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Secretary of the Board of Public Utilities
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Submitted via email: board.secretary@bpu.nj.gov

In the Matter of Docket No. QO24020126 – 2024 Energy Master Plan

To Whom It May Concern:

The American Clean Power Association (ACP) is the leading voice of today's multi-tech clean energy industry, representing over 800 energy storage, wind, utility-scale solar, clean hydrogen and transmission companies. ACP is committed to meeting America's national security, economic and climate goals with fast-growing, low-cost, and reliable domestic power.

MAREC Action (informally, "Mid-Atlantic Renewable Energy Coalition") is a coalition of utility-scale solar, wind, and battery storage developers, wind turbine and solar panel manufacturers, and public interest organizations dedicated to promoting the growth and development of renewable energy in New Jersey and across the PJM grid.

The New Jersey Energy Master Plan (EMP) is the state's 2019 plan to achieve 100% clean energy by 2050. The 2019 EMP established a set of goals to put New Jersey on a pathway to achieve their clean energy goals, expand on previous EMPs, and incorporate mandates from the Clean Energy Act of 2018, the Zero Emission Vehicle Memorandum of Understanding, and the Global Warming Response Act of 2009 to reduce greenhouse gas ("GHG") emissions.

As required by law, the EMP must be updated and will develop actionable steps to continue GHG reduction and maximize clean energy deployment to help New Jersey reach its goal of 100% clean energy by 2035. There were seven strategies enumerated in the 2019 EMP:

1. Reducing Energy Consumption and Emissions from the Transportation Sector;
2. Accelerating Deployment of Renewable Energy and Distributed Energy Resources;
3. Maximizing Energy Efficiency and Conservation, and Reducing Peak Demand;
4. Reducing Energy Consumption and Emissions from the Building Sector;
5. Decarbonizing and Modernizing New Jersey's Energy System;
6. Supporting Community Energy Planning and Action in Underserved Communities; and
7. Expanding the Clean Energy Innovation Economy.

As trade associations focused on utility scale deployment, we will limit our comments on the strategies and responses to the subsequently published RFI questions relative to the interests of our members.

Accelerating Deployment of Renewable Energy and Distributed Energy Resources – Strategy 2 of the 2019 EMP

The 2019 EMP aimed to successfully reduce New Jersey’s climate emissions and meet the State’s energy needs with clean energy by maximizing the development of offshore wind, the amount of in-state renewable energy generation, and the interconnection of zero-emission distributed energy resources. With three offshore wind solicitations complete and one underway, as well as contemplation of energy storage incentive policies and varied approaches to solar investment, New Jersey is advancing its clean energy goals.

Clean power is quickly becoming America’s dominant energy source, as renewables like wind and solar—coupled with battery storage—led new power additions over the past several years. Critical in the fight against climate change, clean energy is also a leading source of U.S. job creation. In 2023, clean power developers in the U.S. commissioned 33,844 megawatts (MW) of new clean power capacity, setting a record for most growth in operating clean power in a single year. Solar and storage both saw a record year for installations, with solar accounting for 58% of all new capacity additions and storage 23%.

New Jersey can and should make continued investment in clean energy a priority. There are many policy levers and ways to incentivize development. Combined with the programs and incentives in the recently passed Inflation Reduction Act, this is the right time for New Jersey to continue pursuing strong clean power policy - because it will ensure that energy costs stay low for ratepayers and businesses.

Strategy 2 – BPU RFI Question 1. What mechanisms are needed to ensure clean energy development incentives are aligned to match generation and load?

Energy Storage Incentive Program

Front-of-the-meter, grid-scale energy storage is a critical component of a modern, clean, and reliable electric grid. Energy storage technologies have the unique capability of maximizing grid efficiency, boosting reliability and resilience, while also lowering costs. Energy storage also serves as an enabling technology to advance the clean energy projects and help New Jersey meet its clean energy objectives.

Not only are energy storage technologies commercially viable and scalable, but they have also become a leading grid-enhancing technology in states across the country with modernized policy frameworks. The amount of battery storage capacity under development has soared over the past two years. At the end of Q3 in 2023, the battery storage pipeline has expanded by 50% year-over-year and has grown by an average of 10% each quarter. In 2023, two new storage projects with a capacity of more than 300 MW came online (both in California). According to the U.S. Energy Information Administration, in 2024, the United States battery storage is expected to double.

In 2018, New Jersey was one of the first states to recognize the power of energy storage and established a goal to deploy 600 MW of storage by 2021 and 2,000 MW of storage by 2030. Unfortunately, less than 100 MW of stand-alone storage has been deployed. Because the PJM market does not effectively incentivize energy storage investments, the BPU must finalize their energy storage incentive program to take advantage of the decreasing costs of storage and available federal tax credits. The federal Inflation Reduction Act provides historic incentives, including a first-ever incentive for stand-alone energy storage, but projects will not get built without an accompanying RTO market or state policy signal.

We are encouraged that the BPU has set a timeline for the third incentive straw proposal and has plans for initial project awards in Q1 2025. The BPU must keep to its commitments or storage investment and grid reliability will suffer. MAREC Action, as a regional focused organization, has heard from storage-focused member companies that they are abandoning the New Jersey market until the state's storage program is finalized.

Competitive Solar Incentive Program

The BPU's recent awards in the second solicitation of the Competitive Solar Incentive (CSI) Program created a path to market for over 310 MW of ground-mounted solar—with most of the projects being allocated to the "basic grid supply" tranche. These results demonstrate that the largest amount of viable capacity and the lowest costs are delivered by projects on conventional sites outside of the built environment or on contaminated sites. As the BPU considers future rounds of the CSI program, there are several improvements that could be made to increase the quality and quantity of bids.

The BPU should revisit its Phase 1 maturity requirement for the next CSI solicitation, provided Transition Cycle 2 projects will not have received their Phase 1 study results by the close of the third solicitation. After removing winners of the second CSI solicitation from the eligible pool of projects for the next solicitation, there will be very few remaining projects with Phase 1 study results in hand at the time that the next solicitation closes, namely only those through Transition Cycle 1. This will diminish competition. To address this, the BPU could consider removing the Phase 1 study obligation for this solicitation while retaining the COD requirement; alternatively, the BPU may consider requiring that projects demonstrate a pathway to final Phase 1 study results by the end of 2025, which would functionally expand the eligible project population to Transition Cycle 2. We also note that overlapping state and county regulatory caps on agricultural land usage for CSI projects will increasingly limit viable projects as the BPU moves to open future solicitations. Recognizing that EMP comments are not the best venue for such detailed program design considerations, we encourage the BPU to conduct a formal comment process to gather feedback on Grid Supply Projects (and potentially other tranches) prior to the third CSI solicitation. We urge the BPU to avoid any delay in the issuance of a third solicitation even as you consider formal comments.

Strategy 2 – BPU RFI Question 2. How can we accelerate the pace at which renewable generation projects are built without making it cost-prohibitive for ratepayers and/or developers?

Choose clean power

In 2023, wind and solar farms combined to generate 15.9 % of electricity produced in the United States, nearly on-par with the 16.2% generated from coal-fired power plants. Utilities and power customers across the country increasingly prefer clean power resources over other generation technology. In every region except the Mid-Atlantic, clean power represents the majority of capacity installations over the past five years. In PJM, natural gas was the overwhelming choice for new capacity in the region. In implementing its goal of 100% clean energy by 2035, choosing utility scale solar, wind, and storage projects will ensure New Jersey is a leader on clean energy in PJM.

Utility scale clean power is competitive on cost

Across the US, regional retail electricity prices continue to rise. In 2023, retail rates were up in every region, with the Southeast seeing the largest increase (+13%) within the contiguous U.S. The Northwest and Midwest had the smallest retail rates increase, both of which were less than 5%. The rise in retail

rates is in line with wholesale power price increases due to natural gas prices being incredibly high the previous year.

Most electricity market prices follow a similar daily curve. Overnight prices are low, reflecting weak demand as most people sleep and businesses are inactive. Prices rise into the morning hours as the country wakes and commutes to work. Demand sags in the middle of the day before ramping up in the evening as people return home and crank on the oven, start a load of laundry, and, increasingly, plug in their electric vehicle. In sunny regions with a high penetration of solar power, the evening peak gets pushed a few hours later. Storage can help meet evening demand by supplanting solar generation as the sun goes down. Offshore wind will provide consistent reliability and is critically important for New Jersey and states along the east coast to meet their carbon or GHG reduction goals.

Following years of cost declines, the levelized costs of wind and solar energy increased over the last three years. Supply chain challenges, logistics cost increases, higher commodity prices, trade barriers, regulatory uncertainties, and macroeconomic inflationary pressure impacted the industry across the board. Despite the increase, wind and solar remain competitive. The cost of producing electricity from solar has declined 46% in the last 10 years thanks to advances in module efficiency, increasing project size and scale, advances in operations and maintenance strategies, and better output performance. The levelized cost of a four-hour duration energy storage facility serving energy markets in the U.S. ranged from \$126- 177/MWh, down significantly from a range of \$347-\$739/MWh in 2015. After tax benefits are considered, these technologies are generally the lowest cost form of new power generation and are increasingly competitive with existing generators. In some parts of the country, it is more cost-effective to replace existing fossil fuel plants with new wind or solar than it is to continue to operate the existing power plant.

Transmission Coordination

Long-term, proactive transmission planning will be critical to both integrate new energy resources and prepare New Jersey's electric grid for 21st century needs. New Jersey has been a leader in this regard, as the first state to take advantage of the State Agreement Approach—a FERC-approved mechanism that allows states to request transmission planning in accordance with public policy needs. New Jersey's recent decision to pause implementation of the State Agreement Approach 2.0 is understandable in light of FERC Order 1920, which revises the intraregional transmission planning requirements for PJM.

Order 1920 makes significant process improvements that will lead to better planned and cost-saving transmission over a horizon of 20 years. The new order also creates significant opportunities for states to provide input into long-term transmission planning and we encourage New Jersey to lean into those opportunities to secure benefits for the state's consumers. New Jersey should seek all opportunities to shape PJM's compliance filing for Order 1920 and subsequently provide feedback into regional transmission plans that address New Jersey's needs.

Order 1920 will take years to implement, and New Jersey shouldn't stand idly by. Even with the pause of State Agreement Approach 2.0, New Jersey should look at nearer-term opportunities to coordinate with neighboring states like Maryland, Delaware, and New York to facilitate no-regrets, cost-saving transmission planning for offshore wind integration. It would be possible, for example, for New Jersey to initiate discussion of a multi-state coordinated transmission planning approach with Maryland, Delaware and other PJM states to share benefits and costs across a wider sub-regional configuration of

states. Maryland and Delaware both have enacted legislation encouraging their regulatory commissioners to examine such opportunities.

How energy storage lowers costs

By optimizing resource portfolios, bolstering reliability, and helping integrate clean, renewable resources onto the grid, energy storage technologies (including long duration and multi-day storage) are uniquely positioned to reduce energy system costs. Over the long-term, these benefits will result in lower rates for consumers. There are myriad ways that energy storage can reduce energy costs, including:

- Supporting the integration of more wind and solar generation — Wind and solar are the cheapest sources of electricity. Energy storage supports the integration of higher and higher shares of renewables, enabling the expansion and incorporation of the most cost-effective sources of electricity generation.
- Reducing energy waste — Energy storage can help eliminate energy waste and maximize the benefits of renewable energy. Energy storage is the only grid technology that can both store and discharge energy. By storing energy when there is excess supply of renewable energy compared to demand, energy storage can reduce the need to curtail generation facilities and use that energy later when it is needed.
- Improving grid efficiency — Energy storage is instantly dispatchable to function both as generation and load, so it can help the grid adjust to fluctuations in demand and supply, optimizing grid efficiency, alleviating transmission congestion, and increasing grid flexibility. This reduces overall system costs.
- Limiting costly energy imports and increasing energy security — As an in-state resource built and operated in New Jersey, energy storage can limit the need to utilize often more costly and more-fossil fuel intensive balancing resources from the broader grid. Energy storage improves energy security and maximizes the use of affordable electricity produced in state.
- Preventing and minimizing power outages — Energy storage can help prevent or reduce the risk of blackouts or brownouts by increasing peak power supply and by serving as backup power for homes, businesses, and communities. Disruptions to power supply can be extremely costly and hazardous to health and safety. Energy storage makes the grid more resilient and reliable.

Clean power stays affordable and reliable with strong market certainty

Offshore wind, solar and storage play a key role in fulfilling Governor Murphy's commitment to 100% clean energy by 2035. New Jersey has already taken significant action to invest in solar, to invest in offshore wind supply chain leadership through the New Jersey Wind Port, and by working with industry leaders on other ways to keep costs low now and into the future for ratepayers. Codifying the 11-gigawatt offshore wind goal will protect that progress and send a strong signal that New Jersey welcomes long-term supply chain investments to support offshore wind manufacturing and jobs.

Long term power purchase agreements, like New Jersey's OREC program, lock in steady prices for decades at a time, which can provide states (and their ratepayers) with a hedge against price volatility and ensure lower electricity market prices. A finalized storage incentive program and continued utility-scale solar procurements will all contribute to a growth in clean energy generation for New Jersey.

Cutting red tape results in lower costs

A primary cost driver for all renewable energy development projects are delays. We recommend the 2024 EMP review opportunities for streamlining and accelerating the state permitting processes for clean energy projects and transmission associated with them. State permitting, project approvals, and

regulatory development should not be the bottleneck to furthering New Jersey's energy goals and we strongly support reviewing potential staffing needs across the state to ensure timely implementation of clean energy goals. Any proposed new regulations regarding clean energy must be evidence-based and common sense, and appropriately weigh benefits against risks.

New Jersey's Offshore Wind Commitment

ACP and MAREC Action both have a number of members focused on offshore wind development, and both our organizations are steering committee members of the New Jersey Offshore Wind Alliance (NJOWA). We support the separate comments submitted to this docket by NJOWA. With 5.2 GW of projects awarded, which will power 1.5 million homes, offshore wind is an area in which New Jersey truly excels. We applaud the Murphy administration, the BPU, the Economic Development Authority, the Department of Environmental Protection, and the entirety of the state's work to accelerate offshore wind off the Jersey coast. Offshore wind will establish a new American supply chain, create tens of thousands of jobs, revitalize port communities, and stimulate investment into local economies across the country. Proposed investments, where a dollar figure is public, include more than \$4 billion across manufacturing, ports, vessels, workforce development, and research areas, with many more on the way.

Three of the proposed offshore wind farm projects in NJ are estimated to inject \$4.7 billion into the state's economy and create over 10,000 jobs — thousands of which will be union construction jobs thanks to a project labor agreement.

Many of our member companies have committed to use all union labor for projects along the East Coast. The deal includes commitments to apprenticeship programs that will include opportunities for women, communities of color, and the formerly incarcerated. This also helps keep students coming out of schools like Atlantic Cape Community College, Stockton University and Rowan University in-state with abundant opportunities to fill critical roles within offshore wind development.

Clean Energy Future: New Jersey

New Jersey is uniquely positioned to take advantage of the booming growth of renewable energy. Clean power policy like the 2019 EMP envisioned means more jobs and investment in-state, and the future New Jersey Energy Master Plan should ensure that the historic goals relating to offshore wind, solar, and storage development are supported with policies that make 100% clean by 2035 a reality. With those changes, New Jersey will be poised to lead our region through the energy transition. On behalf of our members, the American Clean Power Association and MAREC Action thank you for the opportunity to comment and to the staff of the BPU for running such a robust and inclusive process.

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