Renew Home

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BEFORE THE SENATE ENERGY & PUBLIC UTILITIES COMMITTEE
PROPONENT TESTIMONY ON HOUSE BILL 79

Chairman Reineke, Vice Chair McColley, Ranking Member Smith, and members of the Senate Energy & Public Utilities Committee, thank you for the opportunity to provide proponent testimony on House Bill 79 (HB 79).

My name is Will Baker and I am the Director of Market Innovation at Renew Home. Prior to my role at Renew Home, I received an MPA in International Energy Management and Policy from Columbia University. I've been working in residential energy programs for the better part of the last two decades and smart thermostats as part of energy efficiency programs at Google Nest and Renew Home combined for the last six years.

Renew Home has an interest in this legislation because our company has a goal to create North America's largest residential virtual power plant and transform Ohioan households into a cohesive force for energy management. By enabling homes in Ohio to easily reduce and shift the timing of energy use, Renew Home unlocks household savings and supports grid reliability and energy affordability. We have deep experience here through collaborations with industry-leading manufacturers and by supporting more than 100 utility partnerships. With the right conditions, we can deliver flexible, dispatchable power at scale while putting money in the pockets of Ohio residents.

The potential for Virtual Power Plants is extremely high. Renew Home is under contract to manage ~3GW of load via Google Nest thermostats and is aiming to expand to 50GW by 2030 by automating other large-load devices, including hot-water heaters, battery storage, and electric vehicles. The Department of Energy projects that by tripling the scale of virtual power plants, we could reliably meet 10-20% of peak electricity demand by 2030, which would avoid $10 billion in grid costs annually.

HB79 will benefit Ohioans in three ways: First, all ratepayers will benefit from lower costs for investing in the delivery system, including reduced capital expenditures, operating costs, and costs for generation. Second, ratepayers who participate in energy efficiency programs will directly reduce their energy bills while improving comfort within their homes. Third, as Ohio experiences rising energy demand from data centers and other customers after two decades of flat growth, strategic energy efficiency investments will help mitigate the risk of power shortages. More generation will most certainly be needed, and Ohio would be wise to get the most out of the energy it already produces.

Ohioans who take advantage of energy efficiency measures will see lower bills: smart thermostats save an estimated 10-12% on heating and 15% on cooling. Unfortunately, without utility-run energy efficiency programs, Ohio is today lagging behind other states in smart thermostat adoption.

HB 79 empowers electric utilities to design and administer these energy efficiency programs. States with a history of utility-run energy efficiency programs have more energy efficiency measures installed and save residents more money. They also meaningfully impact the sales of smart thermostats as utilities do a lot of public education and customers make purchase decisions based on the discounts and rebates.

Based on our collaboration on residential smart thermostat demand response programs, we estimate that Michigan, Arizona and Georgia—all states with similar population sizes as Ohio—each has more installed smart thermostats than Ohio, partially driven by robust utility-run energy efficiency programs.

Georgia, in particular, has more than 170% more smart thermostats than Ohio. Nest works with utilities to educate customers on the benefits of smart thermostats, and the discounts the utilities offer on the thermostats get customers to make a purchase they normally wouldn't make.

Moving beyond energy efficiency benefits, every single home that installs smart technology like a smart thermostat can also immediately participate in peak load reduction or demand response programs. Participation in PJM's DR capacity market by some retail customers benefits all retail customers because in order to qualify, DR must displace (i.e. underbid) a more expensive conventional capacity resource—resulting in lower overall capacity costs. This lowers costs system-wide.

An example of this is the type of residential demand response program enabled by smart thermostats. In these programs, customers permit their utility to make small, automatic adjustments to temperature settings (think 1 to 2 degrees) to help reduce overall demand. Participation in these programs is entirely voluntary, and participants can even choose to opt out of demand response events as they happen. In aggregate, this helps flatten the demand curve and lower peak demand. A flatter demand curve reduces the need for ratepayers to pay for additional generation and transmission infrastructure and the associated maintenance costs. This results in postponed capital expenditures for the utilities, reducing the need for debt financing and lowering interest costs. These savings are then passed on to customers in the form of lower rates.

In today's environment, it's even more stark with PJM's interconnection auction hitting historic highs of $269.92/MW-day for the majority of PJM. Compare that to the previous auction, which settled at $28.92/MW-day and you see the trajectory of costs that will ultimately be passed on to the ratepayer.

In closing, HB79 will accelerate the voluntary adoption of energy efficiency measures, such as smart thermostats that can be connected to the grid and dispatched to meet future, flexible needs and offer the best chance for Ohio to catch up to other leading states in managing grid resilience and costs for ratepayers.

You have seen the projections from PJM and others that raise future resource adequacy concerns. HB79 is one piece that can help solve that puzzle while offering your constituents a voluntary opportunity to help take more control of their energy spend. It is not the only piece, but it would be a very prudent step to take at this time.

Thank you for the opportunity to testify on behalf of Renew Home, and I welcome any questions from the committee,

Will Baker, Director of Market Innovation
Renew Home, LLC.