

Ontario's IESO builds Canada's largest residential virtual power plant in just six months



The Peak Perks™ program rapidly enrolled 125K+ homes, creating a virtual power plant to power a city the size of Barrie, Ontario

The Independent Electricity System Operator (IESO) operates Ontario's electricity market and manages the bulk electrical system. The system operator launched its award-winning smart thermostat load control program with EnergyHub in June 2023. Six months later, it became the country's largest residential virtual power plant and has continued to grow, enrolling more than 125,000 devices by May 2024 capable of delivering over 100 MW of peak load reduction in its first year.

THE OPPORTUNITY

For the first time in over a decade, the IESO identified a need to increase future electricity capacity and system reliability in its 2021 Annual Planning Outlook. To cost-effectively meet these objectives, the IESO selected EnergyHub's proven customer-centric platform as the launch pad for its new Save on Energy Peak Perks™ smart thermostat demand response program.

The program encourages Ontario residents with smart thermostats to enroll and gain rewards in exchange for brief, time-limited thermostat adjustments during heat-fueled peak demand events. Within six months, Peak Perks had enrolled more than 100,000 homes and smart thermostats, making it Canada's largest residential virtual power plant (VPP) and the fastest-growing flexibility program in EnergyHub history.

OUTCOMES SOUGHT:



Customer
choice



Flexible
capacity

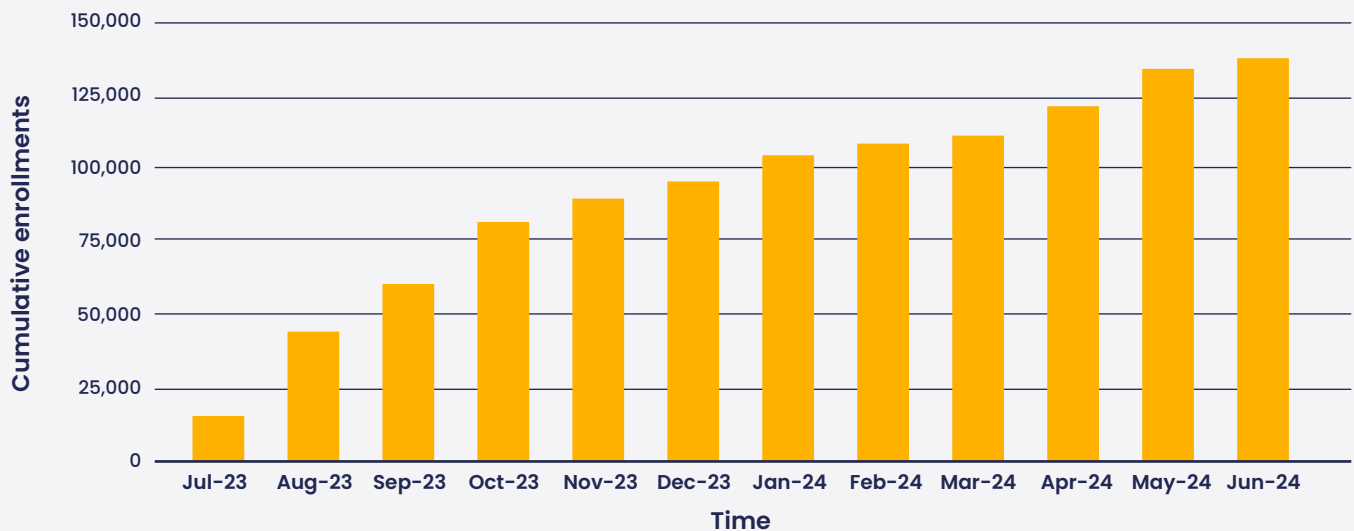


Grid
reliability

“A key part of the program’s success has been our collaboration with EnergyHub. The rate of growth was something none of us could have predicted.”

—Mary Bernard, Supervisor, Residential Program Performance, Ontario IESO.

Peak Perks™ First Year Program Growth



Source: EnergyHub

THE PROCESS

DR EVENT STRATEGY:

A maximum of **three hours per event**; no more than 10 events/year

SEASON LENGTH:

Summer: June 1 – September 30

INCENTIVE:

\$75 upon enrollment and \$20 each additional year

TYPES OF DEVICES:

ecobee, Renew Home (Google Nest), Emerson (Sensi), Alarm.com, and Honeywell Home

Ontario electricity customers enrolled in the Peak Perks program help the grid by participating in time-limited smart thermostat adjustments of up to two degrees Celsius during periods of peak electricity demand.

Joining Peak Perks is easy; most participants enroll through their smart thermostat app with just a few clicks.

To rapidly scale the program, EnergyHub leveraged its marketing expertise to launch multi-channel enrollment and retention campaigns in collaboration with the IESO and thermostat brand partners. EnergyHub delivered a playbook for program growth that boosted awareness through multiple channels, including in-app messages, emails, and microsites. Meanwhile, the Save on Energy team drove traffic to the Peak Perks web page with paid advertisements across Facebook, X, YouTube, Spotify, Google Search, and more.

THE RESULTS

“Partnerships are key, and we couldn’t have achieved this level of growth without EnergyHub. They’ve been a great partner, working together with device manufacturers to help build the resource.”

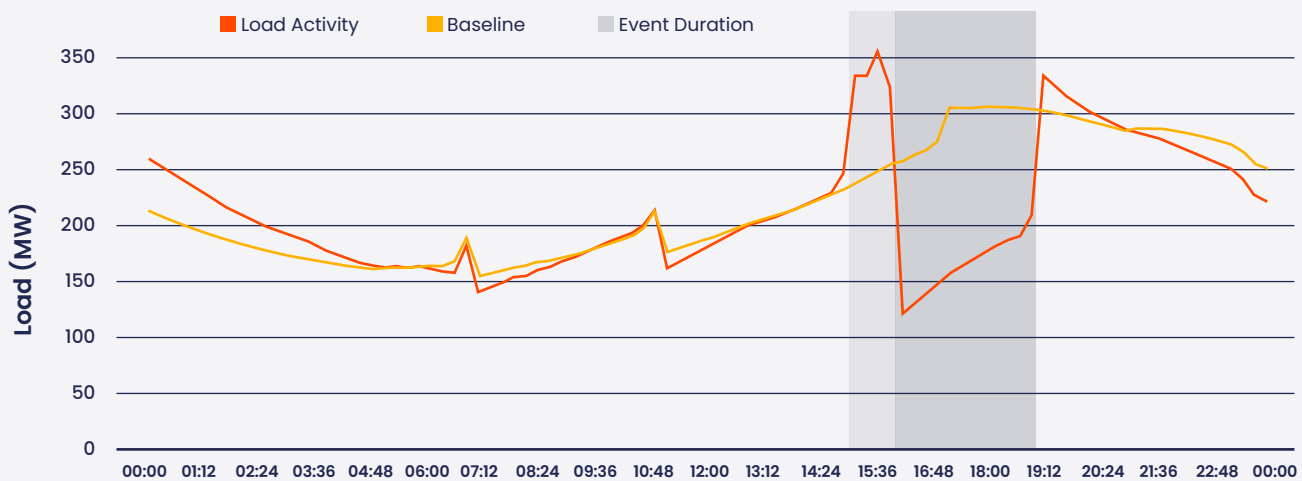
—Jessei Kanagarajan, Senior Manager, Community and Residential Program Performance, Ontario IESO

Summer 2023 was the hottest ever recorded, but that didn’t stop thousands of Ontarians from getting rewarded for adjusting their air conditioning use to support a more reliable, affordable, and sustainable grid. There were six program activations in the program’s first season, with the last event in early September 2023 achieving a maximum one-hour peak demand reduction of 54 MW.

Heading into the 2024 season, with more than 125,000 Ontario homes enrolled, the program delivered a maximum load shed of 133 MW during its first event – that’s the equivalent of taking a city the size of Barrie, Ontario, entirely off the grid. And the resource continues to grow to deliver even larger peak demand reductions.

In acknowledgment of the program’s success, the Peak Perks™ program received a Pacesetter Program award from the Peak Load Management Alliance (PLMA) at the 49th PLMA conference in May 2024 in Portland, OR. The award recognizes outstanding programs that effectively support and deliver flexible load management.

Peak Perks™ Delivers 157 MW Peak Demand Reduction June 20th, 2024



LOOKING FORWARD

EnergyHub is now focused on maximizing value for the IESO by continuing to increase enrollment and expanding the sophistication of its grid-edge services. Based on its success to date, the IESO is expecting to reach about 160,000 devices for the summer 2024 season, delivering load reduction averaging 145 MW.

Contact us for more on how EnergyHub can deliver cost-effective, flexible grid support for your utility.