RECURVE

Sherri L. Golden
Secretary of the Board
New Jersey Board of Public Utilities
44 S. Clinton Avenue, Trenton, NJ 08625

Re: Public Comment on the Inflation Reduction Act Home Energy Rebates

Dear Secretary Golden:

Thank you for the opportunity to provide further comments on the Inflation Reduction Act ('IRA') Home Energy Rebate Programs. Recurve Analytics, Inc. respectfully submits the following comments to the New Jersey Board of Public Utilities ('NJ BPU') Request for Information on IRA Rebate program deployment in New Jersey. Recurve is a leading demand flexibility solution provider specializing in open-source advanced measurement and verification to enable program optimization and validation of performance-based incentives.

The Home Energy Rebates (HER) and High-Efficiency Electric Home Rebate Program (HEAR) programs, enabled through the IRA, offer an exciting opportunity for states like New Jersey to design and implement innovative, data-driven energy efficiency programs that build on historical best practices in measurement and verification, align incentives, and enhance accountability.

As detailed in our comments below, **we are enthusiastic that the BPU plans to include the measured pathway alongside the modeled pathways in regard to the HOMES Program**. The measured pathway has the potential to transform the market for home energy upgrades and provide a sustainable market transformation that will outlast the federal funding opportunity. While we appreciate the inclusion of the measured pathway, **we urge the BPU to revise its proposal to include single-family housing.** Single-family homes constitute a significant portion of New Jersey's housing stock. The NJ BPU has a clear opportunity to diversify the paths to decarbonization and innovation and contribute to grid reliability and affordable clean energy solutions for the people of New Jersey by including both single-family and multi-family homes in the HOMES Program.

Our comments are included below, please feel free to reach out with any follow-up questions you may have at cailee@recurve.com.

Sincerely,

/s/ Cailee Mangan

Cailee Mangan, Esq.
Senior Policy Analyst
Recurve Analytics, Inc.

1. How well does this approach align with the goals of HER, HEAR, and the IRA more broadly?

The IRA HOMES Program offers a significant opportunity to drive market transformation and promote equity across various housing types in New Jersey. Recurve supports the NJ BPU's plan to include both measured and modeled pathways in the HOMES Program to achieve these goals.

The NJ BPU should consider revising the program plan to include single-family homes in the HOMES funding allocation. As we previously mentioned, single-family homes represent a significant amount of New Jersey's housing stock, and excluding them from HOMES funding would be a missed opportunity to drive market transformation and improve grid reliability. Given the amount of single family homes in the state, allocating at least 50% of HOMES funding to single-family homes, prioritizing low- and moderate-income households, would ensure that this program has a broader impact in the state. This inclusion will spur market transformation, reduce greenhouse gas emissions, and enhance grid reliability, while also promoting equity and consumer protection.

2. What would be the best analytical approach – measured or modeled – for calculating energy savings in multifamily buildings? Are there scenarios where one would work better than the other?

While the measured and or modeled approach can both be used in multifamily buildings, both approaches will encounter unique challenges with multifamily buildings.

In addition, integrating advanced analytics and feedback mechanisms into whatever program design the NJ BPU chooses can ensure that the program is adaptable and learns from on-the-ground experiences. This strategic, data-driven approach sets the stage for a smoother transition to a fully measured program in the future. It ensures that the current program is robust, effective, and aligned with New Jersey's long-term sustainability goals and affordable building decarbonization goals while maintaining and improving grid reliability within the state. As the program evolves, the NJ BPU will be armed with real-time feedback to make informed decisions about program design and implementation, allowing it to develop fully into a data-driven program that accurately reflects and responds to the state's energy efficiency needs.

3. What criteria and processes could be used to select buildings for the M-RISE Program?

The NJ BPU could optimize the impact of funds by conducting an initial targeting analysis for both home rebate programs (HER and HEAR) to identify the homes most in need of energy savings. Using energy consumption data (monthly, daily, or hourly, depending on availability), a targeting analysis looks at patterns of consumption to identify and predict which customers will experience the best outcomes on their bills and provide system value

relative to existing constraints. Targeting connects the right customers to the right solutions, helping customers save on their bills while reducing the chances that a customer will see an increased energy burden from new technologies like home electrification. Minimizing the chance of adverse bill impacts is especially important given the state's interest in deploying IRA funds to low- and moderate-income households and disadvantaged communities most vulnerable to increased bill impacts. With targeting, the program administrator can identify and focus on serving high-potential savings customers most likely to drive positive outcomes from both a grid reliability and customer experience perspective in New Jersey. See the webinar _Using Advanced Targeting to Ensure that Electrification Reaches Those Who Will Benefit Most_ for more details.

The TECH Clean California program is a prime example of how targeting can be used for an electrification program optimization like HEAR. The TECH program team analyzed the energy consumption of almost 350,000 customers, focusing on those who have already installed air conditioning as part of the TECH Clean California electrification program. The report highlights the need to carefully target customers with a high potential for savings and consider other factors that motivate participation. Using energy consumption data to develop customer parameters for high- and low-savers and sharing those insights with participating contractors and aggregators supports them in delivering measurable results.

In a recent webinar, Recurve outlined how data-driven customer targeting can optimize energy efficiency programs, including several case studies demonstrating how meter-based targeting can improve results. _How Usage-based Targeting Dramatically Improves Program Results_.

> 4. Does this approach address the unique needs of our state in terms of:
>   a. the need for efficiency and electrification upgrades in multi-family buildings?
>   b. the need for efficiency and electrification upgrades in low- to moderate-income households?

The NJ BPU's proposed approach falls short in addressing the need for efficiency and electrification upgrades in low- and moderate-income ('LMI') single-family homes. There is a substantial opportunity to utilize HOMES funding to promote upgrades in LMI single-family households. The measured approach is especially effective for this sector, as it offers higher rebate values, making it particularly beneficial for LMI homes.

> 5. Do you believe the proposed budget allocations for the M-RISE Program and the CP-HEAR Program are appropriate?

No. The NJ BPU should allocate at least 50% of the HOMES funding to single family households.

6. Do you have any other concerns regarding this approach or additional ideas for consideration?

The NJ BPU has a clear opportunity to diversify the paths to decarbonization and innovation and contribute to grid reliability and affordable clean energy solutions for the people of New Jersey by including both single-family and multi-family homes in the HOMES Program. This will create a more balanced and effective approach, ensuring that the NJ BPU does not "put all their eggs in one basket." By diversifying the types of housing eligible for rebates, the program can maximize its impact across different sectors, increasing overall participation and the likelihood of achieving the program's goals. This approach mitigates the risk associated with focusing solely on the multifamily sector, which has its own set of challenges and complexities.

Furthermore, addressing both single-family and multifamily homes allows for a broader range of solutions and innovations to be tested and implemented. Single-family homes have unique needs and opportunities for energy efficiency and electrification upgrades. By including them in the program, the BPU can foster a more comprehensive market transformation, ensuring that the benefits of the HOMES Program are felt across all housing types. This inclusive strategy not only enhances grid reliability and reduces greenhouse gas emissions but also promotes equity and accessibility for a larger segment of New Jersey residents.

To effectively address the unique needs of multifamily properties through a residential measured program, the split incentive challenge should be addressed. This challenge primarily arises from the fact that the benefits of energy efficiency investments are often divided between building owners and residents, and in a single technology rebate, it is difficult to divide the value streams to either party.

Measured programs, also known as Pay for Performance programs, offer a strategic opportunity to address this conundrum. Building owners can act as aggregators and monetize the value of the incentives as well as tap into any grid value these upgrades may bring to load-serving entities sponsoring the program. At the same time, residents would benefit from the direct bill savings and the comfort and health benefits of an upgraded home. By creating a framework where both parties, building owners and residents, stand to gain benefits from energy efficiency improvements, multifamily properties could become more inclined to engage with P4P programs.

The HOMES rebates, in particular, will be more powerful if coupled with existing grid value offered through existing utility programs. Even as a stand-alone program, multi-family building owners would be able to incorporate performance-based incentives to offset the cost of upgrades and financing for their properties, and residents would capture the bill savings, comfort, and health benefits.

In conclusion, the NJ BPU has a significant opportunity to optimize the HOMES Program by incorporating both single-family and multifamily homes. This inclusive approach ensures that the program aligns with the goals of HER, HEAR, and the broader IRA objectives, driving market transformation and enhancing equity across various housing types in New Jersey. By allocating at least 50% of HOMES funding to single-family homes, with a focus on low- and moderate-income households, the program can maximize its impact, reduce greenhouse gas emissions, and improve grid reliability.

Additionally, addressing both single-family and multifamily homes allows for a diverse range of solutions and innovations, ensuring that the benefits of the HOMES Program are felt across all housing types. This strategy not only enhances grid reliability and reduces emissions but also promotes equity and accessibility for a larger segment of New Jersey residents. Furthermore, integrating advanced analytics and feedback mechanisms into the program design will ensure that it remains adaptable and effective, aligning with New Jersey's long-term sustainability and decarbonization goals while maintaining and improving grid reliability. By diversifying the eligible housing types and leveraging data-driven approaches, the NJ BPU can create a more balanced and impactful program, mitigating risks and achieving broader participation and success