



May 20, 2024

Secretary of the Board
44 South Clinton Ave., 1st Floor
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Trenton, NJ 08625-0350

Re: DOCKET NO. QO23100733 – Comments of Energy Solutions regarding New Jersey’s Request for Information regarding the design of the United States Department of Energy’s Home Energy Rebate Programs – HOMES and HEEHR

Energy Solutions respectfully submits comments to the New Jersey Board of Public Utilities (NJBPUB) regarding the design of the program to implement the federal Inflation Reduction Act Home Efficiency Rebate (HOMES) and Home Electrification and Appliance Rebates (HEEHR) formula funding. Energy Solutions is an employee-owned, mission-driven firm that designs and deploys innovative, high-impact solutions that accelerate market transformation towards solutions that advance equity and cost-effective decarbonization. Energy Solutions implements multiple energy efficiency and decarbonization programs nationwide, including leading the program implementation team for the Technology and Equipment for Clean Heating initiative (“TECH Clean California” or “TECH”), a statewide market transformation program driving the adoption of heat pump space and water heating technologies, as well as the Self-Generation Incentive Program (SGIP) Heat Pump Water Heater (HPWH) program.

Summary

We would like to provide three priority suggestions to ensure effective implementation and that the programs maximize the benefits to the people of New Jersey.

- 1) Expand the scope of the programs to include a public-facing centralized data dashboard, analysis, and events to share the result.**
- 2) Consider alternative funding allocations and incentive levels to achieve Market Transformation goals.**
- 3) Develop a clean buildings workforce through the Training for Residential Energy Contractors (TREC) grant to deliver the HOMES program and HEEHR program, from the perspective of establishing long-term jobs.**

- 1. Expand the scope for the programs to include a public-facing centralized data dashboard, analysis, and events to share the results.**

A requirement established by the DOE for a state’s HOMES and HEEHR program designs is a Market Transformation Plan. The Market Transformation Plan is the



opportunity for a state to present its strategy to reduce the barriers to the adoption of energy efficiency practices and technologies and will generate environmental and economic benefits to program participants. A state's Market Transformation Plan requires a description of how the program will enable the market to recognize the value of homes that have been upgraded through either the HOMES or HEEHR program and a description of the program design elements or activities that a state's HOMES or HEEHR program will support a sustainable business model for home energy contractors.

The NJBPU could gain insights on how to develop its HOMES and HEEHR Market Transformation Plans by referring to the ongoing success of the TECH Clean California program, particularly the way TECH shares program information and insights with the broader public so that stakeholders can build their work on TECH's lessons learned.

TECH Clean California is a statewide initiative to accelerate the adoption of clean space and water heating technology across California homes - single family and multi-family - to help create an equitable pathway to carbon-free homes by 2045 and install six million heat pumps by 2030.

As each state develops and refines its own building decarbonization strategy, data reporting can help answer critical questions to most effectively deploy limited resources to achieve its objectives. Examples of critical questions that can be answered through data reporting are listed below.

- *Project Cost:* What is the average project cost for each installation type? What are the drivers of project cost? How does this compare to baseline equipment costs?
- *Project Performance:* What are the customer bill, grid, and GHG impacts of project installations? What are the drivers that affect this? How do they vary by customer?

To answer these questions, TECH has developed a rigorous data collection strategy to ensure that the information we collect continues to improve the future program.

Given, the strong potential for the IRA programs to help develop new insights for New Jersey, we recommend that the NJBPU strongly consider expanding the scope of HOMES and HEEHR program development to include a public-facing dashboard and events for sharing insights, answering the questions posed above.

Energy Solutions has seen significant benefits from a centralized data collection system and public-facing reporting website in addition to having staff and a scope of work dedicated to conducting the public-facing analysis. We have shared out the results and successes attributable to the TECH Clean California program via public webinars and stakeholder meetings. This crucial element to the program could help the NJBPU to capitalize on the rich market insights that further advance market transformation,



including informing other incentive programs statewide, financing, and policymaking; data is essential to unlocking long-term solutions.

For example, TECH's public reporting data (on techcleanca.com) has been widely cited as an information source by utilities, programs, regulatory agencies, and other stakeholders throughout the country. The website has seen 1,000 downloads of its anonymized project datasets since its launch. This highlights the demand and strong need for this type of information. Since every state has unique needs and challenges, a New Jersey-specific data reporting effort as part of its IRA programming designs could be a highly impactful resource for the state. This public reporting effort should be designed to adhere to rigorous data privacy requirements while still providing sufficient anonymized data to inform planning and demonstration of program impacts.

The development of a public-facing dashboard and public outreach activities could be included in the state's Market Transformation Plan to ensure that there are dedicated resources for staffing and funding and all the pieces come together before program launch. We encourage NJBPU staff to review the most recent TECH annual report on techcleanca.com¹, which highlights successes from the program that the NJBPU can refer to when designing its Market Transformation Plans.

We also support expansive customer utility data access to enable all relevant parties to implement the program most effectively and efficiently and enable a public reporting dashboard to be as useful and informative as possible.

2. Consider different funding allocations and incentive levels to achieve Market Transformation goals.

We recommend that the NJBPU examine alternative ways to align its allocated HEEHR funding and incentives to New Jersey's Market Transformation goals. Offering incentives at the maximum levels will make sure that spending is spent quickly but may reduce the ability for New Jersey to achieve certain goals. Changes to the offerings that NJBPU could consider include:

1. Different rebate amounts for medium-income customers (i.e., 80-150% AMI), which would enable funds to reach more customers and create market incentive to target low-income customers, rather than medium-income customers.
2. Set aside different budget amounts for technologies the NJBPU would like to support, such as insulation or heat pump water heaters, so that all program funding is not depleted by one product.

¹ <https://techcleanca.com/about/news/tech-clean-californias-year-two-annual-report/>

In other areas where fuel switching programs exist, long installation timelines that can often occur when switching from gas to electric has proven to be a significant barrier to adoption. We applaud NJBPU for allocating some incentive funds to address electrification readiness through the Comfort Partners Electrification Adder. Moreover, we recommend that the NJBPU consider including strategies that can avoid panel upgrades, and therefore reduce installation time: panel optimization efforts such as circuit pausers, sharers, and smart panels/breakers. A recent webinar hosted by TECH Clean California, entitled “Good Stewardship of the Panels,” has a collection of information and resources about these alternatives to panel upgrades. The webinar presentation, including recording and transcript, can be found here:

<https://techcleanca.com/events/good-stewardship-of-the-panel-webinar/>

3. Develop a clean buildings workforce through the Training for Residential Energy Contractors (TREC) grant to deliver the HOMES program and HEEHR program, from the perspective of establishing long-term jobs.

We recommend the NJBPU consider the following overarching comments while designing a strategy for implementation of any workforce development program.

Distinguishing Between Contractors, Service Technicians, and Installers: To deliver HOMES and HEEHR, many professionals will require training. For example, while licensing is applicable to contractors, they employ service technicians and installers with different scopes, different requirements, and different training opportunities. Staff should ensure that funds are not allocated solely to the "contractor" level but are used to develop the skills of the technicians and installers that they employ.

Leverage Existing Channels: There are multiple existing pathways through which different contractors, installers, and service technicians might receive education on various aspects surrounding heat pumps. Rather than creating a new training framework, Staff should leverage existing training channels and efforts to minimize market confusion and duplication of work.

Available Skills Assessments: The Department of Energy's (DOE) [Building Science Education Solution Center](#) (BSESC) provides free and on-demand training materials specifically for heat pump and HPWH technologies, by occupation and by technology, as well as a list of DOE-recognized programs and certifications for each.

Heat Pumps: There are several DOE-recognized certifications for heat pump installation and comfort advising. The North American Technician Excellence (NATE) Certification offers the Heat Pump Service Specialty and a Heat Pump Installation Specialty certification. Similarly, HVAC Excellence offers two recognized certifications, one for Heat Pump Service and one for Heat Pump

Installation. Additionally, while it is not yet recognized by the BSESC, the Building Performance Institute maintains an [AC & Heat Pump Professional certification](#).

Heat Pump Water Heaters: There are existing HPWH installer programs managed by manufacturers where individuals can become certified to work on and manage HPWH projects. Standardization of HPWH certifications should require a formal certification from a respected authority, like the DOE, as an industry baseline. Staff should continue to monitor the BSESC website for other upcoming industry training opportunities from Pacific Northwest National Laboratory and other organizations and disseminate notifications of new opportunities to firms working on HPWHs.

BSESC currently offers the following online and on-demand training modules on HPWHs:

- [Introduction to HPWHs](#) – Includes information on how HPWHs operate and create hot water more efficiently than conventional gas/oil or electric element water heaters, in addition to extolling the benefits of HPWHs for consumers and sellers.
- [Decision Guidance on HPWH](#) – Provides guidance and information on how to select the ideal HPWH unit that best meets the needs of a residence.
- [Installation of HPWHs](#) – Addresses the process of acquiring permits, preparation for HPWH installation, and how to initially start a HPWH and maintain it over a unit's lifetime.
- [Load Shifting](#) – Introduces information on the concept of load shifting for HPWHs and the communication devices/connection ports that enable it on a unit.

Energy Assessments: There are several DOE-recognized certifications for the energy assessment occupation, including the American Society of Heating, Refrigeration, and Air-Conditioning Engineers' (ASHRAE) Building Energy Assessment Professionals (BEAP) certification, the Association for Energy Engineers' (AEE) Certified Energy Auditor certification, the Building Performance Institute's (BPI) Home Energy Professional Energy Auditor certification, and the Residential Energy Services Network (RESNET) HERS® Rater certification.

Electric Panel Optimization Training: Electrical panel optimization is perhaps the single largest gap in existing training opportunities available for technicians, installers, and contractors in preparing the workforce for building electrification. Decarbonization efforts will result in a significant increase in household electric load for many homes, requiring an upgrade to service panels. Not all electric panels across the state will require upgrades in the short term, but as decarbonization efforts ramp up across the state, so will the need for electric panel upgrades.



Training installers in electrical panel optimization is vital to the successful electrification in NJ particularly in census tracts with older homes vintages.

Increasing Access to Credentials: There are industry-recognized credentials that exist within and support the HVAC marketplace (e.g., NATE, UA Star Certification, HVAC Excellence Certification, etc.). Staff should continue to support these existing credentials and consider how they can be enhanced and accelerated by the development of trainings through TREC.

Below is the list of examples of industry credentials:

- [NATE Industry Competency Exams](#)
- [HVAC Excellence Employment Ready](#)
- [BPI Air Conditioning & Heat Pump Professional](#)
- [UA Star Certifications](#)
- [NATE Certification with Heat Pump Service Specialty](#)
- [NATE Certification with Heat Pump Installation Specialty](#)
- [HVAC Excellence Heat Pump Service](#)
- [HVAC Excellence Heat Pump Installer](#)

Staff should work to assist individuals in obtaining these credentials, in addition to subsidizing trainings to make them more available and readily known to installers. We recommend that subsidization should cover the cost of sitting for these exams, as well as training time spent in trainings that lead to the credentials.

Conclusion

Energy Solutions thanks the NJBPU for this opportunity to submit our responses during this public comment period. We welcome any opportunity to discuss our recommendations and lessons learned with NJBPU staff if the possibility arises during the review of responses.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Alex MacCurdy'.

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