**March 13, 2024**

**Chief, Division of Environmental Assessment**
**Office of Environmental Programs, Bureau of Ocean Energy Management (BOEM)**
**45600 Woodland Road, VAM–OEP**
**Sterling, Virginia 20166**

**RE: New York Bight Draft Programmatic Environmental Impact Statement (BOEM) 2024-001**
**Docket Number: BOEM-2024-0001**

These comments are submitted by the undersigned for the Draft Programmatic Environmental Impact Statement (PEIS) referenced above, described on page 1-1 of the document as "assessing the potential biological, socioeconomic, physical, and cultural impacts that could result from development activities for six commercial wind energy leases in an area offshore New Jersey and New York known as the New York Bight (NY Bight), as well as the change in those impacts that could result from adopting related programmatic avoidance, minimization, mitigation, and monitoring (AMMM) measures."

On page 1-4 of the PEIS, BOEM restates the Proposed Action for the Draft PEIS as "the adoption of programmatic AMMM measures that BOEM would require as conditions of approval for activities proposed by lessees in COPs submitted for the NY Bight lease areas unless future COP-specific NEPA analysis shows that implementation of such measures is not warranted or effective."

BOEM states the Draft PEIS intends to address the following objectives:

- Analyzing potential impacts if development is authorized in the six NY Bight lease areas.
- Analyzing programmatic AMMM measures for the six NY Bight lease areas.
- Analyzing focused, regional cumulative effects.
- Tiering of project-specific environmental analyses.

These comments describe major failures to comply with the requirements of National Environmental Policy Act (NEPA) in the preparation of this document that appear to be part of an overall campaign of misinformation regarding the cost and ability of off-shore wind to meet the dual demand load and portfolio standard requirements of New York and New Jersey law, policy, and service obligations absent the destruction of the marine ecosystem comprising the NY Bight and surrounding areas.

## I. BACKGROUND

- NJ Executive Order No. 28 of May 23, 2018, sets target of total conversion of the state's energy production profile to 100% clean energy sources on or before January 1, 2050; directs the New Jersey Board of Public Utilities (NJBPU) and other state agencies to develop an Energy Master Plan (EMP), published on January 27, 2020. "Clean" energy includes nuclear generation.
- The New York State Climate Leadership and Community Protection Act (CLCPA) was signed into law on July 18, 2019. Among its provisions are requirements to:
    - Double distributed solar deployment to 6,000 megawatts by 2025
    - Deploy 3,000 megawatts of energy storage by 2030
    - Generate 70% of electricity from renewable energy by 2030
    - Reduce GHG emissions by 40% from the 1990 baseline by 2030
    - Quadruple NY's offshore wind to 9,000 megawatts by 2035
    - 100% clean electricity (emission free) by 2040 (including nuclear)
    - Reduce GHG emissions by 85% from the 1990 baseline by 2050
- Executive Order 14008, "Tackling the Climate Crisis at Home and Abroad," was issued on January 27, 2021. In that order, President Biden stated that the policy of his administration is "to organize and deploy the full capacity of its agencies to combat the climate crisis to implement a Government-wide approach that reduces climate pollution in every sector of the economy; increases resilience to the impacts of climate change; protects public health; conserves our lands, waters, and biodiversity; delivers environmental justice; and spurs well-paying union jobs and economic growth, especially through innovation, commercialization, and deployment of clean energy technologies and infrastructure."
    - To support the goals outlined in Executive Order 14008, the administration announced plans to increase renewable energy production, with a goal of 30 gigawatts (GW) of offshore wind energy capacity by 2030 thought to be capable of producing enough electricity "to power 10 million homes with clean energy…."
    - DOI announced a goal to hold up to seven offshore wind auctions by 2025, including areas in the Gulf of Maine, New York Bight, Central Atlantic, and Gulf of Mexico, as well as offshore of the Carolinas, California, and Oregon.
    - New Jersey Executive Order No. 307 was issued on September 21, 2022, outlining the goal of 11 GW of offshore wind energy generation by 2040, while then NYS Governor Andrew Cuomo set a target of 9 GW of OSW by 2035 in January of 2019, bring the total to 20 GW of installed OSW on the 2035-2040 timeframe.
    - On June 23, 2022, the White House announced the federal government was joining with eleven governors from up and down the East Coast to launch a new Federal-State Offshore Wind Implementation Partnership that will accelerate the growing offshore wind industry, estimated to be a $109 billion revenue opportunity across the offshore wind supply chain this decade. That construction goal was 30 GW along the Atlantic Seaboard by 2030.
- In 2023, the NJ Governor published what amounts to a superceding Executive Order, mandating that clean energy market mechanisms and other programs should be accelerated to provide for 100 percent of the electricity sold in the State to be derived from clean sources by January 1, 2035. The NJBPU was directed to issue an updated EMP in 2024 to provide a roadmap and proposals to achieve the 100 percent clean energy goal (N.J. Admin. Code § Executive Order No. 315 (2023)). The updated EMP has not yet been released.
- As of March 4, 2024, NJ State Senate committee advanced a bill that would authorize a public referendum on amending the state's Constitution to ban construction of new power plants that burn natural gas or other fossil fuels.

    - The measure was changed to allow the construction of such plants if they are to be primarily used as emergency backup power sources.
- In parallel with these actions, the Oyster Creek Nuclear Generating Station in NJ was prematurely shutdown in September of 2018, before its license expired. The 636 MW plant operated at 100% capacity and generated 5,400 GWh of electricity in 2017, its last full year of operation.
- Two nuclear reactors at Indian Point (IP2 and IP3) were also prematurely shuttered in 2020 and 2022, respectively, prior to license expiration. The 1037 MW IP2 plant ran at 94% capacity in its final full year of operation and generated 8,400 GWh of electricity. At 1039 MW and 100% capacity, IP3 generated 9,100 GWh of electricity in its last full year of operation (2021).
    - This mean that as New York and New Jersey were setting and resetting targets for both renewable and "clean" or "emission-free" generation, they consciously eliminated 2719 MW of installed power that annually produced 23,900 GWh of clean power toward which ratepayers had invested millions to build and successfully operate on land assets already dedicated to energy production.
    - As elaborated below, the current leases planned for the NY Bight, which will build 8,822 MW (more than three times the shuttered nuclear) and operate at 40% capacity (vice the 100% of the shuttered nuclear plants) will make about 31,000 GWh, at best a net gain of a little more than 7,000 GWh of clean generation.
- The amounts of installed capacity and number of Wind Turbine Generators (WTGs) in the planned projects as described in the PEIS are inconsistent and seriously misleading:
    - On page ES-4, the PEIS states "Based on a conservatively estimated power ratio of 3 megawatts per square kilometer, BOEM estimates that full development of leases in this area has the potential to create up to 5.6 to 7 GW of offshore wind energy."
    - On the same page, the PEIS states an estimated 16–18 GW of offshore wind energy may be necessary to ensure New York State achieves its Climate Act mandates (New York State Climate Action Council 2022).
    - On page ES-7 of the PEIS, BOEM states that "For the analysis of six NY Bight projects, BOEM anticipates development of 1,103 WTGs, 22 offshore substations (OSSs), 44 offshore export cables totaling 1,772 miles (2,852 kilometers), and 1,582 miles (2,546 kilometers) of inter-array cables across the six NY Bight lease areas."
        - This assertion that the six NY Bight projects would build "up to 1,103 WTGS" is repeated on PEIS page 2-16.
    - On page 3.4.1-8, the PEIS says the NY Bight Projects evaluated in the PEIS would construct an estimated 9,922 MW of renewable power from the installation of 713 WTGs, citing Table D2-1 in Appendix D.
        - Table D2-1 indicates only 8,822 MW will be installed by the current projects, and require 615 WTGs
        - Table D2-1 further indicates that a further 1,103 WTGs are planned, but fails to disclose the resulting installed MWs. (Using a ratio analysis of the data provided in Table D2-1, if 615 WTGs will produce 8,822 MW of installed capacity, then 1,103 WTGs would constitute another 15,822 MW installed).
    - The Table in Appendix D appears to conflict with text elsewhere in the PEIS, and indicates the total planned buildout of OSW in the NY Bight leases is 26,644 MW.

## II. COMMENTS

### 1. Segmentation: The PEIS violates 38 CFR § 200.4 by improperly segmenting the Proposed Action from the full complement of OSW projects and installed Wind Turbine Generators (WTGs) needed to meet the dual legal requirements of service load obligations and applicable state mandates for renewable energy.

The purpose of the Proposed Actions is to build and operate OSW facilities that produce "renewable" electricity from sources approved under NY law and NJ Executive Order to meet what is now—and remains in the future—a long-established "service obligation"[1] to provide electricity to end-use consumers. Switching the existing generation from fossil fuels and nuclear power to renewables such as offshore wind requires full assessment of the impacts of building out the full complement of OSW facilities that will be needed so a) the public is fully informed of the magnitude of the federal action, and b) complete and cumulative impacts can be assessed. This "segmenting" of OSW projects is a blatant violation of NEPA and its regulations, given the stated purpose of the PEIS is to assess the "potential biological, socioeconomic, physical, and cultural impacts that could result from development activities for six commercial wind energy leases in an area offshore New Jersey and New York known as the New York Bight (NY Bight)" (PEIS page ES-3).

*a) The Installed Capacity Requirements and Planning are Both Segmented and Misleading*

The segmentation of projects is clearly evidenced at the outset by the misleading inconsistencies in the size and parameters of NY Bight lease and construction planning outlines above. The PEIS (p. 1-5) states that based on a conservatively applied power ratio of 3 megawatts per square kilometer, BOEM estimates that full development of leases in this area has the potential to create up to 5.6 to 7 GW of offshore wind energy. Yet, the PEIS alternatively states the projects will create 8,822 MW, or 9,922 MW, and will include an additional 1,103 WTGs to ostensibly satisfy the intersecting and potentially contradictory or mutually exclusive statutory and policy renewable goals established by New York and New Jersey:

- NJ: 11 GW of offshore wind energy generation by 2040
- NY: 9.0 GW of offshore wind energy generation by 2035
- NY: 33% of downstate electric generation from OSW by 2040

The PEIS indicates that the 20 GW total of OSW for the two state mandates noted above must be augmented by an additional estimated 16–18 GW of offshore wind energy to ensure New York State achieves its CPCLA mandates. Other than the reference noted above to an additional 1,103 WTGs being "planned," no description, analysis, or impact disclosure regarding the buildout of ***16-18 more GW of OSW*** needed to meet the NY requirements alone is provided in the PEIS. This gap is not readily ascertainable as the Proponents have failed to inform the public regarding the known electricity demand requirements identified forecasts and trends (see data and discussion below).

Inconsistent and misleading depictions of actual and planned WTG/MW in and among the main PEIS text and appendix information demonstrates project segmentation. **Appendix D: Planned Activities Scenario** of the PEIS contains summary tables that indicate the total number of "foundations" to be

[1] Federal law defines the "service obligation" as a requirement applicable to, or the exercise of authority granted to, an electric utility under Federal, State, or local law or under long-term contracts to provide electric service to end-users or to a distribution utility (16 USC § 824q).

built for either WTGs or offshore substations (OSSs) (PEIS Table D-2) and the total number of WTGs (PEIS Table D2-1) as of November, 2023. PEIS Table D2 reveals construction planning for a total of 1,761 foundations in the NY Bight. PEIS Table D2-1 reveals that 1,718 of the foundations are for WTGs to be constructed, 615 (or 713) of which comprise the current proposed actions in the PEIS. The additional, segmented projects wishfully intended to meet NY ratepayer service obligations while also complying with the CLCPA (discussed in further detail below), includes the additional 1,103 WTG buildout.

As excerpted in Table 1, PEIS Table D2-1 data shows that the projects comprising the Proposed Action will total 615 WTGs providing installed capacity of 8,822 MW (contrasting with the 713 WTGs and 9,922 figures provided on p. 2.4.1-8 of the PEIS). The undisclosed, unanalyzed future projects in six other lease areas labeled as "planning" requiring the additional 1,103 WTGs would be an increase of almost 200% over the current project total of 615. These "planned" leases and WTGs are due to begin construction between 2026 and 2030, with construction potentially extending beyond 2030.

**Table 1 : Summary of Current and Planned OSW Projects**

| Region | Lease/Project | Lease Area | Status | Table D2-1 Turbine Number | Generating Capacity (MW) |
|---|---|---|---|---|---|
| NY/NJ | Atlantic Shores South | OCS-A 0499 | COP, PPA, SAP | 200 | 2,837 |
| NY/NJ | NY/NJ Atlantic Shores North | OCS-A 0549 | COP (unpublished), SAP | 157 | 2,355 |
| NY/NJ | NY/NJ Ocean Wind 2 | part of OCS- A 0532 | PPA | 111 | 1,554 |
| NY/NJ | NY/NJ Empire Wind 1 | part of OCS-A 0512 | COP, PPA, SAP | 57 | 816 |
| NY/NJ | NY/NJ Empire Wind 2 | part of OCS-A 0512 | COP, PPA, SAP | 90 | 1,260 |
| NY/NJ | NY Bight lease areas | OCS-A 0537, OCS-A 0538, OCS-A 0539, OCS-A 0541, OCS-A 0542, and OCS-A 0544 | Planning | 1,103 | Not Available |

**Source: PEIS Table D2-1**

Table D2-1 in the PEIS claims the installed MW total for those additional WTGs is not available, but arithmetic tells us that based on the current project figures depicted, each WTG is expected to provide approximately 14.3 MW (8,822 divided by 615). Multiplied against the planned 1,103 additive turbines, the installed capacity for the "future planned" additional projects is 15,772 MW (15.7 GW), less than the estimated 16-18 additional GW needed to meet the CLCPA (assuming NY can claim *all* the electricity).

The improper segmentation extends to energy storage goals established in both jurisdictions. Pursuant to revised energy storage deployment targets announced by NY Governor Kathy Hochul in January of 2022 that double storage capacity from 3 GW to 6 GW by 2030, NYSERDA submitted an updated "Storage Roadmap" to the NYS Public Service Commission (PUC) on December 28, 2022.[2] In the Roadmap, NYSERDA acknowledges "this nation-leading storage target…is motivated by the rapid growth in renewable energy expected over the next decade and the role that electrification of transportation and buildings is expected to play in achieving New York State's future carbon neutral economy" (Roadmap, page 6).

[2] CASE 18-E-0130, In the Matter of Energy Storage Deployment Program, December 28, 2022

The PUC case filling further discloses NYSERDA's understanding that:

> To serve the needs of a carbon neutral economy, analysis developed to support this Roadmap indicates that about 12 GW of energy storage by 2040 and 17+ GW by 2050 would be part of a cost-effective decarbonized electric grid, offering critical benefits in terms of grid reliability and integration of renewable generation (Roadmap, page 6).

This 12-17 GW of storage appears to be parallel infrastructure/facility development needed on top of the the Proposed Actions and the addition 16-18 GW of installed OSW planned by NYS, but the PEIS fails to describe the unavoidable adverse impacts from this storage buildout.

New Jersey has also set an energy storage goal of 2 GW by 2030, which the BPU is looking to implement through a series of incentives. As recently as August of 2023, the BPU was issuing Requests for Information (RFIs) in its Storage Incentive Program (NJSIP) in recognition that "[e]energy storage resources are critical to increasing the resilience of of New Jersey's electric grid, reducing carbon emissions, and enabling New Jersey's transition to 100% clean energy."

In spite of the implicit and explicit obviousness of this energy storage facility buildout as an integral part of renewable generation buildout (particularly the large volume of planned OSW projects and program-

**Table 2: NYISO Baseline Annual Energy Forecast (In GWh)**

| Year | (a)<br><br>Econometric Energy | (b)<br>(-)<br>EE and C&S | (c)<br>= a - b<br>End-Use Energy | (d)<br>(-)<br>Solar PV, BTM | (e)<br>(-)<br>Non-Solar DG, BTM | (f)<br>(+)<br>Storage Net Energy Consumption | (g)<br>(+)<br>EV Energy | (h)<br>(+)<br>Building Electrification | (i)<br>(+)<br>Large Load Projects | (j)<br>= c-d-e+f+g+h+i<br>Baseline Annual Energy Forecast |
|---|---|---|---|---|---|---|---|---|---|---|
| 2023 | 157,127 | 2,137 | 154,990 | 5,329 | 1,969 | 57 | 737 | 954 | 2,340 | 151,780 |
| 2024 | 158,646 | 4,732 | 153,914 | 6,529 | 2,130 | 159 | 1,112 | 1,474 | 4,140 | 152,140 |
| 2025 | 159,307 | 7,322 | 151,985 | 7,719 | 2,186 | 247 | 1,630 | 2,253 | 6,180 | 152,390 |
| 2026 | 160,028 | 9,863 | 150,165 | 8,834 | 2,246 | 374 | 2,339 | 3,212 | 8,240 | 153,250 |
| 2027 | 160,753 | 12,168 | 148,585 | 9,827 | 2,309 | 573 | 3,291 | 4,447 | 9,020 | 153,780 |
| 2028 | 161,568 | 14,455 | 147,113 | 10,654 | 2,367 | 678 | 4,454 | 5,856 | 9,310 | 154,390 |
| 2029 | 162,213 | 16,638 | 145,575 | 11,337 | 2,411 | 781 | 5,841 | 7,551 | 9,530 | 155,530 |
| 2030 | 163,007 | 18,881 | 144,126 | 11,879 | 2,446 | 881 | 7,463 | 9,485 | 10,030 | 157,660 |
| 2031 | 163,931 | 20,956 | 142,975 | 12,325 | 2,503 | 975 | 9,290 | 11,658 | 10,030 | 160,100 |
| 2032 | 164,871 | 22,993 | 141,878 | 12,727 | 2,540 | 1,066 | 11,344 | 14,209 | 10,030 | 163,260 |
| 2033 | 165,960 | 24,862 | 141,098 | 13,106 | 2,586 | 1,159 | 13,639 | 16,986 | 10,030 | 167,220 |
| 2034 | 167,148 | 26,643 | 140,505 | 13,458 | 2,622 | 1,249 | 16,186 | 19,950 | 10,030 | 171,840 |
| 2035 | 168,230 | 28,334 | 139,896 | 13,775 | 2,656 | 1,341 | 18,992 | 23,082 | 10,030 | 176,910 |
| 2036 | 169,163 | 29,894 | 139,269 | 14,068 | 2,682 | 1,430 | 21,808 | 26,413 | 10,030 | 182,200 |
| 2037 | 170,099 | 31,328 | 138,771 | 14,336 | 2,714 | 1,521 | 24,602 | 29,706 | 10,030 | 187,580 |
| 2038 | 171,090 | 32,704 | 138,386 | 14,582 | 2,757 | 1,610 | 27,338 | 33,035 | 10,030 | 193,060 |
| 2039 | 172,320 | 34,067 | 138,253 | 14,816 | 2,778 | 1,699 | 29,990 | 36,292 | 10,030 | 198,670 |
| 2040 | 173,593 | 35,533 | 138,060 | 15,023 | 2,816 | 1,787 | 32,539 | 39,453 | 10,030 | 204,030 |
| 2041 | 174,812 | 36,989 | 137,823 | 15,218 | 2,848 | 1,879 | 34,955 | 42,289 | 10,030 | 208,910 |
| 2042 | 175,929 | 38,390 | 137,539 | 15,399 | 2,873 | 1,967 | 37,223 | 44,893 | 10,030 | 213,380 |
| 2043 | 176,955 | 39,606 | 137,349 | 15,560 | 2,889 | 2,056 | 39,338 | 47,176 | 10,030 | 217,500 |
| 2044 | 177,818 | 40,792 | 137,026 | 15,707 | 2,920 | 2,144 | 41,288 | 49,229 | 10,030 | 221,090 |
| 2045 | 178,722 | 41,926 | 136,796 | 15,841 | 2,949 | 2,231 | 43,065 | 50,868 | 10,030 | 224,200 |
| 2046 | 179,448 | 43,019 | 136,429 | 15,974 | 2,963 | 2,321 | 44,627 | 52,280 | 10,030 | 226,750 |
| 2047 | 180,493 | 44,180 | 136,313 | 16,089 | 2,980 | 2,410 | 45,971 | 53,415 | 10,030 | 229,070 |
| 2048 | 181,504 | 45,354 | 136,150 | 16,201 | 3,015 | 2,496 | 47,090 | 54,440 | 10,030 | 230,990 |
| 2049 | 182,426 | 46,455 | 135,971 | 16,290 | 3,026 | 2,583 | 47,992 | 55,110 | 10,030 | 232,370 |
| 2050 | 183,267 | 47,523 | 135,744 | 16,384 | 3,043 | 2,670 | 48,679 | 55,654 | 10,030 | 233,350 |
| 2051 | 184,468 | 48,628 | 135,840 | 16,477 | 3,069 | 2,758 | 49,064 | 56,074 | 10,030 | 234,220 |
| 2052 | 185,517 | 49,711 | 135,806 | 16,547 | 3,097 | 2,845 | 49,224 | 56,479 | 10,030 | 234,740 |
| 2053 | 186,625 | 50,749 | 135,876 | 16,620 | 3,110 | 2,932 | 49,260 | 56,652 | 10,030 | 235,020 |

(a) - Econometric Energy Forecast - Reflects impacts of projected weather trends and economic growth
(b) (b) - Table I-8a Energy Efficiency and Codes & Standards Energy Impacts, Relative to 2022
(c) - End-Use Energy Consumption - Reflects projected end use energy consumption
(d) - Table I-9b Solar PV Impacts, Behind-the-Meter - Total Reductions in Annual Energy
(e) - Table I-10b Non-Solar Distributed Generation Impacts, Behind-the-Meter - Total Reductions in Annual Energy
(f) - Table I-12b Storage Annual Net Energy Consumption, both wholesale and behind-the-meter (pumped storage is not included - see Table III-2 for current resources) (g) - Table I-11b Electric Vehicle Energy Usage
(h)-TableI-13a Building Electrification Energy Usage-future end-use electrification including heat pumps, water heating, cooking, and other end-uses
(i) - Table I-14 Large Loads Forecast - reflects existing plus future load growth
(j) - Table I-2 Baseline Annual Energy Forecast

ming), the PEIS improperly segments out any assessment of planned storage capacity needed by renewable generation to meet forecast demand.

*b) The Disclosed/Analyzed Buildout Capacity is Completely Insufficient for Known Service Obligations*

The New York Independent System Operator, Inc. ("NYISO") presents load and capacity data for 2023 and future years in its annual "Gold Book." The 2023 Gold Book includes forecasts through to 2053 for electricity demand throughout the state, known the New York Control Area or "NYCA." As summarized by the NYISO on page 22 of the Gold Book, and shown in Table 2, the annualized forecast for demand growth in the NYCA ***will grow by 55% from the current 150,000 GWh to 235,020 GWh between 2023 and 2053***.

Notably, Table 2 indicates that after 2030, the greatest growth in demand for end-use electric energy in the NYCA will be building electrification and electric vehicles (EVs). An additional 49,260 GWh will be needed to power EVs, a factor of ten over the established rail electric transportation systems operating in the northeast corridor, operation of which currently uses more than half of the existing wind production in those same states (Table 3).

**Table 3: Wind Output and Mass Transit Electricity Requirements —Northeast Corridor**

| NE Corridor State | Wind Output (GWh) | Mass Transit System | GWh Used |
|---|---|---|---|
| **MA** | 0.215 | **MBTA** | 0.422 |
| **RI** | 0.209 | | |
| **CT** | 0.013 | **CT*rail*** | U/A |
| **NY** | 4.567 | **NYMTA** | 2.800 |
| **NJ** | 0.022 | **NJT** | 0.300 |
| **PA** | 3.572 | **SEPTA** | 0.386 |
| **MD** | 0.497 | **MARC** | U/A |
| **DE** | 0.004 | | |
| **DC** | 0 | **WMATA** | 0.500 |
| **Interstate** | | **AMTRAK** | 0.636 |
| **Total** | **9.099** | | **5.044** |

**Source: US EIA**

*b) The forecast growth in electricity demand by industry regulators cannot be met by the segmented OSW Projects described in the PEIS*

The planned 8,822/9,922 MW construction under the Proposed Action is well below the 20 MW total needed for the initial compliance with NYS CLCPA and the NJ EO, and woefully below what NYISO growth forecasts indicate will be needed for full NYS compliance alone.

The PEIS borders on fraudulent in its failure to fully disclose and assess the full effects of building out and operating the total number of WTGs needed to "meet" renewable goals and mandates given the realities of demand growth and service obligation; the full buildout will generate compounding and cumulative damage to irreplaceable maritime assets from construction and operation of both WTGs and attendant transmission facilities that are effectively ignored. Nor does the PEIS disclose and and analyze the amount of non-intermittent electric generation (nuclear, hydro, fossil, etc) along with storage/battery facil-

ities that will be needed to ensure reliable electric supplies during the 60% downtime experienced by OSW generation, or storage facilities.

- *New York*

Page 3.4.1-6 of the PEIS notes that the New York State Energy Research and Development Agency (NYSERDA) led the development of the New York State Offshore Wind Master Plan, is leading the coordination of offshore wind opportunities in New York State, and is supporting the development of 9,000 MW of offshore wind energy by 2035.

**Table 4: NYSERDA Projected Generation and Fuel Type**

| NYSERDA Generation Model | Demand Load (Gigawatt Hours/ GWh) | Percentage Renewable | Percentage Offshore Wind |
|---|---|---|---|
| Upstate 2030 | 51,223 | 70% | 0% |
| Downstate 2030 | 100,455 | 70% | 24% |
| Upstate 2040 | 74,905 | 75% | 0% |
| Downstate 2040 | 132,601 | 90% | 33% |

**Source: NYSERDA.NY.Gov**

On its "Story of Our Grid" page, NYSERDA divides the NYCA into Up- and Downstate regions to illustrate how various fuel types will be used to deliver the NYISO-measured load demand. NYSERDA calculations of future demand levels (using numbers similar but not equal to those of the NYISO) and planned renewable contributions for the NYS Grid are summarized in Table 4.[3] [4]

NYSERDA's Upstate/Downstate demand ratios run about one-third/two-thirds of the total load demand in the NYCA. Applying those ratios to the 2053 NYISO forecast, downstate demand will approximate 155,113 GWh. The "Story of Our Grid" webpage states that "Downstate load is completely met with zero emissions generation in 2040," a claim that is based on 33% of load being met with offshore wind. Applying this 33% requirement to the 2053 demand forecast means that more than ***50,000 GWh*** of OSW generation is necessary meet the CPCLA mandates in 2053.[5] Sourcing the 2040 downstate demand with 33% OSW production (as planned by NYSERDA) would require WTG capacity to make ***43,758 GWh.*** As noted above, were the projects to actually total 9,922 MW from 713 WTGs (vice 8,822 MW from 613 WTGs), electric generation could approach ***35,000 GWh of electricity.*** Assuming NY gets 50% of the output from the set (segment) of projects analyzed in the PEIS, ***the 2053 demand shortfall would be more than 30,000 GWh.***

Looked at another way, meeting the 2053 downstate demand of over 155,000 GWh with 33% OSW (***50,000 GWh)*** requires about ***15,000 MW of installed OSW capacity.*** This means NYS alone requires nearly half of all the off-shore wind in the Administration's Program to actually meet its CPCLA

[3] The total demand included in the NYSERDA calculations for 2030 are lower, and the 2040 estimates are higher, than the forecasts in the NYISO Gold Book provided in Table 2. NYSERDA does not provide estimates to 2053

[4] New York City demand is currently about 55,000 GWh, a little over half of the forecast 2030 Downstate demand for ~100,000 GWh.

[5] Calculations of GWh from OSW WTGs herein use a capacity factor of 40%, a three-year average of global capacity factors for 2020 to 2022 reported in 2024 by Statista.

obligations. The PEIS completely fails to disclose the reasonably foreseeable future actions needed to secure the actual MW/WTG buildout needed to produce the 50,000 GWh to meet the NYS mandate alone.

For purposes of grid stability and reliability, as well as delivering forecast demand requirements, it is important to note that the Downstate/NYC demand for 50,000 GWh includes vast municipal enterprise systems such as subways, wastewater treatment plants, hospitals, emergency services (police, fire, emergency medical), street and traffic lights—all requiring 24/7 electricity supply in copious amounts for all residents, but especially underserved and environmental justice populations. Describing actual turbine electricity production in euphemistic, misleading comparisons about powering "X Million Homes" is highly deceptive.

**Table 5: Eastern Seaboard Homes**

| Eastern Seaboard States | "HOMES" (in millions) |
|---|---|
| **ME** | 0.57 |
| **MA** | 2.71 |
| **RI** | 0.42 |
| **CT** | 1.39 |
| **NY** | 7.53 |
| **NJ** | 3.39 |
| **PA** | 5.14 |
| **DE** | 0.45 |
| **MD** | 2.29 |
| **VA** | 3.24 |
| **NC** | 4.01 |
| **SC** | 1.97 |
| **GA** | 3.88 |
| **FL** | 8.15 |
| **Total** | **45.14** |

**Source: US Census Bureau**

As Table 5 shows, the Eastern Seaboard has over 45 million "homes." Breaking down the deceptive tagline about the vaunted Atlantic OSW program powering "10 Million Homes," if the planned 30 GW installed can serve 10 million homes, 45 million homes will require 135 GW installed. The US Department of Energy typically cites 412 offshore WTGs as the requirement per gigawatt, meaning that powering ***all*** the East coast homes (and ***just*** the homes) with the needed 135 gigawatts of wind at 412 turbines per gigawatt puts over 55,000 turbines in the irreplaceable maritime system of the Atlantic—a far cry for the 600-700 turbine segment analyzed in the PEIS.

- *New Jersey*

Data on load growth in New Jersey is not as clear due to its inclusion in the multi-state Pennsylvania/Jersey/Maryland ISO (PJM). The 2024 PJM Load Forecast Report states that the total annual energy use throughout the PJM footprint is expected to increase nearly 40% by 2039, from the current 813,328 to 1,021,955 GWh. Of that, about 30,000 GWh of additional demand is identified as coming from the four NJ utility zones summarized in Table 6.[6]

**Table 6: NJ Forecast Load Increases**

| NJ Utility Zone | Load increase 2024-2039 (GWh) |
|---|---|
| **Atlantic Electric (AE)** | 2,556 |
| **Jersey Central Power & Light (JCPL)** | 11,380 |
| **Public Service Electric & Gas (PS)** | 15,155 |
| **Rockland Electric (East) (RECO)** | 341 |
| **Total** | 29,432 |

**Source: 2024 PJM Load Forecast Report**

[6] The total NJ load growth was calculated by subtracting the 2024 load forecast amount from the 2039 load forecast amount for the four NJ service zones listed in Table E-1, ANNUAL NET ENERGY (GWh) AND GROWTH RATES FOR EACH PJM MID-ATLANTIC ZONE AND GEOGRAPHIC REGION 2024 - 2034 summarized on pages 71-72 of the *2024 PJM Load Forecast Report* linked above.

According to the U.S. Department of Energy's Energy Information Agency (EIA), New Jersey plants of all types produced 65,061 GWh of electricity in 2022, of which 33,394 GWh came from natural gas production.[7] The entire mandated 11,000 MW of OSW installed capacity (only a fraction of which will come from the Proposed Action being evaluated) could only produce about 39,000 GWh. This means that full buildout of the NJ EO goal (one-third of the total Atlantic OSW planned by the Biden Administration), might produce enough electricity to replace natural gas plants or increase production to meet load growth from data centers and electric vehicles, ***but not both.*** It is hard to conceive how the purpose of the action—to make the New Jersey grid emission-free—is satisfied if only the disclosed segment of OSW wind construction is used.

These arithmetic impossibilities become even more glaring and problematic when considering the 2023 acceleration of clean energy goals in NJ Executive Order 315. Previously, the 2019 EMP required 100 percent clean energy by 2050; the new EO 315 deadline is 2035. Notably, the NJ State Senate recently woke suddenly from a green-dream when a bill authorizing a public referendum on amending the state's Constitution to ban construction of new power plants that burn natural gas or other fossil fuels was amended to allow the construction of such plants if they are to be primarily used as emergency backup power sources. The carve-out manages the damaging grid reliability risks exposed when Superstorm Sandy knocked out power in 2012, causing nearly a billion gallons of untreated sewage to flow into area waterways because sewage plants lacked accessible backup generation.

The New Jersey arithmetic again demonstrates that the realities of the service obligation and actual OSW electricity production confirm these projects are but a fractional, segmented portion of the actions needed to meet the overall energy production goals, not just renewable standards.

c) *The final EIS analysis must analyze the fully aggregated (not segmented) complement of operational generation assets and storage capacity needed to reliably satisfy the identified electricity demand (including growth) while combatting the climate crisis through deployment of clean energy technologies and infrastructure.*

The PEIS must redefine the Proposed Action as including construction and operation of the full complement of WTGs and storage facilities needed to meet both the known load requirements and renewable portfolio standards simultaneously. Without properly defined and unsegmented actions, any evaluation or adoption of so-called programmatic avoidance, minimization, mitigation, and monitoring (AMMM) measures remains inaccurate, insufficient, misleading, and violative of the spirit and letter of the National Environmental Policy Act and its attendant regulations.

## 2. Cumulative Impacts: The PEIS fails to identify and assess what are obvious and foreseeable Cumulative Impacts from the deployment of OSW in the NY Bight

All EISs must identify, describe, and analyze the direct, indirect, and cumulative effects of the action alternatives developed to implement the proposed action and the no action alternative. Cumulative effects are defined in 40 CFR § 1508.1 as follows:

> Effects on the environment that result from the incremental effects of the action when added to the effects of other past, present, and reasonably foreseeable actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time.

[7] US EIA New Jersey Electricity Profile 2022. New Jersey currently has 26 natural gas-fired power plants.

In addition, 43 CFR § 46.30 defines "reasonably foreseeable future actions" to include "those federal and non-federal activities not yet undertaken, but sufficiently likely to occur, that a responsible official of ordinary prudence would take such activities into account in reaching a decision." The regulations further provide that the federal and non-federal activities BOEM must take into account in the analysis of cumulative impacts include, but are not limited to, activities for which there are existing decisions, funding, or proposals identified by BOEM. Reasonably foreseeable planned actions do not include those actions that are highly speculative or indefinite.

There is nothing speculative about the legal and policy mandates to build OSW in and near the NY Bight and other Atlantic Ocean regions to satisfy both renewable energy portfolio standards and electricity load demand. BOEM's own tables in Appendix D provide clear details as to the entire planned buildout in the NY Bight, and those numbers clearly show 200% more WTGs than assessed for cumulative impacts in the PEIS. More importantly, BOEM must assess the cumulative impacts of the WTG buildout actually needed to meet both the renewable mandates ***and*** the known load growth forecasts. Therefore the PEIS must fully scope and evaluate all the OSW construction and operation needed and planned to complete the fully-scoped, unsegmented Proposed Action: 33% of Downstate NY electricity produced by OSW in 2040 and beyond, and compliance with NJ Executive Orders 307 and 315.

Moreover, the full cumulative impacts analysis must include the impacts of building the total NY and NJ energy storage capacity described in Section II.1.a of this submission.

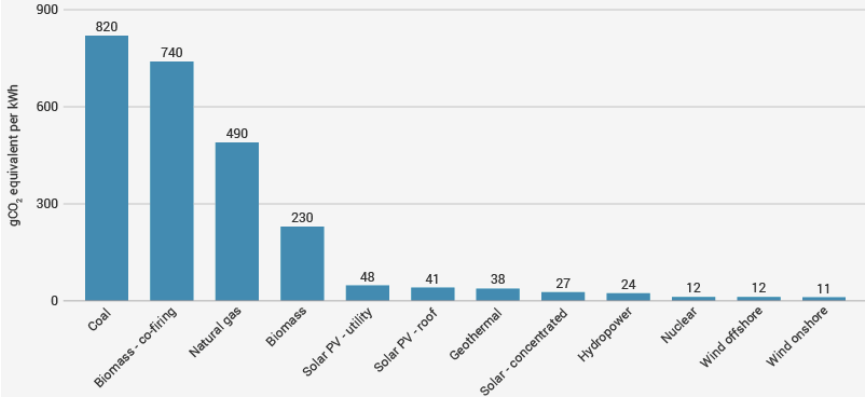
**3. <u>Inadequate Alternatives</u>: The PEIS fails to identify and assess necessary and realistic alternatives to the proposed six commercial wind energy leases the New York Bight given the current and future actual electricity demand in the target service areas, and limited electrical output possible from the Proposed Action and its segmented companion projects.**

The purpose and need for the proposed OSW projects is to produce "renewable" electricity supplies that meet legal portfolio mandates while also satisfying the massively increasing load service obligation that sustains vital needs such as medical services, sanitation, transportation, food preservation, communication, public safety, and emergency services. *The Proposed Projects must be able to accomplish BOTH requirements*.

As noted, the PEIS never discloses whether and how the proposed off-shore wind projects will actually satisfy either the current electricity demand (factoring in displacement), or the prodigious growth in electricity demand forecasted by the affected Independent System Operators. Therefore, to avoid segmentation and meet cumulative effects analysis requirements, the PEIS must analyze a complete suite of alternatives that include meeting installed operating capacity requirements for both fuel type (EO and CPCLA) and output (NYISO and PJM ISO forecasts). This may include retaining natural-gas fired generation or building more nuclear capacity, both of which provide more GWh of generation per unit of installed capacity.

To the extent the drive for "clean generation" is to reduce the risks of climate change from greenhouse gas emissions (GHGs), then using the label "renewable" does not necessarily secure the environmentally preferable generation alternative, especially if other geocapital assets (air, land, and water component supplies) are taken into account (see Figure 1). The full volume of geocapital supply that must be used or expended to produce a kilowatt-hour is more than just the airshed capacity used for GHG absorption. Providing a legally compliant set of alternatives for PEIS analysis may require updated presumptions regarding the perceived preference for OSW as more benign or less harmful than other generation alterna-

**Figure 1: Life-cycle Emissions of Electricity Options**




**Source: World Nuclear Association from IPCC Data**

tives. This becomes crucial when the low rates of actual electricity output from wind sources compared to alternative fuel sources and generation processes are considered (see Table 7).

**Table 7: Comparative MegawattHour Production by State and Fuel**

| State | Fuel Type | Installed MW | MwH Produced | MwH/MW |
|---|---|---|---|---|
| NJ | Wind | 9.0 | 21,629 | 2,403 |
| | Natural Gas | 12,374 | 33,394,323 | 2,699 |
| | Nuclear | 3,631 | 28,318,800 | 7,800 |
| NY | Wind | 2,189.0 | 4,567,508 | 2,087 |
| | Natural Gas | 24,587 | 60,312,012 | 2,453 |
| | Nuclear | 3,398 | 26,812,164 | 7,890 |
| RI | Wind | 78.0 | 209,338 | 2,684 |
| | Natural Gas | 1,933 | 6,963,771 | 3,602 |
| | Nuclear | 0 | 0 | 0 |
| CT | Wind | 5.0 | 12,833 | 2,567 |
| | Natural Gas | 5,376 | 24,530,687 | 4,563 |
| | Nuclear | 2,163 | 16,464,167 | 7,612 |
| MD | Wind | 190.0 | 497,608 | 2,619 |
| | Natural Gas | 6,347 | 13,949,642 | 2,198 |
| | Nuclear | 1,850 | 14,810,684 | 8,004 |
| KS | Wind | 8,261.0 | 29,687,479 | 3,594 |
| | Coal | 4,886 | 20,229,360 | 4,141 |
| | Nuclear | 1,268 | 8,981,959 | 7,085 |
| TX | Wind | 39,334.0 | 114,786,903 | 2,918 |
| | Coal | 19,315 | 85,336,953 | 4,418 |
| | Nuclear | 5,139 | 41,606,955 | 8,097 |

**Source: US EIA Data**

**4. <u>Socioeconomic Impacts</u>: The PEIS fails to identify and assess the full complement of Socioeconomic Impacts from building and operating intermittent power sources in the most densely populated areas of the nation.**

*a) The PEIS fails to fully assess the socioeconomic impacts of higher electric prices on Eastern States that already carry the economic burden of cleaner electricity assets*

As Table 8 demonstrates, using carbon dioxide as an indicator, even in 1970 (at the point when the modern CAA was first passed), the eastern seaboard states already had cleaner generation than counterparts in

**Table 8: Per Capita Energy-related Carbon Dioxide Emissions* by State (1970–2021)**

| | | | Change (1970-2021) | | Change (2020-2021) | |
|---|---|---|---|---|---|---|
| State | 1970 | 2021 | Percent | Absolute | Percent | Absolute |
| District of Columbia | 18.0 | 3.8 | -79.12% | -14.3 | 5.31% | 0.2 |
| New York | 15.6 | 7.9 | -49.61% | -7.7 | 10.18% | 0.7 |
| Massachusetts | 17.5 | 8.0 | -53.99% | -9.4 | 7.44% | 0.6 |
| Maryland | 18.8 | 8.5 | -54.81% | -10.3 | 9.29% | 0.7 |
| Vermont | 12.4 | 8.6 | -30.64% | -3.8 | 2.12% | 0.2 |
| New Jersey | 18.0 | 9.6 | -46.61% | -8.4 | 6.34% | 0.6 |
| New Hampshire | 17.3 | 9.6 | -44.61% | -7.7 | 5.98% | 0.5 |
| Rhode Island | 13.8 | 9.7 | -29.70% | -4.1 | 8.20% | 0.7 |
| Connecticut | 15.7 | 10.1 | -35.82% | -5.6 | 7.53% | 0.7 |
| Florida | 15.2 | 10.4 | -31.96% | -4.9 | 7.76% | 0.7 |
| Maine | 16.9 | 10.5 | -37.93% | -6.4 | 5.69% | 0.6 |
| North Carolina | 19.1 | 10.9 | -42.68% | -8.1 | 7.22% | 0.7 |
| Virginia | 18.6 | 11.3 | -39.14% | -7.3 | -0.47% | -0.1 |
| Georgia | 16.0 | 11.5 | -27.91% | -4.5 | 5.88% | 0.6 |
| Delaware | 29.2 | 12.9 | -55.77% | -16.3 | 2.58% | 0.3 |
| South Carolina | 16.2 | 13.4 | -17.81% | -2.9 | 7.80% | 1.0 |
| Pennsylvania | 26.0 | 16.4 | -36.80% | -9.6 | 10.32% | 1.5 |
| Texas | 31.9 | 22.4 | -29.73% | -9.5 | 5.03% | 1.1 |
| Indiana | 33.1 | 24.4 | -26.12% | -8.6 | 7.33% | 1.7 |
| Louisiana | 39.5 | 40.8 | 3.29% | 1.3 | 3.43% | 1.3 |
| West Virginia | 44.0 | 49.5 | 12.61% | 5.5 | 15.25% | 6.5 |
| North Dakota | 23.8 | 72.7 | 205.43% | 48.9 | 4.48% | 3.1 |
| Wyoming | 55.7 | 94.3 | 69.38% | 38.6 | -2.02% | -1.9 |
| Average all states | 20.7 | 14.8 | -28.67% | -5.9 | 6.72% | 0.9 |

**Source: U.S. Energy Information Administration, State Energy Data System and EIA calculations made for this analysis.**
***Metric tons of energy-related carbon dioxide per resident**

the Midwest and South. Since that time, the eastern states have consistently invested in more clean generation, especially hydro and nuclear, to avoid using their finite and valuable airshed carrying capacity as a dumping ground for conventional pollutants and greenhouse gases. This advanced investment in green technology lead to positive outcomes, but also created much higher electricity prices for businesses and residents (See Table 9).

An unrecognized economic consequence of this disproportionate "greening" of Eastern Seaboard electricity (and other systems such as transportation) is the airshed subsidy provided to dirtier states by the clean coastal states. In effect, the freed up eastern airshed assets are the earned return-on-investment (ROI) from the substantial clean energy investment over previous decades (with corollary increases in electricity costs). This airshed capacity has been expropriated by states whose continued dirty coal and natural gas plant emissions move into and use the airshed absorption capacity freed up by the multi-decade east coast clean investment. Said another way, more westerly areas that continued burning coal were using the unacknowledged "emission credits" created by the eastern state utilities and ratepayers that transitioned their energy and cut emissions. The states that still had coal as their leading source of electricity in 2021 illustrates this wealth transfer (see Figure 2) . Greener coastal states downwind of brown states have effectively subsidized cheaper, dirtier electricity production for decades. This wealth transfer is largely ignored by economists and the Governors of eastern clean states who continue to give away the hard-earned airshed ROI their residents paid for in their electric bills.

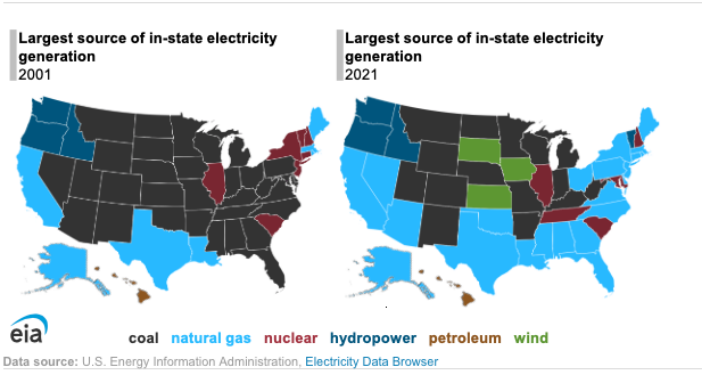
This historic recapitalization underwritten by eastern state residents manifests in the already high price for electricity. As Table 9 shows, of the twenty states with the highest electricity prices, thirteen are (already) green eastern states. The current 6 cents per KWh for wholesale electricity in New Jersey will be affected by the NJBPU orders allowing OSW generators to receive payments averaging more than 15 cents per kilowatt.

**Table 9: States with Highest Electricity Rates (12/23)**

| State | Price per KWh |
|---|---|
| Hawaii | 41.60 ¢ |
| Rhode Island | 30.88 ¢ |
| California | 29.11 ¢ |
| Massachusetts | 28.85 ¢ |
| Maine | 28.04 ¢ |
| Connecticut | 26.86 ¢ |
| New Hampshire | 24.98 ¢ |
| Alaska | 24.70 ¢ |
| New York | 22.52 ¢ |
| Vermont | 21.09 ¢ |
| Michigan | 18.55 ¢ |
| DC | 17.75 ¢ |
| New Jersey | 17.59 ¢ |
| Pennsylvania | 17.53 ¢ |
| Maryland | 17.46 ¢ |
| Wisconsin | 16.48 ¢ |
| Delaware | 16.32 ¢ |
| Ohio | 15.69 ¢ |
| Nevada | 15.55 ¢ |
| Florida | 15.26 ¢ |

**Source: US EIA**

**Figure 2: Coal Remains Largest Source of Electricity Generation in 15 States**




The full suite of socioeconomic impacts for unsegmented OSW system buildout—including all the costs that fold into retail price increases—are not analyzed in the PEIS (or by utility commissions and state leaders). In addition, the PEIS must evaluate the socioeconomic costs of jobs losses, business closure or relocation, opportunity losses, and other diminishment of economic development caused by high electricity prices.[8]

[8] To illustrate this point, the Biden Administration is using federal funds to support a planned $20 billion Intel chip manufacturing complex in Ohio. This electricity-intensive industry is being sited in a state that gets over 50% or its electricity from natural gas, 37% from coal, and only 4% from renewables. The average retail price of electricity in Ohio is 10.64 cents/kWh when accounting for reductions to business.

It makes no socioeconomic sense for any state with a clean generation portfolio to prematurely retire existing electricity assets while states with the highest GHG outputs per capita continue using coal generation.

*b) The PEIS fails to assess the full cost of needed storage and backup generation facilitates to meet forecast demand using portfolio-mandated generation assets*

As noted above, NYSERDA estimates that by 2040, NY will need about 12 GW of energy storage and over 17 GW by 2050 to integrate renewable generation while decarbonizing and maintaining grid reliability. To date, New Jersey has planed for 2 GW of storage capacity. The socioeconomic impacts, including land acquisition, construction, and operation costs, as well as safety to surrounding communities, inter alia, of building and operating these battery and other storage facilities has not been assessed or disclosed in the PEIS.

*c) Environmental Justice analyses fail to consider electricity supply, cost, and reliability as Impact Producing Factors (IPFs), Issues, or Indicators*

The PEIS indicates both New York and New Jersey have identified environmental justice (EJ) communities at the U.S. Census block-level affected by the Proposed Actions, including seven counties that exceed thresholds for environmental justice in New Jersey—Atlantic County, Camden County, Cumberland County, Essex County, Hudson County, Middlesex County, and Union County—and three counties that exceed thresholds for environmental justice in the State of New York—Kings County, New York County, and Queens County—based on their minority populations.

Table 3.6.4-3 on page 3.6.4-16 of the PEIS describes "Issues and indicators to assess impacts on environmental justice. While effective describing many of the EJ issues created by major actions, the analysis fails to include the impacts stemming from the most basic Impact Producing Factors (IPF) associated with energy infrastructure recapitalization: supply, reliability and price of electricity.

EJ Communities disproportionately rely on electricity, especially in the urban setting. They use electrified mass transit, walk streets that must be lit, attend school day and night, require sanitation, medical, and safety services, need access to secure (refrigerated) food, use myriad other public and private services, and want warm, lit homes. EJ communities also need jobs in commercial and industrial enterprises that require reliable, affordable electricity and many of the services described.

The PEIS must evaluate electricity supply, reliability, and price as Impact Producing Factors for this PEIS and other analyses addressing plans and approvals for these projects.

## III. SUMMARY

- In spite of high populations and significant population density, East Coast states almost universally achieve the lowest per capita carbon emissions in the country based on their historic underwriting of clean energy and transport systems.
    - Inland states, with whom eastern states are competing for new manufacturing facilities and other economic development opportunities, still make significant portions of their electricity from coal and natural gas. This keeps electricity prices low and attracts businesses that use electricity as operational fuel, at the same time greenhouse gas emission levels remain high.
    - Forcing eastern states to shut down clean capacity and/or prematurely retire non-coal electricity production facilities in favor of massive expenditures for OSW facilities that are merely presumed to be "environmentally preferable" (all evidence to the contrary) further increases

already high east coast electricity prices and exacerbates competitive advantage already accruing to fossil-electric generating states.

- For an industry as damaging, dangerous, and risky as OSW, whether by design or function, BOEM's system of programmatic EISs coupled with tiered analysis for subsequent issuance of various construction permits and approvals woefully fails to meet the most basic principles and requirements of the National Environmental Policy Act, and this PEIS is no different.
    - Analyses separated into geographically disperse lease-areas inevitably suffer from improper segmentation, fail to assess cumulative impacts, and ignore the macro-socioeconomic impacts that will affect businesses and populations across large areas because these projects involve electricity—as fundamental to survival in today's times as air and water.
- BOEM cannot willfully ignore the realities and plain arithmetic of electricity demand growth when assessing the viability and effects of eliminating electric generation plants that can meet critical survival needs—sanitation, transportation, communication, safety, education, food security, inter alia—in favor of expensive, unreliable, and damaging WTGs that cannot do the job without multiple layers of storage backup along with additive transmission facilities. These sine qua non co-components bring compounding as well as cumulative negative effects to the areas where they must be built and operated.
    - By 2053, downstate New York electricity demand growth is forecast to be over 155,000 GWh (two-thirds of 253,020 GWh); producing 33% of that load with OSW (50,000 GWh) requires the output of about 15,000 MW of installed OSW capacity, far more than the current, acknowledged projects could deliver to the NY Grid.
    - By 2039, New Jersey is forecast to add 29,432 GWh to its demand load, and also plans to replace 33,394 GWh of current electricity produced by natural gas plants, both with OSW. Satisfying this actual requirement for 62,826 GWh of clean/renewable electricity for NJ's portion of the PJM grid with OSW would necessitate more than the planned 11 GW installed capacity.
    - Electricity demand in these two states alone have an estimated requirement for about 26 GW of installed OSW to meet service obligations, almost 87% of the entire 30 GW Atlantic Offshore Wind Program planned by the Biden Administration.
    - To the extent the current Proposed Actions build less than 26,000 GW installed OSW capacity in the NY Bight to meet concurrent demand growth and portfolio standards, additional, undisclosed energy storage facilities will also be required to reliably assure service obligation generation levels. The size, location, and full suite of impacts from the construction and operation of such storage facilities, along with all necessary transmission and distribution infrastructure, must be included in any and all environmental impact analysis to prevent improper segmentation and assure full cumulative impact analysis.
- No amount of mitigation can be accurately assessed or planned in the absence of accurate and fully disclosed impacts and effects from building and operating the full complement of OSW WTGs and attendant storage/transmission facilities needed to meet the knowable and known amounts of electricity required to sustain the populations and assets of the affected states.
- The environmentally preferable option for greening the nation's electricity portfolio does not involve the green eastern seaboard states. Real decarbonization will come from discontinuing the 675,000

GWh of electricity still produced with coal plants in the US, few if any of which are in Atlantic Seaboard states.

- No agency of federal, state, or local government should use public funds to subsidize or underwrite premature retirement and/or displacement of existing non-coal electricity production assets until existing coal plants are first replaced by the ratepayers who benefit from them (especially those in states with the highest GHG outputs per capita).

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