



PLANET A* STRATEGIESSM

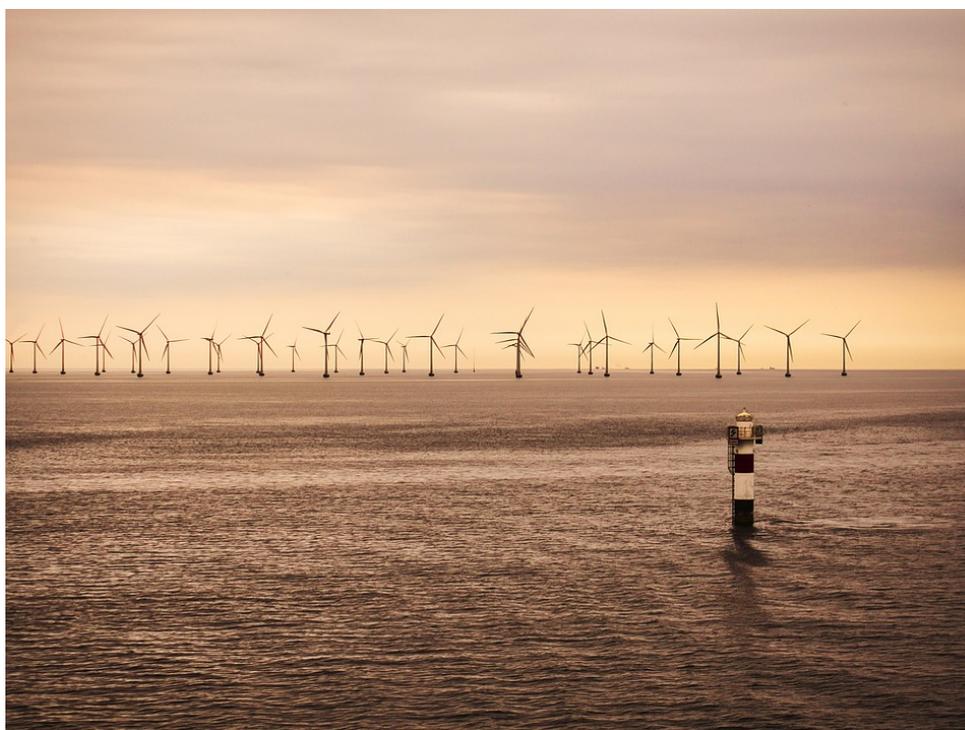
**Because there is no Planet B*

Cancelling Offshore Wind Leases

*Outer Continental Shelf Lands Act Non-Compliance in
Offshore Wind Plant Leasing and Permitting Programs*



Issues and Options for Consideration by the
U.S. Department of Interior in the
“Review of Federal Wind Leasing and Permitting Practices”



April 21, 2025



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ACRONYMS

BOEM	Bureau of Ocean Energy Management
CFR	Code of Federal Regulations
DOD	Department of Defense
DOE	Department of Energy
DOER	Department of Energy Resources (MA)
DOI	Department of Interior
DPU	Department of Public Utilities (MA)
EA	Environmental Assessment
EIA	Energy Information Agency of the Department of Energy
EIS	Environmental Impact Statement (includes Final, Programmatic, and Supplemental)
EWR	Early Warning Radar
EPACT	Energy Policy Act of 2005
EPCET	Economic Planning for the Clean Energy Transition (Report)
FAA	Federal Aviation Administration
FERC	Federal Energy Regulatory Commission
FPA	Federal Power Act
GW/GWh	Gigawatt/Gigawatt Hour
ICR	Installed Capacity Requirement
ISO-NE	Independent System Operator of the New England Grid
MMS	Minerals Management Service
MW/MWh	Megawatt/Megawatt Hour
NEPA	National Environmental Policy Act
OCS	Outer Continental Shelf
OCSLA	Outer Continental Shelf Lands Act
OSW	Off Shore Wind
PAVE PAWS	Perimeter Acquisition Vehicle Entry Phased-Array Warning System
PUC	Public Utility Commission (RI)
RI/MA	Rhode Island and Massachusetts
USC	United States Code
WEA	Wind Energy Area
WTRIM WG	Wind Turbine Radar Interference Mitigation Working Group



EXECUTIVE SUMMARY

Pursuant to a Presidential Memorandum issued on January 20, 2025,¹ the Secretary of Interior (Secretary) is currently conducting a “comprehensive assessment and review of Federal wind leasing and permitting practices.”² In response to information regarding the adequacy of “protection of the environment” uncovered in this ongoing review, the Acting Director of the Bureau of Energy Management (BOEM) has issued a Director’s Order to Empire Offshore Wind LLC to “halt ongoing activities related to the Empire Wind Project” located offshore to New York State to address compliance issues regarding the environmental analyses performed.³

Along with other Atlantic Coast states, New England states are actively developing and marketing offshore wind (OSW) as an alternative source of electricity generation that will allegedly supplant the use of natural gas and other fossil fuels, thereby reducing GHG emissions and diminishing the risk of harm from climate change. Apart from the adverse impacts to protected elements of what is termed “the environment,” the selling of OSW as a viable alternative to existing electricity generation sources is fraught with omitted, misrepresented, and arguably false information regarding its ability to produce reliable electricity that provides a basis for possible OSW lease cancellation.

This Report examines and summarizes the background, legal requirements, and data used in Federal agency decisionmaking regarding offshore wind (OSW) development on the Outer Continental Shelf (OCS). Focusing on lease approvals for projects in Rhode Island and Massachusetts Wind Energy Areas (RI/MA WEAs), the Report evaluates potential violations of statutory and regulatory requirements in the Outer Continental Shelf Lands Act (OCSLA) and related Federal laws in addition to those generally associated with environmental protection. These parallel requirements include provisions of OCSLA, along with state obligation to serve statutes, electricity system reliability rules governed by the Federal Power Act, and the National Environmental Policy Act (NEPA).

The data and legal requirements evaluated in this Report include material information that may have been omitted or misrepresented by offshore wind (OSW) project developers and governmental decisionmakers in the course of obtaining or granting OCSLA leases. This information pertains to: bulk transmission system reliability; installed capacity requirements for “decarbonized” electricity generation (the avowed purpose of building OSW); actual electricity generation from OSW operations compared to ratepayer demand; segment-by-segment lease issuance; encroachment on national security operations and training; and economic waste of maritime assets needed for fishing and navigation.

As a result of the analysis described herein, this Report has identified multiple potential violations of law and due process that support the Secretary taking OCSLA-authorized

¹ Temporary Withdrawal of All Areas on the Outer Continental Shelf from Offshore Wind Leasing and Review of the Federal Government’s Leasing and Permitting Practices for Wind Projects, MEMORANDUM FOR THE SECRETARY OF THE TREASURY, et al, January 20, 2025 (90 Fed. Reg. 8363 (January 29, 2025)).

² Secretary of the Interior Memorandum to Acting Director of Bureau of Ocean Energy Management, April 16, 2025.

³ BOEM Director’s Order to Empire Offshore Wind LLC (Walter Cruikshank, Acting Director), April 16, 2025.



executive action to cancel leases and trigger decommissioning requirements (in addition to any action to “halt” projects). Projects subject to cancellation based on the factors described in this report (summarized below) can and should be evaluated as part of the ongoing comprehensive assessment and review of Federal wind leasing and permitting practices in concert with the Presidential Memorandum’s requirement to assure the United States has “an energy economy capable of meeting the country’s growing demand for *reliable* energy (emphasis added).”

I. Report Findings

A. Offshore Wind Project Lease Cancellation

In the case of RI/MA WEAs, the Secretary of Interior has multiple grounds to consider cancelling existing OSW leases on the OCS due to misrepresented or omitted information in multiple categories material to compliance with OCSLA and other Federal laws that were relied on for lease approval:

- 1) New England elected officials, state energy agencies, and BOEM failed to disclose the installed capacity overbuild requirements necessary for the six New England states to reliably meet demand with “decarbonized” generation;
 - Only in 2024 did the New England Independent System Operator (ISO-NE) finally determine—and publicly disclose—that a total of 97,000 megawatts (MW) of installed capacity was needed to reliably operate the bulk transmission system with renewable generation, a near quadrupling of the current New England installed capacity levels
 - Of that total, ISO-NE indicated 34,000 MW would have to come from offshore wind plant (turbines, substations, transmission lines) that could require use of up to 7 million more acres of ocean assets on the OCS
- 2) Project developers, government officials, and green energy advocates have consistently masked the insufficiency of OSW delivered electricity supplies using the misleading benchmark of “homes powered;”
- 3) Ratepayers have been induced to support OSW based on claimed greenhouse gas (GHG) emission reductions that are, in fact, of such a marginal volume as to be immaterial in climate change mitigation efforts (to the extent such action is deemed required);
- 4) Improper segment-by-segment impact assessments of OSW leasing under the National Environmental Policy Act (NEPA) failed to assess or disclose the totality of direct and indirect impacts of decarbonizing the New England bulk grid system, the avowed purpose of OSW project development;
- 5) BOEM’s failure to prevent economic waste of ocean assets due to OSW interference with prioritized fishing and navigation activities; and
- 6) Bypassed or incomplete Federal interagency procedures that elevated OSW projects over national security considerations, enabling encroachment and other potential adverse impacts to defense mission readiness and operations.

B. National Security Restricted Area Designation

BOEM OSW leasing practices have reallocated maritime/ocean asset capacity to electricity generation activity without necessary review of prioritized national security requirements. The Secretary of Defense, in coordination with the Secretary of Homeland Security/Coast Guard and the Secretary of Interior can consider the following actions to prevent OSW encroachment



on national security mission, training, and operational requirements for use of surface and subsurface ocean space:

- 1) Provide defense mission, training, and operations information directly to the Secretary of Interior to inform decisions regarding lease cancellation on national security grounds;
- 2) Reinvigorate existing Federal interdepartmental and interagency procedures so as to:
 - Affirmatively restrict OSW activity in portions of the OCS needed for national defense;
 - Map all sensitive or special military OCS areas that require restriction of, or deconfliction with, OSW use;
 - Assure all OSW leases have Agreements overseen by the Military Aviation and Installation Assurance Siting Clearinghouse (DOD Clearinghouse) in place before approval;
 - Suspend all DOD Clearinghouse Agreement approval until necessary Wind Turbine Radar Interference Mitigation Working Group (WTRIM WG) analyses are completed;
 - Establish an Ocean Compatible Use Zone Program (OCUZ) in conjunction with mapping and Clearinghouse processes; and
 - Rescind the Biden Administration "Renewable Energy Development on the OCS" Memorandum of Understanding (MOU).

C. Bulk Power Transmission Reliability Under the Federal Power Act

After more than two decades of active OSW leasing activity in the RI/MA WEAs, the New England Independent System Operator (ISO-NE) has only just disclosed that 97,000 MW of installed capacity is required to both “decarbonize” the New England bulk transmission system to meet state Renewable Portfolio Standards (RPSs), and maintain reliable electrical service. This massive disconnect between segment-by-segment projects sized at 800, 1,000, or 2,000 MW and the 97,000 MW overbuild requirement demonstrates how decarbonization has the potential to seriously undermine Federally-governed interstate bulk transmission system reliability if the full overbuild cannot be developed.

The Federal Energy Regulatory Commission (FERC) and National Electricity Reliability Council (NERC), in conjunction with the Department of Interior, and other affected departments and agencies, should undertake a full analysis of the immediate and long-term effects of electric generation “decarbonization” on statutory requirements to maintain bulk transmission reliability. Such a review would include:

- 1) Identifying and assessing the volumes of installed qualifying renewables capacity required for reliable operation and resource adequacy in transmission regions;
- 2) The physical reality of whether overbuild is even possible given the availability of land, ocean, and air asset capacity in a region; and
- 3) Recapitalization costs of both new and replacement capacity in generation and transmission necessary to operate a “decarbonized grid.”

D. State Compliance and Economic Issues

Many, if not all, of the misrepresentation, omission, and compartmentalization issues described in the context of Federal OSW oversight apply to state decisionmaking and oversight, including that of elected officials and utility commissions. States should consider the following actions to reevaluate decarbonization mandates and policies:



- 1) Reassess whether decarbonized electricity generation supply can and will meet state “obligation to serve” statutes that require reliable electricity service to all ratepayers and customers.
- 2) Examine whether and to what extent the full overbuild of offshore wind needed to meet decarbonization and the obligation to serve will create economic waste to the multiple industries comprising what the region calls its “Blue Economy.”⁴

II. Report Recommendations

Based on the findings noted above, the Report recommends that Green Oceans at this time make the following requests for action by Federal entities with OSW project leasing decisionmaking and oversight authority based on the information contained in this Report, in conjunction with the ongoing “Review of Federal Wind Leasing and Permitting Practices:”

- 1) Request the Secretary of Interior take appropriate executive action to cancel or suspend RI/MA WEA leases;
- 2) Request the Secretary of Defense provide the Secretary of Interior with relevant inputs or evidence for consideration in lease cancellation determinations, and enhance procedures for restricting OSW development in national security areas; and
- 3) Request FERC and NERC review risks to bulk transmission system reliability caused by state electricity entertain mandates for decarbonization and renewables overbuild.

III. Additional Further Actions

This Report contains data and information that can be the basis for further Green Oceans outreach, communication, and engagement with Federal and state officials and other organizations involved in OSW development, as well as with ratepayers and the public as it continues its advocacy activities.

⁴ The Blue Economy refers to the commercial use of the oceans that contributes tens of billions of dollars to the New England economy.



SECTION ONE: BACKGROUND

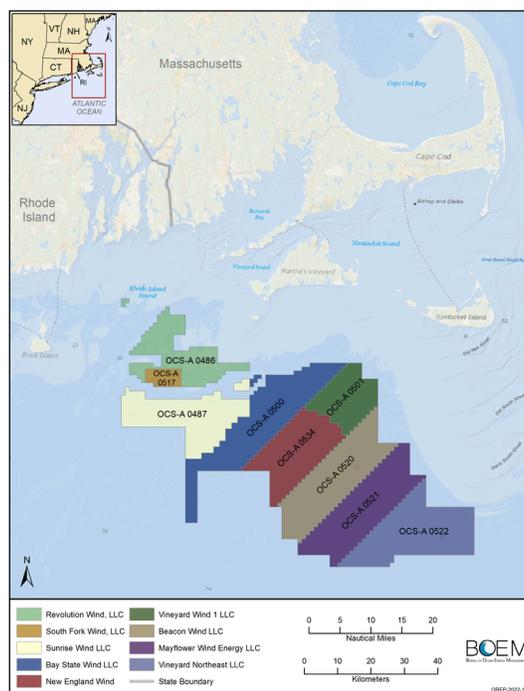
In November of 2010, the Department of Interior (DOI), through the then Mineral Management Service (MMS)⁵ began programs to develop offshore wind electricity production. Initial procedures identified Atlantic OCS areas that appeared most suitable for commercial wind activities, then Wind Energy Areas (WEAs) areas were opened for leasing and detailed site assessment activities.

As a result, the now BOEM identified two major Atlantic OCS WEAs in the New England region (Figure 1):

- Rhode Island and Massachusetts WEA: 164,750 acres located within an area of mutual interest identified by Rhode Island and Massachusetts in a 2010 memorandum of understanding (MOU) designated on February 24, 2012.
- Massachusetts WEA: 826,241 acres offshore Massachusetts adjacent to the RI/MA WEA in a location approximately 12 nautical miles south of Martha's Vineyard and 13 nautical miles southwest of Nantucket, designated on May 30, 2012.

This intensified development of wind electricity as an alternative energy source followed a Congressional amendment to Section 8 of the Outer Continental Shelf Lands Act (OCSLA)⁶ in the Energy Policy Act of 2005 (EPACTI).⁷ The new provisions authorized the Secretary of the Interior to issue OCS leases, easements, or rights-of-way for alternative energy development from offshore wind, wave, and ocean current energy capture technologies.⁸

Figure 1. New England Federal Wind Energy Area (WEA) Leases



Source: Department of the Interior (BOEM)

⁵ The MMS was renamed the Bureau of Ocean Energy Management (BOEM) in 2011.

⁶ Codified at 43 U.S.C. § 1337(p).

⁷ Pub. L. 109-58

⁸ The first U.S. commercial offshore renewable energy lease was approved in October of 2010 by the Secretary of the Interior for the Cape Wind Project, which had begun in 2001 under approval processes then overseen by the US Army Corps of Engineers pursuant to the Rivers and Harbors Act. Although the lease became effective on November 1, 2010 after protracted opposition and litigation, difficulties with project financing and its power purchase agreements led to the lessee terminating lease rights for the site in late 2017.



The EPACT amendments to OCSLA Section 8, discussed in greater detail below, specified multiple mandatory requirements the Secretary of Interior (the Secretary) must ensure before approving alternative energy leases in addition to meeting all existing OCSLA provisions affecting OSW leasing.

Beginning at approximately the same time as the EPACT changes in 2005, successive administrations issued a series of Executive Orders (EO) to support government programming in ocean policy. Beginning with the 2004 creation of an interagency Ocean Policy Committee under the George W. Bush Administration,⁹ the overall remit was to coordinate and inform the ocean policy-making process. Subsequent administrations revoked and replaced this E.O.¹⁰ while also undertaking offshore leasing activities under the EPACT provisions.¹¹

After completing a *Programmatic Environmental Impact Statement for Alternative Energy Development and Production and Alternate Use of Facilities on the Outer Continental Shelf* (the PEIS) in October 2007,¹² the then MMS finalized regulations governing what is still BOEM's offshore leasing process in April 2009, incorporating EPACT statutory requirements.¹³

EPACT implementation interrupted ongoing federal review of a 2001 OSW project known as Cape Wind off the coast of Massachusetts. The DOI took over the review process for the project,¹⁴ and after BOEM's offshore leasing regulations were finalized in 2009, the Cape Wind project became the first U.S. commercial offshore renewable energy lease approved by the Secretary of the Interior in October of 2010. In May of 2018, the lease rights were relinquished by the developers after announcing project discontinuation the prior December.¹⁵

BOEM analyzed the Rhode Island and Massachusetts WEAs under the National Environmental Policy Act (NEPA) to determine potential environmental impacts from “issuing leases and performing site assessments.”¹⁶ This DOI process meant that after completing the PEIS in 2007, BOEM would perform a second round of analyses on leasing and site assessment activities in the WEAs, followed by a third round of NEPA review for construction and

⁹ Executive Order (EO) 13366, December 17, 2004; the first U.S. Ocean Action Plan to implement ocean policy was published by the Bush Administration in January 2005.

¹⁰ Executive Order (EO) 13547, July 19, 2010; Executive Order (EO) 13840, June 19, 2018.

¹¹ As Federal entities were gearing up for wind plant leasing on the OCS, Rhode Island approved the first U.S. commercial offshore wind farm in State waters located 3.8 mi (6.1 km) from Block Island in the Atlantic Ocean. The five-turbine, 30 MW Block Island project was developed by Deepwater Wind, now known as Ørsted US Offshore Wind.

¹² Programmatic Environmental Impact Statement for Alternative Energy Development and Production and Alternate Use of Facilities on the Outer Continental Shelf, OCS EIS/EA MMS 2007-046, 2007.

¹³ Renewable Energy and Alternative Uses of Existing Facilities on the Outer Continental Shelf, 30 Code of Federal Regulations (C.F.R.) §§ 285 et seq.; see also Renewable Energy and Alternative Uses of Existing Facilities on the Outer Continental Shelf, 30 C.F.R. §§585 et seq.

¹⁴ When begun in 2001, the Cape Wind Project lease application was under review by the US Army Corps of Engineers pursuant to the Rivers and Harbors Act. The *Cape Wind Energy Project Final Environmental Impact Statement*, MMS EIS-EA 2008-040, published in January of 2009, describes the project as an electric generation facility with maximum electric output of 484 megawatts in Nantucket Sound (p. E-1). In spite of protracted opposition and litigation, the lease became effective on November 1, 2010, but difficulties with project financing and its power purchase agreements led to the project suspension and then lease termination.

¹⁵ See: BOEM, Cape Wind.

¹⁶ *Commercial Wind Lease Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf Offshore Rhode Island and Massachusetts*, Environmental Assessment, OCS EIS/EA BOEM 2012-070; *Commercial Wind Lease Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf Offshore Massachusetts*, Revised Environmental Assessment, OCS EIS/EA BOEM 2014-603



operation of the actual turbines, transmission stations and cables, port facility requirements, and any planned battery storage.

This phased application of NEPA is a function of BOEM’s own formulation of its “Wind Commercial Leasing Process” that is described in the EAs¹⁷ and on the BOEM website¹⁸ as a “staged” decision-making process under the regulations, seemingly intentionally segmented into four distinct phases:

- Planning and Analysis
- Leasing
- Site Assessment
- Construction and Operations¹⁹

The Environmental Assessments (EAs) prepared for both New England WEAs stated essentially identical reasons for the analysis: “The purpose is to issue leases and approve SAPs to provide for the responsible development of wind energy resources in the previously identified [Rhode Island and Massachusetts WEA][WEA offshore Massachusetts].”²⁰ The EAs for both WEAs covered only the five-year period for conducting site assessment activities, and resulted in a Finding of No Significant Impact (FONSI); BOEM concluded that reasonably foreseeable environmental effects associated with the commercial wind lease issuance and related activities would not significantly affect the environment.²¹ In

Federal Lease Number	Lease Issuance	Project	MW Capacity
OCS-A 0486	2013	Revolution Wind	704
OCS-A 0487	2013	Sunrise Wind	924
OCS-A 0500	2015	Bay State Wind	2,334
OCS-A 0501	2015	Vineyard Wind I	806
OCS-A 0534	2015	New England Wind 1 and 2	2600
OCS-A 0520	2018	Beacon Wind	2,085
OCS-A 0521	2018	SouthCoast Wind	2,062
Total MW Capacity			11,515

Source: National Renewables Energy Laboratory, Offshore Wind Market Report 2024 Edition; BOEM Northeast Ocean Data Wind Project List

¹⁷ *Id* at page 1-4.

¹⁸ BOEM *Wind Energy Commercial Leasing Process Fact Sheet*, retrieved March 5, 2025.

¹⁹ As will be discussed in further detail in this report, all four leasing process “phases” primarily address turbine installation activity inside the offshore leasehold areas, with some review of attendant off- and onshore transmission line development. BOEM’s review of planning, leasing, site assessment, and even construction activities related to turbine development did not analyze in any useful way the port facilities necessary to construct and maintain the turbine plant, or electricity storage requirements that are thought to make the turbine plant output more reliable.

²⁰ *Commercial Wind Lease Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf Offshore Rhode Island and Massachusetts*, Environmental Assessment, OCS EIS/EA BOEM 2012-070, p. 1-1; *Commercial Wind Lease Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf Offshore Massachusetts*, Revised Environmental Assessment, OCS EIS/EA BOEM 2014-603, p. 2.

²¹ *Id* at p. 1 and p. 1, respectively.



neither case was the purpose of the action identified as providing sufficient, reliable, and affordable electricity.

Cumulative impact analysis of site assessment activities in each respective WEA EA was also limited to the five-year life of the proposed action. In the Offshore Rhode Island and Massachusetts EA, cumulative impacts were “expected to be negligible to minor” (p. 4-206). The Offshore Massachusetts EA determined that cumulative impacts could occur but Lessee adoption of mitigating measures such as Standard Operating Conditions would make the impacts “negligible to minor” (pp. 254-255).

Notably, each WEA EA addressed the issue of climate change. The Offshore Rhode Island and Massachusetts WEA EA states:

It is currently beyond the scope of existing science to identify a specific source or discrete amount of GHG emissions and designate it as the cause of specific climate impacts at any particular location because the nature of the climate change phenomena thus far has precluded the identification of a causal relationship between discrete GHG emissions and specific environmental effects (p. 4-206).

The Offshore Massachusetts WEA EA states:

As GHGs are relatively stable in the atmosphere and are essentially uniformly mixed throughout the troposphere and stratosphere, the climatic impact of GHG emissions does not depend upon the source location. Therefore, regional climate impacts are likely a function of global emissions (p. 247).

According to the National Renewable Energy Laboratory *Offshore Wind Market Report* for 2024, over the 12-year period since the WEA Area designations in 2012, the combined installed generating plant and BOEM’s review pipeline for OSW projects totals 11,515 MW of wind plant capacity (Table 1).²²

During its first week in office, the Biden Administration issued a new E.O. directing the Secretary of the Interior to “identify . . . steps that can be taken, consistent with applicable law, to increase renewable energy production . . . in [offshore] waters, with the goal of doubling offshore wind by 2030.”²³ The now revoked E.O. does not specify what OSW baseline measurement was to be doubled—MW capacity installed, megawatts hours of actual electricity produced, or the number of development projects.²⁴

In March of 2021, the Biden Administration formalized the E.O. plan in a new, comprehensive program that established a nationwide 30 GW deployment target for OSW by 2030 under the combined efforts of the DOI, the U.S. Department of Energy, and the U.S. Department of

²² The Pipeline totals is based on projects identified in the National Renewables Energy Laboratory, *Offshore Wind Market Report 2024 Edition* and the BOEM Northeast Ocean Data Wind Project List. The total does not include projects that have been withdrawn, even though the leases might remain active. Table 1 does not include the South Fork Project because the electricity will feed the NY grid, or the Vineyard Northeast Project which has been suspended.

²³ Executive Order 14008, January 27, 2021

²⁴ According to the Department of Energy, Office of Energy Efficiency and Renewable Energy, *Offshore Wind Market Report: 2021 Edition*, two offshore wind projects were operating in Rhode Island and Virginia and the project development pipeline included another 35,000 MW of potential capacity along the Atlantic Coast and off the coasts of California and Hawaii in 2021.



Commerce. In the same policy programming statement, the U.S. Department of Transportation announced \$230 million in grant funding for “port and intermodal infrastructure-related projects” to support offshore-wind focused port infrastructure.²⁵

Joining with eleven east coast governors, the Biden Administration then launched a Federal-State Offshore Wind (OSW) Implementation Partnership on June 23, 2022, to accelerate the the 30 GW OSW expansion.²⁶ Claiming the plan would provide enough electricity “to power 10 million homes,” the Partnership Program seemed primarily intended to use federal funding to reduce greenhouse gases (GHGs) in states whose green energy and transportation systems had already achieved some of the lowest absolute and per capita emissions levels in the nation (see [Table 7 infra](#)).

Over the course of the Biden Administration up until December of 2024, BOEM approved 11 commercial scale offshore wind projects totaling 19 GW of installed capacity, declaring the electricity produced was enough “to power more than 6 million homes.”²⁷

On its first day in office, the Trump Administration issued a Presidential Action for *Temporary Withdrawal of All Areas on the Outer Continental Shelf from Offshore Wind Leasing and Review of the Federal Government’s Leasing and Permitting Practices for Wind Projects* (the Action).²⁸ The Action was taken with “due consideration for a variety of relevant factors, including the need to foster an energy economy capable of meeting the country’s growing demand for reliable energy, the importance of marine life, impacts on ocean currents and wind patterns, effects on energy costs for Americans — especially those who can least afford it — and to ensure that the United States is able to maintain a robust fishing industry for future generations and provide low cost energy to its citizens....”

The Trump Action invokes presidential authority under 43 U.S.C. 1341(a) to withdraw from disposition any of the unleased lands of the OCS as defined in section 2 of OSCLA.²⁹ The Action halted ongoing analysis and approvals by departments and agencies of the Federal government involved in offshore wind project development. However, many of the projects in the WEAs offshore of Massachusetts and Rhode Island already have leases in place and would not be covered by the moratorium on federal leasing and permitting actions (See [Table 1](#)).³⁰ They can be reviewed, however, for possible cancellation or other actions outlined in this report.

²⁵ FACT SHEET: Biden Administration Jumpstarts Offshore Wind Energy Projects to Create Jobs, March 29, 2021. [Archived version](#) retrieved March 5, 2025.

²⁶ Participating states included Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, and North Carolina.

²⁷ [U.S. Department of the Interior Press Release](#), December 24, 2024.

²⁸ [MEMORANDUM FOR THE SECRETARY OF THE TREASURY](#), et al, January 20, 2025.

²⁹ 43 U.S.C. 1331(a)

³⁰ Lease OCS-A 0522 for the Vineyard 2 (Vineyard Northeast) Project is not included in the pipeline after its suspension by its developers in December of 2024.



SECTION TWO: KEY FACTORS IN OFFSHORE WIND DEVELOPMENT IN THE ATLANTIC OCS

I. The Outer Continental Shelf Lands Act (OCSLA): Key Statutory and Regulatory Provisions

As the U.S. became increasingly dependent on oil through the twentieth century, a tidelands controversy emerged between the United States and Texas over title to 2.5 million oil-rich acres of submerged land between low tide and the state's gulfward boundary (then recognized as extending almost 10 miles from shore). As the post-war oil industry expanded through the 1950s and oil production became the second-largest revenue generator for the country after income taxes, the U.S. government passed the U.S. Submerged Lands Act in 1953, which set the federal government's title and ownership of submerged lands at three miles from a state's coastline.³¹

The OCSLA was also enacted in 1953 “to provide for the jurisdiction of the United States over the submerged lands of the outer Continental Shelf, and to authorize the Secretary of the Interior to lease such lands for certain purposes.”³² That law extended the Constitution, laws, and civil and political jurisdiction of the United States to the subsoil and sea-bed of the OCS for the purpose of exploring for, developing, removing, and transporting resources therefrom. The law required that intended mineral leases on the OCS “shall be maintained or issued only under the provisions of this subchapter.”³³

Section 3 of the original statute declared the National Policy for the OCS that included the following key provision: “this Act shall be construed in such a manner that the character of the waters above the outer Continental Shelf as high seas *and the right to navigation and fishing therein shall not be affected* (emphasis added), a provision that remains controlling under current law.”³⁴

A. Alternative Energy Statutory Provisions

Section 388 of the Energy Policy Act of 2005 (EPACT) amended OCSLA to add subsection 8(p)(1)(C), authorizing the Secretary of the Interior (the “Secretary”) to “grant leases, easements, and rights-of-way on the OCS for activities that are not otherwise authorized by law and that produce or support production, transportation, or transmission of energy from sources other

³¹ 43 U.S.C. § 1301 et seq.

³² Public Law 212, Section 345, 67 Stat. 462. Statutory provisions governing Outer Continental Shelf lands, including provisions for offshore alternative energy leasing, are codified in 43 U.S. Code Subchapter III - Outer Continental Shelf Lands (43 U.S.C. §1331 et seq.).

³³ Public Law 212, Chapter 345, section 4(a)(1).

³⁴ Public Law 212, Chapter 345, Section 3(b); 67 Stat. 462; codified at 43 U.S. Code § 1332(2). In spite of what could be seen as an “express statutory check” in OCSLA § 1332(2), the Department of Interior, through its Solicitor's Office, appears to consign or subsume the prohibition on affecting high seas fishing and navigation into its evaluation of OCSLA subsection 8(p)(4)(I) which requires the Secretary to prevent “interference with reasonable uses.” In a 2021 memorandum to the Secretary, the Solicitor's Office interpreted the reasonable use provision—and seemingly the entirety of subsection 8(p)(4)—as providing the Secretary with “wide discretion to determine the appropriate balance between two or more goals” in [§ 8(p)(4)] that conflict or are otherwise in tension. As noted *infra*, this interpretation may not withstand scrutiny when read in conjunction with lease cancellation provisions.



than oil or gas, including renewable energy sources.”³⁵ This provision is the legal basis for offshore wind development on the OCS.

The EPACT amendments to OCSLA included detailed “requirements” for OCS alternative energy production, including “protection” and “prevention” provisions that act as prohibitions on activity that can cause harm. The specified requirements mandate the Secretary “shall ensure that any activity under this subsection is carried out in a manner that provides for--

- (A) safety;
- (B) protection of the environment;
- (C) prevention of waste;
- (D) conservation of the natural resources of the outer Continental Shelf;
- (E) coordination with relevant Federal agencies;
- (F) protection of national security interests of the United States;
- (G) protection of correlative rights in the outer Continental Shelf;
- (H) a fair return to the United States for any lease, easement, or right-of-way under this subsection;
- (I) prevention of interference with reasonable uses (as determined by the Secretary) of the exclusive economic zone, the high seas, and the territorial seas;
- (J) consideration of--
 - (i) the location of, and any schedule relating to, a lease, easement, or right-of-way for an area of the outer Continental Shelf; and
 - (ii) any other use of the sea or seabed, including use for a fishery, a sealane, a potential site of a deepwater port, or navigation;
- (K) public notice and comment on any proposal submitted for a lease, easement, or right-of-way under this subsection; and
- (L) oversight, inspection, research, monitoring, and enforcement relating to a lease, easement, or right-of-way under this subsection.”³⁶

The EPACT amendments added further provisions authorizing the Secretary to:

- Provide for the duration, issuance, transfer, renewal, suspension, and cancellation of a lease, easement, or right-of-way under this subsection.³⁷
- Issue any necessary regulations to carry out this subsection in consultation with the Secretary of Defense, the Secretary of the Department in which the Coast Guard is operating, the Secretary of Commerce, heads of other relevant departments and agencies of the Federal Government, and the Governor of any affected State.

In addition, the 2005 amendments directed the Secretary to establish a comprehensive interagency digital mapping initiative for the OCS to assist decisionmaking relating to siting activities under Section 1337(p) in cooperation with the Secretary of Commerce, the Commandant of the Coast Guard, and the Secretary of Defense. The law mandated the mapping initiative include locations on the OCS of federally-permitted activities; obstructions to navigation; submerged cultural resources; undersea cables; offshore aquaculture projects; and

³⁵ Public Law 109–58, Section 388, 119 STAT. 744 (August 8, 2005); Codified at 43 U.S.C. §1337(p).

³⁶ 43 U.S. Code § 1337(p)(4).

³⁷ Public Law 212, Chapter 345, section 5



any area designated for the purpose of safety, national security, environmental protection, or conservation and management of living marine resources (emphasis added).³⁸

In directing the Secretary to administer leasing provisions for OCS lands, OCSLA provisions include prescribing such rules and regulations as may be necessary to carry out such provisions.³⁹

B. Lease Cancellation Provisions

Both the OCSLA statute and regulations provide for cancellation of OCS leases.

The OCSLA expressly stipulates that “[t]he Secretary may cancel any lease obtained by fraud or misrepresentation.”⁴⁰ This provision does not specify the requirement for a hearing prior to cancellation. As will be noted throughout this Report, the premises, predicates, and promises of comprehensive renewable buildout capable of sustaining a reliable bulk transmission grid relied on misrepresented or omitted data and information when leases were sought and approved.

The OCSLA statute further provides that “[t]he Secretary may at any time prescribe and amend such rules and regulations as he determines to be necessary and proper in order to provide for the prevention of waste and conservation of the natural resources of the outer Continental Shelf, and the protection of correlative rights therein....”⁴¹ The law also directs the Secretary to prescribe regulations for lease cancellation that may occur at any time after a hearing if the Secretary determines that:

- continued activity pursuant to such lease or permit would probably cause serious harm or damage to life (including fish and other aquatic life), to property, to any mineral (in areas leased or not leased), to the national security or defense, or to the marine, coastal, or human environment;
- the threat of harm or damage will not disappear or decrease to an acceptable extent within a reasonable period of time; and
- the advantages of cancellation outweigh the advantages of continuing such lease or permit force.⁴²

Unlike fraud or misrepresentation, lease cancellation under this provision of OCSLA can not occur unless and until lease operations have been under suspension, or temporary prohibition, by the Secretary continuously for a period of five years, or for a lesser period upon request of the lessee.⁴³ Such cancellation shall entitle the lessee to receive compensation as noted in the law.⁴⁴

³⁸ Public Law 109–58, title III, §388(b), Aug. 8, 2005, 119 Stat. 746.

³⁹ 43 U.S.C. 1334(a)

⁴⁰ 43 U.S.C. § 1337(o).

⁴¹ 43 U.S.C. § 1334(a).

⁴² 43 U.S.C. § 1334(a)(2)(A).

⁴³ 43 U.S.C. § 1334(a)(2)(B).

⁴⁴ 43 U.S.C. § 1334(a)(2)(C).



C. Regulatory Provisions

OCSLA-mandated leasing regulations are set out in 30 C.F.R. Part 585, entitled Renewable Energy on the Continental Shelf, and include provisions for lease cancellation that mirror the statutory provisions previously outlined. Key provisions in 30 C.F.R. § 585.422 provide that:

- The Secretary will cancel any lease or grant issued under this part upon proof that it was obtained by fraud or misrepresentation, and after notice and opportunity to be heard has been afforded to the lessee or grant holder (in contrast, the statute says “may cancel” and does not stipulate any need for a hearing).
- The Secretary may cancel any lease or grant issued under this part when the Secretary determines after notice and opportunity for a hearing:
 - The lessee or grantee has failed to comply with any applicable provision of the OCSLA or this part; any order of the Director; or any term, condition, or stipulation contained in the lease or grant.
 - The lessee has terminated commercial operations under a Construction and Operating Permit (COP).
 - Continued activity under the lease or grant:
 - Would cause serious harm or damage to natural resources; life (including human and wildlife); property; the marine, coastal, or human environment; or sites, structures, or objects of historical or archaeological significance; and
 - That the threat of harm or damage would not disappear or decrease to an acceptable extent within a reasonable period of time; and
 - The advantages of cancellation outweigh the advantages of continuing the lease or grant in force.
- Cancellation is also authorized when “[r]equired by national security or defense” without a hearing requirement.⁴⁵

In the case of OCSLA provisions under consideration in this review, some regulatory provisions alter the statutory prescriptions in significant ways that are potentially contradicted by the policy and cancellation provisions of the law. It is worth noting at this point that the above-cited 2021 Solicitor’s Office Memorandum to the Secretary reinterpreted the application of the EPACT requirements for OSW—particularly in regard to the 8(p)(4)(I) reasonable use provision, but seemingly for the entirety of subsection 8(p)(4)—as providing the Secretary with “wide discretion to determine the appropriate balance between two or more goals” in [§ 8(p)(4)] that conflict or are otherwise in tension.⁴⁶

As a result, even though the OCSLA statute does not refer to the requirements as “goals,” does not authorize so-called rational balancing among these requirements, and does not appear to present any ambiguous language that would warrant BOEM altering the text in the regulations,⁴⁷ BOEM OSW leasing regulations modified the statutory language from “shall ensure that any

⁴⁵ Additional and largely duplicative cancellation provisions are contained in 30 C.F.R. §§ 285.437 and 556.1102

⁴⁶ U.S. Department of Interior, Office of the Solicitor Memorandum to the Secretary, *Secretary’s Duties under Subsection 8(p)(4) of the Outer Continental Shelf Lands Act When Authorizing Activities on the Outer Continental Shelf*, M-37067, April 9, 2021.

⁴⁷ In a separate Amicus Curiae filing to the U.S. Supreme Court in the case of *Responsible Offshore Development Alliance v. Department of the Interior* (No. 24-966), Green Oceans has argued that BOEM’s arrogation of authority to “balance” among the OSW leasing requirements in its regulations is precluded by the Major Questions Doctrine whereby courts presume that Congress intends to make major policy decisions itself and not leave those decisions to agencies.



activity under this subsection is carried out in a manner that provides for” the requirements listed as A through L (see above) to “BOEM will ensure that any activities authorized in this part are carried out in a manner that provides for and reaches a rational balance among the following goals to the extent they conflict or are otherwise in tension, none of which inherently outweighs or supplants any other.”⁴⁸

This expansion of BOEM leasing “discretion” will be important going forward to the extent it conflicts with two other key aspects of OCSLA. First, the BOEM balancing regulations appear to improperly consign or subsume the “express statutory check”⁴⁹ in OCSLA § 1332(2)’s prohibition on affecting high seas fishing and navigation into evaluation of subsection § 8(p)(4) (I), which requires the Secretary to prevent “interference with reasonable uses.” Second, OCSLA itself and attendant regulations specifically authorize the Secretary to cancel leases for violating individual EPACT requirements such as “protection of national security interests” without any showing that “tension” exists among the requirements or prerequisite “balancing” among the requirements.

That certain EPACT requirements are singled out as justifying lease cancellation appears to contradict BOEM’s regulatory notion that no requirement “inherently outweighs or slants any other.” Moreover, the BOEM reinterpretation flies in the face of the clear intent of statutory OCS National Policy that OCSLA text “shall be construed in such a manner that the character of the waters above the outer Continental Shelf as high seas and the right to navigation and fishing therein shall not be affected.”⁵⁰ Both become important considerations in determining whether and on what grounds leases can be cancelled.

D. National Security Provisions

When enacted in 1953, Section 12 of OCSLA contained several reservation provisions that: authorized the President of the United States, from time to time, to withdraw unleased OCS lands from disposition; for the President to impose a right of first refusal to buy a lease’s production at market price in a time of war; and for the Secretary to suspend lease operations during a declared state of war or national emergency.⁵¹

Section 12 also granted the Secretary of Defense the right to restrict parts of the outer Continental Shelf needed for national defense from exploration and operations with the approval of the President.⁵² The statute further specifies that so long as such restriction remains in effect, any exploration or operations require concurrence of the Secretary of Defense. If the restriction requires lease operations or production be suspended, any payment of rentals, minimum royalty, and royalty prescribed by such lease is likewise suspended, but the lease term is extended by the length the suspension period.

⁴⁸ 30 C.F.R. § 585.102

⁴⁹ The phrase was used in the Supreme Court case *Watt v. Energy Action Education Foundation*, 454 U.S. 151 (1981), which address Secretary of Interior discretionary powers in conducting OSW bidding solicitations, and is relied on by the DOI Solicitor’s Office in developing the Memorandum that opined the Secretary retained authority to “balance” among OCSLA requirements directed by the statute when issuing leases.

⁵⁰ See Note 31 above.

⁵¹ Public Law 212, Chapter 345, Section 12(a), (b), and (c); 67 Stat. 469-70; codified at 43 U.S. Code § 1341(a), (b), and (c).

⁵² Public Law 212, Chapter 345, Section 12(d); 67 Stat. 469-70; codified at 43 U.S. Code § 1341(d).



To assist in decisionmaking for the newly-authorized OCS siting of alternative energy activities, the EPACT Amendments mandated the Secretary, in cooperation with the Secretary of Commerce, the Commandant of the Coast Guard, and the Secretary of Defense, create an a Coordinated OCS Mapping Initiative to digitally map the OCS. The map would specify locations on the outer Continental Shelf of (a) Federally-permitted activities; (b) obstructions to navigation; (c) submerged cultural resources; (d) undersea cables; (e) offshore aquaculture projects; and (f) any area designated for the purpose of safety, national security, environmental protection, or conservation and management of living marine resources.

E. Lease Provisions

In the event of lease cancellation or other termination, the standard BOEM OSW lease requires all facilities be removed or decommissioned. The lease provision reads as follows:

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 285 and 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 Parts 285, 585, and 586.⁵³

II. Electricity Supply, Capacity, and Reliability

Electricity is indispensable to modern life, powering commercial, industrial, sanitation, safety, transportation, communication, and other systems, including residences. Ratepayers, by law, are only required to underwrite construction and operation of electricity system components that are reasonable and reliable under statutes commonly establishing what is known as the “obligation to serve.”

Electric system reliability means the power system can and does consistently deliver electricity to customers, ensuring a stable and continuous power supply even in the face of potential disturbances or failures. Renewables electricity mandates (some as high as 100%) in five of the six New England states that demand use of intermittent sources like OSW, when considered with broad state decarbonization requirements, electricity growth, and little or no available land and sea surface space, are irreconcilable factors and requirements that have effectively planted a 2050 ticking reliability time bomb in the New England bulk transmission system.

A. Electricity System Overview

System Operations

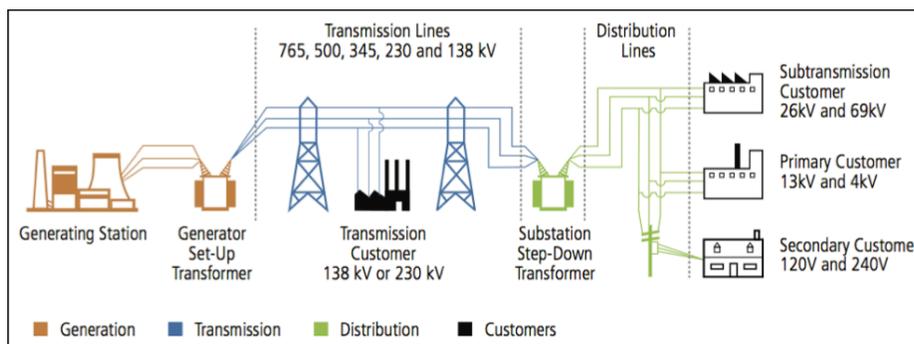
The basic components of what is generally called the bulk power system, or bulk electricity transmission system, include facilities that (a) generate electricity with varying types of fuel (gas,

⁵³ U.S. Department of the Interior, Bureau of Ocean Energy Management, **COMMERCIAL LEASE OF SUBMERGED LANDS FOR RENEWABLE ENERGY DEVELOPMENT ON THE OUTER CONTINENTAL SHELF**, Form BOEM-0008 (January 2025), p. 5.



uranium, wind, water, sunlight, etc.) and processes (combustion, fission, conversion); (b) transmission lines that move the electricity a high voltage states to load centers; and (c) distribution lines that carry electricity into customer facilities and premises (Figure 2).

Figure 2. Electric Grid Architecture



Source: U.S. Department of Energy

Massachusetts and Rhode Island are two of the six New England states where, as in other regions, the bulk power system is overseen by an Independent System Operator (ISO). ISO New England Inc. (ISO-NE) was created in 1997 by the Federal Energy Regulatory Commission (FERC) as an independent, non-profit regional transmission organization (RTO), headquartered in Massachusetts.⁵⁴ Serving all six New England States, ISO New England, Inc. is authorized by the FERC to operate the New England bulk power system and administer New England's organized wholesale electricity market pursuant to the ISO tariff and operation agreements with transmission owners.

ISO-NE acts as one of over 60 balancing authorities in the U.S. that manage the operation of the electric system within a specific geographic area. As a balancing authority, it ensures the day-to-day reliable operation of New England's approximately 30,000 megawatt (MW) bulk power generation and transmission system (including power imported from Hydro-Québec, New Brunswick Power, and the New York Power Authority), oversees the administration of the region's wholesale electricity markets, and manages the regional electricity supply planning processes.

An electric grid is a large complex system with multiple components needed to function properly. Unlike water, electricity doesn't flow with the help of gravity—it always has to be pushed and pumped, in a manner of speaking. Controlled and dependable generation operating in synchronism across the power system enabled the evolution of the modern grids. Without due regard to the issues of intermittency, voltage control, frequency control, and grid inertia, an electric grid cannot operate reliably and stably.

⁵⁴ ISO-NE was created as a replacement for the New England Power Pool (NEPOOL) which had been established in 1971 as part of efforts to improve system reliability after the Northeast Blackout of 1965.



Bulk system reliability applies to the high voltage system—large high voltage wires that move power long distances—from generating stations to load centers. Planners like NERC and the ISO-NE constantly evaluate bulk system reliability in order to prevent voltage collapse, instability, and outages.

Current New England Electricity Supply

The NE-ISO territory has 7.5 million retail customers in a population of 15.1 million. More than 7,000 MW of generating assets have retired since 2013, leaving approximately 400 dispatchable generators with a total of about 30,000 MW of installed capacity to produce electricity. The system includes 9,000 miles of high-voltage transmissions lines (115 kV and above) with 13 interconnections to New York and Eastern Canada. Under ISO-NE operations, all six of the region’s States currently rank in the Top Ten for most expensive electricity in the nation (Table 2).

The six New England states consumed 116,719 gigawatt hours (GWh) of electricity in 2024. Natural gas and nuclear power generated about 80% of this New England demand, and provided 74% of the electricity consumed in the region when imports (10%) are included. Renewables provided 12% of electricity supply (12,902 GWh), including 3,517 GWh from wind (3%) and 4,554 GWh from solar (4%) (Table 3).

Future Load Demand

As part of its legal requirements to assure enough electricity is generated in, or imported into, New England, “load demand” estimates are prepared in 10-year increments and published in ISO-NE’s annual *Forecast Report of Capacity, Energy, Loads, and Transmission* (CELT Report). The most recent CELT Report forecast that electricity demand will rise from the **116,719 gigawatt hours (GWh)** consumed in 2024 to **140,001 GWh** (Table 4), a 17% growth rate that adds an additional **23,282 GWh** to load requirements.⁵⁵ Notably, the CELT forecast for electricity demand growth only takes into account increased use of electricity in transportation and heating; as Tables 3 and 4 indicate, these estimates fail to account for electricity demand growth

Table 2. Top Ten State Average Residential Sector Retail Electricity Prices (2024)

Rank	State	Cents/kWh
1	Hawaii	41.27
2	California	30.22
3	<i>Connecticut</i>	29.96
4	<i>Massachusetts</i>	29.23
5	<i>Rhode Island</i>	27.57
6	<i>Maine</i>	26.22
7	Alaska	25.52
8	New York	24.98
9	<i>N. Hampshire</i>	24.70
10	<i>Vermont</i>	23.21

Source: US Dept. of Energy

⁵⁵ The growth volume of 23,282 GWh is net of the updated electricity use levels published by ISO-NE compared to the 2033 forecasted demand levels. See: *2024–2033 Forecast Report of Capacity, Energy, Loads, and Transmission*, ©ISO New England Inc. System Planning, May 1, 2024.



Table 3. ISO New England 2024 Net Energy for Load (NEL) Summary

	GIGAWATT HOURS (GWh)	% OF GENERATION	% OF NEL
Total Generation	108,539	100%	93%
Gas	59,883	55%	51%
Nuclear	26,547	24%	23%
Renewables	12,902	12%	11%
- Solar	4,554	4%	4%
- Wind	3,517	3%	3%
- Refuse	2,650	2%	2%
- Wood	1,771	2%	2%
- Landfill	377	0.35%	0.32%
- Methane	33	0.03%	0.03%
- Steam	0	0.00%	0.00%
Hydro	8,221	8%	7%
Other	420	0.39%	0.36%
Oil	322	0.30%	0.28%
Coal	234	0.22%	0.20%
Net Imports	10,293		9%
- Quebec	6,076		
- New Brunswick	-9		
- New York	4,225		
Pump Storage	2,113		-2%
Net Energy For Load	116,719		100%

Source: NE-ISO Key Grid and Market Statistics

in storage net energy consumption, building electrification other than heating, and large load projects such as data centers.^{56 57}

Production Capacity Requirements: Immediate Term

Based on the interaction of load demand forecasting and reliability requirements for the bulk grid transmission system, ISO-NE annually updates its estimates for Installed Capacity Requirements (ICR). Also termed resource adequacy, this is the amount of operating generation infrastructure needed to satisfy load demand and system reliability with margins included for reserves. Currently, the ISO-NE

Table 4. 10-Year New England Demand Growth Forecast

State	ANNUAL ENERGY (GWh)			
	Heating		Transportation	
	2024	2033	2024	2033
CT	64	1,228	64	2,687
MA	188	3,794	188	8,291
ME	29	1,469	29	1,845
NH	14	477	14	1,018
RI	17	340	17	720
VT	13	688	13	621
Subtotals	325	7,996	325	15,182
TOTAL 10-YEAR INCREASE				23,178

Source: ISO NE 2024 Forecast Report of Capacity, Energy, Loads, and Transmission (CELT)

⁵⁶ For comparison, see the New York Independent System Operator, Inc. (“NYISO”) load and capacity data estimates published in its annual “Gold Book” (see page 22 of 2023 edition).

⁵⁷ To illustrate “large load” growth that appears not to be accounted for, a Data Center Project west of Springfield, MA—estimated to cost more than \$3 billion at full buildout—is planned for a site with access to two recently upgraded 115 kV high-transmission lines. Slated to be the largest such complex in the state, the “large load” project is expected to require around 150 megawatts (MW) of electricity around the clock (525,600 MWh). The anticipated power purchase agreement with local utility Westfield Gas & Electric would provide below market rates, while a 2024 sales tax exemption, signed into law by Governor Maura Healey, could save the future data-park owners up to \$30 million a year.



region uses approximately 29,700 MW of generating capacity to meet demand.⁵⁸ Adhering to Capacity Commitments through to 2027 will require continued availability of over 30,000 MW of installed capacity (Table 5).

This 30,000 MW figure is an important ICR baseline for production capacity planning going forward. As will be discussed infra, in the longer term, this number will more than triple to nearly 100,000 MW of ICR if ISO-NE actually tries to build out a fully decarbonized electricity systems under state-mandated Renewable Portfolio Standards (RPSs).

Table 5: Actual New England Net Installed Capacity Requirements (ICR) and Reserves for 2023-2024 to 2026-2027

Capacity Commitment Period	2023 Demand Forecast*	Actual Net ICR (MW)	Resulting Reserves (%)
2023-2024	28,212	31,690	12.3
2024-2025	27,935	31,545	12.9
2025-2026	27,163	30,585	12.6
2026-2027	27,298	30,305	11.0

*NE-ISO 2023 Capacity, Energy, Loads, and Transmission (CELT) Report
Source: ISO-NE *Net Installed Capacity Requirements (ICRs), Representative Net ICRs, and Operable Capacity (Op Cap) Analysis 2023*

To assure sufficient electricity production capacity will be operating or available throughout a year, ISO-NE conducts what are known as capacity auctions. Under this process, electricity generating plants in the region submit bids to provide a certain volume of electric generating capacity (in Megawatts or MW) over a defined period in the future to produce the amount of electricity needed to meet identified load demand, as well as meet requirements to maintain bulk power transmission from producers to consumers across the region. The auction secures contracts (starting with the lowest price offer) for enough generating capacity to meet peak load demand; resulting contract generators are paid even though they may not produce kilowatt hours at all times. This mechanism ensures grid reliability by incentivizing generators to maintain sufficient production capacity to meet current and future electricity needs. In addition to generation installed in the New England Region, ISO-NE capacity auctions also acquire Import Capacity Supply Obligations to assure electricity supply is available from neighboring providers.

By the early 2020's, the expanded use of weather-dependent generating sources like wind and solar in the New England states was becoming a cause for concern regarding reliability and related issues. In its 2022 report, *Future Grid Reliability Study: Phase 1*,⁵⁹ ISO-NE conducted both engineering and economic analyses to identify grid reliability challenges that could occur by the year 2040 due to state energy policies. Key takeaways of that report were actually described by the Massachusetts Department of Public Utilities in their 2022 Annual Report, and included the following:

⁵⁸ ISO-NE capacity also includes nearly 3,600 MW of demand capacity resources, including demand response (consumers automatically reduce load demand at peak hours), energy efficiency measures, and distributed generation to reduce electricity demand, and will have already been accounted for in determining the annual electricity use levels (e.g., 116,719 GWh in 2024).

⁵⁹ ISO-NE *2021 Economic Study: Future Grid Reliability Study Phase 1*, July 29, 2022



- Dispatchable or system balancing resources (regardless of energy source) are needed in all scenarios to support variable resources;
- Adding small amounts of dispatchable units significantly reduced the amount of new wind, solar, and storage resources needed to retain future grid reliability;
- Battery storage may not be able to charge sufficiently under future load conditions;
- Nuclear generator retirements pose a challenge to grid reliability and could thwart the states' goals to reduce carbon dioxide emissions; and
- The region may need increased energy regulation services, operating reserves may become deficient and at times completely depleted, and the reserve margin may need to increase by an order of magnitude by 2040 (i.e., from 15% to 300%).⁶⁰

Given these issues, unsurprisingly the ISO-NE 18th Forward Capacity Auction (FCA 18) finalized in February of 2024, secured commitments for 31,556 megawatts (MW) of capacity to be available in 2027/2028, an increase from the 2026-2027 levels noted in Table 5. Of that total, 21,589 MW (almost 70% of the total capacity) were oil (4,417 MW), gas (13,817 MW), and nuclear (3,555 MW) generation assets.⁶¹ This means that no appreciable reduction in the amount of installed natural gas capacity used to reliably produce electricity is occurring in the foreseeable future. Even if the OSW Construction Pipeline noted above successfully builds 12,000 MW of additional OSW to feed load demand in Massachusetts, Rhode Island, and the ISO-NE grid, the intermittency of weather-dependent capacity will require continued use of dispatchable (including fossil) electricity generation to meet both regular demand and/or as backup.

B. Reliability Oversight

Load demand forecasting, installed capacity requirement calculations, and capacity auctions are all steps necessitated by Federal and state law provisions requiring the North American Reliability Council (NERC) and balancing authorities to maintain electricity system reliability in accordance with Federal law, Federal Energy Regulatory Commission (FERC), and state laws and regulations.

Federal Law and Requirements

In addition to adding alternative energy leasing provisions to the OCSLA, the 2005 EPACT added Section 215⁶² to the Federal Power Act (FPA), establishing mandatory, enforceable reliability standards to be overseen by the Federal Energy Regulatory Commission (FERC).⁶³ Reliability oversight was added to the significant existing authority granted FERC under the FPA to regulate the transmission and sale of electric energy in interstate commerce.⁶⁴

⁶⁰ Commonwealth of Massachusetts, DEPARTMENT OF PUBLIC UTILITIES ANNUAL REPORT, 2022

⁶¹ Energy Information Agency, ISO-New England issues Forward Capacity Auction results starting in June 2027.

⁶² Public Law 109-58, title XII, § 1211(a) (2005); 16 U.S.C. § 824o.

⁶³ 16 U.S.C. §§ 791a et seq. The 1935 Federal Power Act, initially enacted as the Federal Water Power Act in 1920, established the Federal Power Commission (FPC) which later became the Federal Energy Regulator Commission (FERC) in 1977.

⁶⁴ Title II of the FPA (§ 201, 16 U.S.C. § 824) (Part of the statute enacted in 1935), provided FERC with jurisdiction over transmission of electrical energy and wholesale sales of electrical energy in interstate commerce. The FPA explicitly limited FERC jurisdiction, stating it does not extend to facilities used for electric generation, local distribution, or transmission facilities in intrastate commerce.



Section 215 of the FPA requires FERC to approve and enforce reliability standards developed by a designated Electric Reliability Organization (ERO) for the bulk electric system.⁶⁵ FERC subsequently issued Order No. 672, which designated the North American Electric Reliability Corporation (NERC) as the ERO, and adopted reliability standards to be enforced by that organization, subject to FERC oversight. The EPACT additions also gave FERC authority to levy civil penalties of up to \$1 million per day for violating any provision in Part II of the, which includes FERC's regulation of rates, markets, mergers and reliability requirements.

NERC establishes mandatory reliability standards, which include requirements related to system planning, operation, and maintenance to ensure that utilities provide continuous and reliable service. These standards cover a wide range of topics, from system operations during emergencies to the maintenance of adequate reserves.⁶⁶

FERC oversight and enforcement of reliability standards developed by NERC, along with other key provisions of the FPA, provide the foundation for ensuring that electric utilities meet minimum standards of reliability. Section 205 of the FPA gives FERC the authority to review and approve rates, terms, and conditions for the sale and transmission of electricity in interstate commerce and prohibits unreasonable rates and undue discrimination with respect to any transmission or sale subject to the Commission's jurisdiction.⁶⁷ Section 206 authorizes FERC to require changes in practices or rates if they are found to be unjust or unreasonable.⁶⁸

FERC's exclusive federal authority over interstate transmission and the wholesale sale of electricity can be considered to "preempt" certain state legal and regulatory activities, and its authority can override state regulations that interfere with interstate electricity markets.⁶⁹ Based on preemption principles, state laws or regulations mandating installed capacity be from what is considered renewable fuel sources at some set level or amount could be seen as violating the FPA if, as a result, inadequate electricity production levels interfere with interstate electricity transmission and grid management requirements, or undermine reliability.

Multiple states in the ISO-NE have established Renewable Portfolio Standards (RPSs) that mandate a percentage of installed capacity that must be from renewable generation sources (see [Chart 1](#)). As will be discussed further, the physical realities and costs of meeting such emission-based dictates have only just been revealed in ISO-NE analyses that finally disclosed the

⁶⁵ 16 U.S.C. §824o(c).

⁶⁶ In a clear statement to the 2024 Reliability Technical Conference held in October of that year, NERC echoed the ISO-NE findings in its *Future Grid Reliability Study: Phase 1*, warning that "[i]n North America, by 2033, summer peak demand for electricity is forecast to increase 10%, while electricity generation is only expected to grow by 4%." The NERC statement left no doubt as to the root cause of electricity reliability threats, noting "At its most basic level, the reliability challenge in North America is a simple math problem: the supply of electricity is not growing fast enough to meet the growing demand for electricity" (emphasis in original).

NERC's Long Term Reliability Assessment released in December of 2024 confirmed the severity of the supply risks, warning that more than half of US power grids face shortfalls that could mean blackouts over the next decade. The report notes that the growing gap between projected electricity demand and available supply is being driven by three main issues: unexpected surges in energy use (data centers, EVs, and building electrification);

⁶⁷ 16 U.S.C. § 824d.

⁶⁸ 16 U.S.C. §824e.

⁶⁹ In *New York v. FERC*, 535 U.S. 1 (2002), the U.S. Supreme Court reaffirmed that FERC has jurisdiction over the wholesale electricity markets and interstate transmission, and that states cannot adopt laws or regulations that conflict with federal jurisdiction over these areas.



staggering renewable buildout necessary to meet the obligation to serve with only decarbonized electricity.

State Requirements

The legal requirement for a utility to provide service (including a delivered product such as water, natural gas, or electricity) is called the “obligation to serve.” The essential concept of the obligation to serve is that every public utility shall furnish adequate, efficient, and reasonable service. Individual states detail the obligation in sections of their state codes governing public utilities, which can vary with caveats and dependencies.

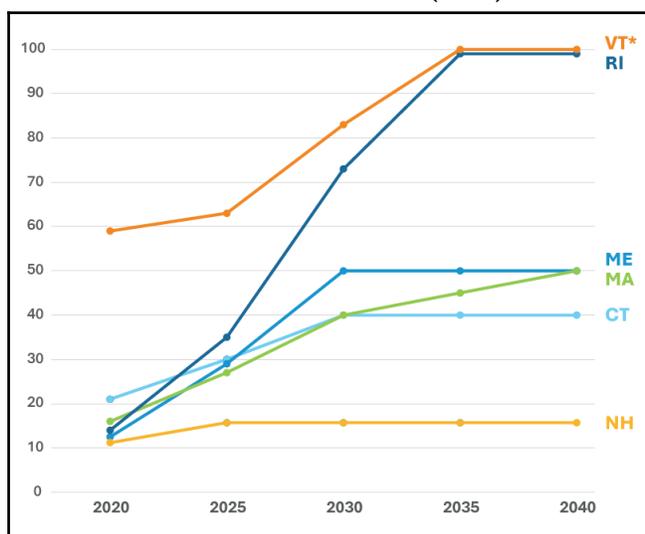
Massachusetts Law and Regulation

The Massachusetts General Law contains various provisions governing the obligation to serve. These include the “Right of user to gas or electricity:”

[A]ny person, having a residence or place of business in a town where a corporation is engaged in the manufacture, transmission or sale of gas or the distribution of electricity [can be required] to supply the petitioner with gas or electricity, upon such terms and conditions as are legal and reasonable[.]⁷⁰

The 1997 Restructuring Act,⁷¹ which redesigned the electricity system to provide for competitive generation markets, added new obligations to providing utility service by requiring “electric companies organized pursuant to the provisions of this chapter to accommodate retail access to generation services and choice of suppliers by retail customers, unless otherwise provided by this chapter.”⁷² The new law, codified in Chapter 164 of the Massachusetts General Laws, further authorized and directed what was then the Massachusetts Department of Telecommunications and Energy (now the Department of Public Utilities or DPU)⁷³ “to

Chart 1. New England States Renewable Portfolio Standards (RPS)



Source: ISO-NE Resource Mix

⁷⁰ Mass. Gen. Laws ch. 164, § 92.

⁷¹ AN ACT RELATIVE TO RESTRUCTURING THE ELECTRIC UTILITY INDUSTRY IN THE COMMONWEALTH, REGULATING THE PROVISION OF ELECTRICITY AND OTHER SERVICES, AND PROMOTING ENHANCED CONSUMER PROTECTIONS THEREIN, Session Laws, Acts (1997), Chapter 164.

⁷² Mass. Gen. Laws ch. 164, § 1A(a).

⁷³ As part of this extensive electric restructuring legislation, name of the Department of Public Utilities (DPU) was changed to the Department of Telecommunications and Energy on November 25, 1997. Then on April 11, 2007, the Department of Telecommunications and Energy was abolished as part of the Governor’s Executive Department reorganization plan, and replaced with (1) a restored Department of Public Utilities (DPU) with jurisdiction over gas, electric, water, siting and transportation functions, and (2) a Department of Telecommunications and Cable. The new DPU was placed under the supervision and control of the Commonwealth Utilities Commission.



oversee quality and reliability of service and to require that quality and reliability are the same as or better than levels that exist on November 1, 1997.”⁷⁴

In conjunction with the 1997 Restructuring Act codified in Chapter 164, additional provisions were added to Massachusetts law in Chapter 25A § 11E authorizing and directing the Department of Energy Resources (DOER) to monitor any independent electricity systems operator or power exchanges organized pursuant to the provisions of Chapter 164.⁷⁵ Chapter 25A § 11E also charges DOER⁷⁶ with collecting, analyzing, and publishing data “to be used by the department for the publication of periodic projections of the supply, demand, and price of energy on statewide and regional basis.”⁷⁷

The law goes on to require DOER to “annually issue a report containing information on all issues of electricity system reliability, including, but not limited to, generation and transmission data detailing load and capacity, for the prior calendar year and forecasting potential future capacity excesses or deficits for the next five calendar years” and utilize the data “to forecast potential capacity excesses or deficits.”⁷⁸

No such report appears to be publicly available. Chapter 25A § 11E does provide that “said report may be undertaken in combination with the report required pursuant to § 7 [of Chapter 25A],”⁷⁹ but the only identified annual report by the DOER was submitted under Chapter 25A, § 5, which requires an annual report to committees and offices of the Massachusetts legislature. The Department of Public Utilities files an Annual Report in accordance with Chapter 25 § 2,⁸⁰ but none of the public filings described includes the mandated information on reliability, generation and transmission data detailing load and capacity, or capacity excesses and deficits.

⁷⁴ Session Laws, Acts (1997), Chapter 164, § 193; codified at Mass. Gen. Laws ch. 164 § 1F(7).

⁷⁵ Mass. Gen. Laws ch 25A § 11E.

⁷⁶ Section 2 of Mass Gen Laws ch 25A provides that the Department of Energy Resources will have three divisions: (i) energy efficiency, (ii) renewable and alternative energy development (including administration of the renewable and alternative portfolio standards; and (iii) green communities (the point of contact for municipalities and other governmental bodies). On its website, DOER indicates its mission “is to develop and implement policies and programs aimed at ensuring the adequacy, security, diversity, and cost-effectiveness of the Commonwealth’s energy supply to create a clean, affordable, equitable and resilient energy future for all residents, businesses, communities, and institutions.” Its website also states that “DOER supports the Commonwealth’s clean energy goals as part of a comprehensive Administration-wide response to the threat of climate change. DOER focuses on transitioning our energy supply to lower emissions and costs, reducing and shaping energy demand, and improving our energy system infrastructure” with no mention of adequacy or security of energy supply.

⁷⁷ Mass. Gen. Laws ch 25A § 11E.

⁷⁸ *Id.* Section 11E The statute further mandates the report contain electricity spot price information for the previous calendar year; a determination of the extent to which the energy markets are maintaining necessary levels of reliability; a determination of whether all customer classes are being adequately served by competitive energy markets; a determination of the competitiveness of energy markets; including a determination whether or not the electric industry is providing consumers with the lowest prices possible within a restructured, competitive retail marketplace; and, finally, a determination of the extent to which the energy markets are achieving the energy efficiency and fuel diversity goals of the commonwealth.

⁷⁹ *Id.* Section 7 of Chapter 25A provides that all energy information collected by the department under that section shall be maintained for the sole and confidential use of the commonwealth, its agencies and offices and is not be deemed to be a public record. However, the section also provides that each covered company, supplier, and aggregator shall report semi-annually to the department the average of all rates charged for default, low-income and standard offer service and that all such rate information so reported shall be deemed public information, shall not be protected as a trade secret, confidential, competitively sensitive, or other proprietary information.

⁸⁰ DEPARTMENT OF PUBLIC UTILITIES ANNUAL REPORT 2023



Rhode Island Law and Regulation

Rhode Island’s statutes provide that electric utilities have an obligation to provide service:

Every public utility is required to furnish safe, reasonable, and adequate services and facilities. The rate, toll, or charge, or any joint rate made, exacted, demanded, or collected by any public utility for . . . any heat, light, water, or power produced, transmitted, distributed, delivered, or furnished; . . . or for any service rendered or to be rendered in connection therewith, shall be reasonable and just, and every unjust or unreasonable charge for the service is prohibited and declared unlawful....⁸¹

The law further stipulates that utility services are a public interest subject to the state’s police power and key to sustaining economic activity:

Preservation of the state's resources, commerce, and industry requires the assurance of adequate public transportation and communication facilities, water supplies, and an abundance of energy, all supplied to the people with reliability, at economical cost, and with due regard for the preservation and enhancement of the environment, the conservation of natural resources, including scenic, historic, and recreational assets, and the strengthening of long-range, land-use planning.⁸²

R.I. Public Utility Commission is charged with implementing the requirements of the statute,⁸³ including least-cost procurement requirements that balance reliability and energy efficiency with supply procurement as complementary but distinct activities for the common purpose of meeting the state’s electrical needs “in a manner that is optimally cost-effective, reliable, prudent, and environmentally responsible.”⁸⁴

Neither the Rhode Island Office of Energy Resources Annual Report 2023 or the Rhode Island Division of Public Utilities & Carriers 2023 ANNUAL REPORT (division of the RI Public Utilities Commission) provide any actual data as to the electricity supply produced in the state, its adequacy or safety, or whether the pricing was reasonable, just, cost-effective, or satisfied the requirements of least-cost procurement.

C. Reliability “Overbuilding” for a Decarbonized ISO-NE Grid

RPSs Driving Undisclosed ICR Requirements

Section 215 of the FPA actually defines the term “bulk-power system” to mean:

⁸¹ R.I. Gen. Laws § 39-2-1(a).

⁸² Rhode Island General Laws Title 39, Public Utilities and Carriers § 39-1-1, Declaration of Policy—Purposes, subsection (3).

⁸³ Rhode Island General Laws § 39-1-3.(a) To implement the legislative policy set forth in § 39-1-1 and to serve as the agencies of the state in effectuating the legislative purpose, there are hereby established a public utilities commission and a division of public utilities and carriers. The commission shall serve as a quasi-judicial tribunal with jurisdiction, powers, and duties to implement and enforce the standards of conduct under § 39-1-27.6 and to hold investigations and hearings involving the rates, tariffs, tolls, and charges, and the sufficiency and reasonableness of facilities and accommodations of railroad, gas, electric distribution, water, telephone, telegraph, and pipeline public utilities; the location of railroad depots and stations, and the control of grade crossings; the revocation, suspension, or alteration of certificates issued pursuant to § 39-19-4; appeals under § 39-1-30; petitions under § 39-1-31; and proceedings under § 39-1-32.

⁸⁴ R.I. General Laws § 39-1-27.7(a)



(A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and (B) electric energy from generation facilities needed to maintain transmission system reliability.⁸⁵ When a state law or regulation impedes reliability, FERC has jurisdiction to enforce reliability standards to assure availability of necessary dispatchable capacity.

Because the FPA is primarily charged with overseeing the interstate bulk grid system and wholesale electricity sales, states retain significant authority to establish policies for electric generation facilities, including fuel use mandates such as RPSs. However, the installed capacity and production capability of generation assets (known as resource adequacy) is a core factor in assuring bulk electric system reliability, and RPS requirements directly affect whether and how decarbonized generation will produce enough “electric energy” to meet demand and maintain system reliability.

In Massachusetts, the state set its first RPS when it restructured the electricity system in 1997. Currently, the Global Warming Solutions Act as amended in 2021, requires the MA Department of Environmental Protection to set interim statewide greenhouse gas emissions targets for 2025, 2030, 2040, 2045, and finally 2050, when utilities will have to source 80% or electricity from renewable sources.⁸⁶ Rhode Island's Renewable Energy Standard (RES), established in June 2004, now requires the state's retail electricity providers to supply 100% of their retail electricity sales from renewable resources by 2033.⁸⁷

ISO-NE Report: Illuminating the Challenges of Tomorrow's Grid

As the RPS requirements became more stringent and potentially draconian, the ISO-NE began further studying the effects of RPSs on bulk transmission system reliability out to 2050. The 2024 report, *Economic Planning for the Clean Energy Transition* (EPCET Report), assesses the renewable buildout requirement needed to maintain reliable grid operations with 100% decarbonized generation.⁸⁸ The EPCET report, the culmination of efforts begun in 2022 with reports such as the previously noted *Future Grid Reliability Study: Phase 1* (and well after Massachusetts and Rhode Island, adopted RPSs in 1997 and 2004, respectively) labels RPS-compliant ICR construction and operation as “challenges” in what some might view as a stupefying level of understatement.

Using multiple scenarios involving weather predictions, electricity demand forecasts, battery storage as dispatchable capacity, and shifts in seasonal peak loads, several critical findings in the EPCET Report finally identify the decarbonized generation asset buildout needed by 2050 for RPS compliance:

- The New England system will need **97 GW (97,000 MW) of total new renewable capacity by 2050** to achieve New England state decarbonization RPSs. Put another way, the 2050 resource mix to meet emissions goals and accommodate increased electrified demand would

⁸⁵ 16 U.S. Code § 824o(a)(1).

⁸⁶ Mass. Gen. Laws. ch. 21N §§ 3(b)

⁸⁷ RI Gen L § 39-26-4.

⁸⁸ *Economic Planning for the Clean Energy Transition: Illuminating the Challenges of Tomorrow's Grid*, ISO New England Inc., October 24, 2025.



require approximately four times the capacity of the current system, spread out over vast areas of New England land and water geocapital asset capacity (exactly where is not specified).

- Average annual capacity buildout to achieve a reliable, stable grid that meets 2050 decarbonization requirements are as follows:
 - 1,293 MW offshore wind
 - 268 MW onshore wind
 - 955 MW solar
 - 952 MW battery storage
 - **Total: 3,468 MW construction, not including transmission lines and related infrastructure, each and every year until 2050**
- Of the 97 GW predicted renewable buildout requirement, **34 GW are OSW that could require up to 7.1 million acres of sea space** (depending on density).
 - The two WEAs currently designated off Rhode Island and Massachusetts comprise a little over 990,000 acres
- As new decarbonized generation and storage units are added to both reach the 100% goal and sustain reliability, the actual utilization rate of each unit is substantially reduced. In other words, by 2045, a newly-added renewable may run for just 10% of that year. Consequently, many resource additions in later years will be curtailed (their production will be limited by system operators) for most of the year, which will increase their cost per MWh.⁸⁹
 - In effect, the ratepayers of New England will be asked to pay for the building and maintenance of many tens of thousands of installed MW that will only be used periodically or intermittently

A second 2024 study evaluated the effects of decarbonization mandates on grid design and buildout. Anticipating that home heating and transportation would drive up New England's electricity demand 106% by 2050, Always On Energy Research concluded meeting forecasted demand for electricity 24/7/365 would require 225 GW of new renewables, more than twice the ISO-NE estimate. In this scenario, the most economically efficient mix of renewable buildout would need over 6,600 offshore wind turbines, over 5,600 onshore wind turbines, and over 129 million solar panels.⁹⁰

These reports confirm a fundamental reality of electricity production with ambient (as supposed to storable) fuels: because there is no “dial” on wind or sunshine to turn it up in response to spikes or growth in electricity demand, the only option for “renewables reliability” is to build a mathematically large enough set of generators such that enough of them at any given moment will be able to make the needed power. This is a recognized practice know as **overbuilding**. When wind and solar output is high, excess production can be curtailed; when demand is high, the grid relies on the overbuilt capacity to meet load requirements. In other words, when there is no way to control or step up the actual power production at a weather-dependent generation facility, the only reliable method of producing more power is to build and maintain duplicative facilities as backup.

⁸⁹ *Id.*, p. 10-11.

⁹⁰ *The Staggering Costs of New England's Green Energy Policies*, Isaac Orr, Mitch Rolling, and Trevor Lewis, Always On Energy Research, November, 2024, p. 6.



The same realities and shortcomings of weather-guaranteed intermittency that underpin the EPCET Report overbuilding disclosures are already evident in ISO-NE capacity decisionmaking. Forward Capacity Auction 18 (noted above) only accepted 439 MW of the 1538 MW installed capacity of the three OSW projects bidding (roughly 29%) (Table 6), a prescient indicator that corroborates why ISO-NE estimates for 2050 require four times the installed capacity of the current system to assure electricity production can reliably meet actual demand.

Project Name	Installed Capacity	Summer Qualifying	Winter Qualifying	FCA Qualifying	Percentage of Installed Capacity
Block Island	30	5.2	14.1	5.2	17%
Revolution Wind	704	208.1	479.8	208.1	28%
Vineyard Wind I	804	236.1	493.9	236.1	29%
Total	1538	449.4	987.8	449.4	29%

Source: ISO-NE Auction Results and Supporting Data

Program goals such as the Biden Administration 30 GW OSW Plan look more like a stalking horse or bait-and-switch to induce or compel ratepayers to commit to renewables overbuilding before the decarbonization-driven ICR levels had been calculated or disclosed by the EPCET Report. This data regarding the total infrastructure, and corollary public air, space, land, and water assets,⁹¹ required to cut emissions with overbuilt renewables if mandatory bulk transmission system reliability standards and the obligation to serve were to be maintained exposes the problematic claims of “powering homes” and “reducing greenhouse gases” that sold OSW to a wishful and under-informed public for decades.

The propensity for renewables advocacy to “bury the lede” on its objective infeasibility is confirmed by the [EPCET Report Fact Sheet](#) developed by ISO-NE. No where is the requirement for 97 GW (97,000 MW) mentioned. Instead, at the bottom of the last page under the heading “Renewable-only build-outs may be vast,” ISO-NE allows that a “2050 resource mix that...adds a build-out of wind, solar, and short-term battery storage to meet emissions goals and accommodate increased electrified demand would require approximately four times the capacity of today’s system.” Unless a reader actually knows the current system uses 25-30,000 MW ICR, there can be no apprehension of the true magnitude of overbuild required, leaving ratepayers again under-informed and potentially misled.

Generally, requirements on electricity generators such as a state RPS are considered outside the basic jurisdiction of FERC. However, because Federal law makes clear that “electric energy

⁹¹ Also referred to as “geocapital” in this report.



from generation facilities needed to maintain transmission system reliability” is part of the bulk power system, the actual resource adequacy and electricity output (or lack thereof) of planned or necessary ICR is in the jurisdiction of FERC and NERC as part of assuring bulk power system reliability (along with balancing energy resources, maintaining adequate backup and capacity, and planning for demand fluctuations).

Although ISO-NE has now finally placed clear information before New England states, electricity system stakeholders, and the public as to the overbuild volume needed to for the 2050 ICR to be decarbonized, no planning or disclosure has been forthcoming from the states or ISO-NE as to where, how, and for how much this 97,000 MW would actually be constructed, including siting availability or limits arising out of transmission system design and capacity.

III. Accuracy and Efficacy of Claimed OSW Greenhouse Gas (GHG) Reductions

As described above, Massachusetts and Rhode Island are underwriting multiple OSW projects with the stated goal of reducing state greenhouse gas emissions and thereby ameliorating changes in the climate such as increasing storm activity, sea level rise, and other adverse physical and economic impacts expected to affect the region.

These goals do not stand up to scrutiny given:

- The ISO-NE grid is already “green.”
- The global total of 53 billion metric tons of carbon dioxide equivalent emitted around the world in 2023 is uniformly mixing throughout the troposphere and stratosphere, rendering localized GHG reductions ineffectual (a fact known from the earliest NEPA evaluations).
- Other states have increased GHG emissions that cancel out New England efforts, making the cost outlays for decarbonization unreasonable under obligation to serve requirements.

Green New England

Table 7: Comparative State Energy-related CO2 Emissions (million metric tons)

State	1970 Absolute	2022 Absolute	2022 Per Capita (Metric Tons)
Connecticut	47.8	37.0	10.3
Maine	16.8	14.9	10.8
Massachusetts	99.6	59.2	8.5
New Hampshire	12.8	13.8	9.9
Rhode Island	13.1	10.2	9.3
Vermont	5.5	5.5	8.5
New England Total	195.7	140.7	
Individual States Exceeding New England Total			
California	294.7	326.2	8.4
Florida	104.4	231.0	10.4
Illinois	247.3	183.7	14.6
Indiana	172.0	163.2	23.9
Louisiana	144.7	191.8	41.8
Michigan	186.9	154.0	15.3
New York	284.9	166.1	8.4
Ohio	275.5	196.2	16.7
Pennsylvania	306.9	213.5	16.5
Texas	360.0	663.0	22.1
Total	2,377.2	2,488.6	

Source: U.S. Energy Information Administration, State Energy Data System (SEDS) and EIA calculations



The population of New England is approximately 58 million people and, as of 2022, its total energy-related greenhouse gas emissions was 140.7 million metric tons CO₂. These factors calculate to 17.8% of the nation's population producing 2.8% of total GHG emissions.⁹²

As [Table 7](#) shows, ten states individually have higher absolute GHG emission levels than the six New England states *combined*. And although most are large population states, with the exception of New York and California, all have higher per capita emission rates than the New England States as well.

Futility of New England Climate Change Action

Proponents of OSW have known since the first NEPA reviews of the RI/MA WEA designations that OSW deployment is irrelevant to mitigating global climate impacts. Analyses for both the RI/MA and MA WEAs included statements that made clear that cutting GHG emissions in the New England area would have no effect on sea-level rise, storms, or other climate change impacts:

It is currently beyond the scope of existing science to identify a specific source or discrete amount of GHG emissions and designate it as the cause of specific climate impacts at any particular location because the nature of the climate change phenomena thus far has precluded the identification of a causal relationship between discrete GHG emissions and specific environmental effects.⁹³

As GHGs are relatively stable in the atmosphere and are essentially uniformly mixed throughout the troposphere and stratosphere, the climatic impact of GHG emissions does not depend upon the source location. Therefore, regional climate impacts are likely a function of global emissions.⁹⁴

Nearly a decade later, the Vineyard Wind I Final Environmental Impact Statement (FEIS) reiterated this reality, saying “[b]ecause GHG emissions spread out and mix within the troposphere, the climatic impact of GHG emissions does not depend on the source location. Therefore, regional climatic impacts are a function of global emissions.”⁹⁵ As global emissions are 53 billion tons of carbon equivalent, saddling ratepayers with the massive costs of recapitalizing an already green electricity systems presents a dangerously false economy.

Brown State Cancellation

Arguably, if New England investments and expenditures in “green” electricity were actually part of a net decrease in overall GHG emissions throughout the stratosphere and troposphere of the United States, a case could be made that the financial burdens placed on ratepayers were creating some value for such expenditures. Unfortunately, this isn’t even nearly the case. As [Table 8](#) illustrates, the GHG reductions achieved by Massachusetts after half a century of power plant

⁹² The greenhouse gas calculation is based on a total of 4,934.4 million metric tons reported by US EIA as emitted nationwide in 2022.

⁹³ Offshore Rhode Island and Massachusetts WEA EA, p. 4-206.

⁹⁴ Offshore Massachusetts WEA EA, p. 247.

⁹⁵ *Vineyard Wind 1 Offshore Wind Energy Project Final Environmental Impact Statement*, OCS EIS/EA BOEM 2021-0012, March 2021, p. A-66.



recapitalization and other fuel switching activities totals more than 40 million metric tons of CO₂ (MMTCO₂). This number is impressive, but it's essentially cancelled out by the rise in GHG emission in Louisiana over the same period. Texas cancels out the the 3 MMTCO₂ eliminated by Rhode Island by two orders of magnitude, and just the marginal growth in US GHG emissions since 1970 (678 MMTCO₂) is more than 4 times higher higher than the

State	1970	1980	1990	2000	2010	2020	2021	2022	Change (1970-2022)		Change (2021-2022)	
									Percent	Absolute	Percent	Absolute
Massachusetts	99.6	76.8	82.9	82.3	72.7	52.1	56.0	59.2	-40.5%	-40.4	5.7%	3.2
Louisiana	144.7	198.4	191.5	220.4	203.3	182.5	187.9	191.8	32.5%	47.1	2.1%	3.9
Rhode Island	13.1	8.4	8.9	11.8	11.0	9.8	10.6	10.2	-22.5%	-3.0	-4.5%	-0.5
Texas	360.0	525.1	570.1	672.5	614.9	624.5	662.0	663.0	84.2%	303.0	0.1%	1.0
Total of states	4,255.8	4,755.1	5,018.5	5,857.7	5,576.4	4,572.0	4,895.6	4,934.4	15.9%	678.6	0.8%	38.8

Source: U.S. Dept. of Energy (EIA) 2024

emission from the combined New England states level of 140 MMTCO₂.

Sector Balance

Table 9 identifies the transportation sector of the New England economy as the largest source of GHG emissions. Transportation sector decarbonization requires massively increased electricity supplies, which in turn, drives the seemingly impossible buildout of renewable generation infrastructure (97,000 MW) to make more electricity. Redesigning transportation

State	MM Tons Emitted						Percentage of Total				
	Com-mercial	Electric Power	Resi-dential	Indus-trial	Transpor-tation	Total	Com-mercial	Electric Power	Resi-dential	Indus-trial	Transpor-tation
Connecticut	4.2	9.2	7.1	1.6	14.9	37.0	11.4%	25.0%	19.2%	4.2%	40.2%
Delaware	0.8	2.0	1.0	3.6	5.2	12.7	6.5%	15.8%	8.0%	28.8%	40.9%
Maine	1.8	1.7	2.7	1.6	7.2	14.9	11.8%	11.6%	17.8%	10.4%	48.4%
Massachusetts	8.1	6.8	12.9	3.3	28.0	59.2	13.7%	11.5%	21.8%	5.6%	47.3%
New Hampshire	1.4	2.4	2.5	0.7	6.7	13.8	10.4%	17.3%	18.4%	5.4%	48.6%
Rhode Island	0.9	2.8	2.1	0.6	3.8	10.2	9.1%	27.3%	20.7%	5.8%	37.1%
Vermont	0.9	0.0	1.3	0.4	2.8	5.5	16.8%	0.1%	24.1%	7.7%	51.3%
New England Total						153.3					

Source: U.S. Department of Energy (EIA)



(e.g., more sea shipping) and electrifying all vehicles using the relatively clean generation mix already operating in New England were never fully evaluated in any of the WEA environmental impact analyses as alternatives to OSW.

In sum, tackling the climate question remains a consideration for the global economy over the foreseeable future. However, there is essentially no evidence that six small, green states drastically recapitalizing electricity generation by prematurely substituting reliable fossil capacity with intermittent OSW will have any positive effect on climate change outcomes. Nor is there any evidence that “leading by example” is securing any further reductions domestically or internationally from entities whose emissions are well in excess of the New England states. Such “leading” is likely, however, to keep New England electricity prices among the highest in the nation, and foist unreasonable cost burdens on ratepayers inconsistent with requirements under obligation to serve statutes.

IV. BOEM Compliance with the National Environmental Policy Act (NEPA)

Since 1970, NEPA has required that federal agencies consider the environmental consequences of their decisions before they act, and prepare a detailed statement of major federal actions significantly affecting the quality of the human environment. The Council on Environmental Quality (CEQ), established by NEPA, has promulgated regulations for environmental review processes with which a federal agency must comply when its involvement in a project is sufficient to constitute a “major federal action.”⁹⁶

Multiple lawsuits against OSW projects have been filed alleging, inter alia, violations of NEPA, with emphasis on improper or inadequate analysis of impacts to endangered species, wildlife, and fisheries. However, on January 20, 2025, President Trump signed Executive Order (E.O.) 14154, *Unleashing American Energy*⁹⁷ directing CEQ to consider rescission of the 2024 amendments to its regulations, issue non-binding guidance to agencies, and form a NEPA task force to coordinate revisions of each federal agency's NEPA implementing regulations.

On Feb. 19, 2025, CEQ issued a prepublication version of an interim final rule and corresponding memorandum to heads of federal departments and agencies that will revoke all of CEQ's NEPA regulations.⁹⁸ Consistent with E.O. 14154, Federal agencies must revise or establish their NEPA implementing procedures to expedite permitting approvals and for consistency with NEPA as amended by the FRA.

The 2023 NEPA amendments and 2025 CEQ memo do not provide a definition of “effects,” nor do they require a cumulative impact analysis. Going forward, lead agencies are authorized to use the 2020 CEQ NEPA Regulations definition of effects (i.e., those “that are reasonably foreseeable and have a reasonably close causal relationship;” a “but for” causal relationship is insufficient to make an agency responsible for a particular effect under NEPA). Future NEPA

⁹⁶ 42 U.S.C. § 4332(C). NEPA defines a “major federal action” is an action that is subject to substantial Federal control and responsibility, which clearly applies to OCS leasing and buildout (42 U.S.C. § 4336e(10)(A)).

⁹⁷ E.O. 14154, *Unleashing American Energy*, 90 Fed. Reg. 8353 (Jan. 29, 2025).

⁹⁸ *Removal of National Environmental Policy Act Implementing Regulations*, Council on Environmental Quality, Interim Final Rule; request for comments, RIN 0331-AA10, February 19, 2025.



documents will not include a cumulative impact analysis, while NEPA documents under development may require a reassessment of effects and removal of the cumulative analysis to be consistent with 2025 CEQ Memo. It remains unclear whether NEPA analyses produced before 2023 will be revised to remove cumulative impact analysis.

This section describes additional potential NEPA process deficiencies in BOEM's OSW Program, subject to revised implementation processes that may be established pursuant to statutory changes and E.O. 14154.

A. BOEM Has Not Prepared a Programmatic EIS for the Biden Administration “30GW” Plan, or the ISO-NE EPCET Report “34 GW” Plan

Generally speaking, agency actions that may be appropriate for a Programmatic EA or EIS are:

- Programs policies, and plans (including resource use plans);
- Regulations;
- National or regional actions;
- Actions that have multiple stages or phases, and are part of an overall plan or program; and
- A group of projects or related types of projects.⁹⁹

OSW Programs involve all the categories of agency action that benefit from a PEIS, and were the basis for the 2007 Programmatic EIS prepared two years after EPACT amendments permitted alternative energy leasing on the OCS. Given the limited data, information, and knowledge available at the time regarding offshore systems, the PEIS specifically noted “[t]his new alternative energy program involves new technologies, many of which are in the early stages of development. Consequently, this EIS has limited the scope of the analysis to technologies and activities likely to be initiated in the foreseeable future—5 to 7 years (2007–2014).¹⁰⁰ In a companion economic study to the PEIS, a “representative project” used in the analysis evaluated a 360 MW project comprised of 100 turbines of 3.6 MW each¹⁰¹ with a total project footprint of approximately 40 square kilometers, and a one-meter (3.3-foot) wide backfilled trench for transmission cable.¹⁰²

The OSW “Program” has radically changed since 2007. In addition to design, construction, and operational changes in wind plant projects, the magnitude of planned installed capacity was “doubled” over the course of the Biden Administration, as the orders and announcements in 2021 make clear. That magnitude has multiplied again, as the reliability-driven 34 GW program

⁹⁹ 40 C.F.R. § 1501.11(a)(2), Programmatic environmental documents and tiering.

¹⁰⁰ *Programmatic Environmental Impact Statement for Alternative Energy Development and Production and Alternate Use of Facilities on the Outer Continental Shelf* (PEIS), OCS EIS/EA MMS 2007-046, 2007, p. 1-2.

¹⁰¹ At the time the 2007 PEIS was prepared, wind turbine technology was described as follows: a typical onshore turbine installed today has a tower height of about 60 to 80 m (200 to 260 ft) and blades about 30 to 40 m (100 to 130 ft) long; most offshore wind turbines are larger in size, and new prototype designs are even bigger. Offshore turbines installed today have power-generating capacities of between 2 and 4 MW, with tower heights greater than 61 m (200 ft) and rotor diameters of 76 to 107 m (250 to 350 ft). A 3.6-MW turbine weighs 290 metric tons (MT) (320 tons) and stands from 126 to 134 m (413–440 ft) tall, approximately the height of a 30-story building. Turbines of up to 5 MW (with rotor diameters of up to 130 m [425 feet]) are being tested. Today's turbines are typically 8-12 MW, with blades up to 100 meters (330 feet) and tower heights reaching 150 meters (~400 feet).

¹⁰² *Assessing the Costs and Benefits of Electricity Generation Using Alternative Energy Resources on the Outer Continental Shelf Final Report*, OCS Study MMS 2007-013, p. 11.

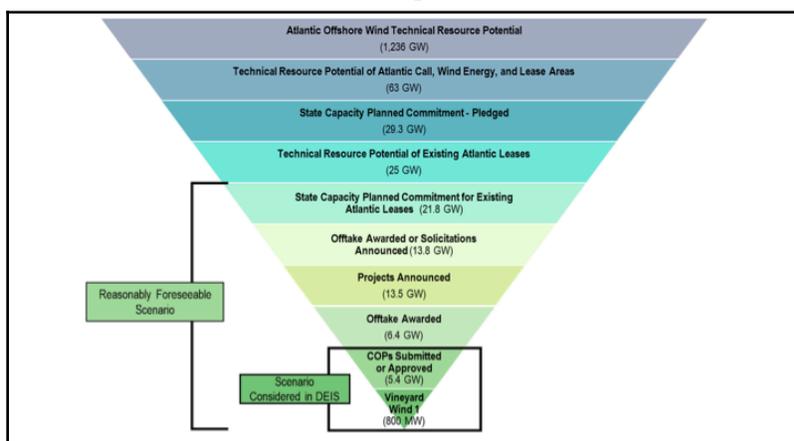


for New England’s OSW overbuild was finally disclosed in the ISO-NE EPCET Report.¹⁰³ Neither program increase has been fully evaluated for adverse impacts.

Leasing, permitting, constructing, and operating these massively expanded OSW installations has enormous consequences for the Outer Continental Shelf asset system and the multiple private and commercial entities that use and appreciate it. A glimpse of just some of the data and information generated when NEPA analysis even approximates RPS overbuild levels can be seen in the Vineyard Wind Supplemental EIS (SEIS).¹⁰⁴

The original Vineyard Draft EIS examined only 5.4 GW of installed capacity (including the 800 MW in the Vineyard Project itself) to determine reasonably foreseeable impacts from the project (Figure 3). In the SEIS, the Reasonably Foreseeable Scenario was expanded to include 21.8 GW in development on Atlantic OCS leases at the time the SEIS was prepared and published (June 2020). This was nine months before the Biden Administration announced its 30 GW Plan in March of 2021, and four years before the EPCET disclosures.

Figure 3. Vineyard Wind 1 Offshore Wind Energy Project—SEIS Overview of the Cumulative Scope for Offshore Wind Activities



Source: Vineyard Wind 1 Offshore Wind Energy Project—SEIS

As impact results summarized in Table 10 show, the Vineyard Wind SEIS clarified for the first time the full import of cumulative effects when OSW installation is examined at the scale contemplated. Multiple categories of affected resources suffer *major* adverse impacts, including OCS uses such as fishing and national security that trigger requirements and prohibitions in the OCSLA. Notably, NEPA itself is largely a procedural statute, and a determination of adverse impacts does not necessarily invalidate a Proposed Action. However, such impacts can and do provide evidence that other substantive statutory provisions are being violated, such as those in OCSLA that require or prohibit certain types of OCS use.

Although the Vineyard Wind I SEIS and ROD are more informative than previously segmented analyses, they are no substitute for a full Programmatic EIS.

¹⁰³ *Economic Planning for the Clean Energy Transition: Illuminating the Challenges of Tomorrow’s Grid (EPCET)*, ISO New England Inc., October 24, 2025.

¹⁰⁴ *Vineyard Wind 1 Offshore Wind Energy Project, Supplement to the Draft Environmental Impact Statement*, OCS EIS/EA BOEM 2020-025. June, 2020.



B. Segmentation

Segmentation occurs when a federal action (a policy, program, plan, or project) is divided into smaller, separate components to disguise or minimize the significance of the total action.

The BOEM OSW leasing process as designed gradually unfolds over four phases:

- Planning and Analysis
- Leasing
- Site Assessment
- Construction and Operations

This “phasing” carries the hallmarks of segmentation in multiple ways. First, BOEM carves out analysis of WEA designations as if they have nothing to do with building turbines or making electricity. Second, once the WEA foot is in the door (relying on the limited assessment of an EA), each lease in a WEA is separately evaluated even though the turbines and transmission infrastructure will be using proximate and overlapping land, ocean, airspace, and other geocapital asset locations and capacity. Third, EISs are prepared for separated “phases” in the leasing process, often with the most serious and harmful impacts not disclosed until the construction permits are under consideration (see Vineyard Wind I SEIS/ROD noted above). Overall, this structured segment-by-segment process avoids and prevents any holistic review or public disclosures that would reveal both adverse impacts and inadequacies in actual electricity produced by the sum of OSW projects.

Finally, the analyses as currently designed and executed separate analysis of offshore turbine and transmission buildout from the onshore transmission upgrades, battery storage, and port facilities without which the offshore turbines lack independent utility.¹⁰⁵ The segmentation is

Table 10. Major Impacts from Vineyard 1 SEIS Foreseeable 22 GW Installed Atlantic Capacity by Resource Affected

Resource Affected	Proposed Action
Navigation and Vessel Traffic: Direct and Indirect Impacts	Negligible to Moderate
Navigation and Vessel Traffic: Cumulative Impacts	Major
Commercial Fisheries and For-Hire Recreational Fishing: Direct and Indirect Impacts	Moderate
Commercial Fisheries and For-Hire Recreational Fishing: Cumulative Impacts	Major
Other Uses: Direct and Indirect Impacts	- Major impacts on scientific research and surveys - Minor to Moderate for military and national security uses - Negligible to Minor impacts for aviation and air traffic, cables and pipelines, and radar systems
Other Uses: Cumulative Impacts	- Major for military and national security uses - Major scientific research and surveys - Negligible to Minor for aviation and air traffic, cable and pipelines, and radar systems

Source: ISO-NE Resource Mix

¹⁰⁵ Independent utility is determined by whether a project segment had an independent function, even if a no other segment of a project was constructed. A project is considered to have independent utility if it would be constructed absent the construction of other projects in the project area. Because the overall BOEM Program is to build sufficient OSW to reliably supply the ISO-NE bulk grid with electricity meeting state RPSs, impacts of full system of overbuild (including 34,000 MW of OSW, 25,000 MW of battery storage, and transmission upgrades) has to be disclosed, and cannot be broken out in to incremental segments.



illustrated by comparing port facility buildout statements in the Revolution Wind Project FEIS and Vineyard Wind I SEIS.

The Revolution FEIS:

The Project would use a combination of existing port facilities located in Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Virginia, and Maryland for offshore construction, assembly, and fabrication, and/or crew transfer and logistics support. ***Modifications of these ports are specifically not included in the Proposed Action because no expansions or modifications to the ports are needed to support vessels, helicopters, equipment, or supplies associated with Project activities*** (emphasis added).¹⁰⁶

Confirming the need to assess the full programmatic requirements of New England OSW buildout beyond each segmented lease area, Vineyard Wind I SEIS, in contrast, actually acknowledged and assessed port utilization activity as an integrated activity of OSW development and the unavoidable adverse impacts resulting:

Port utilization: Expansion: Increases in global shipping traffic and expected increases in port activity associated with the development of future offshore wind projects would likely require port modifications and expansions at ports along the U.S. East Coast. The Massachusetts Clean Energy Center identified 18 waterfront sites in Massachusetts that could be available and suitable for use by the offshore wind industry (MassCEC 2017a, b). Orsted has committed to improvements to Rhode Island ports in support of the Revolution Wind Project (Kuffner 2018). These port modification and expansion projects could affect historic structures and/or archaeological sites within or near port facilities. Future channel deepening by dredging that may be required to accommodate larger vessels required to carry WTG components and/or increased vessel traffic associated with future offshore wind projects could affect marine cultural resources in or near ports. Due to state and federal requirements to identify and assess impacts on cultural resources as part of NEPA and the NHPA and the requirements to avoid, minimize, and/or mitigate adverse impacts on cultural resources, ***these impacts would be long-term, adverse, and isolated to a limited number of cultural resources that cannot be avoided, or that were previously undocumented*** (emphasis added).¹⁰⁷

All four leasing process “phases” primarily address turbine installation activity inside the offshore leasehold areas, with some review of attendant off- and onshore transmission system development. BOEM’s review of planning, leasing, site assessment, and even construction activities related to turbine development did not analyze in any useful way the full picture on port facilities necessary to construct and maintain the turbine plant.

Moreover, although the EPCET Report concluded that a reliable, decarbonized ISO-NE bulk grid would require 25 GW of battery storage facilities operating in concert with OSW and other renewable electricity generators, there is no mention of the direct or cumulative impacts of

¹⁰⁶ *Revolution Wind Farm and Revolution Wind Export Cable Project Environmental Impact Statement* (Revolution FEIS), July 2023, p. 2-21.

¹⁰⁷ *Vineyard Wind I SEIS*, p. 3-75.



constructing or connecting such facilities to the OSW facilities or the grid as part of the segmented NEPA analysis for RI/MA WEA leases.

C. Direct Vice Cumulative Impact Identification and Analysis

Although requirements for cumulative impacts analysis have changed, full understanding and disclosure of the direct impacts of OSW buildout remain under NEPA. Whether driven by a Biden “30 GW Plan,” or the ISO-NE EPCET Report “34 GW Plan,” analyzing lease-by-lease segments of OSW capacity installation masks the direct impacts of the full RPS-driven overbuild needed for reliable bulk transmission capacity, and misrepresents whether and how the full installation will comply with OCS leasing requirements/prohibitions in the OCSLA statute.¹⁰⁸

A full assessment of total direct impacts from all planned or necessary OSW overbuild is also needed to determine whether OSW leases comply with Section 3 of the OCSLA which expressly prohibits adverse effects on “*the right to navigation and fishing*” on the OCS (emphasis added).¹⁰⁹

V. National Security and Encroachment Impacts from OSW

The primary mission of the Department of Defense (DoD) is to defend the United States and protect its interests abroad. Military operations on the OCS encompass a broad range of activities across air, space, sea, and land domains. These operations are vital for national defense, strategic deterrence, force projection, intelligence gathering, and the protection of key maritime and economic interests. The integration of these domains allows military forces to respond effectively to threats, conduct reconnaissance, and maintain global military presence.

To effectively carry out this mission, DoD must be able to operate in two major mission components:

- Active Operations that can include surveillance, reconnaissance, intelligence collection, force protection and interdiction from bases or deployed units
- Testing and Training that can include evaluation and testing of weapons systems, integration of space and cyber capabilities, and continuation-training of combat units.

Major New England military bases include the Naval Submarine Base in New London, Joint Base Cape Cod, and several technical centers and National Guard installations. As [Figure 4](#) illustrates, the bases and facilities in New England are part of major operational and testing areas that overlap with WEAs in off the coasts of Rhode Island and Massachusetts, including the Narragansett Bay Operating Area and the Naval Undersea Warfare Newport Testing Area.

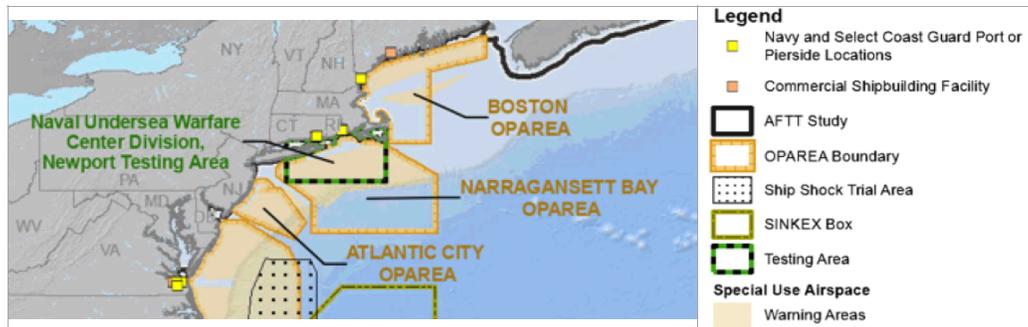
Joint Base Cape Cod is also the site of a PAVE Phased Array Warning Systems (PAVE PAWS), a key component of the Solid State Phased Array Radar System (SSPARS) that provides early warning of ballistic missile threats to the United States from attacks in the Atlantic Ocean and over the arctic pole (Figure 5).

¹⁰⁸ 43 U.S. Code § 1337(p)(4).

¹⁰⁹ Public Law 212, Chapter 345, Section 3(b); 67 Stat. 462; codified at 43 U.S. Code § 1332(2).



Figure 4. Atlantic Fleet New England Training and Testing Study Area



Source: Atlantic Fleet Training and Testing Draft Supplemental EIS/OEIS (2024)

A. Mission Impacts From Wind Energy Encroachment

The Department of Defense must address a plethora of encroachment effects on mission-critical assets and operations from wind energy, both on- and offshore. These include:

Airspace:

- Turbines create avoidance areas and require units to abandon the lower altitudes of military training routes (MTR) and special use airspace. Turbine heights can reach well over 800 feet above ground level (AGL) and wind farms can cover thousands of surface acres, requiring pilots to traverse the above the lower limits of the airspace.
- Turbines impact airborne radar by causing false returns or “clutter” (via Doppler shift) which could be an impact during training missions; this Doppler affect causes significant concerns for the DoD test community, as validating airborne radar system in a cluttered environment is virtually impossible.
- Securing clutter-free airborne radar test areas is a major factor in wind energy factory siting
- Turbines can affect weapons and communications systems prone to electromagnetic interference.
- Large turbine arrays could impact helicopter routes and other non-published training airspace, while loss of the lower altitudes over thousands of land and sea acres may require aircraft to transition at a higher altitude, impacting low level training.
- The larger turbine arrays with taller turbines can impact low-level night vision training

Ground-based Radars:

- Radar receivers experience saturation caused by the large radar cross-section of the reflections from turbines, as well as other processing functions can exhibit nonlinear behavior.
 - These effects reduce, or even eliminate, the ability of the radar to detect targets near and within the wind factory area and negatively impact test and training.
- Doppler shift caused by the turning blades. The velocity of the windmill turbine blade is dependent on the distance from the center of the turbine hub, with an increasing shift moving from the center to the tip of the blades. Thus, the rotating blades produce a



continuous spectrum of frequency shift with much of the spectrum falling within the Doppler limits that air surveillance radars are optimized to detect.

- Range tracking instrumentation can lose lock on airborne test items when turbines provide a larger, more attractive target than the test item. This could have catastrophic consequences on test integrity and safety. Securing clutter-free airborne radar test areas.
- In most cases, wind turbines must be in the line of sight of a radar to impact it. However, there are situations in which turbines can cause problems even if they are out of line of sight. Instrumentation radars and radar cross section measurement systems may be particularly prone to interference. Mitigating measures, such as receiver modifications or limiting coverage areas, could degrade test and training capabilities.

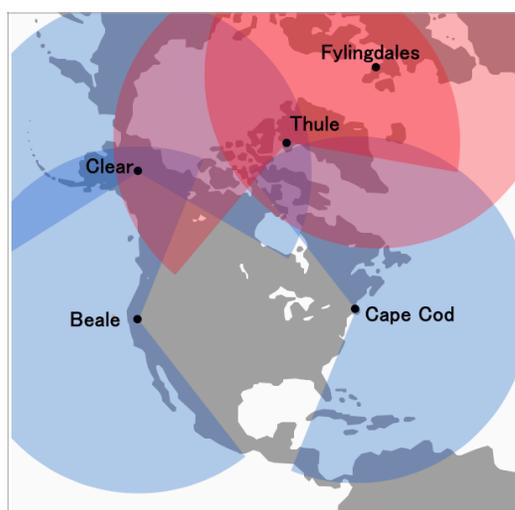
Seaspace:

- Offshore wind energy factories in or proximate to DoD offshore ranges can cause Anti-access/Area Denial (A2/AD) effects to training and testing operations.
- Turbine installation further impact sea lanes, submarine transit lanes, coastal test and training ranges, and may even ensonate the surrounding sea area and compromise sonar test and training.

Habitat and species:

- Wind energy factories near DOD facilities and ranges can result in direct mortality to mammals, birds and bats, leading to avoidance behavior, fragmented habitat, disrupted seasonal migration patterns, and destruction of occupied or unoccupied habitat for species.
 - Such impacts on listed, candidate, or otherwise sensitive species or habitat also found on DoD installations and ranges, cause significant second-tier effects on DoD by increasing over time ESA-related restrictions on DoD operations, including adverse effects from wind factory mitigation measures.

Figure 5. Solid State Phased Array Radar System (including Cape Code PAVE PAWS Early Warning Radar)



- Blue Areas: Radar coverage by PAVE Phased Array Warning System (PAVE PAWS)
- Red Areas: Radar coverage by Ballistic Missile Early Warning System (BMEWS)

B. Encroachment

Economic development projects that require shared or exclusive use of air, space, water, and land assets effectively zoned for military missions are considered an operational risk called “encroachment.” In the national security and defense arena, encroachment is defined primarily as any non-DOD activity, whether planned or executed, which inhibits, curtails, or possesses the



potential to impede the performance of DOD activities that require “irreplaceable training and testing ranges, operating areas, and other mission readiness assets.”¹¹⁰

For decades, encroachment has also included actions, that while potentially compatible with DOD uses under some form of mitigation or adaptation, require work arounds or mission adjustments that unnecessarily shift the burden and costs of operational changes to the military mission, creating mission impairment and the unintended and unauthorized subsidization of the incompatible action.¹¹¹

Starting in 1988 and continuing through to 2005, the DOD closed installations to free up infrastructure maintenance funds to pay for modernization, readiness, and quality of life needs. Over the course of five Base Realignment and Closure (BRAC) rounds, DOD closed over 100 major bases whose physical infrastructure (buildings, runways, docks, etc.) was deemed excess to requirements and expensive to maintain. However, closing bases also relinquished the air, space, water, and land capacities comprising the geocapital infrastructure also needed for mission operation. Unlike equipment and buildings, geocapital infrastructure cannot be packed up, moved, or rebuilt when a mission is realigned to a new location.

In the wake of base closures and consolidations, coupled with more and more economic development competing for limited geocapital infrastructure use, mission-critical requirements for surface and subsurface water, airspace, and spectrum frequencies are harder to meet. At the same time, existing supplies risk encroachment from use competitors such as OSW that undermine the secure, unimpeded, and uninterrupted access needed for operations.

C. Military Aviation and Installation Assurance Siting Clearinghouse (Clearinghouse)

Established by the Fiscal Year (FY) 2011 National Defense Authorization Act (NDAA), the DOD Siting Clearinghouse (the Clearinghouse) was created to provide a timely, transparent, and repeatable process to evaluate potential impacts and mitigation options related to alternative energy project development.¹¹² The Clearinghouse works with private industry and developers, state, local, and Tribal governments, regulators, and non-governmental organizations to minimize adverse impacts to military training, testing, and operations from alternative energy production. The Clearinghouse mission evaluation process for energy projects was revised by Congress in the Fiscal Year 2018 NDAA in efforts to strengthen Department efforts.¹¹³

¹¹⁰ [U.S. Department of Defense Readiness and Environmental Protection Integration Program \(REPI\)](#)

¹¹¹ “Whenever possible, the services work around [encroachment] issues by modifying the timing, tempo, and location of training, as well as the equipment used. However, defense officials have expressed concern that these workarounds are becoming increasingly difficult and costly and that they compromise the realism essential to effective training.” *Military Training: DOD Lacks a Comprehensive Plan to Manage Encroachment on Training Ranges*, General Accountability Office Report, GAO-02-614, June 2002.

¹¹² In January 2011, Congress directed the establishment of the DOD Siting Clearinghouse in Section 358 of the Ike Skelton National Defense Authorization Act for Fiscal Year 2011, Public Law 111-383. In Section 183a of the National Defense Authorization Act for Fiscal Year 2018, Public Law 115-91, the Clearinghouse was renamed the Military Aviation and Installation Assurance Siting Clearinghouse, and its authority was codified in Chapter 7 of Title 10, 10 U.S.C. 183a.

¹¹³ Section 311 of Public Law 115-91.



The Clearinghouse consists of three integrated focus areas: the mission compatibility evaluation process; the active development of technical solutions; and stakeholder engagement with state, local, and Tribal governments. The Clearinghouse has a structured formal review process to conduct a mission compatibility evaluation of proposed wind projects submitted to the FAA. The DOD Siting Clearinghouse established an informal review process and encourages all developers to request a preliminary determination prior to submitting an application with the FAA.¹¹⁴

According to its website, if siting concerns are identified, the Clearinghouse works with industry to mitigate the issues, and if possible, overcoming risks to national security while promoting compatible domestic energy development. Currently, the Clearinghouse has 126 active Mitigation Agreements in place, only one of which is for OSW —The Vineyard Wind I Project (Vineyard Project).^{115 116}

As originally proposed to the DoD and Federal Aviation Administration (FAA), the Vineyard Project's spinning turbine blades would conflict with the North American Aerospace Defense Command's (NORAD) operation of the Falmouth, Massachusetts Airport Surveillance Radar (ASR-8).¹¹⁷ To de-conflict national security, National Airspace System protection, and military readiness requirements from electricity production activities, the parties agreed to limitations on Vineyard Project operations and compensation, including:

- A limit of 62 project wind turbines and one (1) substation
- A limit on project structures to a maximum height of 837 feet above sea level (ASL).
- A construction area restricted to specific geographic coordinates incorporated in the agreement
- A Vineyard Project voluntary contribution of funds to DoD of eighty thousand dollars (\$80,000.00) to offset the cost of measures undertaken by DoD to mitigate adverse impacts of this Project or other energy projects, or to conduct studies of potential measures to mitigate such impacts.¹¹⁸
- Immediate curtailment of Vineyard Project wind turbine operations for national security or defense purposes upon request by NORAD
- Requirements for protection of national defense capabilities and military operations from compromise and exploitation that may occur due to an activity under foreign control operating in the vicinity of national defense capabilities and military operations
 - This includes military installations, research, development, test and evaluation activities, and military readiness activities
 - Protection requirements include advance written notice from Vineyard Project owners to the Department of the Air Force (DAF) of the following:
 - Names of entities and persons having a direct ownership interest in the Project.

¹¹⁴ See website: [DOD Military Aviation and Installation Assurance Siting Clearinghouse](#)

¹¹⁵ [Clearinghouse Mitigation Agreement Map](#)

¹¹⁶ Lease No. OCS-A 0105.

¹¹⁷ [Agreement Among the Department of Defense \(DoD\), the Department of the Air Force \(DAF\), and Vineyard Wind 1 LLC Addressing the Vineyard Wind 1 Offshore Wind Energy Project Near Martha's Vineyard, Massachusetts](#), March 4, 2022.

¹¹⁸ Provisions of the agreement, including the voluntary contribution payments, are specifically authorized by 10 U.S.C. 183a.

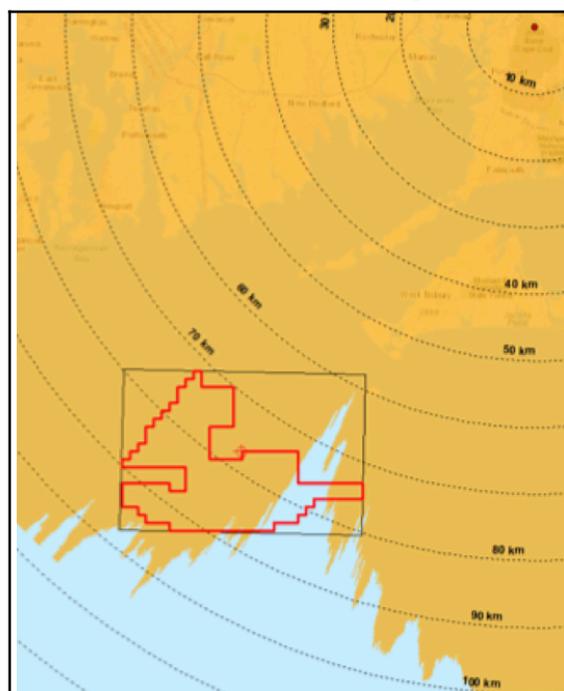


- Names of the material vendors, entities, and persons with which Project Owner will potentially execute contracts to perform construction, supply turbines, or conduct operations activities at the location of the Project.
- Names of any foreign entities and persons being allowed to access the wind turbine structures and associated data systems.¹¹⁹

Westlope Consulting conducted an analysis of two other RI/MA WEA leases—the Revolution and SouthCoast Wind Projects—and identified adverse impacts to national security and aviation operations from radar interference in both cases. Neither project includes a Clearinghouse Agreement as to turbine height limits, placement requirements, or operational mitigation such as curtailment that could be enforced to prevent risk to national security operations.

The Revolution Project study conducted multiple analysis on various forms of radar, using DoD’s Preliminary Screening Tool (PST) and found that wind turbines in the majority of the study area will be within line-of-sight of the Cape Cod PAVE PAWS EWR and could have a significant impact on operations at a blade-tip height of 873 feet AGL. [Figure 6](#) depicts the Revolution Project boundary (in red) overlaid on areas where an 873 foot high blade would be in the line of sight of the EWR radar (colored in yellow).¹²⁰ In addition, the study found that blades of 873 feet AGL and located variously in the northeastern two-thirds, eastern half, and the entire project area interfere with commercial aviation Air Surveillance Radars (Falmouth ASR-8, Nantucket ASR-9, and Providence ASR-9, respectively).¹²¹

Figure 6. Revolution Wind Project Line of Sight Analysis Results for the Cape Cod EWR



Source: Westlope Consulting

The SouthCoast Project study (named Mayflower at the time) concluded that turbines in a section of the planned project were within Cape Cod Early Warning Radar line-of-sight and rotating blades could have significant adverse impacts at heights of 808 feet or higher ([Figure 7](#)).¹²² The study also concluded SouthCoast, like Revolution, would interfere with Air Route

¹¹⁹ *Agreement Among the Department of Defense (DoD), the Department of the Air Force (DAF), and Vineyard Wind 1 LLC*, pp. 3-7.

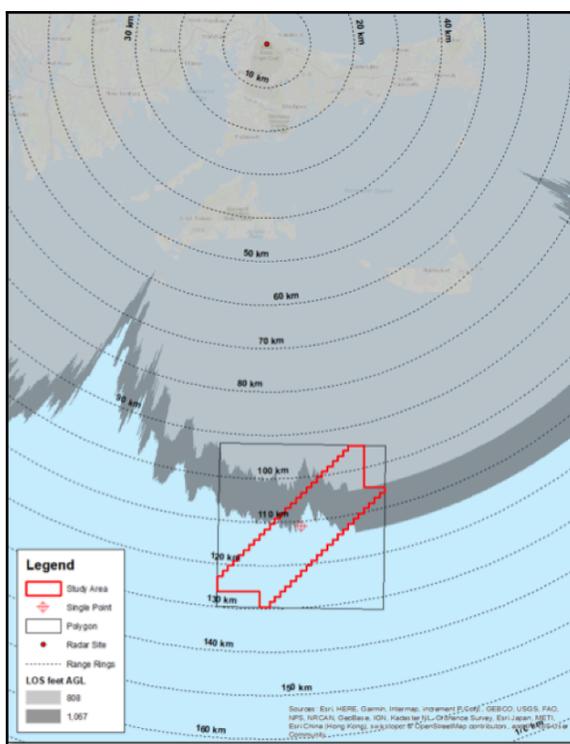
¹²⁰ Revolution Wind Project, Radar and Navigational Aid Screening Study, September 3, 2021, p. 13.

¹²¹ *Id.*, p. 34.

¹²² MAYFLOWER WIND OFFSHORE WIND PROJECT RADAR AND NAVIGATIONAL AID SCREENING STUDY OCTOBER 15, 2020, published in revised form February 2021, p. 27.



Figure 7. SouthCoast Wind Line of Sight Analysis Results for the Cape Cod EWR



Source: Westlope Consulting

Surveillance Radar (ARSR) and Airport Surveillance Radar (ASR) at Falmouth and Nantucket (Falmouth also being a subject of the Clearinghouse agreement for Vineyard I discussed above).

Nonetheless, on January 17, 2025, BOEM announced the approval of the SouthCoast Wind Project Construction and Operations Plan (COP) after signing the ROD on December 20, 2024.¹²³ Although the Westlope expert analysis revealed radar interference was likely, BOEM apparently approved the COP before any Clearinghouse agreement with DOD was reached. The ROD acknowledged the project would create “minor impacts for aviation and air traffic, radar systems, and most military and national security uses”¹²⁴ and required the SouthCoast lessee to mitigate risks to Department of the Navy (DON) operations from acoustic monitoring devices, and to execute a mitigation agreement with the DoD/NORAD for Radar Adverse Impact Management (RAM).¹²⁵

As discussed below, BOEM and DOD still do not have an adequate analysis or evaluation of the cumulative impacts to national security activities and the DOD mission from operating the nearly 12,000 MW of OSW capacity currently operating, under development, or planned for the RI/MA WEAs. This creates the very real possibility that impacts to DOD, including the costs of technology upgrades and operational workarounds, have been misrepresented.

D. 2024 Memorandum of Understanding between the Department of Defense and the Department of the Interior Regarding Renewable Energy Development on the Outer Continental Shelf

As part of the Biden-Harris Administration's efforts to expand offshore wind opportunities and advance an all-of-government approach to address the climate change, the BOEM entered into a Memorandum of Understanding (MOU) with DOD to support the coordinated development

¹²³ SouthCoast Wind Project Construction and Operations Plan Record of Decision, December 20, 2024.

¹²⁴ SouthCoast Wind Project Construction and Operations Plan Record of Decision, December 20, 2024, p. 22.

¹²⁵ Notably, the ROD requires a “contribution” of \$80,000 to NORAD toward the execution of the RAM Agreement, much like the Vineyard I arrangement. However, an agreement similar to Vineyard I seems to have been pushed to a future date in order to get the COP approved before the end of the Biden Administration.



of wind energy generation on the OCS on Oct. 29, 2024.¹²⁶ The MOU was intended to “further institutionalize the deep collaboration between BOEM and DOD that is ensuring that offshore wind lease areas and project plans strengthen the nation's energy security in ways that are compatible with military operations.”¹²⁷

The MOU is premised on several aspects of the Biden 30 GW OSW Program including:

- Federal deferral to state requirements for OSW leasing on the OCS as part of state energy portfolio goals (RPSs);
- DOI, DOE, and DOC joint support for 30 GW of fixed and 15 GW of floating OSW infrastructure by 2035; and
- OSW as a driver of new jobs and economic opportunity, and new supply chains.¹²⁸

In recognition of national security requirements, the MOU acknowledges OSW development may include locations in at-sea warning areas used by DoD for at-sea military readiness activities, and access to unobstructed air, shore, and sea space is necessary to support military testing, training, and operations. It notes that such at-sea and sea-to-shore activities are supported by specialized shore infrastructure, built up over decades of investment, with a skilled local workforce, and access to these areas is vital to continuity of national defense operations and national security objectives.

As written, the MOU process first requires DOD recognize OSW as a key element of national renewable energy generation strategies. Second, as part of delineating Wind Energy Areas (WEAs) BOEM agrees to provide DOD advance notice of leasing locations, potential scope and size, and infrastructure types under consideration for Call Areas through the Clearinghouse (discussed above). Then DOD is required to perform a mission compatibility assessment within 60 calendar days. Its response must identify, first, areas that are expected to be incompatible for energy leasing and that, therefore, may require deferral from leasing; areas that are potentially compatible with mitigation measures applied; or areas that are compatible with energy development. Each determination requires supporting rationale.¹²⁹

On its face, the MOU appears inconsistent with OCSLA procedures for lease area restriction under the authority of the Secretary of Defense. The OCSLA statute does not require DOD to secure the approval or even concurrence of DOI in designating a restricted area, nor does the law use the term “lease deferral.”¹³⁰

The OCSLA provides that as long as a restricted designation remains in effect, Secretary of Defense approval is required for any exploration or operations to be conducted; additionally, if the restricted area contains previously issued leases where operations are suspended due to the

¹²⁶ *Memorandum of Understanding between the Department of Defense and the Department of Interior Regarding Renewable Energy Development on the Outer Continental Shelf (OCS)*, October 29, 2024. The DOD describes the MOU as expanding on and complementing the July 1983 “Memorandum of Agreement Between the Department of Defense and the Department of the Interior on Mutual Concerns on the Outer Continental Shelf” that continues to provide a framework for coordination between the Parties regarding energy development on the OCS.

¹²⁷ *Department of Defense Press Release*, October 29, 2024.

¹²⁸ MOU Renewable Energy Development on the OCS, pp. 1-2.

¹²⁹ *Id.*, pp. 1-4.

¹³⁰ 43 U.S.C. § 1341(d).



restrictions, rentals, royalty, and other payments are also suspended and the lease term is extended by the length of the suspension period.¹³¹

E. Additional Radar Issues

The near doubling of offshore turbine heights are creating radar clutter (returns or echoes other than intended targets) that increase false alarms detection rates, causing systems to raise the threshold considered a detection, and potentially missing actual targets as a result. This interference goes beyond air traffic control and flight safety to weather forecasting and warnings, coastal sea-surface and maritime surveillance, and oceanographic measurements.

Although potential adverse effects from OSW projects are being addressed on a project-by-project basis such as in the Vineyard I Agreement, in fact, there is currently no assessment of the cumulative impacts to aviation and other radar, surveillance, and tracking systems, or completed studies on the effects to national security activities, if the RI/MA WEAs are fully built out under existing leases.

The lack of adequate analysis is confirmed by the recent reporting of the Wind Turbine Radar Interference Mitigation Working Group (WTRIM WG). WTRIM WG was established in 2014 under a Memorandum of Understanding among the Departments of Defense and Energy, the FAA, the National Oceanic and Atmospheric Administration (NOAA), and BOEM. The working group coordinates an interagency Research and Development Plan along with funding commitments of for technology development, studies, field tests, and other expenditures. Effectively, under WTRIM WG the current public users of critical physical and geocapital infrastructure needed for national security and the aviation and maritime industries underwrite and subsidize technology and operational systems that allow them to cede their operational capacity to the OSW industry.¹³²

In its Annual Progress Update for 2024, WTRIM WG claims that “significant advancements were made in evaluation and mitigation of impacts of electricity-generating wind energy installations on sensitive radar systems, primarily through various collaborative projects funded by the WTRIM Working Group agencies.” It also details ongoing cumulative impact analyses and wind impact assessments focused on understanding the spatial overlap of wind energy potential with radar line-of-sight, and that “notable projects began in 2024.”¹³³ Some of the notable projects and the funding organizations include:

- *Cumulative Impact Analysis — DOE*
 - High-level analysis to quantify the amount of wind energy potential that is spatially coincident with defense and weather radar line-of-sight.
 - Understand the potential for radar line-of-sight to be blocked by future wind energy development under a suite of scenarios, including data sources and methods examination
 - Status: Massachusetts Institute of Technology’s Lincoln Laboratory (MIT LL) and the National Renewable Energy Laboratory (NREL) working to understand the potential

¹³¹ *Id.*

¹³² *Memorandum of Agreement, Establishment of the Wind Turbine Radar Interference Mitigation Working Group*, January 4, 2023.

¹³³ WTRIM WG *Annual Progress Update for 2024*, p.2.



- wind growth scenarios that were used to assess the scale of likely impact of wind turbines to Air Route Surveillance Radar (ARSR-4) systems and to compare against the latest North American Aerospace Defense Command (NORAD) Areas-of-Concern (AOC) list.
- Identified “a few new radar sites” that will be significantly impacted.
 - *Wind Impact Assessment to Radar (WJAR) — Department of Defense (DOD)*
 - Understanding and mitigating potential offshore wind interference effects to U.S. Navy and USCG radar systems from “emerging” offshore wind development in coastal United States waters will impact DOD and USCG operating areas
 - Conduct a baseline assessment of impacts to currently fielded airborne and shipboard systems from offshore wind on a scale operating in other parts of the world and “anticipated” for the U.S. east coast.
 - Status: In 2024 the WJAR team held a multi-organization stakeholder kickoff meeting to identify highest-priority mobile USN and USCG radar systems and to establish technical and operational points of contact.
 - *Impacts of Wind Turbines on Airborne Surface Surveillance Radar Systems — DOD*
 - Understand the impacts and identify mitigations of wind turbines to airborne surface surveillance radars critical for safe range clearance of offshore weapons test areas.
 - Status: In 2024, the project team completed the Phase I modeling, simulation, and assessment of the operational performance of radars of interest at detecting sea vessels within proximity of wind turbines of various sizes and placements amongst various sea states. Phase II will focus on refining the project area and developing mitigation solutions that overcome predicted limitations to radar performance to gain and maintain awareness of surface vessel traffic as well as ensure safe operations in the test area.
 - *Underwater Acoustic Impacts of Offshore Wind — DOD*
 - This project “seeks” evaluate impacts of wind turbine-generated underwater acoustic noise on DOD assets, operations, and capabilities.
 - Status: In 2024, the team mapped locations and characteristics of current and planned turbine arrays, along with noise characteristics and noise fields of OSW arrays relative to military operating areas. Impact examination is “continuing.”
 - *Implementation of In-phase & Quadrature (IQ) Range-azimuth Gating (RAG) Map Algorithm — DOE Department of Energy (DOD)*
 - Apply FAA study results to modify algorithms in the Airport Surveillance Radar Model 11’s (ASR-11) Constant False Alarm Rate (CFAR) whose adaptive thresholds were not designed to work in the presence of wind turbine clutter.
 - Status: In 2024, the FAA conducted a test event gauging the performance of the algorithm in the presence of wind turbines; future work will include a full performance analysis to adjust the algorithm and to adjust other radar functionality to make better use of the IQ RAG Map.
 - *Wind Turbine Interference Mitigation via Adaptive Nulling Feasibility Study — DOD*
 - Analyze potential and value of replacing Air Route Surveillance Radar Model 4 (ARSR- 4) components to improve the ability of the radar to detect targets above wind turbines.



- Status: 2024 actions included general project planning, identifying, and securing appropriate datasets, developing test plan and supporting capabilities to demonstrate fixed beamforming.
- *Wind Turbine Interference Mitigation Modeling & Analysis – Phase II — DOD*
 - Quantitative impact assessment of wind turbines on ground-based radars and investigation of potential mitigation approaches that leverage machine learning or other novel signal processing approaches.
 - Status: In 2024, the project team completed “initial” collection of a wind turbine computer-aided design model, ASR-11 parameters & signal processing chain, and typical wind turbine installation parameters. The team also developed a high-fidelity in-motion radar scattering model of a wind turbine at selected frequencies, aspect models, and rotation rates. Finally, a high-fidelity simulation environment was developed that is capable of emulating ASR-11 data containing radar returns from clutter, thermal noise, targets, and wind turbines.¹³⁴

Notably, WTRIM WG does not include or disclose the taxpayer funds expended by member Departments and Agencies to carry out the goals and projects described in the Annual Progress Update for 2024. There is also no indication of how much followup spending will be required for new equipment or other activities that could be requirement to implement WTRIM WG findings or results to accommodate OSW in areas where irreplaceable geocapital infrastructure is needed for national security, aviation, and other radar dependent activities like search and rescue.

VI. Navigation and Fishing

As previously noted, when the OCSLA was enacted in 1953, it established a clear, prescriptive declaration of policy for any energy development on the OCS. In what is now codified at 43 U.S.C. § 1332(2), the statute explicitly provides that the entire subchapter “shall be construed in such a manner that the character of waters above the out Continental Shelf as high seas and the right to navigation and fishing therein *shall not be affected*” (emphasis added).

Yet, the Vineyard I SEIS, which evaluated approximately 22,000 MW of OSW installed capacity, states “[o]verall, future offshore wind projects would have long-term, adverse impacts on commercial and for-hire fisheries due to the reduced area available for fishing and the navigation hazards to fishing vessels, especially larger commercial fishing vessels.”¹³⁵ More specifically, the SEIS confirms that “[t]he presence of structures can lead to impacts on commercial fisheries and for-hire recreational fishing through allisions, entanglement or gear loss/damage, fish aggregation, habitat conversion, navigation hazards (including transmission cable infrastructure), and space use conflicts.”¹³⁶ The Revolution FEIS also concluded that project’s Proposed Action would have major direct and cumulative adverse impacts to commercial fisheries and for-hire recreational fishing.¹³⁷

¹³⁴ Id, pp. 4-6.

¹³⁵ Vineyard I SEIS, p. 3-97.

¹³⁶ Id, p. 3-95.

¹³⁷ Revolution FEIS, p. ES-10.



In spite of what could be seen as an “express statutory check”¹³⁸ in OCSLA § 1332(2), the Department of Interior, through its Solicitor’s Office, appears to consign or subsume the prohibition on affecting high seas fishing and navigation into its evaluation of subsection 8(p)(4) (I) which requires the Secretary to prevent “interference with reasonable uses.” In a 2021 memorandum to the Secretary, the Solicitor’s Office interpreted the reasonable use provision—and seemingly the entirety of subsection 8(p)(4)—as providing the Secretary with “wide discretion to determine the appropriate balance between two or more goals” in [§ 8(p)(4)] that conflict or are otherwise in tension.¹³⁹

Apart from the accuracy of this interpretation, the express statutory check on affecting fishing and navigation in § 1332(2) could be more properly viewed as applying to OCSLA § 8(p)(4)(C), which requires the Secretary to carry out OCSLA leasing activity in a manner that assures the “prevention of waste.” Although the phrase sounds like it refers to management of decommissioned equipment and potentially harmful residuals as a function of environmental protection,¹⁴⁰ OCSLA’s use of “waste” refers to economic loss or damage resulting from what is defined as the subtractive use of shared assets.¹⁴¹

Table 10. The Value of Rhode Island’s “Blue Economy”

Sector	Value (millions)	Jobs
Fisheries	\$1,515	2,965
Defense	\$3,160	16,011
Tourism and Recreation	\$4,300	83,913
Marine Trades	\$1,450	13,337
Ports and Shipping	\$727	2,000
Aquaculture	\$6	194
Offshore Wind	TBD	300
Totals	\$11,158	118,720

Source: University of Rhode Island, Value of Rhode Island’s Blue Economy, March 2020

Such subtractive, or negative-sum, uses of common property are those that produce fewer gains to the user than losses in welfare or net utility to other common owners or users. Arguably, the confirmed “adverse impacts” and thus losses generated by subtracting ocean use from fishing and navigation activity in order to produce intermittent electricity supply is a wasting of ocean assets that currently bring in billions of dollars in economic return.

¹³⁸ The phrase was used in the Supreme Court case *Watt v. Energy Action Education Foundation*, 454 U.S. 151 (1981), which addresses Secretary of Interior discretionary powers in conducting OSW bidding solicitations; the case is relied on by the DOI Solicitor’s Office in its memorandum opinion concluding that the Secretary retained authority to “balance” among OCSLA requirements in approving OSW development.

¹³⁹ U.S. Department of Interior, Office of the Solicitor Memorandum to the Secretary, *Secretary’s Duties under Subsection 8(p)(4) of the Outer Continental Shelf Lands Act When Authorizing Activities on the Outer Continental Shelf*, M-37067, April 9, 2021.

¹⁴⁰ For example, in the federal case filed by a coalition of fishing industry plaintiffs (RESPONSIBLE OFFSHORE DEVELOPMENT ALLIANCE v. UNITED STATES DEPARTMENT OF THE INTERIOR, Case No. 22-237), plaintiffs alleged the Defendants violated Section 1337(p)(4)(C), the prevention of waste requirement “by not considering the decommissioning of the Project” including disposition of “enormous turbines, their components, and the other project structures when the lease and easement run out, nor the cumulative impacts of decommissioning each of the projects planned in the geographic region.”

¹⁴¹ See: *Waste and the Governance of Private and Public Property*, Tara K. Righetti and Joseph A. Schremmer, University of Colorado Law Review, Issue 3, Volume 93, January 23, 2023.



New Bedford, MA is the number one value fishing port in the nation, generating economic activity in excess of \$11.1 billion, directly employing more than 6,800 people, and generating related employment of more than 40,000 people. The New Bedford fishing fleet of 500 vessels lands over 122 million pounds of product annually leveraging \$322 million in direct sales.¹⁴²

Similarly, the value of Rhode Island’s “Blue Economy,” comprised of the multiple industrial and commercial enterprise systems that use the the oceans, also exceeds \$11 billion, including almost 3,000 jobs in a \$1.5 billion fisheries industry (summarized in [Table 10](#)).¹⁴³ In contrast, a 2022 report on the Vineyard I economic impacts by the University of Massachusetts found the project had generated 666 jobs, and an economic output of \$166,648,841, levels that do not begin to approach the economic output and jobs from the fishing industry that will be adversely affected.¹⁴⁴

As noted previously, NEPA itself does not prohibit a proposed action because adverse impacts have been identified; however those adverse impacts can be valid evidence of other substantive statutory violations, in this case, the § 8(p)(4)(C) “*prevention of waste*” requirement in OCSLA. Multiple NEPA analyses have confirmed major adverse impacts to multi-billion dollar fishing and other maritime industries using the OCS ocean assets; BOEM has yet to complete a corresponding analysis of whether such a “redistribution” of that asset capacity from fishing to electricity generation produces adequate value from power output and GHG reductions to justify waste and losses in utility and value for maritime industry users.

¹⁴² Economic Impact, Port of New Bedford [website](#), retrieved April 9, 2025.

¹⁴³ [Value of Rhode Island’s Blue Economy](#), University of Rhode Island, March 2020.

¹⁴⁴ Vineyard Wind 1: Impact on Jobs and Economic Output Annual Report #1, 2022. As part of the negotiations for this project, Vineyard Wind has set aside nearly \$38 million to create a compensation fund for local fishermen.



SECTION THREE: RI/MA WEA LEASING ISSUES AND FINDINGS

I. Grounds for Lease Cancellation

The facts, circumstances, and questionable aspects of legal compliance detailed in this Report regarding OSW leases approved for the Rhode Island and Massachusetts WEAs potentially constitute grounds for lease cancellation under OCSLA and its attendant regulations on the following bases:

- ***Misrepresentations in obtaining leases under 43 U.S.C. § 1337(o)***
 - The inability of segmented OSW leases to meet reliability and supply requirements of the ISO-NE bulk transmission system.
 - Lack of actual climate change benefits to New England ratepayers from OSW deployment.
 - Non-compliant NEPA Analysis
 - Lack of a Programmatic Environmental Impact Statement that would correct for the fact that current analyses and disclosures as to direct and indirect impacts of the OSW overbuild required for bulk transmission reliability are inadequate, concealed, and/or misleading.
 - Segmented analysis of leases that obscures the full direct and indirect impacts.
 - Lack of direct impact analysis for the known quantity of OSW overbuild needed to meet both state RPS and reliability requirements.
 - Potential OSW interference with national security training and operations.
- ***Grounds set forth in 43 U.S.C. § 1334(a) and 30 C.F.R. § 585.422 related to compliance with OCSLA requirements and prohibitions.***

A. Grounds Based on Fraud/Misrepresentation

As generally understood, allegations of fraud could be based on a misrepresentation of fact that was either intentional or negligent.¹⁴⁵ Misrepresentation can also occur when a material omission renders other statements misleading.¹⁴⁶ Fundamental concepts of fraud and misrepresentation provides a basis for considering whether OSW leases may have been granted on misrepresented or omitted material information in the following categories:¹⁴⁷

¹⁴⁵ See generally: [Legal Information Institute, Cornell Law School](#)

¹⁴⁶ See generally: [Legal Information Institute, Cornell Law School](#)

¹⁴⁷ The goal of this Report is to identify factors associated with OSW lease approvals (not related to protection of the environment) that may have been misrepresented or omitted in securing Federal OSW leases, thus providing a basis for considering lease cancellation under DOI processes.



1. Undisclosed Infrastructure Overbuild Requirements

The RI/MA WEAs were created over a decade ago, and since that time the stated purpose of virtually every OSW lease in those areas was to meet New England states' RPSs.¹⁴⁸ Yet, only in 2024 did the ISO-NE EPCET Report finally disclose the vast magnitude of ICR needed to both decarbonize New England electricity with “renewables-only,” **and** maintain a reliable bulk grid system.

Moreover, of the massive 97,000 MW overbuild requirements finally disclosed in the EPCET Report, 34,000 MW are OSW facilities (requiring up to another 7 million acres of ocean assets to install), 25,000 MW of solar, 7,000 MW of onshore wind, and 25,000 MW of battery storage infrastructure for which no geocapital hosting locations have been identified.

Neither BOEM nor the States ever provided an accurate representation of these requirements to the public. The EPCET Report results have seen only limited penetration into public news outlets, Federal and state government agencies, or the rate-paying public. BOEM, which has a robust public relations capability, either failed in its duty to learn of these requirements, or knew of the 34,000 MW estimate for OSW and failed to disclose it to the public. It most certainly did not conduct analysis under NEPA addressing the massive overbuild requirements that would have provided notice and transparency to the public.

Instead, misrepresenting and obscuring the complete picture of OSW requirements has the effect of making the initial RI/MA WEAs leases (11,515 MW) a stalking horse to get uninformed public buy-in for OSW before disclosing that actual decarbonization requires an additional 80,000 MW of new generation and storage sources. By hooking ratepayers on claimed benefits of OSW in 800, 1,000, or 2,000 MW increments, without first determining and disclosing that the full program requirements would entail an uncosted 97,000 MW of wind, solar, and batteries, BOEM may have approved leases on misrepresented data.

2. Volume of Delivered Electricity

In the decades since renewable energy became a public policy mandate to address climate change, wind-generated electricity proponents have used a single yardstick to assert the performance capability and value of turbine productivity: **Enough to power “X number” of homes.** This unexplained, unsupported, and out-of-context benchmark actively misleads the public and some decisionmakers as to the adequacy and reliability of OSW electricity production in multiple ways.

¹⁴⁸ “The purpose of the federal agency action in response to the Vineyard Wind Project COP (Epsilon 2018a, 2019a, 2020a) is to determine whether to approve, approve with modifications, or disapprove the COP to construct, operate, and decommission an approximately 800-megawatt, commercial-scale wind energy facility within Lease Area OCS-A 0501 **to meet New England’s demand for renewable energy.** *Vineyard Wind 1 Offshore Wind Energy Project, Supplement to the Draft Environmental Impact Statement*, June 2020, p. ES-1.

“The need for the Project is to **contribute to Connecticut’s mandate of 2,000 megawatts (MW) of offshore wind energy by 2030**, as outlined in Connecticut Public Act 19-71, and **Rhode Island’s 100% renewable energy goal by 2030**, as outlined in Rhode Island Governor’s Executive Order 20-01 of January 2020.” *Revolution FEIS*, July 2023, p. ES 1-2 (emphasis added).



- **Not Enough Electricity for “Homes”**

As noted above, the current pipeline of OSW infrastructure planned for the RI/MA WEAs is 11,515 MW of installed capacity. At the current average OSW capacity factor of 40%, the projects could produce 40,348,560 megawatt hours (MWh) of electricity (it can also be measured as 40,349 GWh).

New England has 6.08 million “homes” in a region that use an average of 8,000 kilowatt hours (kWh) per home annually. Powering homes New England therefore requires 48,000,000 MWh (48,000 GWh) of electricity each year.¹⁴⁹ Operating at a 40% capacity factor, all the RI/MA WEA projects together can optimally produce 40,348,560 MWh, or 80% of the demand from New England residences. That output would power only about 5 million homes, leaving over 1 million ISO-NE customers without residential power.

Table 11: Total New England Homes

New England States	“HOMES” (in millions)
ME	0.57
MA	2.71
RI	0.42
CT	1.39
VT	0.34
NH	0.65
Total	6.08

Source: U.S. Census

- **“Homes” are a fraction of Electricity Demand**

“Homes” (or residential use) are only one sector of many that require electricity. Others include commercial (businesses), industrial (factories), and transportation (cars, mass transit). Within these categories are the schools, hospitals, street and traffic lights, water treatment, food preservation, and public safety activities that keep the economy running and citizens safe and healthy.

- **Actual “Enough” is never disclosed to the Public**

The six New England states consumed 116,719,000 MWh of electricity in 2024, knowledge that should be brought before the public every time an electricity generation project is announced. Subtracting the 40,348,560 MWh that the combined RI/MA OSW leaseholds might generate, the economic and public enterprise systems of New England would still need 76,370,440 MWh of electricity—almost twice again what planned OSW could produce. The sources of this remaining demand are neither defined nor even acknowledged as necessary when pitching wind, misleading the public into thinking the planned OSW projects are “enough.”

- **New England Electricity Growth Requirements**

By 2033, New England is expected to require over 140,000,000 MWh of electricity supply, and even higher levels in the years leading up to 2050. According to the EPCET Report, the overall OSW requirements to satisfy 2050 electricity demand would total 34,000 MW of installed capacity requiring as much as 7 million more acres of ocean. Convincing the public to support 11,515 MW of installed wind when basic system calculations indicate that a minimum of 34,000 MW is needed takes on the features of a public policy bait and switch.

¹⁴⁹ Energy Information Agency (EIA); this amount is well below the national average of 10,500 kWh.



3. Greenhouse Gas (GHG) Reductions, Efficacy, and Value

Wind and solar proponents lay great store by the technologies' claimed ability to cut GHGs and thereby mitigate the adverse effects of climate change. Unfortunately, individual projects or areas cannot be evaluated in isolation. As made clear in the various EAs and EISs performed for the RI/MA WEA leases, actual GHG reductions from this ocean industrialization are minimal, and physically unable to ameliorate climate change effects either locally, or in the larger region.

Although buried in the text of various EAs and EISs, the BOEM lease approval process (including approvals to execute the Biden Administration "30 GW Plan") failed to acknowledge or inform the states, ratepayers, or other participating agencies that the GHG reductions from operating turbines on these leases would produce minimal emission reductions having no effect in New England, and any actual reductions in GHG emissions would be cancelled out by significant emission growth in states across the country.

Moreover, the following quotes are just two examples of how state leaders time and again told taxpayers/ratepayers that offshore wind was "green energy" that would positively address climate change. In March of 2021, Massachusetts passed comprehensive climate change legislation that codified its commitment to achieve net zero emissions in 2050. *An Act Creating a Next Generation Roadmap for Massachusetts Climate Policy* was marketed as furthering the Commonwealth's nation-leading efforts to combat climate change and protect vulnerable communities. About the new law, Massachusetts State Senate President Karen E. Spilka said "This law outlines a clear roadmap to address our immediate climate crisis."¹⁵⁰

Last September, Massachusetts Commissioner of Energy Resources Elizabeth Mahony said "Offshore wind is a critical tool in fighting climate change. Hot summers, stormy seas, and devastating floods are hitting communities across New England hard. We're grateful to our partners in Rhode Island for joining together on the solution..."¹⁵¹ These comments were made even though the original RI/MA WEA EAs in early 2021's conceded that New England's small, marginal reductions in GHG emissions would have no effect on climate change. New England green energy advocates actively misrepresent OSW as part of a "solution" while the public never hears about the "fine print" buried in EISs that concedes the lack of GHG abatement value from these OSW leases.

Moreover, most of the claims regarding GHG reductions only occur if and when the ISO-NE system full decarbonizes—prior to that time, natural gas and other fossil generation facilities are still operating and likely to be used regularly given they can be dispatched as needed. The reality of New England GHG reductions and "decarbonization" thus becomes a circular and misleading argument: until a fully decarbonized, renewable grid is built out, fossil units emitting GHGs will still be operating and often dispatched ahead of renewables to maintain reliability.

¹⁵⁰ [Press Release](#), Governor Baker Signs Climate Legislation to Reduce Greenhouse Gas Emissions, Protect Environmental Justice Communities, March 30, 2021.

¹⁵¹ [Press Release](#), Massachusetts and Rhode Island Announce Largest Offshore Wind Selection in New England History, September 6, 2024.



Yet, a fully built out decarbonized grid of 97,000 MW is essentially impossible given the cost and limited geocapital assets available to New England for these additive generation facilities.

In the absence of full disclosure regarding the 100% RPS installed capacity requirements, developer claims of decarbonization are misleading and could be seen as false pretenses for obtaining OSW leases. Even at the 97,000 MW level, the EPCET Report concedes that fossil generation will still be needed for multiple days in summer and winter.¹⁵² To the extent leases were granted in furtherance of reaching New England RPS goals and decarbonization, absent adequate evidence these goals can be reliably achieved in accordance with Federal law, such leases are arguably obtained on known or knowable misrepresentations.

4. NEPA Analyses

The the full magnitude and character of impacts from OSW projects in the RI/MA WEA leases were not fully disclosed in NEPA analyses prepared by BOEM and OSW project proponents, thereby allowing leases to be approved on potentially misrepresented data and information.

As noted in detail in discussions above, the outdated, almost technologically irrelevant 2007 PEIS performed for OSW leasing under the newly amended OCSLA specifically noted it only applied to programming in the following five years. Yet, the Biden Administration and leadership in several New England states incrementally increased and expanded planned OSW projects lease by lease without correspondingly updating or rewriting the PEIS to address what had grown to 30 GW of planned installed capacity.

Additionally, when mandating strict renewables requirements in their generation portfolios, states neither calculated nor disclosed how much installed capacity would actually be needed for these goals, or the full array of adverse impacts resulting. The same is true for BOEM—it produced no calculations or disclosures for a burgeoning buildout requirement driven by intensifying RPS strictures. Even after the ISO-NE finally calculated and disclosed the 34 GW of OSW installed capacity needed for the New England program, BOEM has yet to prepare a compliant analysis of direct and indirect impacts of this magnitude of OSW construction and operation.

In the absence of an updated, fully transparent PEIS that assesses and discloses the impacts of a simultaneously decarbonized *and* reliable New England bulk transmission system to decisionmakers and the public, the segment-by-segment claims of negligible or minimal adverse impacts can be seriously misleading.

Relatedly, without identifying all the impacts from building out the current RI/MA WEAs, and the overbuild needed to reach the EPCET Report's 34 GW, project proponents and BOEM cannot properly evaluate whether leases will violate the statutory requirements/prohibitions for issuing OSW leases pertaining to: safety; environmental protection; prevention of waste; OCS asset conservation; national security; correlative rights; interference with reasonable uses of the

¹⁵² EPCET Report, p. 9.



exclusive economic zone, the high seas, and the territorial seas; and lease location vis a vis other users.¹⁵³

5. National Security/Encroachment

Multiple OCSLA provisions require OSW leasing only occur only in the absence of adverse impacts to military operations, training, and other key national security activities. In spite of the near doubling of offshore turbine height and massive infrastructure construction in OCS seaspace, comprehensive analyses of potential impacts to flight safety, air traffic control, and naval operations and training are largely incomplete.

As described on pages 47-49 above, at least seven separate research projects are only in very early stages of determining key operational effects from OSW interference, including what are labeled cumulative impacts but would otherwise constitute a comprehensive analysis of programmatic requirements for 34 GW of installed turbines. If and how OSW turbines can interfere with national security activities and operations is material information that cannot be omitted or only partially disclosed when granting OCS leases. In the absence of full assessment and disclosure of impacts to military operations, leases may have been granted that falsely state “protection of national security interests”¹⁵⁴ has been provided for.

FINDING: The Secretary of Interior has multiple grounds to consider cancelling existing RI/MA WEA leases due to misrepresented or omitted information relied on by Federal decisionmakers for lease approval regarding 1) undisclosed overbuild requirements; 2) volumes of delivered electricity; 3) GHG reductions; 4) NEPA analyses; and 5) National Security.

B. Grounds for Lease Cancellation for Violations of OCSLA Provisions

1. Fishing and Navigation

BOEM regulations authorize the Secretary to cancel leases when he determines, after notice and opportunity for a hearing, that the lessee or grantee has failed to comply with any applicable provision of the OCSLA with respect to that lease or grant. For leases in the RI/MA WEAs, it appears that BOEM has failed to consider that documented adverse impacts to fishing detailed in the Vineyard I SEIS and elsewhere violate multiple OCSLA provisions:

- Expressly prohibited effects on fishing and navigation (§ 1332(2));
- Interference with reasonable uses (§ 8(p)(4)(I)); and
- Economic waste under OCSLA § 8(p)(4)(C), given neither BOEM nor the OSW project proponents in the RI/MA WEAs have established that the OCS ocean assets subtracted from, or lost to, fishing and navigation uses would produce greater return or gain from the limited electricity production and marginal GHG reductions traded for their loss.

As noted in previous sections describing BOEM’s NEPA practices, the failure to conduct any updated programmatic assessment of impacts, the segment-by-segment leasing in WEAs, and the undisclosed levels of OSW overbuild needed to meet RPSs standards have obscured the

¹⁵³ EFACT § 8(p)(4).

¹⁵⁴ 43 U.S.C. § 1337(p)(4)(F).



serious extent to which safe fishing and navigation are negatively and adversely affected in contravention of the multiple OCSLA provisions cited.

Turning to the specific EPACT requirements providing lease cancellation grounds, there is ample evidence of BOEM's failure to prevent economic waste. The presumptive "gains" from using the OCS high seas for industrial OSW construction and operation are to "decarbonize the grid" in accordance with state RPS requirements, and "power homes." OSW development occurring under the current segment-by-segment leasing program will be inadequate to accomplish either goal. Piecemeal OSW buildout will not meet current or future load demand, and seven times more ocean area could be needed to actually build out the requisite 34 GW of OSW that theoretically achieves decarbonization (as detailed by the EPCET Report). Removing ocean capacity from fishing and navigation for use by electricity generators imposes a "subtractive" effect on the ocean assets that yields negative net economic value and constitutes prohibited economic waste, while further compounding what is already improper OSW "interference with reasonable uses." Both prohibitions provide grounds for cancellation under 30 C.F.R. § 585.422(b)(1).

2. National Defense

National security operations require access to, and use of, air and maritime assets proximate to land-based installations to sustain military missions and readiness. Since the OSW programmatic analysis was performed in 2007, turbine height has nearly doubled, and the volume of planned turbine installation has significantly increased, compounding the potential interference with multiple radar systems, seaspace, communications, and other defense activities. Yet, BOEM leasing and interagency coordination processes seem to place the burden to deconflict use and access requirements on the national security mission, largely expecting DOD and other entities to create work arounds, or even relinquish geocapital operating capacity, to enable OSW construction and operation.

Additionally, BOEM has approved segment-by-segment OSW leases in the RI/MA WEAs without completing multiple necessary research projects or impact analyses to prevent turbine interference with early warning systems, defense training, and mission operations, providing the basis for the Secretary to cancel leases for national defense requirements under 43 U.S. Code § 1334(a) and 30 C.F.R. § 585.422(b)(3).

FINDING: The Secretary of Interior has grounds to consider cancelling existing RI/MA WEA leases due to violations of OCSLA provisions related to 1) fishing; 2) economic waste; and 3) national security. Such cancellations cannot occur unless or until operations under such lease or permit shall have been under suspension, or temporary prohibition, by the Secretary, with due extension of any lease or permit term continuously for a period of five years, or for a lesser period upon request of the lessee.



II. Other Federal Issues

A. Designated Restricted Areas for National Defense; 43 U.S.C. 1341(D)

The OCSLA establishes multiple procedures for deconflicting national security and energy development on the OCS. In the case of OSW, however, creating an MOU process that weights lease approval in favor of meeting the Biden Administration’s “30 GW” OSW goal appears to have given BOEM decisionmakers the means to bypass or under-utilize military deconfliction procedures set up in the OCSLA statute and regulations, and the 2011 National Defense Authorization Act (NDAA).

Effectively, the MOU reverses what should be the appropriate process. Instead of BOEM identifying its preferred WEAs and shifting the burden of proof to the DOD to establish whether turbine and related infrastructure will interfere with national security requirements and operations, DOD should be able to map the areas it requires for national security requirements and operations and require BOEM only site WEAs in the remaining areas, thereby avoiding any DOD encroachment.

Since its enactment in 1953, Section 12 of OCSLA has contained reservation provisions that authorize the Secretary of Defense to restrict portions of the outer Continental Shelf needed for national defense from exploration and operations with the approval of the President. The EPACT Amendments mandated the Secretary, in cooperation with the Secretary of Commerce, the Commandant of the Coast Guard, and the Secretary of Defense, create an a Coordinated OCS Mapping Initiative to digitally map the OCS to specify locations on the outer Continental Shelf for (a) Federally-permitted activities; (b) obstructions to navigation; (c) submerged cultural resources; (d) undersea cables; (e) offshore aquaculture projects; and (f) any area designated that could be labeled as having a pre-existing use for the purpose of safety, national security, environmental protection, or conservation and management of living marine resources. Then the 2011 NDAA established the DOD Military and Aviation Siting Clearinghouse to provide a system for ongoing deconfliction of military and energy uses of non-expandable geocapital asset capacity on the OCS. Over the ensuing four years, only one Mitigation Agreement has been signed for an OSW project: Vineyard Wind I.

In light of the above, the Secretary of Defense, in consultation with the Secretary of Interior, can re-evaluate which portions of the OCS are needed for national security in the current training and threat environment. Based on such an analysis, the coordinated OCS Mapping Program can be revised to “zone” areas needed for national security that preclude other incompatible uses. Much like Air Installation Compatible Use Zones (AICUZ) procedures used to deconflict airspace use at installations with with flying missions, Ocean Compatible Use Zones (OCUZ) could be designated for areas where it might be possible to sustain OSW operations in some proximity to national security exclusion zones using a far more robust, DOD Clearinghouse-managed operating agreements.

FINDING: BOEM OSW leasing practices have not taken adequate account of critical national security training and operations that co-use ocean geocapital assets diverted to OSW. The Secretary of Defense, in coordination with the Secretary of Homeland Security/Coast Guard and Secretary Interior, can 1) provide key inputs for consideration in evaluating lease cancellation on national security grounds; 2)



reinvigorate existing procedures to a) affirmatively restrict OSW activity in portions of the outer Continental Shelf needed for national defense; b) map all sensitive or special OCS areas that require restriction or deconfliction with OSW use; c) assure all OSW leases have DOD Clearinghouse Agreements in place before approval; d) suspend Clearinghouse Agreement approval until necessary WTRIM Working Group analysis are completed; e) establish an Ocean Compatible Use Zone Program (OCUZ) in conjunction with mapping and Clearinghouse processes; and f) rescind the Biden Administration "Renewable Energy Development on the OCS" MOU.

B. Reliability Under the Federal Power Act

The 2024 ISO-NE EPCET Report reset the realities and duties of public decisionmakers at all levels of government as to whether—and if so, how—driving decarbonization goals for electric generation assets can be reconciled with Federal Power Act requirements for bulk transmission grid reliability.

NERC reports have already identified serious disconnects between electricity supply and demand, due largely to economic development and electrification demand growth, significant planned retirements of “dispatchable” generation like coal and natural gas, and increasing reliance on “variable” sources of generation like wind and solar.

When enacted in 1935, the Federal Power Act (FPA) acknowledged basic federalism governance principles by maintaining states’ rights to oversee electric generation facilities through their utility commissions, while establishing Federal government jurisdiction over the bulk grid systems that operate in interstate commerce. The 2005 EPACT amendments to OCSLA enhanced that FERC authority when it added mandatory, enforceable reliability standards to the FPA (see Notes 63 and 64 infra).

The unanticipated volumes of OSW and other renewable and storage capacity buildout affecting reliability should incentivize the Federal government to revisit the State/Federal, generation/transmission divisions maintained under the FPA. Uneven and inconsistent state demands for variable and intermittent generation sources are causing visible cracks in bulk transmission reliability. Though not the only region under resource adequacy stress from changes to the electric generation system, New England presents an active case in point as to why FERC and NERC should provide leadership in identifying and managing this emerging collision between RPSs and reliability. Federal reliability oversight should be actively examining how best to prevent states and renewables proponents from creating needless harm from subjective, zero sum generation choices that could damage health, safety, and economic well-being while driving up costs and rates.

FINDING: Green Energy Transition programs, including state Renewable Portfolio Standards, have the potential to adversely affect electric generation resource adequacy and thereby undermine Federally-governed interstate bulk transmission system reliability. FERC and NERC, in conjunction with the Department of Interior and other affected departments and agencies, should undertake a full analysis of the immediate and long-term effects of decarbonizing electric generation assets on reliability, including the volume of installed capacity needed and the costs of new and replacement generation and transmission capacity, to fully inform all levels of government, and especially ratepayers, of the outlays and actual value resulting from this massive recapitalization of electricity system assets.



III. State Issues

Many, if not all, of the misrepresentation, omission, and compartmentalization issues described in the context of Federal oversight of OSW apply to state decisionmaking and oversight, including that of elected officials and utility commissions.

A. Obligation To Serve Requirements for Electricity Supply

It's hard to suggest that U.S. Department of Interior and BOEM officials are responsible for misrepresenting material information in OSW lease decisionmaking without also noting that state governors, legislators, agencies, and utility commissioners also included or omitted this same data and information regarding “homes” powered, GHG reductions, climate change solutions, and national security when making electricity system-related decisions.

As described above, Massachusetts law charges its DPU with overseeing the quality and reliability of electricity service, while its DOER is required to collect and analyze data to include in published projections of supply, demand, and price of energy statewide. Another annual report must disclose electricity reliability issues, detailing load and capacity, and forecasting potential capacity deficits over five years.

Rhode Island law requires that public utilities must provide reliable services (including electricity) at economical cost; rates charged for electricity service must be reasonable; and the law prohibits unjust or unreasonable charges. Rhode Island's Public Utility Commission (PUC) is required to meet the state's electrical needs in a manner that is optimally cost-effective, reliable, prudent, and environmentally responsible.

Given the revelations of the ISO-NE EPCET Report, it's hard to see how either state has met these statutory obligations to assure reliable, affordable, and prudent electricity supply while keeping the public informed. The inherent federalism of governing the electricity generation and transmission system is enabling compartmentalization between production preferences and demand realities that undermine reliability. Even if just negligent, the misrepresentations and omissions regarding RPS-driven bulk system requirements fostered by this compartmentalization have led many ratepayers to believe the green energy transition is feasible and affordable, without understanding the full economic and reliability ramifications.

The EPCET Report disclosures provide an opportunity for state leaders in New England to acknowledge the RPS/reliability disconnects and take corrective measures. This correction will require new analysis of the requirements for infrastructure, geocapital, and dollars actually needed to build out the 97,000 MW of installed generation and transmission capacity a decarbonized grid entails. In addition, this correction should afford the public an opportunity to evaluate decarbonization laws and mandates with full disclosure of the facts.

B. Blue Economy Waste in a Green Energy Transition

Along with BOEM, the Governors of the affected New England states face the issue of economic waste if state requirements for decarbonization and energy transition deprive existing enterprise systems of ocean and related asset access and use. Evaluation of economic waste



risks are not typically in the purview of state energy or public utility management systems, but can be addressed under the umbrella oversight of state economic development authorities and expertise.

Notably, in New England, much of the economic analyses that support a green energy transition rely on reduced or eliminated outlays for price-volatile natural gas as a long-term offset to the construction and operation costs of renewables. These calculations do not generally account for economic waste resulting from the subtractive use of shared assets, such as when wind turbines subtract available fishing or navigation capacity in shared ocean assets, reducing or eliminating maritime economic activity.

The EPCET Report did not evaluate the total cost of decarbonizing the ISO-NE system with a 97,000 MW renewables overbuild, 34,000 of which will require subtraction from currently used ocean assets supporting the New England "blue economy." BOEM arguably should assess potential economic waste created by OSW leasing, including whether it constitutes grounds for lease cancellation; however, equal responsibility rests with the states to fully identify and disclose the economic impacts to existing "blue economy" industries when millions more acres of ocean are targeted for subtractive use in the green energy transition.

FINDING: New England states have not adequately evaluated or disclosed the potential economic waste and offsetting losses from RPS-driven Green Energy Transition programs that will require subtractive use of "blue economy" geocapital assets. Economic impact analysis should be updated to assure full analysis and disclose of potential economic waste from the full 97,000 MW renewables overbuild that includes 34,000 MW of OSW requiring millions of additional acres of ocean asset capacity.



SECTION FOUR: RECOMMENDED ACTIONS FOR GREEN OCEANS

Recommended Actions

Based on the information and analysis provided, PA*S recommends Green Oceans undertake the following actions at this time to provide critical input to the ongoing Department of Interior review of OSW leasing and permitting practices. Green Oceans may wish to consider additional actions as followup with state or local government entities and other participants in OSW development.

Action 1:

- Correspondence to the Secretary of Interior requesting review of RI/MA WEA leases for potential cancellation for OCSLA violations outlined in this report. Such review can be included in the ongoing evaluation of OSW leasing practices under the Presidential Memorandum of January 25, 2025. These grounds include:
 - Fraud or misrepresentations in lease applications
 - Adverse effects to fishing and navigation
 - National security requirements
 - Failure to prevent economic waste

Green Oceans can consider submitting the request to the Secretary in conjunction with other OSW opposition groups.

Action 2:

- Correspondence to the Secretary of Defense requesting the following actions:
 - Coordination with the Secretary of Homeland Security/Coast Guard and Secretary Interior to provide key inputs for consideration in evaluating lease cancellation on national security grounds
 - DOD-led or coordinated procedures to:
 - a) Affirmatively restrict OSW activity in portions of the outer Continental Shelf needed for national defense;
 - b) Map all sensitive or special OCS areas that require restriction or deconfliction with OSW use;
 - c) Assure all OSW leases have DOD Clearinghouse Agreements in place before approval;
 - d) Suspend Clearinghouse Agreement approval until necessary WTRIM Working Group analysis are completed
 - e) Establish an Ocean Compatible Use Zone Program (OCUZ) in conjunction with mapping and Clearinghouse processes; and
 - f) Rescind the Biden Administration "Renewable Energy Development on the OCS" MOU.

Similarly this request can include other signatories at Green Ocean's discretion.



Action 3:

- Correspondence to the Federal Energy Regulatory Commission requesting review of the reliability issues related to bulk system transmission when states enforce RPS standards requiring full decarbonization.
- Such review can be a strategic overview of interconnection issues created when the full requirement for renewable overbuild to maintain reliability is not fully disclosed until years after RPS standards are implemented (the EPCET Report issue), or as part of FERC's authority to review NEPA EIS documents should the Programmatic EIS for OSW leasing be completed.
- FERC can perform such a study in conjunction with the Department of Energy to further determine the levels of transmission infrastructure required to support the 97,000 MW overbuild identified for ISO-NE under RPS decarbonization requirements.

Green Oceans has worked tirelessly since January of 2023 to protect ocean assets from wasteful electricity industrialization by offshore wind projects. Actions recommended in this Report can enhance, complement, and reinforce the litigation and other advocacy activities already underway to reach Green Ocean goals to steer energy transition away from irreplaceable ocean assets.



Preparers

This report was prepared by Planet A* Strategies, a specialized consultancy addressing air, space, land, and water (geocapital) asset management in public and private enterprise systems, with emphasis on geocapital access and optimization for national security, transportation, and energy production systems.

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Ms. Koetz has also held positions as Counsel for the Senate Energy and Natural Resources Committee and US Senator Pete Domenici, as a senior policy director at the Nuclear Energy Institute. She regularly addresses conferences, executive seminars, and workshops on transformational strategies for achieving sustaining enterprise operations in limited geocapital access conditions.

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