

EX PARTE APPLICATION

UNITED STATES DISTRICT COURT
DISTRICT OF NEW JERSEY

PROTECT OUR COAST NJ; ACK FOR WHALES; Docket No: 25-cv-6890
CLEAN OCEAN ACTION, INC.;
FISHERMAN'S DOCK COOPERATIVE;
SEAFREEZE SHORESIDE INC.;
BELFORD SEAFOOD COOPERATIVE;
MISS BELMAR, INC.; CAPTAIN ALAN SHINN;
AMERICAN SEAFOOD LLC;
CAPTAIN GARY STONE; OLD SQUAW FISHERIES, INC.;
HERITAGE FISHERIES, INC.; BKS FISHERIES, INC.;
CAPTAIN SHAWN MACHIE; LUND'S FISHERIES, INC.;
LONG ISLAND COMMERCIAL FISHING ASSOCIATION, INC.
HON. JOHN A. PETERSON, Jr., Mayor of Seaside Park, New Jersey,

Plaintiffs,

v.

THE UNITED STATES OF AMERICA;
DOUG BURGUM, in his Official
Capacity as Secretary of the Interior;
the BUREAU OF OCEAN ENERGY MANAGEMENT
of the Department of the Interior;
WALTER D. CRUICKSHANK, in his Official Capacity as
Acting Director of the Bureau of Ocean Energy
Management; EQUINOR ASA;
EQUINOR US; EMPIRE OFFSHORE WIND LLC;
EMPIRE WIND 2 LLC; EMPIRE LEASEHOLDER LLC
and THE KINGDOM OF NORWAY,

Defendants.

**MEMORANDUM OF LAW IN SUPPORT OF APPLICATION FOR
TEMPORARY AND PRELIMINARY RESTRAINTS**

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PRELIMINARY STATEMENT

This memorandum of law is respectfully submitted in support of plaintiffs' motion on order to show cause for preliminary restraints against defendants to enjoin the construction of the Empire Wind offshore wind turbine project in Lease Area OCS-A-0512 in the body of water known as the New York Bight, situated 19 miles off the coast of New Jersey and 14 miles from the coast of Long Island.

Preliminary restraints are sought on two primary grounds:

- 1) Equinor ASA and its wholly-owned LLC's (collectively "Equinor"), the holder of the Empire Wind lease, is an instrumentality of a foreign government, the Kingdom of Norway, and is, therefore, not eligible for a lease under the Outer Continental Shelf Act (OCSLA), and construction under the lease should be preliminarily restrained; and
- 2) the government's restoration of work permits for the Empire Wind project on May 19, 2025 violated the Administrative Procedure Act (APA) in that no findings of fact or conclusions of law were asserted to support the restoration.

Construction on the Empire Wind turbine project off the coast of New York and New Jersey is imminent, if it has not already begun. The United States Coast Guard has issued a public notice identifying the Empire Wind lease area as being subject to pile driving and monopole installation, as of May 30, 2025, *see* Exhibit R at 98; and rock installation was scheduled to begin April 3, 2025, *id.*, but the above were blocked by the prior April 16, 2025 Stop Work Order; such work can now start since the government lifted the Stop Work Order on May 19, 2025. See Complaint (ECF Doc. 1) ¶¶69-74.

Unless injunctive relief is granted pending adjudication on the merits, irreparable harm in the form of irreversible seabed destruction and other ecological injury will ensue, causing the loss of habitat for native species, conversion of the seabed from soft sand to hard substrate, resulting in loss of soft-bottom native fish and invertebrates, causing the invasive entry of hard bottom species not normally present on the sand bottom that predominates in the lease area; and ultimately reducing fish populations. Whale species will be displaced due to the construction; the primary source food of the nearly-extinct North Atlantic Right Whale will diminish due to hydrodynamic changes; and some whale species will suffer permanent destruction of their hearing, as documented by U.S. government agencies and discussed at Point II, below.

The standard for preliminary injunctive relief is well-known. The moving party must show:

(1) a reasonable probability of eventual success in the litigation, and (2) that it will be irreparably injured ... if relief is not granted [In addition,] the district court, in considering whether to grant a preliminary injunction, should take into account, when they are relevant, (3) the possibility of harm to other interested persons from the grant or denial of the injunction, and (4) the public interest.

Reilly v. City of Harrisburg, 858 F.3d 173, 176 (3d Cir. 2017) (quoting *Del. River Port Auth. v. Transamerican Trailer Transport, Inc.*, 501 F.2d 917, 919-20 (3d Cir. 1974) (further internal citations omitted)).

“[A] district court—in its sound discretion—should balance th[e]se four factors so long as the party seeking the injunction meets the threshold on the first two.” *Reilly*, 858 F.3d at 176; *see also GJJM Enters., LLC v. City of Atl. City*, 293 F. Supp. 3d 509, 517-518 (D. N.J. 2017).

It is respectfully submitted, as discussed below, that these standards are satisfied and since a likelihood of success on the ultimate merits and irreparable harm are shown, then the remaining factors, i.e., the weighing of the public interest should be deemed satisfied in favor of movants:

"As a practical matter, if a plaintiff demonstrates both likelihood of success on the merits and irreparable injury, it almost always will be the case that the public interest will favor the plaintiff."

Am. Tel. & Telegraph Co. v. Winback & Conserve Program, Inc., 42 F.3d 1421, 1427 n.8 (3d Cir. 1994).

I. EQUINOR IS AN INSTRUMENTALITY OF A FOREIGN STATE AND IS NOT ELIGIBLE FOR A LEASE TO CONSTRUCT AN OFFSHORE WIND PROJECT UNDER THE OUTER CONTINENTAL SHELF ACT (OCSLA), 43 U.S.C. § 1331, et seq.

A. Equinor is an instrumentality of the Government of Norway.

Equinor ASA is an instrumentality of a foreign government, the Kingdom of Norway (hereafter “Norway” or the “Norwegian State”). Norway owns 70.6% of Equinor’s stock and controls the election of its Board and all questions raised at Equinor’s annual meeting. Norway has direct control of Equinor’s business and is

entitled to receive “insider information” as to Equinor for delivery to the Norwegian parliament, information not available to other shareholders. Equinor is required by its articles of association to carry out Norwegian state functions. These arrangements can only be changed by an act of Norway’s parliament, the Storting.¹

Equinor has always been an instrumentality of Norway. In 2001, when it was known as Statoil, Norway decided to allow a 29.4% interest in Statoil to be sold to private investors. At that time Norway took action to secure permanent control of Equinor and to continue Equinor’s role as an arm of the Norwegian State. Norway inserted a provision into Statoil’s articles of association that requires Statoil (later renamed Equinor) to sell Norway’s state oil production and on terms that Norway dictates. Equinor, Annual Report, 2021 at 105. This requirement can be changed only by a vote of shareholders at the annual meeting but that vote is wholly controlled by Norway that owns 70.4% of Equinor.

Norway’s control cannot be eliminated by any action of Equinor (or by other shareholders). In 2001, Norway inserted an additional provision in the articles of association that the Norwegian State’s share ownership can never be diluted and that Equinor is prevented from issuing shares or raising capital without the government’s direct consent. *See* Equinor, Annual Report, 2021 at 57. As the

¹ Norway’s Ministry of Fisheries, Trade and Industry owns 67% of Equinor and an additional 3.6% is owned by the Norway Folketrygdfondet, the government-owned National Insurance Fund. Thus, the Norwegian State controls 70.6% of Equinor.

Report makes clear, the ability to reduce Norway's shares "is subject to parliamentary decree". *Id.* at 175.

Equinor acknowledges its control by the Norwegian government and admits that the power to amend its articles of association is dependent on the fiat of the Norwegian State:

Since the Norwegian State, acting through the Norwegian Minister of Petroleum and Energy, has in excess of two-thirds of the shares in the company, it has sole power to amend our articles of association. In addition, as majority shareholder, the Norwegian State has the power to control any decision at general meetings of our shareholders that requires a majority vote, including the election of the majority of the corporate assembly, which has the power to elect our board of directors and approve the dividend proposed by the board of directors.

Equinor, Annual Report, 2021 at 311; Exhibit S.

Equinor acknowledges that Norway may veto any resolution of the Board or at the annual or other periodic meetings:

"As long as the Norwegian State owns more than one-third of our shares, it will be able to prevent any amendments to our articles of association."

Equinor, Annual Report, 2021 at 311; Exhibit S.

Equinor acknowledges it is subject to "**Control by the Norwegian State**" and must protect Norway's interests in a manner that may not "always be aligned with...Equinor's other shareholders...". Equinor, Annual Report, 2021 at 105.

The bold type and italics were inserted by Equinor itself in the annual report, demonstrating the importance of Norway's control:

Control by the Norwegian State. *The interests of Equinor's majority shareholder, the Norwegian State, may not always be aligned with the interests of Equinor's other shareholders, and this may affect Equinor's activities, including its decisions relating to the NCS.*²

See Equinor, Annual Report, 2021 at 105 [highlighting and italics in original].

The annual report describes the dominating role of Norway and that Norway's interests predominate over Equinor's private shareholders:

The Norwegian State directly held 67% of Equinor's ordinary shares as of 31 December 2021 and has effectively the power to influence the outcome of any vote of shareholders, including amending its articles of association and electing all non-employee members of the corporate assembly. **The interests of the Norwegian State in deciding these and other matters and the factors it considers when casting its votes, especially the coordinated ownership strategy for the SDFI and Equinor's shares held by the Norwegian State, could be different from the interests of Equinor's other shareholders.**

Equinor, Annual Report, 2021 at 105 [bold and underscore added].

What is clear from this frank disclosure is that Equinor acts, *first*, in Norway's government interests and that these interests "may not always be aligned" with the commercial interests of the minority shareholders. In other

² "NCS" means the Norwegian Continental Shelf, the location of Norway's state oil reserves.

words, Equinor does the government's bidding, not that of its private equity holders. Equinor *is* an arm of the Norwegian State.

Equinor acknowledges the “coordinated” role Norway plays in Equinor's affairs and of Equinor's role as an integrated arm of “Norwegian State” policy:

The Norwegian State has resolved that its shares in Equinor and the SDFI's interest in NCS licences must be managed in accordance with a coordinated ownership strategy for the Norwegian State's oil and gas interests. Under this strategy, the Norwegian State has required Equinor to market the Norwegian State's oil and gas together with Equinor's own oil and gas as a single economic unit. Pursuant to this coordinated ownership strategy, the Norwegian State requires Equinor, in its activities on the NCS, to take account of the Norwegian State's interests in all decisions that may affect the marketing of Equinor's own and the Norwegian State's oil and gas.

Equinor, Annual Report, 2021 at 105.

Norway's control extends to what Norway admits is “active” involvement in the business and decisions of Equinor. This is actuated through Norway's unique contact with Equinor's staff that is not available to Equinor's other shareholders. This takes place at meetings between Equinor and the Ministry of Fisheries, Trade and Industry at which other shareholders are not present and where “strategic” discussions about Equinor's future take place:

Topics discussed includes Equinor's economic and strategic development, sustainability and the State's expectations regarding results and returns on investments.

Equinor, Annual Report, 2021 at 126; *see also* Equinor, 2024, Board Statement on Corporate Governance, Exhibit U at 8. Norway’s domination extends to demanding “insider information” about the company that is given to Norway’s Storting, but not private shareholders. Equinor, Annual Report, 2021 at 126.³

Norway itself has declared its “active” control over Equinor’s business affairs in Norway’s 2023 State Paper, “Greener and more active state ownership”. *See* Meld. St. 6 (2022–2023) Report to the Storting (White Paper), annexed hereto; www.regjeringen.no/en/dokumenter/meld.-st.-6-20222023/id2937164/?ch=1 (accessed May 31, 2025)[referred to herein as “White Paper”]; Exhibit D hereto.

In the White Paper, Norway describes its “active” management and direction of state-owned entities such as Equinor:

The State being an active owner means that the State, within the framework conditions for the State’s exercise of ownership, works to ensure that the company has good goal attainment. The State achieves this by having explicit goals as owner in each company, setting clear expectations of the companies, and by following up the companies’ goal attainment and efforts regarding the State’s expectations. Follow-up typically takes place through voting at the general meeting, including election of board members, and other means of exercising ownership. Owner dialogue with the Board and management is a key part of exercising ownership. Among other things, owner dialogue enables the State to ask questions that are relevant to the company’s long-term potential for generating a return. As part of the exercise of ownership, the State may also present shareholder proposals. The State regularly considers participating in transactions that contribute to achieving the State’s goal as an owner. The fact that the State as an owner

³ Reference in this brief has been to Equinor’s 2021 Annual Report but its 2024 Annual Report, the most recent, contains virtually identical references. *See e.g.* Exhibit T, Equinor, Annual Report, 2024 at 289, 295.

has a long-term perspective means that the State is focussed on the companies being managed in such a way that they generate high returns and good goal attainment in the long term.

White Paper, §1.1; Exhibit D at 7.

Not only do these facts establish Equinor as an arm of the Norwegian government but Equinor itself, under its prior name Statoil, has claimed to be an instrumentality of Norway based on Norway's 67% direct ownership of Statoil's (Equinor's) shares. *See Grynberg v. BP P.L.C.*, 855 F. Supp. 2d 625, 641 (S.D. Texas 2012)(in claiming immunity under the Foreign Sovereign Immunities Act, Equinor successfully demonstrated it was an agency or instrumentality of Norway based on Norway's 67% ownership).

Based on these known facts, even before discovery has commenced, Equinor is an instrumentality of Norway and the arm of a foreign state and is not among the "persons" who may receive a lease for wind turbine development under the Outer Continental Shelf Act, *see* Point I-B, *infra*, and preliminary injunctive relief should be granted barring Equinor from carrying out any construction or other activities in the OCS-A-0512 Lease Area.

B. Equinor's lease from BOEM is not authorized under OCSLA, 43 U.S.C. § 1331, et seq.

OCSLA does not authorize a foreign government or instrumentality to acquire a lease on the outer continental shelf.

Under OCSLA, a “commercial lease” is the instrument “under which *a person* can conduct commercial activities” on the outer continental shelf. 30 C.F.R. 285.112 [emphasis added].

In turn, “person” is defined in a manner that does *not* include a foreign governmental entity:

The term “person” includes, in addition to a natural person, an association, **a State, a political subdivision of a State**, or a private, public, or municipal corporation.

43 U.S.C. § 1331 (d). “State” is defined as “each of the several States”, meaning the States of the Union, or a subdivision of a State, or a territory of the United States, 43 U.S.C. § 1331(s), definitions that refer to *American governmental bodies*, not foreign governmental entities or instrumentalities, such as Equinor.

Under the OCSLA regulations, the term “person” is defined with even more specific reference to American governmental entities:

Person means, in addition to a natural person, an association (including partnerships and joint ventures); **a federal agency; a State; a political subdivision of a State; a Native American Tribal government**; or a public, private, or municipal corporation. 30 CFR 285.112 [emphasis added].

As these definitions show, a foreign government or its instrumentality is not among the “persons” who may receive a lease from BOEM for generating electricity on the Outer Continental Shelf. As the bold text shows, the definition of

“person” under OCSLA includes a variety of governmental entities delineated as a “federal agency,” a U.S. “State”, a “political subdivision of a State” and “a Native American Tribal government”, not foreign governments. See 30 CFR 285.112; 43 U.S.C. § 1331 (d); 30 C.F.R. 585.107(a)(5-6). These are all American or U.S. governmental bodies, not foreign government entities that are not within the scope of OCSLA.⁴

This interpretation is consistent with the Dictionary Act, 1 U.S.C. § 1, that excludes “foreign governments” from the term “person”, unless there is a specific definition or clear evidence of Congressional intent. See *e.g. Al Fayed v. CIA*, 343 U.S. App. D.C. 308, 229 F.3d 272, 274 (D.C. Cir. 2000) (citing cases). As the D.C. Circuit has concluded in a thoughtful discussion, the Dictionary Act “does not expressly mention foreign sovereigns”, *Sturdza v. U.A.E.*, 281 F.3d 1287, 1307 (D.C. Cir. 2002), and the Supreme Court has “repeatedly held that the word ‘person’ in a statute does not include a sovereign government absent affirmative evidence of such an inclusory intent.” *Al Fayed v. CIA*, *supra*, 229 F.3d at 274.

Since OCSLA refers to government bodies in terms that are limited and defined as

⁴ Although the statute and regulations refer to a “corporation” organized under the laws of the United States or a State, this is conditioned on it being a “*private...corporation*”, see *e.g.* 43 U.S.C. § 1331 (d), 30 CFR 285.112; 30 C.F.R. 585.107(a)(3), not an entity organized by a foreign state and controlled and operated as a foreign governmental entity, as is the case with Equinor.

United States governmental entities, OCSLA plainly does not include or extend to foreign governments or their instrumentalities.⁵

This interpretation is not only textually valid but is logically derived from the very premise of OCSLA that concerns leasing large tracts of United States submerged lands, territory vital to American interests. OCSLA's legislative history demonstrates the intent to treat the Outer Continental Shelf as sovereign land from which foreign governments would naturally be excluded. As the Supreme Court has observed, "Congress chose to retain exclusive federal control of the administration of the Shelf because it underlay the high seas *and the assertion of sovereignty there implicated the foreign policies of the Nation*. *Gulf Offshore Co., Div. of Pool Co. v. Mobil Oil Corp.*, 453 U.S. 473, 479 (1981), citing S. Rep. No. 411, 83d Cong., 1st Sess., 2 (1953), at 6 [emphasis added].

OCSLA itself declares that "the outer Continental Shelf is *a vital national resource reserve held by the Federal Government for the public....*", 43 U.S.C. § 1332(c), language that strongly militates against foreign sovereigns or their instrumentalities gaining leasehold interests. Other elements of OCSLA render it

⁵ In a 1990 decision, the Supreme Court observed that in 1874 Congress amended the Dictionary Act's definition of "person" by substituting "partnerships and corporations" in place of "bodies politic and corporate", a change intended to make it clear that the term *persons* will not be presumed to include "States, Territories, **foreign governments**, &c." *Ngiraingas v. Sanchez*, 495 U.S. 182, 191 (1990) [emphasis added].

a “national security” enactment, 43 U.S.C. § 1349, further explaining the absence of reference to foreign governments as persons eligible to receive leases.

To assume the power to include foreign governmental entities among those entitled to receive offshore leases, where OCSLA plainly does not include foreign governments or their instrumentalities, would be a usurpation of Congressional authority. BOEM has, therefore, illegally leased interests on the Continental Shelf to Equinor, a controlled instrumentality of a foreign state.

For the above reasons, plaintiffs demonstrate a substantial likelihood of ultimate success as to their claim that the lease to Equinor is not authorized under OCSLA. In view of the importance of this question, i.e., whether a foreign governmental entity has been illegally given a lease in the Outer Continental Shelf, it is clear that the public interest supports injunctive relief.

As show in Point II, below, irreparable harm is demonstrated by the concerns of cognate federal agencies that construction, installation and operation of the Empire Wind offshore turbines will cause irreversible change to the seabed and harm to the ocean ecology in the New York Bight.

For the foregoing reasons, Equinor, should be temporarily and preliminarily restrained from any construction and installation activities in the lease area.

II. IN THE ALTERNATIVE, PRELIMINARY RESTRAINTS SHOULD ISSUE RESTORING THE APRIL 16, 2025 STOP WORK ORDER AND RESTRAINING ANY CONSTRUCTION OR INSTALLATION OF THE EMPIRE EMPIRE WIND OFFSHORE TURBINE PROJECT.

The Presidential Memorandum dated January 20, 2025 (“Memorandum”), required the Secretary of the Interior to investigate all offshore wind projects to determine if they will cause ecological, environmental or economic harm. *See* Exhibit A. Pursuant to the Memorandum, a stop work order was issued on April 16, 2025 by the Secretary of the Interior to the Director of the Bureau of Ocean Energy Management (BOEM). The order directed that all work stop on Empire Wind until completion of the investigation ordered by the President. *See Letter of Secretary Burgum* (“Stop Work Order”), April 16, 2025, Exhibit B.

Four weeks later, on May 19, 2025, BOEM reversed this order and said work may resume. *See* “Amendment to Director’s Order dated April 16, 2025”, Exhibit C (the “Reinstatement Order”). No explanation or finding was given as to why BOEM was *now* allowing work to go forward whereas four weeks earlier the Secretary, citing environmental factors, issued a stop work order.

As discussed below, the May 19, 2025 “Reinstatement Order” violated the Administrative Procedure Act (APA), 5 U.S.C. §§ 701-796 by failing to offer a factual basis for reversing the earlier April 16, 2025 “Stop Work Order”.

In the Memorandum, the President identified a need for further investigation and review over offshore wind projects, a conclusion wholly supported by the record as to Empire Wind. Multiple agencies — the United States Coast Guard (USCG), Department of Energy (DOE), National Oceanic and Atmospheric Administration (NOAA) and NOAA’s National Marine Fisheries Service (NMFS) and BOEM itself — have identified significant ecological harm from the Empire Wind turbine construction and operation that will permanently injure the ecology and ecosystem of the waters known as the New York Bight. Each agency acknowledges that further investigation is needed before work on the project should proceed, providing a proper basis for a suspension under 43 U.S.C. § 1337(p)(4) and (5) and 30 C.F. § 585.102(a), as the Secretary ordered. The Complaint details the agency views that environmental issues remain unresolved and that construction will cause major ecological harm. Complaint (ECF 1) at ¶¶82-221.

Secretary Burgum premised the Stop Work Order on the need for additional time to “address feedback [BOEM] has received...from [NOAA] about the

environmental analyses for that project”, following concerns expressed in the Presidential Memorandum. Secretary Burgum stated:

The Bureau of Ocean Energy Management (BOEM) is issuing this Director’s Order to Empire Offshore Wind LLC to halt all ongoing activities related to the Empire Wind Project on the outer continental shelf *to allow time for it to address feedback it has received, including from the National Oceanic and Atmospheric Administration (NOAA), about the environmental analyses for that project. BOEM received this and other feedback regarding Empire Wind as an outgrowth of the review that the Department is engaged in related to offshore wind projects.* See the President’s Memorandum of January 20, 2025. 90 Fed. Reg. 8363 (January 29, 2025). See Exhibit B [emphasis added].

The Stop Work Order directs that no work may take place on the Empire Wind project “until ... BOEM has completed its necessary review.” *Id.* The President’s Memorandum explained the need for such investigation because of concerns of insufficient and rushed regulatory review over offshore wind projects including:

“...legal deficiencies underlying the Federal Government’s leasing and permitting of onshore and offshore wind projects, the consequences of which may lead to grave harm — including *negative impacts on navigational safety interests, transportation interests, national security interests, commercial interests, and marine mammals — and in light of potential inadequacies in various environmental reviews* required by the National Environmental Policy Act to lease or permit wind projects,...”

Presidential Memorandum, January 20, 2025, Exhibit A [emphasis added].

BOEM never completed the “necessary review” and, instead, reinstated the Empire Wind permit on May 19, 2025 without any finding that the concerns expressed by the President and the Secretary had been resolved. The

Reinstatement Order is devoid of any basis — factual or legal — for restoring the work permits and states in its entirety:

On April 16, 2025, the Bureau of Ocean Energy Management issued a Director’s Order to Empire Offshore Wind LLC to halt all ongoing activities related to the Empire Wind Project on the outer continental shelf. That Order is hereby amended to lift the halt on activities during the ongoing review.

Reinstatement Order, May 19, 2025; Exhibit C.

In contrast, the Secretary’s April 16, 2025 stop work order was based on a record of environmental and ecological harm, summarized below, that is unresolved or is not capable of scientific resolution due to the absence of adequate scientific knowledge, all of which supports the Presidential Memorandum’s concern that prior permits were the product of inadequate investigation and review.

These manifold agency concerns are discussed in detail below.

A. U.S. Coast Guard analysis as to navigational conflicts.

The United States Coast Guard (USCG) has opposed construction of the Empire Wind project due to its interference with navigation. To mitigate this problem, the Coast Guard’s “Risk Assessment” recommends placement of turbine structures at least two (2) nautical miles (“NM”) from the edge of the maritime traffic lanes and 5 NM from the entry/exit of the Hudson Canyon to Amboy TS and the Ambrose to Nantucket TSS.” *See* USCG Guidance, Exhibit E. In contrast, Empire Wind is allowing only a 1 NM separation, giving rise to what USCG calls a “medium to high” or “high risk” for collisions.

The Coast Guard's concern is among the agency issues on which the President based his January 20, 2025 Memorandum (i.e., "negative impacts on navigational safety") and that support the Secretary's Stop Work Order. The Secretary has not explained why he *now* believes these conflicts have been resolved so as to support the May 19, 2025 Reinstatement Order, that is devoid of any factual or legal findings, in violation of the APA, and should be preliminarily enjoined.

B. High frequency (HF) radar interference.

In this same vein, NOAA has found that the Empire Wind project poses a clear and distinct hazard to high frequency (HF) radar operation in the New York Bight that includes the waters off the New Jersey and Long Island coasts:

"There are eleven (11) high frequency (HF) radars in New Jersey, New York and Rhode Island that will be negatively impacted to some degree or another by wind turbines situated offshore Long Island. This would result in a loss of coastal radar monitoring for 100 miles of the NY, NJ and RI coasts. HF radars are used operationally by the US Coast Guard for search and rescue and by NOAA for oil spill response. Both these applications require 24/7/365 operations unimpeded by external interference to the HF radar signal." NOAA, Assessment, July 14, 2014, Exhibit F.

In the NOAA assessment, Director Willis referred to the lack of scientific information to measure interference with HF radar from turbine structures and that simulations demonstrate the likelihood of HF interference and that mitigation measures *must* be understood and studied **before** construction:

Two recent simulations of offshore wind turbine interaction with HF coastal radar operation (Teague, 2012, <http://www.oceans12mtsieehamptonroads.org/>

index.cfm; Naqvi and Ling, DOE Study DEEE0005380) indicate that rotating turbine blades will cause some degree of interference with HF radar data and that this interference will require mitigation techniques.” NOAA, Assessment, Exhibit F.

NOAA went on to make it clear that “real-world” knowledge as to these impacts are not known but that studies **must** be “refined” to safely implement any turbine project:

“The signature and impact of turbine blade rotation on HF radar data processing are not currently characterized from real-world situations, and simulation data only recent exist. Simulations of turbine impacts must be refined to include details of actual turbine construction materials and operating parameters. These simulations and real-world data will inform regulators of the extent to which mitigation techniques will be required for unimpeded HF radar operation.” NOAA, Assessment, Exhibit F.

NOAA thus concluded that the proposed turbine structures *will* interfere with the operation of the 11 High Frequency radar installations that protect navigation and make rescue possible in the New York Bight and along the New Jersey coast. BOEM has made no study to rectify or resolve these issues.

To the contrary, BOEM admits that HF radar interference from the Empire Wind project does pose a “risk to public health, safety and the environment”. *See Record of Decision*, Appendix A, p. A-25; Exhibit G. Failing to address NOAA’s concerns that mitigation must be studied **before** operation of the turbines, BOEM stipulates that “Lessee [Equinor] must mitigate unacceptable interference with IOOS HF radar from the Project.” *Id.* However, this “mitigation” measure is unknown and is to be developed only **after** the project is under operation.

This record supports the President and the Secretary's concerns as to insufficient review and investigation as to navigational and traffic safety issues that led to the April 16, 2025 revocation of work permits for Empire Wind until further investigation is completed. In contrast, the May 19, 2025 Reinstatement Order fails to explain why BOEM now finds there is no longer a need for further review, rendering the May 19, 2025 order in violation of the APA.

C. Department of Energy (DOE) study as to HF radar interference.

On July 27, 2020 DOE conducted a webinar detailing the implications raised in NOAA's July 14, 2024 Assessment, Exhibit F, and explained how the United States Coast Guard uses the surface current monitoring on HF radars to implement search and rescue missions for mariners, including commercial fishers. The DOE study is annexed as Exhibit H.

DOE's demonstration slides depict colored vector markings that show HF radar coverage *before* turbine construction ("No Interference") and the absence of markings *after* construction ("With Interference"). See Exhibit H at 30-31. As the loss of vector lines show, it is not just the Empire Wind lease area that loses radar coverage but a substantial part of the New York Bight. In the vicinity of the Empire Wind project, there will be virtually no HF radar vectors and no coverage for mariners and commercial fishers. *Id.*

BOEM issued the permit for Empire Wind in the face of this evidence of HF radar loss by two cognate and expert agencies, NOAA and DOE. No agency,

including BOEM, has disputed these findings or demonstrated that there are any mitigation measures to compensate for the loss of HF radar coverage.

For these further reasons, the record demonstrates an incomplete or inadequate review by BOEM that supports the Secretary's April 16, 2025 revocation of work permits for Empire Wind. In contrast, the Secretary has not explained or offered substantiation as to why BOEM *now* believes these conflicts have been resolved to support the May 19, 2025 Reinstatement Order, making that order arbitrary, capricious or unreasonable or unsupported by the record.

D. NMFS Symposium On Offshore Wind Development.

At the State of the Science symposium on offshore wind in July of 2024, the National Marine Fisheries Service (informally known as NOAA Fisheries) presented the “constraints” it is experiencing in attempting to create ecosystem models to assess the impact of offshore wind development (“OWD”). The Chief of NMFS's Offshore Wind Energy Branch presented the following “constraints” or barriers to properly modeling the impacts of OWD:

- Limited empirical data to ground truth, calibrate, or validate models
- Limited species specific and life stage specific data available
- Limited knowledge on the spatial extent of impact producing factors
- Most published studies are from a few locations in Europe which are not directly comparable to Northeast U.S. shelf ecosystem
- Limited knowledge of the spatial scale of biological impacts
- High levels of uncertainty for individual effects and for cumulative effects
- Limited information on how OWD development will interact with other ecosystem stressors

- Limited ability to integrate across OWD development because different methods and approaches are used to collect data
- Access to data collected by numerous project monitoring programs
- No established monitoring programs for socio economic impacts from OWD development.”

See Andrew Lipsky, NOAA Fisheries Chief, Offshore Wind Ecology Branch, *Symposium: Progression Toward an Integrated Ecosystem Based Approach to Assessing Environmental Impact of Offshore Energy Development* (July 18, 2024) (presentation available at YouTube, <https://tinyurl.com/OSWconstraints>; see slide and remarks at 53:58-55:33), incorporated herein as Exhibit I, hereto.

Fisheries Chief Lipsky concluded that there is a “design challenge” to fill the data gaps “so we can make sure our models are [grounded] in understanding what really is happening in the ocean”. *Id.* The government’s Fisheries Chief has said that the government does not have sufficient knowledge or data to justify going forward with Empire Wind. This is the very concern the President raised in the Memorandum that refers to “potential inadequacies in various environmental reviews...to lease or permit wind projects”. Memorandum, January 20, 2025.

Thus, a strong basis exists in the record to support the Secretary’s April 16, 2025 stop work order and no basis is asserted in the May 19, 2025 Reinstatement Order to justify reversing this order and allowing the work permits to go forward.

E. NMFS Assessment of Ecological Impacts on Essential Fish Habitat (EFH).

NMFS reviewed the July 5, 2023 Essential Fish Habitat (EFH) assessment provided by BOEM as to the Empire Wind project. NMFS concluded that “the proposed project will result in significant adverse impacts to EFH, federally-

managed species, their prey, and other resources under our purview.” NMFS, Assessment at 1-2, Exhibit K. As to Cholera Bank, an “important, regional bathymetric feature that provides important fisheries habitat”, NMFS found that six Wind Turbine Generators (WTGs), numbers B01, C01, B02, D02, B03, and D03, **must** be moved “to avoid and minimize adverse impacts to Cholera Bank”. NMFS, Assessment at 3. The agency also found that “WTGs, Offshore Substations (OSSs) and cables (interarray, interlink, and export) should be microsituated/sited to avoid sensitive benthic habitats”...” NMFS, Assessment at 3-4.

By this recommendation, NMFS was informing BOEM that the six turbine structures and other facilities **must** be moved to protect benthic resources — the seabed ecosystem — in the lease area. This has not been done. Instead, BOEM rejected the NMFS findings on the singular ground that to move the six WTGs would prevent Empire Wind from generating sufficient power to meet its contract with New York State, as BOEM bluntly stated:

“...selection of Alternative B [and E] would not allow Empire Wind to install the minimum number of WTGs necessary to fulfill Empire’s contractual obligations with NYSERDA [the New York State power agency]”.

See Record of Decision (ROD), November 2023 at 10-11, Exhibit G.

BOEM never disputed the scientific concerns raised by NMFS. BOEM simply ignored the issue in order to allow Equinor to go forward with its power contract. An unresolved scientific and ecological concern thus remains, fully

supporting the April 16, 2025 revocation of work permits and the President's concerns as to "*inadequacies in various environmental reviews*". See Exhibit A.

NMFS also found a lack of adequate documentation as to environmental harm to the fishery from the Empire Wind project giving rise to "significant concerns" as to adverse fishery impacts from the Empire Wind project:

We have significant concerns with the environmental implications of developing sensitive ecological areas without a full evaluation of adverse impacts or measures to avoid and minimize adverse impacts, particularly impacts to Cholera Bank and estuarine habitats within the OEC corridors. In addition, substantial uncertainties remain regarding the impacts to oceanographic processes (including potential impacts to the Mid-Atlantic Cold Pool), hydrodynamics, primary and secondary productivity, and predator-prey relationships that may result from this project and others cumulatively across the Mid-Atlantic and New England. As a result, the full suite of adverse effects cannot be fully identified, understood, or evaluated. **Consequently, there may be significant effects on EFH and other NOAA trust resources for which insufficient data is available for the ecological consequences to be fully understood and for EFH conservation recommendations to be developed at this time.** NMFS, Assessment at 2 [emphasis added].

NMFS observed that the Empire Wind plan did not adequately study the seabed and existing habitat to understand ecological impacts of the turbine project and that BOEM failed to

"incorporate sufficient samples and replications to identify potential changes to benthic features, habitat complexity, and associated macrobenthic communities (including invasive species [e.g., *Didemnum vexillum*] growth) across and within each habitat type in the project area, including the artificial substrates to be constructed."

NMFS, Assessment at 8. This is yet another finding that supports the President's concerns as to "*inadequacies in various environmental reviews*", see Exhibit A, that led to the April 16, 2025 Stop Work Order.

NMFS concluded that to resolve other scientific uncertainties it would be necessary to obtain three-years of pre-construction data as to acoustic conditions in the habitat area *before* construction began. NMFS, Assessment at 8.

No documentation has been provided by BOEM to address the lack of adequate study identified by NMFS; as such, BOEM's review remains incomplete, as the President and Secretary originally concluded in the Stop Work Order, and no factual basis is presented to support the May 19, 2025 restoration of the work permits that are in violation of the APA and should be preliminarily enjoined.

F. NMFS identified permanent ecological harm that supports the Secretary's April 16, 2025 stop work order.

NMFS disputes BOEM's conclusion that harm to fish populations and habitat can be cured by the "artificial reef" effect of turbine structures:

We are concerned that the EFH assessment emphasizes potential benefits of habitat conversion resulting from the placement of WTGs and scour protection due to the potential artificial reef effect. **We disagree with this characterization and the assertion that any artificial reef effect is primarily beneficial.**

NMFS, 2023, Appendix at 6 [emphasis added]; Exhibit K.

This is a primary scientific dispute as to the "artificial reef" concept adopted by BOEM under which it is claimed that turbine structures may provide reef

effects to encourage fish production. NMFS concludes the addition of hard surface to the sea floor will damage permanently the ecology of the Cholera Banks sub-surface habitat and ecosystem and that it will take “decades” to recover the lost ecology:

The addition of artificial hard substrate that is typically uniform and angular/jagged to protect WTG and OSS foundations and cables in existing complex rocky and shell habitats will result in a loss of both physical and biological structural complexity provided previously by those habitats. It is also expected to cause shifts in the community composition of fishes, as these substrates often do not mimic natural rocky habitat. The type and attributes of artificial hard substrates will be an important factor in how fish species may use these artificial substrates. As previously discussed, natural rocky habitats are inherently complex and multiple managed fish species have life history stages that are dependent on, or mediated by, rocky habitats and their intrinsic fine-scale attributes (Gotceitas et al. 1995, Lindholm et al. 1999, Methratta and Link 2006). Rocky habitats also provide a substrate for macroalgal and epibenthic growth that can increase the functional value of these habitats as refuge for juvenile fish. **It takes years to decades to establish the epifauna and macroalgae that play an important role in mediating the spatial distribution and success of multiple managed fish species, thus the addition of artificial substrates is not expected to replace the functions and values of natural habitats, particularly for juvenile species.**

NMFS, 2023, Appendix at 6; Exhibit K.

By this assessment, NMFS demonstrates that the conversion of the seabed into a hard rocky substrate to be caused by the turbine installation will cause permanent ecological harm, a statement by the government’s leading marine fisheries expert that harm to the seabed from turbine installation *is permanent and irreparable*. The Assessment identifies species loss that will follow conversion of

the seabed from soft to hard bottom including loss of Atlantic surf clam, sea scallop, and ocean quahog, major fishing species of the east coast and strong contributors to its ecosystem. NMFS, 2023, Appendix at 7; Exhibit K.

Following conversion of the seabed, the Assessment notes the potential for “establishment or [] expansion of *invasive species* due to artificial reefs” and observes that *it is not yet possible to “fully evaluate this threat”* and that the presence of invasive species such as D. Vexillum can be 2.5 times *greater* on artificial reef “than on natural substrate”. NMFS, 2023, Appendix at 7; Exhibit K [emphasis added].

In other words, invasion by non-native species is a known outcome from the conversion of the seabed but sufficient information does *not* exist to “fully evaluate this threat”, *id.*, the very reason the President and Secretary stopped the work permits. No investigation has resolved these issues to support the May 16, 2025 restoration of work permits, rendering that order arbitrary, capricious or unreasonable or unsupported by the record.

G. The turbine structures’ threat to Long Fin Squid.

Among the major fishery species in this region is long fin squid that are known to be sensitive to frequency and sound aggregations that impact mating and

other behaviors. NMFS notes that, “Behavioral changes have also been documented in long fin squid in response to pile driving noise.” NMFS, 2023, Appendix at 8; Exhibit K. NMFS documents that long fin squid spawning and egg laying success is “particularly vulnerable” to impacts of construction and placement of the WTGs:

Longfin squid is a commercial and ecologically important species that may be particularly vulnerable to project impacts as it spawns in the project area by depositing eggs in large clusters on the seafloor.

Longfin squid spawning behavior is distinct and complicated; when arriving near shore, schools of squid will pause at selected locations where a complex system of courtship, mating and communal egg laying arises (Shashar and Hanlon 2013). NMFS, 2023, Appendix at 7; Exhibit K.

NMFS found that the only way to avoid permanent injury to squid habitat is to remove the six WTGs: “Removing the six WTGs from Cholera Bank, as mentioned above, will avoid the permanent loss of egg deposition/adult spawning habitat for longfin squid from habitat conversion and will eliminate the construction-related impacts associated with installation of the WTGs and associated cables.” NMFS, 2023, Appendix at 9; Exhibit K. As NMFS found, failure to move the six WTG’s will permanently harm the long fin squid habitat.

BOEM has not disputed NMFS’s finding as to the harm to the squid fishery. Instead, as noted earlier, it has stated that if the six WTGs were removed, the

project would not “fulfill Empire’s contractual obligations with the New York State Energy Research and Development Authority (NYSERDA)". *See* BOEM Final Environmental Impact Statement (FEIS), at p. S-7; Exhibit M; *see* ROD at 10-11; FEIS annexed as Exhibit M.

By this explanation, BOEM is apparently concerned about Equinor’s profits but does not reject or dispute NMFS's ecological concerns as to harm to the squid habitat and fishery, giving support to the Secretary’s April 16, 2025 Stop Work Order and the concerns in the Presidential Memorandum.

In contrast, no investigation as to the squid fishery or ecological mitigation as to squid habitat has been identified by BOEM to support the May 16, 2025 Reinstatement Order.

H. NMFS CONCLUDED THAT TURBINE IMPACTS ON FISH POPULATION ARE NOT “FULLY UNDERSTOOD”.

NMFS concluded that the risk to fish populations, among the “long-term impacts of new introduced artificial reef material associated with offshore wind farms *is still not fully understood*.” NMFS, 2023, Appendix at 17; Exhibit K [emphasis added]. The agency observes that, “Increased fish aggregation around turbines does not necessarily imply net or future population growth for the species

(Smith et al. 2016).” *Id.* NMFS has concluded that the “artificial reef effect” may have the opposite result based on studies of the Block Island turbine array:

Turbine foundations at the Block Island Wind Farm attract large numbers of black sea bass, a common resource species that aggregates around structured benthic habitats to feed and reproduce (HDR 2020). This species is expected to benefit from the addition of WTGs and scour protection. **However, black sea bass are known to be voracious predators and it is not clear if or how an increase in this species around the WTG would impact sensitive life stages of other fish species including juveniles, eggs, and larvae. Site specific studies are needed to help understand how changes in fish assemblages in the project area are affecting these sensitive life stages.**

NMFS, 2023, Appendix at 17; Exhibit K [emphasis added].

As the highlighted sentences show, there is simply no documentation available as to how changes caused by wind turbine structures will impact these biologically diverse areas, a conclusion that *supports the Secretary’s April 2025 decision to suspend Empire Wind work permits due to the inadequate prior investigation*. No information has been produced that would justify the May 19, 2025 decision to reinstate the work permits.

Equally uncertain is the effect of cumulative biological impacts to be caused by the turbines:

Given the scale and scope of development and associated impacts (known, predicted and unknown), there is a tremendous amount of uncertainty regarding the effects of this project and others (individually, cumulatively, and synergistically) along the U.S. Atlantic Coast. However, this uncertainty

is not appropriately reflected in the EFH assessment or other project documents (e.g., NEPA documents). It is important to note that uncertainty regarding the nature and scale of the impacts is not equal to having no impacts. The Empire Wind project will cause disturbances on various spatiotemporal scales that interact with one another and other disturbances such as stochastic events (storms), climate change, ocean acidification and others (Fay et al. 2017; Hare et al. 2016; Wiernicki et al. 2020). Multiple overlapping and interacting disturbances have the potential to cause large, nonlinear, or unexpected changes in ecosystem structure and functioning (Buma 2015). NMFS, 2023, Appendix at 16; Exhibit K.

Citing two recent studies, NMFS concludes the full extent of harm to fish populations from operation of the turbines is unknown and will be enhanced by multi-layered impacts from construction and installation:

For Empire Wind, the project area (and habitats, species therein) will be subject to decades of operational impacts from [operational] noise, heat, EMF, chemical contaminants, changes to sediment dynamics, hydrodynamics and other oceanographic and atmospheric processes (e.g., Miles et al. 2021; Tougaard et al. 2020), layered atop multiple years of construction-related impacts from pile driving, cable installation, and other actions, all in a climate-change affected ecosystem. NMFS, Appendix at 16.

NMFS noted the “need for a *precautionary* approach to development in the highly productive shelf environment...” and that “early” reports of “offshore wind turbines as biodiversity hotspots should be considered *with caution* as these reports generally refer to the typical species-rich second stage of succession reached after a few years of colonization, *but disappearing later on.*” NMFS, 2023, Appendix at 16; Exhibit K [emphasis added].

Ecological harm is predicted, NMFS says, from artificially induced “hard” substrates on the seabed that cannot substitute biologically for natural soft bottom. NMFS, 2023, Appendix at 16; Exhibit K. Loss of the soft bottom off the Long Island and New Jersey coasts from the Empire Wind projects will risk “population-level changes” as to species in this region, what NMFS calls “anticipated **permanent** impacts to complex and soft bottom habitats,...” NMFS, 2023, Appendix at 16; Exhibit K [emphasis added]. Alteration in the “function of the local ecosystem” caused by changes in “feeding habitats” can arise from the turbine structures and “can affect the tight trophic link between the benthos and many fish species.” NMFS, Appendix at 16.

All of this is *irreparable, permanent* harm to the ecosystem of the New York Bight to be caused by construction of the Empire Wind turbines.

NMFS bluntly disputed BOEM’s conclusion that the hydrodynamic effects of the project “are [not] likely to be biologically significant.” NMFS, Appendix at 16 at 19. NMFS states:

“Project specific studies are needed to understand the oceanographic changes from project operation and evaluate the effects of those changes on the ecosystem and the species that rely on this area.”

NMFS, Appendix at 19 [emphasis added].

In other words, NMFS, the national marine biology expert, directly disputes the ecological basis of BOEM's decision to approve the construction plan for Empire Wind. The NMFS findings support the April 16, 2025 order that further environmental review is necessary before work can proceed on Empire Wind.

No evidence refuting NMFS's findings as to the hydrodynamic changes has been identified by the Secretary to support reinstatement of the Empire Wind work permits, rendering the May 19, 2025 order arbitrary, capricious or unreasonable or unsupported by this well-established ecological record.

I. The record shows a lack of adequate investigation as to harm to endangered whales that further supports the Secretary's April 16, 2025 "Stop Work Order".

With less than 350 individuals surviving, the North Atlantic Right Whale is the most critically endangered marine mammal *and* it inhabits the Empire Wind project area that forms a part of its migration and feeding area. All federal agencies agree this species is critically endangered and that little is known as to how offshore wind turbine structures will affect their life history and habitat. It is widely agreed that the loss of one individual will threaten the survival of the

species and multiple threats are posed by offshore wind projects, including Empire Wind, as discussed below.⁶

The project area will overlap “critical” habitat for the North Atlantic Right Whale, that uses the project area “throughout the year”, as well as the Sei whale, the Fin whale and the Sperm whale. BOEM, Final Environmental Impact Statement (FEIS) §3.15-3-4; Exhibit M. Supporting the President and the Secretary’s orders, BOEM concluded in the FEIS that further investigation is necessary to understand the impact of the Empire Wind project on endangered whale species. FEIS, §3.15-5; Exhibit M.

Sound impacts are among the most significant risk factors from WTG construction and operation and these, BOEM agrees, are poorly understood. BOEM itself concluded that hearing impacts of underwater turbine noise on the larger whale species is unknown. FEIS, § 3.15-11; Exhibit M. The FEIS concedes that behavioral changes from sound impacts are poorly understood and “are challenging to both predict and measure, and this remains an ongoing field of study within marine mammal bioacoustics,...”. FEIS, § 3.15-17; Exhibit M.

⁶ See www.boem.gov/environment/protecting-north-atlantic-right-whales-during-offshore-wind-energy-development; Exhibit N; “BOEM and NOAA Fisheries North Atlantic Right Whale and Offshore Wind Strategy”, January 2024, at 17; Exhibit O (discussing species-threatening concerns).

As to EMF (Electromotive Force) impacts on marine ecologies, BOEM concedes there is insufficient research on the effect on EMF on benthic organisms, FEIS, §3.6-29.

All of these “unknowns” support the Secretary’s April 16, 2025 order. Nothing has been identified or produce to show that these concerns are resolved so as to support the May 19 2025 reinstatement of work permits.

Among the risks posed by the turbine project are “acoustic masking” in which the communication of whales is blocked by externally-added sounds. BOEM concedes it will be necessary to properly understand these issues *before* regulation or mitigation can be implemented, further supporting the Secretary’s Stop Work Order. “[P]hysiological stress” to whales from sound impact “is extremely difficult to measure in wild animals”, BOEM concluded, and “is a complex subject with many interacting factors and extreme variability in response from one sound source to another and from species to species.” FEIS, §3.15-17; Exhibit M. What is clear is that impact of industrial sound on these endangered animals *is unknown*.

BOEM has not resolved these issues and admits that impacts on whale species from underwater sound intrusions are difficult to understand *and the effect is ultimately not known*:

The long-term effects of multiple anthropogenic underwater noise stressors on marine mammals across their large geographical range are difficult to determine and relatively unknown. The potential for these stressors to have population-level consequences likely varies by species, among individuals, across situational contexts, and by geographic and temporal scales (Southall et al. 2021b). FEIS, §3.15-19; Exhibit M.

Uncertainty prevails, combined with BOEM's admission that underwater sound emissions can cause permanent marine mammal deafness ("PTS"), an irreversible loss of hearing due to hair cell loss or other structural damage to auditory tissues. FEIS, §3.15-16; Exhibit M.

All of this supports the Secretary's April 16, 2025 finding that investigation is necessary before work permits can go forward for an industrial project in waters inhabited by rare and endangered animals, the impacts on which are almost completely unknown, reflecting a near-complete absence of scientific knowledge.

BOEM even admits there has not been sufficient research to understand the impact of turbine operational sound on marine mammals: "In any case, additional data are needed to fully understand the effects of size, foundation type, and drive type on the amount of sound produced during turbine operation." FEIS, §3.15-30; Exhibit M.

BOEM acknowledges there has not been definitive research as to whether the operational noise of turbines will drive away and displace marine mammals but

that existing evidence shows *permanent loss of species where turbines are operating*:

Very few empirical studies have looked at the effect of operational wind turbine noise on wild marine mammals. Some have shown an increase in acoustic detections of marine mammals during the operational phase of wind farms (e.g., harbor seals: Russell et al. 2016; harbor porpoise: Scheidat et al. 2011), while another study showed a decrease in the abundance of porpoises 1 year after operation began in comparison with the pre-construction period (Tougaard et al. 2005). FEIS, §3.15-31; Exhibit M.

Further supporting the President and Secretary's orders, BOEM noted there has been **no** scientific study — none at all — as to the effect of pile driving noise, intense explosive underwater sound associated with turbine construction, as to baleen whales, the most endangered species that inhabit the project area: “there are no studies that have directly examined the behavioral response of baleen whales to pile driving,…” FEIS, §3.15-34; Exhibit M. Whales exposed to pile driving noise for any lengthy period can suffer “PTS”, a species-threatening condition, as BOEM also acknowledges:

Depending on the hearing sensitivity of the species, exceedance of NMFS PTS and TTS thresholds may occur on the scale of several kilometers. PTS could permanently limit an individual's ability to locate prey, detect predators, navigate, or find mates *and could therefore have long-term effects on individual fitness*. FEIS, §3.15-34 [emphasis added].

BOEM admits that “uncertainty” prevails as to the cumulative impact of noise on these animals: “[U]ncertainty remains regarding the long-term cumulative

acoustic impacts associated with multiple pile-driving projects that may occur over a number of years.” FEIS, Appendix D, D-5; Exhibit M.

This complete absence of information as to the effect of turbine sound emissions on whale species fully supports the Secretary’s April 16, 2025 conclusion that further investigation as to the Empire Wind project is necessary, yet BOEM reinstated the work permits on May 19, 2023⁵ with no further investigation as to these (or any other issues) and no findings that any issues had been resolved.

In an extraordinary admission, BOEM acknowledges the threat to the North Atlantic Right Whale’s food source from the turbines, specifically that changes in the hydrodynamic patterns once the WTG structures are in place may cause declines in the zooplankton and phytoplankton on which this endangered whale feeds:

[B]roadscale hydrodynamic impacts could alter zooplankton distribution and abundance (van Berkel et al. 2020). This possible effect is primarily relevant to NARWs, as their planktonic prey (calanoid copepods) are the only listed species’ prey in the region whose aggregations are primarily driven by hydrodynamic processes. As aggregations of plankton, which provide a dense food source for NARWs to efficiently feed upon, are concentrated by physical and oceanographic features, increased mixing may disperse aggregations and may decrease efficient foraging opportunities. Potential effects of hydrodynamic changes in prey aggregations are specific to listed species that feed on plankton, whose movement is largely controlled by water flow, as opposed to other listed species that eat fish, cephalopods, crustaceans, and marine vegetation, which are either more stationary on the

seafloor or are more able to move independent of typical ocean currents (NMFS 2021b). FEIS, §3.15-45; Exhibit M.

BOEM admits it has no solution to this projected interference with the North

Atlantic Right Whale's food supply:

There is considerable uncertainty as to how these broader ecological changes will affect marine mammals in the future and how those changes will interact with other human-caused impacts. The effect of the increased presence of structures on marine mammals and their habitats is likely to be negative, varying by species, and its significance is unknown. *Id.*

Marine mammals face reduced food supply from these hydrodynamic effects

but BOEM admits these impacts are not “fully understood:

“the potential effects on marine mammal prey species distribution, and therefore marine mammals, from changes to hydrodynamic conditions caused by the presence of offshore structures are not fully understood at this time.” FEIS, §3.15.-43; Exhibit M.

It follows that Empire Wind and its structures risk permanent and irreparable harm to the most endangered of these species, the North Atlantic Right Whale: “it is unknown whether the population can sufficiently recover from the loss of an individual to maintain the viability of the species.” FEIS, §3.15-47; Exhibit M.⁷

⁷ NOAA reports there are “fewer than 70 reproductively active females” alive in the world. *See* www.fisheries.noaa.gov/species/north-atlantic-right-whale; Exhibit P and Exhibit O at 8. Due to this and other factors, “the resilience of this population to stressors affecting their distribution, abundance, and reproductive potential is low” and it “faces a high risk of extinction,…” *Id.*

Thus, BOEM admits to the very uncertainty that motivated the Secretary's April 16, 2025 stop work order and no information has been produced to show that these issues have been resolved to support reinstatement of the work permits.⁸

J. The Secretary's April 16, 2025 stop work order was supported by this record and no finding has been made by BOEM to support reinstatement.

For the foregoing reasons, plaintiffs seek temporary and preliminary restraints enjoining the construction or installation of the Empire Wind turbines and other facilities. As shown above, Defendants' own studies reveal that the Empire Wind project will irreparably damage matters of great public import, including fishing activity, air and vessel navigation, defense systems, marine life and ocean ecology. It was for these reasons that the administration halted all offshore wind development pending further review and analysis. The abrupt reversal of this decision—which allows Empire Wind to move forward—is wholly unsupported, unexplained and, therefore, the epitome of arbitrary and capricious behavior in direct violation of the Administrative Procedure Act.

⁸ Other potential outcomes from hydrodynamic changes include a lack of scientific analysis as to the effect on the Mid-Atlantic Cold Pool, a seasonal water mass vital to the life cycle of fish and invertebrates in the Empire Wind Lease Area, including yellow tail flounder, winter flounder and Atlantic Surfclams. FEIS, §3.13-3; §3.13-18. BOEM acknowledges the risk of “[c]hanges in cold pool dynamics” is unknown but “could potentially cause changes in habitat suitability and fish community structure”. FEIS, §3.13-20. “It is too early to evaluate the effect of offshore wind structures on fish and invertebrate movements and migrations [.]”. *Id.* All of these are “permanent” impacts. FEIS, §3.13-28.

Accordingly, plaintiffs enjoy a substantial likelihood of success on the ultimate merits of this matter, and therefore, abundant grounds exist for this Court to temporarily and preliminarily enjoin the development of the Empire Wind project.

CONCLUSION

For the foregoing reasons, plaintiffs seek temporary and preliminary restraints enjoining construction or installation of the Empire Wind turbines and other facilities.

Respectfully submitted,

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