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Subject: Comments on FY 2024 Comprehensive Resource Analysis and Clean Energy Programs -  
Docket No. QO23040235 and QO23040236

Thank you for providing the opportunity to comment on the Comprehensive Resource Analysis (CRA) and program budgets for the New Jersey Clean Energy Program (CEP).

New Jersey's goal is critical, and these budgets will help the implementation of targeted goals by the state of New Jersey. Focusing on New Jersey's goal of 400,000 heat pumps installed by 2030, these programs will need to grow significantly to enable workforce growth and for the state to meet its energy goals. To ensure the state maximizes the impact of the CEP, the Board of Public Utilities (BPU) should promote all programs especially geothermal heat pumps and incentives and programs, and for all types of buildings.

#### Abstract/Summary

1. While we support the budget and spending in this sector, we also ask the BPU to block the diversion and the redistribution of funding, from the BPU's fund and the tax funds collected through the societal benefit charge. It is disingenuous to claim New Jersey wants to be at the forefront of electrification and climate goals and then divert the clean energy fund money away from its intended purpose.
2. The BPU is supporting the implementation of heat pumps however, neighboring states provide additional incentives for geothermal. The lack of promotion of geothermal as the most active and promising reduction in energy usage creates a void in true energy conservation.
3. The States' goal is clear when discussing the solar collection of energy. However, joining solar and geothermal together in the conversation and promotion of energy reduction will allow solar generation to match net zero building projects. By starting with geothermal, solar projects become more streamlined and compact and therefore allowing more resources to be distributed among more of the residents of the state of New Jersey.
4. The State and the Board of Public Utilities are attempting to make tremendous strides forward in solar and wind electric generation. There is a void between small arrays and huge MW arrays. Midsize generation facilities, appear to be prohibited. Promoting microgrids of solar and hydroelectric in agricultural facilities and fast-tracking permits for these will expedite the growth of solar. beneficial uses need to be placed above local ordinances from preventing it. It should be promoted and expanded in agricultural operations and spaces.

5. The Board of Public Utilities must expedite the acceptance of the money allocated to New Jersey from the Inflation Reduction Act of 2022, H.R. 5376 & H.R. 3682 from the 2022 IRA Act and the investment and JOBS Act 2021 IIJA. We need to stop the gridlock and the nonpartisan vote-swapping to get this moving. If geothermal and solar are inherently beneficial to New Jersey and we can change the electric usage at fixed buildings sites and homes we can ease our way into items and electrifying mobile vehicles.

#1

Let's start with funding. It is unconscionable and perhaps immoral to keep taking money out of the BPU fund and diverting it to items it was not specified in the original tax description. The state started diverting the tax early and by 2013 we were already transferred up to \$162 million in disingenuous spending. Once the diversion pathway was paved by 2016 \$1 billion had been diverted from the clean energy fund. Moved over to pay for energy costs and state buildings. Now it is reported, by June 12, 2023, by New Jersey Policy Perspective, the state has diverted over \$2 billion total from the clean energy fund. We understand it is a bipartisan solution, starting with Corzine through Christie and now in Murphy's administration.

#2

The States lack of incentive for Geothermal projects, presents again as disingenuous or at a minimum counter to intended goals. If 20% of the nation would convert to geothermal, we would reduce electric usage by 42.6 MW or the equivalent of the yearly usage for Virginia, Maryland, Delaware, and New Jersey.

While I don't see society being off natural gas for electric generation in the near future. It will strengthen the board's position to intensify reductions. If we use natural gas directly for heat as a gas furnace best we can do is 98% efficiency. If we use geothermal, the same BTU input would yield a 530% efficiency. Reducing the demand needs to be our focus. It is within the Board's capacity to add a per-ton incentive similar to New York State for geothermal, increasing the funding per application. Allowing for funding for multiple units per project will help entice customer participation. Increase project demand strengthens both the State and the Board's goals for workforce development.

Promoting and installing one single geothermal unit is the environmental equivalent of planting 750 trees. Converting 1,000 units becomes a carbon-sequestering forest at 750,000 trees. To be clear I support both the conversation to geothermal, the addition of solar, and the planting of the trees.

#3

By installing geothermal first and reducing the electrical load on the home for the heat pump electric solar systems can be smaller. Therefore, more solar can be provided to more people, at a more attractive price range because they won't need huge arrays. It's much easier to discuss a net zero solution to individual homes if we reduce the load on homes through geothermal first. Overwhelming homes with large solar

arrays to match other heat pump demands is similar to old-school oil design where you just overwhelmed the heat loss on a house with a big oil boiler.

#4

The BPU can help the state follow through on the goal to generate clean energy. Utilizing these funds to reach out to every large roof mass especially, every agricultural building, and cover it with solar. We can also go into old mill races and start installing small hydroelectric generating plants.

The next item, to promote solar, geothermal, and net zero is for the State to fast-track the permit process and remove the stumbling blocks in local communities. Some communities have restrictions of 900 square feet of solar arrays. These are often too small to be practical. Local ordinances need to be overcome, and spot zoning to prevent agriculture and local electrical generation are in direct conflict with the goals of the state.

#5

Currently, the state has not completed the effort to get the funds from the federal government from the inflation reduction act of 2022. Princeton University's "Zero Lab" is assuming that 50% of that money will be lost if the state does not speed up building the projects. Sadly they are looking at larger power lines where New Jersey has the opportunity to do a lot of solar behind the meter on the customer side or close to the meter on small commercial and farm projects. The same opportunities for creating microgrids and microgeneration opportunities available with small hydroelectric generators.

The State and the BPU need to harness the funds collected, reduce the permitting obstacles and embrace geothermal as the reduction in use and solar that is close to the meter for homes. Farms and small-scale commercial projects need to be promoted. Small microgrid generation reduces the need for infrastructure expansions.

I thank the Board for accepting comments on these important issues.

All the best for our state and our children

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