

May 21, 2024

Secretary of the Board
44 South Clinton Ave., 1st Floor
PO Box 350
Trenton, NJ 08625-0350

Re: Request For Information In The Matter Of The Implementation Of Federal Inflation Reduction Act HOMES (Home Efficiency Rebates) And HEEHR (Home Electrification And Appliance Rebates) Program

INTRODUCTION AND SUMMARY OF RECOMMENDATIONS

The Inflation Reduction Act (“IRA”) provides a unique opportunity to kickstart residential Virtual Power Plants (“VPPs”) by pairing smart thermostats and heat pumps.

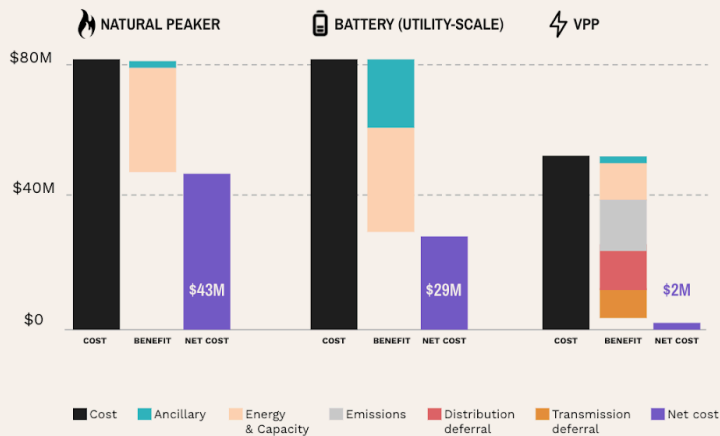
Renew Home would like to thank the Board of Public Utilities (“BPU”) for inviting comments on the implementation of the Inflation Reduction Act. The IRA passed in August 2022 and provides nearly \$1 trillion in investments to the clean energy industry. A subset of that bill includes direct incentive payments for energy efficiency measures in the Home Efficiency Rebate (“HOMES”) and High-Efficiency Electric Homes Rebates (“HEEHR”) sections. The legislation provides the framework for these two programs, but leaves the actual implementation decisions up to individual states.

To assist the states, the Department of Energy (“DOE”) created guidelines to implement HOMES and HEEHR, which were released on July 28th, 2023. The guidelines include clarifications to the original legislation. Additionally, the DOE released their Virtual Power Plant Liftoff Report¹ in September 2023. In it, DOE claims that the US grid will need an additional 80GW to 160GW of VPP capacity by 2030. To achieve these ambitious goals, the massive amount of IRA funding should be leveraged in a way that maximizes the potential for future VPPs.

1. **New Jersey should implement the IRA program design in a way that promotes VPP participation.** Residential VPPs that include heat pumps and smart thermostats provide a cost-effective alternative to manage peak electricity demand at scale. A recent Brattle group study found that a VPP enabled by smart technologies can provide many of the same benefits as generation resources by reducing or shifting load, at a fraction of the cost of traditional resources. Brattle modeled a 400 MW VPP with residential thermostats and found it could perform as reliably as a gas peaker plant at 40% of the net cost.

¹ liftoff.energy.gov/vpp/

VPPs have the lowest economic, social, and environmental costs

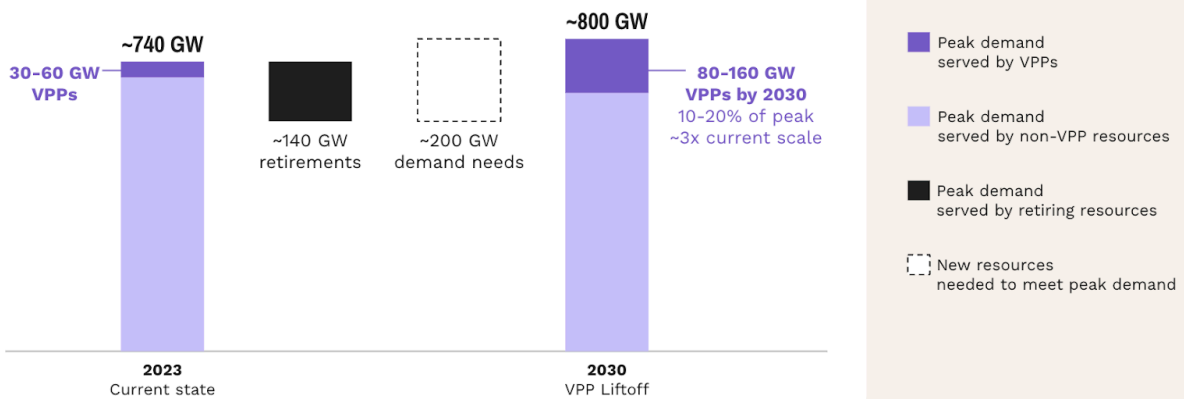


Key takeaways:

- Net Costs.** The economics of VPPs far exceed those of either peaker plants or utility scale stationary storage by 10x or more.
- Benefits.** We have accessed the **energy** and **capacity** value portions of the value stack, but **emissions**, **ancillary**, and **distribution value** remain untapped.
- Speed & scale.** VPPs are poised to build out more MWs at a faster clip than any other resource type.

The need & opportunity for VPPs is massive

US PEAK ELECTRICITY DEMAND



- New Jersey should require pairing ENERGY STAR(R) Certified smart thermostats with heat pumps as a way to allow incremental electric load to participate in VPPs.** *The DOE Home Energy Rebate guidance specifically calls out smart thermostat eligibility in the low-income HEEHR program when paired with heat pumps*, and allows for smart thermostats to help achieve modeled or measured energy savings under HOMES. Installing smart thermostats alongside new loads like heat pumps lowers the cost of electrification to the grid and helps mitigate future peak demand spikes.

3. **New Jersey should coordinate with aggregators to offer pre-enrollment into demand response (“DR”) programs with every smart thermostat sale.** Demand response programs in particular provide potential for residential customers to provide load management support during extreme weather events or during peak loads. To ensure that the full DR value of thermostats are realized at the point of sale, all efforts should be made to leverage new channels for customer engagement, such as online marketplaces and enrollment portals where appropriate. Pre-enrollment into DR programs primes the grid for residential VPPs.
4. **New Jersey should follow DOE’s Data Access Guidelines as required in IRA’s Section 50121(c)(5).** Data access will enable more robust customer and grid solutions. These guidelines address sharing, consent processes, notification, data protection, liability and roles and responsibilities of various stakeholders.

We thank BPU for its attention to developing HOMES and HEEHR program design principles that meet its affordability, decarbonization, and equity goals.

Respectfully submitted,

Will Baker

Director of Market
Innovation