

Ms. Carmen Diaz Acting Secretary
New Jersey Board of Public Utilities
Division of Clean Energy
44 S. Clinton Ave. 1st Fl
POB 350
Trenton, NJ 08625-0350

July 29, 2022

RE: Proposed Update to New Jersey Clean Energy Program
New Construction Programs
Docket Nos. QO22050327

Dear Ms. Diaz

Thank you for the opportunity to comment on the proposed new New Construction Program.

As noted in my comments on the FY 23 Budget and Programs the NJBPU does a reasonably good job in helping to advance the goals of the 2019 Energy Master Plan (EMP) related to Strategies 1 - Reducing Energy Consumption and Emissions from the Transportation Sector, Strategy 2 - Accelerate Deployment of Renewable Energy and Distributed Energy Resources, Strategy 3 - Maximize Energy Efficiency and Conservation and Reduce Peak Demand and Strategy 6 - Support Community Energy Planning and Action with an Emphasis Encouraging and Supporting Participation by Low- and Moderate-Income and Environmental Justice Communities. However, the FY 23 Budget and Programs does not reasonably or comprehensively address Strategy 4 Reduce Energy Consumption and Emissions from the Building Sector. The NJBPU needs to focus more attention in addressing the goals and objectives of Strategy 4 because the residential and commercial buildings sectors are the second largest source of New Jersey's GHG emissions. This proposal is a good start in addressing Strategy 4 of the 2019 EMP but can be improved.

My comments focus on three areas:

1. Developing a goal for cold climate heat pump installations within the new New Construction Program;
2. Funding for Zero Energy Homes (ZEH); and
3. Coordination among various NJBPU programs and other state agency programs within the new New Construction Program; and

1. Goal for Cold Climate Heat Pumps in the new New Construction Program

Cold climate heat pumps are the primary energy efficient GHG mitigation technology cited in the technical appendix to the 2019 EMP (the Integrated Energy Plan IEP) to achieve the goals of the 2019 EMP related to the electrification of the building sector. This new program should include a specific goal for the installation of cold climate heat pumps for FY 23. Not establishing a specific goal for cold climate heat pumps within the newly proposed New Construction Program is a significant missed opportunity for energy savings. In energy efficiency programs missed opportunities for energy savings are harder to make up later. Setting goals for cold climate heat pumps early within this newly revised program means more cost-effective energy savings over time and will set the bar for the individual utility EE programs as they come up for their 3 year review.

2. Funding Zero Energy Homes

The proposal calls for using the Passive Homes program as a guide and benchmark for the revised New Construction Program. This is a great start. But NJBPU can do this and one better by developing an actual Zero Energy Homes (ZEH) program. The increase to a full ZEH program would be a relatively small incremental cost on top of the current budget.

According to the Rocky Mountain Institute's 2019 report – The Economics of Zero- Energy Homes Single-Family Insights, the incremental cost of building a ZEH is approximately 8% split between a Zero Energy Ready Home (ZERH) and a actual ZEH. The ZERH's incremental costs as noted by RMI was approximately 1 to 2.5% of the total, leaving the incremental increment for a ZEH to be approximately 6.25% on average.

According to The Passive Homes website cost guidance, the incremental cost of a Passive Home is between 5 and 10%. It is clear that expanding the current newly revised New Construction Program to a full Zero Energy Home program would be a small incremental cost on top of the current program cost. This cost can be further managed by implementing this revision to the New Construction program as a limited scale pilot similar to the affordable Whole Homes pilot. One way to do this in a cost-effective manner is to coordinate with the Housing Mortgage and Financing Agency (HMFA) Green Homes program.

Currently the State's FY 23 budget is proposing to construct 3,300 affordable housing units managed through the Housing Mortgage and Financing Agency (HMFA) mainly through federal funds.¹ The option is available to the developers to build these 3,300 affordable homes under the HMFA's Green Home – Low Income Tax Credit program. The NJBPU's newly revised New Construction program could be available to developers within the HMFA Green Homes, if they opted to go this route with HMFA as fully ZEH. This would allow not only for the construction of very energy efficient affordable low-income homes but low-income homeowners that have low to no energy costs.

One technical area the NJBPU should revise in the ZEH guidance and definition is to allow for the current New Jersey Renewable Energy Portfolio Standard (RPS) requirements to be deducted from the input electric energy. Currently, as I read the DOE ZEH's guidance, the input energy does not account for the RPS. It does not appear to allow for the deduction of the RPS. Accounting for the New Jersey RPS in the incoming electric energy will reduce the size of the output on-site renewable energy system. This revision, along with the very energy efficient home through the Passive Home program, will make the output energy offset smaller at a lower cost and make the overall ZEH more cost effective.

3. Coordination with other NJBPU Clean Energy Incentive programs and other state agency incentive programs for affordable low income ZEH

Currently the State has several programs to help low-income customers including but not limited to the following:

1. HMFA's Low-income Tax Credit - Green Homes program;
2. NJDCA Weatherization Assistance Program (WAP);
3. NJDCA Low-Income Heating Energy Assistance Program;

¹ While the funds are in the State's FY23 Budget and will not be constructed in FY23 in order to design and build these affordable low-income homes as Zero Energy Homes would require a commitment of funding in FY23.

4. NJBPU Clean Energy Program (CEP) – New Construction;
5. NJBPU CEP Comfort Partners;
6. Electric Vehicle Programs;
7. Solar Renewable Energy Certificates II (SREC II); and
8. Community Solar.

Collectively these programs provide hundreds of millions of dollars for low-income affordable housing as part of those program's available funding or the full program funding. However, these programs, for the most part, operate separately and independent of each other. If these programs were all fully coordinated, the State could actually build low-income affordable Zero Energy Homes in a cost-effective manner. Low-income affordable homes that have low or no energy costs.

The BPU should coordinate these programs under or in coordination with the revised New Construction program. In a coordinated program, the NJBPU along with the other state agencies could ensure that a part of the 3,300 low-income affordable homes are Passive Energy Homes and actual Zero Energy Homes.

In addition to the Passive Home requirement and the HMFA Green Homes requirements the affordable low income ZEH should include the following equipment within the ZEH:

- EV charging ports;
- Cold climate heat pump HVAC systems;
Heat pump hot water heaters;
- Induction stoves;
- Grid-interactive EE and RE systems – Flexible load homes; and
- Sufficient on-site solar and battery storage to offset a portion of the total load but also to offset peak.
- Dedicated incentive funding for community solar to offset the remaining portion of the total load not covered by the on-site solar.

Thank you for the opportunity to provide comments on the proposed New Construction Program.

Very Truly Yours

Michael Winka

Michael Winka

227 Cold Soil Rd.

Princeton, NJ 08540

mwinka@comcast.net

609 778 -8717