

NRSTOR AND MPOWER LAUNCH TESLA POWERWALL HOME BATTERY RENTAL PROGRAM IN TORONTO

Submitted by | NRSTOR

Electricity consumers today are faced with ongoing challenges related to their electricity consumption. Cost, resiliency, as well as reducing consumption and impact on environment have become popular themes in their concerns. While popular strategies to reduce electricity consumption (turning lights off and not using heavy appliances during peak hours) will help with some reduction in costs, how can residential consumers make a bigger impact on improving costs, quality of power, and reducing their carbon footprint?



According to consulting firm McKinsey & Company, many consumers clearly want the added control, reliability, and resilience that comes from having a battery at home, and household batteries could contribute to making the grid more cost effective, reliable, resilient, and safe. This is why NRStor and MPOWER Energy Solutions launched Canada's first Home Battery Rental Program, featuring the Tesla Powerwall, to Toronto homeowners; effectively creating a community microgrid that will deliver homeowners resiliency and, from time to time, support the grid during critical peaks. In the first phase of the program, eligible residents located in the area of and around Spadina Avenue and College Street West, will have the opportunity to access reliable backup power during grid outages, better manage peak electricity usage, and monitor real time energy consumption.

NRStor believes distributed energy resources (DERs), such as batteries, solar, and electric vehicles, are disrupting the traditional utility model globally and this innovative value sharing

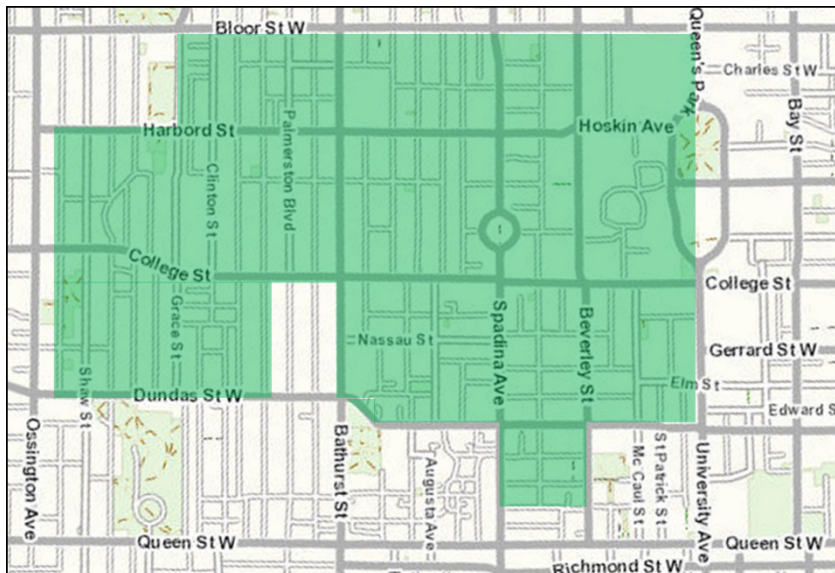
model significantly lowers system costs to homeowners. These types of projects are gaining in popularity in the United States, and have been launched by utilities like Green Mountain Power. NRStor and MPOWER will be working with both Enbridge and Toronto Hydro – two of Canada’s most progressive energy companies – to ensure the success of the first phase of this project and grow it across the country.

In the event of an outage, the battery will provide seamless backup electricity to power essential

household loads such as lights, electrical sockets, refrigerators, gas furnace fans and wireless internet. A mobile app monitors household energy flow, sending outage alerts and notifications to the homeowner once the outage has been restored. The batteries will be charged with lower-cost off-peak electricity and will then be used to power the home when grid demand is at its highest, reducing peak electricity costs for homeowners and Toronto Hydro.

Program Details: Bringing reliable energy to your neighbourhood

NRStor, MPOWER Energy Solutions, Toronto Hydro and Enbridge recently launched an exciting resiliency pilot program, featuring Tesla Powerwall.



Eligible homeowners in Toronto located near Spadina and College (the shaded green areas on the map below) will have the opportunity to access reliable backup power during grid outages, better manage peak electricity usage and monitor real time energy consumption for \$29.99/month on a 10-year rental, plus a one-time connection charge of \$1,500.

MPOWER Energy Solutions will manage the installation and operations of the battery

in your home. The battery will charge with lower cost off-peak electricity and use that stored energy during peak times to directly benefit you and the local electricity grid.

- You will receive alerts in the event of a power outage
- The battery will provide seamless backup power supply for your essential appliances and devices in your home.
- You will be able to monitor home energy use in real time on your phone from anywhere.
- You could benefit from a reduction in your peak electricity bill.

Powerwall improves reliability for customers and reduces costs for everyone on peak energy days.

Program Summary

TORONTO'S FIRST VIRTUAL POWER PLANT (VPP) PILOT

BRINGING AFFORDABLE RESILIENCY TO THE DOWNTOWN CORE

THE OPPORTUNITY

We are launching the first major residential battery (Tesla Powerwall) rental program in Canada in one of Canada's most densely populated and electrically congested neighbourhoods. Our project will provide affordable resiliency to homeowners while delivering much-needed local and system-wide services to reduce electricity costs and emissions while avoiding costly substation upgrade infrastructure.

We want to support Toronto's ambitious sustainability targets through an equally ambitious VPP pilot project.

BENEFITS OF ENERGY STORAGE

Homeowners

- ✓ **Increased Resiliency:** Onsite storage improves power quality and better protects essential systems.
- ✓ **Peak Energy Cost Reductions:** Optimizing local energy consumption based on TOU price signals reduces peak energy charges to customers.

Toronto Hydro & City of Toronto

- ✓ **Utility Benefits:** Toronto Hydro will be able to better manage peak demand and defer conventional infrastructure costs, while improving local power quality & resiliency.
- ✓ **TransformTO Goals:** This project directly supports the City's TransformTO storage and climate objectives.

Ontario's Independent Electricity System Operator

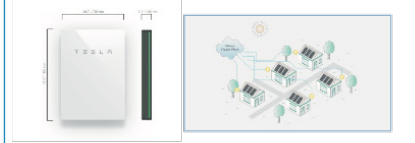
- ✓ **System Services:** Energy storage can deliver system services including DR, OR, etc.
- ✓ **DER Test Services:** The microgrid can deliver new IESO DER services including ramping, transactive energy, etc.

BENEFITS FOR TORONTO



COST-EFFECTIVE, QUICK DEPLOYMENT

The Tesla Powerwall is a rechargeable lithium-ion home battery that optimizes energy usage. Homeowners living in the service area (below) are eligible to rent a Tesla Powerwall for **\$29.99/month**, plus a one-time connection charge of **\$1,500**, representing a >50 lifecycle cost savings compared to a standard direct system purchase.



STRATEGIC SITING: ELIGIBLE ZONE

Energy storage can be strategically sited to deliver a combination of local and system-wide benefits.

Our project will aggregate a "fleet" of Tesla Powerwall units connected to the Cecil street substation to act as a decentralized battery. Customers located in the Spadina and College area of Toronto will be eligible to participate in this program (subject to additional pilot terms and conditions).



GOVERNMENT PRIORITY

"Our government is building an electricity system that works for the people... We are taking a comprehensive, pragmatic approach to building the modern, efficient, and transparent electricity system that the people of Ontario deserve".
— Hon. Rod Phillips, MoECP

ABOUT NRSTOR INC.

NRStor is an industry-leading energy storage project developer. We provide innovative solutions based on our unparalleled understanding of energy storage technologies, their costs, and the benefits they can provide.

We have earned our reputation as a leader in energy storage. NRStor built the first commercial flywheel storage project in Canada and is now building the first commercial fuel-free compressed air energy storage project in the world. We have over 100MW of lithium ion battery projects in development and a growing pipeline of exciting innovative projects.

A CONSORTIUM THAT CAN EXECUTE

- ✓ **NRStor:** Battery developer/owner, commercial ops. manager
- ✓ **MPOWER:** Canada's certified installer of the Tesla Powerwall
- ✓ **Enbridge:** Utility integration and overall program growth
- ✓ **Toronto Hydro & City of Toronto:** Utility connection and integration
- ✓ **Tesla Energy:** Tesla Powerwall supplier and aggregation platform

TESLA POWERWALL FUNCTIONALITY

- ✓ Save on energy during on-peak hours
- ✓ Receive alerts in the event of a power outage
- ✓ Rely on a 12 to 24-hour backup power supply for your essential appliances and devices in your home
- ✓ Monitor your home energy use in real-time on your phone from anywhere

Control Your Energy from Anywhere

Seamlessly monitor and automatically manage your Powerwall, solar panels, Model S or X anytime, anywhere with the Tesla App.



Consortium Members



Links:

<http://nrstor.com/powerwall/>

<http://nrstor.com/2019/06/11/nrstor-and-mpower-launch-tesla-powerwall-home-battery-rental-program/#:~:text=NRStor%20and%20MPOWER%20launch%20Tesla%20Powerwall%20Home%20Battery%20Rental%20Program,-Consumers%20today%20are&text=NRStor%20believes%20distributed%20energy%20resources,lowers%20system%20costs%20to%20homeowners.>