Skipjack Wind Farm
Request for Proposals – Environmental Analysis and Permitting Support
Issued: September 22, 2017

The Skipjack Wind Farm (SJWF) is a proposed 120 MW offshore wind farm located on the outer continental shelf (OCS) of the Atlantic Ocean off the coasts of Maryland and Delaware, to be located within BOEM Lease OCS-A 0482 area. In connection with the development of the SJWF, Skipjack Offshore Energy, LLC (Skipjack), a wholly-owned indirect subsidiary of Deepwater Wind Holdings, LLC, plans to install a cable to shore and utilize various onshore facilities. Skipjack plans to conduct offshore and onshore surveys and submit permit applications no later than the fourth quarter of 2018. Following receipt of permits, offshore installation and commissioning of the SJWF are anticipated to take place in 2022. More information regarding the project is available at: http://dwwind.com/project/skipjack-wind-farm/

Skipjack has committed to utilize Maryland-based businesses, as well as implement a comprehensive small and minority-owned business engagement plan, as described in Order Number 88192 dated May 11, 2017, including all the Stipulations set forth in Appendix B thereof (See Attachment 1), and as agreed by Skipjack and the Maryland Public Service Commission (PSC) pursuant to a Memorandum of Understanding (MOU) (See Attachment 2). The requirements for small and minority business participation are anticipated to flow down to contracts for permitting services, and other services performed within Maryland, as described below.

Minority Business Enterprise Requirements
An overall minority business enterprise (MBE) subcontractor participation goal has been established for this procurement. The MBE requirements include minority, small, and veteran-owned small business (MB, SB, VSB) subcontractor participation goals of 29% MB, 10% SB, and 0.5% VSB of the total contract dollar amount.

Notwithstanding any sub-goals established above, the Contractor is encouraged to use a diverse group of subcontractors and suppliers from any/all of the various MBE classifications to meet the remainder of the overall MBE participation goal.

1. Bidders/Offerors are responsible for verifying that each of the MBE(s) (including any MBE primes and/or MBE primes participating in a joint venture), selected to meet the goal and any sub-goals is appropriately certified and has the correct NAICS codes allowing it to perform the committed work.
2. Within ten (10) Working Days from notification that it is the recommended awardee or from the date of the actual award, whichever is earlier, the Bidder/Offeror must provide an Outreach Efforts Compliance Statement
3. A current directory of certified MBEs is available through the Maryland State Department of Transportation (MDOT), Office of Minority Business Enterprise. The directory is also available on the MDOT website at http://mbe.mdot.state.md.us/directory/. The most current and up-to-date information on MBEs is available via this website. Only MDOT-certified MBEs may be used to meet the MBE subcontracting goals.

4. The Contractor, once awarded a Contract, will be responsible for submitting or requiring its subcontractor(s) to submit the following forms to provide the State with ongoing monitoring of MBE Participation:
   a. Prime Contractor Paid/Unpaid MBE Invoice Report
   b. MBE Prime Contractor Report
   c. MBE Subcontractor/Contractor Unpaid MBE Invoice Report

Qualification Requirements
Skipjack is seeking proposals from consultants to support environmental analysis and permitting of the SJWF. To be considered qualified, a firm should have:

- Knowledge of mid-Atlantic coastal and terrestrial environmental resources pertinent to the development of an offshore windfarm and submarine/terrestrial cable project;
- Demonstrated experience with development of federal, state and local permit applications and reports to support development of an offshore windfarm and/or submarine and terrestrial cable(s);
- Experience coordinating and consulting with multiple Federal, state, and local agencies on complex energy projects;
- Positive relationships with local stakeholders engaged in the development of offshore and coastal projects;
- Ability to work with small and minority-owned businesses to conduct environmental analysis and permitting work; and as such comply with the project’s MBE goals
- Maryland office(s) with project personnel based in-state and as such contribute to the project’s goal of in-state spending of 34%

Interested firms should submit a proposal that demonstrates how the firm meets the qualification requirements bulleted above; including:

1. Detailed summary of qualifications and experience required to complete all aspects of the permitting of the SJWF;
2. Matrix of all anticipated permits and studies / analyses required for the full permitting of the SJWF, including a schedule for each item;
3. Description of approach and list of tasks to be completed to permit the SJWF;
4. Identification of specific personnel for each task including a summary of their prior experience, resumes, and billing rate;
5. Identification of all potential teaming partners or subconsultants;
6. A plan for in-state and MBE participation; The following metrics must be provided for each task:
   a. % to be completed by Maryland-based personnel
b. % to be completed by Maryland SB  
c. % to be completed by Maryland MB  
d. % to be completed by Maryland VSB  
7. Three references supporting successful experience in the assessment of environmental resources and permitting of wind energy and offshore / coastal projects in the mid-Atlantic region  
8. Estimated costs for each task (labor and expenses) including breakout of subconsultant costs;  
9. A statement that the Services Agreement provided in Attachment 3 is acceptable and the insurance requirements can be met.  

Interested firms should also submit the following information:  
1. Is the respondent certified as veteran, disadvantaged or minority owned (or similar)? ☐ Yes ☐ No  
2. Has the respondent ever been disbarred, suspended or terminated for default by any governmental agency? ☐ Yes ☐ No  
3. Is the respondent licensed by any governmental agency? ☐ Yes ☐ No  
   If yes, describe (include copies of all relevant and current licenses necessary to perform the work): __________________________________________________________________  
4. Does the respondent have certifications from any governmental agency? ☐ Yes ☐ No  
   If yes, describe (include copies of all relevant and current certifications necessary to perform the work): __________________________________________________________________  
5. Has the respondent ever filed for bankruptcy protection? ☐ Yes ☐ No  
   If yes, describe: ___________________________________________________________  
6. Has the respondent recently had, does it currently have, or does it have a reasonable basis to expect labor disputes, insurance claims or any on-going or pending litigation? ☐ Yes ☐ No  
7. Please provide the three (3) latest years of OSHA 300 logs pertaining to Bidder for locations where work will be conducted.  
8. Please provide the three (3) latest years Bidder’s Workman’s Compensation experience modifier Rate.  

Deepwater requests that interested bidders indicate their intent (via email) to submit a proposal by October 6, 2017. Final proposals must be postmarked by October 20, 2017. One hard copy and one electronic copy (via email) must be sent to:  

Stephanie Wilson  
Manager of Permitting & Environmental Affairs  
Deepwater Wind  
56 Exchange Terrace, Suite 300  
Providence, RI 02903  
swilson@dwwind.com
Parties selected through this process may receive information that Skipjack considers confidential. Accordingly, please execute the enclosed Non-Disclosure Agreement (NDA) and return with your proposal (Attachment 4).

Each respondent is responsible for its costs to participate in this process. This request for proposals does not constitute an offer by Skipjack. Skipjack expressly reserves the right to cancel this process at any time and/or reject any or all bids and offers submitted in response to this letter, in each case without liability.

Skipjack is an Equal Opportunity Employers (EOE). Qualified applicants are considered without regard to age, race, color, religion, sex, national origin, sexual identification or orientation, disability or veteran status. All qualified applicants will receive consideration without discrimination because of sex, marital status, race, age, creed, national origin or the presence of disabilities. False or misleading statements during an interview and/or on the application form are grounds for terminating the application process or, if discovered after engagement, terminating the engagement. Additional testing on job related skills may be required prior to engagement.

ATTACHMENTS:

Attachment 1: Maryland PSC Order
Attachment 2: Memorandum of Understanding
Attachment 3: Services Agreement
Attachment 4: Non-Disclosure Agreement
Attachment 1

Maryland PSC Order
ORDER NO. 88192

IN THE MATTER OF THE APPLICATIONS OF U.S. WIND, INC. AND SKIPJACK OFFSHORE ENERGY, LLC FOR A PROPOSED OFFSHORE WIND PROJECT(S) PURSUANT TO THE MARYLAND OFFSHORE WIND ENERGY ACT OF 2013

BEFORE THE PUBLIC SERVICE COMMISSION OF MARYLAND

CASE NO. 9431

Issue Date: May 11, 2017

Before: W. Kevin Hughes, Chairman
Harold D. Williams, Commissioner
Michael T. Richard, Commissioner
Anthony J. O’Donnell, Commissioner
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I. INTRODUCTION

With today’s Order, we echo the sentiments of Governor Larry Hogan in his 2017 State of the State Address, in which he proclaimed, “Maryland truly is Open for Business.” The decision we reach today affirms that Maryland is indeed open for business, specifically with at least two different offshore wind project developers – U.S. Wind, Inc. and Skipjack Offshore Energy, LLC. As a result of our Order, these companies are enabled to construct 368 megawatts (“MW”) of offshore wind capacity in the Atlantic Ocean, yielding in the aggregate over $1.8 billion of in-State expenditures and spurring the creation of almost 9,700 new Maryland jobs. These offshore wind projects enhance Maryland’s commitment to clean, renewable electricity generation by producing numerous environmental and health benefits, such as the reduction of at least 19,000 tons of carbon dioxide per year over the projects’ minimum twenty-year designed lifecycle.

Indeed, through this Order the State is positioned to become a national leader in the burgeoning offshore wind industry by securing tangible commitments to develop a robust supply chain in Maryland utilizing small businesses and minority business enterprises, while also revitalizing and re-purposing existing port infrastructure to bring much-needed job opportunities to areas of the State especially impacted by previous economic downturns. Further, the “all-in” approach to offshore wind that we undertake today signals to our neighbors and the world that Maryland is ready to serve as a regional hub and a substantial base for additional offshore wind development up and down the East Coast, thus, yielding sustained job growth for many years to come.

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We are cognizant, however, that there is a cost to doing business. It is not lost on us that this Order effectuates a premium investment by our ratepayers, albeit one that was contemplated and authorized by the General Assembly through its enactment of the Maryland Offshore Wind Energy Act of 2013. We took seriously the charge to maximize the benefits and minimize the costs to our ratepayers, and in the course of the proceedings we fulfilled our mandate to establish the lowest cost on ratepayers by reducing substantially the Applicants’ bids, making the consideration of both Applications possible. Collectively, the net ratepayer impact associated with our approval is projected to be less than $1.40 per month for residential customers, with an approximate 1.40% impact on the annual bills of nonresidential customers – both less than the ratepayer impacts authorized by the legislation.

Nonetheless, we have, to the best of our abilities, attempted to seize on the realization of both lofty economic and environmental goals established by the State, while doing so at the lowest cost possible to our ratepayers through the imposition of significant and numerous conditions on our approval, as described throughout the Order. It is our sincere intent and expectation that the conditions we impose on both U.S. Wind, Inc. and Skipjack Offshore Energy, LLC will ensure a maximum return on the investment of our ratepayers, while minimizing any potential negative impacts stemming from the ratepayer-funded incentives that will flow to the developers as a result of this Order.

We are aware that while the scope of our task is narrowly confined to considering whether or not to award State incentives to the proposed offshore wind projects, and that other federal authorities will provide the Applicants with final authorization to construct and operate, our actions will facilitate and make possible the business case for the
Applicants to proceed in that process. We therefore have specifically conditioned our award with requirements that the Applicants successfully acquire the necessary federal permits, and continue to work with Maryland citizens, and local, state, and federal authorities in addressing all applicable environmental, visual, and other impacts of public concern.²

In the instant proceeding, after a thorough review of the record evidence, the question before us with respect to the Applications for Approval of a Qualified Offshore Wind Project is not whether to proceed, but rather how to proceed. As noted by several intervenors, the benefit of competition (albeit one of many benefits we realized in this case) is that we are presented with two options: move forward incrementally through the approval of one, smaller project; or, move forward on an “all-in” basis and authorize incentives for both projects.

Put simply, we chose the latter. We found it especially compelling to consider the concept of risk when reaching our decision. There are obvious financial risks to our ratepayers associated with the chosen approach, and equally obvious ways to mitigate them (which we have done), such as the requirement that no ratepayer funds are expended until such time that the offshore wind projects are generating electricity. We have also considered and addressed the risk that our ratepayers may be unduly locked into a price now while offshore wind technology costs could continue trending downward in the future, which we have mitigated by requiring an “open books” approach to development and construction costs, wherein the developers must flow through 80% of

² We agree with Maryland Energy Administration Witness Fiastro that these proceedings represent the State’s opportunity to weigh-in on the importance of issues, such as visual impacts, and thus condition our Order on steps designed to address public comment. Tr. at 1987-1989.
realized savings to our ratepayers. Furthermore, we have considered exhaustively the issues of whether the offshore wind projects have not only demonstrated a likelihood to produce positive net economic, environmental, and health benefits to the State, but also whether such benefits will truly come to pass. In so doing, we have conditioned our Order on the realization of certain commitments outlined in the Applications, including the creation of direct in-State jobs and the investment of funds in Maryland infrastructure and businesses.

Finally, we note the overwhelming support for an offshore wind project from citizens, businesses, and public officials who testified at our public hearings in Berlin and Annapolis. Thirty-eight individuals testified at the Berlin hearing and over 60 individuals testified at the Annapolis hearing, the vast majority in support of one or both projects, citing the environmental, energy, economic, and health benefits of offshore wind.

Therefore, after careful review and consideration, we find that the Applications for Approval of a Qualified Offshore Wind Project submitted by U.S. Wind, Inc. and by Skipjack Offshore Energy, LLC satisfy the criteria specified as a condition precedent to our approval, and further, that it is in the public interest to move forward with both Applications.

II. BACKGROUND

A. The Applicants

An Application for Approval of a Qualified Offshore Wind Project was submitted in this proceeding by U.S. Wind, Inc. (“US Wind”) on February 3, 2016 and by Skipjack Offshore Energy, LLC (“Skipjack”) on August 23, 2016 (collectively, the “Applicants”).
US Wind is a Massachusetts corporation registered in Maryland, established for the purpose of developing a 750 MW wind farm project off the coast of Maryland and similar wind projects in the United States. The company is a fully-owned subsidiary of Renexia S.p.A. (“Renexia”), a joint stock company incorporated under the Laws of Italy with over five years of experience developing renewable energy projects around the world – including 450 MW of wind projects in Europe and Africa. The parent company of Renexia, Toto Holding, began as a construction company 40 years ago and now consists of companies in the fields of engineering, construction, concessions, renewable energy, and transportation.

Skipjack is a Delaware limited-liability company authorized to do business in Maryland, and is a wholly-owned direct subsidiary of Deepwater Wind New Jersey, LLC (“DWNJ”). DWNJ is a wholly-owned direct subsidiary of Deepwater Wind Holdings, LLC, the owner of the 30 MW Block Island Wind Farm off the coast of Rhode Island – the first domestic offshore wind project. The company’s majority owner is D.E. Shaw, a large, privately-held global investment management and technology development firm.

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3 US Wind expressed in its Application the intent to construct up to a 750 MW offshore wind farm in its Maryland Wind Energy Area; however, US Wind requests through this proceeding Offshore Wind Energy Renewable Credits for only 248 MW of the total project capacity. See 2016 OREC Application by US Wind (hereinafter “US Wind Ex. 1”) at 7. US Wind confirmed that the 248 MW project will be separate and distinct from the later phases of the project in which the remaining 500 MW of capacity is installed, and that the projects will remain separate and distinct for purposes of operation and maintenance as well. Id. at 17. Although US Wind provided information pertaining to the benefits stemming from the entirety of the proposed 750 MW offshore wind farm (see, e.g. Rich Direct at 4-5), we considered herein only those that related directly to the 248 MW proposed offshore wind project that is the subject of this proceeding.

4 Id. at 1, 3, 7.
5 Id. at 3.
6 Id. at 3-4.
7 Skipjack Wind Farm Application to the Maryland Public Service Commission for Approval of a Qualified Offshore Wind Project (Revised Public Version) (hereinafter “Skipjack Ex. 7”) at 2-3.
8 Id. at 2.
9 Id. at 1.
B. The Applications

1. U.S. Wind, Inc.

US Wind proposes to construct a 750 MW wind farm project off the coast of Maryland, for which the company seeks offshore wind renewable energy credits (“ORECs”) in support of the development of 248 MW of offshore wind capacity.\(^\text{10}\) In its Application, US Wind states that it intends to utilize the Siemens SWT-4.0-130 4 MW turbine model and jacket foundations for the turbine installation;\(^\text{11}\) although, during the evidentiary hearings in this proceeding, US Wind noted that it is also considering seriously the use of 6 MW turbine models.\(^\text{12}\) Based on the wind resource and net energy yield assessment prepared by its subcontractors for this turbine design, US Wind estimates that its 248 MW offshore wind (“OSW”) project will produce 913,845 megawatt hours per year (“MWh/year”) at the P-50 confidence level.\(^\text{13}\)

In its Application, US Wind projects that it will achieve a commercial operation date (“COD”) of January 1, 2020 for its 248 MW project.\(^\text{14}\) The US Wind Application proposes to locate the project approximately 12 nautical miles east of Ocean City, Maryland in the Maryland Wind Energy Area (“WEA”) for which US Wind secured the development rights through a competitive auction process conducted by the United States Department of the Interior’s Bureau of Ocean Energy Management (“BOEM”) in August, 2010.

\(^{10}\) US Wind Ex. 1 at 1.


\(^{12}\) Tr. at 78 (Rich).

\(^{13}\) Id. at ES-17. The “P” values refers to the probability of a level of energy output, with the term “P50” referring to the 50th percentile, indicating that there is a 50% chance that the actual output will be greater than this amount and a 50% chance that the actual output will be less than this amount. See Skipjack Ex. 7 at 23.

\(^{14}\) Id. at ES-17.
According to the Application, the planned point of interconnection ("POI") will be the Indian River substation. An active interconnection application for the 248 MW project is pending with PJM Interconnection, LLC ("PJM") – known as queue position AB1-056.16

US Wind provides detailed information in its Application pertaining to its efforts to: engage small businesses and minority business enterprises; train and utilize skilled labor; and provide compensation consistent with Maryland regulatory requirements.17 The affirmative statements required by the Maryland Offshore Wind Energy Act of 2013 are also included in the Application, for which US Wind imposed no conditions.18

As described in the Application, US Wind expected the 248 MW project to cost approximately $1.375 billion, or $5,544/kW.19 To recoup those capital expenditures, US Wind offered in its Application a two-part, 20-year OREC bid with a first year price of $201.57/MWh and a levelized price of $177.64/MWh (2012$).20 Given that the projected upgrade costs for transmission interconnection are expected to be zero, the second component of US Wind’s two-part OREC bid is negated, thereby resulting in an adjusted levelized OREC price reflected in the Application of $176.66/MWh (2012$).21

US Wind retained expert consultants to conduct the required cost-benefit analysis needed to demonstrate that its proposed OSW project would yield positive net economic, environmental, and health benefits to the State. Its Application includes the economic

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15 US Wind Ex. 1 at 2.
16 Commission Ex. 2 at ES-17.
17 Id. at 54-57.
18 Id. at ES-7.
19 Id. at ES-22. During the evidentiary hearings, US Wind revised downward its expectation of project costs, as further described below.
20 Id. at ES-28.
21 Id.
benefits analysis of US Wind’s consultant EDR Group, which estimates that in-State economic benefits of $494.1 million (2015$) and $4,278 million (2015$) will accrue during the development and construction phases, and the operating period, respectively. The Application also estimates that total employment impacts will accrue to the State as a result of the US Wind project in the amount of 2,120 new full-time equivalent jobs (“FTEs”) and 4,540 new FTEs during the development and construction phases, and the operating period, respectively. Additionally, the Application contains projections of tax revenue contributions to the State in the amount of $17.3 million (2015$) during the development and construction phases, and $48 million during the operating period of the US Wind project. The Application also contains an environmental and health benefits analysis, in which US Wind estimates reductions in lifecycle avoided emissions of the following pollutants: 16,150 tons of nitrogen oxide (NO\textsubscript{X}); 35,311 tons of sulfur dioxide (SO\textsubscript{2}); 18.9 million tons of carbon dioxide (CO\textsubscript{2}); and 1,642 tons of particulate matter.

2. Skipjack Offshore Energy, LLC

Skipjack proposes to construct a 120 MW wind farm project approximately 17 to 21 nautical miles off the coast of Maryland in the Delaware WEA designated by BOEM as OCS-A 0482. In its Application, Skipjack states that it intends to utilize an 8 MW class turbine and monopile foundations for the turbine installation. Based on the wind resource and net energy yield assessment prepared by its subcontractors for an 8 MW

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22 Commission Ex. 2 at ES-24.
23 Id.
24 Id.
25 Id. at ES-26.
26 Skipjack Ex. 7 at IV.
27 Id. at 17.
turbine with a 179 meter rotor diameter, Skipjack estimates that its 120 MW OSW project will produce 455,458 MWh/year at the P-50 confidence level.  

In its Application, Skipjack states that its targeted COD is November, 2022 for its 120 MW project. According to Skipjack’s Application, the planned point of interconnection will be at a substation located in Ocean City, Maryland, with the definitive POI established during the PJM interconnection process, which has not yet been undertaken.

Skipjack makes certain commitments in its Application to: engage small businesses and minority business enterprises; train and utilize skilled labor; and provide compensation consistent with Maryland regulatory requirements. The affirmative statements required by the Maryland Offshore Wind Energy Act of 2013 are also included in the Application; however, Skipjack initially imposed certain conditions, including grandfathering provisions to mitigate change in law risk and a qualifier that the Applicant will apply for State and Federal grants provided that the grants would result in a “material benefit for ratepayers” and/or “do not adversely affect the ability of the Company to develop, construct, and operate the Project.”

As described in the Application, Skipjack expected the 120 MW project to cost approximately $720 million, or $6,000/kW. To recoup these capital expenditures,
Skipjack offered in its Application a one-part, 20-year OREC bid with a first year price of $166.0/MWh and a levelized price of $134.36/MWh (2012$).\textsuperscript{34}

Skipjack retained expert consultants to conduct the required cost-benefit analysis needed to demonstrate that its proposed OSW project would yield positive net economic, environmental, and health benefits to the State. Skipjack’s Application includes the economic benefits analysis of its consultant Boston Pacific, which estimates that in-State economic benefits of $302.9 million (2015$) and $149.5 million (2015$) will accrue during the development and construction phases, and the operating period, respectively.\textsuperscript{35} The Application also estimates that total employment impacts will accrue to the State as a result of the Skipjack project in the amount of 1,468 new FTEs and 1,060 new FTEs during the development and construction phases, and the operating period, respectively.\textsuperscript{36} Additionally, the Application contains projections of tax revenue contributions to the State in the amount of $25.2 million (2015$) during the development and construction phases, and $3.7 million during the operating period of the Skipjack project.\textsuperscript{37} The Application also contains an environmental and health benefits analysis, in which Skipjack’s consultant estimates reductions in lifecycle avoided emissions of the following pollutants: 554 tons of NO\textsubscript{X}; 3,330 tons of SO\textsubscript{2}; 5.16 million tons of CO\textsubscript{2}; 346 tons of particulate matter; and 0.02 tons of mercury (Hg).\textsuperscript{38}

\textsuperscript{34} Skipjack Ex. 7 at 55, Attachment 4-4.  
\textsuperscript{35} Id. at 57-58.  
\textsuperscript{36} Id. at 58.  
\textsuperscript{37} Id.  
\textsuperscript{38} Id. at 59.
C. Procedural History

The Maryland Offshore Wind Energy Act of 2013 (the “Act” or “OWEA”) was passed by the General Assembly and signed into law on April 9, 2013. Subsequently, and in accordance with the Act, the Public Service Commission of Maryland (“Commission”) initiated Rulemaking 51 to adopt revisions to the Code of Maryland Regulations (“COMAR”), for the purpose of issuing a comprehensive set of regulations to implement OWEA.

The Act also directed the Commission to contract for the services of independent consultants and experts to assist in the evaluation and comparison of a potential applicant’s OSW project. In compliance with this directive, the Commission retained a team led by Levitan & Associates, Inc. (“Levitan”), which included subcontractors DNV GL, Sullivan Cove, and Chesapeake Environmental Management.

On January 28, 2016, an Application for Approval of a Qualified Offshore Wind Project was submitted to the Commission’s consultant, Levitan, through a dedicated website with secure portals. Pursuant to COMAR 20.61.06.01.B(1), Levitan, on behalf of the Commission, initiated a review of the submission for purposes of rendering a determination on administrative completeness. Levitan notified the Commission on February 24, 2016, that the application received on January 28, 2016 was deemed administratively complete, and thus, in accordance with COMAR 20.61.06.01.B(3), the Commission opened an Application Period during which other persons were invited to

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40 PUA § 7-704.1(e)(2). We note that the Act does not restrict the Commission to considering the analysis presented by its independent consultants and experts only.
41 COMAR 20.61.01.03.B(1-1) defines “administratively complete” as whether the Commission has determined an application to contain the information described in §§ D – N of COMAR 20.61.06.02.
submit applications.\footnote{Maillog No. 183939: Notice of Maryland Offshore Wind Project Application Period (Feb. 24, 2016).} The Application Period commenced officially on February 25, 2016 for a period of 180 calendar days.\footnote{COMAR 20.61.01.03.B(1-6) defines “Application Period” as the period of time, beginning and ending in accordance with §§(B)(3) and (B)(4) of COMAR 20.61.06.01, during which one or more OSW applicants may submit an application for approval of a proposed offshore wind project.} On August 23, 2016, immediately preceding the conclusion of the original Application Period, a second application was submitted to Levitan through the website’s secure portals.

Subsequently, the Commission granted three, 30-day extensions to the Application Period\footnote{In its discretion, the Commission may provide for additional application periods. PUA § 7-704.1(a)(3).} to allow Levitan the necessary time to complete the determinations required by the Regulations.\footnote{In doing so, the Commission is permitted to extend the Application Period by one or more additional periods of 30 calendar days. COMAR 20.61.06.01.B(4).} During the extended Application Period, the second Application for Approval of a Qualified Offshore Wind Project was determined to be administratively complete on September 22, 2016.\footnote{Maillog No. 197182: Notice of Extension of Maryland Offshore Wind Project Application Period (Aug. 22, 2016); Maillog No. 199475: Notice of Second Extension of Maryland Offshore Wind Project Application Period (Sept. 21, 2016); Maillog No. 201238: Notice of Third Extension of Maryland Offshore Wind Project Application Period (Oct. 20, 2016).}

On November 21, 2016, Levitan notified the Commission that as of the close of the Application Period (\textit{i.e.} November 18, 2016), two Applications for Approval of a Qualified Offshore Wind Project had been received from US Wind and Skipjack.\footnote{Commission Ex. 2 at ES-1. As noted in the Report, upon its initial review of the Skipjack Application, Levitan uncovered missing and incomplete information, which was subsequently received, resulting in an ultimate determination of administrative completeness. \textit{Id}.} In its filing, Levitan noted that it found the Applications to be administratively complete pursuant to COMAR 20.61.06.02, and recommended to the Commission that the Applications had also satisfied the minimum threshold criteria pursuant to COMAR 20.61.06.03. Therefore, in accordance with COMAR 20.61.06.01.D, the Commission

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\footnote{Maillog No. 204774: Notice of Administrative Completeness and Minimum Threshold Criteria (Nov. 21, 2016).}
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convened this proceeding, to conduct the required multi-part review to evaluate and compare the Applications.48 Pursuant to the Commission’s directive, the Applicants filed the public and confidential versions of their Applications in the docket on November 30, 2016.49

On December 14, 2016, the Commission conducted a pre-hearing conference to set a procedural schedule for this proceeding, and to address petitions to intervene and other preliminary matters.50 In addition to the entry of appearances for the Office of People’s Counsel (“OPC”) and the Commission’s Technical Staff (“Staff”), 11 parties petitioned to intervene. At the pre-hearing conference, the Commission granted, without opposition, the petitions to intervene and adopted a procedural schedule.51 Additionally, the Commission ordered that discovery commence immediately following the December 14, 2016 pre-hearing conference for all parties to the proceeding, subject to execution of individual protective agreements sponsored by the Applicants.52

Lastly, the Commission briefly took up several pending preliminary matters at the December 14, 2016 pre-hearing conference, including the Motion to Disqualify the November 30, 2016 Application of Skipjack Offshore Energy, LLC (“Motion to Disqualify”) filed by US Wind. A response to the Motion to Disqualify was solicited from Skipjack on or before December 30, 2016, and comments in support or opposition to the Motion were due on or before January 9, 2017.53 After consideration of the

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48 Order No. 87898 (Nov. 22, 2016).
49 US Wind Ex. 1 and 1C; Skipjack Ex. 7 and 7C.
50 Order No. 87898 at 2.
51 Order No. 87945 (Dec. 16, 2016). The petitions to intervene filed by three parties were initially held in abeyance pending notification that counsel had been retained. All three petitions were subsequently granted.
52 Id. at 3.
53 Id. at 5.
comments submitted by US Wind, Skipjack, Staff, OPC, and the Maryland Energy Administration ("MEA"), on January 23, 2017, the Commission denied without prejudice the Motion to Disqualify.\textsuperscript{54}

Pursuant to the scheduling order, the Applicants filed Direct and Supplemental Direct Testimony on January 4, 2017. On or before February 15, 2017, the following parties submitted written testimony: MEA; Wharf and Dock Builders, Pile Drivers and Divers, Local Union No. 179, of the Northeast Regional Council of Carpenters, of the United Brotherhood of Carpenters and Joiners of America ("Local Union No. 179"); Ironworkers Local Union No. 5 of the International Association of Bridge, Structural & Ornamental Ironworkers, Reinforcing Rodman, Riggers, Machinery Movers & Glaziers ("Local Union No. 5"); the Business Network for Offshore Wind (the "Business Network"); Staff; OPC; and Atlantic Grid Development, LLC ("Atlantic Grid"). On March 2, 2017, US Wind, Skipjack, and Local Union No. 5 submitted Rebuttal Testimony.

Prior to commencing the evidentiary hearings, the Commission held a status conference on March 9, 2017. In addition to addressing several preliminary matters regarding scheduling, the Commission engaged in a focused discussion regarding its intent to encourage maximum transparency during the subsequent evidentiary hearings. Specifically, the Commissioners reiterated that it would be in the best interest of Maryland ratepayers to conduct a comparative process (of the proposed offshore wind projects) that remained as transparent as practicable, while recognizing that the

\textsuperscript{54} Order No. 87993 (Jan. 23, 2017).
Applicants’ commercially-sensitive and proprietary information needed to remain protected.\textsuperscript{55}

The Commission initially set aside ten days for evidentiary hearings; although, it became necessary to add two additional days for testimony, between March 13, 2017 and March 28, 2017. The Commission also conducted two public hearings in Berlin and Annapolis, Maryland to solicit comments from interested persons.\textsuperscript{56}

On April 13, 2017, written briefs were filed with the Commission by: US Wind; Skipjack; MEA; the Sierra Club / Maryland League of Conservation Voters (“Sierra Club/MLCV” or “Environmental Intervenors”);\textsuperscript{57} Atlantic Grid; the Business Network; Staff; and OPC. The Commission received reply written briefs on April 26, 2017 from the following parties: US Wind; Skipjack; OPC; Staff; MEA; and the Sierra Club/MLCV.

Pursuant to the Act, unless extended by mutual consent of the (15) parties to the proceeding, the Commission’s order to approve, conditionally approve, or deny the Applications is to be issued no later than May 17, 2017.\textsuperscript{58}

\textbf{D. Positions of the Parties}

1. \textit{Commission Technical Staff}

Staff does not take an explicit position on whether the Commission should approve, conditionally approve, or deny the Application for Approval of a Qualified

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\textsuperscript{55} March 9, 2017 (Prehearing Conference) Tr. at 14. We note that, as a result of this discussion, the Applicants agreed to reclassify as public large portions of the Applications and witness testimony, which in turn permitted the intervenors to file revised public versions of their witness testimony. The Levitan report, in which the Commission’s independent consultant compared and contrasted the Applications side-by-side, was also revised to reflect the newly public information, and subsequently re-filed on March 22, 2017.

\textsuperscript{56} Public hearings were held on: March 25, 2017 (Berlin, Maryland); and March 30, 2017 (Annapolis, Maryland).

\textsuperscript{57} A corrected Appendix A to the Initial Brief was filed with the Commission on April 24, 2017.

\textsuperscript{58} PUA § 7-704.1(b).
Offshore Wind Project submitted by US Wind or by Skipjack; rather, Staff advocates that the Commission consider a number of matters when reaching its decision.\textsuperscript{59} Most importantly, argues Staff, “[t]he issue of cost should be a paramount consideration in the determination the Commission must make in this proceeding.”\textsuperscript{60} Staff observes that the authorizing legislation provides the Commission with considerable flexibility in reaching its decision so that the potential benefits of OSW can be maximized while also focusing on the lowest cost impact to ratepayers.\textsuperscript{61}

Staff observes too that both Applications individually and collectively satisfy the statutory requirement of demonstrating positive net economic, environmental, and health benefits for the State.\textsuperscript{62} Additionally, Staff notes that one or both of the Applications would aid in compliance with the State’s Renewable Energy Portfolio Standard (“RPS”) Program, and that realization of an OSW project as an in-State renewable energy resource would markedly increase the supply of RECs derived from Maryland resources.\textsuperscript{63}

2. Maryland Energy Administration

MEA believes that the Applications, when evaluated and compared in accordance with the requirements of the Act, show that both proposed OSW projects have costs and benefits to the State.\textsuperscript{64} On balance, however, MEA recommends that if the Commission chooses to proceed, it should do so incrementally by making an initial award of OREC\textsuperscript{s} to the Skipjack proposed OSW project only, subject to certain conditions.\textsuperscript{65} The conditions suggested by MEA include a commitment by Skipjack to: pursue “swift and
comprehensive outreach with Maryland and Delaware officials”; invest at least $204.8 million in-State during the construction phase of the OSW project; finalize a plan with the Governor’s Office of Minority Affairs for minority business participation during all aspects of the OSW project; base its operations and maintenance activities within Maryland; and continue making every effort to protect the viewshed for both Maryland and Delaware beach resorts, to the extent practicable.\textsuperscript{66}

With respect to the US Wind Application, MEA recommends that the Commission hold it in abeyance until some of the emergent issues raised about the project can be resolved.\textsuperscript{67} Specifically, MEA highlights variables including project costs, site location, equipment selection, and the effect on Maryland beaches and the ocean view from those beaches as issues that merit further review before taking final action on the US Wind Application.\textsuperscript{68}

3. \textit{Office of People’s Counsel}

Initially, OPC’s direct case focused solely on the projected ratepayer impacts of the two Applications.\textsuperscript{69} OPC did not offer adjustments to the values, assumptions, or conclusions contained in the Levitan report; rather, OPC noted Levitan’s recommendation that the Commission adopt the values used by Levitan to allow for a side-by-side comparison of the Applications.\textsuperscript{70} OPC Witness Chang testified against the US Wind Application, opining that the “ratepayer impact of the US Wind project

\begin{footnotesize}
\begin{itemize}
\item Id. at 12-13.
\item MEA Initial Brief at 13-14; MEA Reply Brief at 4. We note that MEA could have presented testimony on these issues for us to consider during the course of the proceedings. Tr. at 2054 – 2056 (Witness Fiastro confirming that $500,000 was available to support the retention of an additional economist and to provide technical support for the review of the Applications).
\item MEA Initial Brief at 13.
\item Chang Direct at 2.
\item Id. at 9-11.
\end{itemize}
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proposal [initially using $1.49 of the $1.50 residential ceiling] allows for very minimal uncertainty in Levitan’s forecasts of market dynamic values in order to remain under the mandated legislative rate impact caps.” 71 In contrast, Mr. Chang testified that the Commission should accept Skipjack’s Application, given that similar changes in the underlying assumptions “are unlikely to push the rate impact of Skipjack’s project proposal above the residential rate impacts thresholds…” 72 However, after the Applicants each submitted revised numbers in response to the Commission’s Bench Data Request 1-3, Mr. Chang conceded that “there is obviously a little more head room for greater fluctuations” than what was articulated in his pre-filed testimony. 73

On brief, however, OPC reversed its previous position and opines instead that neither Application meets the statutory requirements; therefore, OPC argues that both must be denied. 74 OPC alleges that the necessary analysis of state economic impacts is incomplete, and that neither Applicant has made a convincing case that their proposed project will provide positive net benefits to Maryland. 75

OPC proposes, however, several conditions that it contends the Commission must consider in the event that the Commission does decide to accept one or both of the Applications, including: (1) holding both Applicants to the lowest OREC bid; (2) accepting the Skipjack proposal for an “open book” construction process; (3) modifying

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71 Id. at 3-4.
72 Id. at 4.
73 Tr. at 2062-2063 (Chang).
74 OPC Initial Brief at 9; OPC Reply Brief at 4-5. In the alternative, OPC suggests that “with the consent of the Applicants, the Commission could extend the period for consideration of both applications for 180 days to provide the Applicants with additional opportunity to provide the analysis required by the OWEA and supplement their cases to demonstrate that their projects would indeed provide net benefits to the State.” See OPC Reply Brief at 4-5. The Act, however, requires that any such extension occur with the “mutual consent of the parties” (PUA § 7-704.1(b)), of which there are many beyond the Applicants, and none of which commented favorably with respect to OPC’s suggestion. See, e.g. MEA Reply Brief at 3-4.
75 OPC Initial Brief at 13-23.
the aforementioned “open book” process to require that 80% of savings flow through to the ratepayers; (4) requiring a commitment to pursue methods and technologies to reduce the impacts of an OSW project; (5) requiring a commitment to use best efforts to pursue all eligible State and federal grants, rebates, tax credits, loan guarantees, or other similar benefits as those benefits become available and to provide 80% of those benefits to ratepayers; (6) requiring the Applicants to participate in good faith in a second phase of this proceeding to consider the Atlantic Grid proposal to unbundle the transmission component of the OSW project(s); and (7) requiring a reduction in the size of the US Wind project to be on par with that of Skipjack.76

4. Sierra Club / Maryland League of Conservation Voters

The Sierra Club/MLCV recommends that the Commission approve at least one of the proposed projects, subject to conditions designed to protect marine mammals and other species.77 Further, while the Sierra Club/MLCV contends that both Applications meet the statutory requirements set forth in the Act, the Environmental Intervenors suggest that if the Commission opts to move forward with only one project, then the Commission should approve the proposed project that will bring the most significant economic, environmental, and health benefits to the citizens of Maryland.78 In reaching a determination on these matters, the Sierra Club/MLCV advocates that the Commission consider fully even those benefits that are difficult to quantify, including the “first mover

76 Id. at 30-33.
77 Sierra Club/MLCV Reply Brief at 5.
78 Sierra Club/MLCV Initial Brief at 29; Sierra Club/ MLCV Reply Brief at 9.
advantage” and “the benefits of cleaner air, and a clean and thriving Chesapeake Bay, which improve public health, reduce medical cost burdens, and improve quality of life.”

5. The Business Network for Offshore Wind

The Business Network asserts that both of the Applications, contingent on the adoption of certain recommended conditions, satisfy the statutory requirement for approval of a Qualified Offshore Wind Project. The Business Network cautions against a decision not to move forward with any OSW project, noting its belief that doing so would cause Maryland to “lose out on a significant industry and economic development opportunity to other states.” Rather, the Business Network advocates that the Commission approve both proposed OSW projects to provide greater competition and opportunities for Maryland businesses, although, it suggests certain conditions to bolster the Applicants’ supply chain development and job growth commitments.

6. Atlantic Grid Development, LLC

Atlantic Grid expresses its support for the development of offshore wind to serve Maryland’s ratepayers, noting that OSW is a large, clean renewable resource that has become more affordable over time. Atlantic Grid contends, however, that it is in the best interest of ratepayers for the Commission to consider “unbundling” offshore wind transmission from generation as a condition to approval of either of the Applications in

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79 US Wind Witness Rich testified that the first mover advantage refers to “the benefits of seizing the first advantage momentum in any given industry,” where a geographical area, such as Silicon Valley, “become[s] known for a particular specialty, because they were the first ones to move forward in a given industry.” Tr. at 347.
80 Sierra Club/MLCV Initial Brief at 12.
81 Business Network Initial Brief at 6.
82 Id.
83 Id. at 5.
84 Id. at 8-14.
85 Atlantic Grid Initial Brief at 2-3.
this proceeding. To effectuate this proposal, Atlantic Grid suggests that the Commission require the selected developer to provide an estimated cost of its transmission interconnection facilities, which would be subtracted from the OREC price schedule in the event that a third-party transmission provider is selected in a subsequent proceeding.\footnote{Id. at 26.}

Atlantic Grid recommends that the Commission utilize the Federal Energy Regulatory Commission Order 1000 State Agreement Approach to direct PJM regarding the construction of the third-party transmission option.\footnote{Id.}

7. Ironworkers Local Union No. 5 of the International Association of Bridge, Structural & Ornamental Ironworkers, Reinforcing Rodman, Riggers, Machinery Movers & Glaziers

Local Union No. 5 states that it “stands 100% in favor” of OSW and asserts its belief that the OSW industry and the citizens of Maryland will benefit greatly if the Commission issues an OREC award to the Applicant with the largest interest for Maryland.\footnote{Beckman Direct at 2.} To this end, Local Union No. 5 notes some concern regarding the Skipjack Application, given the Applicant’s admission that the smaller scope of the Skipjack proposed OSW project will provide overall less of an economic impact to the State.\footnote{Beckman Rebuttal at 1-2.} Moreover, Local Union No. 5 expresses its opinion that, “Maryland needs to be fully developed as a new center for the great, emerging source of innovative and dynamic energy redevelopment that [the US Wind proposed OSW project] represents.”\footnote{Id. at 2-3.}
8. *Wharf and Dock Builders, Pile Drivers and Divers, Local Union No. 179, of the Northeast Regional Council of Carpenters, of the United Brotherhood of Carpenters and Joiners of America*

Local Union No. 179 expresses its unanimous support for the development of OSW projects in Maryland that are deemed by the Commission to be “qualified” pursuant to the authorizing legislation. Witness Roncinske asserts that the “Wharf and Dock Builders, Pile Drivers and Divers have the technical expertise, experience and ability to make the OSW projects a reality,” and notes that craftspeople represented by the Union worked 180,000 hours during the course of construction for the 30 MW Deepwater Block Island OSW project.

9. *Other Intervenors*

Petitions to intervene were granted for several parties that did not actively participate or take a position, including: the Maryland Department of Natural Resources’ Power Plant Research Program (“PPRP”); Southern Maryland Electric Cooperative (“SMECO”); Potomac Electric Power Company (“Pepco”), Delmarva Power & Light Company (“Delmarva Power”), and Baltimore Gas and Electric Company (“BGE”); Retail Energy Supply Association (“RESA”); and the Chesapeake Physicians for Social Responsibility.

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91 Roncinske Direct at 1.
92 *Id.* at 1-2.
III. LEGAL STANDARD APPLICABLE TO THIS PROCEEDING AND REQUIRED PROCEDURAL FINDINGS

The task before us in this proceeding is multi-faceted. We must ascertain whether the administrative record, by a preponderance of the evidence,\(^{93}\) demonstrates that the criteria enumerated in PUA § 7-704.1(d) and (e) are satisfied with respect to each of the Applications pending before us for Approval of a Qualified Offshore Wind Project, as submitted by US Wind and by Skipjack. The Commission is prohibited from issuing an OREC award in the event that an OSW application fails to demonstrate positive net economic, environmental, and health benefits to the State,\(^{94}\) or in the event that an OSW application is projected to violate certain residential and nonresidential ratepayer protections outlined in the Act.\(^{95}\)

Specifically, the projected net rate impact for an average residential customer, based on annual consumption of 12,000 kWh, combined with the projected net rate impact of other Qualified Offshore Wind Projects, can not exceed $1.50 per month (2012$), over the duration of the proposed OREC pricing schedule.\(^{96}\) Additionally, the projected net rate impact for all nonresidential customers considered as a blended average, combined with the projected net rate impact of other Qualified Offshore Wind Projects, can not exceed 1.5% of nonresidential customers' total annual electric bills, over the duration of the proposed OREC pricing schedule.\(^{97}\) And finally, the price set in the proposed OREC price schedule can not exceed $190 per MWh (levelized 2012$).\(^{98}\)

\(^{93}\) See Coleman v. Anne Arundel County Police Dept., 369 Md. 108, 134-36, 797 A.2d 770 (2002) (stating that the standard of review for contested cases in Maryland is a ‘preponderance of the evidence’).
\(^{94}\) PUA § 7-704.1(e)(1)(i).
\(^{95}\) PUA § 7-704.1(e)(1)(ii)-(iv).
\(^{96}\) PUA § 7-704.1(e)(1)(ii).
\(^{97}\) PUA § 7-704.1(e)(1)(iii).
\(^{98}\) PUA § 7-704.1(e)(1)(iv).
We must also determine whether the Applications for Approval of a Qualified Offshore Wind Project submitted by US Wind and by Skipjack are in the public interest. In accordance with the Act, we must reach a decision on the Applications—whether to approve, conditionally approve, or deny—within 180 days of the Application Period ending (i.e. no later than May 17, 2017).\(^99\) The conditions we may impose, should we choose to approve one or both Applications, are guided by, but not limited to, the criteria outlined in the authorizing legislation.\(^100\) In reaching our decision, the Act specifies the criteria by which we must evaluate and compare the Applications, including 13 enumerated criteria and a 14\(^{th}\) criterion permitting the Commission to consider any other appropriate standard.\(^101\) The burden of proof in this proceeding is upon the Applicants to provide sufficient evidence that their respective filings satisfy the statutory criteria. The Commission retains discretion as to the weighting and relative importance of one criterion versus another in effectuating the evaluation and comparison of the Applications.

In addition to assessing compliance with the Maryland Offshore Wind Energy Act of 2013, as codified in the Public Utilities Article, we must also review the Applications in the context of the Commission’s regulations promulgated in Rulemaking 51 and adopted as COMAR 20.61.06 et seq. The Regulations outline an application review process consistent with the criteria enumerated in the authorizing legislation. Specifically, as a preliminary matter, an application must be determined to be

\(^99\) PUA § 7-704.1(b). The only exception to this deadline permitted by statute is with the “mutual consent of the parties” to the proceeding. Id.
\(^100\) The Applicants acknowledged that the Commission is authorized to impose certain conditions in a final Commission order, including ones that pertain to the OREC price schedule proposed for each OSW project. See generally Tr. at 280 and 302.
\(^101\) PUA § 7-704.1(d)(1).
“administratively complete” and it must have satisfied the “minimum threshold criteria” prior to any quantitative or qualitative assessment of the proposed OSW project by the Commission or by its independent consultant in this matter.102

A. Determination of Administrative Completeness

For an application to be deemed “administratively complete,” it must be found within 30 days of receipt to contain the information described in Sections D through N of COMAR 20.61.06.02, which corresponds generally to and expands on the information prescribed by the Maryland Offshore Wind Energy Act of 2013.103 The initial review is for completeness only, and is not dispositive of any future review on the merits.

Pursuant to the Regulations, the Commission commenced the initial 180-day Application Period on February 25, 2016,104 after accepting Levitan’s determination that the Application submitted by US Wind was administratively complete. The second application was submitted by Skipjack on August 23, 2016, immediately preceding the conclusion of the original Application Period.105 During the extended Application Period, the Skipjack Application was determined to be administratively complete by Levitan on September 22, 2016. No party to this proceeding issued a timely challenge to the determination of administrative completeness with respect to either the US Wind or

102 COMAR 20.61.06.01.B – D.
103 COMAR 20.61.01.03.B(1-1).
104 Maillog No. 183939: Notice of Maryland Offshore Wind Project Application Period (Feb. 24, 2016).
105 Id.
the Skipjack Applications.\footnote{We note, however, that OPC for the first time in its Initial Brief argues that neither of the Applications contain the complete information necessary to satisfy the requirements delineated in COMAR 20.61.06.02.L (identical in substance to PUA § 7-704.1(c)(3)), which would have prevented a determination of administrative completeness in accordance with the definition contained in COMAR 20.61.01.03.B(1-1). See OPC Initial Brief at 9-23. Nevertheless, we considered extensively OPC’s argument in reaching our decision on the US Wind and the Skipjack Applications, as described throughout Section IV herein.}

\section*{B. Minimum Threshold Criteria Determination}

In order to determine that an application has satisfied the minimum threshold criteria, it must be found to fulfill the standards articulated in Section A of COMAR 20.61.06.03.\footnote{COMAR 20.61.03.B(6-8).} Specifically, an application must demonstrate that: (i) it represents a “Qualified Offshore Wind Project” as defined by the Act;\footnote{See PUA § 7-701(k)(1)-(2).} (ii) the term of the proposed OREC price schedule does not exceed 20 years and commences no earlier than January 1, 2017; (iii) the proposed OREC price schedule does not exceed $190 per MWh (levelized 2012$); (iv) the proposed project, including the associated transmission-related interconnection facilities, will be constructed using commercially proven components and equipment available to the OSW applicant; (v) the project COD is reasonable in light of the permitting, technical, construction, operational, and economic challenges generally faced by offshore wind project developers; and (vi) the applicant maintains site control or presents a feasible plan to obtain site control.\footnote{COMAR 20.61.06.03.A.} If an application is found to meet these criteria, an independent qualitative and quantitative analysis of the criteria enumerated in PUA § 7-704.1(d)(1)-(xiii) must commence.\footnote{COMAR 20.61.06.03.B.}

Following the close of the Application Period on November 18, 2016, Levitan recommended to the Commission that the US Wind Application and the Skipjack
Application satisfied the minimum threshold criteria. On December 13, 2016, however, US Wind challenged this determination as it pertained to Skipjack, arguing that the Commission should disqualify the Application submitted by Skipjack on the grounds that it failed to meet the statutory definition of a Qualified Offshore Wind Project. Specifically, US Wind alleged that the location of the Delaware WEA, as proposed in Skipjack’s Application for Approval of a Qualified Offshore Wind Project, is improper and that the Skipjack Application should be denied for a number of associated reasons. On December 30, 2016, Skipjack filed a Response in opposition to the Motion to Disqualify and on January 9, 2017, OPC, Staff, and MEA each filed responses opposing US Wind’s Motion.

We first addressed US Wind’s Motion to Disqualify the Skipjack Application in our January 23, 2017 Order, in which we denied US Wind’s request, without prejudice, largely on the grounds that the filing was akin to a motion for summary judgment and premature in that disputes involving material issues of fact remained. We noted, however, that the parties were permitted to raise the factual and legal arguments articulated in the US Wind Motion to Disqualify and responses during the March, 2017 evidentiary hearings, and on brief, as appropriate. US Wind did just that – incorporating by reference through its Initial Brief its December 13 Motion to Disqualify and all associated exhibits and replies.

111 Maillog No. 204774: Notice of Administrative Completeness and Minimum Threshold Criteria (Nov. 21, 2016); Commission Ex. 2 at ES-2, ES-3, ES-29.
113 Id.
114 Order No. 87993 (Jan. 23, 2017).
115 Id. at 8.
116 US Wind Initial Brief at 43-45.
Upon renewed consideration of the US Wind Motion to Disqualify the Skipjack Application, we again deny the Motion. We remain unconvinced by US Wind’s argument that a project constructed on the Delaware WEA could not meet the statutory definition of a “Qualified Offshore Wind Project.” On the contrary, a representative of the party with whom the statute requires coordination and consultation to occur prior to designation of the lease site, i.e. the State of Maryland through MEA, argues the opposite position, noting that, “[i]t is incongruent that the Maryland legislature intended to limit OREC applications to one federal area, and not the other, when both wind areas otherwise meet the statutory requirements of §7-701(k).” Further, we find that the record contains ample evidence of coordination and consultation with the State prior to identification by BOEM of the Delaware WEA. Thus, having received no further challenges to our independent consultant’s determination that both the US Wind and the Skipjack Applications propose projects that meet the statutory definition of a Qualified Offshore Wind Project, we accept Levitan’s recommendation that the Applications of US Wind and Skipjack satisfy the minimum threshold criteria necessary to pursue a further review of both Applications on their respective merits.

IV. EVALUATION AND COMPARISON OF THE PROPOSED OFFSHORE WIND PROJECTS

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117 Id.
118 PUA § 7-701(k)(1)(i).
119 MEA Initial Brief at 2.
120 For example, the record demonstrates that BOEM consulted and coordinated with the State prior to designation of the Delaware WEA through the BOEM Smart from the Start initiative, and through the review processes necessary for compliance with the National Environmental Policy Act and the Coastal Zone Management Act. See Maillog No. 209093: Skipjack Offshore Energy, LLC’s Response to Motion to Disqualify (Dec. 30, 2016); Maillog No. 209597: Comments on the Motion to Disqualify the Application of Skipjack Offshore Energy, LLC on behalf of the Staff of the Public Service Commission (Jan. 9, 2017); Maillog No. 209567: MEA’s Response to the Motion to Disqualify (Jan. 9, 2017); Maillog No. 209572: OPC’s Response to US Wind’s Motion to Disqualify (Jan. 9, 2017).
In accordance with the Act and with our Regulations, an independent qualitative and quantitative assessment of the Applications filed by US Wind and Skipjack was conducted in the context of the criteria enumerated in PUA § 7-704.1(d)(1)(i) – (xiii). In evaluating and comparing the Applicants’ proposed OSW projects, we contracted for the services of independent consultants and experts as instructed by the Act. Further, we included in our evaluation and comparison of the Applications a review of the two other statutory provisions promulgated in PUA § 7-704.1(d): a verification requirement with respect to the opportunity for certain stakeholders to express concerns regarding project siting during the federal leasing process; and a review of the opportunities for minority business enterprises and minority investor participation in the development of the OSW projects pending before us.

As a result of our evaluation and comparison of the Applications, we considered the imposition of certain conditions on each of the proposed OSW projects so that if, in our discretion, we elected to approve one or both Applications, the resulting Qualified Offshore Wind Project(s) would remain in the public interest throughout the duration of the project(s)’ development, construction, operations, and de-commissioning phases. These conditions of our approval are discussed in, but not limited to, the relevant sections below; further conditions are imposed in the subsequent Commission Decision portions of this Order.

A. Opportunities for Representatives of the United States Department of Defense and the Maritime Industry to Express Concerns Regarding Project Siting

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121 PUA § 7-704.1(d)(1); COMAR 20.61.06.03.B.
122 PUA § 7-704.1(d)(2).
123 PUA § 7-704.1(d)(3)-(4).
The Act requires the Commission to verify that representatives of the United States Department of Defense ("DoD") and the maritime industry have had the opportunity, through the federal leasing process, to express concerns regarding project siting,\(^\text{124}\) which can be accomplished readily given that the federal leasing process for both of the WEAs discussed in this case occurred several years prior to the present proceeding.\(^\text{125}\) In this instance, although the Applications pending before us propose to utilize two different wind energy areas, verification of this statutory requirement can be completed largely by referencing a joint federal review process. Specifically, the Final Environmental Assessment prepared by BOEM with respect to the commercial wind lease issuance and site assessment activities on the Atlantic Outer Continental Shelf addresses the proposed leasing sites offshore Delaware and Maryland (as well as New Jersey and Virginia).\(^\text{126}\) The BOEM report cites an extensive list of information considered in scoping the National Environmental Policy Act ("NEPA") document, including "[o]ngoing consultations with other federal agencies including the U.S. Fish and Wildlife Service, the National Marine Fisheries Service, the DoD, and the U.S. Coast Guard ("USCG")."\(^\text{127}\) Moreover, the consultations that occurred between BOEM and

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\(^{124}\) PUA § 7-704.1(d)(3). See also COMAR 20.61.06.04.  
^{125}\ The lease (OCS-A 0482) for the Delaware WEA was executed by BOEM on November 16, 2012. See BOEM, Delaware Activities (2017), available at: https://www.boem.gov/Delaware/. The leases for the two Maryland WEAs (OCS-A 0489 and OCS-A 0490) were executed by BOEM on December 1, 2014. See BOEM, Maryland Activities (2017), available at: https://www.boem.gov/maryland/.  
^{127}\ Id. at 3.
stakeholders such as the USCG and the DoD were the subject of discussions during our evidentiary proceedings.\textsuperscript{128}

We note that, while the Act requires us to verify the existence of feedback opportunities for these crucial stakeholders during the federal leasing process, we are persuaded that continued consultation between the Applicants and the DoD and maritime industry representatives regarding turbine siting is essential to reducing the risk of unintended consequences associated with either project. Thus, we require as a condition to an OREC award the commitment suggested by US Wind for an ongoing dialogue with these stakeholders regarding any changes to the siting and turbine model selection contemplated in the Applications pending before us.\textsuperscript{129}

**B. Opportunities for Minority Business Enterprise Participation and Minority Investors; Workforce Diversity Initiatives**

In enacting the Maryland Offshore Wind Energy Act of 2013, the General Assembly was unambiguous in its intent that minority business enterprises (“MBE”) and minority investors be considered as viable and active participants in the State’s prospective new industry. The unequivocal statutory directive to any OSW applicant that it make serious, good-faith efforts to solicit and interview a reasonable number of minority investors, should an applicant seek investors in its proposed OSW project,\textsuperscript{130} was further bolstered by a statement of purpose regarding use of the Maryland Offshore Wind Business Development Fund (the “Fund”); specifically, that the Fund be used to “encourage emerging businesses in the State, including minority-owned emerging

\textsuperscript{128} Tr. at 398-400 (Chairman Hughes/Rich) and 433-438 (Commissioner O’Donnell/Rich).

\textsuperscript{129} Tr. at 437-438 (Commissioner O’Donnell/Rich). Witness Rich commented that concerns expressed previously by these stakeholders involved the height of the turbines, rather than their placement. Tr. at 436.

\textsuperscript{130} PUA § 7-704.1 (d)(4).
businesses, to participate in the emerging offshore wind industry.”  
Accordingly, MEA has allocated $4 million of the $32 million Offshore Wind Development Fund expenditures for this purpose and the Applicants may be a resource to MEA regarding planned grant programs in fiscal years 2018 and beyond.  
Further, any approved OSW applicant is statutorily required to consult with the Governor’s Office of Minority Affairs (“GOMA”) and the Office of the Attorney General (“OAG”) to establish a clear plan for setting reasonable and appropriate MBE goals and procedures for each phase of the Qualified Offshore Wind Project within six months of our Order.

Thus, in reviewing the two Applications pending before us, we considered seriously – as evidenced especially by our extensive questioning during the hearings – the good faith efforts and outreach made by each of the Applicants to-date with respect to the development of opportunities for MBE participation and minority investment in the projects.  
As required by our Regulations, we also assessed the adequacy of the Applicants’ plan to engage minority businesses and whether evidence was provided of a good-faith commitment by each of the Applicants to solicit minority investors in future attempts to raise capital.

The record is replete with examples in which US Wind has met or exceeded the statutory and regulatory requirements on this subject matter.  In its Application, US Wind

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131 State Gov’t § 9-20C-03 (b)(2).
132 See Commission Ex. 3: MEA Offshore Wind Development Fund Expenditures (Sept. 2016); Tr. at 2026-2027 (Chairman Hughes/Fiastro).
133 2017 Md. Laws, ch. 438 (codified as PUA § 7-704.1 (e)(3)). A previous iteration of this provision, which was sunset effective June 30, 2016, would have prohibited the Commission from approving an OSW application if the “clear plan for setting reasonable and appropriate [MBE] goals and procedures for each phase of the qualified offshore wind project” was not finalized between the OSW applicant and GOMA prior to issuance of the Order. See Section 3 and Section 11, 2013 Md. Laws, ch. 003; COMAR 20.61.06.06.
134 See, e.g. Tr. at 402-410 (Cmmr. Williams / Rich); Tr. at 1185-1190 (Cmmr. Williams / Grybowski).
135 COMAR 20.61.06.03 B(1)(a)(xiv) – (xv).
details its commitment to MBE utilization and participation goals, noting that quantifiable project goals have been established already as follows: pre-construction – 15% (planning and design; finance and administration); construction – 15% (wind turbine assemblies; foundation and substructure; balance of plant); and operations and maintenance – 15% (windfarm operation and maintenance (“O&M”); other operation, administration, and management).\textsuperscript{136} In addition, US Wind requires that all major subcontractors embrace its MBE programmatic goals for the project, which will then be reinforced during pre-bid sessions and other procurement activities.\textsuperscript{137} Further, US Wind confirms that it is actively soliciting minority investors, and has received “indications of interest” from several.\textsuperscript{138}

Indeed, the execution of US Wind’s plan to engage MBE partners is not just theoretical, but has yielded already verifiable results. For example, the Applicant’s partnership with the Maryland Small Business Development Center to conduct workshops throughout the first half of 2015 yielded 85 MBE connections.\textsuperscript{139} US Wind also confirms that three minority and women-owned businesses are under contract or sub-contract for the Project currently.\textsuperscript{140} And, US Wind’s Application contains details regarding ongoing measurement, reporting, and assessment of MBE plan results to make certain that further achievement continues after receipt of an OREC award.\textsuperscript{141}

Skipjack’s MBE commitments with respect to its project are focused on prospective actions; however, the Applicant has represented that its track record of

\textsuperscript{136} Tr. at 405-407; US Wind Initial Brief at 20.
\textsuperscript{137} US Wind Initial Brief at 20.
\textsuperscript{138} Tr. at 29 (Rich).
\textsuperscript{139} US Wind Initial Brief at 21.
\textsuperscript{140} Id.
\textsuperscript{141} Id.
meeting the goals that it sets warrants our reliance on these commitments, and we concur.\textsuperscript{142} Skipjack has emphasized that for the portions of its project that will be located in-State, it will use good faith efforts to fully achieve Maryland’s goals for MBE participation.\textsuperscript{143} Further, Skipjack will require that its contractors use good faith efforts to achieve or exceed the goals of 29% MBE participation with respect to contracts for permitting services, engineering services, construction services, and maintenance services performed within Maryland.\textsuperscript{144} With respect to the solicitation of interest from minority investors, Skipjack commits to make serious, good faith efforts to interview minority investors in any future attempt to raise venture capital or attract new investors.\textsuperscript{145}

While the record developed in this matter reveals that one Applicant – US Wind – has demonstrated a greater degree of outreach and engagement of MBEs and potential minority investors to-date, we find that both US Wind and Skipjack have offered meaningful and significant commitments moving forward. Coupled with the conditions described below, we are confident that the projects sponsored by US Wind and by Skipjack will support the State’s commitment to diversity and equal employment opportunities, and ensure that the legislative intent to support inclusion of minority-owned emerging businesses in the State’s burgeoning offshore wind industry is realized.

Therefore, in issuing an OREC award to US Wind and to Skipjack, we condition the Order on the voluntary commitments to MBE participation goals and procedures

\textsuperscript{142} Tr. at 954 (Grybowski).

\textsuperscript{143} Skipjack Ex. 7 at 41-42.

\textsuperscript{144} Id.

\textsuperscript{145} Id. at 55. Although Skipjack initially conditioned this particular commitment in its Application upon the receipt of a “fully-approved, mutually-acceptable, un-appealable OREC Order,” we do not accept any such modifier language in the conditions we impose herein. We observe, however, that Skipjack subsequently articulated its acceptance of the change in law risk associated with this proceeding (Skipjack Ex. 11 at 3). We additionally note that Witness Grybowski described the remaining highlighted language as depicting a “timing issue” only (Tr. at 1006 (Grybowski)).
articulated in each Applicant’s respective submission. While we further condition our OREC award on each Applicant’s consultation, on or before six months of today’s Order, with GOMA and the OAG on establishing a clear plan for setting reasonable and appropriate MBE goals for each phase of the project, we view the voluntary plans adopted herein and described in the respective Applications as a floor or a “back-stop.” To the extent that any MBE participation goals or procedures developed later in consultation with GOMA and the OAG exceed those voluntarily developed by the Applicants, any more stringent item shall supersede the MBE goals or procedures described in the applicable Application and adopted through this Order. Additionally, every six months following issuance of this Order, the Applicants shall each file with the Commission a progress report regarding the establishment and implementation of MBE goals and procedures. Lastly, US Wind and Skipjack are directed to execute a memorandum of understanding with the Commission in which each Applicant agrees to make serious, good faith efforts to interview minority investors in any future attempts to raise venture capital or to attract new investors to its respective project.

In addition to the aforementioned conditions pertaining to MBE participation and opportunities for minority investors, we recognize too the significance of encouraging a more diverse workforce within the internal ranks of each Applicant’s company. As stated during our evidentiary hearings by Skipjack Witness Grybowski, the issue of setting up an internal workforce diversity plan is something that “as you move from a small project development company to a bigger project development company, you have to start considering. So, I think that’s a good idea.”146 Indeed, both Applicants acknowledged a

146 Tr. at 1190 (Cmmr. Williams / Grybowski).
willingness to engage in further discussions on this matter.\textsuperscript{147} Thus, we find it appropriate to also condition the OREC award on a requirement that each Applicant develop metrics to track the diversity of its internal workforce, and that reporting on these metrics occur in conjunction with the semi-annual reports on MBE goal attainment discussed above.

\section*{C. Lowest Cost Impact on Ratepayers of the Price Set Under a Proposed OREC Pricing Schedule}

The Commission is required by the Act to evaluate and compare the proposed OSW projects to determine the lowest cost impact on ratepayers of the price set under a proposed OREC pricing schedule.\textsuperscript{148} We concur with Staff that the issue of cost should be a paramount consideration in the determination we must make in this proceeding.\textsuperscript{149} While the Skipjack Application as proposed reflects a lower OREC price schedule and would also result in a lower ratepayer impact than the US Wind project due to its smaller size, we note that certain conditions could be imposed to further mitigate the costs to ratepayers associated with the approval of either Application.\textsuperscript{150} Thus, we did not consider the lower cost proposed by Skipjack to be determinative in our decision with respect to whether to proceed with the US Wind Application.

Our consideration of “lowest cost impact on ratepayers” was more difficult in the abstract, however, especially as it pertains to our decision as to whether to move forward at this juncture with one or both Applications, or neither. Proponents of an “all in” approach, such as the Business Network, contend that the “selection of both projects

\footnotesize{\textsuperscript{147} Id.  
\textsuperscript{148} PUA § 7-704.1(d)(1).  
\textsuperscript{149} Staff Initial Brief at 5.  
\textsuperscript{150} See infra Section V.B for a full discussion of these conditions, the proposed OREC price schedule, and the ratepayer impacts associated with the Applications.}
provides greater competition and opportunities for Maryland businesses to participate in the development of the projects, and is likely to yield the lowest cost to ratepayers.”

Indeed, we have realized the benefits of competition through this proceeding already, and we concur with MEA that “it is undisputed that Maryland will gain more jobs if both projects move forward, than not.”

Furthermore, we are persuaded by the arguments against an incremental approach at this stage (which we understand to be grounded in the assumption that costs will come down significantly in the near future, thus potentially supporting a more robust second OREC award), given that “part of that cost reduction comes from competition and efficiencies from a maturing supply chain, which will not develop in Maryland without a project off the coast of the Delmarva Peninsula.” Moreover, we impose a condition on both Applicants (discussed later in this Order) that will capture for the benefit of Maryland ratepayers the vast majority of any near-term technology savings that an OSW project may realize during its construction phase.

Lastly, we find that a delay in the development of the State’s OSW industry, imposed by either a strict denial of the Applications or through an unwarranted extension to these proceedings, is unlikely to result in the lowest cost to ratepayers. As noted by MEA, not only has this proceeding involved significant time and resources from all parties, but the Investment Tax Credit – which is a component of both Applicants’ OREC

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151 Business Network Initial Brief at 5.
152 MEA Initial Brief at 12.
153 Id.
154 Business Network Initial Brief at 6.
155 See OPC Initial Brief at 23.
price bids – will decline annually hereafter, “possibly affecting [the Applicants’] ability to meet the revised price offers.”156

Therefore, we find that on balance the lowest cost to ratepayers in the context of realizing the goals outlined in the Maryland Offshore Wind Energy Act of 2013 will be achieved through our decision to jumpstart the burgeoning OSW industry in the State with an all-in approach.

D. Potential Reductions in Transmission Congestion Prices, Capacity Prices, Locational Marginal Pricing

The Act dictates that the Commission consider potential reductions in transmission congestion prices, capacity prices, and locational marginal prices for electricity that would result from the development of the proposed OSW project when evaluating and comparing the Applications.157 In compliance with the Regulations, the Applicants each included a discussion of the long-term effects of their respective proposed OSW projects on the PJM markets as part of the required cost-benefit analysis.158 While the Commission’s independent consultant undertook its own analysis using a different methodology,159 Levitan also qualitatively assessed the Applicants’ submittals, finding that both US Wind and Skipjack provided a discussion of the potential PJM market impacts in satisfaction of the Regulations.160

In evaluating and comparing the Applications on the basis of these criteria, we note that the side-by-side comparison facilitated by the independent Levitan analysis is particularly useful. Levitan concludes that Maryland ratepayers would benefit from
reduced energy and capacity prices, as well as reduced transmission congestion costs, attributable to both Applications. 161

E. The Extent to which the Cost-Benefit Analysis Submitted Under PUA § 7-704.1(c)(3) Demonstrates Positive Net Economic, Environmental, and Health Benefits to the State

Pursuant to the Act and the Regulations, an Application for Approval of a Qualified Offshore Wind Project is required to include a cost-benefit analysis that reflects each of the criteria outlined in PUA § 7-704.1(c)(3). The Commission must consider the extent to which this cost-benefit analysis demonstrates positive net economic, environmental, and health benefits to the State in reaching a decision on the Applications. 162

While our independent consultant in this matter conducted its own cost-benefit analysis for both Applications using the required statutory criteria, Levitan also qualitatively assessed the analyses supplied by the Applicants pursuant to the Regulations. 163 In regard to the US Wind submission, Levitan concluded that the net economic benefits reflected in US Wind’s Application may be overestimated. 164 With respect to the Skipjack submission, Levitan noted that the environmental impacts analysis was perhaps oversimplified. 165

Due to these observations, and to facilitate an appropriate side-by-side comparison of the Applications, Levitan recommended that we consider its

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161 Id. at ES-33 – ES-35.
162 PUA § 7-704.1(d)(1)(vi); COMAR 20.61.06.03.B(1)(a)(x).
163 COMAR 20.61.06.03.B(1)(a)(x).
164 Commission Ex. 2 at 64.
165 Id. at 148-149.
independently-developed cost-benefit analysis during our decision-making process. Although we conclude that the evidence presented by the Applicants indicates positive net economic, environmental, and health benefits will accrue to the State as a result of their respective proposed OSW projects, we further verified this determination by relying primarily on the Levitan analysis in reaching our ultimate determination later in this Order. In the end, Levitan’s independent analysis indicated that both proposed OSW projects would produce positive net economic, environmental, and health benefits to the State; albeit that the larger scope of the US Wind proposed OSW project would yield approximately double the benefits of the Skipjack proposed OSW project.

F. The Extent to which an Applicant’s Plan for Engaging Small Businesses, Contractors, and Skilled Labor Meets the Goals Specified in State Statute for Engagement, Hiring, and Compensation

The Act and the Regulations require the Commission to evaluate several aspects of how each proposed OSW project would affect employment, labor, and small businesses in the State. Specifically, the Commission must consider the extent to which the Applicants’ plans: propose to engage small businesses in furtherance of State goals; provide for the use of skilled labor and appropriate agreements to promote the prompt, efficient, and safe completion of the project; and, provide for compensation to employees and subcontractors consistent with the wages outlined in §§ 17-201 through 17-228 of the State Finance and Procurement Article.

In sum, the record evidence demonstrates that US Wind has taken concrete steps over the past year to engage small businesses throughout the State, and both Applicants

166 Id. at 64-65, 129, 131.
167 Id. at ES-42.
168 PUA §§ 7-704.1(d)(1)(vii) – (x); COMAR 20.61.06.03.B(1)(a)(v); COMAR 20.61.06.03.B(1)(a)(xiv).
are committed to using “good faith efforts” to do so moving forward.\textsuperscript{169} Additionally, the Commission’s independent consultant concluded that the Applicants have submitted acceptable strategies to comply with the requirements for the use of skilled labor and appropriate compensation.\textsuperscript{170} Although Levitan concluded that US Wind is further ahead in its demonstration of these commitments, we concur with our independent consultant that given the early stage of development for both proposed OSW projects, these criteria have been satisfied.\textsuperscript{171}

We note, however, that the Business Network suggests certain conditions are necessary to bolster the proposed OSW projects’ supply chain development and job growth commitments.\textsuperscript{172} The Business Network requests that the Commission condition approval of a project(s) on the developer(s) working directly with the Business Network and its members on several fronts, including: developing three discrete R&D projects with Maryland universities; providing Business Network members with a formal priority to compete and submit bids on supply chain opportunities; and providing input alongside the Business Network on the best use of the total Offshore Wind Business Development Fund, administered by MEA.\textsuperscript{173}

Although we concur wholeheartedly with the sentiments expressed by both Applicants with respect to the admirable efforts of the Business Network to mobilize the supply chain in Maryland,\textsuperscript{174} we decline to impose the requested conditions. Both Applicants are already members of the Business Network, and the record demonstrates

\textsuperscript{169} Commission Ex. 2 at ES-19 – ES-20.
\textsuperscript{170} Id. at 56-57, 121.
\textsuperscript{171} Id.
\textsuperscript{172} Business Network Initial Brief at 8.
\textsuperscript{173} Id. at 8-12.
\textsuperscript{174} See, e.g. Skipjack Reply Brief at 14; Tr. at 143-144 (Rich).
that both US Wind and Skipjack have actively participated and will continue to participate in Business Network-sponsored events moving forward. As stated by US Wind Witness Rich, the Business Network’s role “is always going to be complementary. It’s always going to be a catalyst for trying to allow us to reach out to these groups. So in that capacity, they are without equal.” Thus, we are confident that the Applicants will continue to take advantage of the expertise offered by the Business Network in development of the necessary supply chains in Maryland, without a need for us to legally compel US Wind or Skipjack to do so.

Finally, we note that MEA, through ongoing grants and loans from the Offshore Wind Development Fund to the Business Network, institutions of higher education, State agencies, and private and non-profit businesses, will continue to spur opportunities for the start-up and growth of small businesses and contractors in the State.

G. Siting and Project Feasibility

In enacting the Maryland Offshore Wind Energy Act of 2013, the General Assembly incorporated in the authorizing legislation a definition of a Qualified Offshore Wind Project, which includes criteria that speak directly to the siting of a proposed offshore wind farm. Of particular note is that the Act requires a proposed OSW project to be located on the outer continental shelf of the Atlantic Ocean, between 10 and 30 miles off the coast of Maryland. In addition to confirming satisfaction of these definitional criteria, the Act directs the Commission to evaluate the siting and feasibility

175 Skipjack Reply Brief at 14; Tr. at 145 (Rich).
176 Tr. at 145 (Rich).
177 See Commission Ex. 3.
178 PUA § 7-701(k)(1).
of a proposed OSW project when considering whether to proceed with one or both of the Applications.\footnote{PUA § 7-704.1(d)(1)(xi).}

With respect to the siting of its proposed OSW project, US Wind indicated initially its intent to locate the 248 MW wind farm that would be incentivized by the ORECs between 12 and 15 nautical miles off the coast of Maryland.\footnote{Tr. at 459 (Rich).} During our evidentiary hearings, US Wind submitted visual renderings of the entirety of the 750 MW wind farm it envisions constructing in the Maryland WEA. US Wind characterized the renderings as depicting a “worst case” scenario using the largest turbines under consideration and shown in different lighting conditions to illustrate visibility of the turbine blades from various perspectives and from ground level.\footnote{Tr. at 831 – 832, 838-839.} Although Witness Rich testified that he had sought local input on the impact of these visual renderings,\footnote{Tr. at 18, 20.} it became apparent from public comments that the viewshed impact was greater than at least initially anticipated by certain affected stakeholders.\footnote{See, e.g. Tr. March 25, 2017 Public Hearing (Berlin) at 75-76.} Subsequent to the Berlin public hearing, Witness Rich indicated that it was feasible to locate the proposed OSW project closer to the eastern edge of the Maryland WEA, thus reducing the visual impact; although, doing so would be costly.\footnote{Tr. at 2255 – 2257 (Chairman Hughes/Rich).}

With respect to the siting of its proposed OSW project, Skipjack indicated its intent to locate the 120 MW wind farm project approximately 17 to 21 nautical miles off the coast of Maryland in the Delaware WEA.\footnote{Skipjack Ex. 7 at IV.} Skipjack also presented visual renderings of its proposed OSW project during our evidentiary hearings, noting that the
smaller project size and use of larger turbines contemplated in its Application will reduce the visual impact of its proposal given that fewer turbines take up a smaller portion of the viewshed.\textsuperscript{186} The visual renderings reflected the view from ground level at 146\textsuperscript{th} Street in Ocean City, which Skipjack asserts is the closest point of its proposed OSW project viewable from Ocean City, Maryland.\textsuperscript{187}

Notwithstanding the legal permissibility of a proposed OSW project to locate as close as 10 miles off the coast of the State,\textsuperscript{188} we find that there is a strong public interest in ensuring that impacts to the viewshed as a result of an OSW project are minimized to the fullest extent possible. Toward this end, we are cognizant that today’s Order is not the final hurdle that either Applicant must overcome prior to the construction of their respective OSW projects. Indeed, the multitude of additional regulatory reviews that will be conducted by the federal government before either OSW project could begin construction were the subject of extensive discussions during our evidentiary hearings.\textsuperscript{189}

As confirmed during this proceeding, further consideration of viewshed impacts will be achieved through the consultation and environmental review processes that are undertaken when BOEM receives a Site Assessment Plan (“SAP”) or a Construction and Operations Plan (“COP”), and BOEM’s approval of a COP will be contingent on a proposed OSW project’s successful completion of a National Environmental Policy Act (“NEPA”) review.\textsuperscript{190} These federal review processes will be conducted prospectively, however. And, thus while our concerns are assuaged that additional opportunities for

\textsuperscript{186} Tr. at 915 – 916 (Grybowski).
\textsuperscript{187} Tr. at 906.
\textsuperscript{188} PUA § 7-701(k)(1)(ii).
\textsuperscript{189} See Commission Ex. 2 at 49-51, 115-117 (providing a full listing of permits and approvals necessary to construct the US Wind and the Skipjack proposed OSW projects).
\textsuperscript{190} Gowell Direct at 5-6.
feedback will be available to stakeholders, we conclude that it is necessary to condition our Order on several measures that we believe will further safeguard the public interest.

First, we condition our OREC award on the filing by each Applicant of its SAP, COP, and NEMA with the Commission contemporaneous with any submission to BOEM (or other relevant federal agency). Further, our OREC award is contingent on the positive review and/or approval of the SAP, COP, and NEMA assessment by the relevant federal agency. To the extent that the relevant federal agency directs the Applicant to alter any aspect of its SAP or COP to comply with federal or state requirements, the Applicant is directed to file with the Commission within 60 days of receiving such notice an explanation and description of any required modifications. Moreover, any more restrictive remediation or mitigation measure imposed by the relevant federal agency during these subsequent permitting and review processes is hereby incorporated as a condition of this Order.

Second, we condition our OREC award on the use by each Applicant of best commercially-reasonable efforts to minimize the viewshed impacts of their respective OSW projects, regardless of the outcome of the federal review processes described above. As suggested by several intervenors,\(^1\) we consider this condition to require US Wind to locate its 248 MW proposed OSW project in the eastern-most portion of the Maryland WEA that could reasonably and practicably accommodate the project, so as to

\(^1\) See, e.g. OPC Initial Brief at 33.
reduce visual impacts on the State’s coastal communities.\footnote{We recognize that additional costs will be incurred as a result of this condition, but do not authorize US Wind to recover such costs beyond the funding provided through the OREC price schedule established by this Order. Thus, US Wind may consider such costs in its determination of what constitutes “reasonably and practicably accommodate the Project”; although, we note that US Wind has committed to minimizing the viewscape impacts and engaging in a transparent manner with stakeholders. See US Wind Initial Brief at 28, 31.} We encourage both Applicants to continue consultations with stakeholders affected directly by the viewshed issue.\footnote{Any adjustments to the OSW project’s siting must conform to the definitional requirements of a Qualified Offshore Wind Project outlined in PUA § 7-701(k).}

\textit{Third}, we recognize that viewshed impacts are not limited to daytime activities, and thus we condition our OREC award on the requirement that each Applicant use best commercially-reasonable efforts to minimize the nighttime viewshed impacts as well. Both US Wind and Skipjack confirmed that their proposed OSW projects will comply with the Federal Aviation Administration (“FAA”) lighting requirements and the United States Coast Guard’s requirements for Aids to Navigation.\footnote{US Wind Response to Bench Data Request No. 2 (hereinafter, “US Wind Ex. 31”) at 8; Skipjack Response to Bench Data Request No. 2 (hereinafter, “Skipjack Ex. 16”) at 5.} Further, US Wind has indicated that requests for alternative lighting schemes to reduce visual impacts and extend the life of obstruction lights could be considered by BOEM during its review processes.\footnote{US Wind Ex. 31 at 12-13.} We instruct both Applicants to pursue vigorously any alternative lighting schemes that could reduce visual impacts on the State’s coastal communities while maintaining the safety and achieving the purpose for which the nighttime lighting schemes are required.

\textit{Fourth}, we condition our OREC award on the use of best commercially-reasonable efforts to minimize the sounds produced during the construction and operation phases of the Qualified Offshore Wind Project, both in-air and underwater, and
incorporate by reference any related monitoring or mitigation measures imposed by state or federal agencies during subsequent permitting and review processes. This condition stems from our recognition that concerns regarding the siting of the proposed OSW projects extend to more than just the potential impacts on the viewshed, and may include impacts on the coastal communities associated with noise produced during the construction or operations phase of the proposed OSW projects as well.

We solicited input from both Applicants during our proceeding regarding the proposed sound propagation monitoring that would be undertaken during the construction and operation phases of their respective proposed OSW projects, both under the water and by air. In response, US Wind noted its planned in-air and underwater sound modeling that will be conducted as part of its COP, and provided also the mitigation measures to be implemented for pile-driving included in the SAP for its meteorological tower. Skipjack noted that specific requirements for underwater noise monitoring will be established by relevant regulatory agencies during subsequent permitting processes, and will likely rely on hydrophones as the current standard. Skipjack also expects to utilize acoustic modeling to determine the distance that sound is anticipated to travel during pile driving. Overall, both Applicants observe that while construction noise may be audible from shore, it is expected to be minimal based on studies conducted to-date regarding sound propagation during pile driving and operational sounds from wind turbines. Regardless, the Applicants have both committed to adhering to local laws

196 US Wind Ex. 31 at 1-2.
197 US Wind Ex. 31 at 4-6; Skipjack Ex. 16 at 2-3.
and regulations, and limiting pile driving to daylight hours only, which we also impose as a condition of our Order.\textsuperscript{198}

Moreover, we received testimony from our independent expert consultant regarding the use of mitigation measures with respect to the construction noise associated with offshore wind projects in Europe, such as the utilization of “bubble curtains” to absorb the sounds propagating from pile driving.\textsuperscript{199} Witness Drunsic noted that the technologies deployed both to minimize impacts from construction noise and to minimize viewsesh impacts from lighting have evolved considerably in recent years, and will continue to be developed, tested, and deployed moving forward.\textsuperscript{200} Thus, we do not impose the use of any specific sound or lighting mitigation measures in this Order, recognizing that the applicable technologies will continue to evolve in the intervening years. Instead, we condition the OREC award on the use by each Applicant of the best commercially-available technology at the time of deployment to minimize the impacts of construction and operations noise stemming from the Qualified Offshore Wind Projects.

In addition to the aforementioned siting considerations, this statutory criterion directs us to consider the feasibility of each proposed OSW project, which we interpret herein to encompass the risk – or the minimization of risk – resulting from the Applicants’ outreach to local, state, and federal officials. As indicated by the record evidence, the outreach conducted by US Wind with Maryland and Delaware authorities in advance of these proceedings was extensive and commendable.\textsuperscript{201} On the other hand,

\textsuperscript{198} US Wind Ex. 31 at 1-6; Skipjack Ex. 16 at 1-3.
\textsuperscript{199} Tr. at 1952-1953 (Cmmr. O’Donnell / Drunsic).
\textsuperscript{200} Tr. at 1953 – 1954 (Cmmr. O’Donnell / Drunsic).
\textsuperscript{201} See US Wind Response to Commission Bench Data Request regarding Outreach Efforts (March 28, 2017). See also MEA Initial Brief at 4-5.
Skipjack’s approach, which has since garnered its share of adverse public commentary, can best be described as largely a “wait and see” tactic. While we appreciate that Skipjack is committed to engaging with Maryland and Delaware stakeholders moving forward, and indeed we condition our OREC award on such good faith and earnest efforts occurring in a timely fashion, we note that this “measured development philosophy” has introduced at least some degree of risk into the ultimate feasibility of the Skipjack project, since as we noted previously, there are many more opportunities at the federal level for stakeholders to weigh in.

In sum, we note that the siting and feasibility issues associated with each of the Applications introduces a degree of risk into whether either proposed OSW project will clear the full range of permitting hurdles that loom before them. We find, however, that this risk – at least in the strictly financial sense – is borne solely by the Applicants, given that our ratepayers will not fund the purchase of any ORECs until such time that the Qualified Offshore Wind Projects are generating electricity. Thus, we find that the siting and feasibility considerations articulated in this section, as appropriately mitigated by our imposed conditions, weigh in favor of proceeding with both Applications so that the State is in the best position to realize the objectives outlined by the Maryland Offshore Wind Energy Act of 2013. Further, we find that proceeding with both Applications mitigates the risk that an individual project may not come to fruition.

H. The Extent to which the Proposed Offshore Wind Project would Require Transmission or Distribution Infrastructure Improvements in the State

202 Skipjack Reply Brief at 29.
203 Id.
The Act and the Regulations require a consideration of transmission or distribution infrastructure improvements in the State that would result from construction of the proposed OSW project.\textsuperscript{204} The Applicants propose interconnecting to the transmission network located at various points on the Delmarva Peninsula – a process controlled by PJM. The PJM generation and transmission interconnection process is designed to identify any upgrades that may be required to the affected transmission system to support operation of the proposed generating facility.\textsuperscript{205} Owners of the proposed new generating facilities are financially responsible for the cost of any required upgrades.\textsuperscript{206}

As stated in its Application, US Wind applied already to PJM and received a queue position for its proposed interconnection to the Delmarva Power Indian River substation.\textsuperscript{207} The PJM System Impact Report for this queue position indicates that no transmission upgrades are necessary to interconnect the US Wind 248 MW proposed OSW project at this location on the Delmarva Peninsula.\textsuperscript{208}

Skipjack has not yet undertaken the formal PJM interconnection process, but did utilize an engineering firm to perform an evaluation of the interconnection feasibility of its proposed OSW project to two locations in Ocean City, Maryland.\textsuperscript{209} Based on this evaluation, Skipjack does not believe that any system upgrades will be required to accommodate the interconnection of its proposed OSW project at either location;

\begin{footnotesize}
\begin{enumerate}
\item PUA § 7-704.1(d)(1)(xii); COMAR 20.61.06.03.B(1)(a)(ix).
\item \textit{Id.}
\item Commission Ex. 2 at 76.
\item Skipjack Ex. 7 at Attachment 2-15.
\end{enumerate}
\end{footnotesize}
nevertheless, Skipjack confirms in its Application that it will not seek any additional recovery through its OREC price schedule regardless of the outcome of PJM’s formal process.\textsuperscript{210}

Given that both Applicants have accepted fully the financial risk of any transmission upgrades necessitated by interconnection of their proposed OSW projects to the grid, we find that this factor is not decisive as to whether one project should move forward over the other; rather, we note that both Applicants have satisfied the statutory requirement with respect to this criterion. Moreover, any associated financial risk will not be borne by our ratepayers.

I. Estimated Ability to Assist in Meeting the Renewable Energy Portfolio Standard Under § 7-703 of this Subtitle

The Act establishes an OREC carve-out, not to exceed 2.5%, from Tier 1 of the State’s RPS beginning no sooner than 2017.\textsuperscript{211} The Act and the Regulations instruct the Commission to review the estimated ability of a proposed OSW project to assist in meeting the State’s RPS, considering the expected generation confidence level associated with the proposed OREC amount (\textit{i.e.} P-50).\textsuperscript{212}

We find that both proposed OSW projects would contribute to the realization of Maryland’s RPS goals; albeit, US Wind will assist to a greater degree given its larger proposed project size. In addition to the annual contribution of 913,845 ORECs and 455,482 ORECs from the US Wind and the Skipjack OSW projects, respectively, it is possible that the proposed OSW projects could generate additional Tier 1 RECs (associated with generation in excess of the amount incentivized through this Order),

\begin{itemize}
\item\textsuperscript{210} Van Beek Direct at 6.
\item\textsuperscript{211} PUA § 7-703(b).
\item\textsuperscript{212} PUA § 7-703(d)(1)(xiii); COMAR 20.61.06.03.B(1)(a)(xii).
\end{itemize}
which could also be used by Maryland electricity suppliers to demonstrate compliance with the State’s RPS.\textsuperscript{213}

Further, as calculated by the Commission’s independent consultant in this matter, the ORECs generated by the US Wind proposed OSW project would offset $219 million (2016$) from being spent on Tier 1 RECs; ORECs generated by the Skipjack proposed OSW project would offset $102 million (2016$).\textsuperscript{214} MEA observes that, “[s]ince both of the Applicants are planning on making large in-State investments during portions of the design, construction, and operations and maintenance phases of project development, a significant amount of Maryland’s capital will remain in-State when OSW enters the RPS compliance matrix.”\textsuperscript{215} Given that we take great care in this Order to impose conditions on the Applicants so that the in-State investments are in fact realized, we find that this statutory criterion weighs in favor of approving both Applications.

\textbf{J. Any Other Criteria that the Commission Determines to be Appropriate}

In addition to the statutory criteria reviewed in the previous sections, the Act also authorizes the Commission to consider any other criteria that it deems appropriate when comparing and contrasting the Applications.\textsuperscript{216} Through the promulgation of our Regulations, the Commission expanded on several of the existing statutory criteria and adopted a multitude of additional considerations. Specifically, the Regulations instruct the Commission to consider the following supplemental factors beyond those outlined explicitly by statute: qualifications of the applicant’s project team; the reasonableness

\begin{itemize}
  \item \textsuperscript{213} Staff Initial Brief at 22.
  \item \textsuperscript{214} Commission Ex. 2 at ES-36.
  \item \textsuperscript{215} MEA Initial Brief at 8-9.
  \item \textsuperscript{216} PUA § 7-704.1(d)(1)(xiv).
\end{itemize}
and appropriateness of certain project characteristics; the applicant’s financial plan; demonstration of site control; project COD and schedule; if applicable, the reasonableness of the proposed transmission upgrade cost allocation methodology; the operations and maintenance plan; the decommissioning plan; and any unique attributes that distinguish a proposed project from another.217

We find that each of these additional criteria outlined in the Regulations was considered extensively in the development of our independent consultant’s report, and conclude that the Levitan qualitative analysis of these factors supports our decision not to disqualify from further consideration either of the Applications.218 We do, however, impose one condition on the Applicants after a review of these additional criteria and our independent consultant’s commentary: an approved OSW project developer must file contemporaneously with the Commission any modifications to its decommissioning plan, including any revisions to its decommissioning cost estimate, which is required to be updated and audited by BOEM every year.219

V. COMMISSION DECISION REGARDING FINDINGS REQUIRED BY PUBLIC UTILITIES ARTICLE § 7-704.1(e)

A. Positive Net Economic, Environmental, and Health Benefits to the State

On April 4, 2016, Governor Hogan signed into law an ambitious goal with bipartisan support: the reauthorization of the State’s Greenhouse Gas Reduction Act

217 COMAR 20.61.06.03.B(1)(a).
218 Commission Ex. 2 at ES-31. Note that the Regulations contemplate the elimination from further consideration of an application that the Commission determines represents a significant risk of not achieving successful commercial operation or is not likely to provide net economic, environmental, and health benefits to the State. COMAR 20.61.06.03.B(1)(b).
219 Commission Ex. 2 at 145. We note too that COMAR 20.61.06.01.E. requires an Applicant to notify the Commission within 30 days of its decision to amend the decommissioning plan contained in its Application.
(“GGRA”), targeted at reducing statewide greenhouse gas emissions 40% from 2006 levels by 2030. Together with the Maryland Offshore Wind Energy Act of 2013, both pieces of legislation mandate that measures taken to advance the outlined environmental and health objectives also demonstrate positive net economic benefits to the State as a condition precedent to their implementation. Specifically, the Commission is prohibited from approving an applicant’s proposed OSW project unless it demonstrates positive net economic, environmental, and health benefits to the State, based on certain statutory criteria.

Thus, a path forward is sought in which Maryland is a frontrunner in both economic and climate initiatives, striving to lead by example that the two objectives are not mutually exclusive. We strongly believe that the Qualified Offshore Wind Projects approved by our Order do just that, while simultaneously maximizing and protecting our ratepayers’ investment in them. Further, we find that great efficiencies – both economic and administrative – can be realized by positioning offshore wind projects to serve as practicable mitigation measures in the State’s forthcoming December 31, 2019 Greenhouse Gas Reduction Plan. As detailed below, it is our resolute conclusion that the offshore wind project proposed by US Wind, as well as the offshore wind project

221 Env’t § 2-1206(8)(vi).
222 PUA § 7-704.1(e)(1)(i). As a preliminary matter, we note that because the record provides sufficient evidence, as detailed below in Sections V.1.A - C, to demonstrate that the categories of economic, environmental, and health benefits accruing to the State as a result of each proposed OSW project independently yield net positive results, we do not reach the legal question of whether the statute indeed requires a separate finding of positive net economic and positive net environmental and positive net health benefits (or whether the benefits can be aggregated to offset the net ratepayer costs attributable to the proposed OSW project(s)). See Sierra Club/MLCV Reply Brief at 2 (discussing its contention that OPC has too narrowly construed the Act). We note, however, that since the record supports the conclusion that each category yields positive net benefits to the State independently (as described in subsequent sections), it follows that a collective consideration of the attributes would similarly yield a determination of positive net benefits to the State – to an even greater degree. Id. at note 2.
223 Env’t § 2-1205(c)(2).
proposed by Skipjack, demonstrate positive net economic, environmental, and health benefits to the State.

1. Positive Net Economic Benefits to the State

As posited by several intervenors in this proceeding, we believe that the legislative intent behind the Maryland Offshore Wind Energy Act of 2013 was to drive more than just short-term economic gains, as evidenced in part by the establishment of, and the substantial monies directed to, the Maryland Offshore Wind Business Development Fund. 224 Thus, while we reviewed the Applicants’ proposals in the context of the statutorily required demonstration of positive net economic benefits to the State, we considered too the proposition of the “First Mover Advantage” discussed at great length during our hearings. In short, we concur that “Maryland must develop a project that warrants investment in both infrastructure and jobs” in order to realize a return on our ratepayers’ investment in this nascent industry. 225 This does not, however, come without a sizeable price tag, and it is our solemn duty to ensure that our approval of the projects is conditioned on the realization of the economic commitments articulated in the Applications sponsored by US Wind and by Skipjack.

The economic commitments offered by both Applicants demonstrate a positive net benefit to the State as calculated by the Commission’s independent expert consultant in this matter. 226 Specifically, Levitan concluded that the commitments in the Applications will generate at least $610 million and $347 million of planned in-State expenditures during the development and construction phases of the US Wind and

224 PUA § 7-704.1(g).
225 US Wind Initial Brief at 12.
226 Commission Ex. 2 at ES-42.
Skipjack OSW projects, respectively. During the operations phase, an additional $744 million and $134 million of in-State expenditures (as calculated by Levitan) are projected to accrue as a result of the US Wind and Skipjack OSW projects, respectively. Further, both US Wind and Skipjack are projected to contribute significant tax revenues to the State during all phases of the OSW projects. Additional infusions of $6 million from each Applicant into the Maryland Offshore Wind Business Development Fund will further stimulate in-State economic growth as emerging businesses are provided with the financial assistance necessary to prepare for an active role in the State’s new industry.

Moreover, the development, construction, operation and maintenance activities of both proposed OSW projects are projected to translate into direct, indirect, and induced employment opportunities in areas of the State that remain vulnerable following the previous decade’s economic downturn. As State Senator Johnny Ray Salling (Baltimore County) – a representative of one such area – opined, “[o]ffshore wind is something we need to grab ahold of and run with. My district is home to Trade Point Atlantic, and these [ORECs] can help bring more jobs to Sparrows Point and the surrounding communities.” Indeed, Levitan’s independent estimate of in-State economic benefits reflects the potential for 7,050 new Maryland jobs (FTEs) as a result of the US Wind proposed OSW project and 2,635 new Maryland jobs (FTEs) as a result of the Skipjack

227 Id. at 39.
228 Id.
229 Id. Explicit in this statement is our dismissal of the argument that US Wind will not contribute tax dollars to Maryland, but rather to Delaware, as a result of its proposed interconnection point. See Skipjack Initial Brief at 42. We accept US Wind’s affirmation that, “[t]here is no debate that US Wind is subject to Maryland taxes now and in the future that will benefit the state” and note that the conditions imposed herein ensure that a sufficient nexus for Maryland to impose taxes on the US Wind project will exist. See US Wind Reply Brief at 25.
230 See PUA § 7-704.1(g). See also COMAR 20.61.06.05.
231 Maillog No. 214592: Case No. 9431 Public Correspondence File, (April 7, 2017).
proposed OSW project.\textsuperscript{232} Coupled with other representations made by both Applicants regarding the use of in-State assembly and staging locations, as well as in-State operating bases, these projections support the finding of our independent expert consultant, and our ultimate conclusion, that Maryland is well-positioned to significantly grow its employment ranks over the duration of both projects.\textsuperscript{233}

Despite the aforementioned overwhelming record evidence to the contrary, including the findings of the Commission’s independent expert consultant in this matter,\textsuperscript{234} OPC now contends that the benefits of both proposed projects fail “to overcome the sizeable total costs that they will impose on ratepayers throughout the State.”\textsuperscript{235} Specifically, OPC argues that the Applicants have not satisfied their respective burdens related to the demonstration of positive net economic benefits by failing to consider fully the impact on residential, commercial, and industrial ratepayers over the life of the proposed OSW projects.\textsuperscript{236} OPC alleges that the analysis is incomplete without additional information related to what impact, if any, higher electricity rates for businesses throughout the State will have on employment and wages.\textsuperscript{237} OPC also

\begin{itemize}
\item \textsuperscript{232} Commission Ex. 2 at ES-39.
\item \textsuperscript{233} \textit{Id.} at ES-41. The US Wind and Skipjack proposed OSW projects have both confirmed their intent to utilize Sparrows Point as the assembly and staging location, and Ocean City as the operating base, and we trust they will cooperate in doing so. \textit{Id.}
\item \textsuperscript{234} The Maryland Offshore Wind Energy Act of 2013 directs the Commission to rely on the services of independent consultants and experts when calculating net benefits to the State. PUA § 7-704.1(e)(2).
\item \textsuperscript{235} OPC Initial Brief at 11. This position appears to be a departure from OPC’s pre-filed testimony and that of its witness during the evidentiary hearings, during which Witness Chang conceded that it is a fair assessment of his final conclusion that the Commission should accept the Skipjack Application based on the rate impact calculations used in the Levitan report. \textit{See} Tr. at 2064 (Prevas/Chang). Further, Witness Chang confirmed that the primary focus of his testimony – as OPC’s sole witness – was to evaluate the criteria pertaining to ratepayer cost impacts. \textit{See} Tr. at 2065 (Prevas/Chang).
\item \textsuperscript{236} OPC Initial Brief at 12.
\item \textsuperscript{237} \textit{Id.}
\end{itemize}
contends that all analyses have ignored the statutory requirement to consider the impact of a proposed OSW project on businesses in the State.238

In sum, OPC disagrees with the findings contained in the Levitan Report, based on OPC’s evaluation of two statutory directives related to analyzing impacts on businesses. In doing so, OPC also disagrees with MEA that both Applications satisfy the prerequisites to a Commission decision as set forth in statute.239 And, OPC disagrees with the recommendation by the Business Network that the Commission approve both proposed OSW projects, with the Business Network noting that “Maryland stands at the doorstep of ushering in the true beginning of a new industry that could serve as a launching point for great economic growth for the State, its businesses, and community for years to come.”240

Upon reviewing the Applications and associated attachments (which number in the thousands of pages), the pre-filed testimony filed by all parties to the proceeding, the report prepared by the Commission’s independent consultant, and the transcripts spanning over two weeks of evidentiary hearings, we strongly disagree with OPC’s contention that a “gap in information”241 exists in this matter. It is simply untrue that none of the analyses evaluated completely the impact on residential, commercial, and industrial ratepayers over the life of the proposed offshore wind projects, as required by the Act.242 On the contrary, Levitan considered the issue to an exhaustive degree, reviewing qualitatively the cost-benefit analyses prepared by experts for each

238 Id.
239 MEA Initial Brief at 9-10.
240 Business Network Initial Brief at 1.
241 See OPC Initial Brief at 14.
242 PUA § 7-704.1(c)(3)(iv).
Applicant, as well as conducting its own independent cost-benefit assessment for both of the proposed OSW projects, focusing in turn on each of the enumerated statutory criteria.

As the record demonstrates, the commitments made by the Applicants will result in positive net economic gains accruing to the State and its citizens. To the extent that higher electricity rates are incurred by Maryland ratepayers as a result of today’s OREC award, any incremental negative economic impacts not captured already by the aforementioned analyses would be indirect or induced at best, thus constituting a de minimis further economic impact outside of the ratepayer impact calculations discussed later in this Order. Further, as Skipjack contends, “OWEA contains specific retail rate impact limits for OSW projects, and it is reasonable to interpret these relatively strict limits as the mechanism by which OWEA would restrict the impact of higher electricity rates on the economy.”

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243 Commission Ex. 2 at 62-68 (US Wind), and 128-136 (Skipjack).
244 Id. at 72-92 (US Wind), and 141-160 (Skipjack).
245 Levitan concluded that the revised price schedules proposed by each Applicant would yield total net Maryland ratepayer costs in the amount of $1,364 million (2016$) – US Wind, and $604 million (2016$) – Skipjack. See Levitan & Associates, Inc. Updated Net Ratepayer Impact Tables (hereinafter, “Commission Ex. 4”) at 1. However, Levitan projected the following in-State economic benefits attributable to each project: US Wind - $1,354 million (2015$) in-State expenditures, 7,050 new jobs (FTEs), and $48 million in direct taxes; and, Skipjack - $481 million (2015$) in-State expenditures, 2,635 new jobs (FTEs), and $26 million in direct taxes. See Commission Ex. 2 at ES-39, 91, and 159. In addition, as discussed previously, both Applicants will contribute $6 million to the Maryland Offshore Wind Business Development Fund as a condition of our OREC award. Thus, on balance, the Commission’s independent consultant concluded that both the US Wind and the Skipjack proposed OSW projects would result in positive net economic benefits to the State stemming from the combination of in-State expenditures, job creation, and tax revenue contributions. Commission Ex. 2 at ES-42. We note too that in an analogous circumstance, the Court of Special Appeals found that the Commission need not reduce the components of a cost-benefit analysis to a precise dollar value. Accokeek, Mattawoman, Piscataway Creeks Communities Council, Inc. v Maryland Pub. Serv. Comm’n, 227 Md. App. 265, 286-293 (2016).
246 As stated by Levitan Witness Parker, “I’m confident that the increases due to construction and operation of the project would outweigh any negative impacts due to higher electricity costs.” Tr. at 1839.
247 Skipjack Reply Brief at 6.
In short, we concur with MEA that the evidentiary record demonstrates that “both projects are in conformance with the requirements of PUA § 7-704.1(e)(1).”\textsuperscript{248} Indeed, the OSW project proposed by US Wind, as well as the OSW project proposed by Skipjack, demonstrates positive net economic benefits to the State based on the criteria specified in statute.\textsuperscript{249} And as noted by Local Union No. 5 Witness Beckman, “[t]he importance of a sizeable influx of high paying jobs to the citizens of the State of Maryland cannot be overstated, given the steady loss of such jobs…during the past several years.”\textsuperscript{250}

We do, however, conclude that additional steps are warranted to ensure that Maryland ratepayers realize the positive net economic benefits discussed in this section. The Applicants have both affirmed repeatedly their respective commitments to achieve the in-State benefits articulated in their Applications, reinforced by metrics and certain obligations.\textsuperscript{251} We accept these commitments as the basis for the conditions we impose herein.

Specifically, we find it appropriate to condition our OREC award on the requirement that US Wind and Skipjack at a minimum demonstrate, upon the

\textsuperscript{248} MEA Initial Brief at 10.
\textsuperscript{249} We find that the record demonstrates each of the cost-benefit analyses submitted in this matter considered at a minimum the requisite criteria prescribed by statute. \textit{See Commission Ex. 2 at 72-92 (US Wind), and 141-160 (Skipjack).} The statutory criteria detail the minimum requirements of a cost-benefit analysis, including: (i) a detailed input-output analysis of the impact of the offshore wind project on income, employment, wages, and taxes in the State with particular emphasis on in-State manufacturing employment; (ii) detailed information concerning assumed employment impacts in the State, including the expected duration of employment opportunities, the salary of each position, and other supporting evidence of employment impacts; (iii) an analysis of the anticipated environmental benefits, health benefits, and environmental impacts of the offshore wind project to the citizens of the State; (iv) an analysis of any impact on residential, commercial, and industrial ratepayers over the life of the offshore wind project; (v) an analysis of any long-term effect on energy and capacity markets as a result of the proposed offshore wind project; (vi) an analysis of any impact on businesses in the State; and (vii) other benefits, such as increased in-State construction, operations, maintenance, and equipment purchase. PUA § 7-704.1(c)(3).
\textsuperscript{250} Beckman Rebuttal at 1-2.
\textsuperscript{251} US Wind Ex. 31 at 17-19; Skipjack Ex. 16 at 14-15.
commencement of commercial operations, a level of direct in-State expenditures commensurate to the percentage basis described in their respective Applications.\footnote{252} Thus, US Wind’s demonstration should illustrate that at a minimum 19\% of total project development and construction costs were expended in-State, which could translate into as much as $291.6 million (2021\$) based on current spending projections;\footnote{253} Skipjack’s threshold for compliance will be that it has expended at a minimum 34\% of project development and construction costs within Maryland, which could translate into as much as $204.8 million (2021\$) based on current spending projections.\footnote{254} Given that these in-State expenditures are expected to generate positive net economic benefits for Maryland businesses, we find it reasonable to accept the remediation measure proposed by Skipjack should the required expenditures not occur.\footnote{255} Thus, in the event that an independent assessment reveals that the in-State expenditures of an Applicant have not met or exceeded the percentages imposed through this Order, then any shortfall shall be deposited into the Maryland Offshore Wind Business Development Fund to provide financial assistance to emerging State businesses. This remediation measure is appropriate given that it is reasonable the businesses benefiting from the Fund would have been disadvantaged by the lesser percentage of in-State expenditures.

\footnote{252 We do not find it prudent to condition the award on a specific dollar value of in-State expenditures as suggested by certain intervenors (see, e.g. MEA Initial Brief at 13), given that a subsequent condition adopted herein will provide for a shared refund component to ratepayers of any cost savings achieved during the construction phase of each OSW project. Rather, we base this condition on a percentage achievement metric, to allow for cost efficiencies to be realized while preserving the proportion of planned in-State expenditures committed to by US Wind and by Skipjack in their respective applications.}

\footnote{253 Commission Ex. 2 at 63. The figure presented in the Report is in 2015 dollars, and has been converted into 2021 dollars herein to provide a consistent comparison with the Skipjack value. $258.9 million (2015\$) x 1.02^6 (i.e. 6 years of 2\% inflation) = $291.6 million (2021\$).}

\footnote{254 Skipjack Ex. 16 at 15.}

\footnote{255 Id.}
Further, we conclude that the OREC award shall similarly be conditioned on the achievement of in-State direct employment opportunities projected to occur as a result of the proposed OSW projects.\textsuperscript{256} It is firmly within the control of each Applicant to ensure the realization of direct jobs located in Maryland stemming from their respective OSW project; although, we will permit some flexibility for these jobs to be created during various phases (\textit{i.e.} development, construction, operations and maintenance, de-commissioning). The Applicants are directed to execute detailed tracking of the direct full-time equivalent positions created during each phase of their respective OSW project, and to report these results to the Commission as a condition of today’s OREC award.

We are sensitive too, to the concerns noted by certain intervenors to the proceeding that the positive net economic benefits resulting from these OSW projects could become localized, while the costs will be borne by all Maryland ratepayers.\textsuperscript{257} While such a result is not proscribed by statute,\textsuperscript{258} we find it appropriate to impose certain conditions, which have been stipulated to by the Applicants and recommended by various intervenors, as a means by which to ensure that numerous areas of the State benefit directly from investments made in support of the OSW projects’ development. Thus, we accept as a condition to our Order the recommendation made by the Business Network that each Applicant use a port facility in Baltimore to serve as the marshaling port, and

\textsuperscript{256} Levitan projected that 1,298 direct jobs (FTEs) and 2,282 direct jobs (FTEs) would result from the US Wind project during the development/construction and the operating phases, respectively. For the Skipjack project, Levitan projected that 913 direct jobs (FTEs) and 484 direct jobs (FTEs) would result during the development/construction and the operating phases, respectively. Commission Ex. 2 at ES-39.

\textsuperscript{257} OPC Initial Brief at 13, citing the testimony of MEA Witness Fiastro (\textit{see} Tr. at 2033).

\textsuperscript{258} \textit{See} Skipjack Reply Brief at 6.
further, that each Applicant use a port facility in Ocean City to serve as the O&M port. In addition, each Applicant is required to locate an operations center within the State. In addition, we accept each Applicant’s commitment to invest significant monies and to pursue federal grants in support of the development of these facilities. Specifically, US Wind has pledged a $51 million investment in a steel fabrication plant and $26.4 million worth of upgrades at the Tradepoint Atlantic shipyard (also known as Sparrows Point), and Skipjack has factored in an expected $25 million investment in a Maryland steel fabrication facility.

In summary, we conclude that the OSW projects proposed by US Wind and by Skipjack each demonstrate positive net economic benefits to the State. The conditions imposed on each Applicant through this Order ensure that the Maryland ratepayers’ investment in the approved Qualified Offshore Wind Projects is warranted.

2. Positive Net Environmental Benefits to the State

259 Business Network Initial Brief at 12-14. This condition is consistent with the statement of intent made by both Applicants regarding the use of Sparrows Point as an assembly and staging location, and Ocean City as an operating base. See Commission Ex. 2 at ES-41.

260 Tr. at 1368 (Chairman Hughes/Van Beek). The term “operations center” is intended to capture a facility at which personnel are located for the purposes of monitoring the output of the offshore wind farm and controlling the turbines. Id. This is separate and distinct from the commitment by each Applicant to open a corporate office in the State, which US Wind has done already, See Tr. at 1203 (Witness Grybowski confirming that Skipjack plans to open a corporate office in Maryland).

261 US Wind Initial Brief at 10; Commission Ex. 2 at 90. Witness Rich also discussed the likelihood of a key contractor pursuing “activities in Salisbury up to the Wicomico River.” Tr. at 125. We strongly encourage both Applicants to consider utilizing ports in the Salisbury area and/or to encourage sub-contractors to utilize ports in the Salisbury area, so that the lower Eastern Shore is afforded its share of the good-paying direct, indirect, and induced job opportunities that the Applicants have committed to delivering.

262 Commission Ex. 2 at 158. Skipjack committed to utilizing the Tradepoint Atlantic shipyard (i.e. Sparrows Point) as its logistics hub in addition to locating a steel fabrication facility at that location. Tr. at 1203. Thus, we condition our OREC award on a minimum expenditure by Skipjack on port upgrades in addition to the planned investment in a steel fabrication facility. Because US Wind has dedicated $26.4 million for this purpose, and the Skipjack project’s capacity will be roughly half the size of US Wind’s project, we direct Skipjack to invest a minimum of $13.2 million in port upgrades at the Tradepoint Atlantic shipyard (or comparable port in the Baltimore region).
An Application for Approval of a Qualified Offshore Wind Project must demonstrate that positive net environmental benefits will accrue to the State.\textsuperscript{263} The demonstration must rely on an independent analysis of the environmental benefits to Maryland associated with a proposed OSW project, quantitatively expressed in terms of avoided air emissions and qualitatively discussed in terms of any impacts on the affected marine environment (based on publicly available information).\textsuperscript{264}

The State’s long-standing commitment to realizing reductions in greenhouse gas emissions and achieving the commensurate environmental and health benefits is evidenced by several bold initiatives, including: the GGRA goal of reducing carbon emissions 40\% by 2030; the RPS mandate to source 25\% of electricity consumed in-State from renewable energy resources by 2020; and the State’s participation in the Regional Greenhouse Gas Initiative. The Maryland Offshore Wind Energy Act of 2013 not only aligns itself with these objectives, it does so by enabling the State to achieve a greater share of its renewable energy goals with Maryland-based resources (rather than through an ever-growing reliance on out-of-state Renewable Energy Credits (“RECs”)), and its GGRA reductions in carbon emissions through trailblazing economic-development projects.

We concur with MEA that “[o]ffshore wind projects will directly benefit Maryland with fewer carbon emissions.”\textsuperscript{265} Indeed, the record evidence in this proceeding demonstrates that approval of one or both of the Applications pending before us will lower the carbon intensity of Maryland’s generation profile and result in positive

\textsuperscript{263} PUA § 7-704.1(e)(1)(i).
\textsuperscript{264} COMAR 20.61.06.03.B(3).
\textsuperscript{265} MEA Initial Brief at 9.
net environmental benefits to the State – quantitatively expressed in terms of avoided air emissions. Specifically, Levitan concluded through its independent forecast of avoided power plant emissions that reductions of harmful pollutants in the following amounts would accrue annually to Maryland over the twenty-year operational period of the proposed OSW projects.266

Table 1: Independent Estimate of Average Annual Change in Maryland Air Emissions (tons/year)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>US Wind</th>
<th>Skipjack</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO₂</td>
<td>(12,809)</td>
<td>(6,384)</td>
</tr>
<tr>
<td>NOₓ</td>
<td>(6.8)</td>
<td>(3.4)</td>
</tr>
<tr>
<td>SO₂</td>
<td>(3.1)</td>
<td>(1.6)</td>
</tr>
</tbody>
</table>

These reductions will greatly assist Maryland in reaching its goal of reducing carbon emissions 40% by 2030.267 Moreover, transitioning to clean energy sources such as OSW will further the State’s goal of providing environmentally sustainable electric service while not sacrificing reliability or hindering the growth of Maryland’s economy.

As noted by the Sierra Club/MLCV, no party to the proceeding presented any evidence during the hearings disputing that emission reductions would occur in Maryland as a result of the US Wind and Skipjack proposed OSW projects;268 although, the Applicants presented evidence that emission reductions stemming from their respective projects will actually be greater than estimated by our independent consultant.269 Subsequent to the hearings, however, OPC relies on the discussion presented by Levitan in its Report and during the hearings regarding a potential “market response” in western PJM (i.e. the potential displacement of new renewable energy generation in western PJM

266 Commission Ex. 2 at ES-40.
267 Commission Ex. 2 at ES-40; MEA Initial Brief at 9.
268 Sierra Club/MLCV Reply Brief at 3.
269 Commission Ex. 2 at ES-26; Skipjack Initial Brief at 43-47.
by the offshore wind project(s)) to justify OPC’s new position\textsuperscript{270} that “[o]ffshore wind
would, therefore, have a limited, if any, net reduction, or net increase, on total carbon
emissions.”\textsuperscript{271} We dismiss the validity and relevance of OPC’s statement on several grounds.

\textit{First}, we remain unconvinced that the “market response” contemplated in Levitan’s
analysis represents a reasonable or probable future scenario. We do not dispute the existence
of a “market response” concept as articulated by Levitan; nor do we dispute that the REC
market is “limited” by state statutes. We do, however, take issue with the conclusion that
because the proposed OSW project(s) would provide RECs in fulfillment of Maryland’s RPS
requirement, this will necessarily be \textit{in lieu of} an onshore wind project providing RECs to
Maryland or another state.\textsuperscript{272} Witness Parker confirmed during the hearings that the Levitan
analysis relied on an assumption that RPS targets in and around Maryland will continue to
mirror current law,\textsuperscript{273} which we find unlikely based on recent events, especially given that
our own State has acted to accelerate and increase the RPS obligation since the completion of
the Levitan analysis.\textsuperscript{274} Thus, any degree of continued state, federal, or market-driven
demand for new renewables in or adjacent to the PJM region will discount the realization of
the market response contemplated by the Levitan analysis and increase the emission
reductions realized by the proposed OSW projects in-State and throughout the PJM region.

\textit{Moreover}, even if the market response described by Levitan occurs, albeit at a slower rate,

\textsuperscript{270} As discussed previously, this appears to be a departure from OPC’s position in its pre-filed testimony. See also US Wind Reply Brief at 38-39.
\textsuperscript{271} OPC Initial Brief at 23.
\textsuperscript{272} Tr. at 1912 (Parker).
\textsuperscript{273} Tr. at 1912-1913 (Chairman Hughes/Parker). For example, not only has Maryland recently adopted a
more rigorous RPS mandate, but the Governor of New York is similarly discussing more stringent targets. Id.
\textsuperscript{274} See Commission Ex. 2 at 17-18, Figure 13. Note that Senate Bill 921 / House Bill 1106 (2016) revised
the statute so that the RPS became a 25% by 2020 mandate, as opposed to the previous iteration of 20% by
the net ratepayer cost would be lower than projected for each Application;\textsuperscript{275} thereby further
eroding OPC’s contention that the proposed OSW projects fail to demonstrate sufficient
benefits to outweigh the costs that will be borne by ratepayers.\textsuperscript{276}

Second, we dismiss as irrelevant OPC’s issues with the Skipjack environmental
benefits analysis. Regardless of whether Skipjack relied on “optimistic assumptions” to
monetize its estimate of environmental benefits, as alleged by OPC,\textsuperscript{277} the Levitan
analysis independently concluded that both proposed OSW projects would yield positive
net economic, environmental, and health benefits to the State.\textsuperscript{278} Besides, the Act does
not require the monetization of environmental benefits; rather, the Regulations dictate
that the demonstration must occur in part through a quantification of avoided air
emissions.\textsuperscript{279} OPC offers no evidence to support an argument that this requirement has
not been met.\textsuperscript{280}

Lastly, we reject any implication that a consideration of environmental benefits as
an offset to ratepayer costs is inappropriate in the context of this proceeding. As noted by
the Sierra Club/MLCV, “OPC’s implied argument seems to be that if the benefit would
not appear in the ratepayers’ utility bill, that benefit should not be considered by the
Commission.”\textsuperscript{281} On the contrary, the Act is explicit in its directive to consider the

\begin{footnotes}
\textsuperscript{275} Tr. at 1908 (Parker).
\textsuperscript{276} OPC Initial Brief at 23.
\textsuperscript{277} Id. at 21.
\textsuperscript{278} Commission Ex. 2 at ES-42.
\textsuperscript{279} COMAR 20.61.06.03.B(3).
\textsuperscript{280} OPC merely points to the Levitan discussion of a “market response” to justify OPC’s assertion that
“[o]ffshore wind would, therefore, have a limited, if any, net reduction, or net increase, on total carbon
emissions.” See OPC Initial Brief at 23. The Levitan analysis, however, concludes that even with an
assumed full “market response,” there will still be a reduction in Maryland air emissions – as required by
the Act and the Regulations. See Commission Ex. 2 at ES-40.
\textsuperscript{281} Sierra Club/MLCV Reply Brief at 3.
\end{footnotes}
positive net environmental benefits of a proposed OSW project;\textsuperscript{282} and, although the Regulations discuss quantifying these benefits in terms of avoided air emissions, this does not \textit{ipso facto} result in a finding that the value of these avoided air emissions to the State is zero.\textsuperscript{283}

Indeed, these avoided air emissions translate into economic benefits to the State even outside of the construct of direct monetization using a social cost of carbon. For example, the avoided air emissions realized by the US Wind and Skipjack OSW projects will also represent avoided compliance costs that would otherwise be required for purposes of achieving the State’s suite of ambitious climate goals. Reliance on OSW as a mitigation measure in the context of the State’s 40\% by 2030 GGRA carbon reduction goal means that some ratepayer or taxpayer dollars will not have to be expended to develop and implement an alternative reduction strategy. And, while opponents may argue that other potential mitigation measures may be less costly than OSW, it is important to note that low-hanging fruit and emissions reductions attributable to market forces were captured already by the Maryland Department of the Environment in its Plan to achieve the 25\% by 2020 GGRA carbon reduction goal.\textsuperscript{284} Further, reliance on OSW as a greenhouse gas mitigation measure is consistent with other directives in the GGRA, including that any proposed mitigation measure is required to “produce a net economic benefit to the State’s economy and a net increase in jobs in the State.”\textsuperscript{285}

\textsuperscript{282} PUA § 7-704.1(e)(1)(i).
\textsuperscript{283} A “lack of consensus [as] to the dollar value that should be attributable to avoided emissions” does not equate to a non-existent dollar value. Tr. at 1886.
\textsuperscript{285} Env’t § 2-1206 (8)(vi).
Additionally, as observed by several intervenors in this proceeding, “[m]any of the Tier 1 RECs purchased and retired in Maryland are created by renewable energy generation units in other states within PJM Interconnection,” thus resulting in RPS compliance costs benefiting largely out-of-state entities.\textsuperscript{286} By offsetting a share of Tier 1 RECs required for compliance, the approval of the US Wind and the Skipjack OSW projects will ensure that Maryland’s continued commitment to environmental initiatives does not preclude the State from realizing at least a portion of the direct economic benefits associated with the development of the renewable resources incentivized through the broader RPS mandate.\textsuperscript{287}

Notwithstanding our findings regarding the positive environmental benefits that will accrue to the State as a result of the US Wind and the Skipjack OSW projects, we are cognizant of the need to mitigate potential adverse implications to the affected marine environment stemming from these projects, which were highlighted especially by the Sierra Club/MLCV in this proceeding.\textsuperscript{288} Specifically, the Environmental Intervenors request that approval of either proposed OSW project be conditioned on limitations to construction and certain other activities during the peak migration season for endangered right whales.\textsuperscript{289} The additional protective measures suggested by the Environmental Intervenors include items such as enhanced real-time human monitoring for whale

\textsuperscript{286} MEA Initial Brief at 8. See also Sierra Club/MLCV Initial Brief at 23 (noting Commissioner O’Donnell’s statement that 70 – 75% of REC money is going out-of-state).
\textsuperscript{287} Id.
\textsuperscript{288} Sierra Club/MLCV Initial Brief at 26-28.
\textsuperscript{289} Id.
activity in the site area, restriction of activities to daylight hours, the use of noise-reducing tools and technologies, and a lower speed limit for vessels in the area.290

We concur that the Applicants must adopt precautionary protection measures such as those outlined by the Sierra Club/MLCV to ensure that marine mammals are protected from harm during the development, construction, and operation of the OSW projects, and thus condition our OREC award on this occurring.291 We also recognize that further environmental remediation measures may be imposed through subsequent state or federal agency review processes associated with necessary project permits, and thus incorporate by reference any such conditions with the expectation that the Applicants will employ the best mitigation measures available at the time of construction and commercial operations. With such conditions in place, we are confident that the OSW projects proposed by US Wind and by Skipjack will yield significant positive net environmental benefits to the State.

3. Positive Net Health Benefits to the State

When enacting the initial Renewable Energy Portfolio Standard, the General Assembly codified several of its findings in statute, such as that the benefits of electricity from renewable energy resources, including long-term decreased emissions, a healthier environment, increased energy security, and decreased reliance on and vulnerability from imported energy, accrue to the public at large.292 The focus on health benefits attributable to renewable energy resources continued in the Maryland Offshore Wind

290 Id. at 28.
291 We note that on brief, the Applicants and the Environmental Intervenors confirmed that an agreement has since been executed regarding a process for adopting the actual conditions necessary. See Sierra Club/MLCV Reply Brief at 5.
292 PUA § 7-702(b)(1).
Energy Act of 2013, with the General Assembly requiring a demonstration that positive net health benefits will accrue to the State as a condition precedent to our approval of a Qualified Offshore Wind Project.  

While the Regulations focus on a qualitative assessment of the health impacts associated with avoided air emissions, publicly-available studies do exist that quantify the health and climate benefits that can be derived from OSW in the Mid-Atlantic. In the event that we had relied on such methods of quantifying the associated health benefits, it would have served to further boost the positive net economic benefits realized by Maryland in conjunction with the US Wind and the Skipjack Qualified Offshore Wind Projects that are discussed earlier in this Order.

We limited our analysis, however, to the qualitative assessment of the health impacts associated with the avoided air emissions attributable to the OSW projects proposed by US Wind and by Skipjack, as calculated by our independent consultant in this matter. The independent forecast of avoided power plant emissions in Maryland over the proposed twenty-year operating terms of each OSW project found that emissions of several harmful pollutants (CO₂, NOₓ, and SO₂) would decrease significantly. Publicly available information demonstrates that the pollutants avoided by the approval

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293 PUA § 7-704.1(e)(1)(i).
294 COMAR 20.61.06.03.B(3).
295 See Sierra Club/MLCV Initial Brief at 24, stating that a recent study that concluded a 200 MW OSW farm in Maryland would result in $44 million in health benefits from avoided mortality rates thanks to reduced pollution (citing Jonathan J. Buonocore et al., Health and climate benefits of offshore wind facilities in the Mid-Atlantic United States at 3, (July 14, 2016) http://www.synapseenergy.com/sites/default/files/Health-Climate-Benefits-Offshore-Wind-14-068_0.pdf).
296 See supra Section V.A.1.
297 Commission Ex. 2 at ES-39 – ES-40. As discussed in Section V.A.2, infra, Levitan’s independent estimate concluded that the US Wind project would yield an average annual reduction in Maryland emissions of 12,809 tons/year (CO₂), 6.8 tons/year (NOₓ), and 3.1 tons/year (SO₂); the Skipjack project would yield an average annual reduction in Maryland emissions of 6,384 tons/year (CO₂), 3.4 tons/year (NOₓ), and 1.6 tons/year (SO₂). Id. at ES-40.
of the US Wind and the Skipjack OSW projects would otherwise result in detrimental impacts to human health and the environment.\textsuperscript{298} Specifically, the reduction of NO\(_X\) and SO\(_2\) pollutants, which contribute to the formation of smog and acid rain, will serve to alleviate or prevent certain respiratory problems for Marylanders and reductions in CO\(_2\) power plant emissions will help limit the adverse health effects of global warming.\textsuperscript{299}

The Sierra Club and Maryland League of Conservation Voters contend that approval of a “utility-scale, long-term OSW project will provide electricity to hundreds of thousands of Maryland residents while ensuring cleaner air and water and better health for all Marylanders.”\textsuperscript{300} Further, by “harnessing Maryland’s reserves of pollution-free OSW energy,” we can make significant progress in reducing the “serious public health impacts from air pollution, including asthma attacks and premature deaths.”\textsuperscript{301} Thus, we conclude that the record evidence demonstrates a positive net health benefit will accrue to the State as a result of our approval of the respective Applications for a Qualified Offshore Wind Project submitted by US Wind and by Skipjack.

**B. Projected Net Ratepayer Impacts and OREC Price Schedule**

Prior to the enactment of the Maryland Offshore Wind Energy Act of 2013, its proponents introduced similar legislation during the 2011 and 2012 legislative sessions.\textsuperscript{302} In both instances the proposed legislation was substantively comparable to the 2013 Act with a few key exceptions, such as, the inclusion of residential and nonresidential ratepayer protection measures in the form of price caps on monthly bill

\textsuperscript{298} Sierra Club/MLCV Initial Brief at 23-26.  
\textsuperscript{299} Commission Ex. 2 at ES-40.  
\textsuperscript{300} Sierra Club/MLCV Initial Brief at 24.  
\textsuperscript{301} \textit{Id.} at 23.  
\textsuperscript{302} House Bill 1054 (2011); House Bill 441 (2012).
impacts, as well as a cap on the underlying OREC price schedule. Specifically, as enacted the Act prohibits the Commission from approving a proposed OSW project unless: (i) the projected net rate impact for an average residential customer does not exceed $1.50/month (2012$); (ii) the projected net rate impact for all nonresidential customers (considered as a blended average) does not exceed 1.5% of nonresidential customers’ total annual electric bills; and (iii) the price set by the proposed OREC price schedule does not exceed $190/MWh (2012$). In the event that more than one OSW project is authorized, the ratepayer impacts of all Qualified Offshore Wind Projects may not collectively exceed the caps outlined in the first and second clauses.

The legislative history of the Act, coupled with the codified provisions involving permissible ratepayer impacts and lowest cost proposals, is particularly instructive in our review of the Applications pending before us. We concur with MEA that the State has already made the policy decision to authorize OSW development and the ratepayer impacts that may result from it, subject, of course, to the Commission’s duty to approve, conditionally approve, or deny individual applications. Nevertheless, we have taken great care to ensure that a decision to proceed with ratepayer supported OSW development in Maryland is accomplished at the lowest cost practicable. We take seriously the role with which we are charged, i.e. to effectuate the policies duly enacted by the General Assembly and the Governor, while seeking to maximize the benefits and minimize the costs to our ratepayers associated with implementing such policies.

303 US Wind Initial Brief at 6.
304 PUA § 7-704.1(e)(1)(ii)-(iv).
305 PUA § 7-704.1(e)(1)(ii)-(iv).
306 MEA Initial Brief at 10.
It was in this spirit that we issued our first Bench Data Request to the Applicants, after concluding that additional information was necessary to facilitate our statutory mandate to consider the “lowest cost impact on ratepayers of the price set under a proposed OREC pricing schedule”\textsuperscript{307} and to support the consideration of appropriate conditions. During our evidentiary proceedings, the Applicants acknowledged that we are authorized to impose conditions in a final order, including ones that may pertain to the OREC price schedule.\textsuperscript{308} Therefore, we find it appropriate to consider the OREC price schedules and resulting ratepayer impacts contained in the Applicants’ responses to Commission Bench Data Request No. 1, rather than the bids outlined in the November 30, 2016 Applications.

In response to Commission Bench Data Request No. 1, US Wind offered a dramatic reduction in its OREC price schedule, citing a number of factors that assisted the company in reducing project risk, and thus, project costs. US Wind noted that significant positive events in the United States offshore wind industry occurred in the last 12 to 18 months, such as: the successful award to US Wind of the northern New Jersey WEA; the designation of US Wind by BOEM as the “sole developer of interest” in the South Carolina WEA; the successful in-service operation of the Block Island Wind Farm; and the $42.5 million winning bid for the New York WEA.\textsuperscript{309} As a result, US Wind expects the reductions in its project risk to translate into an average 21% savings compared to the costs included in its November 30, 2016 Application, equating to an

\begin{flushright}
\textsuperscript{307} PUA § 7-704.1(d)(1)(i).
\textsuperscript{308} Tr. at 280, 302.
\textsuperscript{309} US Wind Response to Commission Bench Data Request No. 1 (hereinafter, “US Wind Ex. 24”) at 1-2.
\end{flushright}
OREC cost reduction of approximately $30/MWh.\textsuperscript{310} US Wind also confirmed that it could accept a 1.0% escalator for its OREC price schedule.\textsuperscript{311} Levitan concluded that the updated pricing offered by US Wind equates to a gross OREC levelized cost of $137.06/MWh (2012$), and estimated ratepayer impacts of $0.97/month (residential; 2012$) and 0.96% (nonresidential).\textsuperscript{312}

Skipjack, through its response to Commission Bench Data Request No. 1, similarly offered reductions in its OREC price schedule, albeit to a lesser degree given the relative starting points of each Applicant’s bid terms. Specifically, Skipjack states that it will accept a first-year OREC price of $163.0/MWh (2022$), escalating at a rate of 1.5% thereafter.\textsuperscript{313} Levitan concluded that the updated pricing offered by Skipjack equates to a gross OREC levelized cost of $131.93 (2012$), and estimated ratepayer impacts of $0.43/month (residential; 2012$) and 0.43% (nonresidential).\textsuperscript{314}

The updated OREC price schedules sponsored by the Applicants clearly demonstrate compliance with the applicable statutory directives individually, and also collectively (as confirmed by our independent consultant in this matter), given that the aggregate impact of the Applicants’ updated proposals would result in an approximate $1.40/month (2012$) residential impact and a 1.40% impact on nonresidential customer bills. This outcome is in stark contrast to the results of aggregating the Applicants’ proposed OREC price schedules contained in their November 30, 2016 Applications, \textit{i.e.} prior to realizing the benefits of competition in this proceeding, in which the US Wind

\textsuperscript{310} Id. at 2, 5.
\textsuperscript{311} Id. at 5.
\textsuperscript{312} Commission Ex. 4.
\textsuperscript{313} Skipjack Ex. 11 at 3.
\textsuperscript{314} Commission Ex. 4.
Application alone proposed to utilize all but one cent of the residential ratepayer cap authorized by the Act. Indeed, had we remained in this posture through the close of the evidentiary hearings, OPC’s argument on brief may have held water – but we are not. Instead, we have a healthy buffer between the aggregated projected net ratepayer costs of the Qualified Offshore Wind Projects and the ratepayer impacts permitted by the Act.

Nonetheless, OPC on brief contends that the uncertainty surrounding the underlying market projections used in the net ratepayer impact calculations necessitates approval of only one project, should the Commission choose to proceed at all.315 In support of its argument, OPC cites the testimony of its expert witness, who described how actual bill impacts will be different than projected if the assumptions underpinning the Levitan analysis regarding wholesale market price projections are not realized.316

We note that OPC’s witness was not unique in questioning the reasonableness of Levitan’s underlying assumptions, as well as the likelihood of whether prospective market changes or fluctuations would yield ratepayer impact results other than those projected in the Levitan analysis. We are persuaded, however, by the assertions of our independent consultant in this matter regarding the directionality of any potential forecasting errors, which significantly undercuts the OPC argument. Specifically, while Levitan contends that its analysis represents “the most likely forecast” and is neither aggressive nor conservative, Witness Parker confirms that the most probable direction of

315 OPC Initial Brief at 25-27.
316 Chang Direct at 17-19; OPC Initial Brief at 25-27.
any future market differences compared to his assumptions will likely yield lower net ratepayer impacts than projected in the Levitan report – not higher, as implied by OPC.317

Further, we impose certain conditions, which will ensure Maryland ratepayers support the development of two OSW projects at the lowest possible cost. First, in adopting an OREC price schedule through this Order, we find that it is appropriate to levy a gross levelized OREC price of $131.93 (2012$) on both Applicants, subject to a 1.0% price escalator.318 As recognized by Skipjack Witness Grybowski, the US Wind and Skipjack projects are “essentially” the same price – a statement relied on by US Wind in support of its proposal;319 thus, we find it reasonable that US Wind should yield to the lower OREC price proposed by Skipjack in response to Commission Bench Data Request No. 1. Indeed, to the extent that any project differences justify adoption of varying OREC price schedules for the Applicants, we would expect the US Wind proposal to benefit from and reflect certain economies of scale. While we appreciate the concern noted by MEA that US Wind may not yet have fully optimized its project costs320 (thus resulting in the slightly higher OREC bid), we are not persuaded that it is necessary to hold the US Wind Application in abeyance; rather, we find that this issue is adequately resolved through this condition.

Second, we adopt as a condition to our OREC awards the “open book” approach to construction-related capital expenditures for each Qualified Offshore Wind Project that

317 Tr. at 1907-1908. This is because the most probable discrepancies between the Levitan analysis and future market scenarios would translate into higher wholesale energy prices, capacity prices, or less of a market response – each of which would in turn yield greater revenues or avoided costs to offset the estimated net ratepayer costs stemming from each proposed OSW project. Id.
318 Witness Grybowski stated that Skipjack is “relatively agnostic” to a price escalator and that it would not affect Skipjack’s financing plan to adjust downward to a 1.0% price escalator. Tr. at 2330.
319 See US Wind Initial Brief at 7 (citing Tr. at 2335 (Grybowski)).
320 MEA Initial Brief at 5, 14.
was described initially by Skipjack. This approach serves as a mechanism for sharing savings with our ratepayers if the engineering, procurement, and construction (“EPC”) costs of the OSW project are less than that projected by US Wind or by Skipjack in their respective Applications. As a result, the Applicants will pay the equivalent of 80% of any realized savings into the escrow account(s) established in connection with the Qualified Offshore Wind Projects, which will then be refunded to ratepayers pursuant to the mechanism established in the Regulations. Through the imposition of this condition, we are persuaded that any remaining concerns articulated by certain intervenors (involving the need to pursue an incremental approach to OSW development so that future projects will benefit from and reflect the continued downward pressures on technology costs) are adequately resolved.

Collectively, the conditions imposed in this section will further reduce the net ratepayer impacts experienced by Maryland residential and nonresidential customers stemming from our approval of the Applications. Moreover, we are confident that the additional headroom between the aggregated OSW projects’ ratepayer impacts and the statutory caps, which will result from the conditions adopted in this Order, will more than offset any potential future market fluctuations, thereby ensuring that the cost caps

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321 Skipjack Ex. 11 at 6-7.
322 As recommended by Skipjack, we authorize a 7% buffer in the EPC costs utilized as the basis for this mechanism to provide the Applicants with sufficient flexibility to appropriately manage the project. Id. at 6.
323 While the Skipjack proposal contemplated a 50/50 sharing mechanism, in which the developer retained half of the realized savings, we accept OPC’s recommendation that we adopt an 80/20 sharing mechanism to align with the statutory requirement to pass through 80% of State and federal grants and other benefits to ratepayers. OPC Initial Brief at 31.
324 See COMAR 20.61.06.14.
325 See, e.g. MEA Initial Brief at 10-12.
326 The Applicants are also directed to comply with the conditions imposed by PUA § 7-704.2(c)(3).
envisaged by the Act are not just projected to be met – but will also be realized in practice.

VI. COMMISSION DECISION REGARDING FINDINGS REQUIRED BY PUBLIC UTILITIES ARTICLE § 7-704.2(a)

The Act directs the Commission to establish the offshore wind energy component of the RPS based on the projected annual creation of ORECs by Qualified Offshore Wind Projects.\(^{327}\) Although the Act requires a determination of the OSW component under PUA § 7-703(b)(12) through (17), which corresponds to calendar years 2017 through 2022 and later,\(^{328}\) the Commission is simultaneously governed by the statutory provision that states, “a payment may not be made for an OREC until electricity supply is generated by the offshore wind project.”\(^{329}\) Further, the RPS obligation for ORECs must be established on a forward-looking basis at least three years in advance of the calendar year in which the OREC purchase obligation is to take effect.\(^{330}\) Thus, collectively, the requirements imposed by the Act and by the Regulations, and supported by the record evidence in this proceeding, dictate that the offshore wind component of the RPS may begin no sooner than January 1, 2021.

The Commission’s independent consultant in this matter determined that the projected annual creation of ORECs by the US Wind project would equate to 53.0% of the offshore wind carve-out in its first year of commercial operations (\(i.e.\) 2020); the

\(^{327}\) PUA § 7-704.2(a)(1); COMAR 20.61.06.07.

\(^{328}\) Note that Senate Bill 921 / House Bill 1106 (2016) revised this section of the statute so that the RPS became 25% by 2020 mandate, as opposed to the previous iteration of 20% by 2022. 2017 Md. Laws, ch. 1 and 2. This revision did not affect the percentage limitation (2.5%) on the offshore wind energy component, but did result in a revision of the statute to now define the applicable obligations in PUA § 7-703(b)(12)-(15), corresponding to calendar years 2017 through 2020 and later. (emphasis added)

\(^{329}\) PUA § 7-704.1(f)(1)(iv)(1).

\(^{330}\) COMAR 20.61.06.08.A.
Skipjack project would equate to 25.9% of the offshore wind carve-out in its first full year of commercial operations (i.e. 2023). Therefore, the annual offshore wind component of the RPS translates into 1.33% and 0.65% for the US Wind and the Skipjack Qualified Offshore Wind Projects, respectively.

We note, however, that the Regulations instruct us to include a surplus to accommodate reasonable forecasting error in estimating overall electricity sales in the State. Given that the forecast of Maryland electricity sales relied on in this proceeding is derived from the PJM load forecast, we find it appropriate to utilize a measurement of reasonable forecasting error developed by PJM as well. The mean absolute percent error (“MAPE”), which is a commonly-accepted measure of prediction accuracy for forecasting methodologies, was calculated by PJM to be 3% in the specification utilized to develop the January, 2016 PJM Load Forecast Report used in this proceeding.

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331 Commission Ex. 2 at ES-41.
332 53.0% of the “not to exceed 2.5%” OSW carve-out equates to 1.33%; while 25.9% of the “not to exceed 2.5%” OSW carve-out equates to 0.65%. PUA § 7-703(b). While Levitan calculated this figure assuming a 2020 COD as proposed by US Wind, we note that an adjustment to the US Wind project for an OREC obligation beginning no sooner than January 1, 2021 is required to comply with the directive outlined in COMAR 20.61.06.08.A. However, the first-year offshore wind component of the RPS obligation for US Wind remains the same at 1.33%, given the projected Maryland energy forecast in 2021 (i.e. 913,845 ORECs ÷ 66,656 GWh = 1.33%).
333 COMAR 20.61.06.07.A(2).
334 Levitan and US Wind relied on substantially similar methodologies to develop a forecast of applicable load energy in Maryland over the operational life of each project, which leveraged the “January 2016 PJM Load Forecast Report” developed by PJM. To derive Maryland-specific projections, “[l]oad forecasts for Baltimore Gas & Electric, Allegheny Power, Delmarva Power and Light, Potomac Electric Power were used with a portion of each zone allocated to Maryland load. The forecast beyond 2031 was escalated at an annual rate consistent with the growth rate in the last year of the forecast.” See US Wind Ex. 1 at 5-5-9.
335 See PJM Interconnection, LLC, Updates to Load Forecast Methodology (Sept. 2, 2015) at 55, available at: http://www.pjm.com/~media/committees-groups/subcommittees/las/20150902/20150902-item-04-forecast-update.ashx. We note that PJM significantly revised its load forecasting methodology beginning with its 2016 load forecast. The MAPE calculated for the three-year out forecast, on a zonal-weighted basis, is 3% in the new specification. Id. Additional information pertaining to the development of the load forecasting models maintained by PJM, including analysis of the MAPE, is also available publicly through a PJM whitepaper. See PJM Resource Adequacy Planning Department, Load Forecasting Model Whitepaper (April 27, 2016), available at: http://www.pjm.com/~media/library/reports-notices/load-forecast/2016-load-forecast-whitepaper.ashx.
Thus, we have adjusted the forecast of Maryland electricity sales for 2021 – 2042 to reflect this potential 3% forecasting error, which results in the following RPS obligation for the purchase of ORECs over the twenty-year duration of each Qualified Offshore Wind Project approved through this proceeding.\textsuperscript{336}

*Table 2: Offshore Wind Component of the RPS Obligation for Purchasers of ORECs*\textsuperscript{337}

<table>
<thead>
<tr>
<th>Year</th>
<th>Offshore Wind Carve-out</th>
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<tbody>
<tr>
<td>2021</td>
<td>1.37%</td>
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<tr>
<td>2022</td>
<td>1.36%</td>
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<td>2023</td>
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<td>2024</td>
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<td>2025</td>
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<tr>
<td>2041</td>
<td>0.60%</td>
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<tr>
<td>2042</td>
<td>0.60%</td>
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\textsuperscript{336} Note that the obligation significantly increases in 2023 to account for the Skipjack Qualified Offshore Wind Project coming on-line, and decreases significantly in 2041 to reflect the end of the twenty-year OREC price schedule accepted for the US Wind Qualified Offshore Wind Project.

\textsuperscript{337} Note that the percentage obligation for the OREC carve-out fluctuates annually because the Maryland energy sales forecast is not static. *See, e.g.* US Wind Ex. 24 at Attachment Response to Bench Data Request 1-3.
Pursuant to the Act and the Regulations, electricity suppliers (i.e. the OREC purchasers) must purchase the necessary number of ORECs from the appropriate escrow account(s) to satisfy the RPS obligation determined in the above table, subject to the limitations prescribed in PUA §7-703(a)(3). This Order vests US Wind and Skipjack with the right to receive payments for ORECs according to the terms outlined herein. Nonetheless, such payments shall not be made for ORECs until and unless electricity is generated by the Qualified Offshore Wind Project. Further, ratepayers, purchasers of ORECs, and the State shall be held harmless for any cost overruns associated with a Qualified Offshore Wind Project; as such, any cost overruns – to the extent that they occur – can not be collected via an adjustment to the RPS OREC obligation determined through this Order. Similarly, any debt instrument issued in connection with a Qualified Offshore Wind Project approved through this Order must include language specifying that the debt instrument does not establish a debt, obligation, or liability of the State.

338 See PUA § 7-704.2(c). The limitations outlined in PUA § 7-703(a)(3) state that the portion of the RPS that represents offshore wind energy may not apply to electricity sales at retail by any electricity supplier in excess of: (i) 75,000,000 kWh of industrial process load to a single customer in a year; and (ii) 3,000 kWh of electricity in a month to a customer who is an owner of agricultural land and files an Internal Revenue Service Form 1040, Schedule F.


340 PUA § 7-704.2(f)(1)(iv)(2). We note that both Applicants have accepted the change in law risk, and thus, the State and its citizens shall be held harmless in the event that a change in federal law results in a lower investment tax credit incentive than assumed in the Applicants’ respective Applications.

341 PUA § 7-704.2(f)(1)(v).
VII. OTHER MATTERS: THE ATLANTIC GRID PROPOSAL

Although Atlantic Grid notes its support for the development of the offshore wind industry generally, it takes issue with the presumption that transmission for an OSW project should be bundled with the generation component and provided by the developer for a single OREC price. Instead, Atlantic Grid proposes unbundling of the generation and transmission components of an OSW project, and requests a specific finding from the Commission that this unbundling approach is in the public interest. Further, Atlantic Grid requests that the Commission conditionally approve the Applications subject to its proposed unbundling process, whereby an OREC award would be reduced by the amount of a developer’s avoided transmission costs in the event that an alternative transmission option is selected through a subsequent Commission hearing.

With the exception of OPC, no other party to the proceeding endorses the Atlantic Grid proposal as a condition to approval of one or both of the Applications. Staff states that it would assist the Commission in implementing the Atlantic Grid proposal if directed; although, Staff notes a recent Commission decision, which it interprets as arguing against the proposition that the Commission would choose to apply a liberal construction of its power to unbundle the transmission interconnection component from either proposed OSW project. Skipjack rebuts Atlantic Grid’s assertion that it is “undisputed” that “ratepayers are best served by ‘unbundling’ offshore

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342 Melnyk Direct at 4.
343 Atlantic Grid Initial Brief at 26.
344 Id.
345 OPC Initial Brief at 32-33.
346 Staff Reply Brief at 6-7.
wind transmission from generation," arguing instead that while the proposal may have some theoretical appeal, it is a very problematic model that may result in some stranded capacity. Moreover, Skipjack contends that, “Atlantic Grid’s rates will be the subject of a Federal Energy Regulatory Commission tariff that will not be subject to the OREC caps, and those rates will take into consideration potential liquidated damages.” (internal citations omitted)

While we appreciate the innovative thinking involved in the development of Atlantic Grid’s proposal, we cannot agree that it is in the public interest to condition the Order we issue today on the results of a to-be-determined second phase of this proceeding. We find that the uncertainty surrounding both the timing of such a proceeding, as well as its outcome, would work against the risk-avoiding measures that we have taken great care to implement in this Order, and could hinder the Applicants’ ability to secure the necessary project financing to ultimately realize the positive net economic, environmental, and health benefits to the State. Put simply, we conclude that adjustments to adequately account for the project-on-project risk that would be introduced through adoption of the Atlantic Grid proposal should not be made through this Order.

We do note, however, that our denial of the Atlantic Grid proposal should not be construed by the Applicants as a prohibition on their independent decision-making abilities to pursue potential cost-savings opportunities, such as a third-party transmission provider, after issuance of this Order. Our decision not to mandate a second phase of this

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347 Atlantic Grid Initial Brief at 1.
349 Id. at 13.
350 Tr. 1137 – 1139 (Grybowski).
proceeding to pursue alternative transmission arrangements does not foreclose the Applicants’ from relying on similar competitive market forces to voluntarily pursue such an option in a future filing with the Commission.\textsuperscript{351}

\textbf{VIII. CONCLUSION}

For the reasons set forth above, after conducting an evaluation and comparison of the Applications in accordance with PUA § 7-704.1(d), we find that the Applications filed by US Wind and by Skipjack satisfy the requirements enumerated in PUA § 7-704.1(e) and thus constitute Qualified Offshore Wind Projects pursuant to PUA § 7-701(k). Finding both Applications to also be in the public interest, we therefore approve the proposals of both US Wind and Skipjack, subject to the conditions set forth in the Appendices to this Order,\textsuperscript{352} which we consider to be conditions of our approval as contemplated by PUA § 7-704.1(b)\textsuperscript{353} and therefore not subject to modification without prior Commission approval. As required by PUA § 7-704.1(f), we also specify in this Order the OREC price schedule and its duration, as well as the number of ORECs that the Qualified Offshore Wind Projects may sell each year, as follows: (1) US Wind: 913,845 ORECs per year at a price schedule equivalent to a levelized price of $131.93 per OREC (2012$) using a 1.0% price escalator, beginning on January 1, 2021 for a duration of 20 years; (2) Skipjack: 455,482 ORECs per year at a price schedule equivalent to a

\textsuperscript{351} We note that the imposition of the cost-savings sharing mechanism as a condition to our approval of the Applications, discussed in Section IV.C, ensures that ratepayers would also benefit from an Applicant’s decision to pursue a third-party transmission provider subsequent to this Order.

\textsuperscript{352} Failure to abide by the requirements imposed by these Conditions shall be deemed a violation of the Order, entitling the Commission to take whatever action it deems appropriate.

\textsuperscript{353} See also COMAR 20.61.06.03.E(1)-(3).
levelized price of $131.93 per OREC (2012$) using a 1.0% price escalator, beginning on January 1, 2023 for a duration of 20 years.

IT IS THEREFORE, this 11th day of May, in the year Two Thousand Seventeen, by the Public Service Commission of Maryland,

ORDERED: (1) That the Application for Approval of a Qualified Offshore Wind Project submitted by U.S. Wind, Inc. is hereby granted, subject to the conditions and requirements contained in this Order and in Appendix A;

(2) That the approval of the Application filed by U.S. Wind, Inc. as a Qualified Offshore Wind Project pursuant to PUA § 7-701(k) vests U.S. Wind, Inc. with the right to receive payments for offshore wind renewable energy credits in accordance with the terms in this Order and in Appendix A;

(3) That U.S. Wind, Inc. shall notify the Commission in writing by May 25, 2017 whether it accepts the conditions of approval attached to this Order as Appendix A;

(4) That the Application for Approval of a Qualified Offshore Wind Project submitted by Skipjack Offshore Energy, LLC is hereby granted, subject to the conditions and requirements contained in this Order and in Appendix B;

(5) That the approval of the Application filed by Skipjack Offshore Energy, LLC as a Qualified Offshore Wind Project pursuant to PUA § 7-701(k) vests Skipjack Offshore Energy, LLC with the right to receive payments for offshore wind renewable energy credits in accordance with the terms in this Order and in Appendix B;
(6) That Skipjack Offshore Energy, LLC. shall notify the Commission in writing by May 25, 2017 whether it accepts the conditions of approval attached to this Order as Appendix B;

(7) That U.S. Wind, Inc. and Skipjack Offshore Energy, LLC remain subject to the jurisdiction of the Public Service Commission of Maryland for enforcement of the provisions in this Order and in the Appendices;

(8) That OREC purchasers are directed to purchase the necessary number of ORECs from the appropriate escrow account(s) to satisfy the RPS obligation determined in Table 2 of this Order, subject to the limitations prescribed in PUA §7-703(a)(3) and the conditions described herein; and

(9) That all other motions not granted herein are denied.

/s/ W. Kevin Hughes
/s/ Harold D. Williams
/s/ Michael T. Richard
/s/ Anthony J. O’Donnell
Commissioners
APPENDIX A – U.S. Wind, Inc.: List of Conditions Required for Approval of the Qualified Offshore Wind Project

IV. A. Opportunities for Representatives of the United States Department of Defense and the Maritime Industry to Express Concerns Regarding Project Siting

1. U.S. Wind, Inc. shall, within 30 days of reaching a decision regarding any changes to the project siting and turbine model selection contemplated in the November 30, 2016 Application, consult with representatives of the United States Department of Defense and the Maritime.

IV. B. Opportunities for Minority Business Enterprise Participation and Minority Investors; Workforce Diversity Initiatives

For purposes of the following conditions, “minority” means an individual who is a member of any of the groups listed in § 14-301(k)(1)(i) of the State Finance and Procurement Article.

2. U.S. Wind, Inc. shall, within 90 days of the issuance of this Order, sign a memorandum of understanding with the Commission that requires U.S. Wind, Inc. to make serious, good-faith efforts to interview minority investors in any future attempts to raise venture capital or attract new investors to the offshore wind project. U.S. Wind, Inc. shall coordinate with the Director of the Commission’s Office of External Relations in developing the memorandum of understanding, which shall not contain any limitations or conditions beyond those contemplated specifically by PUA § 7-704.1(d)(4).

3. U.S. Wind, Inc. shall, within 6 months of the issuance of this Order, engage in good-faith efforts to consult with the Governor’s Office of Minority Affairs and the Office of the Attorney General for purposes of establishing a clear plan for setting reasonable and appropriate minority business enterprise (“MBE”) participation goals and procedures for each phase of the Qualified Offshore Wind Project (the “Plan”).
   a. U.S. Wind, Inc. shall file with the Commission the Plan developed in consultation with the Governor’s Office of Minority Affairs and the Office of the Attorney General. The filing shall articulate any substantive differences between the Plan and the applicable MBE commitments described in U.S. Wind, Inc.’s November 30, 2016 Application.
   b. Every 6 months following the issuance of this Order, U.S. Wind, Inc. shall submit a report to the Commission on its progress establishing and implementing MBE goals and procedures. U.S. Wind, Inc. shall, within 90 days of the issuance of this Order, coordinate with the Director of the Commission’s Office of External Relations to develop the appropriate reporting template, which shall, at a minimum, compare and contrast the available data using monthly intervals.
4. U.S. Wind, Inc. shall make serious, good-faith efforts to implement the MBE goals and procedures stipulated in U.S. Wind, Inc.’s November 30, 2016 Application. Information regarding the attainment of the MBE goals, accompanied by an explanation and remediation plan for any shortfalls, shall be included in the semi-annual reporting required by Condition 3.b.

5. U.S. Wind, Inc. shall, within 90 days of the issuance of this Order, develop workforce diversity metrics and an associated reporting template in coordination with the Director of the Commission’s Office of External Relations. The workforce diversity metrics shall be included in the semi-annual reporting required by Condition 3.b.

IV. G. Siting and Project Feasibility

6. U.S. Wind, Inc. shall file its Site Assessment Plan (“SAP”), Construction and Operations Plan (“COP”), and National Environmental Policy Act (“NEPA”) documents with the Commission contemporaneous with any submission to the United States Department of the Interior’s Bureau of Ocean Energy Management (“BOEM”) and/or other relevant federal agency. The OREC award is contingent on the positive review and/or approval of the SAP, COP, and NEPA documents by BOEM or the relevant federal agency. To the extent that the relevant federal agency directs U.S. Wind, Inc. to alter any aspect of its SAP or COP to comply with federal or state requirements, U.S. Wind, Inc. is directed to file with the Commission within 60 days of receiving such notice an explanation and description of any required modifications. Any more restrictive remediation or mitigation measure imposed by the relevant federal agency during these subsequent permitting and review processes is hereby incorporated as a condition to the OREC award.

7. U.S. Wind, Inc. shall use best commercially-reasonable efforts to minimize the daytime and nighttime viewshed impacts of its Qualified Offshore Wind Project, including through the reliance on best commercially-available technology at the time of deployment.

   a. U.S. Wind, Inc. shall locate its Qualified Offshore Wind Project in the eastern-most portion of the Maryland Wind Energy Area that can reasonably and practicably accommodate its Qualified Offshore Wind Project.

8. U.S. Wind, Inc. shall use best commercially-reasonable efforts to minimize the sounds produced during the construction and operation phases of the Qualified Offshore Wind Project, both in-air and underwater. Any noise-related remediation or mitigation measure imposed by a state or federal agency during subsequent permitting and review processes is hereby incorporated as a condition to the OREC award.

Appendix A: U.S. Wind, Inc. - 2
9. U.S. Wind, Inc. shall abide by all applicable local laws and regulations pertaining to noise restrictions during the construction phase of its Qualified Offshore Wind Project.

10. U.S. Wind, Inc. shall restrict pile driving that occurs during the development and construction phases of its Qualified Offshore Wind Project to daytime hours only.

IV. J. Any Other Criteria that the Commission Determines to be Appropriate

11. U.S. Wind, Inc. must file contemporaneously with the Commission any modifications to its decommissioning plan, including any revisions to its decommissioning cost estimate, at the time of making any such required filing with BOEM.

V. A. 1. Positive Net Economic Benefits to the State

12. Pursuant to PUA § 7-704.1(g) and COMAR 20.61.06.05, U.S. Wind, Inc. shall make the following contributions to the Maryland Offshore Wind Business Development Fund (the “Fund”) established under State Gov’t § 9-20C-03:
   a. Within 60 days after the issuance of this Order, U.S. Wind, Inc. shall deposit $2,000,000 into the Fund.
   b. Within 1 year after the initial deposit under paragraph (a) of this condition, U.S. Wind, Inc. shall deposit an additional $2,000,000 into the Fund.
   c. Within 2 years after the initial deposit under paragraph (a) of this condition, U.S. Wind, Inc. shall deposit an additional $2,000,000 into the Fund.
   d. Pursuant to COMAR 20.61.06.05, U.S. Wind, Inc. shall notify the Commission within 30 calendar days after each deposit due date whether timely and full payment has been made or not, and if not, an explanation for failure to make the payment.

13. Upon the commencement of commercial operations, U.S. Wind, Inc. shall demonstrate that a certain minimum level of direct in-State expenditures occurred during the development and construction phases of the Qualified Offshore Wind Project.
   a. The metric shall be the percentage of in-State direct expenditures compared to total capital expenditures for the Qualified Offshore Wind Project, and the threshold for compliance shall be a demonstration of percent in-State expenditures equivalent to or in excess of the following amount: 19%.
   b. U.S. Wind, Inc. shall contract with an independent expert to conduct the measurement of actual investment in the State of Maryland and the total capital budget for the Qualified Offshore Wind Project.
c. The report prepared by the independent consultant shall be filed with the Commission within 6 months of commencing commercial operations for the Qualified Offshore Wind Project.

d. In the event that the independent report submitted to the Commission does not demonstrate compliance with the required in-State spending threshold, then U.S. Wind, Inc. shall deposit the balance due within 6 months into the Maryland Offshore Wind Business Development Fund established under State Gov’t § 9-20C-03.

14. U.S. Wind, Inc. shall cause directly the creation of the following minimum level of new in-State jobs, measured in full-time equivalents: 1,298 direct development/construction period jobs, and 2,282 direct operating period jobs.

a. U.S. Wind, Inc. shall contract with an independent expert to conduct the verification of the direct jobs required by this condition.

b. U.S. Wind, Inc. shall file reports with the Commission demonstrating its progress in fulfilling this condition on the following schedule: (1) within 6 months of completion of the development/construction period; (2) within 18 months of commencing commercial operations of the Qualified Offshore Wind Project; and (3) within 6 months of commencing decommissioning activities for the Qualified Offshore Wind Project.

15. U.S. Wind, Inc. shall use a port facility located in the greater Baltimore region to serve as the marshaling port, defined as the facility from which the components are transported, loaded onto the installation vessel, and taken to the Qualified Offshore Wind Project.

16. U.S. Wind, Inc. shall use a port facility located in the Ocean City, Maryland region to serve as the operations and maintenance port.

17. U.S. Wind, Inc. shall locate a permanent operations center for the Qualified Offshore Wind Project within the State of Maryland for the life of the project.

18. U.S. Wind, Inc. shall invest in a Maryland steel fabrication plant in the minimum amount of $51 million.

19. U.S. Wind, Inc. shall invest in upgrades at the Tradepoint Atlantic shipyard, or a comparable Maryland port facility, in the minimum amount of $26.4 million.

V. A. 2. Positive Net Environmental Benefits to the State

20. U.S. Wind, Inc. shall adopt all appropriate precautionary measures designed to ensure that marine mammals are protected from harm during the development, construction, and operation of the Qualified Offshore Wind Project.

21. U.S. Wind, Inc. shall abide by all environmental remediation and mitigation measures imposed through subsequent state or federal agency review and permitting processes, and shall strive to utilize the best commercially available technologies to implement any required measures.
V. B. Projected Net Ratepayer Impacts and OREC Price Schedule

22. The OREC price schedule for the Qualified Offshore Wind Project is approved as follows:

   a. US Wind is authorized to sell up to 913,845 ORECs per year produced by its Qualified Offshore Wind Project, for a duration of 20 years beginning on January 1, 2021. The approved OREC price schedule shall not exceed a levelized OREC price of $131.93 (2012$), using a price escalator of 1.0%.

23. U.S. Wind, Inc. shall implement a mechanism for sharing savings if the engineering, procurement, and construction costs (“EPC Costs”) for the Qualified Offshore Wind Project are less than the EPC Costs reflected in Section 4-4 of U.S. Wind, Inc.’s November 30, 2016 Application, pursuant to the following conditions:

   a. U.S. Wind, Inc. may discount the baseline used for comparison in the implementation of this mechanism (i.e. the EPC Costs outlined in its November 30, 2016 Application) by up to 7.0% (the “Adjusted EPC Costs Baseline”).

   b. For purposes of implementing the mechanism, EPC Costs shall mean, the costs identified in the Application with respect to the development and installation of the Qualified Offshore Wind Project, including: (i) costs incurred in connection with the acquisition of the lease area; (ii) costs incurred in connection with Development and Project Management (including meteorology studies, geological and geophysical studies, preliminary design and engineering, permitting, transmission interconnection, and commercial and legal activities); (iii) costs incurred for engineering, design, procurement, fabrication, marshalling, logistics, installation and construction (including project management and inspection, detailed engineering and design, labor, supervision, tools, construction equipment, materials, components, supplies, transportation, services and subcontracts); (iv) costs incurred in procuring the WTGs, monopile foundations, export cable, interarray cable, port upgrades; (v) costs incurred to re-perform defective work; (vi) costs incurred to perform warranty work; (vii) sales and use taxes on goods and equipment purchased in connection with the work; (viii) costs of insurance; (ix) taxes or other fees; (x) costs to interconnect to the delivery point; and (xi) any capitalized costs of the facility as determined in accordance with U.S. GAAP and the Internal Revenue Code, including all regulations promulgated thereto.

   c. The mechanism for sharing savings will be implemented following the commencement of commercial operations of the Qualified Offshore Wind Project, as follows:
i. U.S. Wind, Inc. will retain a certified public accountant to prepare a report on the EPC Costs. The report shall verify the documented EPC Costs associated with the Qualified Offshore Wind Project. The report prepared by the certified public accountant shall be filed with the Commission within 6 months of commencing commercial operations for the Qualified Offshore Wind Project.

ii. Realized savings equal to the positive amount, if any, resulting from the formula: “Adjusted EPC Costs Baseline” minus documented EPC Costs.

iii. U.S. Wind, Inc. shall pay within 6 months after issuance of the report 80% of any realized savings into the escrow account established in connection with its Qualified Offshore Wind Project, to be refunded to ratepayers subject to the mechanism established in COMAR 20.61.06.14.

24. U.S. Wind, Inc. shall use best efforts to apply for all eligible State and federal grants, rebates, tax credits, loan guarantees, or other similar benefits as those benefits become available. U.S. Wind, Inc. shall pass along to ratepayers, without the need for any subsequent Commission approval, 80% of the value of any State or federal grants, rebates, tax credits, loan guarantees, or other similar benefits received by the Qualified Offshore Wind Project and not included in the November 30, 2016 Application. U.S. Wind, Inc. shall file a report with the Commission within 30 days of passing along to ratepayers any savings stemming from application of this condition.

VI. COMMISSION DECISION REGARDING FINDINGS REQUIRED BY PUBLIC UTILITIES ARTICLE § 7-704.2(a)

25. No payment may be made for an OREC until electricity supply is generated by the Qualified Offshore Wind Project.

26. Ratepayers, purchasers of ORECs, and the State shall be held harmless for any cost overruns associated with the Qualified Offshore Wind Project.

27. Any debt instrument issued in connection with the Qualified Offshore Wind Project must include language specifying that the debt instrument does not establish a debt, obligation, or liability of the State.
APPENDIX B – Skipjack Offshore Energy, LLC: List of Conditions Required for Approval of the Qualified Offshore Wind Project

IV. A. Opportunities for Representatives of the United States Department of Defense and the Maritime Industry to Express Concerns Regarding Project Siting

1. Skipjack Offshore Energy, LLC shall, within 30 days of reaching a decision regarding any changes to the project siting and turbine model selection contemplated in the November 30, 2016 Application, consult with representatives of the United States Department of Defense and the Maritime.

IV. B. Opportunities for Minority Business Enterprise Participation and Minority Investors; Workforce Diversity Initiatives

For purposes of the following conditions, “minority” means an individual who is a member of any of the groups listed in § 14-301(k)(1)(i) of the State Finance and Procurement Article.

2. Skipjack Offshore Energy, LLC shall, within 90 days of the issuance of this Order, sign a memorandum of understanding with the Commission that requires Skipjack Offshore Energy, LLC to make serious, good-faith efforts to interview minority investors in any future attempts to raise venture capital or attract new investors to the offshore wind project. Skipjack Offshore Energy, LLC shall coordinate with the Director of the Commission’s Office of External Relations in developing the memorandum of understanding, which shall not contain any limitations or conditions beyond those contemplated specifically by PUA § 7-704.1(d)(4).

3. Skipjack Offshore Energy, LLC shall, within 6 months of the issuance of this Order, engage in good-faith efforts to consult with the Governor’s Office of Minority Affairs and the Office of the Attorney General for purposes of establishing a clear plan for setting reasonable and appropriate minority business enterprise (“MBE”) participation goals and procedures for each phase of the Qualified Offshore Wind Project (the “Plan”).

a. Skipjack Offshore Energy, LLC shall file with the Commission the Plan developed in consultation with the Governor’s Office of Minority Affairs and the Office of the Attorney General. The filing shall articulate any substantive differences between the Plan and the applicable MBE commitments described in Skipjack Offshore Energy, LLC’s November 30, 2016 Application.

b. Every 6 months following the issuance of this Order, Skipjack Offshore Energy, LLC shall submit a report to the Commission on its progress establishing and implementing MBE goals and procedures. Skipjack Offshore Energy, LLC shall, within 90 days of the issuance of this Order, coordinate with the Director of the Commission’s Office of External Relations to develop the appropriate reporting template.
which shall, at a minimum, compare and contrast the available data using monthly intervals.

4. Skipjack Offshore Energy, LLC shall make serious, good-faith efforts to implement the MBE goals and procedures stipulated in Skipjack Offshore Energy, LLC’s November 30, 2016 Application. Information regarding the attainment of the MBE goals, accompanied by an explanation and remediation plan for any shortfalls, shall be included in the semi-annual reporting required by Condition 3.b.

5. Skipjack Offshore Energy, LLC shall, within 90 days of the issuance of this Order, develop workforce diversity metrics and an associated reporting template in coordination with the Director of the Commission’s Office of External Relations. The workforce diversity metrics shall be included in the semi-annual reporting required by Condition 3.b.

IV. G. Siting and Project Feasibility

6. Skipjack Offshore Energy, LLC shall file its Site Assessment Plan (“SAP”), Construction and Operations Plan (“COP”), and National Environmental Policy Act (“NEPA”) documents with the Commission contemporaneous with any submission to the United States Department of the Interior’s Bureau of Ocean Energy Management (“BOEM”) and/or other relevant federal agency. The OREC award is contingent on the positive review and/or approval of the SAP, COP, and NEPA documents by BOEM or the relevant federal agency. To the extent that the relevant federal agency directs Skipjack Offshore Energy, LLC to alter any aspect of its SAP or COP to comply with federal or state requirements, Skipjack Offshore Energy, LLC is directed to file with the Commission within 60 days of receiving such notice an explanation and description of any required modifications. Any more restrictive remediation or mitigation measure imposed by the relevant federal agency during these subsequent permitting and review processes is hereby incorporated as a condition to the OREC award.

7. Skipjack Offshore Energy, LLC shall use best commercially-reasonable efforts to minimize the daytime and nighttime viewshed impacts of its Qualified Offshore Wind Project, including through the reliance on best commercially-available technology at the time of deployment.

8. Skipjack Offshore Energy, LLC shall use best commercially-reasonable efforts to minimize the sounds produced during the construction and operation phases of the Qualified Offshore Wind Project, both in-air and underwater. Any noise-related remediation or mitigation measure imposed by a state or federal agency during subsequent permitting and review processes is hereby incorporated as a condition to the OREC award.

9. Skipjack Offshore Energy, LLC shall abide by all applicable local laws and regulations pertaining to noise restrictions during the construction phase of its Qualified Offshore Wind Project.
10. Skipjack Offshore Energy, LLC shall restrict pile driving that occurs during the development and construction phases of its Qualified Offshore Wind Project to daytime hours only.

11. Skipjack Offshore Energy, LLC shall conduct comprehensive and timely outreach with Maryland and Delaware local, state, and federal officials and agencies, particularly involving, but not limited to, the siting of its Qualified Offshore Wind Project. Skipjack Offshore Energy, LLC shall file a report summarizing these outreach efforts within 6 months of the issuance of this Order. Any mitigation or remediation measures voluntarily accepted by Skipjack Offshore Energy, LLC in response to the outreach efforts shall also be detailed at a minimum in the 6-month report; although, pursuant to COMAR 20.61.06.18.B, any material change to its November 30, 2016 Application must be reported to the Commission within 30 days of the date of that decision.

IV. J. Any Other Criteria that the Commission Determines to be Appropriate

12. Skipjack Offshore Energy, LLC must file contemporaneously with the Commission any modifications to its decommissioning plan, including any revisions to its decommissioning cost estimate, at the time of making any such required filing with BOEM.

V. A. 1. Positive Net Economic Benefits to the State

13. Pursuant to PUA § 7-704.1(g) and COMAR 20.61.06.05, Skipjack Offshore Energy, LLC shall make the following contributions to the Maryland Offshore Wind Business Development Fund (the “Fund”) established under State Gov’t § 9-20C-03:

   a. Within 60 days after the issuance of this Order, Skipjack Offshore Energy, LLC shall deposit $2,000,000 into the Fund.

   b. Within 1 year after the initial deposit under paragraph (a) of this condition, Skipjack Offshore Energy, LLC shall deposit an additional $2,000,000 into the Fund.

   c. Within 2 years after the initial deposit under paragraph (a) of this condition, Skipjack Offshore Energy, LLC shall deposit an additional $2,000,000 into the Fund.

   d. Pursuant to COMAR 20.61.06.05, Skipjack Offshore Energy, LLC shall notify the Commission within 30 calendar days after each deposit due date whether timely and full payment has been made or not, and if not, an explanation for failure to make the payment.

14. Upon the commencement of commercial operations, Skipjack Offshore Energy, LLC shall demonstrate that a certain minimum level of direct in-State
expenditures occurred during the development and construction phases of the Qualified Offshore Wind Project.

a. The metric shall be the percentage of in-State direct expenditures compared to total capital expenditures for the Qualified Offshore Wind Project, and the threshold for compliance shall be a demonstration of percent in-State expenditures equivalent to or in excess of the following amount: 34%.

b. Skipjack Offshore Energy, LLC shall contract with an independent expert to conduct the measurement of actual investment in the State of Maryland and the total capital budget for the Qualified Offshore Wind Project.

c. The report prepared by the independent consultant shall be filed with the Commission within 6 months of commencing commercial operations for the Qualified Offshore Wind Project.

d. In the event that the independent report submitted to the Commission does not demonstrate compliance with the required in-State spending threshold, then Skipjack Offshore Energy, LLC shall deposit the balance due within 6 months into the Maryland Offshore Wind Business Development Fund established under State Gov’t § 9-20C-03.

15. Skipjack Offshore Energy, LLC shall cause directly the creation of the following minimum level of new in-State jobs, measured in full-time equivalents: 913 direct development/construction period jobs, and 484 direct operating period jobs.

a. Skipjack Offshore Energy, LLC shall contract with an independent expert to conduct the verification of the direct jobs required by this condition.

b. Skipjack Offshore Energy, LLC shall file reports with the Commission demonstrating its progress in fulfilling this condition on the following schedule: (1) within 6 months of completion of the development/construction period; (2) within 18 months of commencing commercial operations of the Qualified Offshore Wind Project; and (3) within 6 months of commencing decommissioning activities for the Qualified Offshore Wind Project.

16. Skipjack Offshore Energy, LLC shall use a port facility located in the greater Baltimore region to serve as the marshaling port, defined as the facility from which the components are transported, loaded onto the installation vessel, and taken to the Qualified Offshore Wind Project.

17. Skipjack Offshore Energy, LLC shall use a port facility located in the Ocean City, Maryland region to serve as the operations and maintenance port.

18. Skipjack Offshore Energy, LLC shall locate a permanent operations center for the Qualified Offshore Wind Project within the State of Maryland for the life of the project.

19. Skipjack Offshore Energy, LLC shall invest in a Maryland steel fabrication plant, in the minimum amount of $25 million.
20. Skipjack Offshore Energy, LLC shall invest in upgrades at the Tradepoint Atlantic shipyard, or a comparable Maryland port facility, in the minimum amount of $13.2 million.

V. A. 2. Positive Net Environmental Benefits to the State

21. Skipjack Offshore Energy, LLC shall adopt all appropriate precautionary measures designed to ensure that marine mammals are protected from harm during the development, construction, and operation of the Qualified Offshore Wind Project.

22. Skipjack Offshore Energy, LLC shall abide by all environmental remediation and mitigation measures imposed through subsequent state or federal agency review and permitting processes, and shall strive to utilize the best commercially available technologies to implement any required measures.

V. B. Projected Net Ratepayer Impacts and OREC Price Schedule

23. The OREC price schedule for the Qualified Offshore Wind Project is approved as follows:

   a. Skipjack is authorized to sell up to 455,482 ORECs per year produced by its Qualified Offshore Wind Project, for a duration of 20 years beginning on January 1, 2023. The approved OREC price schedule shall not exceed a levelized OREC price of $131.93 (2012$), using a price escalator of 1.0%.

24. Skipjack Offshore Energy, LLC shall implement a mechanism for sharing savings if the engineering, procurement, and construction costs (“EPC Costs”) for the Qualified Offshore Wind Project are less than the EPC Costs reflected in Attachment 4-3 to Skipjack Offshore Energy, LLC’s November 30, 2016 Application, pursuant to the following conditions:

   a. Skipjack Offshore Energy, LLC may discount the baseline used for comparison in the implementation of this mechanism (i.e. the EPC Costs outlined in its November 30, 2016 Application) by up to 7.0% (the “Adjusted EPC Costs Baseline”).

   b. For purposes of implementing the mechanism, EPC Costs shall mean, the costs identified in the Application with respect to the development and installation of the Qualified Offshore Wind Project, including: (i) costs incurred in connection with the acquisition of the lease area; (ii) costs incurred in connection with Development and Project Management (including meteorology studies, geological and geophysical studies, preliminary design and engineering, permitting, transmission interconnection, and commercial and legal activities); (iii) costs incurred for engineering, design, procurement, fabrication, marshalling, logistics, installation and construction (including project management and...
inspection, detailed engineering and design, labor, supervision, tools, construction equipment, materials, components, supplies, transportation, services and subcontracts); (iv) costs incurred in procuring the WTGs, monopile foundations, export cable, interarray cable, port upgrades; (v) costs incurred to re-perform defective work; (vi) costs incurred to perform warranty work; (vii) sales and use taxes on goods and equipment purchased in connection with the work; (viii) costs of insurance; (ix) taxes or other fees; (x) costs to interconnect to the delivery point; and (xi) any capitalized costs of the facility as determined in accordance with U.S. GAAP and the Internal Revenue Code, including all regulations promulgated thereto.

c. The mechanism for sharing savings will be implemented following the commencement of commercial operations of the Qualified Offshore Wind Project, as follows:

i. Skipjack Offshore Energy, LLC will retain a certified public accountant to prepare a report on the EPC Costs. The report shall verify the documented EPC Costs associated with the Qualified Offshore Wind Project. The report prepared by the certified public accountant shall be filed with the Commission within 6 months of commencing commercial operations for the Qualified Offshore Wind Project.

ii. Realized savings equal to the positive amount, if any, resulting from the formula: “Adjusted EPC Costs Baseline” minus documented EPC Costs.

iii. Skipjack Offshore Energy, LLC shall pay within 6 months after issuance of the report 80% of any realized savings into the escrow account established in connection with its Qualified Offshore Wind Project, to be refunded to ratepayers subject to the mechanism established in COMAR 20.61.06.14.

25. Skipjack Offshore Energy, LLC shall use best efforts to apply for all eligible State and federal grants, rebates, tax credits, loan guarantees, or other similar benefits as those benefits become available. Skipjack Offshore Energy, LLC shall pass along to ratepayers, without the need for any subsequent Commission approval, 80% of the value of any State or federal grants, rebates, tax credits, loan guarantees, or other similar benefits received by the Qualified Offshore Wind Project and not included in the November 30, 2016 Application. Skipjack Offshore Energy, LLC shall file a report with the Commission within 30 days of passing along to ratepayers any savings stemming from application of this condition.
VI. COMMISSION DECISION REGARDING FINDINGS REQUIRED BY PUBLIC UTILITIES ARTICLE § 7-704.2(a)

26. No payment may be made for an OREC until electricity supply is generated by the Qualified Offshore Wind Project.

27. Ratepayers, purchasers of ORECs, and the State shall be held harmless for any cost overruns associated with the Qualified Offshore Wind Project.

28. Any debt instrument issued in connection with the Qualified Offshore Wind Project must include language specifying that the debt instrument does not establish a debt, obligation, or liability of the State.
Attachment 2

Memorandum of Understanding
August 14, 2017

ML#

David Collins, Executive Secretary,
Maryland Public Service Commission
William Donald Schaefer Tower
6 St. Paul St., 16th Floor
Baltimore, MD 21202

RE: Skipjack Offshore Energy, LLC. Memorandum Of Understanding (MOU)

Dear Mr. Collins:

Pursuant to Case 9431, Order No. 88192, Appendix A, Condition (4)(B)(2), the Director of the Maryland Public Service Commission Office of External Relations hereby files for consideration this Memorandum of Understanding and included data collection Templates, which summarize the terms and conditions agreed to by Skipjack Offshore Energy, LLC. The Company has reviewed and supports this filing.

Additionally, we respectfully request leave to file Template four identified in the MOU Appendix A. Template four will capture the MBE Goals to be developed as required in Order 88192 Appendix B, Condition (3). Order 88192 requires development of MBE Goals in conjunction with the Maryland Office of Attorney General and the Governor’s Office of Minority Affairs.¹ The Order grants the parties 6 months from the Order’s issue date to complete development of the MBE Goals. Accordingly, a new template will need to be developed to capture those goals.

Sincerely,

Odogwu Obi Linton, Esq., Director
Office of External Relations
Maryland Public Service Commission

CC: Skipjack Offshore Energy, LLC.

¹ The Office has since been renamed to the Governor’s Office of Small, Minority & Women Business Affairs. The new name is reflected in the proposed MOU.
I. INTRODUCTION

This Memorandum of Understanding ("MOU") between the Public Service Commission of Maryland ("Commission") and Skipjack Offshore Energy, LLC ("Company") is entered into pursuant to and as required by Maryland Public Utilities Article §7-704.1(d)(4)(ii)(3) and Condition (4)(B)(2) of Appendix B (Skipjack Offshore Energy, LLC) of Maryland Public Service Commission Case No. 9431, Order No. 88192, memorializes the understanding that the Company will voluntarily incorporate and encourage competitive bidding opportunities that include efforts to reach and notify companies that traditionally have not participated in energy development projects and markets. The Company shall engage in good-faith efforts to consult with the Governor's Office of Small, Minority & Women Business Affairs and the Office of the Attorney General to establish a clear plan for setting reasonable and appropriate minority business enterprise ("MBE") participation goals and procedures for each phase of the Company's Qualified Offshore Wind Project (the "Plan"). The Company shall also take serious, good-faith steps to interview minority investors in any future attempts to raise venture capital or attract new investors in the Company's Qualified Offshore Wind Project.

II. REPORTS

On May and November 11th of each year, the Company shall submit data on reporting templates, attached hereto. The reports, shall, at a minimum, compare and contrast the available data using monthly intervals to demonstrate the Company's adherence to the terms of the Conditions set forth in Maryland Public Service Commission Case No. 9431, Order No. 88192 and, this MOU. In addition, the Company will develop metrics to track the diversity of its internal workforce, and report on this goal in conjunction with the semi-annual reports on MBE
goal attainment discussed above. Specifically, the Company will report on its contracting and spend with firms that can be categorized as minority pursuant to Public Utilities Article 14-301(k)(1)(i). The Company shall retain records of the information relied upon to determine that a firm can be categorized as minority and, make them available to the Commission and its Technical Staff upon request. All reports shall include descriptive narrative and, shall be submitted with data on templates provided by the Commission. The Company shall make its representatives available for questions or clarification about the report and the data filed therein upon request from the Commission or its Technical Staff.

The Company shall also include a comprehensive description of the outreach efforts employed to announce and introduce opportunities to minority firms, including efforts to reach minority investors and efforts to diversify its workforce. This narrative shall reflect outreach efforts taken since the last Report, upcoming planned outreach efforts, successful results and lessons learned.

III. GOALS

During the evidentiary phase of the proceedings before the Commission, the Company's representatives, under oath, voluntarily committed to use good faith efforts to achieve a goal of 29% MBE participation for contracts for (i) permitting services, (ii) engineering services, (iii) construction services and (iv) maintenance services executed in the State of Maryland in connection with the Company's Qualified Offshore Wind Project, measured as a percentage of the total cost of such contracts. While the Commission and the Company acknowledge that this is an aggressive goal and that no specific timetable is set to accomplish this goal, the Company commits to using its best efforts to achieve the goals. The Commission and the Company
anticipate that the Company will consistently work and show progress towards this goal and, if
the Company determines that it is unable to reach its goal, it shall state so in its Report. The
Company shall provide explanation of its efforts to achieve the goal and the strategies it will
employ to reach the goal in the future.

For purposes of demonstrating the 34% minimum level of direct in-state expenditures
incurred in connection with the development and construction phases of the Company’s
Qualified Offshore Wind Project, as required by Condition 14 of Appendix B (Skipjack Offshore
Energy, LLC) of Maryland Public Service Commission Case No. 9431, Order No. 88192, the
total capital budget for the project will include the following expenditures: the costs identified in
the Company’s Application with respect to the development and installation of the Qualified
Offshore Wind Project, including: (i) costs incurred in connection with the acquisition of the
lease area; (ii) costs incurred in connection with development and project management
(including meteorology studies, geological and geophysical studies, preliminary design and
engineering, permitting, transmission interconnection, and commercial and legal activities); (iii)
costs incurred for engineering, design, procurement, fabrication, marshalling, logistics,
installation and construction (including project management and inspection, detailed engineering
and design, labor, supervision, tools, construction equipment, materials, components, supplies,
transportation, services and subcontracts); (iv) costs incurred in procuring the WTGs, monopile
foundations, export cable, interarray cable, port upgrades; (v) costs incurred to re-perform
defective work; (vi) costs incurred to perform warranty work; (vii) sales and use taxes on goods
and equipment purchased in connection with the work; (viii) costs of insurance; (ix) taxes or
other fees; (x) costs to interconnect to the delivery point; and (xi) any capitalized costs of the
facility as determined in accordance with U.S. GAAP and the Internal Revenue Code, including all regulations promulgated thereto. Direct in-state expenditures means expenditures made (i) for goods or services performed in the State of Maryland or off the coast of Maryland including the Delaware Wind Energy Area, (ii) to persons or entities with a physical presence in the State of Maryland or who pay taxes to or file tax returns with the State of Maryland, or (iii) to entities organized under the laws of the State of Maryland or chartered in the State of Maryland.

IV. ADDITIONAL TERMS

Through this MOU, the Company renews its commitment to facilitate contracting opportunities for Diverse Suppliers and to encourage opportunities for a diverse workforce. The Company agrees to review both its existing procurement and Diverse Supplier procurement programs on an annual basis and, where needed, modify its programs and inform the Diverse Supplier community of changes in a timely fashion, with the goal of further ensuring that Diverse Suppliers will have the maximum opportunity to participate and succeed in the competition for contracts for goods and services. Finally, the Company and the Commission agree that this MOU may be revised from time to time, with the consent of both parties, as experience is gained in its application or due to changes in legislation.

In negotiating this MOU, it is understood that the Company is not required to accept anything other than the lowest qualified bid for a project, and where necessary, may use organizations that do not meet the definition of minority as listed in Public Utilities Article 14-301(k)(1)(i) of the State Finance and Procurement Article. The Commission notes that it does not have jurisdiction over contracting or procurement complaints filed against the Company,
however through this MOU, the Company will maintain a process for receiving, reviewing and responding to Diverse Supplier procurement and workforce diversification related complaints.

The Commission may incorporate review of the Report as part of any public proceeding to review the progress of the project.

V. SIGNATURES

This Memorandum of Understanding is entered into this ____ day of ________________, 2012 by the undersigned on behalf of the Maryland Public Service Commission and ______ its Maryland-regulated affiliates.

_________________________  __________________________
Company

_________________________

_________________________

_________________________

Commissioners
Maryland Public Service Commission
APPENDIX A – REPORTING TEMPLATES

Template 1 - 14-301(k)(1)(i) spend breakdowns
  • Spend by minority category as compared to total spend by project phase

Template 2 – Workforce Diversity
  • Total workforce; total diverse; total hires;

Template 3 – Investment Report
  • Data about minority investor interviews (how many, funds raised, funds needed)

Template 4 – NAICS Code breakouts (template and categories to be developed in conjunction with the Governor’s Office of Small, Minority & Women Business Affairs and OAG)
### SPEND BREAKDOWN TEMPLATE

**COMPANY NAME:**

**FOR THE REPORTING PERIOD (MAY OR NOV):**

<table>
<thead>
<tr>
<th>LINE #</th>
<th>DESCRIPTION</th>
<th>DIRECT ($)</th>
<th>SUB CONTRACT ($)</th>
<th>DIVERSE SUPPLIER PROCUREMENT ($)</th>
<th>PERCENTAGE (%) OF DIVERSE SUPPLIER PROCUREMENT</th>
<th>TOTAL UTILITY PROCUREMENT ($)</th>
<th>PERCENTAGE (%) OF DIVERSE SUPPLIER ($) TO TOTAL UTILITY PROCUREMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>AFRICAN-AMERICAN</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>0.00%</td>
<td>$0</td>
<td>0.00%</td>
</tr>
<tr>
<td>2</td>
<td>AMERICAN INDIAN/NATIVE AMERICAN</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>0.00%</td>
<td>$0</td>
<td>0.00%</td>
</tr>
<tr>
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<td>0.00%</td>
<td>$0</td>
<td>0.00%</td>
</tr>
<tr>
<td>4</td>
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<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>0.00%</td>
<td>$0</td>
<td>0.00%</td>
</tr>
<tr>
<td>8</td>
<td>WOMEN</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>0.00%</td>
<td>$0</td>
<td>0.00%</td>
</tr>
<tr>
<td>10</td>
<td>PHYSICALLY OR MENTALLY DISABLED</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>0.00%</td>
<td>$0</td>
<td>0.00%</td>
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<tr>
<td>12</td>
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<td>$0</td>
<td>$0</td>
<td>0.00%</td>
<td>$0</td>
<td>0.00%</td>
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<tr>
<td>14</td>
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<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>0.00%</td>
<td>$0</td>
<td>0.00%</td>
</tr>
</tbody>
</table>
Public Service Commission of Maryland  
Case 9431, Order 88192  
Memorandum of Understanding  
Workforce Diversity Filing Template

WORKFORCE DIVERSITY TEMPLATE  
COMPANY NAME:  
FOR THE REPORTING PERIOD (MAY OR NOV):

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>TOTAL EMPLOYEES</th>
<th>PERCENTAGE OF MINORITY INTERVIEWS TO TOTAL</th>
<th>PERCENTAGE OF MINORITY OFFERS TO TOTAL</th>
<th>AVAILABLE POSITION MINORITY EMPLOYEE DELTA OVER</th>
<th>PERCENTAGE OF DIVERSE INTERVIEWS TO TOTAL</th>
<th>TOTAL MINORITY EMPLOYEE DELTA OVER REPORTING PERIOD</th>
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</thead>
<tbody>
<tr>
<td>BEGINNING OF PERIOD TOTAL EMPLOYEES</td>
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<td>TOTAL POSITIONS AVAILABLE</td>
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<td>TOTAL INTERVIEWS</td>
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<td>TOTAL OFFERS</td>
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<tr>
<td>END OF PERIOD TOTAL POSITIONS</td>
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<tr>
<td>AMERICAN INDIAN/NATIVE</td>
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<td>SOCIALLY OR ECONOMICALLY DISADVANTAGED</td>
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<tr>
<td>TOTAL</td>
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</tbody>
</table>
**INVESTMENT ANALYSIS TEMPLATE**

**COMPANY NAME:**

FOR THE REPORTING PERIOD (May or Nov):

<table>
<thead>
<tr>
<th>LINE #</th>
<th>NAME AND ADDRESS OF FIRM INTERVIEWED</th>
<th>WAS AN EQUITY SHARE PURCHASED?</th>
<th>IF NO, PLEASE PROVIDE CURRENT STATUS</th>
</tr>
</thead>
<tbody>
<tr>
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</table>
CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 14th day of August, 2017, a copy of the foregoing “Skipjack Offshore Energy, LLC. Memorandum Of Understanding (MOU)” was served by email to the interested party list and the parties that participated in the PC44 Consumer Protections and Customer Choice Workgroup.

Odogwu Obi Linton, Esq., Director
Office of External Relations
Maryland Public Service Commission
William Donald Schaefer Tower
6 St. Paul St.
15th Floor
Baltimore, MD 21202

410-767-8046
Attachment 3

Services Agreement
This Service Agreement ("Service Agreement") is made effective as of _______________, 2017 by and between Skipjack Offshore Energy, LLC ("Client") and ___________________________ ("Contractor").

WHEREAS, Client and its affiliates are in the business of developing, constructing, owning and operating renewable energy facilities, including offshore wind farms; and

WHEREAS, Client desires to hire Contractor to perform certain services as specified herein in connection with the Skipjack Offshore Wind Farm ("Project").

NOW THEREFORE, in consideration of the premises and mutual covenants set forth herein, and for other good and valuable consideration, the Parties hereby agree as follows:

1. DEFINITIONS, RULES OF INTERPRETATION, ORDER OF PRECEDENCE.

1.1. Definitions. All capitalized terms used but not otherwise defined in this Service Agreement shall, unless expressly otherwise stated, have the respective meanings set forth below.

“Affiliate” means a corporation, company or other entity directly or indirectly Controlling or Controlled by a Party.

“Change Order” shall mean a written agreement between Contractor and Client prepared and approved in accordance with the procedures of Article 5.

“Claims” shall mean claims, judgments, demands, causes of action, losses, liabilities, interest, awards, penalties, costs, fees and expenses (including without limitation, reasonable attorneys’ fees and legal costs).

“Client Representative” shall mean the individual Client designates in a Task Order as the “Client Representative.”

“Contractor Representative” shall mean the individual Contractor designates in a Task Order as the “Contractor Representative.”

“Control” means ownership of: (a) at least fifty percent (50%) of outstanding shares or securities; or (b) at least fifty percent (50%) of the ownership interest representing the right to make the decisions for such entity. Such entity shall be deemed to be an Affiliate only for the periods, either now or in the future, in which such ownership or control exists.

“Documents” mean the working studies, reports, sketches, estimates, drawings, proposals drawings, specifications, general conditions, supplementary general conditions, special conditions, addenda, change orders, and electronic submittals developed hereunder.

“Environmental Laws” shall mean all applicable federal, state or local laws, statutes, ordinances, regulations, rules, orders, permits, common law or the like relating to the environment, natural resources, safety, health or the regulation of Hazardous Material existing as of the execution of this Service Agreement or enacted or promulgated thereafter, including, without limitation, the

“Financing” shall mean indebtedness, whether secured or unsecured, loans, guarantees, notes, convertible debt, bond issuances, including pursuant to one or more lease transactions (including, but not limited to, sale-leaseback transactions or other tax-equity transactions, synthetic leases or other lease transactions for Financing purposes) and any refinancing of the foregoing.

“Force Majeure” shall mean an event or circumstance that wholly or partly prevents or delays the performance of any obligation by a Party, but only if and to the extent that: (i) such event is not within the reasonable control, directly or indirectly, and not the fault of or caused by the claiming Party and could not have reasonably been provided against by the claiming Party; (ii) such event, despite the exercise of reasonable diligence, cannot be prevented or avoided by the claiming Party; and (iii) such event, despite the exercise of reasonable due diligence, could not be foreseen. The failure of a subcontractor to perform shall not be a Force Majeure Event unless such failure was caused by a Force Majeure Event.

“Hazardous Material” shall mean any chemical substance, material or waste, in any form, whether solid, liquid, gaseous, semisolid or any combination thereof, comprised of or containing any hazardous material regulated under or subject to any Environmental Law including, without limitation, asbestos, polychlorinated biphenyls, petroleum, petroleum products, radioactive substances, medical and other potentially infectious or pathogenic waste or any substance or material which may be considered hazardous or otherwise subject to statutory or regulatory requirements governing handling, disposal and/or clean-up.

“Laws” shall mean all federal, state and local constitutions, charters, acts, statutes, laws (including Environmental Laws), ordinances, codes, rules, regulations, orders, permits and approvals and any legislative or administrative actions of any agency, department, authority, political subdivision or other governmental instrumentality and any final decrees, judgments or orders of any court, and the requirements set forth in applicable engineering and construction codes and standards in each case applicable to Contractor, Client or the Work.

“Lender” shall mean any Person or agent or trustee of such Person, including any tax equity investor, who provides Financing to Client, including pursuant to one or more lease transactions (including, but not limited to, sale-leaseback transactions, synthetic leases or other lease transactions) and shall include hedge providers and any assignee or transferee of such a party and any trustee, collateral agent or similar entity acting on behalf of such a party and any party to a sale-leaseback transaction or other tax-equity transaction.
“Party” shall mean Client or Contractor, as applicable.

“Person” means any natural person, corporation, limited liability company, partnership, firm, association, governmental authority or any other entity whether acting in an individual, fiduciary or other capacity.

“Project Permits” shall mean the governmental approvals identified in a Task Order and all other governmental approvals required to be obtained and maintained by the Client and/or Contractor under Law in order to perform their respective obligations hereunder.

“Project Requirements” shall mean: (i) Laws, (ii) this Service Agreement, (iii) the Project Permits, (iv) the prevailing standards and practices of the industry, and (v) prudent engineering and construction practices.

“Service Agreement” means this Service Agreement, the Annexes, any other attachments hereto, and any other documents incorporated herein by reference including any Task Order executed hereunder, as the context requires.

“Scope of Work” shall mean the scope of work described in each Task Order, as may be amended from time to time pursuant to a Change Order.

“Task Order” shall mean one or more task orders executed by Client and Contractor in substantially the form attached as Annex 2. Each Task Order shall be subject to and integrated into this Service Agreement.

“Technical Data” shall mean the documents and drawings delivered to Contractor by or on behalf of Client.

“Work” shall mean all work required to be performed by Contractor as mutually agreed to in separate written Task Orders executed by Client and Contractor under this Service Agreement.

“Work Product” shall include, as applicable, (a) all documents, maps, photographs, drawings, specifications and samples drawings, CAD materials, job books, data, recordings, tracings, specifications, calculations, diaries, memoranda, manuals, correspondence, documentation, plans, programs, plants, processes, products, costs, equipment, routes, reports, studies, designs, know how, trade secrets, communications written or oral and any other information, of any form or media, developed and created by Contractor or any subcontractor in connection with this Service Agreement; and (b) all intellectual property, invention or know-how Contractor or its subcontractors produce in performing this Service Agreement.

1.2. Rules of Interpretation. In this Service Agreement, unless the context indicates otherwise expressly provided:

(a) The singular includes the plural and the plural includes the singular.

(b) Words of the masculine gender include correlative words of the feminine and neuter genders.
(c) References to statutes, laws or regulations are to be construed as including all statutory or regulatory provisions consolidating, amending, replacing, succeeding or supplementing the statute, law or regulation referenced.

(d) References to “writing” include printing, typing, lithography, facsimile reproduction, electronic mail, portable document formats and other means of reproducing words in a tangible visible form.

(e) The words “approval” and “consent” shall be deemed to be followed by the phrase “which shall not be unreasonably withheld, unreasonably conditioned, or unduly delayed,” except as the context or express reference may otherwise require.

(f) The words “including,” “includes” and “include” shall be deemed to be followed by the words “without limitation” or “but not limited to” or words of similar import.

(g) References to articles, sections (or subdivisions of sections) or annexes are references to articles, sections (or subdivisions of sections) or annexes of this Service Agreement and are incorporated by reference unless otherwise indicated.

(h) References to agreements and other contractual instruments shall be deemed to include all exhibits and appendices attached thereto and all subsequent amendments and other modifications to such agreements and other instruments, but only to the extent such amendments and other modifications are not prohibited by the terms of this Service Agreement.

(i) References to Persons include their respective successors and permitted assigns.

(j) The headings or captions used in this Service Agreement are for convenience of reference only and do not define, limit or describe any of the provisions hereof or the scope or intent hereof.

1.3. **Order of Precedence.** It is understood that the Work is to be performed under this Service Agreement, including the terms and conditions hereof, together with the Annexes, which are intended to complement this Service Agreement. However, in the event of an inconsistency, the following order of precedence shall govern, in descending order, with the greatest precedence beginning with (a):

(a) The Service Agreement

(b) The Annexes, with Annex 1 having the highest priority

(c) Each Task Order

2. **PURPOSE, SCOPE AND REQUIREMENTS.**

2.1. **Services.** Contractor shall perform the Work for Client in accordance with this Service Agreement and the applicable Task Order. Contractor agrees to furnish all services, materials, equipment, vessels, aircraft, labor and supplies, special tools and software (including those
specified in a Task Order) and all business administration and superintendence necessary to perform the Work in accordance with its obligations under this Service Agreement and the applicable Task Order, consistent with the Project Requirements and as more particularly described in the Scope of Work.

2.2. **Personnel.** All Work shall be performed by the employees of Contractor unless otherwise agreed in writing by Client. Contractor shall be wholly and solely responsible for the Work or Subcontracted Services (hereinafter defined) provided by any officer, employee, agent, contractor or subcontractor of Contractor (collectively, “Contractor’s Personnel”). Contractor shall perform the Work according to the schedule and by the method specified in the Scope of Work and in character, sequence, and timing so that it will be coordinated with the work of others and in accordance with any schedules provided by Client (or by others acting on behalf of Client).

(a) When technical or professional subcontracted work or services and/or other outside services and facilities (collectively, the “Subcontracted Services”) have been procured by Contractor with Client’s prior written approval, Contractor shall issue subcontracts for Subcontracted Services in its own name.

(b) If Work is required to be performed offshore, Contractor’s Personnel engaged in such offshore work shall have undertaken United States Coast Guard certified offshore survival training.

(c) If Work is required to be performed in countries, including the United States, other than where Contractor is resident, Contractor shall be solely responsible for securing any required visas, travel permits or other travel documents or authorizations.

2.3. **Commencement of Work.** Client shall issue a written notice to Contractor authorizing Contractor to commence Work pursuant to a Task Order (the “Notice to Proceed”). Within three (3) days after issuance by Client of the Notice to Proceed, Contractor shall commence and diligently pursue the Work, assigning to it a priority so that the Work will be completed in accordance with the Scope of Work and the Project Requirements. Contractor understands and agrees that time is of the essence with respect to the execution and completion of the Work.

2.4. **Schedule.** The work schedule applicable to the Scope of Work specified in a Task Order (“Work Schedule”) shall be set forth in such Task Order. If no Work Schedule is specified, then Contractor shall prosecute the Work continuously to completion. Contractor shall complete its performance of the Work in accordance with the Work Schedule. On a monthly basis, commencing with the first month following the issuance of the Notice to Proceed, Contractor shall forward reports indicating the current progress of the Work, including a detailed comparison, in the same form and format as the Work Schedule, of the Work as and when it was actually performed against the Work Schedule and a detailed explanation of any variances from the Work Schedule to Client.

2.5. **Law; Project Permits; Project Requirements.** Contractor shall perform and shall cause all of its subcontractors to perform the Work and all of the obligations hereunder in accordance with the Project Requirements, Project Permits and all applicable federal, state, county or other
municipal laws, regulations, codes or other requirements applicable to the Work issued by any governing body having authority over the performance of the Work.

2.6. **Meeting and Reporting Requirements.** Contractor shall provide Client with monthly reports, or more frequently if requested by Client, regarding the status of the Work. At any time upon the prior reasonable request of Client, Contractor’s representatives shall attend meetings with Client and its designees to discuss the progress of the Work. Contractor’s Representative and Client’s Representative shall also meet once a week to discuss the progress of the Work. All meetings shall be held at Client’s offices or such other reasonable location as agreed to by Client and Contractor upon reasonable request by the Client, but not less than once per month.

2.7. **Quality Assurance, Safety and Emergencies.** Within thirty (30) days of the issuance of the Notice to Proceed, Contractor shall provide to Client a program describing the quality assurance programs and procedures to be used by Contractor in the performance of the Work, and Client shall have the right to review and comment on such programs. Contractor agrees to furnish to Client, at Contractor’s expense, material safety data sheets for the Work.

2.8. **Safety Program.** Contractor shall initiate, maintain and supervise safety precautions and programs necessary to comply with Law and to prevent injury to Persons or damage to property and shall incorporate all such safety precautions and programs in a written safety program manual. Such programs shall, at a minimum, meet the requirements of Client’s programs.

2.9. **Liens and Encumbrances.** Provided Client has paid Contractor undisputed amounts as required under this Service Agreement, Contractor shall upon request of Client, furnish a certification that no Liens are in force with respect to any portion of the Work and a waiver of all such lien rights Contractor may have in connection with the performance of the rest of the Work covered by the progress payment request. Such certificate shall be in form and content reasonably satisfactory to Client. Contractor shall supply similar certificates and lien waivers from all subcontractors.

2.10. **Reliance.** Contractor may not rely upon or make any claim against Client with respect to:

   (a) The completeness of the Technical Data;

   (b) Any Contractor interpretation of or conclusion drawn from any Technical Data or any such data, interpretations, opinions or information; and

   (c) Any Contractor assumptions.

2.11. **Vessels.** If the Services require the use of vessels, Contractor’s vessel(s) or vessel charters, as the case may be, shall meet the following minimum requirements and the vessel charters shall include the following terms and conditions unless otherwise agreed by Client in writing:

   (a) The vessel shall be tight, strong, staunch and in all respects seaworthy and shall comply with all applicable federal and state requirements, including without limitation the requirements in subparagraph (b) below.
(b) The vessel and her equipment shall in all respects be eligible under and shall comply with all applicable conventions, laws (including the Jones Act, as amended), regulations, requirements and recommendations for performing the Work in this Service Agreement and that she shall have on board for inspection by the relevant authorities all statutory and class certificates, records, compliance letters and other documents required, including but not limited to: (i) safety and health regulations, (ii) certificates required by the International Convention on Civil Liability for Oil Pollution Damage of 1969, the 1992 Protocol, the 2000 Protocol and any other subsequent amendments and extensions, and (iii) MARPOL 1973/1978 as amended, and SOLAS 1974 as amended, as applicable to each vessel, and the Oil Pollution Act of 1990, as amended.

(c) In the case of an actual or threatened discharge of oil or other hazardous substance from the vessel into the waters of the United States in which Contractor is operating (whether or not caused by Contractor’s negligence), Contractor will promptly undertake such measures as are reasonably necessary to prevent or mitigate pollution damage from thereby arising.

2.12. **Charters.** If the Services require Contractor to charter a vessel or an aircraft, Contractor shall be solely responsible for arranging such charter and Client shall have no obligation or liability to the owner of such vessel or aircraft.

3. **PRICE AND BILLING.**

3.1. **Price.** The price of the Work to be performed as specified in a Task Order shall be as specified in the applicable Task Order (the “Price”). Unless otherwise agreed such Price shall constitute the entire consideration due to Contractor for the Work.

3.2. **Invoices.** On a monthly basis, Contractor will issue to Client a single invoice for each outstanding Task Order in Contractor’s standard format (the “Statement”). All Statements must be submitted electronically to billing@dwwind.com and shall reference the PO # specified in the Task Order. Provided that Contractor issues the Statement prior to the 15th of the month, the Statement shall be paid within 30 days after the date Client receives the Statement in form and substance acceptable to Client (the “Due Date”). Any monies due Contractor by Client for the Work may, at Client’s option, be applied to the payment of any sums owing by Contractor or any of Contractor’s affiliated companies to Client or any of Client’s affiliated companies. As a condition to Client’s obligation to make payments hereunder, Contractor must deliver a duly executed Request for Taxpayer Identification Number and Certification (Form W-9 or Form W-8, as applicable) to Client.

3.3. **Taxes.** Client shall have no liability for the payment or reimbursement of, and Contractor shall be liable for and shall pay, or cause to be paid, any or all ad valorem, value-added, property, occupation, severance, gross receipts, privilege, sales, use, consumption, excise, lease, transaction and other or new taxes, governmental charges, licenses, fees, duties, tariffs, permits and assessments, or increases therein (“Taxes”) applicable to the Work. If Client is required to remit any such Taxes, then the amount shall be deducted from any sums becoming due to Contractor. Contractor shall indemnify, defend and hold harmless Client from any claims for such Taxes.
4. **WARRANTY.**

4.1. **RESERVED.**

4.2. **Services.** Contractor warrants that the Work specified in a Task Order will be free from defect and will conform to this Service Agreement and the Project Requirements. Contractor will exercise reasonable skill, care, and diligence in the performance of the Work and will carry out its responsibilities in accordance with customarily accepted industry practices. Contractor warrants that well-qualified persons, who are properly licensed, registered or otherwise authorized to perform the Work pursuant to applicable laws and regulations shall perform the Work. Contractor shall, in the performance of the Work, (a) exercise prudent skill, care and diligence and perform such work promptly, in a professional and workmanlike manner and free from defects, coordinating such Work with Client (and any of Client’s contractors, as Client shall determine); (b) ensure that the Work is executed in accordance with this Service Agreement and in accordance with all applicable federal, state and local laws, rules, regulations and guidelines; (c) procure, at its own expense, all permits and licenses required for the performance of the Work and arrange for all required inspections; (d) if applicable, promptly provide all Documents and Work Product prepared in connection with the Work to Client; and (e) observe all facilities access, safety and securities measures required by Client and assure that its subcontractors and employees follow Client’s policies while at any Client site.

4.3. **Reperformance.** If Contractor fails to meet the foregoing standard, Contractor will perform at its own cost, and without reimbursement from Client, the professional services necessary to correct errors and omissions which are caused by Contractor’s failure to comply with above standard, and which are reported to Contractor within one (1) year from the completion of the Work.

4.4. **Survival.** All warranties (both express and implied) shall survive inspection, acceptance, testing and payment by Client.

5. **MODIFICATIONS.**

5.1. **General.** Any change in a Scope of Work shall be identified in, and performed pursuant to, a written and fully executed Change Order. In no event shall Contractor undertake any change in the Scope of Work until it has received a Change Order executed by Client. Any amendment, modification or addition implemented by Contractor without notice to, and specific prior written approval by Client, shall not give rise to an adjustment of the Price, the Work Schedule or any obligation of Contractor under this Service Agreement.

5.2. **Client Requested Changes.** Client may, at any time, by written notice to Contractor, make modifications or changes to a Scope of Work to be provided under this Service Agreement. If any such change causes an increase or decrease in the cost of the Work, or the time required for performance of the Work, an equitable adjustment shall be made in the Price or Work Schedule or both and the parties shall execute a Change Order. Any claim by Contractor for adjustment under this Section must be asserted within ten (10) days from the date of receipt by Contractor of the notification of modification. Nothing herein shall excuse Contractor from proceeding with this Service Agreement as modified.
6. WORK PRODUCT.

6.1. Ownership. Any Work Product prepared or furnished by Contractor (and Contractor’s independent professional consultants and Subcontractors) pursuant to this Service Agreement shall become the property of Client whether or not the Work is completed. All Work Product shall be considered work made for hire by Contractor. If any Work Product may not, by operation of Law, be considered work made for hire by Contractor for Client (or if ownership of all right, title and interest of the intellectual property rights therein shall not otherwise vest exclusively in Client), Contractor agrees to assign, and upon creation thereof automatically assigns, without additional consideration, the ownership of all copyrights and patentable inventions directly applicable to the Work Product to Client. Contractor shall perform, upon the reasonable request of Client at any time, such further acts as may be necessary or desirable to transfer, perfect and defend Client's ownership of the Work Product.

6.2. Licensing of Work Product. If and to the extent that any Work Product is or may not be transferred to Client as work for hire:

(a) Contractor hereby grants Client an unrestricted, freely transferable, fully paid up, perpetual license and right to use, reproduce and make derivative works from all Work Product in such manner and for such purposes as Client may in its sole discretion determine, including without limitation for the construction, operation, maintenance, repair, alteration, modification or expansion of any current or future project of Client (a “Project”). Without limiting the foregoing, Contractor expressly agrees that Client shall have the right to assign, sublicense or otherwise transfer, in whole or in part, the benefit of the licenses confirmed in this Section to any affiliates, any lender that provides financing to Client, a successor in interest to Client or current or future project (whether by merger, membership interest sale or asset sale), any subsequent purchaser or assignee of the same, or any Contractor, contractor or other service provider for any Project.

(b) If any Work Product includes intellectual property rights, proprietary information or copyrighted information of a third party, or any information or property requiring a license to use, manufacture, sell, reproduce, distribute by any means, perform publicly or display such material, Contractor shall use commercially reasonable efforts to secure the necessary copyright, license or release to allow Client to use, manufacture, sell, reproduce, distribute, perform publicly and display such information.

(c) Following a termination of this Service Agreement for any reason, Contractor shall promptly deliver all Documents and Work Product to Client. The license provided in this Section shall survive termination of this Service Agreement by either Party for any reason.

6.3. Clear Title. Contractor guarantees that legal title to and ownership of the Work Product shall pass to Client free and clear of any and all liens, claims, security interests or other encumbrances made by or through Contractor, any subcontractor, or their officers, employees or representatives.

7. DEFAULT; REMEDIES.

7.1. Events of Default. The occurrence of any of the following events shall constitute an event of default (individually, an “Event of Default,” and collectively, “Events of Default”) hereunder:
(a) any representation or warranty made by Contractor herein is false or misleading when made or when deemed made or repeated,

(b) Contractor fails to perform any covenant or obligation set forth in this Service Agreement, including without limitation the failure to make shipment of items or fails to perform the Work within the time specified herein,

(c) Contractor fails to make prompt payment for labor, equipment or materials, or disregards any Laws, or the lawful requirements of any governmental authority or the instructions of Client consistent with this Service Agreement.

(d) Contractor chronically, persistently or repeatedly fails or refuses to substantially fulfill its obligations in accordance with this Service Agreement.

(e) Client fails to pay any Statement that is due within twenty (20) Business Days after receipt by Client of written demand from Contractor.

(f) The insolvency of a Party; (b) the filing of a voluntary petition in bankruptcy by a Party; (c) the filing of any involuntary petition in bankruptcy against a Party that is not vacated within 30 days of the filing thereof; (d) the appointment of a receiver or a trustee over a Party; or (e) the execution of an assignment for the benefit of creditors by a Party.

7.2. Client Remedies. Upon the occurrence of any Event of Default by Contractor, Client may, upon written notice to Contractor, exercise any or all of the following rights and remedies in any combination or order that Client may elect, in addition to such other rights or remedies as Client may have hereunder or at law or in equity, to:

(a) withhold payments due under this Service Agreement;

(b) terminate, cancel or suspend this Service Agreement, in whole or in part and without liability; or

(c) procure on such terms as Client deems appropriate, items or services similar to those so terminated or cancelled, in which event Contractor shall be liable to Client for any excess costs and expenses incurred in connection with procuring same.

7.3. Contractor Remedies. Upon the occurrence of any Event of Default by Client, Contractor may, upon written notice to Client, in addition to such other rights or remedies as Contractor may have hereunder or at law or in equity terminate, cancel or suspend this Service Agreement.

7.4. Partial Termination. If Client terminates, cancels or suspends this Service Agreement in part following an Event of Default by Contractor, Contractor shall continue performance to the extent not terminated. If it is determined that an Event of Default had not occurred and Client terminated this Service Agreement, such termination shall be considered to be for its convenience as provided in Section 8.1.

7.5. No Consequential Damages. IN NO EVENT SHALL EITHER PARTY BE LIABLE TO THE OTHER PARTY FOR CONSEQUENTIAL, INCIDENTAL, PUNITIVE, EXEMPLARY OR INDIRECT DAMAGES, LOST PROFITS OR OTHER BUSINESS INTERRUPTION
7.6. RESERVED.

7.7. Client’s Limitation on Liability. Client’s total liability to Contractor for all Claims or suits of any kind, whether based upon contract, tort (including negligence, warranty, strict liability, or otherwise, for any losses, damages costs or expenses of any kind whatsoever arising out of, or resulting from, or relating to the performance or breach of this Service Agreement shall, under no circumstances, exceed the Price; provided, that any liabilities of Client under Article 10 and any liabilities arising out of fraud, gross negligence or willful misconduct shall be uncapped. Notwithstanding any other provision of this Service Agreement, Contractor’s sole recourse for any liability arising under or in connection with this Service Agreement shall be against Client, and there shall be no recourse against any of Client’s Affiliates, or the stockholders, members or other owners, officers, directors, employees or agents of any such Person, for any liability arising under or in connection with this Service Agreement.

7.8. Contractor’s Limitation on Liability. Contractor’s total liability to Client for all Claims or suits of any kind, whether based upon contract, tort (including negligence, warranty, strict liability, or otherwise, for any losses, damages costs or expenses of any kind whatsoever arising out of, or resulting from, or relating to the performance or breach of this Service Agreement shall, under no circumstances, exceed the Price; provided, that:

(a) any liabilities of Contractor under Article 6, Article 10, Sections 11.2 and 11.4 and Article 12 and any liabilities arising out of fraud, gross negligence or willful misconduct shall be uncapped; and

(b) the limitation set forth in Section 7.7 shall not apply to Contractor’s direct or indirect costs incurred in performing or re-performing the Work.

8. TERMINATION FOR CONVENIENCE.

8.1. Convenience. Client shall, at any time in its sole discretion by delivery of written notice to Contractor, have the right to terminate, cancel or suspend, in whole or in part, this Service Agreement and any Task Order execute hereunder, without cause and for convenience.

8.2. Effect. Following a termination, cancellation or suspension pursuant to Section 8.1, Client shall have no obligation to Contractor except that Contractor shall be entitled to all amounts due Contractor for work properly rendered and expenses properly incurred to the date of receipt of notice of termination; provided, however, that in no event shall Client be obligated to pay an amount in excess of the Price or for unabsorbed overhead, loss of anticipated profit or revenue or other consequential economic loss due to the termination, cancelation or suspension; and any advance payments will be refunded accordingly.
9. **INSURANCE.** Contractor agrees that it shall procure and maintain (and shall require all Subcontractors to procure and maintain) at its sole cost and expense insurance as required by Law or as otherwise may be specified in Annex 1.

10. **RESPONSIBILITY; INDEMNIFICATION.**

10.1. **Responsibility.** Each Party shall be solely responsible for the safety and protection of its persons and property and shall comply with all applicable federal, state, local and safety Laws and regulations.

10.2. **Contractor’s Indemnity.** Contractor hereby releases and agrees to indemnify, defend and hold harmless Client, its affiliates, its other contractors of any tier, and the directors, officers, agents, employees, successors and assigns of each of them (each, a “Client Indemnified Party” and, collectively, the “Client Indemnity Group”), from and against any and all Claims for:

   (a) bodily injury to, sickness, disease or death of any individuals in the Contractor Indemnity Group (hereafter defined);

   (b) bodily injury to, sickness, disease or death of any third party or for any loss of or damage to the property of third parties (as used herein, third parties are those who are not part of either the Client Indemnity Group or the Contractor Indemnity Group) to the extent such injuries or damages are the result of the negligent acts or omissions, willful misconduct or tortious acts or omissions (including strict liability) of any member of Contractor Indemnity Group during the term of this Service Agreement;

   (c) any fines and penalties imposed by any governmental authority on account of any violation of any applicable Laws to be complied with by the Contractor Indemnity Group; and

   (d) any loss or loss of use or damage to the equipment or other property of the Contractor Indemnity Group, whether owned, leased or chartered.

10.3. **Client’s Indemnity.** Client hereby releases and agrees to indemnify, defend and hold harmless Contractor, and the directors, officers, agents, employees, successors and assigns of Contractor (each, an “Contractor Indemnified Party” and, collectively, the “Contractor Indemnity Group”) from and against any and all Claims for:

   (a) bodily injury to, sickness, disease or death of any individuals in the Client Indemnity Group;

   (b) bodily injury to, sickness, disease or death of any third party or for any loss of or damage to the property of third parties (as used herein, third parties are those who are not part of either the Client Indemnity Group or the Contractor Indemnity Group), to the extent such injuries or damages are the result of the negligent acts or omissions, willful misconduct or tortious acts or omissions (including strict liability) of any member of the Client Indemnity Group during the term of this Service Agreement;
(c) any fines and penalties imposed by any governmental authority on account of any violation of any applicable Laws to be complied with by the Client Indemnity Group; and

(d) any loss or loss of use or damage to the equipment or other property of the Client Indemnity Group, whether owned, leased or chartered.

10.4. Pollution Indemnity. Contractor shall be responsible for any Claim arising out of actual or threatened pollution damage or contamination of land or water, including expenses incurred in control, cleanup or removal, fines and penalties, and damage to property, which arise or result from the Contractor Indemnity Group’s actions during the performance of this Service Agreement due to spills, leaks, discharges or releases of fuels, lubricants, motor oils, pipe dope, paints, coatings solvents, bilge, garbage, hydrocarbon consumables, and other like materials emanating from the equipment or other property of the Contractor Indemnity Group, whether owned, leased or chartered. Without relieving Contractor of any of its obligations with respect to pollution and contamination as provided above, it is agreed that if the Contractor Indemnity Group is not responding appropriately with respect to pollution and contamination as provided above, then Client may take part to any degree that it deems necessary in the control and removal of any pollution or contamination. In such event, Contractor shall reimburse Client for any pollution or contamination control and removal costs incurred by Client.

10.5. Lien Indemnity. Except for Client’s failure to make payments required under this Service Agreement, Contractor shall not assume, create or suffer to be created any lien, claim or similar encumbrance filed against the Work, or upon any materials, equipment or structures encompassed therein, or upon the premises upon which they are located, by Contractor, any of Contractor’s Subcontractors, or based on a claim for payment in connection with the Work by any other person. Contractor shall indemnify and hold harmless Client from, and defend its interests against, all such liens, claims and encumbrances including all expenses and reasonable attorney's fees incurred in discharging any such liens, claims and encumbrances. Contractor shall discharge any such liens, claims and encumbrances, or provide a bond to Client, no later than thirty (30) calendar days after written demand therefore is made by Client. Contractor shall indemnify and hold Client harmless from and against any liens or claims resulting from the failure of Contractor to make payments to its subcontractors. At the time of the submission of the Contractor’s final invoice, Contractor shall submit a duly executed lien waiver for Contractor’s performance of the Work in form acceptable to Client.

10.6. Permit Liability. Contractor shall be responsible for all liabilities, damages, fines, penalties, and attorneys’ fees which may arise (including but not limited to those that Client pays or becomes liable to pay) because of Contractor’s non-compliance with any permit, license or governmental approval applicable to the Work, other than any damages, fines and penalties arising from any act or omission of Client, or the agents, employees, contractors (other than Contractor and its Subcontractors), and representatives of Client. The liability under this subsection shall be limited to events of non-compliance that occur during Contractor’s performance, control or possession of the Work.

10.7. Indemnity Scope. With respect to Claims under Sections 10.2 or 10.3, other than with respect to fraud, gross negligence or willful misconduct the indemnity obligations and releases shall apply to all Claims, regardless of whether caused or contributed to by negligence or other fault
including sole, joint or concurrent) of any of the parties indemnified or released, or any theory of legal liability, including strict liability, defect in premises, materials or equipment, “ruin”, or other un-seaworthiness or other fault of any vessel, or any other anticipated or unanticipated event or condition and regardless of whether pre-existing the execution of this Service Agreement.

10.8. **Indemnity Defense.** When a Party hereunder (“Indemnifying Party”) is required to indemnify the other Party (“Indemnified Party”) in accordance with this Section for a claim brought by a third party, the Indemnifying Party shall assume on behalf of such Indemnified Party, and conduct with due diligence and in good faith, the defense of any claim against such Party, whether or not the Indemnifying Party shall be joined therein, and the Indemnified Party shall cooperate with the Indemnifying Party in such defense. The Indemnifying Party shall be in charge of the defense and settlement of such claim; provided, however, that without relieving the Indemnifying Party of its obligations hereunder or impairing the Indemnifying Party's right to control the defense or settlement thereof, the Indemnified Party may elect to participate through separate counsel in the defense of any such claim, but the fees and expenses of such counsel shall be at the expense of such Indemnified Party; except in the event that (i) the Indemnified Party shall have reasonably concluded that there exists a material conflict of interest between the Indemnifying Party and the Indemnified Party in the conduct of the defense of such claim (in which case the Indemnifying Party shall not have the right to control the defense or settlement of such claim, on behalf of such Indemnified Party), or (ii) the Indemnifying Party shall not have employed counsel to assume the defense of such claim within a reasonable time after notice of the commencement of an action thereon, in which case the reasonable fees and expenses of counsel shall be paid by the Indemnifying Party. No Indemnifying Party shall settle any such claims or actions in a manner which would require any action or forbearance from action by any Indemnified Party without the prior written consent of the Indemnified Party, which consent shall not be unreasonably withheld.

10.9. **Indemnity Survival.** THE INDEMNITY OBLIGATIONS AND RELEASES THAT APPLY TO AN EVENT OR CONDITION THAT OCCURS DURING THE PERFORMANCE OF THIS SERVICE AGREEMENT SHALL SURVIVE AND NOT BE AFFECTED BY THE EXPIRATION OR TERMINATION OF THIS SERVICE AGREEMENT. THE PARTIES INDEMNIFIED, OR RELEASED SHALL BE ENTITLED TO REASONABLE ATTORNEYS FEES AND COSTS INCURRED IN ASSERTING OR ENFORCING THE INDEMNITY OBLIGATIONS AND RELEASES SET FORTH IN THIS SERVICE AGREEMENT AGAINST THE OTHER PARTY.

11. **REPRESENTATIONS AND WARRANTIES.**

11.1. **General-Corporate.** Each Party represents and warrants to the other Party that: (a) it is duly organized, validly existing and in good standing under the laws of the state of its organization and in each jurisdiction where it is required to be qualified as a foreign organization or entity; (b) it has all requisite power to own, operate and lease its properties and carry on its business as now conducted; (c) it has all regulatory approvals necessary for it to legally perform its obligations under this Service Agreement; (d) the execution, delivery and performance of this Service Agreement is within its powers, have been duly authorized by all necessary action and do not violate any of the terms or conditions in its governing documents, any contract or other agreement to which it is a party or any Law applicable
to it; (e) this Service Agreement constitutes its legally valid and binding obligation enforceable against it in accordance with the terms thereof; (f) there are no bankruptcy proceedings pending or being contemplated by it or, to its knowledge, threatened against it; (g) there are no legal proceedings that would be reasonably likely to materially adversely affect its ability to perform this Service Agreement; and (h) it has knowledge and experience that enable it to evaluate the merits and risks of this Service Agreement.

11.2. **Compliance.** Contractor represents and warrants that the Work that has been and/or will be provided and that prices charged are in strict compliance will all applicable Laws, including without limitation the Fair Labor Standards Act of 1938, as amended, and the Occupational Health and Safety Act of 1970, as amended, and the regulations promulgated thereunder. Contractor makes no representations or warranties concerning compliance with the Occupational Safety and Health Act of 1970 as to the facilities which are not under the Contractor’s control (either directly or through contract or charter).

11.3. **No Disbarment.** Contractor represents and warrants that it has not been disbarred, suspended or terminated for default by any governmental agency.

11.4. **Intellectual Property.** Contractor represents and warrants that, with respect to any Work Product:

(a) Contractor owns or has sufficient rights, title and interest in such Work Product and the intellectual property rights associated with such Work Product to agree that the Work Product is work for hire and when delivered will be the property of Client, or in the alternative, where title to the Work Product cannot be transferred, to license such Work Product to Client or otherwise allow Client to use such Work Product pursuant to the terms of this Service Agreement.

(b) There are no outstanding assignments, grants, licenses, obligations, agreements, liens, encumbrances or claims of any other party (whether written, oral or implied), including without limitation any licensing, honoraria, use, royalty or similar fees, associated with or attached to such Work Product or that limit or otherwise affect the ability of Client to use any Work Product or that are inconsistent with this Service Agreement and the rights contained herein.

(c) No such Work Product infringes or has infringed the intellectual property rights of any third party and when used as anticipated in connection with any Project or as contemplated by this Service Agreement such Work Product will not infringe or constitute a misappropriation of any intellectual property rights of any third party.

(d) No third party has asserted any claim of infringement and Contractor has not received any written or oral notice of any claims of infringement or has any reason to believe that any such infringement exists or has existed in the past.

(e) There are no limitations on the sale, license or use of such Work Product and any associated intellectual property rights by way of any order, decree of court, judgment or otherwise.

(f) The execution, delivery and performance of this Service Agreement will not breach, violate or conflict with any instrument or agreement governing any intellectual property rights with
respect to such Work Product or in any way impair the right of Client to use, license or dispose of such Work Product as permitted by this Service Agreement.

11.5. **Restricted Party.** Contractor represents that it is not (and that its subcontractors are not) a Restricted Party, which for the purposes of this Service Agreement shall be deemed to include any person or entity that is:

(a) a national of, located in, or organized under the laws of Cuba, Iran, North Korea, Sudan or Syria;

(b) named on the U.S. Treasury Department list of Specially Designated Nationals; the U.S. Commerce Department Denied Persons, Entity, or Unverified lists or General Order No. 3; the U.S. State Department Debarred Parties List; or the U.S. General Services Administration Excluded Parties List System;

(c) subject to non-proliferation sanctions under the laws of the United States;

(d) designated as an institution of primary money laundering concern;

(e) engaged in activities involving nuclear materials, missile or rocket technologies, or the proliferation of chemical or biological weapons;

(f) part of or affiliated with any non-U.S. military or paramilitary organization; or

(g) owned or controlled by any non-U.S. government.

11.6. **Waiver.** Contractor represents and warrants that it is subject to the civil and commercial law specified in Section 15.2 with respect to its obligations under this Service Agreement, and its execution, delivery and performance of this Service Agreement constitute private and commercial acts. Contractor is an entity with the legal capacity to sue and be sued. Contractor has, pursuant hereto, validly waived every immunity (sovereign or otherwise) to which it or any of its properties would otherwise be entitled from any legal action, suit or proceeding from jurisdiction of any court or from setoff or any legal process (whether service or notice, pre-award or prejudgment attachment in aid of execution of judgment, execution of judgment or otherwise) under the laws of the state of its organization and the United States in respect of its obligations under this Service Agreement.

11.7. **Anti-Bribery.** Neither Contractor nor any other person on Contractor’s behalf, offered or given anything of value to: (i) any official, member, employee or customer of a governmental entity, any political party or official thereof, or any candidate for political office; (ii) any customer or member of the government; or (iii) any other person, in any such case while knowing or having reason to know that all or a portion of such money or thing of value may be offered, given or promised, directly or indirectly, to any customer, member of the government or candidate for political office for the purpose of the following: (A) influencing any action or decision of such person, in his or its official capacity, including a decision to fail to perform his or its official function; (B) inducing such person to use his or its influence with any government or instrumentality thereof to affect or influence any act or decision of such government or instrumentality to assist Contractor in obtaining or retaining business for, or with, or directing business to, any person; (C) securing any improper advantage; (D) where such payment is or was contingent upon the award of any government contract to Contractor or that would otherwise be
in violation of any applicable law; or (E) where such payment would constitute a bribe, kickback or illegal or improper payment to assist Contractor in obtaining or retaining business for, or with, or directing business to, any person. Contractor maintains a system of internal accounting controls adequate to insure that Contractor maintains no off-the-books accounts and that Contractor’s assets are used only in accordance with Contractor’s management directives.

12. CONFIDENTIAL INFORMATION.

12.1. Confidential Information. Contractor agrees that it will, at all times, hold in confidence for Client all designs, know-how, techniques, devices, drawings, specifications, patterns, technical information, documents, business plans, items requirements, forecasts and similar data, whether oral, written or otherwise, conveyed by Client (or its affiliated companies) to Contractor in connection with this Service Agreement or procured, developed, produced, manufactured or fabricated by Contractor in connection with Contractor’s performance hereunder, including without limitation any Work Product or Documents (collectively, “Information”). Contractor shall exercise the same degree of care to prevent disclosure of any Information to others as it takes to preserve and safeguard its own proprietary information, but in any event not less than a reasonable degree of care. Contractor shall not, without the prior written consent of Client, reproduce any Information or disclose any Information to any third party (except as required by Law) or use any Information for any purpose other than for the benefit of Client hereunder. Any technical knowledge or information of Contractor that Contractor has disclosed or may hereafter disclose to Client in connection with the Work or other performance covered by this Service Agreement shall not, unless otherwise agreed to in writing by Client, be deemed to be confidential or proprietary information and shall be acquired by Client free from any restrictions as part of the consideration of this Service Agreement.

12.2. Third Party Confidential Information. Contractor agrees, upon request of Client, to execute the form of confidentiality agreement attached hereto as Exhibit 1.

13. EXCUSABLE DELAYS. Neither Party shall be liable for damages resulting from Force Majeure. In the event of Force Majeure, Contractor shall provide written notice to Client no later than two (2) business days after Contractor first has knowledge of or becomes aware of the circumstances of such Force Majeure. Thereafter, Contractor shall provide a detailed assessment of the delay, and periodic updates to such assessment as mutually agreed to by the parties, and Contractor shall provide a detailed recovery plan to Client. The delay shall be no longer than necessary and Client shall not be responsible for any increased costs, including price escalation.

14. ACCESS. Contractor agrees that Client shall have access at reasonable times to inspect and make copies of notes, designs, drawings, specifications, electronic files, calculations and other technical data pertaining to Contractor’s obligations under this Service Agreement.

15. FINANCING. Client may, without the consent of Contractor, assign, or grant as security, beneficially or otherwise, its rights under this Service Agreement to Lenders in connection with any Financing, re-financing or other financing arrangement (through either a collateral or direct assignment and, in the case of a direct assignment, including a sub-assignment back to Client for the term of the financing). Contractor covenants that it shall execute or arrange for the delivery of certificates, consents, opinions, estoppels, amendments and other documents reasonably requested by Client or Lender in order to consummate any financing, refinancing or other
financing arrangement and shall enter into reasonable agreements with such Lender that provide that Contractor recognizes the rights of such Lender upon foreclosure of Lender’s security interest and such other customary provisions as may be reasonably requested by Client or any such Lender. Contractor agrees that no Lender shall be obligated to perform any obligation or be deemed to incur any liability or obligation provided in this Service Agreement on the part of Client or shall have any obligation or liability to Contractor with respect to this Service Agreement except to the extent any Lender has expressly assumed the obligations of Client hereunder. Contractor shall accept a cure performed by any Lender so long as the cure is accomplished within the applicable cure period so agreed to between Contractor and any Lender.

16. RESERVED.

17. MISCELLANEOUS.

17.1. Notices. All notices, requests and other communications required or permitted by this Service Agreement or by Law to be served upon or given to a Party by the other Party shall be deemed duly served and given (i) when received after being delivered by hand or courier service, (ii) on the date sent by confirmed facsimile or e-mail if sent prior to 4:00 p.m., recipient’s time and on the next business day if sent after 4:00 p.m., recipient’s time, or (iii) when received if sent by certified mail, return receipt requested, postage prepaid, to the address set forth below the Party’s signature. Each Party may change its address for the purposes of this Section by giving notice of change to the other Party in the manner provided in this Section. All notices, requests and other communications required in connection with a Task Order shall made by and between the Client Representative and Contractor Representative.

17.2. Governing Law. This Service Agreement, any disputes or claims arising out of or relating to this Service Agreement, and any questions concerning its validity, construction or performance shall be governed by the substantive laws of the State of New York without regard to its conflict of law principles (other than Section 5-1401 of the New York General Obligations Law). Each of the Parties hereby irrevocably waives, to the fullest extent permitted by law, any and all right to trial by jury in any legal proceeding arising out of or in connection with this Service Agreement.

The foregoing choice of governing law shall, unless otherwise specified, apply to all subcontracts entered into pursuant to this Service Agreement and to all insurance contracts required to be maintained by Contractor in accordance with this Service Agreement.

17.3. Subcontracting. Contractor shall not subcontract all or any portion of its obligations under this Service Agreement without the prior written approval of Client. Subject to the foregoing, if Contractor uses any subcontractor, Contractor shall be fully responsible for services performed by such subcontractor to the same extent as if the services were performed directly by Contractor. Contractor warrants that it will timely pay all subcontractors and suppliers.

17.4. Assignment. Contractor shall not have the right to assign all or any portion of this Service Agreement without the prior consent of Client, which may be granted or withheld in Client’s sole discretion. Client shall have the right to assign all or any part of this Service Agreement without Contractor’s consent. Client shall provide Contractor with notice of any such assignment; provided,
however, that failure of Client to give such notice of an assignment consistent with the previous sentence shall not affect any such assignment or constitute a default hereunder.

17.5. **Successors and Assigns.** This Service Agreement shall inure to the benefit of, be binding upon, and be enforceable by and against the Parties and their respective successors and permitted assigns.

17.6. **No Partnership or Third Party Beneficiaries.** Contractor acknowledges and agrees that in performing its obligations under this Service Agreement, Contractor will be acting solely as an independent contractor, responsible for the methods and means used in performing its services under this Service Agreement and neither Contractor nor any of its employees, associated consultants, subcontractors or employees of said consultants or subcontractors shall be deemed to be employees of Client for any purpose. Subject to Section 17.3, all persons employed by Contractor in the performance of the Work are employees of Contractor. Contractor shall carry such employees on the payroll of Contractor and make all required payments to state, federal and local authorities covering payroll taxes and any other payments relating to such persons’ employment. Nothing contained in this Service Agreement shall be construed or constitute any Party as the employee, agent, partner, joint venturer or contractor of any other Party. This Service Agreement is made and entered into for the sole protection and legal benefit of the Parties, and their permitted successors and assigns, and no other person or entity shall be a direct or indirect legal beneficiary of, or have any direct or indirect cause of action or claim in connection with, this Service Agreement.

17.7. **Non-Discrimination.** During the performance of this Service Agreement, Contractor and its subcontractors shall not deny this Service Agreement’s benefits to any person on the basis of race, religion, color, national origin, ancestry, ethnic group identification, physical handicap, mental disability, medical condition, marital status, age, gender, sexual orientation or sexual identification, nor shall they discriminate unlawfully against any employee or applicant for employment because of race, religion, color, national origin, ancestry, ethnic group identification, physical handicap, mental disability, medical condition, marital status, age, gender, sexual orientation or sexual identification. Contractor shall ensure that the evaluation and treatment of employees and applicants for employment are free of such discrimination.

17.8. **No-Advertising.** Contractor or its agents shall not use Client’s name, photographs, logo, trademark or other identifying characteristics or that of any of its affiliates or subsidiaries without Client’s prior written approval. Contractor shall not issue any press releases, hold press conferences, or make or issue any public statements of any kind regarding this Service Agreement except as may be required by applicable Law without the written consent of the Client. Nothing in this Section 17.8 shall prevent Contractor from listing Client as a client of Contractor; provided that Contractor first notifies Client.

17.9. **Currency.** All payments hereunder shall be in U.S. dollars. All insurance contracts required to be maintained hereunder by Contractor shall be denominated in U.S. dollars.

17.10. **Counterparts.** This Service Agreement may be executed by the Parties in one or more counterparts or duplicate originals, all of which taken together shall constitute one and the same instrument. Delivery of a copy of this Service Agreement or a signature page hereto bearing an original signature by facsimile transmission, by electronic mail in “portable document format” (“.pdf”) form or by any other electronic means intended to preserve the original graphic and
17.11. Other. The terms and provisions of this Service Agreement, including any Task Orders, annexes, attachments, exhibits or schedules, may only be modified, amended or supplemented by written agreement duly executed by each Party; provided that Change Orders pursuant to Section 5.2 shall only require the signature of Client. No failure or delay by a Party in exercising any right hereunder and no course of dealing between the Parties shall operate as a waiver thereof. No waiver of any breach of the terms of this Service Agreement shall be effective unless such waiver is in writing and signed by the Party against whom such waiver is claimed. No waiver of any breach shall be deemed to be a waiver of any other or subsequent breach. If any provision of this Service Agreement for any reason shall be held invalid, illegal or unenforceable by any governmental authority, then such holding shall not invalidate or render unenforceable any other provision hereof and such portions shall remain in full force and effect as if this Service Agreement had been executed without the invalid, illegal or unenforceable portion. If any provision of this Service Agreement is declared invalid, illegal or unenforceable, then the parties shall promptly renegotiate to restore this Service Agreement as near as possible to its original intent and effect. This Service Agreement supersedes all prior agreements and understandings among the parties with respect to the subject matter hereof. All provisions providing for limitation of or protection against loss or liability of the Client, including licenses, warranties, protections, and indemnities, shall survive any termination, suspension or cancellation of this Service Agreement.

17.12. Conflicts of Interest. Contractor understands Client is a forward thinking organization that intends to develop innovative technologies and approaches to offshore wind development that gives it a competitive advantage in the industry. In consideration of this Service Agreement, the Work that will be performed hereunder, and Contractor’s receipt of Information, Contractor agrees that for so long as this Service Agreement shall be in effect and during the two (2) year period following the termination of this Service Agreement, Contractor shall avoid creating a conflict of interest by not directly or indirectly participating in the development, engineering, design, permitting, or construction of offshore wind power projects within 50 miles of the coast of Delaware and Maryland.
IN WITNESS WHEREOF, the Parties have entered into this Service Agreement as of the date first written above.

Skipjack Offshore Energy, LLC

By:  _______________________________  By:  _______________________________
Title:  _______________________________
Address:  56 Exchange Terrace, Suite 300
          Providence, RI 02903 USA
          Attn: General Counsel

________________________________________

________________________________________
Prior to the start of any Work, Contractor shall at its own expense, procure and maintain in effect, or cause to be procured and maintained, during the performance and until final completion and acceptance of all Work the following minimum insurance coverages with carriers acceptable to Client.

1. The insurance coverages shall not include (i) any claims made insurance policies (except Professional Liability) or (ii) any self-insured retention or deductible amount greater than $250,000, unless previously approved by the Client in writing.

2. All insurance policies, with the exception of workers’ compensation, Employer’s Liability and automobile liability, shall be primary to and without contribution from any other insurance or self-insurance maintained by the Client.

3. All insurance policies (other than worker’s compensation insurance) shall provide for a waiver of subrogation against Client by Contractor and its insurers.

4. All insurance policies, with the exception of workers’ compensation, Employer’s Liability and professional liability, shall name Client and its successors and assigns (and such third parties as Client may require), as additional insureds.

5. Prior to the commencement of Work, Contractor shall deliver to Client evidence of the required insurance coverage in the form of Certificates of Insurance acceptable to Client. The insurance policies shall contain a provision that coverage cannot be cancelled, allowed to expire or the limits materially reduced, until at least thirty (30) days (ten (10) days in the case of nonpayment of premium) after written notice has been given to Client.

6. All insurance coverages shall be provided by insurance companies acceptable to Client and having ratings of A-/VII or better in the A.M. Best Key Rating Insurance Guide (latest edition in effect at the latest date stated in the Certificates of Insurance provided in accordance with paragraph 5 above).

7. Failure to maintain the insurance required under this Service Agreement shall constitute a material breach of this Service Agreement and Contractor shall be liable for any resulting costs, liabilities and damages (including attorneys’ fees and settlement expenses) incurred by Client in connection with such breach.

8. The insurance provided shall in no manner relieve or release Contractor, its agents, subcontractors and invitees from, or limit their liability as to, any obligations assumed under this Service Agreement.
<table>
<thead>
<tr>
<th>Type of Coverage</th>
<th>Limits of Liability</th>
<th>Minimum Coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workers’ Compensation Insurance</td>
<td>Workers’ compensation insurance in accordance with all applicable laws in the state(s) in which the Services are to be performed. The policy shall contain an “All States” endorsement, a “Voluntary Compensation” endorsement and include coverage for Alternate Employer. If applicable, workers’ compensation insurance in accordance with US Longshoremen &amp; Harbor Workers Act, Jones Act Coverage, the Outer Continental Shelf Lands Act and any other act applicable to federal Worker’s Compensation law.</td>
<td>Statutory</td>
</tr>
<tr>
<td>Employers’ Liability Insurance</td>
<td>Employer’s liability insurance, for the Contractor’s liability arising out of injury to or death of its employees. If applicable, maritime employer’s liability and benefits and damages under the Jones Act (including transportation, wage, maintenance and cure) and Death on the High Seas Act for the Contractor’s liability arising out of injury to or death of its employees.</td>
<td>Employer’s liability shall be written with minimum limits of $1,000,000 each accident; $1,000,000 disease policy limit and $1,000,000 disease each employee.</td>
</tr>
<tr>
<td>Commercial General Liability Insurance</td>
<td>Commercial General Liability Insurance written on an occurrence basis, unless otherwise agreed in writing by the Client, for bodily injury (including death) and property damage claims to third parties arising from the Services performed by the Contractor. Said coverage shall include premises/operations, products/completed operations for a period of not less than three (3) years from the date that the Services are completed. The policy shall not include any exclusions for independent contractors, broad form property damage, blanket contractual liability and the policy must be endorsed to include sudden and accidental pollution (30 day discovery / 60 day reporting clause).</td>
<td>$2,000,000 each occurrence and $4,000,000 in the aggregate as respects products liability and completed operations and a $4,000,000 general aggregate.</td>
</tr>
<tr>
<td>Automobile Liability Insurance</td>
<td>Automobile Liability insurance providing coverage for all owned, non-owned and hired vehicles used in connection with the Services performed under this Service Agreement.</td>
<td>$1,000,000 per accident for bodily injury and property damage.</td>
</tr>
<tr>
<td>Professional Liability Insurance</td>
<td>During the performance of this Service Agreement and for not less than five (5) years from the date that the Services are completed, covering all design, engineering, consulting and professional services provided under this Service Agreement.</td>
<td>$1,000,000 per claim, specific to this Service Agreement.</td>
</tr>
<tr>
<td>Wharfinger’s Liability Insurance</td>
<td>If applicable, Wharfinger’s liability insurance providing coverage for damage to vessels and the vessels cargo while moored at any wharf or peer which is owned and/or operated and/or leased by Contractor and for which Contractor is legally liable</td>
<td>$1,000,000 per occurrence</td>
</tr>
</tbody>
</table>
### Marine Hull and Machinery Insurance

**If Contractor utilizes vessels in connection with the Work,** marine hull and machinery insurance, on all Contractor owned, operated, or chartered Vessels and marine craft (whether navigable or not) and associated equipment, including collision liability, with sister ship clause unamended, and with limits of liability no less than the stated insured value of such vessels and marine craft. Coverage shall include strikes and confiscation; sue and labour and liner negligence provisions. Where Vessels or marine craft engage in towing operations, said insurance shall include full towers/collision liability up to hull value with the sister ship clause unamended.

<table>
<thead>
<tr>
<th>Limit</th>
<th>No less than the stated insured value of each vessel.</th>
</tr>
</thead>
</table>

### Marine Protection and Indemnity Insurance:

**If Contractor utilizes vessels in connection with the Work,** Marine protection and indemnity insurance on all Contractor owned, operated, or chartered vessels. Such insurance shall be written with a protection and indemnity club or insurance carrier reasonably acceptable to Client and shall include coverage for bodily injury and death, passenger liability, cargo loss and damage, general average, loss and damage to property on vessel, damage to fixed and floating objects, third party liability, pollution liability, wreck removal, debris removal, collision, tower’s liability, anchor handling liability and contractual liability arising from or in connection with the Work. Insurance for pollution liability shall be maintained with limits of liability as required under the Oil Pollution Act of 1990, as amended, and any other applicable state or Federal law, whichever is higher. (The required limits herein may be satisfied by any combination of primary, umbrella or excess liability policies.)

<table>
<thead>
<tr>
<th>Limit</th>
<th>$10,000,000 per occurrence.</th>
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</table>

### Aircraft Liability Insurance:

**If Contractor utilizes aircraft in connection with the Work,** owned or non-owned, Contractor shall maintain or cause to be maintained aircraft liability insurance. (The required limits herein may be satisfied by any combination of primary, umbrella or excess liability policies.)

<table>
<thead>
<tr>
<th>Limit</th>
<th>$10,000,000 per occurrence</th>
</tr>
</thead>
</table>

### Umbrella/Excess Liability Insurance

Umbrella/Excess Liability Insurance and/or Bumbershoot Liability Insurance. Such coverage shall be on an occurrence basis, unless otherwise agreed by the Client, providing coverage over and above the policies specified above.

<table>
<thead>
<tr>
<th>Limit</th>
<th>$10,000,000 each occurrence and in the aggregate.</th>
</tr>
</thead>
</table>
TASK ORDER NO. ______
The task described below will be completed in accordance with Service Agreement, dated as of _________ (the “Agreement”) between Skipjack Offshore Energy, LLC and __________________________. Capitalized terms not otherwise defined herein shall have the meanings given to them in the Agreement.

Scope of Work: As described in Attachment __.

Technical Data: [N/A / As described in Attachment __.]

Work Schedule: As described in Attachment __.

Fee/Price: As described in Attachment ___ (the “Price”).

Permits: [N/A / Permits applicable to the Work are as described in Attachment __.]

Equipment: [N/A / Contractor shall be responsible for providing, coordinating, mobilizing and/or supervising the following equipment, materials, equipment, gear and tools described in Attachment __.]

Personnel: As described in Attachment __.

PO Number: DWW____________________ (to be referenced in all invoices).

Insurance: As required by the Agreement.

Client Representative: ________________________.

Contractor Representative: ________________________.

Terms and Conditions. In consideration for Client’s order herein, Contractor agrees that this Task Order shall be governed by and subject to the terms and conditions of the Agreement, which are incorporated herein by this reference and shall control over any inconsistent, additional or different terms or conditions that appear in any quotation, acknowledgement, proposal or other communication received from Contractor, written or otherwise.

IN WITNESS WHEREOF, the parties have executed this Task Order as of the date first written above.

Skipjack Offshore Energy, LLC

By: ___________________________ By: ___________________________
Name: ________________________ Name: ________________________
Title: _________________________ Title: _________________________
Date: _________________________ Date: _________________________
Exhibit 1
CONFIDENTIALITY UNDERTAKING

This Confidentiality Commitment (this “Agreement”), dated _________________, 201__, is entered into by ____________________ (“Contractor”) for the benefit of Skipjack Offshore Energy, LLC (“Client”) and _________________ (“Third Party”).

1. **Background.** Contractor and Client are parties to that certain Service Agreement dated as of ____________________, 2017 (the “Service Agreement”). Reference is made to that certain [insert contract specifics] (the “Subject Agreement”), by and between Third Party and Client.

2. **Undertakings.** In connection with Contractor’s performance of its obligations pursuant to the Service Agreement Contractor may receive information that is identified by Third Party as proprietary or confidential (or that by its nature reasonably appears to be proprietary or confidential whether or not identified as such) (“Third Party Confidential Information”). Contractor shall not use any such Third Party Confidential Information other than for the purposes contemplated in the Service Agreement. In connection therewith, Contractor agrees:

   (a) to preserve the confidentiality of all Third Party Confidential Information made available by or on behalf of Client and/or Third Party to Contractor or otherwise learned by Contractor by using the same degree of care it uses in safeguarding its own confidential or non-public information, but in no event less than a reasonable degree of care;

   (b) not to disclose or allow to be disclosed such Third Party Confidential Information to a third party;

   (c) to use such Third Party Confidential Information only for purposes contemplated in the Service Agreement; and

   (d) to disclose such Third Party Confidential Information only to such of its employees who have a need to know such Third Party Confidential Information in connection with the performance of the Service Agreement or enforcement of this Agreement, and then only after each such person has been advised of the obligations contained in this Agreement and that such person is bound by them.

All such Third Party Confidential Information shall be kept confidential by Contractor unless it is: (i) information which at the time of disclosure is already in the public domain; (ii) information which after disclosure hereunder becomes part of the public domain by publication or otherwise through no act or fault of Contractor; (iii) information which Contractor can prove was known to Contractor prior to the date hereof and was not obtained or derived in contravention of any confidentiality obligation in favor of Third Party; (iv) information obtained from a third party in lawful possession of such information who is not under a confidentiality obligation to Third Party.

Contractor may disclose Third Party Confidential Information if such disclosure: (i) is with the express prior written consent of Third Party; (ii) is required by any governmental body or regulatory body, or by any applicable law or regulation; or (iii) is made to lawyers, consultants,
accountants and insurers of Contractor, provided that such persons have a professional obligation
to keep such matters confidential.

4. Breach and Remedies. If Contractor breaches its obligations under this Agreement, then, in
addition to any remedies available to Client or Third Party at law or in equity, Client and/or
Third Party, severally, shall be entitled to injunctive or other equitable relief. Contractor
acknowledges that remedies at law may be inadequate to protect Client and Third Party against
any actual or threatened breach of this Confidentiality Undertaking by Contractor, and, without
prejudice to any other rights and remedies otherwise available to Client and Third Party,
Contractor agrees to the granting of equitable relief in Client’s or Third Party’s favor without
proof of actual damages and without the necessity of posting a bond. Contractor agrees to
indemnify and hold harmless Client and Third Party from any damage, loss, cost or liability
(including reasonable and reasonably documented legal fees and disbursements and the costs of
enforcing this indemnity) arising out of or resulting from any unauthorized use or disclosure by
Contractor of the Third Party Confidential Information.

3. Term. The obligations set forth in this Agreement shall remain valid for _________ (___)
years after the date hereof.

IN WITNESS WHEREOF, Contractor has executed this Agreement as of the date first written
above.

__________________________________  
By: ______________________________
Name: 
Title: 
Date:
Attachment 4

Non-Disclosure Agreement
CONFIDENTIALITY AGREEMENT

This CONFIDENTIALITY AGREEMENT (together with permitted amendments, the “Agreement”) entered into as of __________, 2017 (the “Effective Date”) by and between Skipjack Offshore Energy, LLC, a Delaware limited liability company (“Company”) and ________________________________, a ____________________________ (“Counterparty”). Each of Company and Counterparty may be referred to herein as a “Party” and together the “Parties.”

RECITALS

WHEREAS, Company is developing the Skipjack Offshore Wind Farm a proposed 120 MW offshore wind farm located on the outer continental shelf (OCS) of the Atlantic Ocean off the coasts of Maryland and Delaware, to be located within BOEM Lease OCS-A 0482 area (the “Project”);

WHEREAS, in connection with the Project, Company is issuing a request for seeking proposals from consultants to support environmental analysis and permitting of the Project (the “Purpose”);

Whereas, Counterparty has or plans to submit a response to the request for proposals

WHEREAS, in furtherance of the Purpose, each Party (the “Disclosing Party”) may make available to the other Party (the “Receiving Party”) certain information which it deems highly confidential and proprietary business information and trade secrets; and

WHEREAS, the Parties are prepared to provide such information subject to the terms and conditions of this Agreement.

NOW THEREFORE, in consideration of the premises and mutual covenants set forth herein, and for other good and valuable consideration, the Parties hereby agree as follows:

1. CONFIDENTIALITY; TRADE SECRETS AND WORK PRODUCT.

1.1. Confidentiality Obligation. In consideration of receiving Protected Information, the Receiving Party agrees:

1.1.1. to preserve the confidentiality of all Protected Information made available by or on behalf of the Disclosing Party to the Receiving Party or otherwise learned by the Receiving Party by using the same degree of care it uses in safeguarding its own confidential or non-public information, but in no event less than a reasonable degree of care;

1.1.2. not to disclose or allow to be disclosed such Protected Information to a third party without the express prior written consent of the Disclosing Party;

1.1.3. to use such Protected Information only for purposes of the Purpose; and

1.1.4. to disclose such Protected Information only to such of its Restricted Persons who have a need to know such Protected Information in connection with the Purpose or the performance or enforcement of this Agreement, and then only after each such person has been advised of the obligations contained in this Agreement and that such person is bound by them.
The rights of the Disclosing Party under this Agreement are in addition to and not in lieu of its rights under any applicable law governing the protection of trade secrets. The Receiving Party shall be liable for any breach of this Agreement by its Restricted Persons.

1.2. **Term.** Unless otherwise agreed by the Parties in writing, Protected Information delivered hereunder shall only be entitled to the protections of this Agreement if such Protected Information is received by the Receiving Party on or before the date that is two (2) years after the date first written above. This Agreement shall terminate on the earlier of the second anniversary of the last disclosure hereunder or the fourth anniversary of the Effective Date.

1.3. **Definitions.** For purposes of this Agreement:

“Affiliate” means a corporation, company or other entity directly or indirectly Controlling or Controlled by a Party; provided, that in the case of Company, Affiliate shall not include the members, stockholders or investors (or affiliates of such members or investors) of Deepwater Wind Holdings, LLC.

“Control” means ownership of: (a) at least fifty percent (50%) of outstanding shares or securities; or (b) at least fifty percent (50%) of the ownership interest representing the right to make the decisions for such entity. Such entity shall be deemed to be an Affiliate only for the periods, either now or in the future, in which such ownership or control exists.

“Confidential Information” means all (i) confidential, proprietary and/or non-public information or (ii) information which constitutes a trade secret, in each case, whether oral or written or in a magnetic or electronic media. Examples of “Confidential Information” include, but are not limited to, the following: capital costs; operating costs; processes, facility design, choice of technology and parts, methods of implementation, target, historical, current and projected future performance capability and other technical or engineering information; computer code and source code; customer lists; marketing strategies and/or plans; price curves; price lists; trading positions; product information (including information regarding development, pricing, presentation, rollout and implementation); billing and trading records; financial information, financial statements, financial pro formas and assumptions, corporate ownership information and records, credit information; and employee information. Confidential Information includes any documents, agreements, notes (including personal notes), computer files, archival or backup tapes or diskettes containing any of the foregoing.

“Protected Information” means all Confidential Information that does not include (i) information which at the time of disclosure is already in the public domain; (ii) information which after disclosure hereunder becomes part of the public domain by publication or otherwise through no act or fault of the Receiving Party; (iii) information which the Receiving Party can prove was known to the Receiving Party prior to the date hereof and was not obtained or derived in contravention of any confidentiality obligation in favor of the Disclosing Party; and (iv) information obtained from a third party in lawful possession of such information who is not under a confidentiality obligation to Disclosing Party.

“Restricted Persons” means (i) the managers, directors, officers, members of the board of managers or directors, and employees of a Party (“Employees”), (ii) the attorneys, financial advisors, bankers, consultants and accountants or other representatives of a Party (“Representatives”), (iii) the members, Affiliates, stockholders, predecessors, subsidiaries or investors of a Party (“Investors”).
1.4. **Ownership.** No license under any patent, copyright or trademark or other proprietary interest is expressly or implicitly granted hereby.

1.5. **Restricted Persons.** Notwithstanding any other provision herein or agreement between the Parties to the contrary, the Parties acknowledge that no person or entity shall be deemed to be a Restricted Person solely because he or she possesses knowledge of (i) the fact that Protected Information has been provided to a Party hereunder and/or (ii) the Purpose. For the avoidance of doubt, persons or entities who are not Restricted Persons shall not be bound by this Agreement in any respect, and none of Company’s Investors or their Affiliates shall be restricted in any manner with respect to any activities including without limitation (x) the trading of any securities, conducted by Employees or Representatives thereof who are not Restricted Persons and (y) any activities of such Employees or Representatives other than in their capacity acting for Company.

2. **RETURN OF INFORMATION.** Upon receipt of a request of the Disclosing Party, the Receiving Party shall, at the Disclosing Party’s option, (i) promptly return to the Disclosing Party any Protected Information (or copies thereof) in the Receiving Party’s possession or (ii) promptly destroy any Protected Information (or copies thereof) in the Receiving Party’s possession and certify such destruction to the Disclosing Party (provided further that the foregoing covenant shall be deemed satisfied if, (x) with respect to personal computers, computer files which constitute Protected Information are deleted from the computer and (y) with respect to documents or other media that contain Protected Information and non-Protected Information, the Protected Information is redacted). Notwithstanding the foregoing, (A) one copy of all documents, materials or information constituting Protected Information of the Disclosing Party (excluding personal information), may be retained by the Receiving Party’s legal counsel for purposes of maintaining compliance with the Receiving Party’s obligations hereunder, and (B) the Receiving Party may retain electronic copies created by its automatic backup systems, provided such copies are not used or disclosed. Notwithstanding the return or destruction of the Protected Information, the Receiving Party and its Restricted Persons shall continue to be bound by their obligations of confidentiality and other obligations hereunder for the remainder of the term hereof.

3. **LEGALLY COMPELLED DISCLOSURE.** If the Receiving Party is requested or required by law, regulation or the rules of a stock exchange or any governmental authority or regulatory agency (by deposition, interrogatory, request for documents, subpoena, civil investigative demand or similar process) to disclose any of the Protected Information, then the Receiving Party may disclose such Protected Information without liability provided that (i) prior to disclosure it provides (unless prohibited by law) the Disclosing Party with written notice of such requirement (provided that if such prior written notice is not reasonably practicable, such written notice shall be provided as soon as possible after disclosure), (ii) the Receiving Party shall furnish only that portion of the Protected Information which is legally required to be disclosed, and (iii) if requested by the Disclosing Party, the Receiving Party shall exercise its reasonable efforts, at the Disclosing Party’s sole cost and expense, to obtain reliable assurance that confidential treatment will be accorded the disclosed Protected Information. Notwithstanding the foregoing, no such notice shall be required in the case of a routine audit or regulatory or administrative review not specifically related to the Disclosing Party or the Purpose.

4. **BREACH AND REMEDIES.** If the Receiving Party or its Restricted Persons breaches its obligations under this Agreement, then, in addition to any remedies available to the Disclosing Party at law or in equity, the Disclosing Party shall be entitled to injunctive or other equitable relief. The Receiving Party acknowledges that remedies at law may be inadequate to protect the Disclosing Party against any actual or threatened breach of this Agreement by the Receiving Party or its Restricted Persons, and, without prejudice to any other rights and remedies otherwise available to the Disclosing Party, the Receiving Party agrees to the granting of equitable relief in the Disclosing
Party’s favor without proof of actual damages and without the necessity of posting a bond. The Receiving Party agrees to indemnify and hold harmless the Disclosing Party from any damage, loss, cost or liability (including reasonable and reasonably documented legal fees and disbursements and the costs of enforcing this indemnity) arising out of or resulting from any unauthorized use or disclosure by the Receiving Party or its Restricted Persons of the Protected Information.

5. Notices and Miscellaneous.

5.1. Notices. All notices, requests and other communications required or permitted by this Agreement or by law to be served upon or given to a Party by the other Party shall be deemed duly served and given (i) when received after being delivered by hand or courier service, (ii) on the date sent by confirmed facsimile or e-mail if sent prior to 4:00 p.m., recipient’s time and on the next business day if sent after 4:00 p.m., recipient’s time, or (iii) when received if sent by certified mail, return receipt requested, postage prepaid, to the address set forth below the Party’s signature. Each Party may change its address for the purposes of this Section by giving notice of change to the other Party in the manner provided in this Section.

5.2. Miscellaneous. The terms and provisions of this Agreement, including any exhibits or schedules, may only be modified, amended or supplemented by written agreement duly executed by each Party. No failure or delay by a Party in exercising any right hereunder and no course of dealing between the Parties shall operate as a waiver thereof. No waiver of any breach of the terms of this Agreement shall be effective unless such waiver is in writing and signed by the Party against whom such waiver is claimed. No waiver of any breach shall be deemed to be a waiver of any other or subsequent breach. If any provision of this Agreement for any reason shall be held invalid, illegal or unenforceable by any governmental authority or court having jurisdiction over the interpretation or enforcement of this Agreement, then such holding shall not invalidate or render unenforceable any other provision hereof and such portions shall remain in full force and effect as if this Agreement had been executed without the invalid, illegal or unenforceable portion. If any provision of this Agreement is declared invalid, illegal or unenforceable, then the Parties shall promptly renegotiate to restore this Agreement as near as possible to its original intent and effect.

THE SUBSTANTIVE LAWS OF THE STATE OF NEW YORK SHALL GOVERN THIS AGREEMENT AND ANY QUESTIONS CONCERNING ITS VALIDITY, CONSTRUCTION OR PERFORMANCE, WITHOUT REGARD TO THE CONFLICTS OF LAWS PROVISIONS THEREOF. EACH PARTY HEREBY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, ANY RIGHT IT MAY HAVE TO A TRIAL BY JURY IN ANY LEGAL PROCEEDING DIRECTLY OR INDIRECTLY ARISING OUT OF OR RELATING TO THIS AGREEMENT (WHETHER BASED ON CONTRACT, TORT OR ANY OTHER THEORY).

This Agreement binds the Parties only with respect to the matters expressly set forth herein and nothing herein shall bind either of the Parties to specific terms or conditions relating to the Purpose. Without limitation of the foregoing, neither Party is bound or committed to engage in negotiations or discussions with respect to the Purpose nor, unless, if and until one or more definitive agreements with respect to the Purpose has been executed and delivered by the Parties or their applicable Affiliates in their sole discretion, to seek to consummate the Purpose, subject to the terms and conditions of any such definitive agreement. Nothing herein shall constitute the creation of a partnership, joint venture or agency between the Parties.
This Agreement may be executed electronically and in more than one counterpart, each of which shall be deemed to be an original, but all of which together shall constitute one and the same document. This Agreement shall inure to the benefit of, be binding upon, and be enforceable by and against the Parties and their respective successors and permitted assigns. This Agreement is solely for the benefit of the Parties, and shall not be deemed to confer upon or give to any other person any remedy, claim of liability or reimbursement, cause of action or other right. Any assignment of this Agreement, in whole or in part, by either Party without the other Party’s prior written consent (in its sole discretion) shall be null and void. This Agreement constitutes the entire agreement between the Parties concerning the subject matter hereof and supersedes all prior agreements and understandings among the Parties with respect to the subject matter hereof. To the extent lawful, the provisions of this Agreement shall govern the relationship of the Parties among themselves. Captions, titles and headings used in this Agreement are for ease of reference only and do not constitute a part of this Agreement. An original of this executed Agreement may be imaged or scanned and stored on computer tapes and disks. If such an image of this Agreement is introduced as evidence in any judicial, arbitration, mediation or administrative proceedings, neither Party shall object to the admissibility of the imaged Agreement on the basis that it was not originated or maintained in documentary form under the hearsay rule, the best evidence rule or other rule of evidence.

5.3. Representations and Warranties. The Disclosing Party represents and warrants to the Receiving Party that it has the right to disclose and make available the Protected Information to the Receiving Party and its Restricted Persons without the violation of any contractual, legal, fiduciary or other obligation to any person. The Disclosing Party makes no express or implied representation or warranty pursuant to this Agreement as to the accuracy or completeness of the Protected Information. The Receiving Party agrees that neither the Receiving Party nor its Restricted Persons will make any claims whatsoever against the Disclosing Party or its Restricted Persons with respect to or arising out of the review of or use or content of the Protected Information or any errors therein or omissions therefrom, or any action taken or any inaction occurring in reliance on the Protected Information, except and solely to the extent as may be included in any definitive agreement with respect to a transaction.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be duly executed and delivered by the undersigned authorized representatives.

Skipjack Offshore Energy, LLC

By: ______________________________
Name: ______________________________
Its: ______________________________

By: ______________________________
Name: ______________________________
Its: ______________________________

Notices:
56 Exchange Terrace
Providence, RI 02903
Attn: General Counsel
Email: kadmin@dwwind.com