RECORD OF DECISION
CAPE WIND ENERGY PROJECT
HORSESHOE SHOAL, NANTUCKET SOUND

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF OCEAN ENERGY MANAGEMENT
WASHINGTON, D.C.

INTRODUCTION

This Record of Decision (ROD) documents the Bureau of Ocean Energy Management's (BOEM's) decision to affirm BOEM's issuance of the existing lease to Cape Wind Associates, LLC (CWA) for the Cape Wind Energy Project (CWEP) and sets forth the rationale for the decision. The decision was reached after a careful and thorough analysis of the seafloor and its ability to support wind turbine generators presented in BOEM's 2017 Final Cape Wind Energy Project Supplemental Environmental Impact Statement[1], July 2017 (2017 CWEP FSEIS).

The ROD addresses the requirements of 40 Code of Federal Regulations [CFR] 1505.2 including: 1) identifying the alternatives in the 2017 CWEP FSEIS, which are those considered in the Minerals Management Service 2009 Cape Wind Energy Project Final Environmental Impact Statement[2], January 2009 (2009 CWEP FEIS) that remain relevant in reaching the decision; and 2) discussing whether all practicable means to avoid or minimize environmental harm from the alternative selected have been adopted, and if not, why they were not. Documents consulted and/or referenced in the preparation of this ROD include the following:

- 2009 CWEP FEIS (US DOI 2009)
- 2010 Cape Wind Energy Project Environmental Assessment and Finding of No New Significant Impact (US DOI 2010a)
- 2010 Cape Wind Energy Project Record of Decision (US DOI 2010b)
- 2011 Cape Wind Energy Project Construction and Operations Plan (CWA 2011)
- 2011 Cape Wind Energy Project Environmental Assessment (US DOI 2011a)
- 2011 Cape Wind Energy Project Record of Decision (US DOI 2011b)
- 2014 Cape Wind Facilities Design Report (CWA 2014a)
- 2014 Cape Wind Fabrication and Installation Report (CWA 2014b)
- 2014 Construction and Operations Plan Revision No. 1 (CWA 2014c)
- 2014 Cape Wind Energy Project Environmental Assessment and Finding of No New Significant Impact (US DOI 2014a)
- 2017 CWEP FSEIS (US DOI 2017)

Background: On July 5, 2016, the United States Court of Appeals for the District of Columbia Circuit vacated the 2009 CWEP FEIS, and required BOEM to "supplement it with adequate geological surveys before Cape Wind may begin construction." The Court opined: "[w]ithout adequate geological surveys, the Bureau cannot 'ensure that the seafloor [will be] able to support' wind turbines." *Public Emples. for Envtl. Responsibility v. Hopper*, 827 F.3d 1077,

[1] Available at https://www.boem.gov/Cape-Wind-Energy-Project-Final-Supplemental-Environmental-Impact-Statement/
[2] Available at https://www.boem.gov/Renewable-Energy-Program/Studies/Cape-Wind-FEIS.aspx

1083 (D.C. Cir. 2016). The Court noted that the additional geotechnical surveys that were subsequently gathered after 2009 as part of the Construction and Operations Plan (COP), Fabrication and Installation Report (FIR), and Facilities Design Report (FDR) could be used to supplement the 2009 CWEP FEIS if they adequately addressed the concerns regarding the ability of the seafloor to support wind turbine generator (WTG) structures (*Id.* fn. 5).

CWA submitted geotechnical surveys and reports for the specific purpose of establishing the suitability of the construction sites and structure designs within the project area. These geotechnical surveys and reports are discussed in the 2009 FSEIS. In preparation for the COP, FDR, and FIR, CWA cored and tested the seafloor at every construction location in order to assess its ability to support the project's designed WTG structures. An independent third-party Certified Verification Agent (CVA)[3] reviewed and verified the geotechnical surveys and reports pursuant to 30 CFR 585.705. The CVA determined that the design and construction methods proposed by CWA were suitable for the characteristics of the seafloor at the project site, were well-established within the industry, and had been utilized heavily in Europe.

To comply with the Court order, BOEM prepared the 2017 CWEP FSEIS to re-evaluate the geotechnical surveys and confirm whether the seafloor would support wind turbines at the locations proposed by CWA in its application to build and operate the Cape Wind Energy Project.

2017 CWEP FSEIS: The review conducted for the 2017 CWEP FSEIS focused on the limited scope of the Court's remand. The Court order required BOEM to supplement its assessment specifically to determine whether the seafloor would support the WTGs. To provide the necessary assessment to address the Court's remand for the 2017 CWEP FSEIS, BOEM's Geotechnical Engineer reviewed previous geotechnical survey analyses and conclusions drawn by the CVA and previously reviewed by BOEM. The Geotechnical Engineer previously concurred (US DOI 2014b) with the CVA's determination that the foundation designs and construction methods proposed by CWA were appropriate for the project site based on the geotechnical survey information and analyses provided by CWA, and verified by the CVA.

For the 2017 CWEP FSEIS, the Geotechnical Engineer determined that the geotechnical survey information and analyses provided by CWA, and verified by the CVA, were appropriate for foundation designs and construction methods proposed by CWA, and that no other geotechnical information was necessary to make this determination. The foundation designs and construction methods proposed by CWA were chosen based on their suitability for the seafloor conditions of the site. Additionally, for the 2017 CWEP FSEIS, BOEM reviewed and reassessed the initial analyses relevant to the seafloor presented in the 2009 CWEP FEIS and subsequent environmental assessments (EAs), the findings of BOEM's 2014 review of the FDR (CWA 2014a) and FIR (CWA 2014b), and the review and analyses by the CVA. BOEM determined that the reviews and analyses are still valid and demonstrate that the project design is suitable for supporting wind turbine generators considering the seafloor conditions present in the project area. Public comments on the draft 2017 CWEP DEIS were considered in the 2017 CWEP FSEIS, and comments pertaining to the seafloor were incorporated into the analysis.

The decision BOEM is making with respect to the Proposed Action and the No Action Alternative is whether to affirm BOEM's 2010 decision to issue the existing lease or rescind that

[3] Det Norske Veritas, an international accredited registrar and classification society.

decision based on an analysis of the ability of the seafloor to support WTG structures. BOEM's selection of the Proposed Action would affirm the decision to issue the lease to CWA and leave undisturbed prior approvals, including that of the COP.

DECISION

BOEM has reviewed and reassessed the initial analyses relating to the seafloor that were presented in the 2009 CWEP FEIS and subsequent EAs, the findings of BOEM's 2014 review of the FDR and FIR, and the review and analyses by the CVA. Additionally, during the 45-day comment period on the draft CWEP supplemental environmental impact statement (CWEP DSEIS), BOEM received a total of 581 submittals from a variety of sources including private citizens, Federal agencies, state government, local governments, non-governmental organizations (NGOs), and industry. BOEM thoroughly reviewed each submittal and identified more than 5,200 discrete comments within the 581 submittals.

BOEM has found that the additional geotechnical data that CWA gathered in 2012 for preparation of the FDR and FIR does not alter the 2009 CWEP FEIS analysis of the Proposed Action and relevant alternatives. The direct and indirect effects, their respective significance, and means of mitigation remain the same, as discussed in the collective analysis for the Proposed Action and alternative actions of the 2009 CWEP FEIS and subsequent EAs. The environmental consequences of the 2017 Proposed Action do not differ from the findings in the 2009 CWEP FEIS, 2010 EA, and the subsequent RODs, where BOEM made the decision to offer CWA a lease, with conditions. The environmental consequences of the Proposed Action in the 2017 CWEP FSEIS also do not differ from BOEM's findings in the 2011 EA prepared for the decision on the COP, and documented in the 2011 ROD.

Therefore, after carefully considering its analysis of the 2009 CWEP FEIS and the supplemental analysis in the 2017 CWEP FSEIS, including comments from the public, BOEM has decided to affirm the issuance of the lease to CWA, which would leave untouched the decisions that flowed from it, including the COP approval. The COP allows CWA to construct, operate, and decommission 130 WTGs located in a grid pattern on and near Horseshoe Shoal in Nantucket Sound, Massachusetts, as well as an electrical service platform (ESP), inner-array cables, and two transmission cables. This discussion fulfils requirements of Council on Environmental Quality regulations in 40 CFR 1505.2 (a).

DISCUSSION

The decision is informed by five factors:

- Consideration of the purpose and need,
- Consideration of the effects of the proposed action,
- Consideration of the alternatives, including the environmentally preferred alternative,
- Consideration of the mitigation and monitoring, and
- Consideration of comments and concerns presented in the public review process.

1. Purpose and Need

The purpose and need of BOEM's issuance of a lease to develop and operate a wind energy facility on the Outer Continental Shelf (OCS) offshore of New England is to employ technology that is currently available, technically feasible, and economically viable; that can interconnect

with and deliver electricity to the New England Power Pool; and that can make a substantial contribution to enhancing the region's electrical reliability and regional renewable energy portfolio. Since the FEIS, there has been no change in the purpose and need given that the Cape Wind lease and COP continue to fulfill the purpose and need of the 2009 FEIS. Consequently, the purpose and need remains the same, and there is no basis to modify the decision based upon a change in the purpose or need.

2. Description of the Proposed Action

The Proposed Action for the 2009 CWEP FEIS entailed the construction, operation, and decommissioning of 130 WTGs located in a grid pattern on and near Horseshoe Shoal in Nantucket Sound, Massachusetts, as well as an ESP, inner-array cables, and two transmission cables. Each of the 130 WTGs would generate electricity independently of each other. Solid dielectric submarine inner-array cables from each WTG would interconnect and terminate at the ESP. The ESP would serve as the common interconnection point for all of the WTGs. The proposed submarine transmission cable system runs approximately 10.9 nautical miles from the ESP to the landfall location in Yarmouth (US DOI 2009). The two parallel submarine transmission cables would travel north to northeast in Nantucket Sound into Lewis Bay, past the westerly side of Egg Island, and then make landfall at New Hampshire Avenue in Yarmouth.

After the publication and circulation of the 2009 CWEP FEIS, BOEM's predecessor, the Minerals Management Service (MMS), approved the issuance of a lease to CWA for the Cape Wind Energy Project on April 28, 2010 (2010 ROD; US DOI 2010b). The lease was later executed on October 4, 2010. The Proposed Action for the 2017 CWEP FSEIS is the same as the 2009 CWEP FEIS Proposed Action, except that the action would be implemented by affirming BOEM's 2010 decision to issue the existing lease. The 2017 Proposed Action would leave undisturbed BOEM's issuance of the lease and the decisions that flowed from that, including the COP approval, and would allow CWA to continue to exercise its rights under the lease within its terms and conditions.

3. Alternatives, Including the Environmentally Preferred Alternative

In the 2009 CWEP FEIS, ten geographic and twelve non-geographic alternatives were considered. Three geographic and four non-geographic alternatives were analyzed in detail. Since the Court specifically did not vacate the lease and BOEM's approval of the COP, the only alternatives considered in the 2009 FEIS that are still applicable are: 1) the Proposed Action, which affirms BOEM's issuance of the existing lease and leaves the lease in place without modification); and 2) the No Action Alternative, pursuant to which BOEM would rescind its issuance of the lease.

The Environmentally Preferred Alternative in the 2010 ROD was the Smaller Project Alternative based on the evaluation of the alternative's potential effects to resources in the affected environment, presented in Section 5.4.3.2 of the CWEP FEIS and summarized in Table 3.3.5-1 (Appendix A, CWEP FEIS). The No Action Alternative was considered, but subsequently dismissed, as the demand for energy would be met by other means, and thus impacts from these other technologies would occur.

Between the Proposed Action and No Action Alternatives, the Proposed Action is considered the environmentally preferred alternative because the No Action Alternative would most likely lead to the construction of new facilities that rely on fossil fuels, and impacts from such technologies and their emissions would exceed impacts from the CWEP under the lease.

In the 2009 CWEP FEIS and the 2010 ROD, BOEM considered the national goals of diversifying the nation's energy portfolio in an effort to gain energy independence and create jobs, while safeguarding the environment and the rich cultural heritage near the project location. Affirming the decision to issue the CWA lease will help meet these goals. This discussion fulfils requirements of Council on Environmental Quality regulations in 40 CFR 1505.2 (b).

4. Mitigation and Monitoring

The 2010 ROD identified mitigation measures that were deemed practicable to avoid or minimize the environmental harm that may result from the project (2009 ROD Section 5.0). Those mitigation and monitoring requirements for the CWEP were derived from the standard best management practices identified in the *Programmatic Final Environmental Impact Statement for Alternative Energy Development and Production and Alternate Use of Facilities on the Outer Continental Shelf* (October 2007), measures proposed by CWA during the review process, from the 2009 CWEP FEIS, consultation and coordination with governmental agencies, and from other participants in the CWEP review process.

Additionally, the 2011 ROD identified additional mitigation and monitoring (US DOI 2011b) which were made part of the conditions of approval of the COP. After submission of the FDR and FIR, BOEM required submission of a revised COP (CWA 2014c), which BOEM analyzed and approved with conditions (US DOI 2014a).

The environmental impacts of the Proposed Action analyzed in the 2017 CWEP FSEIS and their respective significance, possible conflicts, and means of mitigation are essentially the same as the impacts analyzed in the 2009 CWEP FEIS and subsequent EAs. The expected environmental consequences of the Proposed Action in the CWEP FSEIS to allow the lease to remain in place do not differ from the findings in the 2009 CWEP FEIS, the 2010 EA, and the subsequent ROD, where BOEM made the decision to offer CWA a lease, with conditions including mitigation measures.

All of the conditions, stipulations, mitigations, and monitoring requirements from the previous RODs and approvals remain in place, backed with inspection and enforcement as provided in other BOEM regulatory activities. No new mitigation measures are warranted since the CWEP FSEIS did not identify any impacts not already addressed in consideration of the lease and the COP. This discussion fulfils requirements of Council on Environmental Quality regulations in 40 CFR 1505.2 (c).

5. Consideration of Comments and Concerns Presented in the Public Review Process

During the public comment period for the CWEP DSEIS from March 31, 2017, until May 15, 2017, BOEM received a total of 581 submittals from a variety of sources including private citizens, federal agencies, state government, local governments, non-governmental organizations (NGOs), and industry. NGOs include environmental groups, trade associations, and businesses. Submittals included letters, emails, and comment cards. The discrete comments within the scope of the CWEP DSEIS that BOEM received can be placed within these broad categories: 1) bedrock integrity; 2) inadequate testing of riprap in saltwater; 3) moving boulders and boulder

mitigation; 4) the moving sand wave field within the project area; 5) seafloor disturbance; 6) sediment transport/scour; 7) the adequacy of the CWEP DSEIS consideration of the seafloor capability to support WTGs; 8) turbine failures not generally being due to issues regarding the seafloor; and 9) shallow environments being more difficult areas within which to engineer projects. There were no submitted comments that provided information suggesting the seafloor may not be capable of supporting turbines. The "seafloor disturbance" and "sediment transport/scour" categories each had the greatest number of comments among those within scope, followed by the "moving sand wave field" category. BOEM thoroughly reviewed each submittal and identified more than 5,200 discrete comments within the 581 submittals. Based on the comments that were within scope of the CWEP DSEIS, BOEM made minor revisions and clarifications in the CWEP FSEIS. A summary of these comments can be found in the CWEP FSEIS in Table 5-1. Most of the comments BOEM received fell outside of the scope of the CWEP DSEIS, and these comments are addressed in Table 5-2 of the CWEP FSEIS.

Soon after the CWEP FSEIS was published, BOEM received a comment letter dated August 16, 2017. The letter requested that Cape Wind's lease be cancelled. BOEM considered the comments in this letter and determined these comments also to be out of the scope of review.

CONCLUSION

After careful consideration of the purpose and need for the Proposed Action, the analysis contained in the 2017 CWEP FSEIS, and comments received on the CWEP DSEIS and CWEP FSEIS, BOEM has found that the additional geotechnical data that CWA gathered in 2012 for preparation of the FDR and FIR was sufficient for determining whether the seafloor would support wind turbine generators and that additional geotechnical data does not alter the 2009 CWEP FEIS conclusions about the environmental consequences of the Proposed Action and relevant alternatives. The project was designed to be appropriate and suitable for the seafloor conditions of the project area, and has been determined as conforming to industry standards by an independent certified validation agent. There is no evidence to suggest the seafloor would be unable to support turbines for this project design. The environmental consequences of the Proposed Action considered in the CWEP FSEIS do not differ from the findings in the 2009 CWEP FEIS, 2010 EA, and the subsequent ROD, where BOEM recorded its decision to offer CWA a lease, with conditions. BOEM has decided to affirm the lease issuance for the CWEP in Nantucket Sound. In reaching this decision, BOEM has fully considered the purpose of and need for the Proposed Action, the consequences of the Proposed Action, identification of alternatives, including the environmentally preferred alternative, identification of mitigation adopted in previous decisions and approvals and determined that all practicable means to avoid or minimize environmental harm have been adopted.

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Date: 9-26-2017

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