

6/7/24 - Comments  
on the forthcoming 2024 Energy Master Plan  
BPU Docket No. QO24020126

Thank you for the opportunity to provide comments towards the forthcoming 2024 NJ Energy Master Plan.

New Jersey has taken a major step forward with Executive Order (EO) 316<sup>1</sup>, with the following extracted text:

“In February 2023, Governor Murphy signed Executive Order No. 316, directing that “[i]t is the policy of the State to advance the electrification of commercial and residential buildings with the goal that, by December 31, 2030, 400,000 additional dwelling units and 20,000 additional commercial spaces and/or public facilities statewide will be electrified, and an additional 10 percent of residential units serving households earning less than 80 percent of area median income will be made ready for electrification through the completion of necessary electrical repairs and upgrades.””

Another major step forward is EO315<sup>2</sup>, with the following extracted text:

“....to accelerate the target of 100% clean energy by 2050 to 2035. 100% clean energy is defined as 100% of electricity sold in New Jersey to come from clean sources of electricity through clean energy market mechanisms paired with support for a clean energy standard in New Jersey.”

Additional related Executive Orders can also be found at the prior reference.<sup>3</sup>

Detailed comments on the 2024 NJ Energy Master Plan follow:

**1. The 2024 EMP needs to focus on an updated pathway that meets the above objectives and targets eliminating NJ Greenhouse Gas (GHG) use by 2050.**

Recent EMP hearings elicited public feedback<sup>4</sup> that the 2019 EMP included a low cost pathway to minimize GHG by 2050. These costs were stated as a small fraction of overall NJ energy costs, and thus a far smaller fraction of the NJ state budget and economy. The 2024 EMP needs to present a specific pathway for moving ahead (not a further study of a set of pathways), while also factoring in updates such as wind generation and the societal costs of GHG. 5 years later, a specific direction with actions and results is long overdue<sup>5</sup>.

**2. The 2024 EMP needs to reference all associated Executive Orders such as those listed above and ensure the energy plan implements them.**

**3. The 2024 EMP should include a public roadmap and project plan with schedules to achieve the Greenhouse Gas (GHG) reduction and electrification objectives each year.**

The roadmap and action plan should include specific line items by type, amount of GHG savings by type for each year, how each result will be achieved, and measured results.

The roadmap should also include a plan that projects the increased incremental electricity demand created by Building Electrification (BE) and Electric Vehicles, and how this demand will be met year by year by each electric utility, local distribution grids, area distribution grids, and renewable power generation, and offset by savings such as Grid-Interactive Efficient Buildings (GEB)<sup>6</sup> and advanced transmission line conductors, as well as electric generation such as rooftop and parking canopy solar.

#### **4. Convert All Residences and Small Businesses to Eliminate GHG**

The 2024 NJ EMP needs to include a systematic program to convert **ALL** residences and small business to eliminate GHG (aka stop burning fossil fuel), and also meet EO & EMP objectives. The program should include annual goals and measured results, clear procedures, incentives, guidance brochures (residence, multi-family, small business, municipal, commercial), funding, and HVAC contractor guidance and workforce development, not just a variety of programs.<sup>7</sup> Guidance brochures<sup>8</sup> available elsewhere are also an example of what NJ should provide.

- 5. To help address the prior, the 2024 EMP should establish objectives by utility and track results for at least 67,000 dwelling units per year that need to be converted to electric space heating, specifically via electric “cold climate” heat pumps, starting in 2025 in order that the NJ electric utilities collectively meet the 400,000 additional dwelling units electrified by 2030 specified in NJ EO 316.**

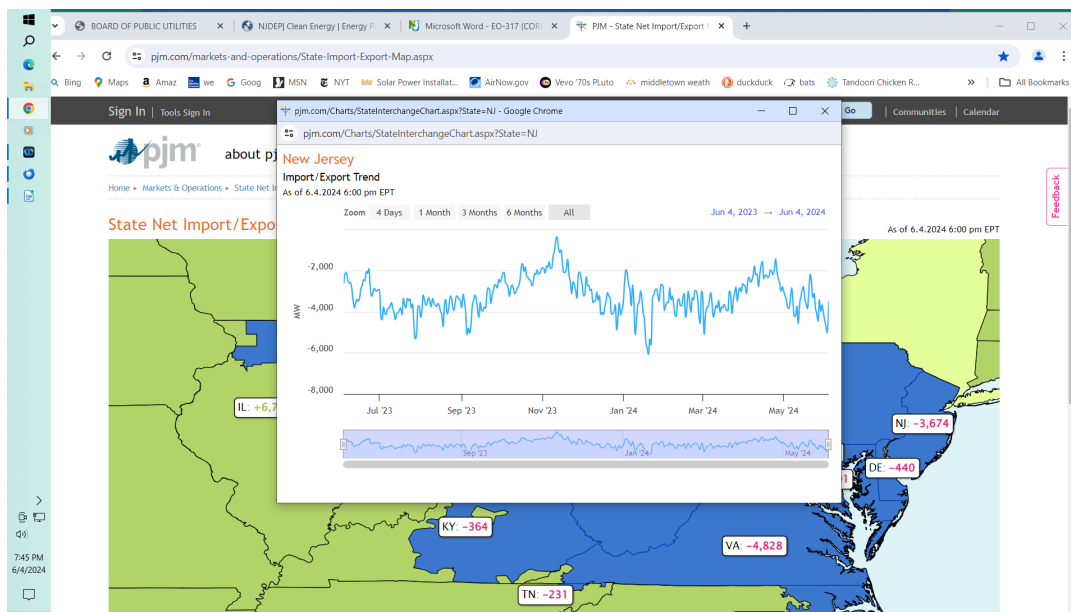
Likewise, the 2024 EMP should establish and track results for annual objectives for the 20,000 additional commercial/public facilities to be electrified, and the additional 10% of residential units serving households earning less than 80% of area median income made ready for electrification.

The New Jersey government should also establish specific annual objectives for heat pump water heaters, electric dryers and electric ranges, as well as annual objectives for upgrading household electric panels where needed to support Building Electrification, e.g. upgrades to  $\geq 200$  amps, which should also consider service line needs to support Electric Vehicles.

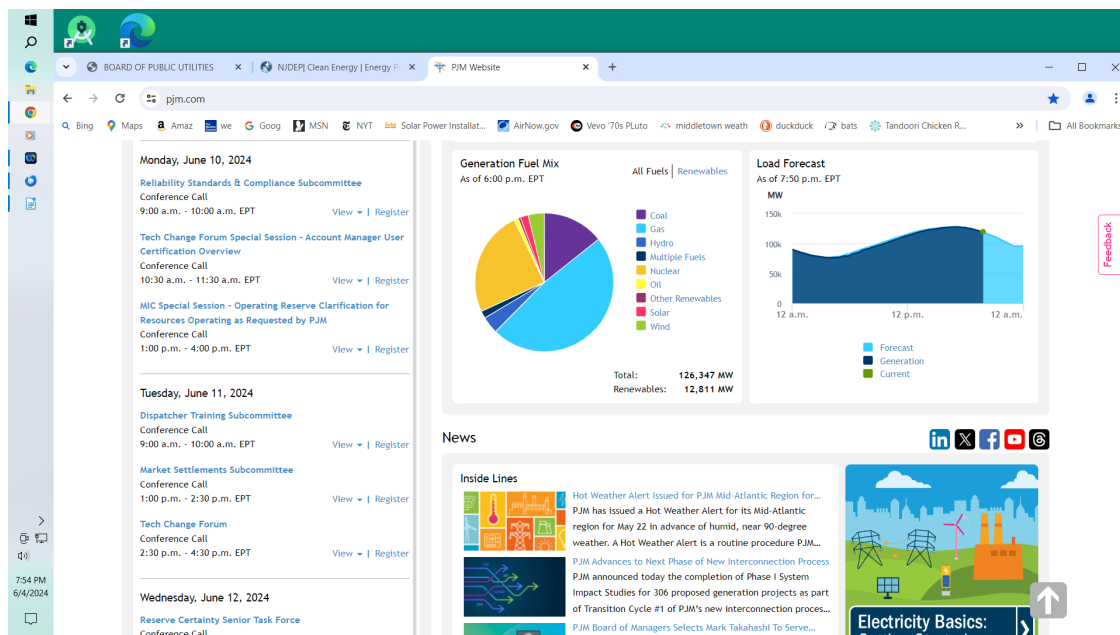
- 6. The 2024 EMP should specify a clear plan with schedules by year to get to 100% clean electric by 2035.**

For example, how and when will NJ eliminate the large amount of dirty electricity imported routinely from the PJM (see charts below) as well as generated in-state to meet this objective?

NJ power importation:



Instantaneous pie chart of PJM power generation:



The  
2024  
EMP

should specify how to eliminate dirty electricity. For example, by working with pool and government authorities, utilities, and power generators to ensure that high capacity and new generation higher capacity transmission lines are quickly established nationwide<sup>9</sup> so that renewable power can be readily transferred among grids in consideration of the context that “Most models suggest that a more interconnected grid is a better grid”.<sup>10</sup>

This plan will also need to factor in electricity demand growth from building and transportation electrification, and economic growth.

7. The 2024 EMP needs to specify a substantial program of electricity storage (e.g. batteries) to complement the vast increase in renewable electricity expected by 2035.

California and Texas both have huge programs for battery storage, but New Jersey appears to lack an active one. The California program has helped address large swings in solar each day, without requiring increases in natural gas usage.<sup>11</sup> Texas plans to add 6.4 GW of battery storage in 2024 to address grid stability considering its growing solar<sup>12</sup>.

Electric storage is mentioned in the NJ 2019 EMP. NJ has requested docket based comments regarding storage incentives<sup>13</sup>. But there does not appear to be an actual, active or scheduled statewide program to implement grid storage nor how nor when this would be done. It is observed that virtually all comments on this docket except one (one filed as late comments) appear to have been provided before or by the Sept 2023 docket comment deadline, and here it is 10 months later without any apparent progress.

**8. The 2024 EMP should provide a method to fix the new regressive EV annual road tax fee which penalizes LMI people and will thus also retard the used EV market in NJ.**

The administration's new EV road tax (registration fee) discriminates against Low Medium Income (LMI) car drivers and retirees. Basic math shows that for a typical MPG gas vehicle, the New Jersey gas tax (and registration) is cheaper, often far cheaper, for under 10,000 to 13,000 miles driven per year compared to paying the \$250 (eventually \$290) annual EV road tax. Even gas guzzlers (including large heavy models) might pay less than an EV owner depending on mileage driven. And LMI car drivers tend to pay for gas week to week as they are able, do not really see the gas tax as an individual expense since its embedded in the gas price, and will not easily pay this large annual EV fee (unlike the better off) which requires a large lump payment. Thus many may not buy an EV. This is even worse when several years of it are collected upfront as required for new car sales, i.e. perhaps \$1000 upfront road tax, or more. 3<sup>rd</sup> car EV purchases, e.g. for high school, college and young drivers, will also be discouraged and thus will favor gas vehicles instead of EV. Demand for used EVs may drop or not develop. Over 10 years, the EV road tax would add \$2500 to \$2900 to EV costs, much of which will be an unfair penalty for low to modest mileage LMI customers compared to gas customers. Instead, the 2024 EMP should specify a method to compensate LMI EV owners to fix this unfair situation, and/or switch it to other methods such as usage (e.g. DMV mileage check), weight class, and/or license plate tolling based methods applied to ALL vehicles.

Also, NJ already collects an electric sales tax from utilities, so a portion of this EV road tax is essentially double taxation.

**9. Stop the huge increase in MSRP for FY25 EV Incentives**

The recent NJ Clean Energy Program hearings proposed an increase in the MSRP for which a NJ incentive can be increased from \$45,000 to \$55,000, over a 20% increase,

without explanation. Anyone that can afford a new vehicle for \$45,000 to \$55,000 does NOT need any assistance (there is no reason to make NJ limit equivalent to an IRA tax credit limit). Instead, the NJ incentives should be re-directed to focus on lower cost EVs, either new or used, and help stimulate the mass deployment of EVs, not EV purchase by the well off. Thus, the 2024 EMP must specify that the FY24 EV incentive limit of \$45,000 must be maintained or decreased, return to the \$4K incentive, and allocate some incentives for used EV purchase, and thus assist LMI customers, with a limit placed on the used EV sales price such as \$25K. Only then consider the concept of also extending an additional incentive to LMI customers.

#### **10. Lack of NJ DC Fast Chargers impedes EV rollout**

Discussion at recent BPU hearings expressed concern about lack of NJ DC fast chargers for EVs. This negatively impacts decisions about purchasing EVs in NJ. A check of EVs for Cape May area was done using a DOE website<sup>14</sup>. Via this site, unfortunately only 3 fast chargers were identified south of a Tesla charging plaza at Cape May Courthouse, i.e. for about a stretch of 12 miles encompassing the entire tip of Cape May including the municipality of Cape May, Wildwood, etc, Cape May State Park, and vast areas of recreation, hotels, housing and tourism. (note, other links turned up another 2 fast charger ports). No DC fast chargers were identified in Atlantic City or immediate surrounding communities (though several are near the intersection of the parkway and AC expressway). No one will want to take EVs on a road trip to popular NJ vacation spots like Cape May or Atlantic City without enough and readily available DC fast chargers.

The 2024 EMP needs to document a detailed plan, funding, and schedule by month working with providers to roll out a huge number of public EV chargers statewide including LMI communities to fix this problem. Without the chargers, the EV program may stall.

#### **11. The 2024 EMP needs to call for an aggressive schedule and funding to ramp-up electric school and other buses.**

There are only 21 electric school buses operational today in NJ, a tiny amount out of 21700.<sup>15 16</sup> A rapid ramp-up of electric school buses is essential to achieve GHG goals but especially to improve the health of school children and those near school buses given the typically dirty emissions of fossil fuels school buses. New Jersey Transit and other bus operators also need to do the same.

#### **12. Wind Settlement money should be directed towards electric heat pump incentives**

Recently NJ settled a wind farm developer claim for \$125 million<sup>17</sup>. The 2024 EMP should direct that a large portion of this money should be used to fund “cold climate” electric heat pump incentives, but only in addition to existing or planned funds, not to replace other funds. This would substantially help jump start the “cold climate” heat

pump roll out and Building Electrification, and help meet EO316. Also, rolling out electric heat pumps in place of fossil fuel HVAC greatly improves neighborhood point air quality.

- 13. The 2024 EMP should specify that NJ utilities should not provide any incentives for central air conditioning systems that provide only cooling for residence or small business. HVAC incentives should only be available for combined heating and cooling “cold climate” heat pumps<sup>18</sup>.**

Where utilities may have such central air conditioning (cooling) or de-humidifier incentives, instead the entire incentive amount should be transferred to the heat pump category. Investing in central air conditioning systems where heat pumps can be used or invested in instead is locking in the wrong equipment for decades, and should not be paid for by taxpayers or rate payers.

Furthermore, implementation of our recommended requirement of no support for central air conditioning systems may encourage multi-family and HOA type housing situations to change existing prohibitions against heat pump systems, and instead encourage heat pumps. We’re aware of an example where a unit owner struggled against their HOA to get their heat pump installed.

Incentives should not be allowed for hybrid systems that provide automated fuel switching. It is unacceptable to perpetuate dependence on new (or replacement) fossil fuel equipment that could easily last another 30 years, which will then not only generate pollution for decades, but also enable perpetuation of fossil fuel networks which instead should be phased out.

- 14. The BPU should not waste taxpayer money on a study of the “potential of using gas to provide back-up heating during the the coldest hours of the year” (a MAJOR goal of the BPU for the 2024 EMP as recently presented)**

The BPU should not endorse the high cost of retaining gas utility administration and a shrinking aging gas pipe network with customers steadily departing just to provide heat for a few hours, and which would also require customers to maintain expensive dual systems. Leave this configuration for those that think they can sell it; the BPU does not need to use taxpayer or rate payer money to aid their sales pitch. With “cold climate” heat pumps readily available today, and which readily pump out heat at cold temperatures, and with the “cold climate” heat pumps installed at about the same cost as gas HVAC equipment, there is no reason for this expensive and polluting dual statewide scheme. Other states and rural areas even far colder don’t have this gas backup scheme (e.g. Maine), so why should New Jersey? Would NJ also insist that propane and oil customers should retain their systems and fuel delivery just for a few hours of heating? This makes no sense. (Maine also has a hugely successful heat pump deployment program. Massachusetts latest heat pump program requires that the existing fossil fuel system be removed or capped in order to obtain their incentive. Massachusetts also has

many customers served by natural gas. Massachusetts must believe that the heat pump equipment is adequate. Does the NJ BPU believe Massachusetts is wrong?

### **15. The 2024 EMP needs to eliminate all natural gas equipment and network incentives.**

The 2024 EMP should specify that there will be no fossil fuel incentives among all filings from NJ utilities, whether gas, electric, or combined electric/gas utilities, and NJ should offer no fossil fuel incentives itself.

And further expansion of the natural gas network needs to stop now. This investment is going to end up being stranded.

Funding previously allocated or proposed by any NJ utility filings for natural gas incentives for new and retrofit installations or funded by NJ itself should instead be immediately diverted primarily to incentives for cold climate heat pumps, but also other Building Electrification incentives and priorities. No more money should be spent on any fossil fuel equipment or its infrastructure starting now. Natural gas companies should be forbidden from covering the cost of installation of gas pipelines and meters at customer premises; customers must bear this cost themselves. It's been shocking to see a natural gas company still offer to pay for installation of customer gas lines in their marketing literature to residential customers; this needs to stop now. ‘

Note: Prior context for our comments includes previous input<sup>19</sup>, NJ EOs 315 & 316, the 2019 NJ Energy Master Plan strategy 4.2 which calls for incentives for the transition to electric heat pumps, heat pump hot water heaters and other electric appliances, and the 2019 NJ EMP strategy 4.1 - Start the transition for new construction to be net zero carbon, along with other EMP strategies. In addition, the 2019 Integrated Energy Plan cites EV and heat pumps as the key technologies to assist New Jersey in reaching its 100% clean energy goals.

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- 1 <https://nj.gov/infobank/eo/056murphy/pdf/EO-316.pdf> (2/15/23; extract: “It is the policy of the State to advance the electrification of commercial and residential buildings with the goal that, by December 31, 2030, 400,000 additional dwelling units and 20,000 additional commercial spaces and/or public facilities statewide will be electrified, and an additional 10 percent of residential units serving households earning less than 80 percent of area median income will be made ready for electrification ....”)
  - 2 <https://dep.nj.gov/cleanenergy/nj/> (extract for EO315)
  - 3 <https://dep.nj.gov/cleanenergy/nj/>
  - 4 Speaker presentations at the May/June 2024 EMP hearings.
  - 5 On June 23, 1988 (now almost 35!! years later), with the temperature at 100F in Washington, D.C., NASA Climate Scientist James Hansen warned Congress about human induced global warming.  
<https://slate.com/technology/2018/07/james-hansens-1988-climate-change-warning-30-years-on.html>

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Partial extract from article of weather conditions the summer of 1988: “The rest of the summer offered up some of the **worst heat waves then on record**. Drought conditions **parched 40 states**. Major **news outlets** around **the country** began running stories about the threat of a warming planet”

Its quite instructive and perhaps prophetic to read a vision of the future in major media presented on December 13, 1988 in a linked article: <https://www.latimes.com/archives/la-xpm-1988-12-13-mn-293-story.html>

6 <https://www.energy.gov/eere/buildings/grid-interactive-efficient-buildings>

7 Table 2 of the JCP&L 12/23 filing provides a list of programs. JCP&L indicates the following in its filing, but this does not provide for the referenced comment from which this endnote is referenced:

“As presented in the above table [Table 2], EE&C Plan II includes a comprehensive portfolio of EE, PDR, and BD programs for the residential, commercial and industrial, and multifamily sectors, including Company initiatives as part of the “Additional Utility Led” section of the Plan.”)

8 <https://www.redwoodenergy.net/research>

9 <https://www.whitehouse.gov/briefing-room/statements-releases/2024/05/28/fact-sheet-biden-harris-administration-launches-federal-state-initiative-to-bolster-americas-power-grid/>

10 <https://www.yahoo.com/news/abnormally-dry-canada-taps-u-114108735.html>

11 <https://blog.gridstatus.io/caiso-batteries-apr-2024/>

12 <https://electrek.co/2024/03/22/texas-installs-another-big-solar-battery-storage-project/>

13 [https://nj.gov/bpu/pdf/publicnotice/Notice\\_RFI\\_NJEnergyStorageIncentiveProgram.pdf](https://nj.gov/bpu/pdf/publicnotice/Notice_RFI_NJEnergyStorageIncentiveProgram.pdf)

14 <https://driveelectric.gov/stations>

15 <https://www.nj.com/education/2024/05/dozens-of-new-electric-school-buses-coming-to-nj-see-which-districts.html>

16 <https://www.njspotlightnews.org/2024/02/21700-registered-school-buses-nj-most-diesel/>

17 <https://www.usnews.com/news/us/articles/2024-05-28/new-jersey-and-wind-farm-developer-orsted-settle-claims-for-125m-over-scrapped-offshore-projects>

18 It is however understood that NJ BPU may document limited exceptions allowing incentives for cooling only Energy Star systems for specialized small business configurations only such as restaurants and hair salons as these may require extensive cooling capability during peak customer usage beyond the capacity of a combined heating and cooling heat pump system, and if the need is clearly documented by HVAC engineers.

19 6/27/23 - Comments Building Decarbonization Straw Proposal Docket QO23030150 (submitted on behalf of Building Electrification Team)