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Sherri L. Golden  
Secretary of the Board  
44 South Clinton Avenue  
1st Floor Post Office Box 350  
Trenton, NJ 08625-0350  
*Submitted electronically*

**Re: 2024 New Jersey Energy Master Plan, Docket No. QO24020126**

Dear Secretary Golden and Members of the NJ Board of Public Utilities,

Clean Ocean Action (COA) is a regional, environmental, nonprofit organization with a mission to improve the water quality of the marine waters off the New Jersey/New York coast. Over the past several years, COA has engaged with the New Jersey Board of Public Utilities (“BPU”) and other state and federal agencies on energy policy, including the past iterations of the Energy Master Plan, fossil fuel projects, and offshore wind development.<sup>1</sup> COA’s involvement also includes serving as a stakeholder in the New Jersey Offshore Wind Environmental Resources Working Group.

COA appreciates the opportunity to comment on the 2024 update to the Energy Master Plan (EMP), and the four recent public meetings to hear presentations and provide oral comments. We urge the BPU to prioritize measures to reduce energy demand, increase efficiency, and reduce energy waste over developing new renewable energy industries. To address the remaining need

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<sup>1</sup> E.g. Clean Ocean Action, Comments re 2019 Energy Master Plan (Sept. 16, 2019); Clean Ocean Action, Comments re Revisions to 2011 Energy Master Plan; Clean Ocean Action, Comments re New Jersey Offshore Wind Solicitation #3 Solicitation Guidance Document Application Submission for Proposed Offshore Wind Facilities, Docket No. QO22080481 (Jan. 13, 2023); Clean Ocean Action, Comments re Notice of Availability of a Draft Programmatic Environmental Impact Statement for Expected Wind Energy Development in the New York Bight, Docket No. BOEM-2024-0001 (Mar. 13, 2024); Clean Ocean Action, Comments re Atlantic Shores South Federal Consistency Determination for Review – Lease Area OCS-A 0499 (Oct. 19, 2023).

*after* demand and waste reduction and efficiency measures are maximized, research and development focusing on environmental impacts and technological feasibility should occur *before* construction or workforce development to ensure that any new sources of renewable energy will not be harmful to the environment and will be able to replace fossil fuel consumption.

## **I. Demand Reduction & Efficiency Programs**

The 2019 EMP includes a significant amount of goals and strategies related to reducing demand and increasing energy efficiency.<sup>2</sup> BPU recognizes that reducing energy waste is the cleanest and most economical energy system option, and energy efficiency and load management are the most cost-effective energy resources for meeting customer needs.<sup>3</sup> The agency's own study showed that energy efficiency measures could achieve a 20% decrease in peak demand and a 21% decrease in overall demand for electricity by 2029.<sup>4</sup> According to the Department of Energy, 36,332 New Jerseyans were employed in the field of energy efficiency in 2022, and these are permanent jobs.<sup>5</sup> Implementing energy efficiency measures in the commercial and residential sectors will result in cost savings, allowing both sectors to spend in other ways that will benefit New Jersey's economy.<sup>6</sup>

Despite widespread agreement that energy efficiency and demand-side programs are essential for achieving clean energy goals, those programs and other non-wires solutions have not been getting the same amount of public attention in practice as new renewable—specifically, wind—energy development. Any form of new energy generation will have environmental impacts, because it is industrial development. For example, as will be discussed in Section II, baseline research still needs to be conducted to fully understand the impacts of offshore wind development on the marine ecosystem. The extent of these impacts must be identified and evaluated before development moves forward. As such, BPU should prioritize demand reduction and efficiency programs ahead of renewable energy generation. Specifically, BPU should promote energy audits for both residential and commercial energy users, and promote submetering of multi-family residences, where possible.

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<sup>2</sup> N.J. Bd. Pub. Utilities, 2019 Energy Master Plan: Pathway to 2050 136-156 (2019), [https://nj.gov/emp/docs/pdf/2020\\_NJBPU\\_EMP.pdf](https://nj.gov/emp/docs/pdf/2020_NJBPU_EMP.pdf)

<sup>3</sup> *Id.* at 38, 136.

<sup>4</sup> *Id.* at 136.

<sup>5</sup> DOE, U.S. Energy & Employment Report: New Jersey (2023), <https://www.energy.gov/sites/default/files/2023-06/USEER23-NJ-v2.pdf>

<sup>6</sup> Casey J. Bell, *Understanding the True Benefits of Both Energy Efficiency and Job Creation*. American Council for an Energy Efficient Economy. Community Development Investment Review. (March 2014) Available at [https://www.frbsf.org/community-development/files/cdir\\_vol10issue1-Understanding-the-True-Benefits-of-Energy-Efficiency-and-Job-Creation.pdf](https://www.frbsf.org/community-development/files/cdir_vol10issue1-Understanding-the-True-Benefits-of-Energy-Efficiency-and-Job-Creation.pdf); Jim Lazar, *Recognizing the Full Value of Energy Efficiency*, Regulatory Assistance Project. (Sept. 2013). Available at <https://aceee.org/files/pdf/conferences/eeer/2013/4B-Lazar.pdf>.

A major part of this effort should include publicizing the existing programs and making them accessible to New Jersey residents and businesses. Members of the public can attend energy efficiency stakeholder meetings to follow the progress of the Triennium 1 and 2 programs, but the information is not presented in an accessible way. It is difficult to follow the filings updates without an extensive background in the energy industry. Utilities could improve customer relations by explaining how participating in the energy efficiency process reduces rates and costs, as well as environmental impacts of energy development and generation. While BPU's website contains evaluations and reports for programs, it is unclear how frequently such reports are compiled and what interim goals BPU is trying to achieve;<sup>7</sup> stakeholders should not have to pore through dozens of reports to access that basic information. BPU's public-facing materials should give succinct summaries of how each program works in practice and when evaluations will be released. For all programs, BPU should regularly publish interim reports outlining progress toward quantifiable benchmarks, outside of the five-year EMP update process.

During the stakeholder engagement process, BPU highlighted its implementation of the requirements in the Clean Energy Act of 2018 for electric utilities to reduce consumption by 2% and gas industries to do so by 0.75%. The 2018 statute requires BPU to review the targets every three years using a study completed one year after enactment, and expects that BPU will increase the targets beyond those initial percentages,<sup>8</sup> but the targets have remained the same. BPU must focus on increasing the consumption reduction targets for the electric and gas utilities, consistent with a 20% demand decrease by 2029.

BPU should also expand the Whole House pilot program to other municipalities. The Whole House pilot program addresses safety issues such as lead paint and service lines, electrical deficiencies, water intrusion, and mold, which often defer and delay work on energy efficiency improvements.<sup>9</sup> During the public hearing process, BPU used this program as a successful example of making energy efficiency accessible to low- and moderate-income communities.

In sum, there are many ways in which BPU can leverage energy efficiency and demand reduction programs to decrease the amount of overall energy required to meet New Jersey's needs, thereby reducing dependence on fossil fuel energy as well as new industrial development, including from renewable energy. BPU should prioritize and publicize these strategies, and create a concrete plan to achieve them.

## **II. Offshore Wind Development**

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<sup>7</sup> N.J. Bd. Pub. Utils., *Program Evaluations, Market Analysis and TRMs*, NEW JERSEY'S CLEAN ENERGY PROGRAM, <https://www.njcleanenergy.com/main/public-reports-and-library/market-analysis-protocols/market-analysis-baseline-studies/market-an> (last visited June 12, 2024).

<sup>8</sup> See N.J.S.A. 48:3-87.9(3)

<sup>9</sup> Press Release, N.J. Bd. Pub. Utilities, New Jersey Board of Public Utilities Launches 'Whole House' Pilot Program in Trenton (Sep. 26, 2022), <https://www.nj.gov/bpu/newsroom/2022/approved/20220926.html>.

BPU has placed a high priority on developing wind energy, accelerating the pace of its offshore wind solicitations.<sup>10</sup> COA has been actively following offshore wind development in the New York/New Jersey Bight for almost two decades and has submitted numerous public comments to BPU and other state and federal agencies expressing the need for responsible offshore wind development and concern that the current pace of development is irresponsible.<sup>11</sup> Rather than restate those comments, we incorporate them by reference. Briefly, COA continues to advocate for detailed studies and environmental analyses to understand the project-specific and cumulative environmental impacts *before* making offshore wind project development decisions.

Research gaps have persisted as offshore wind projects continue to advance. For example, the Draft Programmatic Environmental Impact Statement for six offshore wind lease areas in the New York/New Jersey Bight highlighted several research gaps, including secondary impacts on benthic communities, population studies on several marine mammal species and sea turtles, and the potential behavioral responses of marine mammals and sea turtles to new structures in their environment.<sup>12</sup> Additionally, the New Jersey Department of Environmental Protection (DEP) and BPU identified research priorities to respond to data gaps as part of the Research & Monitoring Initiative; these include impacts of offshore wind development on: the seafloor, ocean stratification, benthic communities, seabirds, bats, the distribution and connectivity of fish and invertebrates, marine mammals' risk of vessel strike, commercial and recreational fisheries, as well as collecting baseline data on sea turtles.<sup>13</sup> As such, research and development activities should be prioritized ahead of offshore wind energy development.

Although workforce development is necessary to create an industry that supports the state's economy, the WIND Institute's priority should be on research and development of technologies and mitigation measures to reduce offshore wind's environmental impacts. The WIND Institute's research program should collaborate with the Research & Monitoring Initiative to maximize resources and avoid duplicating efforts.

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<sup>10</sup> Press Release, N.J. Bd. Pub. Utilities, Murphy Administration Announces Developments in Offshore Wind Industry (May 28, 2024), <https://www.nj.gov/bpu/newsroom/2024/approved/20240528.html>

<sup>11</sup> *E.g.*, Clean Ocean Action, Comments re New Jersey Offshore Wind Solicitation #3 Solicitation Guidance Document Application Submission for Proposed Offshore Wind Facilities, Docket No. QO22080481 (Jan. 13, 2023); Clean Ocean Action, Comments re Notice of Availability of a Draft Programmatic Environmental Impact Statement for Expected Wind Energy Development in the New York Bight, Docket No. BOEM-2024-0001 (Mar. 13, 2024); Clean Ocean Action, Comments re Atlantic Shores South Federal Consistency Determination for Review – Lease Area OCS-A 0499 (Oct. 19, 2023).

<sup>12</sup> BUREAU OCEAN ENERGY MGMT., NEW YORK BIGHT DRAFT PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT, appx. E (Jan. 2024), <https://www.boem.gov/renewable-energy/ny-bight-draft-peis-app-e-analysis-incomplete-unavailable-info>

<sup>13</sup> N.J. DEP'T ENV'T PROT. & N.J. BD. PUB. UTILS., NEW JERSEY'S OFFSHORE WIND RESEARCH & MONITORING INITIATIVE, <https://dep.nj.gov/wp-content/uploads/offshorwind/njdep-osw-rmi-process-description.pdf> (last visited June 12, 2024).

Moreover, the wind industry's sustainability is doubtful without major upgrades to the grid system.<sup>14</sup> The BPU has made progress in this area with its prebuilt infrastructure solicitation. COA has supported efforts to modernize the grid, as it increases the likelihood that renewable energy projects will be able to replace some fossil fuel consumption, and that less overall energy will be consumed on a more efficient grid system. The 2024 EMP should continue refining plans to upgrade New Jersey's grid to be more efficient and support responsibly developed renewable energy. Similarly, large-scale renewable energy development also relies on robust energy storage systems that can save excess energy generated in particularly windy or sunny conditions and tap into storage when those natural resources are less plentiful.<sup>15</sup> If renewable energy is not supported by robust infrastructure, there could be gaps between supply and demand for energy that would need to be filled by an existing, likely dirty energy source.

BPU has prioritized developing the offshore wind industry ahead of developing other renewable energy industries, such as solar. Multiple stakeholders, including those outside the solar industry, urge BPU to treat solar energy development equally. Heat pumps should also be involved in New Jersey's energy portfolio, as they are heretofore effective, zero-emission alternatives to gas or oil heating and cooling systems and have been growing in popularity as a result.<sup>16</sup> COA supports the idea of equal treatment for all forms of renewable development: thorough study of the potential environmental risks should be completed before any project development begins, especially at the industrial scale. BPU should enlist an independent third party to conduct thorough, honest cost/benefit analyses of all forms of renewable energy development before investing in them, including the cumulative impacts of building up the industry. The project-specific and cumulative environmental impacts should be weighed against a quantitative estimate of the fossil fuel generation and resulting negative health outcomes avoided, and the methodology for these estimates should be transparent.

Instead of focusing its resources and public outreach on one renewable energy industry, offshore wind, BPU should emphasize research and development for all renewable energy sources, giving each equal treatment.

### **III. Definition of Clean Energy**

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<sup>14</sup> John Fialka, *U.S. Offshore Wind Needs to Clear a Key Hurdle: Connecting to the Grid*, SCIENTIFIC AMERICAN (Aug. 3, 2020), <https://www.scientificamerican.com/article/u-s-offshore-wind-needs-to-clear-a-key-hurdle-connecting-to-the-grid/>

<sup>15</sup> Tom Melville, *Energy storage important to creating affordable, reliable, deeply decarbonized electricity systems*, MIT NEWS (May 16, 2022), <https://news.mit.edu/2022/energy-storage-important-creating-affordable-reliable-deeply-decarbonized-electricity-systems-0516>

<sup>16</sup> N.Y. STATE ENERGY RSCH. & DEVELOPMENT AUTH., *Heat Pumps Outsell Gas Furnaces Again*, [https://www.nyscrda.ny.gov/Featured-Stories/Heat-Pumps-Outsell-Gas-Furnaces-Again/?utm\\_id=organic&utm\\_source=salesforce&utm\\_medium=email&utm\\_campaign=featuredstories2024&utm\\_content=May-Residential-Heat-Pumps-Outsell-Gas-Furnaces-Again](https://www.nyscrda.ny.gov/Featured-Stories/Heat-Pumps-Outsell-Gas-Furnaces-Again/?utm_id=organic&utm_source=salesforce&utm_medium=email&utm_campaign=featuredstories2024&utm_content=May-Residential-Heat-Pumps-Outsell-Gas-Furnaces-Again) (last visited June 11, 2024).

The 2019 EMP defines “100% clean energy by 2050” to mean 100% carbon-neutral electricity generation, and carbon neutrality as “having a net zero carbon footprint by eliminating carbon emissions or balancing carbon emissions with carbon removal”.<sup>17</sup>

This definition would allow fossil fuel generation to remain a part of New Jersey’s energy mix as long as the company responsible invested in some type of carbon offset. This is unacceptable for a “clean energy” goal. It would preserve existing fossil fuel generators, which are disproportionately sited in environmental justice (EJ) communities, causing negative health outcomes such as asthma, cardiovascular disease, and cancer.<sup>18</sup> Carbon sequestration elsewhere would not alleviate the harm done to communities exposed to fossil fuel generation facilities.

Additionally, the definition could allow newer, but still dirty, energy sources to be considered “clean energy”, such as hydrogen and renewable natural gas. Both hydrogen and renewable natural gas carry significant environmental risks that eclipse any benefits they may provide and should not be considered clean energy at this time.

Extracting pure hydrogen is resource-intensive and costly, and the life-cycle emissions vary greatly depending on the energy source used to produce the hydrogen.<sup>19</sup> For example, extracting hydrogen from natural gas, which is currently the most available method, emits twelve kilograms of carbon dioxide per every kilogram of hydrogen produced.<sup>20</sup> That process also produces carbon monoxide as a co-pollutant.<sup>21</sup> Even green hydrogen, which uses solar or wind energy to extract hydrogen from water, can emit up to one kilogram of atmospheric carbon dioxide equivalent for every kilogram of hydrogen produced.<sup>22</sup>

Renewable natural gas is another name for methane generated from the breakdown of organic material at landfills, dairy farms, or wastewater treatment plants, to name a few examples.<sup>23</sup> Methane is eighty times more potent of a greenhouse gas than carbon dioxide.<sup>24</sup> Even if all the United States’ biomethane were harvested for fuel, it would only replace 10-15% of natural gas consumption and emits co-pollutants when burned.<sup>25</sup> Additionally, it is not currently possible to

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<sup>17</sup> N.J. BD. PUB. UTILITIES, 2019 ENERGY MASTER PLAN: PATHWAY TO 2050, *supra* note 2, at 11.

<sup>18</sup> Timothy Q. Donaghy et al, *Fossil fuel racism in the United States: How phasing out coal, oil, and gas can protect communities*, 100 ENERGY RESCH. <https://doi.org/10.1016/j.erss.2023.103104>.

<sup>19</sup> *How Clean Is Green Hydrogen?*, MIT CLIMATE PORTAL (last updated Feb. 27, 2024), <https://climate.mit.edu/ask-mit/how-clean-green-hydrogen>.

<sup>20</sup> *Id.*

<sup>21</sup> *Id.*

<sup>22</sup> *Id.*

<sup>23</sup> John Carey, *While some tout “renewable natural gas” as a way to mitigate climate change, others see a false solution*, 121 PROCEEDINGS NAT’L ACAD. SCI. U.S. (July 11, 2023), [10.1073/pnas.2309976120](https://doi.org/10.1073/pnas.2309976120).

<sup>24</sup> *Id.*

<sup>25</sup> *Id.*

capture all of the methane being processed, so leakage occurs—at each stage of the process, methane gas is emitted into the atmosphere.<sup>26</sup>

The 2024 EMP should revise the definition of “clean energy” to unequivocally exclude energy sources that produce toxic co-pollutants or rely on carbon sequestration to be carbon neutral.

#### **IV. Inclusion of Low and Moderate Income Communities & Renters**

Many stakeholders emphasized that EMP’s priorities must be intentional about extending to Low and Moderate Income Communities (“LMI”), renters, and EJ communities. Currently, LMI and EJ communities bear the brunt of fossil fuel generation, especially the negative health outcomes that befall populations living near fossil fuel generation facilities.<sup>27</sup> Low-income housing is more likely to be older buildings that are less energy-efficient, leading to higher energy use and bills and reduced indoor air quality for those with the least resources to respond.<sup>28</sup> Populations in LMI and EJ communities also tend to live in multi-family residences and/or rent, rather than own their homes, and clean energy programs are less accessible to renters in multi-family residences because residents have less control over the amount and source of the energy they use.

As discussed above, an accurate definition of “clean energy” that excludes dirty energy sources that rely on carbon offsets for carbon neutrality or produce co-pollutants would greatly benefit LMI, EJ, and all other communities as well as natural resources.

#### **V. Conclusion**

The 2024 EMP should reprioritize the goals of the 2019 EMP and include concrete plans to achieve those goals as well as more opportunities for the BPU and the public to review interim progress. The 2024 EMP should focus first and foremost on energy efficiency and demand reduction, prioritizing those solutions over any new energy development. Within renewable energy, offshore wind energy development should not have a favored position over other renewable energy sources such as solar, storage, or heat pumps. Research and development should be prioritized before project development occurs. All renewable energy sources should be subject to rigorous environmental risk analyses that consider the cumulative impacts of building a new industry. The 2024 EMP’s definition of “clean energy” should only include energy sources that do not produce greenhouse gas emissions or co-pollutants. Finally, the EMP should further the efforts of the 2019 EMP to intentionally ensure access to energy efficiency, waste reduction, and responsible renewable energy opportunities for LMI and EJ communities.

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<sup>26</sup> *Id.*

<sup>27</sup> Timothy Q. Donaghy et al, *supra* note 17.

<sup>28</sup> See Press Release, N.J. Bd. Pub. Utilities, New Jersey Board of Public Utilities Launches ‘Whole House’ Pilot Program in Trenton, *supra* note 9.



COA supports the intent of the EMP to combat climate change by transitioning away from fossil fuels. The changes outlined in these comments will help New Jersey achieve a truly sustainable energy mix. Thank you again for the opportunity to provide comments on the 2024 EMP.

Respectfully submitted,



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