Comments on the New Jersey Board of Public Utilities (BPU) 2024 Energy Master Plan (EMP)

Submitted by: Brian Lestini, MD PhD

I am a physician and executive who lives and works in New Jersey. The comments provided in this document are solely my own, and are submitted in my personal and private capacity as a citizen. They do not represent that of any company or organization.

Recommendation for Aggressive Pursuit of 100% Clean Energy by 2035

- As a physician, business leader, and father, I underscore to BPU the critical urgency and importance of achieving New Jersey's goal of 100% clean energy by 2035.
- Every day, New Jerseyans are adversely impacted by the increasing effects of climate change and fossil fuel-associated pollution.
- It is with high certainty that we know climate change is happening and is due to the man-made generation of greenhouse gases due to the combustion of carbon-based fossil fuels, supported by over 200,000 scientific articles generated over 4 decades that confirm consensus [1][2]. This high level of evidence is rare, even relative to other areas of science or medicine in which there is considered to be consensus opinion.
- It is also certain that the pace of climate change is accelerating, which leaves a very narrow window for us to take steps to mitigate and adapt to further adverse climate-related impacts on human health and economic output.
- Furthermore, the health effects of climate change are significant. 2024 was the hottest summer on record, and every future summer will become the hottest ever. Excessive heat currently kills about 12,000 Americans annually, similar to gun homicides [3]. In New Jersey alone, roughly 445 deaths a year are attributable to excess heat, which is estimated to rise to roughly 3,560 per year by the end of the century unless meaningful steps are taken to slow the pace of climate change [4].
- Pollutants generated by burning fossil fuels, such as PM 2.5 particulate matter, nitrogen oxides, and a host of other pollutants are able to penetrate deeply into the

lungs and bloodstream. These pollutants are now the highest single risk factor for disease globally, more than high blood pressure, smoking, or diabetes [5]. Air pollution leads to roughly 350,000 premature deaths each in the US alone [6], and is strongly associated with many diseases such as heart disease, stroke, asthma, chronic lung disease, adverse pregnancy outcomes, and dementia.

- Fortunately, by implementing robust policies and incentives to accelerate the transition to clean energy as recommended in the 2024 updated EMP, we can take meaningful steps in New Jersey to mitigate and adapt to the worst effects of climate change and fossil pollution.
- New Jersey also stands to benefit economically, in terms of tens of billions of dollars saved in public health costs, and similar tens of billions generated in economic output and the creation of clean energy jobs.
- In addition to committing to the most aggressive electrification scenarios and "no regrets" strategies outlined in the current BPU 2024 EMP, New Jersey must commit to introducing and passing 100% Clean Energy by 2035 legislation without delay, codifying these commitments into law in order to drive public and private investment into our clean energy economy and protect human health.
- Crucially to New Jersey's goals, BPU must take every possible step to ensure that PJM is held accountable for interconnecting the almost 300 GW of backlogged capacity, of which roughly 95% comprises renewables, without delay, and without bias toward prioritization of fossil fuel derived capacity. This should include not only working with PJM directly, but also with other state regulatory bodies, the legislature, and the governor, as needed to ensure the appropriate policies are in place to bring this excess renewable capacity on line as expeditiously as possible.

Economic Growth and Potential

- The steps taken by our state and at the federal level to grow New Jersey's clean energy economy have already generated tangible benefits.
- Between 2022-2023, clean energy jobs in New Jersey increased by 5%, to roughly 60,000 jobs (not including transmission & distribution), or 42% of the total 143,000 energy jobs in the state. The vast majority of these jobs are in solar and construction/manufacturing [7]. By BPU estimates outlined in the draft EMP, these clean energy jobs are furthermore poised by nearly double under the most aggressive 100% clean energy by 2035 scenarios.
- The 5.2 GW of wind electricity awarded (of 11 GW planned) in the first 3 solicitations (of 7 planned) have provided roughly $5 billion in economic benefits to the state [8].

- The New Jersey Wind Port in Lower Alloways Creek, Salem County, woud provide access to 50% of the available offshore wind lease areas along the Atlantic coast, and would provide up to 1,500 local jobs [8][9].
- Expanding the scope and scale of clean energy, and providing robust clean energy jobs training and recruitment programs, will dramatically increase the economic gains to the people of our state.
- Also, with the investments made in clean energy to advance clean electricity technological efficiency at scale, home energy efficiency, regional wind capacity, battery storage and low-cost alternative financing such as the New Jersey Green Bank, accelerating clean energy deployments will provide significant cost savings to New Jersey ratepayers compared to a "business-as-usual" scenario. In fact, solar is now the cheapest form of electricity generation.
- Efforts to date in New Jersey to: put more than 200,000 electric vehicles on the road; install 4,200 charging stations; access nearly $2 billion in federal funding from the Inflation Reduction Act (IRA) and Bipartisan Infrastructure Law, including $13 million in IRA funding for zero-emission school buses and $400 million in IRA funds to electrify our ports [10][11]; and legislate and invest in electrification of medium- and heavy-duty vehicles, have led to reduced pollution in our neighborhoods and schools while saving money for New Jerseyans, businesses, and schools.

Public Health Benefits of Clean Energy

- Numerous studies have shown that phasing out fossil fuels will prevent thousands of premature deaths and save billions in healthcare costs.
- Reducing air pollutants and mitigating the effects of extreme heat will reduce emergency room utilization and heathcare costs for a wide range of conditions such as asthma, heat exhaustion, and hypertension, of which fossil-fuel associated emissions are a direct contributing factor.
- The health benefits calculated by BPU under the EMP, while substantial, likely significantly underestimate the true health benefits of decarbonization. In fact, it is estimated that roughly $30 billion could be saved statewide from the health benefits stemming from emissions reductions [12].
- Additional indirect benefits include increased productivity due to less days of work or school missed due to emissions and climate-related health impacts.
- By committing to 100% Clean Energy by 2035, New Jersey stands to benefit from major investments that will put New Jersey on a clear path to a safer, healthier, and more prosperous future. As an example, one model of the health benefits of

greenhouse gas reduction from IRA investments predicts that nationally we can avoid nearly one million asthma attacks, 41,000 heart attacks, and 19,000 hospital admissions - a total of more than three million lost workdays and 33,000 deaths – by 2050, just by cleaning up our air and reducing pollution [13]. Proportionately, New Jerseyans are expected to similarly benefit from these investments.

Economic and Societal Costs of Inaction

- The recent dramatic projected increase in electricity rates that New Jersey faces as a result of the most recent PJM auction in 2024 demonstrates the real and significant risk of failing to rapidly implement non-fossil fuel-based clean energy sources. In particular, the failure of PJM to interconnect the backlog of new sources of electricity generation, of which 95% are clean energy sources, as well as failure to historically adequately account for the unreliability of aging fossil fuel generating plants, has primarily led to the current rate crisis. One analysis indicated that if only 30% of the currently backlogged renewable projects had been interconnected, the market clearing price could have been reduced by as much as 63% [14].
- As solar and onshore wind are now the lowest-cost sources of electricity generation as compared to fossil fuels, these rate hikes underscore the urgent need to bring on adequate clean energy capacity in order to drive down and stabilize costs for ratepayers.
- These events further emphasize the critical role of clean energy to bring reliability in addition to affordability, based on improvements of storage technologies, ability to generate power locally in-state without reliance on regional or national stability, and decreased reliance on aging fossil fuel plants.
- The risks to New Jersey's economy are severe should the state fail to meet its clean energy goals, putting tens of billions of dollars in investment and economic output in jeopardy.
- Failing to commit to 100% clean energy by 2035 further puts at risk the heath of children, pregnant women, overburdened communities, the elderly, and those with other illnesses who are already disproportionately affected by the impacts of fossil fuel pollutants. New Jersey residents—particularly those in historically redlined neighborhoods and communities near highways, power plants, or industrial facilities— already bear the brunt of this pollution. These are the same communities often lacking access to green space, cooling infrastructure, or quality healthcare. Environmental injustice is health injustice.
- In addition to the direct costs of inadequate action transitioning to 100% clean energy, there will be severe impacts on indirect costs such as dramatic increases in

emergency room and healthcare utilization, loss of productivity due to missed days of work and school, and reliance on already strained public services and budgets.

- By BPU's calculations, the net societal benefit of adopting a 100% clean energy by 2035 EMP approach $100 billion. To forego such benefits by failing to complete a rapid and just transition to 100% clean energy would not only be irresponsible for New Jersey taxpayers and ratepayers, it would be morally reprehensible in terms of impacts on the health and well-being of every New Jerseyan.

Conclusion

- The BPU is to be commended for putting forward an aggressive, yet achievable, set of scenarios for New Jersey to reach the crucial goal of 100% Clean Energy by 2035.
- The health and prosperity of New Jerseyans are already being impacted by the effects of a warming climate, experienced as more extreme heat, worsening air pollution, higher energy costs, and lost days of productivity. Committing to 100% clean energy now would reduce such harms dramatically and is imperative to protect the public health and economic well-being of New Jerseyans.
- In addition to saving lives, phasing out polluting oil and gas as energy sources could save New Jerseyans billions of dollars in healthcare costs thanks to the health benefits of emissions reductions. More importantly, however, are the real impacts on the everyday lives of people in our state. Clean energy is not just about reducing emissions and costs; it's about reducing emergency room visits for asthma, lowering blood pressure in children exposed to pollution, and giving vulnerable populations a fighting chance in a changing climate.
- The BPU should take bold action in enacting a high electrification scenario, one in which our electricity generation, transportation and building sectors are moved toward the lowest possible use of fossil fuel baseload generation and heating needs, and projected increases in demand are met exclusively with decarbonized, non-fossil sources such as solar, wind, and nuclear capacity.
- Moreover, beyond policy set forth by BPU, it is imperative that New Jersey lawmakers re-introduce and pass legislation that will codify 100% Clean Energy by 2035 into law without delay.

References

[1] Haunschild R, Bornmann L, Marx W (2016) Climate Change Research in View of Bibliometrics. PLoS ONE11(7): e0160393. doi:10.1371/journal. pone.0160393.

[2] John Cook et al 2013 Environ. Res. Lett. 8 024024.

[3] Shindell, D., Zhang, Y., Scott, M., Ru, M., Stark, K., & Ebi, K. L. (2020). The effects of heat exposure on human mortality throughout the United States. GeoHealth, 4, e2019GH000234. https://doi.org/10.1029/2019GH000234

[4] https://www.climatecentral.org/partnership-journalism/climate-change-and-concrete-turn-up-heat-on-vulnerable-communities-in-new-jerseys-cities. Accessed April 29, 2025.

[5] Lancet 2024; 403: 2162–203.

[6] Vohra, K., Environmental Research 195 (2021) 110754. https://doi.org/10.1016/j.envres.2021.110754.

[7] Energy Employment By State 2024, United States Energy & Employment Report 2024, www.energy.gov/USEER. Accessed April 29, 2025.

[8] https://www.njeda.gov/offshorewind/. Accessed April 29, 2025.

[9] https://bpuoffshorewind.nj.gov/. Accessed April 29, 2025.

[10] Evergreen Action, personal communication.

[11] American Lung Association, personal communication.

[12] https://njclimateresourcecenter.rutgers.edu/wp-content/uploads/2024/03/Monetizing-Health-Benefits-of-Offshore-Wind-Expansion-and-Demand-Reduction-Strategies-in-New-Jersey-March-2024.pdf.

[13] Kumar, A., American Journal of Preventive Cardiology 19 (2024) 100707. https://doi.org/10.1016/j.ajpc.2024.100707.

[14] https://www.nrdc.org/bio/claire-lang-ree/pjms-capacity-auction-real-story. Accessed April 29, 2025.