

December 7th, 2021

Attention: Cathrine Regan, Secretariat
12th floor, West Tower, City Hall
100 Queen Street West
Toronto, ON M5H 2N2

RE: City of Toronto Executive Committee Review: Toronto Hydro Climate Action Plan and Next Steps

I am writing on behalf **NRStor Inc.**, a Toronto-based leader in energy storage, to support Toronto Hydro's Climate Action Plan as well as the City of Toronto's Executive Committee review on next steps.

NRStor develops cost-effective, reliable energy storage projects that create energy cost savings and reduce environmental impact. We are at the forefront of energy innovation across Canada, working with progressive utilities and stakeholders to enable innovation in the electricity sector.

Our electricity system is undergoing significant transformation and we believe distributed energy resources (DERs), such as batteries, solar, and electric vehicles can deliver customers with lower cost, more sustainable and more reliable energy alternatives. To this end, we believe Toronto Hydro's Climate Action Plan aligns with the City of Toronto's TransformTO framework objectives and is a meaningful step forward for both the City of Toronto and Toronto Hydro to achieve desired sustainability targets.

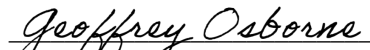
The Local Demand Response pilot at the Cecil substation outlined in the Climate Action Plan enabled an exciting first of kind virtual power plant (VPP) in Toronto, which can also be considered as a non-wires alternative (NWA) solution to traditional infrastructure upgrades. Together with Toronto Hydro, Enbridge, Tesla and MPOWER Energy Solutions, **NRStor led the Local Distributed Energy Resources Integration and Rental Program Pilot, which was supported by the IESO's Grid Innovation Fund:**

This pilot demonstrated a rental model for deploying behind-the-meter energy storage (using Tesla Powerwalls) in an electrically constrained urban neighbourhood in downtown Toronto. The pilot explored how this model can make energy storage affordable for homeowners while providing valuable services to the local and provincial bulk electricity system – enabling lower-cost, more reliable and more sustainable energy for ratepayers.

Additional information on the NRStor-led pilot is submitted as the following attachments:

1. "Bringing reliable energy to your neighbourhood" community flyer
2. "Toronto's First Virtual Power Plant (VPP) Pilot" project summary

NRStor sees an exciting opportunity for the proliferation of residential home battery and DER offerings and is actively working with the City of Toronto and utilities to advance wide-scale deployments across Ontario. We look forward to the City's review of Toronto Hydro's Climate Action Plan and look forward to continued dialogue.


Director, Strategy & Operations
NRStor Inc.

Reliability and Resiliency

Bringing reliable energy to your neighbourhood



www.nrstor.com/powerwall

Rely on Tesla Powerwall to supply essential energy during a power outage

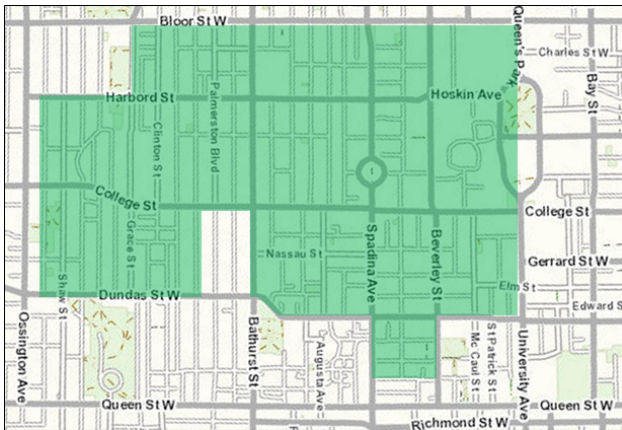
Tesla Powerwall is a rechargeable lithium-ion home battery that stores energy and makes it available on demand. The battery is charged with off-peak electricity, then uses that stored energy during on-peak times. This reduces your peak energy costs and ensures you have a back-up power supply for your home.

Why use Tesla Powerwall?

- Save on energy during on-peak hours
- Receive alerts in the event of a power outage
- Rely on a 12 – 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

Eligible areas

Homeowners living within the Cecil Street substation service area and surrounding areas are eligible to rent Tesla Powerwall for \$29.99/mo., plus a one-time connection charge of 1,500.¹



Homes in the outlined map—generally Bloor-Dundas-Roxton-University—are eligible.

Interested in reliable energy and reducing your peak energy costs?
Visit www.nrstor.com/powerwall for more information.



¹Subject to Terms and Conditions of Powerwall Pilot Program Participation Agreement.

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

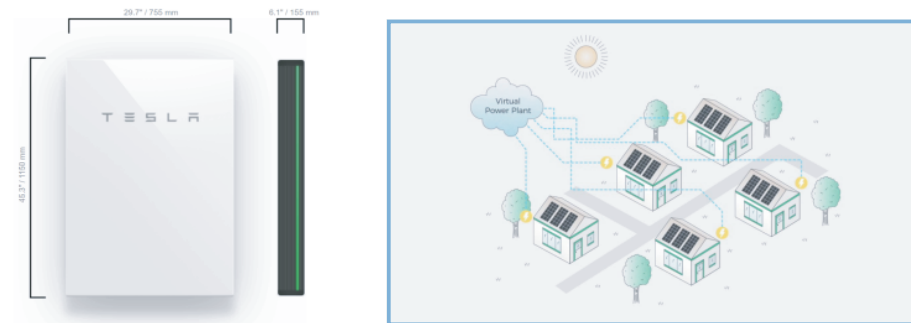
- ✓ **System Services:** Energy storage can deliver system services including DR, OR, etc.
- ✓ **DER Test Services:** The microgrid can deliver new IESO DER services including ramping, transactive energy, etc.

BENEFITS FOR TORONTO

1  RATEPAYER SAVINGS	2  ELECTRICITY GRID RELIABILITY & RESILIENCY	3  PUBLIC-PRIVATE PARTNERSHIPS	4  CLIMATE BENEFITS
---	---	---	--

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

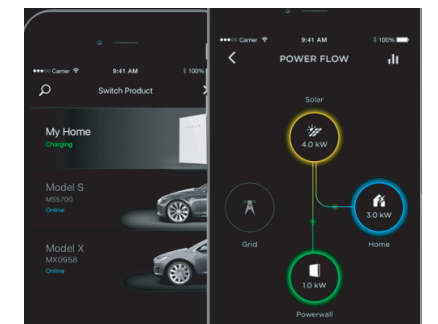
- ✓ **NRStor:** Battery developer/owner, commercial ops. manager
- ✓ **MPOWER:** Canada's certified installer of the Tesla Powerwall
- ✓ **Enbridge Gas:** Utility integration and overall program growth
- ✓ **Toronto Hydro & City of Toronto:** Utility connection and integration
- ✓ **Tesla Energy:** Tesla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



PROJECT PARTNERS

