Our Most Recent Report

NEFSA

COOLING STATIONS REPORT OCT. 10, 2023

MAIN TAKEAWAYS:

- **SEAWATER LIFT PUMPS (SWLPS) CAN ACCELERATE THE MATURING PROCESS FOR LARVAE.**
- **DISRUPTING THE NATURAL PROCESS CAN LEAD TO HIGH MORTALITY RATES AND FISH DEFECTS.**
- **WIND FARMS ARE COSTLY, AS CONSUMER PRICES INCREASE, SHOULD WE ADD MORE ENERGY COSTS TO THE CURRENT BURDEN?**

1

STRUCTURE:

The Orsted Ocean-wave farm Project design claims to have the "best technology available", yet **fails to address entrainments and the acceleration to fish maturity**

- Three vertical pipes in a cluster drain from the ocean surface down to **10 feet above the sea floor**
- Each pipe has an intake opening **just under 20 feet** in surface area.
- Giant filters installed on these opening guarantee that large objects won't damage or destroy the structure from within, but **does not filter small organisms like fish larvae**
- Ten of the three pipes will operate with its own SWLP capable of pumping **2,000 gallons per minute**, for a total intake of water flow per day **2,880 gallons per minute**
- The extreme power brings water and anything small enough, to fit through the mesh **flow to the surface in minutes.**

2

STRUCTURE:

BREAKDOWN OF MAXIMUM DAILY FLOW PER MONTH

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Max Daily Flow	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
Max Daily Flow (MGD)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

- The U.S. Department of the Interior Bureau of Ocean Energy Management (BOEM) **claims that the Orsted (DOW) have yet to discharge the temperature of the discharge water by these cooling systems.**
  - However, they believe the warm water effects on the surrounding ocean are "likely to be extremely minimal." **But there is no research to support this claim.**
  - BOEM's banking on engineering advancements to mitigate harm to the environment but **cannot confirm the effects currently.**

3

ECOLOGICAL IMPACTS:

GREATER ATLANTIC'S WHOLE CHEMICAL TO FISH STOCK COGENIC COMMENTS

- The environment of Massachusetts during operation **based on the national NOAA** National Centers for Environmental Information Climate Reports **is unknown.**
  - Estimates are from NOAA's Marine Resources Monitoring, Assessment, and Prediction (MARMAP) program from 1977 to 1987 and from the Northeast Fisheries Science Center (NFSC) through 2007 through the North Atlantic region.

The Orsted Ecosystem Project Independent Statement **assumes** of impact **based on the research on the mortality rate of** the Atlantic Herring Larvae, **Clupea harengus**

- "It is important to note that the potential (chlorpyrifos) and pyrethroid insecticides (deltamethrin) concentrations used in the experiment are well in excess of concentrations that would be expected in environmental individuals would arrive passage through the CWPS. Thus, the results of this study, **based on the 96-hour lethal and sublethal** temperature exposure of the NOAA (1984), Entrainment survival studies at existing power plants do not include directly comparable healthy or stressed herring."

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ECOLOGICAL IMPACTS:

UNDER WATER TEMPERATURES EFFECT BREEDING CYCLES FOR THE COD AND ALL ACCORDING TO THE GREATER ATLANTIC

- **Higher water temperatures typically stimulate sperm** (Morphin Zoh-Hatchmonos team)
- For females, these enveloped cycles mean that female vitamins produce eggs. Given this information, it is clear that the vitamins are **not** the only factor in the production of eggs, but they are typically of **fewer quality, and larvae have lower survival rates.**
- Cod eggs **develop faster in warmer waters.** Cod eggs and kids **need warmer water** and their with the cooler.
- **Increasing water temperatures may affect mating spawning** activity and the number of eggs produced by the cod and ocean perch.
- Mouthfull release eggs with the float near the water's surface and ide the waves it survive the 12 waves until they hatch. The ratio distinguish based on the water temperature. Warmer water accelerates the process.
- Haddock eggs flee to the ocean surface and ride the currents.

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COSTS:

THE MYTH BEHIND CHEAP AND RELIABLE WIND GENERATION

- Lessons for the **ocean-wave** case utilities and state public utility commission (MPC) increased responsibility.
  - Most recently, the Gulf of Mexico lost for the Lake Charles Lines Area was **over $5 million.**
  - Hurricane Ida, in 2021, **$1 billion.**
  - Vineyard Wind cases **over $3 million per MW**
  - Consequence is a extreme cycle healthy at $1 million per MW

- What is a viable source of ocean generation
  - Ocean-wave farm Project design claims to have a power of Kwyk. A wave speed of 20.5 knots enables the turbine to operate at **full power.**
  - Turbines will shut down to protect themselves at 22 meters/second (50.4 mph).
  - Offshore wind farms **typically** have **lifts of 37 MW** high, meaning wind is in the air with a gusts of 50 mph **will cease zero electricity for the grid.**

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NEFSA

DEFEND AMERICA'S MARITIME HERITAGE.

BECOME A MEMBER TODAY.

FIGHT SALTY.

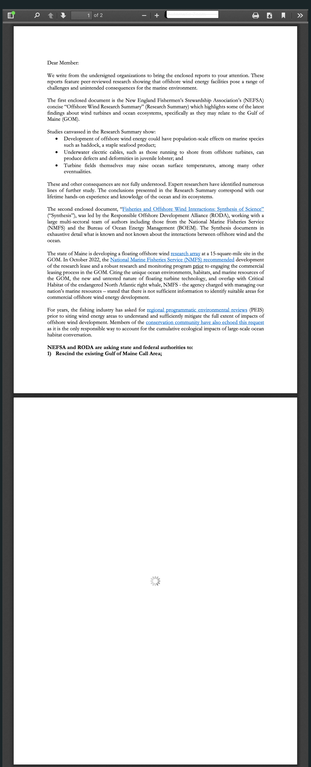
Offshore Wind Research Summary

NEFSA

OFFSHORE WIND RESEARCH SUMMARY

AUG. 7TH, WWW.NEFSAHEMEN.ORG

Our Coalition Letter



Dear Member:

We write from the undersigned organizations to bring the enclosed reports to your attention. These reports feature peer-reviewed research showing that offshore wind energy facilities pose a range of challenges and unintended consequences for the marine environment.

The first enclosed document is the New England Fishermen's Stewardship Association's (NEFSA) concise "Offshore Wind Research Summary" (Research Summary) which highlights some of the latest findings about wind turbines and ocean ecosystems, specifically as they may relate to the Gulf of Maine (GOM).

Studies canvassed in the Research Summary show:

- Development of offshore wind energy could have population-scale effects on marine species such as haddock, a staple seafood product;
- Underwater electric cables, such as those running to shore from offshore turbines, can produce defects and deformities in juvenile lobster; and
- Turbine fields themselves may raise ocean surface temperatures, among many other eventualities.

These and other consequences are not fully understood. Expert researchers have identified numerous lines of further study. The conclusions presented in the Research Summary correspond with our lifetime hands-on experience and knowledge of the ocean and its ecosystems.

The second enclosed document, "Fisheries and Offshore Wind Interactions: Synthesis of Science" ("Synthesis"), was led by the Responsible Offshore Development Alliance (RODA), working with a large multi-sectoral team of authors including those from the National Marine Fisheries Service (NMFS) and the Bureau of Ocean Energy Management (BOEM). The Synthesis documents in exhaustive detail what is known and not known about the interactions between offshore wind and the ocean.

The state of Maine is developing a floating offshore wind research area at a 15-square-mile site in the Gulf of Maine. In October 2022 the National Marine Fisheries Service (NMFS) recommended development of the research lease and a robust research and monitoring program prior to engaging the commercial leasing process in the GOM. Citing the unique ocean environments, habitats, and marine resources of the GOM, the new and untrusted nature of floating turbine technology, and overlap with Critical Habitat of the endangered North Atlantic right whale, NMFS - the agency charged with managing our nation's marine resources - stated that there is not sufficient information to identify suitable areas for commercial offshore wind energy development.

For years, the fishing industry has asked for regional programmatic environmental review (PEIS) analysis of wind energy areas to understand and sufficiently mitigate the full extent of impacts of offshore wind development. Members of the conservation community have also echoed this request as it is the only responsible way to account for the cumulative ecological impacts of large-scale ocean habitat conversation.

NEFSA and RODA are asking state and federal authorities to:
1) Rescind the existing Gulf of Maine Call Area;

Connect

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