# United States Department of the Interior

BUREAU OF OCEAN ENERGY MANAGEMENT
WASHINGTON, DC 20240-0001

MAR 5 2019

Mr. Lars Thanning Pedersen
Vineyard Wind LLC
700 Pleasant Street
Suite 510
New Bedford, Massachusetts 02740

Dear Mr. Pedersen:

Please find enclosed one fully executed copy of Vineyard Wind LLC's (Company Number: 15010) commercial lease OCS-A 0522. The lease comprises 132,370 acres, more or less, lying within the Massachusetts Wind Energy Area, and will become effective April 1, 2019.

Please do not hesitate to contact me at our main office number, (703) 787-1300, if you have any further questions.

Sincerely,

James F. Bennett
Program Manager
Office of Renewable Energy Programs

Enclosure

RECEIVED

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Office of Renewable
Energy Programs

| UNITED STATES<br>DEPARTMENT OF THE INTERIOR<br>BUREAU OF OCEAN ENERGY<br>MANAGEMENT<br><br>**COMMERCIAL LEASE OF SUBMERGED LANDS FOR RENEWABLE ENERGY DEVELOPMENT ON THE OUTER CONTINENTAL SHELF**<br><br>***Paperwork Reduction Act of 1995 statement:*** *This form does not constitute an information collection as defined by 44 U.S.C. § 3501 et seq. and therefore does not require approval by the Office of Management and Budget.* | Office<br><br>Sterling, VA | Renewable Energy Lease Number<br><br>OCS-A 0522 |
|---|---|---|
| | Cash Bonus and/or Acquisition Fee<br><br>$135,100,000.00 | Resource Type<br><br>Wind |
| | Effective Date<br><br>April 1, 2019 | Block Number(s)<br><br>See Addendum A |

This lease, which includes any addenda hereto, is hereby entered into by and between the United States of America, ("Lessor"), acting through the Bureau of Ocean Energy Management ("BOEM"), its authorized officer, and

| Lessee | Interest Held |
|---|---|
| Vineyard Wind LLC | 100% |

("Lessee"). This lease is effective on the date written above ("Effective Date") and will continue in effect until the lease terminates as set forth in Addendum "B." In consideration of any cash payment heretofore made by the Lessee to the Lessor and in consideration of the promises, terms, conditions, covenants, and stipulations contained herein and attached hereto, the Lessee and the Lessor agree as follows:

**Section 1: Statutes and Regulations.**

This lease is issued pursuant to subsection 8(p) of the Outer Continental Shelf Lands Act ("the Act"), 43 U.S.C. §§ 1331 *et seq.* This lease is subject to the Act and regulations promulgated pursuant to the Act, including but not limited to, offshore renewable energy and alternate use regulations at 30 CFR Part 585 as well as other applicable statutes and regulations in existence on the Effective Date of this lease. This lease is also subject to those statutes enacted (including amendments to the Act or other statutes) and regulations promulgated thereafter, except to the extent that they explicitly conflict with an express provision of this lease. It is expressly understood that amendments to existing statutes, including but not limited to the Act, and regulations may be made, and/or new statutes may be enacted or new regulations promulgated, which do not explicitly conflict with an express provision of this lease, and that the Lessee bears the risk that such amendments, regulations, and statutes may increase or decrease the Lessee's obligations under the lease.

**Section 2: Rights of the Lessee.**

(a) The Lessor hereby grants and leases to the Lessee the exclusive right and privilege, subject to the terms and conditions of this lease and applicable regulations, to: (1) submit to the Lessor for approval a Site Assessment Plan (SAP) and Construction and Operations Plan (COP) for the project identified in Addendum "A" of this lease; and (2) conduct activities in the area identified in Addendum "A" of this lease ("leased area") and/or Addendum "D" of this lease ("project easement(s)"), that are described in a SAP or COP that has been approved by the Lessor. This lease does not, by itself, authorize any activity within the leased area.

(b) The rights granted to the Lessee herein are limited to those activities described in any SAP or COP approved by the Lessor. The rights granted to the Lessee are limited by the lease-specific terms, conditions, and stipulations required by the Lessor per Addendum "C."

(c) This lease does not authorize the Lessee to conduct activities on the Outer Continental Shelf (OCS) relating to or associated with the exploration for, or development or production of, oil, gas, other seabed minerals, or renewable energy resources other than those renewable energy resources identified in Addendum "A."

**Section 3: Reservations to the Lessor.**

(a) All rights in the leased area and project easement(s) not expressly granted to the Lessee by the Act, applicable regulations, this lease, or any approved SAP or COP, are hereby reserved to the Lessor.

(b) The Lessor will decide whether to approve a SAP or COP in accordance with the applicable regulations in 30 CFR Part 585. The Lessor retains the right to disapprove a SAP or COP based on the Lessor's determination that the proposed activities would have unacceptable environmental consequences, would conflict with one or more of the requirements set forth in subsection 8(p)(4) of the Act (43 U.S.C. § 1337(p)(4)), or for other reasons provided by the Lessor pursuant to 30 CFR 585.613(e)(2) or 30 CFR 585.628(f)(2). Disapproval of plans will not subject the Lessor to liability under the lease. The Lessor also retains the right to approve with modifications a SAP or COP, as provided in applicable regulations.

(c) The Lessor reserves the right to suspend the Lessee's operations in accordance with the national security and defense provisions of Section 12 of the Act and applicable regulations.

(d) The Lessor reserves the right to authorize other uses within the leased area and project easements(s) that will not unreasonably interfere with activities described in an approved SAP and/or COP, pursuant to this lease.

**Section 4: Payments.**

(a) The Lessee must make all rent payments to the Lessor in accordance with applicable regulations in 30 CFR Part 585, unless otherwise specified in Addendum "B."

(b) The Lessee must make all operating fee payments to the Lessor in accordance with applicable regulations in 30 CFR Part 585, as specified in Addendum "B."

**Section 5: Plans.**

The Lessee may conduct those activities described in Addendum "A" only in accordance with a SAP or COP approved by the Lessor. The Lessee may not deviate from an approved SAP or COP except as provided in applicable regulations in 30 CFR Part 585.

**Section 6: Associated Project Easement(s).**

Pursuant to 30 CFR 585.200(b), the Lessee has the right to one or more project easement(s), without further competition, for the purpose of installing gathering, transmission, and distribution cables, pipelines, and appurtenances on the OCS, as necessary for the full enjoyment of the lease, and under applicable regulations in 30 CFR Part 585. As part of submitting a COP for approval, the Lessee may request that one or more easement(s) be granted by the Lessor. If the Lessee requests that one or more easement(s) be granted when submitting a COP for approval, such project easements will be granted by the Lessor in accordance with the Act and applicable regulations in 30 CFR Part 585 upon approval of the COP in which the Lessee has demonstrated a need for such easements. Such easements must be in a location acceptable to the Lessor, and will be subject to such conditions as the Lessor may require. The project easement(s) that would be issued in conjunction with an approved COP under this lease will be described in Addendum "D" to this lease, which will be updated as necessary.

**Section 7: Conduct of Activities.**

The Lessee must conduct, and agrees to conduct, all activities in the leased area and project easement(s) in accordance with an approved SAP or COP, and with all applicable laws and regulations.

The Lessee further agrees that no activities authorized by this lease will be carried out in a manner that:

(a) could unreasonably interfere with or endanger activities or operations carried out under any lease or grant issued or maintained pursuant to the Act, or under any other license or approval from any Federal agency;

(b) could cause any undue harm or damage to the environment;

(c) could create hazardous or unsafe conditions; or

(d) could adversely affect sites, structures, or objects of historical, cultural, or archaeological significance, without notice to and direction from the Lessor on how to proceed.

**Section 8: Violations, Suspensions, Cancellations, and Remedies.**

If the Lessee fails to comply with (1) any of the applicable provisions of the Act or regulations, (2) the approved SAP or COP, or (3) the terms of this lease, including associated Addenda, the Lessor may exercise any of the remedies that are provided under the Act and applicable regulations, including, without limitation, issuance of cessation of operations orders, suspension or cancellation of the lease, and/or the imposition of penalties, in accordance with the Act and applicable regulations.

The Lessor may also cancel this lease for reasons set forth in subsection 5(a)(2) of the Act (43 U.S.C. § 1334(a)(2)), or for other reasons provided by the Lessor pursuant to 30 CFR 585.437.

Non-enforcement by the Lessor of a remedy for any particular violation of the applicable provisions of the Act or regulations, or the terms of this lease, will not prevent the Lessor from exercising any remedy, including cancellation of this lease, for any other violation or for the same violation occurring at any other time.

**Section 9: Indemnification.**

The Lessee hereby agrees to indemnify the Lessor for, and hold the Lessor harmless from, any claim caused by or resulting from any of the Lessee's operations or activities on the leased area or project easement(s) or arising out of any activities conducted by or on behalf of the Lessee or its employees, contractors (including Operator, if applicable), subcontractors, or their employees, under this lease, including claims for:

a. loss or damage to natural resources,
b. the release of any petroleum or any Hazardous Materials,
c. other environmental injury of any kind,
d. damage to property,
e. injury to persons, and/or
f. costs or expenses incurred by the Lessor.

Except as provided in any addenda to this lease, the Lessee will not be liable for any losses or damages proximately caused by the activities of the Lessor or the Lessor's employees, contractors, subcontractors, or their employees. The Lessee must pay the Lessor for damage, cost, or expense due and pursuant to this Section within 90 days after written demand by the Lessor. Nothing in this lease will be construed to waive any liability or relieve the Lessee from any penalties, sanctions, or claims that would otherwise apply by

statute, regulation, operation of law, or could be imposed by the Lessor or other government agency acting under such laws.

"Hazardous Material" means

1. Any substance or material defined as hazardous, a pollutant, or a contaminant under the *Comprehensive Environmental Response, Compensation, and Liability Act* at 42 U.S.C. §§ 9601(14) and (33);
2. Any regulated substance as defined by the Resource Conservation and Recovery Act ("RCRA") at 42 U.S.C. § 6991 (7), whether or not contained in or released from underground storage tanks, and any hazardous waste regulated under RCRA pursuant to 42 U.S.C. §§ 6921 *et seq.*;
3. Oil, as defined by the Clean Water Act at 33 U.S.C. § 1321(a)(1) and the Oil Pollution Act at 33 U.S.C. § 2701(23); or
4. Other substances that applicable Federal, state, tribal, or local laws define and regulate as "hazardous."

**Section 10: Financial Assurance.**

The Lessee must provide and maintain at all times a surety bond(s) or other form(s) of financial assurance approved by the Lessor in the amount specified in Addendum "B." As required by the applicable regulations in 30 CFR Part 585, if, at any time during the term of this lease, the Lessor requires additional financial assurance, then the Lessee must furnish the additional financial assurance required by the Lessor in a form acceptable to the Lessor within 90 days after receipt of the Lessor's notice of such adjustment.

**Section 11: Assignment or Transfer of Lease.**

This lease may not be assigned or transferred in whole or in part without written approval of the Lessor. The Lessor reserves the right, in its sole discretion, to deny approval of the Lessee's application to transfer or assign all or part of this lease. Any assignment will be effective on the date the Lessor approves the Lessee's application. Any assignment made in contravention of this section is void.

**Section 12: Relinquishment of Lease.**

The Lessee may relinquish this entire lease or any officially designated subdivision thereof by filing with the appropriate office of the Lessor a written relinquishment application, in accordance with applicable regulations in 30 CFR Part 585. No relinquishment of this lease or any portion thereof will relieve the Lessee or its surety of the obligations accrued hereunder, including but not limited to, the responsibility to remove property and restore the leased area and project easement(s) pursuant to section 13 of this lease and applicable regulations.

**Section 13: Removal of Property and Restoration of the Leased Area and Project Easement(s) on Termination of Lease.**

Unless otherwise authorized by the Lessor, pursuant to the applicable regulations in 30 CFR Part 585, the Lessee must remove or decommission all facilities, projects, cables, pipelines, and obstructions and clear the seafloor of all obstructions created by activities on the leased area and project easement(s) within two years following lease termination, whether by expiration, cancellation, contraction, or relinquishment, in accordance with any approved SAP, COP, or approved Decommissioning Application, and applicable regulations in 30 CFR Part 585.

**Section 14: Safety Requirements.**

The Lessee must:

a. maintain all places of employment for activities authorized under this lease in compliance with occupational safety and health standards and, in addition, free from recognized hazards to employees of the Lessee or of any contractor or subcontractor operating under this lease;

b. maintain all operations within the leased area and project easement(s) in compliance with regulations in 30 CFR Part 585 and orders from the Lessor and other Federal agencies with jurisdiction, intended to protect persons, property and the environment on the OCS; and

c. provide any requested documents and records, which are pertinent to occupational or public health, safety, or environmental protection, and allow prompt access, at the site of any operation or activity conducted under this lease, to any inspector authorized by the Lessor or other Federal agency with jurisdiction.

**Section 15: Debarment Compliance.**

The Lessee must comply with the Department of the Interior's non-procurement debarment and suspension regulations set forth in 2 CFR Parts 180 and 1400 and must communicate the requirement to comply with these regulations to persons with whom it does business related to this lease by including this requirement in all relevant contracts and transactions.

**Section 16: Equal Opportunity Clause.**

During the performance of this lease, the Lessee must fully comply with paragraphs (1) through (7) of Section 202 of Executive Order 11246, as amended (reprinted in 41 CFR 60-1.4(a)), and the implementing regulations, which are for the purpose of preventing employment discrimination against persons on the basis of race, color, religion, sex, or national origin. Paragraphs (1) through (7) of Section 202 of Executive Order 11246, as amended, are incorporated in this lease by reference.

**Section 17: Certification of Nonsegregated Facilities.**

By entering into this lease, the Lessee certifies, as specified in 41 CFR 60-1.8, that it does not and will not maintain or provide for its employees any segregated facilities at any of its establishments and that it does not and will not permit its employees to perform their services at any location under its control where segregated facilities are maintained. As used in this certification, the term "facilities" means, but is not limited to, any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, timeclocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees. Segregated facilities include those that are segregated by explicit directive or those that are in fact segregated on the basis of race, color, religion, sex, or national origin, because of habit, local custom, or otherwise; provided, that separate or single-user restrooms and necessary dressing or sleeping areas must be provided to assure privacy as appropriate. The Lessee further agrees that it will obtain identical certifications from proposed contractors and subcontractors prior to awarding contracts or subcontracts unless they are exempt under 41CFR 60-1.5.

**Section 18: Notices.**

All notices or reports provided from one party to the other under the terms of this lease must be in writing, except as provided herein and in the applicable regulations in 30 CFR Part 585. Written notices and reports must be delivered to the Lessee's or Lessor's Lease Representative, as specifically listed in Addendum "A," either electronically, by hand, by facsimile, or by United States first class mail, adequate postage prepaid. Each party must, as soon as practicable, notify the other of a change to their Lessee's or Lessor's Contact Information listed in Addendum "A" by a written notice signed by a duly authorized signatory and delivered by hand or United States first class mail, adequate postage prepaid. Until such notice is delivered as provided in this section, the last recorded contact information for either party will be deemed current for service of all notices and reports required under this lease. For all operational matters, notices and reports must be provided to the party's Operations Representative, as specifically listed in Addendum "A," as well as the Lease Representative.

**Section 19: Severability Clause.**

If any provision of this lease is held unenforceable, all remaining provisions of this lease will remain in full force and effect.

**Section 20: Modification.**

Unless otherwise authorized by the applicable regulations in 30 CFR Part 585, this lease may be modified or amended only by mutual agreement of the Lessor and the Lessee. No such modification or amendment will be binding unless it is in writing and signed by duly authorized signatories of the Lessor and the Lessee.

| Vineyard Wind LLC | The United States of America |
|---|---|
| Lessee | Lessor |
| Iain Henderson | |
| (Signature of Authorized Officer) | (Signature of Authorized Officer) |
| Iain Henderson | James F. Bennett |
| (Name of Signatory) | (Name of Signatory) |
| CFO | Program Manager, Office of Renewable Energy Programs |
| (Title) | (Title) |
| February 20, 2019 | March 5, 2019 |
| (Date) | (Date) |

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF OCEAN ENERGY MANAGEMENT

**ADDENDUM "A"**

DESCRIPTION OF LEASED AREA AND LEASE ACTIVITIES

Lease Number OCS-A 0522

I. Lessor and Lessee Contact Information

Lessee Company Number: 15010

(a) Lessor's Contact Information

| | **Lease Representative** | **Operations Representative** |
|---|---|---|
| Title | Program Manager | Same as Lease Representative. |
| Address | U.S. Department of the Interior<br>Bureau of Ocean Energy Management<br>45600 Woodland Road<br>Sterling, Virginia 20166 | |
| Phone | (703) 787-1300 | |
| Fax | (703) 787-1708 | |
| Email | renewableenergy@boem.gov | |
| | | |

(b) Lessee's Contact Information

| | **Lease Representative** | **Operations Representative** |
|---|---|---|
| Name | ERICH STEPHENS | SAME AS LEASE REPRESENTATIVE |
| Title | CDO | |
| Address | 700 PLEASANT ST<br>SUITE 510<br>NEW BEDFORD MA 02740 | |
| Phone | (401) 487-3320 | |
| Fax | | |
| Email | estephens@vineyardwind.com | |

II. Description of Leased Area

The total acreage of the leased area is approximately 132,370 acres.

This area is subject to later adjustment, in accordance with applicable regulations (*e.g.*, contraction, relinquishment).

**Lease OCS-A 0522**

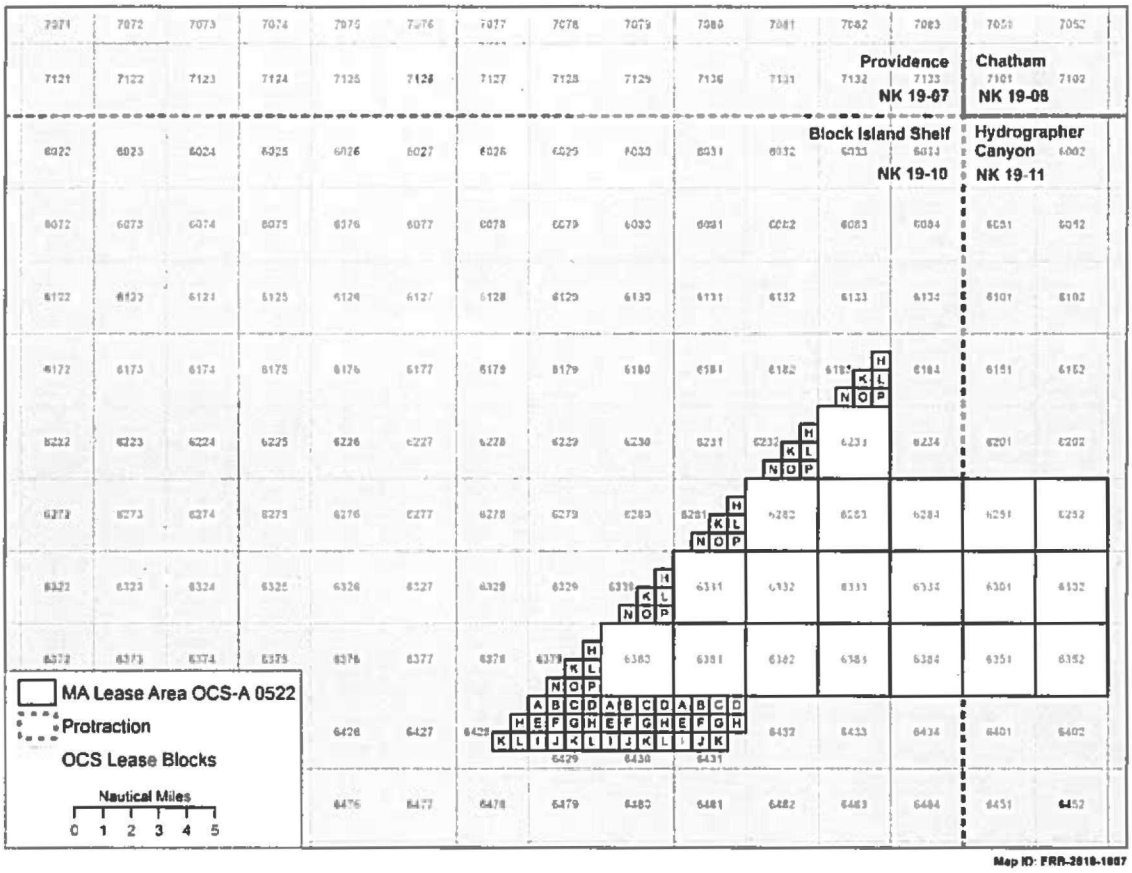
The following Blocks or portions of Blocks lying within Official Protraction Diagram Block Island Shelf NK19-10, are depicted on the map below and comprise 98,210 acres, more or less.

1) Block 6183, SE1/4 of NE1/4, SE1/4 of SW1/4, SE1/4
2) Block 6232, SE1/4 of NE1/4, SE1/4 of SW1/4, SE1/4
3) Block 6233, All of Block
4) Block 6281, SE1/4 of NE1/4, SE1/4 of SW1/4, SE1/4
5) Block 6282, All of Block
6) Block 6283, All of Block
7) Block 6284, All of Block
8) Block 6330, SE1/4 of NE1/4, SE1/4 of SW1/4, SE1/4
9) Block 6331, All of Block
10) Block 6332, All of Block
11) Block 6333, All of Block
12) Block 6334, All of Block
13) Block 6379, SE1/4 of NE1/4, SE1/4 of SW1/4, SE1/4
14) Block 6380, All of Block
15) Block 6381, All of Block
16) Block 6382, All of Block
17) Block 6383, All of Block
18) Block 6384, All of Block
19) Block 6428, SE1/4 of NE1/4, N1/2 of SE1/4
20) Block 6429, N1/2, N1/2 of S1/2
21) Block 6430, N1/2, N1/2 of S1/2
22) Block 6431, N1/2, N1/2 of SW1/4, NW1/4 of SE1/4

The following Blocks or portions of Blocks lying within Official Protraction Diagram Hydrographer Canyon NK19-11, are depicted on the map below and comprise 34,160 acres, more or less.

23) Block 6251, All of Block
24) Block 6252, All of Block
25) Block 6301, All of Block
26) Block 6302, All of Block
27) Block 6351, All of Block
28) Block 6352, All of Block

For the purposes of these calculations, a full Block is 2,304 hectares. The acreage of a hectare is 2.471043930.




III. Renewable Energy Resource

Wind

IV. Description of the Project

A project to generate energy using wind turbine generators and any associated resource assessment activities, located on the Outer Continental Shelf in the leased area, as well as associated offshore substation platforms, inner array cables, and subsea export cables.

V. Description of Project Easement(s)

Once approved, the Lessor will incorporate Lessee's project easement(s) in this lease as ADDENDUM "D."

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF OCEAN ENERGY MANAGEMENT

**ADDENDUM "B"**

LEASE TERM AND FINANCIAL SCHEDULE

Lease Number OCS-A 0522

I. Lease Term

The duration of each term of the lease is described below. The terms may be extended or otherwise modified in accordance with applicable regulations in 30 C.F.R. Part 585.

| **Lease Term** | **Duration** |
|---|---|
| Preliminary Term | 1 year |
| Site Assessment Term | 5 years |
| Operations Term | 33 years |

Schedule: Addendum "C" includes a schedule and reporting requirements for conducting site characterization activities.

Renewal: The Lessee may request renewal of the operations term of this lease, in accordance with applicable regulations in 30 CFR Part 585. The Lessor, at its discretion, may approve a renewal request to conduct substantially similar activities as were originally authorized under this lease or in an approved plan. The Lessor will not approve a renewal request that involves development of a type of renewable energy not originally authorized in the lease. The Lessor may revise or adjust payment terms of the original lease as a condition of lease renewal.

II. Definitions

"Lease Issuance Date" refers to the date on which this lease has been signed by *both* the Lessee and the Lessor.

"Effective Date" has the same meaning as "effective date" in the Bureau of Ocean Energy Management (BOEM) regulations provided in 30 CFR 585.237.

"Lease Anniversary" refers to the anniversary of the Effective Date of the lease.

"End Date" refers to the earlier of a) the last calendar day of the last month of the Operations Term; or b) the date on which the lease terminates in the event of a lease termination.

"Commercial Operations" means the generation of electricity or other energy product for commercial use, sale, or distribution.

"Commercial Operation Date," or "COD," refers to the date on which the Lessee first begins Commercial Operations on the lease.

"Delivery Point" is the meter identified in the COP where the Lessee's facility interconnects with the electric grid to deliver electricity for sale.

An individual wind generation turbine is said to be "available for Commercial Operations" on or after the first day that it engages in Commercial Operations on the lease; and to be no longer available for Commercial Operations on or after the day when it is permanently decommissioned. These dates are determined by the Construction and Operations Plan (COP).

III. Payments

Unless otherwise authorized by the Lessor in accordance with the applicable regulations in 30 CFR Part 585, the Lessee must make payments as described below.

(a) ***Rent.*** The Lessee must pay rent as described below:

Rent payments prior to the COD, or prior to the lease End Date in the event that the lease terminates prior to the COD, are calculated by multiplying the acres in the leased area times the rental rate per acre as follows:

Lease OCS-A 0522

- Acres in Leased Area: 132,370
- Annual Rental Rate: $3.00 per acre or fraction thereof
- Rental Fee for Entire Leased Area: $3.00 x 132,370 = $397,110

The first year's rent payment of $397,110 is due within 45 days of the date that the lease is received by the Lessee for execution. Rent for the entire leased area for the next year and for each subsequent year is due on or before each Lease Anniversary through the year in which the COD occurs. The rent for each year subsequent to the COD on the imputed portion of the lease not authorized for Commercial Operations is due on or before each Lease Anniversary. The imputed portion of the lease that is not authorized for Commercial Operations at each Lease Anniversary in year t, $S_t$, and the corresponding Adjusted Annual Rent Payment will be determined as follows:

(A) $$S_t = \left(1 - \frac{M_t'}{MAX(M_t': for\ all\ t \geq 2)}\right)$$

(B) $Adjusted\ Annual\ Rent\ Payment = S_t * Rental\ Fee\ for\ Entire\ Leased\ Area$

Where:
$S_t$ = Portion of the lease not authorized for Commercial Operations in year $t$ based on the definition of $t$ in Section III (b) (4) below.

$M_t'$ = Actual Nameplate capacity expressed in megawatts (MW) rounded to the nearest second decimal in year $t$ of Commercial Operations on the lease as defined in Section III (b) (4) below, prior to any adjustments as specified in the most recent approved COP for turbine maintenance, replacements, repowering, or decommissioning. For our purposes nameplate capacity is the maximum rated electric output the turbines of the wind farm facility under commercial operations can produce at their rated wind speed designated by the turbine's manufacturer.

$MAX(M_t')$ = Highest value of $M_t'$ projected in the most recent approved version of the COP to be achieved in any year of Commercial Operations on the lease.

The Adjusted Annual Rent Payment calculated in Equation (A) herein, will be rounded up to the nearest dollar. The annual rent payments will be set forth in Addendum "E" when the COP is initially approved or subsequently revised.

Consider an example of a 1,000 MW project on a lease with an Effective Date of January 1, 2014 and a COD of January 1, 2022 on a lease area consisting of 100,000 acres as follows:

| Payment (Jan. 1st) | $M_t'$ (MW) | $MAX(M_t')$ (MW) | $\left(1 - \frac{M_t'}{MAX(M_t')}\right)$ | Rental Fee for Entire Area | Payment Amount |
|---|---|---|---|---|---|
| 2014 | 0 | 1,000 | 1.0 | $300,000 | $300,000 |
| ... | ... | | ... | | ... |
| 2021 | 0 | | 1.0 | | $300,000 |
| 2022 | 500 | | 0.5 | | $150,000 |
| 2023 | 500 | | 0.5 | | $150,000 |
| 2024 | 500 | | 0.5 | | $150,000 |
| 2025 | 800 | | 0.2 | | $60,000 |
| 2026 | 800 | | 0.2 | | $60,000 |
| 2027 | 800 | | 0.2 | | $60,000 |
| 2028 | 1,000 | | 0.0 | | $0 |

In the event a revised COP is approved by BOEM that identifies an alternative installation schedule that differs from the previously-approved COP, the Lessee must make subsequent payments based on the revised installation schedule. In addition, the Lessee must make a payment equal to the sum of any incremental annual rent payments that would have been due at the Lease Anniversary of prior years based on the differences between the Initial Installation Schedules specified in the previously-approved COP and the revised COP, plus interest on the annual balances, in accordance with 30 CFR 1218.54.

Consider an example whereby the initial COP specified an installation schedule with all 1,000 MW online at the COD, i.e., $M_t'$ is 1,000 MW at COD. The following table demonstrates how the back rent payments would be calculated if the project was initially scheduled as a

single phase, but then later determined to be the three-phase project as shown in the previous example in a revised COP approved prior to the payment due on January 1, 2023.

| Payment (Jan. 1st) | Initial $M'_t$ (MW) | Revised $M'_t$ (MW) | Single-Phase Payment Amount | Three-Phase Payment Amount | Back Rent Payment Amount | Subsequent Rent Payment Amount |
|---|---|---|---|---|---|---|
| 2014 | 0 | 0 | $300,000 | $300,000 | $0 | $0 |
| ... | ... | ... | ... | ... | ... | ... |
| 2021 | 0 | 0 | $300,000 | $300,000 | $0 | $0 |
| 2022 | 1,000 | 500 | $0 | $150,000 | $150,000 | $0 |
| 2023 | 1,000 | 500 | $0 | $150,000 | $0 | $150,000 |
| 2024 | 1,000 | 500 | $0 | $150,000 | $0 | $150,000 |
| 2025 | 1,000 | 800 | $0 | $60,000 | $0 | $60,000 |
| 2026 | 1,000 | 800 | $0 | $60,000 | $0 | $60,000 |
| 2027 | 1,000 | 800 | $0 | $60,000 | $0 | $60,000 |
| 2028 | 1,000 | 1,000 | $0 | 0 | $0 | $0 |

The last rent payment prior to Commercial Operations being authorized on the entire lease area, i.e., the year in which the value of $S_t$ is equal to zero, or prior to the lease End Date, in the event that the lease terminates prior to Commercial Operations being authorized on the entire lease area, will represent the final rent payment, unless a revised COP identifying an alternative maximum initial capacity is approved by BOEM. All rent payments, including the last rent payment, are payable for the full year and will not be prorated to the COD or other installation milestones. The COD is equivalent to the authorization date for the first phase of development on the lease, to be updated based on the initial or revised approved COP documentation. The schedule of rent payments on the lease is defined in Addendum "E". All rent payments, except for the first 6-month rent payment, must be made as required in 30 CFR 1218.51. Late rent payments will be charged interest in accordance with 30 CFR 1218.54.

(1) ***Project Easement.***

Rent for any project easement(s) is described in ADDENDUM "D".

(2) ***Relinquishment.***

If the Lessee submits an application for relinquishment of a portion of the leased area within the first 45 calendar days following the date that the lease is received by the Lessee for execution, and the Lessor approves that application, no rent payment will be due on that relinquished portion of the leased area. Later relinquishments of any leased area will reduce the Lessee's rent payments due the year following the Lessor's approval of the relinquishment, through a reduction in the Acres in Leased Area and the corresponding Rental Fee for the Entire Leased Area and any related Adjusted Annual Rent Payments.

(b) ***Operating Fee.*** The Lessee must pay an operating fee as described below:

**(1) Initial Operating Fee Payment.**

The Lessee must pay an initial prorated operating fee within 45 calendar days after the COD. The initial operating fee payment covers the first year of Commercial Operations on the lease and will be calculated in accordance with subsection (4) below, using an operating fee rate of 0.02 and a capacity factor of 0.4.

**(2) Annual Operating Fee Payments.**

The Lessee must pay the operating fee for each subsequent year of Commercial Operations on or before each Lease Anniversary following the formula in subsection (4) below. The Lessee must calculate each operating fee annually subsequent to the initial operating fee payment using an operating fee rate of 0.02 through the thirty-three year operations term of the lease. The capacity factor of 0.4 will remain in effect until the Lease Anniversary of the year in which the Lessor adjusts the capacity factor.

**(3) Final Operating Fee Payment.**

The final operating fee payment is due on the Lease Anniversary prior to the End Date. The final operating fee payment covers the last year of Commercial Operations on the lease and will be calculated in accordance with the formula in subsection (4) below.

**(4) The formula for calculating the operating fee in year *t*.**

| $F_t$ | = | $M_t$ | * | H | * | $c_p$ | * | $P_t$ | * | $r_t$ |
|---|---|---|---|---|---|---|---|---|---|---|
| (annual operating fee) | | (nameplate capacity) | | (hours per year) | | (capacity factor) | | (power price) | | (operating fee rate) |

Where:

| | |
|---|---|
| t = | the year of Commercial Operations on the lease starting from each Lease Anniversary, where *t* equals 1 represents the year beginning on the Lease Anniversary prior to, or on, the COD. |
| $F_t$ = | the dollar amount of the annual operating fee in year *t*. |
| $M_t$ = | the nameplate capacity expressed in megawatts (MW) rounded to the nearest second decimal place in year *t* of Commercial Operations on the lease.<br><br>The value of $M_t$, reflecting the availability of turbines, will be determined based on the COP. This value will be adjusted to reflect any modifications to the COP approved by BOEM as of the date each operating fee payment is due, in accordance with the calculation in Equation 1, for each year of Commercial Operations on the lease. |

$$\textbf{(1)}\quad M_t = \sum_{w=1}^{W_t}\left(N_w * \left[\frac{\left(\sum_{d=1}^{D} E_{w,t,d}\right)}{D}\right]\right)$$

Where:

$W_t$ = Number of individual wind generation turbines, *w*, that will be available for Commercial Operations during any day of the year, *t*, per the COP.

$N_w$ = Nameplate capacity of individual wind generation turbine, *w*, per the COP expressed in MW.

$E_{w,t,d}$ = Indicates whether individual wind generation turbine, *w*, will be available for Commercial Operations on day *d* of year *t*. The value is set to 1 for any day in year *t* for which the condition is true, i.e., the wind turbine will be available for Commercial Operations, and zero for any day in year *t* for which the condition is false, i.e., the wind turbine will not be available for Commercial Operations. The month of February is always assumed to have 28 days for purposes of this calculation, where March 1st will be counted as the first day of Commercial Operations if Commercial Operations commence on February 29th of a leap year.

$D$ = Days in the year set equal to 365 in all years for purposes of this calculation.

$M_t$ may be reduced only in the event that installed capacity is permanently decommissioned per the COP. $M_t$ will not be changed in response to routine or unplanned maintenance of units, including the temporary removal of a nacelle for off-site repair or replacement with a similar unit.

EXAMPLE: Assume that the Lease Anniversary is January 1st, the COD is July 1, 2018, that the facility will ultimately have 100 individual wind generation turbines with a nameplate capacity of 5.0 MW each, and that the COP specifies the following, cumulative installation schedule for wind turbines to become available for Commercial Operations:

- July 1, 2018 (COD): 20 turbines (20 new units);
- October 1, 2018: 45 turbines (25 new units);
- January 1, 2019: 50 turbines (5 new units);
- July 1, 2019: 65 turbines (15 new units);
- January 1, 2020: 95 turbines (30 new units);
- February 29, 2020: 100 turbines (5 new units).

Further assume that the COP calls for 50 of the turbines to be decommissioned after September 30, 2039 ($t$ = 22), and that the remaining turbines are decommissioned at

the End Date of March 15, 2040 ($t$ = 23).

The value of $M_t$ would be estimated as demonstrated in Table 1a for each year of Commercial Operations on the lease in this example.

**Table 1a: Example of $M_t$ Calculations for Installation and Decommissioning**

| $t$ | Turbines | MW | Commercial Operations Period | Comm. Ops. Days | Days in Year | Share of Days | MW | $M_t$ |
|---|---|---|---|---|---|---|---|---|
| 1 | 20 | 100 | Jul. 1st to Dec. 31st | 184 | 365 | 50.41% | 50.41 | 81.92 |
| | 25 | 125 | Oct. 1st to Dec. 31st | 92 | | 25.21% | 31.51 | |
| 2 | 50 | 250 | Jan. 1st to Dec. 31st | 365 | | 100.00% | 250.00 | 287.81 |
| | 15 | 75 | Jul. 1st to Dec. 31st | 184 | | 50.41% | 37.81 | |
| 3 | 95 | 475 | Jan. 1st to Dec. 31st | 365 | | 100.00% | 475.00 | 495.96 |
| | 5 | 25 | Mar. 1st to Dec. 31st | 306 | | 83.84% | 20.96 | |
| 4 | 100 | 500 | Jan. 1st to Dec. 31st | 365 | | 100.00% | 500.00 | 500.00 |
| ... | ... | ... | ... | ... | | ... | ... | ... |
| 21 | 100 | 500 | Jan. 1st to Dec. 31st | 365 | | 100.00% | 500.00 | 500.00 |
| 22 | 50 | 250 | Jan. 1st to Dec. 31st | 365 | | 100.00% | 250.00 | 436.98 |
| | 50 | 250 | Jan. 1st to Sep. 30th | 273 | | 74.79% | 186.98 | |
| 23 | 50 | 250 | Jan. 1st to Mar. 15th | 74 | | 20.27% | 50.68 | 50.68 |

To illustrate the impact of decommissioning a portion of the individual wind generation turbines and replacing them with units of greater capacity on the calculation of $M_t$, assume that at the end of March 31, 2022, 10 units are to be made unavailable due to decommissioning, and that the incremental units have a capacity of 7.0 MW and are expected to be made available for Commercial Operations on September 15, 2022. The impact on $M_t$ in 2022 and in subsequent years starting in 2023 and continuing until decommissioning is illustrated in Table 1b.

**Table 1b: Example of $M_t$ Calculations for Repowering**

| $t$ | Turbines | MW | Commercial Operations Period | Comm. Ops. Days | Days in Year | Share of Days | MW | $M_t$ |
|---|---|---|---|---|---|---|---|---|
| 5 | 90 (5.0) | 450 | Jan. 1st to Dec. 31st | 365 | 365 | 100.00% | 450.00 | 483.04 |
| | 10 (5.0) | 50 | Jan. 1st. to Mar. 31st | 90 | | 24.66% | 12.33 | |
| | 10 (7.0) | 70 | Sep. 15th to Dec. 31st | 108 | | 29.59% | 20.71 | |
| 6 | 90 (5.0) | 450 | Jan. 1st to Dec. 31st | 365 | | 100.00% | 450.00 | 520.00 |
| | 10 (7.0) | 70 | Jan. 1st to Dec. 31st | 365 | | 100.00% | 70.00 | |

| | |
|---|---|
| H = | the number of hours in the year for billing purposes which is equal to 8,760 for all years of Commercial Operations on the lease. |
| $c_p$ = | the "Capacity Factor" in Performance Period p, which represents the share of anticipated generation of the facility that is delivered to where the Lessee's facility interconnects with the electric grid (i.e. the Delivery Point) relative to its generation at continuous full power operation at the nameplate capacity, expressed as a decimal between zero and one. |

The initial Capacity Factor ($c_0$) will be set to 0.4.

The Capacity Factor will be subject to adjustment at the end of each Performance Period. After the sixth year of Commercial Operations on the lease has concluded, the Lessee will utilize data gathered from years two through six of Commercial Operations on the lease and propose a revised Capacity Factor to be used to calculate subsequent annual payments, as provided for in Table 2 below. A similar process will be conducted at the conclusion of each five-year Performance Period, thereafter.

**Table 2: Definition of Performance Periods**

| Performance Period ($p$) | Commercial Operation Years ($t$) | Payments Affected by Adjustment | Capacity Factor ($c$) | Date End Year ($n$) |
|---|---|---|---|---|
| 0 (COD) | Not Applicable | Payments 1 to 7 | $c_0$=0.4 | -- |
| 1 | $t$ = 2 to 6 | Payments 8 to 12 | $c_1$ | $n_1$=6 |
| 2 | $t$ = 7 to 11 | Payments 13 to 17 | $c_2$ | $n_2$=11 |
| 3 | $t$ = 12 to 16 | Payments 18 to 22 | $c_3$ | $n_3$=16 |
| 4 | $t$ = 17 to 21 | Payments 23 to 27 | $c_4$ | $n_4$=21 |
| 5 | $t$ = 22 to 26 | Payments 28 to 32 | $c_5$ | $n_5$=26 |
| 6 | $t$ = 27 to 31 | Payment 33 | $c_6$ | $n_6$=31 |

**Adjustments to the Capacity Factor**

The Actual 5-year Average Capacity Factor ($Xp$) is calculated for each Performance Period after COD ($p > 0$) per Equation 2 below. $Xp$ represents the sum of actual, metered electricity generation in megawatt-hours (MWh) at the Delivery Point to the electric grid ($A_t$) divided by the amount of electricity generation in MWh that would have been produced if the facility operated continuously at its full, stated capacity ($M_t$) in all of the hours ($h_t$) in each year, $t$, of the corresponding five-year period.

$$\text{(2)}\quad X_p = \frac{\sum_{t=n-4}^{n} A_t}{\left(\sum_{t=n-4}^{n} M_t * h_t\right)}$$

Where:

$M_t$ = Nameplate Capacity as defined above.

$n$ = "Date End Year" value for the Performance Period, $p$, as defined in Table 2.

$p$ = Performance Period as defined in Table 2.

$A_t$ = Actual generation in MWh associated with each year of Commercial Operations, $t$, on the lease that is transferred at the Delivery Point; Delivery Point meter data supporting the values submitted for annual actual generation must be recorded, preserved, and timely provided to the Lessor upon request. In the event the Lessor requires the assistance of the Lessee in obtaining information useful in verifying

| | |
|---|---|
| | such information, for example by waiving confidentiality with respect to data held by a third party, such assistance must be timely provided.<br><br>$h_t$ = Hours in the year on which the Actual Generation associated with each year of Commercial Operations, $t$, on the lease is based; this definition of "hours in the year" differs from the definition of H in the operating fee equation above. The hours in the year for purposes of calculating the capacity factor must take into account the actual number of hours, including those in leap years.<br><br>The value of the Capacity Factor at the outset of Commercial Operations ($p = 0$) is set to 0.4 as stated in equation 3:<br><br>**(3)** $c_0 = 0.4$<br><br>The value of the Capacity Factor corresponding to each Performance Period ($c_p$) is set according to equations 4A, 4B, and 4C as follows for each value of $p$ greater than zero. The Capacity Factor is set equal to the Actual 5-Year Average Capacity Factor provided that the value falls within a range of plus or minus 10 percent of the previous Performance Period's capacity factor.<br><br>**(4A)** $c_p = X_p \text{ for } c_{p-1} * 0.90 \le X_p \le c_{p-1} * 1.10$<br>**(4B)** $c_p = c_{p-1} * 0.90 \text{ for } X_p < c_{p-1} * 0.90$<br>**(4C)** $c_p = c_{p-1} * 1.10 \text{ for } X_p > c_{p-1} * 1.10$<br><br>All values for $c_p$ must be rounded to the nearest third decimal place. |
| $P_t$ = | a measure of the annual average wholesale electric power price expressed in dollars per MW hour.<br><br>The Lessee must calculate $P_t$ at the time each operating fee payment is due, subject to approval by the Lessor. The Base Price ( $P_b$ ) must equal the weighted average of the peak and off-peak spot price indices for the Northeast – Massachusetts Hub power market for the most recent year of data available as reported by the Federal Energy Regulatory Commission (FERC). If FERC stops publishing this data or the specified location of the data changes over time, the Lessor must specify an alternate source of data and methodology that is approximately equivalent.<br><br>The peak and off-peak price indices must be weighted 52.0% and 48.0%, respectively, for purposes of estimating the weighted index value for the Base Price. For example, in the March 12, 2012 State of the Markets Report the peak price index for 2011 was \$51.99/MWh and the corresponding off-peak price index for 2011 was \$33.94/MWh, resulting in a weighted index value for the Base Price for 2011 ($P_{2011}$) of \$43.33/MWh (=52.0% * \$51.99 / MWh + 48.0% *\$33.94 / MWh). The calculation of $P_b$ must be |

rounded up to the nearest, second decimal place.
The Base Price must be adjusted for inflation from the year associated with the published spot prices to the year in which the operating fee is to be paid as shown in equations (5A) and (5B):

**(5A)** $$P_t = P_b * \left(\frac{GDP_g}{GDP_{g-1}}\right)^{y-g} * \left(\frac{GDP_g}{GDP_b}\right) \text{ for } g \geq b$$

**(5B)** $$P_t = P_b * \left(\frac{GDP_g}{GDP_{g-1}}\right)^{y-b} \text{ for } g < b$$

Where:

*GDP* = Annual Implicit Price Deflators for Gross Domestic Product (GDP deflator index) published by the U.S. Bureau of Economic Analysis (BEA) for the specified period.

If BEA stops publishing the data required for this calculation, or the specified location of the data changes over time, the Lessor will specify an alternative source of data and methodology that it considers approximately equivalent.

*b* = The most recent year for which FERC reports the appropriate electricity spot price data expressed as the year, e.g., 2009, as in the illustrative example below.

*g* = The most recent year for which GDP deflator indices are available from BEA expressed as the year, e.g., 2011, as in the illustrative example below.

*y* = The year the annual payment is due expressed as the year corresponding to the value of *t* described above, e.g., 2013, as in the illustrative example below.

The second term on the right-hand side of equation (5A) represents a projected annual change in the index of inflation employing the last year of data available from BEA, while the third term represents the cumulative change in the index of inflation up to the previous year.

**Example:**
The following hypothetical example is provided to illustrate the methodology using Equation (5A) and the illustrative values provided for *b*, *g*, and *y* above, applied to historical GDP deflator data. If the actual FERC price indices are based on 2009 data and the GDP deflator indices are available for 2011, the inflation-adjusted price index value would be determined from equation (5A) as follows for a payment occurring in *y* = 2013:

| | |
|---|---|
| | $P_{t(2013)} = P_{2009} * \left(\frac{GDP_{2011}}{GDP_{2010}}\right)^{2013-2011} * \left(\frac{GDP_{2011}}{GDP_{2009}}\right) = \frac{\$38.40}{\text{MWh}} * \left(\frac{113.361}{110.992}\right)^2 * \left(\frac{113.361}{109.729}\right) = \frac{\$41.38}{\text{MWh}}$<br><br>Note: The current GDP deflator index is 113.361 for 2011, 110.992 for 2010, and 109.729 for 2009 (last revised by BEA on April 27, 2012); the FERC index price for the year 2009 is $38.40/MWh (On-peak: $44.60/MWh; Off-peak: $31.68/MWh; last revised March 12, 2012). Although 2011 FERC prices are available, the 2009 prices are used in the example to illustrate the concept.<br><br>The Lessor and the Lessee will use the latest FERC price indices and revised BEA GDP deflator index values at the time the pricing adjustments are made. The source of data used in the calculations must be noted in the Lessee's documentation supporting their estimate of the value of $P_t$ each year for review and approval by the Lessor. |
| $r_t$ = | the operating fee rate of 0.02 (2%). |

(c) ***Reporting, Validation, Audits, and Late Payments.***

The Lessee must submit the values used in the operating fee formula to the Lessor at the time the annual payment based on these values is made. Submission of this and other reporting, validation, audit and late payment information as requested by the Lessor must be sent to the Lessor using the contact information indicated in Addendum "A", unless the Lessor directs otherwise. Failure to submit the estimated values and the associated documentation on time to the Lessor may result in penalties as specified in applicable regulations.

Within 60 days of the submission by the Lessee of the annual payment, the Lessor will review the data submitted and validate that the operating fee formula was applied correctly. If the Lessor validation results in a different operating fee amount, the amount of the annual operating fee payment will be revised to the amount determined by the Lessor.

The Lessor also reserves the right to audit the meter data upon which the Actual 5-year Average Capacity Factor is based at any time during the lease term. If, as a result of such audit, the Lessor determines that any annual operating fee payment was calculated incorrectly, the Lessor has the right to correct any errors and collect the correct annual operating fee payment amount.

If the annual operating fee is revised downward as a result of the Lessee's calculations, as validated by the Lessor, or an audit of meter data conducted by the Lessee or Lessor, the Lessee will be refunded the difference between the amount of the payment received and the amount of the revised annual operating fee, without interest. Similarly, if the payment amount is revised upward, the Lessee is required to pay the difference between the amount

of the payment received and the amount of the revised annual operating fee, plus interest on the balance, in accordance with 30 CFR § 1218.54.

Late operating fee payments will be charged interest in accordance with 30 CFR § 1218.54.

IV. Financial Assurance

The Lessor will base the determination for the amounts of all Site Assessment Plan (SAP), COP, and decommissioning financial assurance requirements on estimates of the cost to meet all accrued lease obligations. The Lessor determines the amount of supplemental and decommissioning financial assurance requirements on a case-by-case basis. The amount of financial assurance required to meet all lease obligations includes:

(a) **Initial Financial Assurance.** Prior to the Lease Issuance date, the Lessee must provide an initial lease-specific bond, or other approved means of meeting the Lessor's initial financial assurance requirements in an amount equal to $100,000.

(b) **Additional Financial Assurance.** In addition to the initial lease-specific financial assurance discussed above, the Lessee is also required to provide additional supplemental bonds associated with the SAP and COP, or other form of financial assurances and a decommissioning bond or other approved means of meeting the Lessee's decommissioning obligations.

(1) Prior to the Lessor's approval of a SAP, the Lessor will require an additional supplemental bond or other form of financial assurance in an amount determined by the Lessor based on the complexity, number, and location of all facilities involved in the site assessment activities planned in the SAP, and estimates of the costs to meet all accrued obligations, in accordance with applicable BOEM regulations (30 CFR 585.515-537). The supplemental financial assurance requirement is in addition to the initial lease-specific financial assurance in the amount of $100,000. The Lessee may meet these obligations by providing a new bond or other acceptable form of financial assurance, or increasing the amount of its existing bond or other form of financial assurance.

(2) Prior to the Lessor's approval of a COP, the Lessor may require an additional supplemental bond or other form of financial assurance in an amount determined by the Lessor based on the complexity, number, location of all facilities, activities and Commercial Operations planned in the COP, and estimates of the costs to meet all accrued obligations, in accordance with applicable BOEM regulations (30 CFR 585.515-537). The supplemental financial assurance requirement is in addition to the initial lease-specific financial assurance in the amount of $100,000 and an additional supplemental bond or other form of financial assurance required with the SAP. The Lessee may meet this obligation by providing a new bond or other acceptable form of financial assurance, or increasing the amount of its existing bond or other form of financial assurance.

(3) The Lessor will require a decommissioning bond or other form of financial assurance based on the anticipated decommissioning costs in accordance with applicable BOEM regulations (30 CFR 585.515-537). The decommissioning obligation must be guaranteed through an acceptable form of financial assurance and will be due according to the schedule beginning before commencement of the installation of commercial facilities on a date or dates to be determined by the Lessor.

(c) **Adjustments to Financial Assurance Amounts.** The Lessor reserves the right to adjust the amount of any financial assurance requirement (initial, supplemental, or decommissioning) associated with this lease and/or reassess the Lessee's cumulative lease obligations, including decommissioning obligations, at any time. If the Lessee's cumulative lease obligations and/or liabilities increase or decrease, the Lessor will notify the Lessee of any intended adjustment to the financial assurance requirements and provide the Lessee an opportunity to comment in accordance with applicable BOEM regulations.

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF OCEAN ENERGY MANAGEMENT

**ADDENDUM "C"**

LEASE-SPECIFIC TERMS, CONDITIONS, AND STIPULATIONS

Lease Number OCS-A 0522

The Lessee's rights to conduct activities on the leased area are subject to the following terms, conditions, and stipulations. The Lessor reserves the right to impose additional terms and conditions incident to the future approval or approval with modifications of plans, such as a Site Assessment Plan (SAP) or Construction and Operations Plan (COP).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## 1 DEFINITIONS

1.1 Definition of "Archaeological Resource": The term "archaeological resource" has the same meaning as "archaeological resource" in the Bureau of Ocean Energy Management (BOEM) regulations provided in 30 CFR 585.112.

1.2 Definition of "Dynamic Management Area (DMA)": The term "DMA" refers to a temporary area designated by the National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS) and consisting of a circle around a confirmed North Atlantic right whale sighting. The radius of this circle expands incrementally with the number of whales sighted, and a buffer is included beyond the core area to allow for whale movement. Mandatory or voluntary speed restrictions may be applied by NOAA NMFS within DMAs. Information regarding the location and status of applicable DMAs is available from the NMFS Office of Protected Resources.

1.3 Definition of "Effective Date": The term "Effective Date" has the same meaning as "effective date" in BOEM regulations provided in 30 CFR 585.237.

1.4 Definition of "Geological and Geophysical Survey (G&G Survey)": The term "G&G Survey" serves as a collective term for surveys that collect data on the geology of the seafloor and landforms below the seafloor. High resolution geophysical surveys and geotechnical (sub-bottom) exploration are components of G&G surveys.

1.5 Definition of "Geotechnical Exploration": The term "Geotechnical Exploration," also referred to as "Sub-bottom Sampling," or "Geotechnical Testing," is used to collectively refer to site specific sediment and underlying geologic data acquired from the seafloor and the sub-bottom and includes geotechnical surveys utilizing deep borings, vibracores, and cone penetration tests.

1.6 Definition of "High Resolution Geophysical Survey (HRG Survey)": The term "HRG Survey" means a marine remote-sensing survey using, but not limited to, such equipment as side-scan sonar, magnetometer, shallow and medium (Seismic) penetration sub-bottom profiler systems, narrow beam or multibeam echo sounder, or other such equipment employed for the purposes of providing data on geological conditions, identifying shallow hazards, identifying archaeological resources, charting bathymetry, and gathering other site characterization information.

1.7 Definition of "Protected Species": The term "protected species" includes marine mammals (those protected under the Endangered Species Act and those protected under the Marine Mammal Protection Act), sea turtles, sturgeon, and giant manta ray.

1.8 Definition of "Protected-Species Observer": The term "protected-species observer," or "PSO," means an individual who is trained in the shipboard identification and behavior of protected species.

1.9 Definition of "Ramp-up": The term "ramp-up" means the process of incrementally increasing the acoustic source level of the survey equipment when conducting HRG surveys until it reaches the operational setting.

1.10 Definition of "Site Assessment Activities": The term "site assessment activities" or "site assessment," has the same meaning as "site assessment activities" in 30 CFR 585.112.

1.11 Definition of "Qualified Marine Archaeologist": The term "qualified marine archaeologist" means a person retained by the Lessee who meets the Secretary of the Interior's Professional Qualifications Standards for Archaeology (48 FR 44738-44739), and has experience analyzing marine geophysical data.

## 2 SCHEDULE

### 2.1 Site Characterization

2.1.1 Survey Plan(s). Prior to conducting survey activities in support of the submission of a plan, the Lessee must submit to the Lessor at least one complete survey plan. Each distinct survey effort (e.g., mobilization) must be addressed by a survey plan, although a single survey plan may cover more than one effort. Each survey plan must include details and timelines of the surveys to be conducted on this lease necessary to support the submission of a plan (i.e., necessary to satisfy the information requirements in the applicable regulations, including but not limited to 30 CFR 585.606, 610, 611, 621, 626, 627). Each survey plan must include a description of historic property identification surveys that will be conducted to gather the information required by BOEM to complete review of a plan under the National Historic Preservation Act (e.g., offshore and onshore archaeological surveys and surveys within the viewshed of proposed renewable energy structures). Each survey plan must be consistent with the Lessee's Fisheries Communication Plan (see 4.1.3) and include a description of the Lessee's intentions to coordinate with the U.S. Coast Guard to prepare a Notice to Mariners for the specific survey activities described in the survey plan.

The Lessee must submit each survey plan to the Lessor at least 30 calendar days prior to the date of the required pre-survey meeting with the Lessor (See 2.1.2). Prior to the commencement of any survey activities described in the survey plan, the Lessee must modify each survey plan to address any comments the Lessor submits to the Lessee on the contents of the survey plan in a manner deemed satisfactory by the Lessor.

2.1.2 Pre-Survey Meeting(s) with the Lessor. At least 60 days prior to the initiation of survey activities in support of the submission of a plan (i.e., SAP and/or COP), the Lessee must hold a pre-survey meeting with the Lessor to discuss the applicable proposed survey plan and timelines. The Lessee must ensure the presence at this meeting of a Qualified Marine Archaeologist and any other relevant subject matter experts (e.g., terrestrial archaeologist, architectural historians) related to the proposed historic property identification surveys described in the survey plan unless otherwise authorized by the Lessor. The Lessor may request the presence of other relevant subject matter experts at this meeting.

## 2.2 Progress Reporting

2.2.1 Semi-Annual Progress Report. The Lessee must submit to the Lessor a semi-annual (i.e., every six months) progress report through the duration of the site assessment term that includes a brief narrative of the overall progress since the last progress report, or – in the case of the first report – since the Effective Date. The progress report must include an update regarding progress in executing the activities included in the survey plan(s), and include as an enclosure an updated survey plan(s) accounting for any modifications in schedule.

# 3 NATIONAL SECURITY AND MILITARY OPERATIONS

The Lessee must comply with the requirements specified in stipulations 3.1, 3.2 and 3.3 when conducting site characterization activities in support of plan (i.e., SAP and/or COP) submittal.

## 3.1 Hold and Save Harmless

Whether compensation for such damage or injury might be due under a theory of strict or absolute liability or otherwise, the Lessee assumes all risks of damage or injury to persons or property, which occur in, on, or above the Outer Continental Shelf (OCS), to any persons or to any property of any person or persons in connection with any activities being performed by the Lessee in, on, or above the OCS, if such injury or damage to such person or property occurs by reason of the activities of any agency of the United States Government, its contractors, or subcontractors, or any of its officers, agents or employees, being conducted as a part of, or in connection with, the programs or activities of the individual military command headquarters (hereinafter "the appropriate command headquarters") listed in the contact information provided as an enclosure to this lease.

Notwithstanding any limitation of the Lessee's liability in Section 9 of the lease, the Lessee assumes this risk whether such injury or damage is caused in whole or in part by any act or omission, regardless of negligence or fault, of the United States, its contractors or subcontractors, or any of its officers, agents, or employees. The Lessee further agrees to indemnify and save harmless the United States against all claims for loss, damage, or injury in connection with the programs or activities of the command headquarters, whether the same be caused in whole or in part by the negligence or fault of the United States, its contractors, or subcontractors, or any of its officers, agents, or employees and whether such claims might be sustained under a theory of strict or absolute liability or otherwise.

3.2 **Evacuation or Suspension of Activities**

3.2.1 General. The Lessee hereby recognizes and agrees that the United States reserves and has the right to temporarily suspend operations and/or require evacuation on this lease in the interest of national security pursuant to Section 3(c) of this lease.

3.2.2 Notification. Every effort will be made by the appropriate military agency to provide as much advance notice as possible of the need to suspend operations and/or evacuate. Advance notice will normally be given before requiring a suspension or evacuation. Temporary suspension of operations may include, but is not limited to the evacuation of personnel and appropriate sheltering of personnel not evacuated. "Appropriate sheltering" means the protection of all Lessee personnel for the entire duration of any Department of Defense activity from flying or falling objects or substances and will be implemented by an order (oral and/or written) from the BOEM Office of Renewable Energy Programs (OREP) Program Manager, after consultation with the appropriate command headquarters or other appropriate military agency, or higher Federal authority. The appropriate command headquarters, military agency, or higher authority will provide information to allow the Lessee to assess the degree of risk to, and provide sufficient protection for, the Lessee's personnel and property.

3.2.3 Duration. Suspensions or evacuations for national security reasons will not generally exceed seventy-two (72) hours; however, any such suspension may be extended by order of the OREP Program Manager. During such periods, equipment may remain in place, but all operations, if any, must cease for the duration of the temporary suspension if so directed by the OREP Program Manager. Upon cessation of any temporary suspension, the OREP Program Manager will immediately notify the Lessee such suspension has terminated and operations on the leased area can resume.

3.2.4 Lessee Point-of-Contact for Evacuation/Suspension Notifications. The Lessee must inform the Lessor of the persons/offices to be notified to implement the terms of 3.2.2 and 3.2.3.

3.2.5 Coordination with Command Headquarters. The Lessee must establish and maintain early contact and coordination with the appropriate command headquarters, in order to avoid or minimize the potential to conflict with and minimize the potential effects of conflicts with military operations.

3.2.6 Reimbursement. The Lessee is not entitled to reimbursement for any costs or expenses associated with the suspension of operations or activities or the evacuation of property or personnel in fulfillment of the military mission in accordance with 3.2.1 through 3.2.5 above.

### 3.3 Electromagnetic Emissions

The Lessee, prior to entry into any designated defense operating area, warning area, or water test area, for the purpose of commencing survey activities undertaken to support SAP or COP submittal must enter into an agreement with the commander of the appropriate command headquarters to coordinate the electromagnetic emissions associated with such survey activities. The Lessee must ensure that all electromagnetic emissions associated with such survey activities are controlled as directed by the commander of the appropriate command headquarters.

## 4 STANDARD OPERATING CONDITIONS

### 4.1 General

4.1.1 Vessel Strike Avoidance Measures. The Lessee must ensure that all vessels conducting activities in support of plan (i.e., SAP and COP) submittal, including those transiting to and from local ports and the lease area, comply with the vessel-strike avoidance measures specified in stipulations 4.1.1.1 through 4.1.1.8.3, except under extraordinary circumstances when complying with these requirements would put the safety of the vessel or crew at risk.

4.1.1.1 The Lessee must ensure that vessel operators and crews maintain a vigilant watch for marine mammals (whales, dolphins, porpoises, seals), sea turtles, and giant manta rays, and slow down or stop their vessel to avoid striking these protected species.

4.1.1.2 The Lessee must ensure that vessels 19.8 meters (m) (65 feet [ft]) in length or greater that operate between November 1 through July 31, operate at speeds of 10 knots (11.5 mph) or less.

4.1.1.3 The Lessee must ensure that vessel operators monitor NMFS North Atlantic Right Whale reporting systems (e.g., the Early Warning System, Sighting Advisory System, and Mandatory Ship Reporting System) from November 1 through July 31 and whenever a DMA is established within any area vessels operate.

4.1.1.4 The Lessee must ensure that all vessel operators comply with 10 knot (18.5 kilometers per hour [km/hr]) speed restrictions in any DMA.

4.1.1.5 The Lessee must ensure that all vessel operators reduce vessel speed to 10 knots or less when mother/calf pairs, pods, or large assemblages of marine mammals are observed near an underway vessel.

4.1.1.6 North Atlantic Right Whales.

4.1.1.6.1 The Lessee must ensure all vessels maintain a separation distance of 500 m (1,640 ft) or greater from any sighted North Atlantic right whale or unidentified large marine mammal.

4.1.1.6.2 The Lessee must ensure that the following avoidance measures are taken if a vessel comes within 500 m (1,640 ft) of any North Atlantic right whale:

4.1.1.6.2.1 If underway, any vessel must steer a course away from any North Atlantic right whale at 10 knots ( 18.5 km/h) or less until the 500 m (1,640 ft) minimum separation distance has been established (except as provided in 4.1.1.6.2.2).

4.1.1.6.2.2 If a North Atlantic right whale is sighted within 100 m (328 ft) to an underway vessel, the vessel operator must immediately reduce speed and promptly shift the engine to neutral. The vessel operator must not engage the engines until the North Atlantic right whale has moved beyond 100 m (328 ft), at which point the Lessee must comply with 4.1.1.6.2.1.

4.1.1.6.2.3 If a vessel is stationary, the vessel must not engage engines until the North Atlantic right whale has moved beyond 100 m (328 ft), at which point the Lessee must comply with 4.1.1.6.2.1.

4.1.1.7 Large Whales other than the North Atlantic Right Whale.

4.1.1.7.1 The Lessee must ensure all vessels maintain a separation distance of 100 m (328 ft) or greater from any sighted Endangered Species Act (ESA)-listed whales or humpback whales.

4.1.1.7.2 The Lessee must ensure that the following avoidance measures are taken if a vessel comes within 100 m (328 ft) of whale:

4.1.1.7.2.1 If underway, the vessel must reduce speed and shift the engine to neutral, and must not engage the engines until the whale has moved beyond 100 m (328 ft).

4.1.1.7.2.2 If stationary, the vessel must not engage engines until the whale has moved beyond 100 m (328 ft).

4.1.1.8 Small Cetaceans (Dolphins and Porpoises), Seals, Giant Manta Rays, and Sea Turtles.

4.1.1.8.1 The Lessee must ensure that all vessels underway do not divert to approach any small cetacean, seal, sea turtle, or giant manta ray.

4.1.1.8.2 The Lessee must ensure that all vessels maintain a separation distance of 50 meters (164 ft) or greater from any sighted small cetacean, seal, sea turtles, or giant manta ray, except when a small cetacean or seal approaches the vessel, in which case, the Lessee must follow 4.1.1.8.3 below.

4.1.1.8.3 If a small cetacean or seal approaches any vessel underway, the vessel underway must avoid excessive speed or abrupt changes in direction to avoid injury to the animal.

4.1.1.9 Vessel Operator Briefing. The Lessee must ensure that all vessel operators are briefed to ensure they are familiar with the requirements specified in 4.1.1.

4.1.2 Marine Trash and Debris Prevention. The Lessee must ensure that vessel operators, employees, and contractors actively engaged in activity in support of a plan (i.e., SAP and COP) submittal are briefed on marine trash and debris awareness and elimination, as described in the BSEE NTL No. 2015-G03 ("Marine Trash and Debris Awareness and Elimination") or any NTL that supersedes this NTL, except that the Lessor will not require the Lessee to post placards. The Lessee must ensure that these vessel operator employees and contractors receive training on the environmental and socioeconomic impacts associated with marine trash and debris and their responsibilities for ensuring that trash and debris are not intentionally or accidentally discharged into the marine environment. Briefing materials on marine debris awareness, elimination, and protected species are available at http://oocmain.theooc.us/page41.html.

4.1.3 Fisheries Communications Plan (FCP) and Fisheries Liaison. The Lessee must develop a publicly available FCP that describes the strategies that the Lessee intends to use for communicating with fisheries stakeholders prior to and during activities in support of the submission of a plan. The FCP must include the contact information for an individual retained by the Lessee as its primary point of contact with fisheries stakeholders (i.e., Fisheries Liaison). If the Lessee does not develop a project website, the FCP must be made available to the Lessor and the public upon request.

4.1.4 Entanglement Avoidance.

4.1.4.1 The Lessee must ensure that any structures or devices attached to the seafloor for continuous periods greater than 24 hours use the best available mooring systems for minimizing the risk of entanglement or entrainment of marine mammals, manta rays and sea turtles, while still ensuring the safety and integrity of the structure or device. The best available mooring system may include, but is not limited to, vertical and float lines (chains, cables, or coated rope systems), swivels, shackles, and anchor designs.

4.1.4.2 All mooring lines and ancillary attachment lines must use one or more of the following measures to reduce entanglement risk: shortest practicable line length, rubber sleeves,

weak-links, chains, cables or similar equipment types that prevent lines from looping or wrapping around animals, or entrapping protected species.

4.1.4.3 Any equipment must be attached by a line within a rubber sleeve for rigidity. The length of the line must be as short as necessary to meet its intended purpose.

4.1.4.4 If an entangled live or dead marine protected species is reported, the Lessee must provide any assistance to authorized stranding response personnel as requested by BOEM or NMFS.

## 4.2 Archaeological Survey Requirements

4.2.1 Archaeological Survey Required. The Lessee must provide the results of an archaeological survey with its plans.

4.2.2 Qualified Marine Archaeologist. The Lessee must ensure that the analysis of archaeological survey data collected in support of plan (e.g., SAP and/or COP) submittal and the preparation of archaeological reports in support of plan submittal are conducted by a Qualified Marine Archaeologist.

4.2.3 Tribal Pre-Survey Meeting. The Lessee must invite by certified mail the Narragansett Indian Tribe, the Mashpee Wampanoag Tribe, and the Wampanoag Tribe of Gay Head (Aquinnah) to a tribal pre-survey meeting. The purpose of this meeting will be for the Lessee and the Lessee's Qualified Marine Archaeologist to discuss the Lessee's Survey Plan and consider requests to monitor portions of the archaeological survey and the geotechnical exploration activities, including the visual logging and analysis of geotechnical samples (e.g., cores, etc.). The meeting must be held subsequent to the pre-survey meeting with the Lessor (see 2.1.2). Invitation to the tribal pre-survey meeting must be made at least 15 calendar days prior to the date of the proposed tribal pre-survey meeting. The meeting must be scheduled for a date at least 30 calendar days prior to commencement of survey activities performed in support of plan submittal and at a location and time that affords the participants a reasonable opportunity to participate. The anticipated date for the meeting must be identified in the timeline of activities described in the applicable survey plan (see 2.1.1).

4.2.4 Geotechnical Exploration. The Lessee may only conduct geotechnical exploration activities performed in support of plan (i.e., SAP and/or COP) submittal in locations where an analysis of the results of geophysical surveys has been completed. This analysis must include a determination by a Qualified Marine Archaeologist as to whether any potential archaeological resources are present in the area. Except as allowed by the Lessor under 4.2.6, the geotechnical exploration activities must avoid potential archaeological resources by a minimum of 50 m (164 ft), and the avoidance distance must be calculated from the maximum discernible extent of the archaeological resource. A Qualified Marine Archaeologist must certify, in the

Lessee's archaeological reports, that geotechnical exploration activities did not impact potential historic properties identified as a result of the HRG surveys performed in support of plan submittal, except as follows: in the event that the geotechnical exploration activities did impact potential historic properties identified in the archaeological surveys without the Lessor's prior approval, the Lessee and the Qualified Marine Archaeologist who prepared the report must instead provide a statement documenting the extent of these impacts.

4.2.5 Monitoring and Avoidance. The Lessee must inform the Qualified Marine Archaeologist that he or she may be present during HRG surveys and bottom-disturbing activities performed in support of plan (i.e., SAP and/or COP) submittal to ensure avoidance of potential archaeological resources, as determined by the Qualified Marine Archaeologist (including bathymetric, seismic, and magnetic anomalies; side scan sonar contacts; and other seafloor or sub-surface features that exhibit potential to represent or contain potential archaeological sites or other historic properties). In the event that this Qualified Marine Archaeologist indicates that he or she wishes to be present, the Lessee must facilitate the Qualified Marine Archaeologist's presence, as requested by the Qualified Marine Archaeologist, and provide the Qualified Marine Archaeologist the opportunity to inspect data quality.

4.2.6 No Impact without Approval. In no case may the Lessee knowingly impact a potential archaeological resource without the Lessor's prior approval.

4.2.7 Post-Review Discovery Clauses. If the Lessee, while conducting geotechnical exploration or any other bottom-disturbing site characterization activities in support of plan (i.e., SAP and COP) submittal and after review of the location by a Qualified Marine Archaeologist under 4.2.4, discovers an unanticipated potential archaeological resource, such as the presence of a shipwreck (e.g., a sonar image or visual confirmation of an iron, steel, or wooden hull, wooden timbers, anchors, concentrations of historic objects, piles of ballast rock) or evidence of a pre-contact archaeological site (e.g. stone tools, pottery or other pre-contact artifacts) within the project area, the Lessee must:

4.2.7.1 Immediately halt seafloor/bottom-disturbing activities within the area of discovery;

4.2.7.2 Notify the Lessor within 24 hours of discovery;

4.2.7.3 Notify the Lessor in writing via report to the Lessor within 72 hours of its discovery;

4.2.7.4 Keep the location of the discovery confidential and take no action that may adversely affect the archaeological resource until the Lessor has made an evaluation and instructs the applicant on how to proceed; and

4.2.7.5 Conduct any additional investigations as directed by the Lessor to determine if the resource is eligible for listing in the National Register of Historic Places

(30 CFR 585.802(b)). The Lessor will do this if: (1) the site has been impacted by the Lessee's project activities; or (2) impacts to the site or to the area of potential effect cannot be avoided. If investigations indicate that the resource is potentially eligible for listing in the National Register of Historic Places, the Lessor will tell the Lessee how to protect the resource or how to mitigate adverse effects to the site. If the Lessor incurs costs in protecting the resource, under Section 110(g) of the National Historic Preservation Act, the Lessor may charge the Lessee reasonable costs for carrying out preservation responsibilities under the OCS Lands Act (30 CFR 585.802(c-d)).

## 4.3 Geological and Geophysical (G&G) Survey Requirements

4.3.1 General. The Lessee must ensure that all vessels conducting activity in support of a plan (i.e., SAP and COP) submittal comply with the geological and geophysical survey requirements specified in 4.3 except under extraordinary circumstances when complying with these requirements would put the safety of the vessel or crew at risk.

4.3.2 Visibility. The Lessee must not conduct G&G surveys in support of plan (i.e., SAP and COP) submittal at night or if any observation conditions (e.g., darkness, rain, fog, and sea state) prevent visual monitoring of the HRG survey exclusion zone (see 4.3.6.1) or the geotechnical exploration exclusion zone (see 4.3.7.1), except as allowed under 4.3.3.

4.3.3 Nighttime Survey Requirements. If the Lessee intends to conduct G&G survey operations in support of plan submittal at night or when visual observation is otherwise impaired, the Lessee must use PSOs supplemented with night vision technology and a passive acoustic monitoring system to monitor the exclusion zone. The Lessee must submit to the Lessor an alternative monitoring plan detailing the monitoring methodology (e.g., active or passive acoustic monitoring technologies). No nighttime surveys may begin until the Lessor determines that the alternative monitoring plan is adequate to monitor for protected species.

4.3.4 Protected-Species Observer. The Lessee must ensure that the exclusion zone for all G&G surveys performed in support of plan (i.e., SAP and COP) submittal is monitored by NMFS-approved protected-species observers.

4.3.4.1 The Lessor must ensure all PSOs and Passive Acoustic Monitoring (PAM) Operators have completed a PSO and/or PAM training program, as appropriate. PSOs must be approved by NMFS prior to the start of a survey. Instructions and application requirements to become a NMFS-approved PSO can be found at: https://www.greateratlantic.fisheries.noaa.gov/protected/esaobserver/index.html.

4.3.4.2 No later than 7 calendar days prior to the scheduled start of survey activities that require PSOs, the Lessee must provide to the Lessor a list of PSOs that will implement best management practices (BMPs) during survey work. The Lessee must provide the Lessor a current approval from NMFS that indicates the PSOs

are currently qualified to work on survey, and documentation or certificate of individual PSOs' successful completion of a commercial PSO training course and/or PAM operator course with an overall examination score of 80% or greater (Baker et. al 2013 available at https://www.fisheries.noaa.gov/resource/document/national-standards-protected-species-observer-and-data-management-program).

4.3.4.3 The Lessee must submit a PSO/PAM Operator schedule showing the number of PSOs/PAM Operators used is sufficient to effectively monitor the affected area identified for each project (e.g., surveys or pile driving) according to the following: a) PSOs/PAM must not be on watch for more than 4 consecutive hours, with at least a 2-hour break after a 4-hour watch, unless otherwise accepted by the Lessor; b) PSOs/PAM must not work for more than 12 hours in any 24-hour period (Baker et al. 2013).

4.3.4.4 The Lessee must ensure PSO data is collected in accordance with standard reporting forms, software tools, and electronic data forms approved by BOEM for the particular activity.

4.3.5 Observation Location and Optical Device Availability. The Lessee must ensure that monitoring occurs from the highest available vantage point on the associated operational platform, allowing for 360-degree scanning. The Lessee must ensure that reticle binoculars and other suitable equipment are available to each observer to adequately perceive and monitor protected marine species within the exclusion zone during surveys conducted in support of plan (i.e., SAP and COP) submittal.

4.3.6 High-Resolution Geophysical Surveys. Stipulations specific to HRG surveys conducted in support of plan (i.e., SAP and COP) submittal where one or more acoustic sound sources is operating at frequencies below 200 kHz are provided in 4.3.6.1 through 4.3.6.9.

4.3.6.1 Establishment of Default Exclusion Zone. The Lessee must ensure a 200-meter radius exclusion zone around the sound source for ESA-listed whales and sea turtles. In the case of the North Atlantic right whale, the Lessee must observe a minimum separation distance of 500 m (1,640 ft), as required under 4.1.1.6.1. Exclusion zones for non-listed marine mammals will be determined through project-specific mitigation and monitoring requirements of Incidental Take Authorizations (ITAs) provided by the National Marine Fisheries Service. If an ITA is not required, default exclusion zones of 100 m (328 ft) for harbor porpoises and humpback whales, and 50 m (164 ft) for all other non-listed marine mammals must be established around each vessel conducting HRG survey activities.

4.3.6.2 High Resolution Geophysical Sound Source Verification. No later than 45 calendar days prior to the commencement of survey activities , the Lessee must submit the results of sound source verification for any active acoustic devices that may be used. The Lessee must submit sound source verification results containing the frequencies, source

level (dB re 1μPa), and modeled distances to most current guidance specified by the Lessor for ear injury and behavioral disturbance in the survey area. If existing data is available, the analysis must provide an explanation why the existing data is expected to be representative for the equipment in the area to be surveyed. This explanation must include a discussion of any differences between the equipment tested and the equipment to be used, a discussion of any differences in propagation characteristics conditions (depth, water temperature and bottom conditions), and an explanation for how those differences would affect sound propagation and injury and behavioral disturbance distances. No surveys may begin until the Lessor determines that the sound source verification use of existing information is acceptable.

4.3.6.3 If the existing SSV information is not acceptable, the Lessee must submit to the Lessor a sound source verification plan for field measurements of any HRG equipment that will be used, no later than 30 calendar days prior to the commencement of survey activities. Acoustic measurements must be sufficient to establish the following: frequencies, source level (Peak, SEL, and RMS sound pressure levels re 1 μPa at 1 m), and the sound exposure distance for ear injury and behavioral harassment thresholds for marine mammal hearing groups, sea turtles, and fish specified by the Lessor. The Lessee must take these sound measurements from at least three reference distances at two depths (i.e., a depth at mid-water and a depth at approximately 1 m above the seafloor). The results of the field measurements must be provided to the Lessor for review at least 24 hours in advance of commencing a survey.

4.3.6.3.1 If the Lessor determines that the exclusion zone does not encompass the sound-exposure threshold for ear injury to protected species, the Lessor will consult with NMFS and may impose additional requirements on the Lessee.

4.3.6.4 Modification of Exclusion Zone per Lessee Request. The Lessee may use the field verification results to request modification of the exclusion zone for the specific HRG survey equipment under consideration. Any new exclusion zone radius proposed by the Lessee must be based on the most conservative field measurements of the largest exclusion zone and diving behavior of the protected species in the survey area. The Lessee may periodically reevaluate the modified zone using the field verification procedures described in 4.3.6.3. The Lessee must obtain Lessor approval of any new exclusion zone before it is implemented.

4.3.6.5 Clearance of Exclusion Zone. The Lessee must ensure that active acoustic sound sources will not be activated until the PSO has reported the exclusion zone clear of all marine mammals and sea turtles for 60 minutes.

4.3.6.6 Electromechanical Survey Equipment Ramp-Up. The Lessee must ensure that, when technically feasible, a "ramp-up" of the electromechanical survey

equipment occurs at the start or re-start of HRG survey activities. A ramp-up would begin with the power of the smallest acoustic equipment for the HRG survey at its lowest power output. The power output would be gradually turned up and other acoustic sources added in a way such that the source level would increase in steps not exceeding 6 dB per 5-minute period.

4.3.6.7 Shut Down for Protected Species. The Lessee must ensure that anytime a protected species is sighted within the exclusion zone defined in 4.3.6.1, the PSO must notify the Resident Engineer or other authorized individual, and call for an immediate shutdown of the electromechanical survey equipment. HRG survey equipment may be allowed to continue operating if marine mammals voluntarily approach the vessel (e.g., to bow ride) when the sound sources are at full operating power. The vessel operator must comply immediately with such a call by the PSO. Any disagreement or discussion must occur only after shut-down. Subsequent restart of the electromechanical survey equipment may only occur following clearance of the exclusion zone (see 4.3.6.5) and implementation of ramp-up procedures (see 4.3.6.6).

4.3.6.8 Pauses in Electromechanical Survey Sound Source. The Lessee must ensure that, if the electromechanical sound source shuts down for reasons other than encroachment into the exclusion zone by a whale or sea turtle, including reasons such as, but not limited to, mechanical or electronic failure, resulting in the cessation of the sound source for a period greater than 20 minutes, restart of the electromechanical survey equipment commences only after clearance of the exclusion zone (see 4.3.6.5) and implementation of ramp-up procedures (see 4.3.6.6). If the pause is less than 20 minutes the equipment may be restarted as soon as practicable at its operational level as long as visual surveys were continued diligently throughout the silent period and the exclusion zone remained clear of marine mammals and sea turtles. If visual surveys were not continued diligently during the pause of 20-minutes or less, the Lessee must clear the exclusion zone, as described in 9.3.6.5, and implement ramp-up procedures, as described in 4.3.6.6, prior to restarting the electromechanical survey equipment.

4.3.7 Geotechnical Exploration. Stipulations specific to geotechnical exploration limited to borings and vibracores and conducted in support of plan (i.e., SAP and COP) submittal are provided in 4.3.7.1 through 4.3.7.6.

4.3.7.1 Establishment of Default Exclusion Zones. A default exclusion zone distance of 500 m (1,640 ft) for North Atlantic right whales and other listed species must be monitored around each vessel conducting geotechnical survey activities where North Atlantic right whales are expected to occur. If surveys are conducted in an area where North Atlantic right whales are not expected to occur, a default exclusion zone of 200 m (656 ft) for other large whales and sea turtles must be

established around each vessel conducting HRG survey activities. Exclusion zones for non-listed marine mammals will be determined through project-specific mitigation and monitoring requirements of ITAs provided by the NMFS. If an ITA is not required, default exclusion zones of 100 m (328 ft) for harbor porpoises and humpback whales, and 50 m (164 ft) for all other non-listed marine mammals must be established around each vessel conducting HRG survey activities.

4.3.7.2 Geotechnical Sound Source Verification. No later than 45 calendar days prior to the commencement of any surveys with any geotechnical survey equipment producing underwater sound levels, the Lessee must submit existing information on the sound levels produced by the equipment. If adequate information on the equipment is not available, the Lessor may require the Lessee to submit a plan to the Lessor for field verification of the sound source levels and of any geotechnical survey equipment operating at frequencies below 200 kHz. The Lessor must approve this verification plan prior to the commencement of the survey. The Lessor may require the Lessee to modify the plan in a manner deemed satisfactory by the Lessor.

4.3.7.2.1 If the Lessor determines that the exclusion zone is not effective to minimize impacts to protected species, the Lessor may impose additional requirements on the Lessee, including, but not limited to, required expansion of this exclusion zone.

4.3.7.3 Clearance of Exclusion Zone. The Lessee must ensure that the geotechnical sound source is not activated until the PSO has reported the exclusion zone clear of all marine mammals and sea turtles for 60 minutes.

4.3.7.4 Modification of Exclusion Zone per Lessee Request. If the Lessee wishes to modify the default exclusion zone for specific geotechnical exploration equipment, the Lessee must submit a plan for verifying the sound source levels of the specific geotechnical exploration equipment to the Lessor. The plan must demonstrate how the field verification activities will comply with the requirements of 4.3.7.2. The Lessor may require that the Lessee modify the plan to address any comments the Lessor submits to the Lessee on the contents of the plan in a manner deemed satisfactory to the Lessor prior to the commencement of field verification activities. Any new exclusion zone radius proposed by the Lessee must be based on the sound exposure distance for ear injury or behavioral harassment thresholds for marine mammal hearing groups, sea turtles, and fish as defined by the Lessor. The Lessee must use this modified zone for all subsequent use of field-verified equipment. The Lessee may periodically reevaluate the modified zone using the field verification procedures described in 4.3.7.2. The Lessee must obtain Lessor approval of any new exclusion zone before it is implemented.

4.3.7.5 Shut Down for Whales and Sea Turtles. If any whales or sea turtles are sighted at or within the exclusion zone, an immediate shut-down of the geotechnical survey equipment is required. The vessel operator must comply immediately with such a call by the PSO. Any disagreement or discussion must occur only after shut-down. Subsequent restart of the geotechnical survey equipment may only occur following clearance of the exclusion zone (see 4.3.7.3).

4.3.7.6 Pauses in Geotechnical Survey Sound Source. The Lessee must ensure that, if the geotechnical sound source shuts down for reasons other than encroachment into the exclusion zone by a whale or sea turtle, including reasons such as, but not limited to, mechanical or electronic failure, resulting in the cessation of the sound source for a period greater than 20 minutes, restart of the geotechnical survey equipment commences only following clearance of the exclusion zone (see 4.3.7.3). If the pause is less than 20 minutes, the equipment may be restarted as soon as practicable as long as visual surveys were continued diligently throughout the silent period and the exclusion zone remained clear of marine mammals and sea turtles. If visual surveys were not continued diligently during the pause of 20 minutes or less, the Lessee must clear the exclusion zone, as described in 4.3.7.3, prior to restarting the geotechnical survey equipment.

## 4.4 Reporting Requirements

4.4.1 The Lessee must ensure compliance with the following reporting requirements for site characterization activities performed in support of plan (i.e., SAP and COP) submittal and must use the contact information provided as an enclosure to this lease, or updated contact information as provided by the Lessor, to fulfill these requirements:

4.4.2 Field Verification of Exclusion Zone Preliminary Report. The Lessee must report the results of any required sound source verification of the exclusion zone for G&G survey equipment operating below 200 kHz to the Lessor and NMFS prior to using the equipment during survey activities conducted in support of plan submittal. The Lessee must include in its report a preliminary interpretation of the results for all sound sources, which will include details of the operating frequencies, sound pressure levels (SPLs) (measured in Peak, SEL, and RMS), the distance to the ear injury and behavior thresholds, frequency bands measured, as well as associated latitude/longitude positions, ranges, depths and bearings between sound sources and receivers.

4.4.3 Reports of Survey Activities and Observations. The Lessee must provide the Lessor with reports every 90 calendar days following the completion of HRG or geotechnical exploration activities, and a final report at the conclusion of the HRG or geotechnical exploration activities. Each report must include a summary of survey activities, all PSO and incident reports (See Appendices A and B), and an estimate of the number of listed marine mammals, sea turtles, and sturgeon observed and/or taken during these survey activities. The final report must contain a detailed

analysis and interpretation of the sound source verification data, if such data was collected by the Lessee.

4.4.4 Reporting Injured or Dead Protected Species. The Lessee must ensure that sightings of any injured or dead protected species (e.g., marine mammals, sea turtles, giant manta ray or sturgeon) are reported to the Lessor, NMFS, and the NMFS Greater Atlantic (Northeast) Region's Stranding Hotline (866-755-6622 or current) within 24 hours of sighting, regardless of whether the injury or death is caused by a vessel. In addition, if the injury or death was caused by a collision with a project-related vessel, the Lessee must ensure that the Lessor is notified of the incident within 24 hours. The Lessee must use the form provided in Appendix A to ADDENDUM "C" to report the sighting or incident. If the Lessee's activity is responsible for the injury or death, the Lessee must ensure that the vessel assist in any salvage effort as requested by NMFS.

4.4.5 Reporting Observed Impacts to Protected Species.

4.4.5.1 The Lessee must report any observed takes of listed marine mammals, sea turtles sturgeon, or giant manta ray resulting in injury or mortality within 24 hours to the Lessor and NMFS.

4.4.5.2 The Lessee must record any observed injuries or mortalities using the form provided in Appendix A to ADDENDUM "C".

4.4.6 Protected Species Observer Reports. The Lessee must ensure that the PSOs record all observations of protected species using standard marine mammal observer data collection protocols. The list of required data elements for these reports is provided in Appendix B to ADDENDUM "C".

4.4.7 Marine Mammal Protection Act Authorization(s). If the Lessee is required to obtain an authorization pursuant to section 101(a)(5) of the Marine Mammal Protection Act prior to conducting survey activities in support of plan submittal, the Lessee must provide to the Lessor a copy of the authorization prior to commencing these activities.

## 5 SITING CONDITIONS

5.1 **Vessel Transit Corridors.** In its COP project design, Lessee must extend any BOEM-approved vessel transit corridors in adjacent lease areas, unless BOEM determines that such corridors are not necessary or can be modified. Lessee may not construct any surface structures in such vessel transit corridors.

5.2 **Surface Structure Setback.** In its COP project design, the Lessee must incorporate a 750 m setback from any shared lease boundary within which the Lessee may not construct any surface structures, unless the Lessee and the adjacent lessee agree to a smaller setback, the Lessee submits such agreement to BOEM, and BOEM approves it.

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF OCEAN ENERGY MANAGEMENT

**APPENDIX A TO ADDENDUM "C"**

Lease Number OCS-A 0522

**Incident Report: Protected Species Injury or Mortality**

*Photographs/Video should be taken of all injured or dead animals.*

Observer's full name: _____

Reporter's full name: _____

Species Identification: _____

Name and type of platform: _____

Date animal observed: _____ Time animal observed: _____

Date animal collected: _____ Time animal collected: _____

Environmental conditions at time of observation (i.e. tidal stage, Beaufort Sea State, weather):

_____

_____

Water temperature (°C) and depth (m/ft) at site: _____

Describe location of animal and events 24 hours leading up to, including and after, the incident (incl. vessel speeds, vessel activity and status of all sound source use):

_____

_____

_____

_____

_____

Photograph/Video taken: YES / NO If Yes, was the data provided to NMFS? YES / NO
(Please label *species, date, geographic site* and *vessel name* when transmitting photo and/or video)

Date and Time reported to NMFS Stranding Hotline: _____

**Sturgeon Information:** *(please designate cm/m or inches and kg or lbs)*

Species:_____

Fork length (or total length):_____Weight:_____

Condition of specimen/description of animal: _____

_____

_____

Fish Decomposed: NO SLIGHTLY MODERATELY SEVERELY

Fish tagged: YES / NO If Yes, p*lease record all tag numbers.*

Tag #(s):_____

Genetic samples collected: YES / NO

Genetics samples transmitted to:_____on____/_____/20__

**Sea Turtle Species Information:** *(please designate cm/m or inches)*

Species:_____Weight (kg or lbs):_____

Sex: Male Female Unknown

How was sex determined?:_____

Straight carapace length:_____Straight carapace width:_____

Curved carapace length:_____Curved carapace width:_____

Plastron length:_____Plastron width:_____

Tail length:_____Head width:_____

Condition of specimen/description of animal:_____

_____

_____

**Existing Flipper Tag Information**

Left:_____Right:_____

PIT Tag#:_____

**Miscellaneous:**

Genetic biopsy collected: YES NO Photographs taken: YES NO

**Turtle Release Information:**

Date:_____Time:_____

Latitude:_____Longitude:_____

State:_____County:_____

**Remarks:** (note if turtle was involved with tar or oil, gear or debris entanglement, wounds, or mutilations, propeller damage, papillomas, old tag locations, etc.)_____

_____

_____

_____

**Marine Mammal information:** *(please designate cm/m or ft/inches)*

Length of marine mammal (note direct or estimated): _____

Weight (*if possible, kg or lbs*):_____

Sex of marine mammal (if possible):_____

How was sex determined?:_____

Confidence of Species Identification: SURE UNSURE BEST GUESS

Description of Identification characteristics of marine mammal:_____

_____

_____

_____

_____

Genetic samples collected: YES / NO

Genetic samples transmitted to:_____on____/_____/20__

Fate of marine mammal:_____

_____

_____

_____

Description of Injuries Observed:_____

_____

_____

_____

Other Remarks/Drawings:_____

_____

_____

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF OCEAN ENERGY MANAGEMENT

**APPENDIX B TO ADDENDUM "C"**

Lease Number OCS-A 0522

**REQUIRED DATA ELEMENTS FOR PROTECTED SPECIES OBSERVER REPORTS**

The Lessee must ensure that the PSO record all observations of protected species using standard marine mammal observer data collection protocols. The list of required data elements for these reports is provided below:

1. Vessel name;
2. PSOs' names and affiliations;
3. Date;
4. Time and latitude/longitude when daily visual survey began;
5. Time and latitude/longitude when daily visual survey ended; and
6. Average environmental conditions during visual surveys including:
    a. Wind speed and direction;
    b. Sea state (glassy, slight, choppy, rough, or Beaufort scale);
    c. Swell (low, medium, high, or swell height in meters); and
    d. Overall visibility (poor, moderate, good).
7. Species (or identification to lowest possible taxonomic level);
8. Certainty of identification (sure, most likely, best guess);
9. Total number of animals;
10. Number of juveniles;
11. Description (as many distinguishing features as possible of each individual seen, including length, shape, color and pattern, scars or marks, shape and size of dorsal fin, shape of head, and blow characteristics);
12. Direction of animal's travel relative to the vessel (preferably accompanied by a drawing);
13. Behavior (as explicit and detailed as possible, noting any observed changes in behavior);
14. Activity of vessel when sighting occurred.

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF OCEAN ENERGY MANAGEMENT

**ADDENDUM "D"**

PROJECT EASEMENT

Lease Number OCS-A 0522

This section includes a description of the Project Easement(s), if any, associated with this lease, and the financial terms associated with it. This section will be updated as necessary.

I. Rent

The Lessee must begin submitting rent payments for any project easement associated with this lease commencing on the date that BOEM approves the Construction and Operations Plan (COP) or modification of the COP describing the project easement. Annual rent for a project easement 200 feet wide, centered on the transmission cable, is $70.00 per statute mile. For any additional acreage required, the Lessee must also pay the greater of $5.00 per acre per year or $450.00 per year.

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF OCEAN ENERGY MANAGEMENT

**ADDENDUM "E"**

RENT SCHEDULE

Lease Number OCS-A 0522

This section includes a description of the schedule for rent payments that will be determined after the Construction and Operations Plan has been approved or approved with modifications. This section will be updated as necessary.

Unless otherwise authorized by the Lessor in accordance with the applicable regulations in 30 CFR Part 585, the Lessee must make rent payments as described below.

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF OCEAN ENERGY MANAGEMENT

Lease Number OCS-A 0522

**CONTACT INFORMATION FOR REPORTING REQUIREMENTS**

The following contact information must be used for the reporting and coordination requirements specified in ADDENDUM "C", Stipulation 3:

**United States Fleet Forces (USFF) N46**
**1562 Mitscher Ave, Suite 250**
**Norfolk, VA 23551**
**(757) 836-6206**

The following contact information must be used for the reporting requirements in ADDENDUM C, Stipulation 4.4:

**Reporting Injured or Dead Protected Species**

National Oceanic and Atmospheric Administration
Fisheries Northeast Region's Stranding Hotline
800-900-3622

**All other reporting requirements in Stipulation 4.4**

Bureau of Ocean Energy Management
Environment Branch for Renewable Energy
Phone: 703-787-1340
Email: renewable_reporting@boem.gov

National Marine Fisheries Service
Northeast Regional Office, Protected Resources Division
Section 7 Coordinator
Phone: 978-281-9328
Email: incidental.take@noaa.gov

Vessel operators may send a blank email to ne.rw.sightings@noaa.gov for an automatic response listing all current dynamic management areas.

**ENCLOSURE**

# United States Department of the Interior

BUREAU OF OCEAN ENERGY MANAGEMENT
WASHINGTON, DC 20240-0001

FEB 7 ~~2018~~ 2019

Mr. Lars Thanning Pedersen
Vineyard Wind LLC
177 Huntington Avenue, 17th Floor
Boston, Massachusetts 02115

Dear Mr. Pedersen:

The Bureau of Ocean Energy Management (BOEM) is pleased to offer commercial lease OCS-A 0522 to Vineyard Wind LLC (Company Number: 15010). Commercial lease OCS-A 0522 comprises approximately 132,370 acres lying within the Massachusetts Wind Energy Area. Instructions on how to accept and execute the lease are included below.

For commercial lease OCS-A 0522, you must comply with the following requirements:

1) Sign, date, and return the three enclosed copies of commercial lease OCS-A 0522. Please include lease and operations contact information on Addendum A of the lease instrument.

2) Provide a surety bond or other form of BOEM-approved financial assurance in the amount of $100,000 to guarantee compliance with all terms and conditions of lease OCS-A 0522.

3) Pay by Electronic Funds Transfer (EFT) the balance of your bonus bid. The balance of your bonus bid is $134,650,000.00, your cash bid amount of $135,100,000.00 less your bid deposit of $450,000.00. Pursuant to the Final Sale Notice for Lease Sale ATLW-4A, you must use EFT procedures (not to include *pay.gov*) for payment of the balance of the bonus bid, following the detailed instructions in the enclosed "Instructions for Making Electronic Payments" (also available on BOEM's website at: https://www.boem.gov/Electronic-Payment-Instructions-2018).

Within ten (10) business days of receipt of this letter, the materials described in items 1 and 2 above must be received by BOEM, and the payment described in item 3 above must be made pursuant to the instructions provided.

BOEM will execute the commercial lease on behalf of the United States and send you one fully executed copy after confirming compliance with the above requirements. Commercial lease OCS-A 0522 will become effective on the first day of the month following the date the lease is signed by both parties, unless you request, and we approve, making the lease effective on the first day of the month in which it is signed by BOEM. Please note that the first year's rent payment for the lease in the amount of $397,110.00 is due within forty-five (45) calendar days of the date when you receive the enclosed lease copies (i.e., the date this letter is received).

Please do not hesitate to contact Ms. Gina Best at (703) 787-1341 or gina.best@boem.gov if you have any questions regarding the issuance of your commercial lease.

Sincerely,

James F. Bennett
Program Manager
Office of Renewable Energy Programs

Enclosures

## Bids Received for Lease Sale ATLW-4A Offshore Massachusetts

**December 13-14, 2018**

| Round | Bidder Name | Bid Type | Price | | |
|---|---|---|---|---|---|
| | | | *OCS-A 0520* | *OCS-A 0521* | *OCS-A -522* |
| 1 | Cobra Industrial Services Inc. | Live | | | $264,740 |
| | East Wind LLC | Live | | $254,776 | |
| | EC&R Development, LLC | Live | | | $264,740 |
| | EDF Renewables Development, Inc. | Live | $257,622 | | |
| | Equinor Wind US LLC | Live | $257,622 | | |
| | Innogy US Renewable Projects | Live | $257,622 | | |
| | Mayflower Wind Energy, LLC | Live | $257,622 | | |
| | Northeast Wind Energy LLC | Live | | | $264,740 |
| | PNE Wind USA Inc. | Live | | | $264,740 |
| | Vineyard Wind LLC | Live | $257,622 | | |
| | wpd offshore Alpha LLC | Live | $257,622 | | |
| 2 | Cobra Industrial Services Inc. | Live | | | $764,000 |
| | East Wind LLC | Live | | $254,776 | |
| | EC&R Development, LLC | Live | | | $764,000 |
| | EDF Renewables Development, Inc. | Live | $757,000 | | |
| | Equinor Wind US LLC | Live | $757,000 | | |
| | Innogy US Renewable Projects | Live | $757,000 | | |
| | Mayflower Wind Energy, LLC | Live | | $254,776 | |
| | Northeast Wind Energy LLC | Live | | | $764,000 |
| | PNE Wind USA Inc. | Live | | | $764,000 |
| | Vineyard Wind LLC | Live | $757,000 | | |
| | wpd offshore Alpha LLC | Live | | $254,776 | |
| 3 | Cobra Industrial Services Inc. | Live | | | $1,250,000 |
| | East Wind LLC | Live | | $1,250,000 | |
| | EC&R Development, LLC | Live | | | $1,250,000 |
| | EDF Renewables Development, Inc. | Live | $1,250,000 | | |
| | Equinor Wind US LLC | Live | $1,250,000 | | |
| | Innogy US Renewable Projects | Live | $1,250,000 | | |
| | Mayflower Wind Energy, LLC | Live | | | $1,250,000 |
| | Northeast Wind Energy LLC | Live | | | $1,250,000 |
| | PNE Wind USA Inc. | Live | | | $1,250,000 |
| | Vineyard Wind LLC | Live | $1,250,000 | | |
| | wpd offshore Alpha LLC | Live | $1,250,000 | | |
| 4 | Cobra Industrial Services Inc. | Live | | | $2,000,000 |
| | East Wind LLC | Live | | $1,250,000 | |
| | EC&R Development, LLC | Live | | | $2,000,000 |
| | EDF Renewables Development, Inc. | Live | | | $2,000,000 |
| | Equinor Wind US LLC | Live | $2,000,000 | | |

| | | | | | |
|---|---|---|---|---|---|
| | Innogy US Renewable Projects | Live | $2,000,000 | | |
| | Mayflower Wind Energy, LLC | Live | | $1,250,000 | |
| | Northeast Wind Energy LLC | Live | | | $2,000,000 |
| | PNE Wind USA Inc. | Live | | | $2,000,000 |
| | Vineyard Wind LLC | Live | $2,000,000 | | |
| | wpd offshore Alpha LLC | Live | $2,000,000 | | |
| 5 | Cobra Industrial Services Inc. | Live | | | $3,000,000 |
| | East Wind LLC | Live | | $2,000,000 | |
| | EC&R Development, LLC | Live | | | $3,000,000 |
| | EDF Renewables Development, Inc. | Live | | $2,000,000 | |
| | Equinor Wind US LLC | Live | $3,000,000 | | |
| | Innogy US Renewable Projects | Live | $3,000,000 | | |
| | Mayflower Wind Energy, LLC | Live | $3,000,000 | | |
| | Northeast Wind Energy LLC | Live | | | $3,000,000 |
| | PNE Wind USA Inc. | Live | | | $3,000,000 |
| | Vineyard Wind LLC | Live | $3,000,000 | | |
| | wpd offshore Alpha LLC | Live | $3,000,000 | | |
| 6 | Cobra Industrial Services Inc. | Live | | | $5,000,000 |
| | East Wind LLC | Live | | $4,000,000 | |
| | EC&R Development, LLC | Live | | | $5,000,000 |
| | EDF Renewables Development, Inc. | Exit | | $2,600,000 | |
| | Equinor Wind US LLC | Live | $5,000,000 | | |
| | Innogy US Renewable Projects | Live | $5,000,000 | | |
| | Mayflower Wind Energy, LLC | Live | | | $5,000,000 |
| | Northeast Wind Energy LLC | Live | | | $5,000,000 |
| | PNE Wind USA Inc. | Live | | | $5,000,000 |
| | Vineyard Wind LLC | Live | $5,000,000 | | |
| | wpd offshore Alpha LLC | Live | | | $5,000,000 |
| 7 | Cobra Industrial Services Inc. | Live | | | $7,000,000 |
| | East Wind LLC | Live | | $4,000,000 | |
| | EC&R Development, LLC | Live | | | $7,000,000 |
| | Equinor Wind US LLC | Live | $7,000,000 | | |
| | Innogy US Renewable Projects | Live | $7,000,000 | | |
| | Mayflower Wind Energy, LLC | Live | | $4,000,000 | |
| | Northeast Wind Energy LLC | Live | | | $7,000,000 |
| | PNE Wind USA Inc. | Live | | | $7,000,000 |
| | Vineyard Wind LLC | Live | $7,000,000 | | |
| | wpd offshore Alpha LLC | Live | | $4,000,000 | |
| 8 | Cobra Industrial Services Inc. | Live | | | $9,000,000 |
| | East Wind LLC | Live | | $6,000,000 | |
| | EC&R Development, LLC | Live | | | $9,000,000 |
| | Equinor Wind US LLC | Live | $9,000,000 | | |
| | Innogy US Renewable Projects | Live | $9,000,000 | | |
| | Mayflower Wind Energy, LLC | Live | $9,000,000 | | |

| | | | | | |
|---|---|---|---|---|---|
| | Northeast Wind Energy LLC | Live | | | $9,000,000 |
| | PNE Wind USA Inc. | Live | | | $9,000,000 |
| | Vineyard Wind LLC | Live | $9,000,000 | | |
| | wpd offshore Alpha LLC | Live | $9,000,000 | | |
| 9 | Cobra Industrial Services Inc. | Live | | | $12,000,000 |
| | East Wind LLC | Live | | $6,000,000 | |
| | EC&R Development, LLC | Live | | | $12,000,000 |
| | Equinor Wind US LLC | Live | $12,000,000 | | |
| | Innogy US Renewable Projects | Live | $12,000,000 | | |
| | Mayflower Wind Energy, LLC | Live | | $6,000,000 | |
| | Northeast Wind Energy LLC | Live | | $6,000,000 | |
| | PNE Wind USA Inc. | Live | | $6,000,000 | |
| | Vineyard Wind LLC | Live | $12,000,000 | | |
| | wpd offshore Alpha LLC | Live | | | $12,000,000 |
| 10 | Cobra Industrial Services Inc. | Live | | | $15,000,000 |
| | East Wind LLC | Live | | $10,000,000 | |
| | EC&R Development, LLC | Live | | | $15,000,000 |
| | Equinor Wind US LLC | Live | $15,000,000 | | |
| | Innogy US Renewable Projects | Live | $15,000,000 | | |
| | Mayflower Wind Energy, LLC | Live | | $10,000,000 | |
| | Northeast Wind Energy LLC | Live | | $10,000,000 | |
| | PNE Wind USA Inc. | Live | | $10,000,000 | |
| | Vineyard Wind LLC | Live | $15,000,000 | | |
| | wpd offshore Alpha LLC | Live | | $10,000,000 | |
| 11 | Cobra Industrial Services Inc. | Live | | | $20,000,000 |
| | East Wind LLC | Live | | $16,000,000 | |
| | EC&R Development, LLC | Live | | | $20,000,000 |
| | Equinor Wind US LLC | Live | $20,000,000 | | |
| | Innogy US Renewable Projects | Live | $20,000,000 | | |
| | Mayflower Wind Energy, LLC | Live | | | $20,000,000 |
| | Northeast Wind Energy LLC | No Bid | | | |
| | PNE Wind USA Inc. | Exit | | $10,100,000 | |
| | Vineyard Wind LLC | Live | $20,000,000 | | |
| | wpd offshore Alpha LLC | No Bid | | | |
| 12 | Cobra Industrial Services Inc. | Live | | $16,000,000 | |
| | East Wind LLC | Live | | $16,000,000 | |
| | EC&R Development, LLC | Live | | | $25,000,000 |
| | Equinor Wind US LLC | Live | $25,000,000 | | |
| | Innogy US Renewable Projects | Live | $25,000,000 | | |
| | Mayflower Wind Energy, LLC | Live | | $16,000,000 | |
| | Vineyard Wind LLC | Live | $25,000,000 | | |
| 13 | Cobra Industrial Services Inc. | Exit | | $20,000,000 | |
| | East Wind LLC | Live | | $22,000,000 | |

| | | | | | |
|---|---|---|---|---|---|
| | EC&R Development, LLC | Live | | | $25,000,000 |
| | Equinor Wind US LLC | Live | $30,000,000 | | |
| | Innogy US Renewable Projects | Live | | | $25,000,000 |
| | Mayflower Wind Energy, LLC | Live | | | $25,000,000 |
| | Vineyard Wind LLC | Live | $30,000,000 | | |
| 14 | East Wind LLC | Live | | $22,000,000 | |
| | EC&R Development, LLC | Live | | | $32,000,000 |
| | Equinor Wind US LLC | Live | $35,000,000 | | |
| | Innogy US Renewable Projects | Live | | | $32,000,000 |
| | Mayflower Wind Energy, LLC | Live | | $22,000,000 | |
| | Vineyard Wind LLC | Live | $35,000,000 | | |
| 15 | East Wind LLC | Live | | $30,000,000 | |
| | EC&R Development, LLC | Live | | | $38,000,000 |
| | Equinor Wind US LLC | Live | $40,000,000 | | |
| | Innogy US Renewable Projects | Live | | | $38,000,000 |
| | Mayflower Wind Energy, LLC | Live | $40,000,000 | | |
| | Vineyard Wind LLC | Live | $40,000,000 | | |
| 16 | East Wind LLC | Live | | $30,000,000 | |
| | EC&R Development, LLC | Live | | | $45,000,000 |
| | Equinor Wind US LLC | Live | $47,000,000 | | |
| | Innogy US Renewable Projects | Live | | $30,000,000 | |
| | Mayflower Wind Energy, LLC | Live | | $30,000,000 | |
| | Vineyard Wind LLC | Live | $47,000,000 | | |
| 17 | East Wind LLC | Live | | $40,000,000 | |
| | EC&R Development, LLC | Live | | | $45,000,000 |
| | Equinor Wind US LLC | Live | $55,000,000 | | |
| | Innogy US Renewable Projects | Live | | | $45,000,000 |
| | Mayflower Wind Energy, LLC | Live | | $40,000,000 | |
| | Vineyard Wind LLC | Live | $55,000,000 | | |
| 18 | East Wind LLC | Live | | $50,000,000 | |
| | EC&R Development, LLC | Live | | | $55,000,000 |
| | Equinor Wind US LLC | Live | $65,000,000 | | |
| | Innogy US Renewable Projects | Live | | $50,000,000 | |
| | Mayflower Wind Energy, LLC | Live | | $50,000,000 | |
| | Vineyard Wind LLC | Live | $65,000,000 | | |
| 19 | East Wind LLC | Live | | $63,000,000 | |
| | EC&R Development, LLC | Live | | | |
| | Equinor Wind US LLC | Live | $78,000,000 | | |
| | Innogy US Renewable Projects | Exit | | $50,240,130 | |
| | Mayflower Wind Energy, LLC | Live | | | $55,000,000 |
| | Vineyard Wind LLC | Live | $78,000,000 | | |
| 20 | East Wind LLC | Live | | $63,000,000 | |
| | EC&R Development, LLC | Exit | | | $55,370,000 |

| | | | | | |
|---|---|---|---|---|---|
| | Equinor Wind US LLC | Live | $93,000,000 | | |
| | Mayflower Wind Energy, LLC | Live | | $63,000,000 | |
| | Vineyard Wind LLC | Live | | | $73,000,000 |
| 21 | East Wind LLC | Live | | $80,000,000 | |
| | Equinor Wind US LLC | Live | $93,000,000 | | |
| | Mayflower Wind Energy, LLC | Live | | | $73,000,000 |
| | Vineyard Wind LLC | Live | | | $73,000,000 |
| 22 | East Wind LLC | Live | | $80,000,000 | |
| | Equinor Wind US LLC | Live | $93,000,000 | | |
| | Mayflower Wind Energy, LLC | Live | | $80,000,000 | |
| | Vineyard Wind LLC | Live | | | $89,000,000 |
| 23 | East Wind LLC | Live | | $91,000,000 | |
| | Equinor Wind US LLC | Live | $93,000,000 | | |
| | Mayflower Wind Energy, LLC | Live | | | $89,000,000 |
| | Vineyard Wind LLC | Live | | | $89,000,000 |
| 24 | East Wind LLC | Live | | $91,000,000 | |
| | Equinor Wind US LLC | Live | $93,000,000 | | |
| | Mayflower Wind Energy, LLC | Live | | $91,000,000 | |
| | Vineyard Wind LLC | Live | $93,000,000 | | |
| 25 | East Wind LLC | Live | | $105,000,000 | |
| | Equinor Wind US LLC | Live | $110,000,000 | | |
| | Mayflower Wind Energy, LLC | Live | $110,000,000 | | |
| | Vineyard Wind LLC | Live | $110,000,000 | | |
| 26 | East Wind LLC | Live | | $105,000,000 | |
| | Equinor Wind US LLC | Live | $120,000,000 | | |
| | Mayflower Wind Energy, LLC | Live | | | $101,000,000 |
| | Vineyard Wind LLC | Live | | | $101,000,000 |
| 27 | East Wind LLC | Live | | $105,000,000 | |
| | Equinor Wind US LLC | Live | $120,000,000 | | |
| | Mayflower Wind Energy, LLC | Live | $120,000,000 | | |
| | Vineyard Wind LLC | Live | | | $116,000,000 |
| 28 | East Wind LLC | Live | | $105,000,000 | |
| | Equinor Wind US LLC | Live | $135,000,000 | | |
| | Mayflower Wind Energy, LLC | Live | | $105,000,000 | |
| | Vineyard Wind LLC | Live | | | $116,000,000 |
| 29 | East Wind LLC | Live | | $124,000,000 | |
| | Equinor Wind US LLC | Live | $135,000,000 | | |
| | Mayflower Wind Energy, LLC | Live | | | $116,000,000 |
| | Vineyard Wind LLC | Live | | | $116,000,000 |
| 30 | East Wind LLC | Live | | $124,000,000 | |
| | Equinor Wind US LLC | Live | $135,000,000 | | |
| | Mayflower Wind Energy, LLC | Live | | $124,000,000 | |

| | | | | | |
|---|---|---|---|---|---|
| | Vineyard Wind LLC | Live | | | $135,000,000 |
| 31 | East Wind LLC | Exit | | $128,032,877 | |
| | Equinor Wind US LLC | Live | $135,000,000 | | |
| | Mayflower Wind Energy, LLC | Live | | | $135,000,000 |
| | Vineyard Wind LLC | Live | | | $135,000,000 |
| 32 | Equinor Wind US LLC | Live | $135,000,000 | | |
| | Mayflower Wind Energy, LLC | Live | | $135,000,000 | |
| | Vineyard Wind LLC | Exit | | | $135,100,000 |