TORONTO

REPORT FOR ACTION

Supplementary Report: Approach to Public Electric Vehicle (EV) Charging Three-Year Plan

Date: April 21, 2026
To: City Council
From: Executive Director, Environment, Climate and Forestry
Wards: All

SUMMARY

On April 7, 2026, the Infrastructure and Environment Committee considered item IE28.3 "Approach to Public Electric Vehicle (EV Charging) Three-Year Plan" which recommended that City Council adopt a three-year public electric vehicle (EV) charging, funding and implementation plan to expand equitable access to public EV charging; and to negotiate, enter into, and execute the Collaboration Agreement between the Proponent, City of Toronto and Toronto Parking Authority (TPA) for the purpose of establishing a multi-year Toronto-wide Public Electric Vehicle Charging Program.

At the same meeting, the Infrastructure and Environment Committee requested that the Executive Director, Environment, Climate and Forestry, to report directly to the April 22, 2026 meeting of City Council on:

- The quantitative and qualitative goals and objectives of the City's Public Electric Vehicle Charging Program;
- Upgraded charts in the report (April 2, 2026) from the Executive Director, Environment, Climate and Forestry, included as Attachment 1 to this supplementary report, to show the revenue costs for charging and the installation costs and to report Green P lots (Toronto Parking Authority) and street parking in the same fashion on both charts;
- The market surveys that support the demonstrated electric vehicle uptake as well as results and from surveys that show desire to purchase electric vehicles and any reasons that residents give for not buying;
- Documentation regarding access to charging as factor as to whether or not to purchase an Electric Vehicle in areas with and without garages and suitable driveways;
- Options to deal with extremely low utilization rates at Green P lots (Toronto Parking Authority), including downsizing the number of stations that would free up revenue producing spots at the busiest lots and / or adding faster charging stations at popular locations;

- The factors that led to the decision to install only 109 street ports, both permit parking and Green P (Toronto Parking Authority), and include all difficulties experienced with Toronto Hydro and all issues related to cost of installation by Toronto Parking Authority and Transportation Services;
- Level of oversight by the funder on the implementation of the Toronto Parking Authority Electric Vehicle plan and advice to the former Toronto Parking Authority Board on its oversight role;
- The inclusion of between 100 and 200 new street installations in permit parking areas for 2026-29; and
- All annual revenues from Permit parking areas including sale of permits, and fines, and the amount that has been raised for Electric Vehicle installation by the dedicated increase to permit parking fees to accommodate Electric Vehicle installation.

This report provides the supplemental information requested by the Infrastructure and Environment Committee.

The three-year plan to advance EV charger network growth in areas with demonstrated EV uptake while ensuring equity-focused investments where private-market delivery is unlikely. Implementation will follow a dual-track approach:

(A) Commercially financed deployments under the Agreement, and
(B) City-led, data-driven investments to address system gaps and priority use-cases, including on-street permit parking locations in neighbourhoods with limited access to at-home charging.

RECOMMENDATIONS

The Executive Director, Environment, Climate and Forestry recommends that:

1. City Council receive this report for information.

FINANCIAL IMPACT

There are no financial impacts resulting from the recommendation in this report.

The Chief Financial Officer and Treasurer has reviewed this report and agrees with the Financial Impact Section as presented in this report.

DECISION HISTORY

At its meeting of April 7, 2026, the Infrastructure and Environment Committee referred to the Executive Director, Environment, Climate and Forestry a motion to report directly to the April 22, 2026 meeting of City Council on the identified items.

https://secure.toronto.ca/council/agenda-item.do?item=2026.IE28.3

COMMENTS

Quantitative and qualitative goals and objectives of the City's Public Electric Vehicle Charging Program

The City's Public Electric Vehicle Charging Program is guided by five strategic goals, outlined in the April 7, 2026 Staff Report IE28.3 "Approach to Public Electric Vehicle (EV Charging) Three-Year Plan." These goals quantify targets around public EV adoption, financial performance, customer experience, demand fulfillment, and sector-specific electrification.

- **Goal 1 - Public EV Adoption**: Expand charging infrastructure across City-owned properties to support the City's target of 30 per cent of registered vehicles in Toronto being EVs by 2030. Key actions to be applied to charging infrastructure include equitable access, transparent pricing, and integrated user experiences.
- **Goal 2 - Financial Performance**: Achieve positive annual cash flow and a minimum 15 per cent pre-tax project return-on-investment (ROI) by Year 5. Meeting these thresholds enables the City to secure a 10% equity stake, ensuring long-term shared value with limited upfront capital exposure.
- **Goal 3 - City-Wide Demand Served**: Within five years, serve 10-15 per cent of Toronto's public charging demand through data-driven deployment planning. Priorities include Neighbourhood Improvement Areas and Emerging Neighbourhoods and sites with strong electrical grid readiness.
- **Goal 4 - Customer Experience**: By Year 3, reach at least 85 per cent customer satisfaction and at least 98 per cent network uptime, supported by proactive monitoring, transparent pricing, and streamlined parking-and-charging interactions.
- **Goal 5 - Commercial Fleet Electrification**: By 2030, deliver sufficient fast-charging capacity to support full electrification of commercial fleets through purpose-built hubs, high-power infrastructure, and collaboration with industry operators.

The qualitative goals and objectives of the City's Public Electric Vehicle Charging Program, which informed negotiations with the Proponent, were presented as guiding considerations in the October 9, 2024 Staff Report IE16.5 "Approach to Public Electric Vehicle (EV) Charging to 2030", which outlined that public charging in Toronto should:

- Not encourage, support, or prioritize the use of personal vehicles above active transportation or public transit;
- Increase equitable access to affordable low-carbon transportation options;
- Be deployed at charging hubs where installation costs per charger can be reduced through economies of scale;
- Be deployed with flexibility to easily relocate where there is potential for redevelopment of the site within the next five years;
- Be safe, accessible, convenient, and reliable; and
- Not be deployed at on-street locations where there is planned or potential implementation of transit or active transportation infrastructure or routes within the next five years.

Revenue and Installation Costs

Attachment 1 presents a detailed analysis of the Toronto Parking Authority's (TPA) electric vehicle (EV) charging infrastructure utilization and associated costs for the year 2025. It includes data on off-street parking lots as well as on-street charging stations, highlighting parking utilization, charger installation costs, electricity dispensed, and EV session statistics.

Market for Electric Vehicles

In addition to the stakeholder and public engagement conducted as part of the previously referenced IE16.5 “Approach to Public Electric Vehicle (EV) Charging to 2030”, ECF staff have reviewed recent market research by the Federal Government, Pollution Probe, as well as studies from Dunsky and Ernst & Young to better understand limitations to EV uptake.

The Federal Government’s “Market Snapshot: Zero emission vehicles in Canada – latest trends, including region and make/model-level insights” illustrates that Zero Emission Vehicles (ZEVs), which includes both battery electric vehicles and plug-in hybrid vehicles, were responsible for 60% of the net increase in total vehicle registrations in Canada in 2024 and accounted for one in seven new vehicles sold that year. As of December 2025, Toronto had 42,271 registered EVs, or about 3.8% of the registered passenger vehicles. The latest Dunsky EV Adoption report states that a medium growth ZEV adoption scenario would result in 87% of new light-duty vehicle sales in Ontario being ZEVs by 2035. The report also indicated that on average, Canadians will save approximately $1,650 annually per vehicle on fuel, not to mention the benefits from reduced greenhouse gas emissions and improved air quality.

Natural Resources Canada’s Zero-Emission Charging in MURB and Garage-Orphans report (January 2025), indicates that access to charging infrastructure remains one of the barriers to mass adoption of ZEVs. The key proposed solutions for addressing this are increased public and workplace charging and removal of barriers (e.g., revising condo acts, bylaws, and regulations, permits triggering EV equipment requirements) and incentives for multi-unit residential building (MURB) owners/managers.

These solutions will be advanced through the City's collaboration with The Atmospheric Fund on a Complimentary Action Plan, updates to the City of Toronto's Zoning By-law 569-2013 through its Zoning for Low-Carbon Technologies Review, as well as leveraging the Collaboration Agreement to increase public charging options. Pending Council approval, staff will report on the status of these initiatives in the annual progress update report.

The following table indicates the projected number of ZEVs in Toronto, based on Federal Government projections for Ontario, that would result from the forecasted adoption of ZEVs over time:

ZEV Projection	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Projected per cent composition of ZEVs as part of total vehicles in Toronto	6.24%	10.00%	15.00%	25.00%	30.00%	35.00%	40.00%	45.00%	50.00%	55.00%
Projected total number of ZEVs	83,866	134,400	201,600	336,000	403,200	470,400	537,600	604,800	672,000	739,200

Documentation regarding access to charging as factor in whether or not Toronto residents purchase an electric vehicle in areas with and without garages and suitable driveways.

In addition to the stakeholder and public engagement conducted by ECF staff, to ensure its assessment is using up-to-date market information, the City reviewed Ernst & Young's Canada's Annual Mobility Consumer Index (March 2026), which gauges consumer attitudes towards vehicle purchasing and technology preferences.

Consistent with earlier City findings, the study indicates the primary inhibitors to EV adoption in Canada are the higher upfront purchase cost (32%) and public charger quality / interoperability (28%). Consumers also cite difficulty locating charging stations (38%), expensive charging costs (32%) and long wait times to access chargers (31%) among their top charging concerns. For those considering home charging, high installation costs, higher electricity bills, and required electrical panel upgrades emerged as added considerations. In addition to the City efforts to improve public access through the Proponent on City-owned land, Toronto Hydro has also established a dedicated team of Customer Connection Associates to guide customers through all types of connection processes, ensuring a consistent customer experience for those who want to make an EV connection in their home or business.

When further considering difficulties locating charging stations, City staff reviewed the 2025 Federal Government Zero-Emission Vehicle Charging in MURB and Garage-Orphans study, which identified key barriers to ZEV charging in MURBs and for garage orphans and points to solutions, best-practices and a suite of practical actions that stakeholders can take. Key identified barriers are grid preparedness, buildings electrical capacity, lack of access to charging, consumer awareness and installation cost.

The top two motivators for purchasing an EV remain the same as in 2024 with 53% of respondents citing high fuel prices as the top consideration, an increase from 45% the year before. In second spot, 47% of respondents cited environmental concerns as a primary concern; up from 34% in 2024.

Improving Utilization at Existing Locations

The TPA's approach to date, informed by third party EV charger demand forecasts, has been to deliberately overbuild charging capacity at select locations where there is anticipated demand to future-proof sites, reduce range anxiety (concern battery will run out of power before reaching a charging destination) to encourage EV adoption, and allow demand to scale over time as EV adoption increases. While this has resulted in underutilization at some locations, it has generated valuable insights into customer charging behavior and has directly informed how the City intends to collaborate with TPA to more effectively manage locations with low rates of utilization.

- At locations where low charger utilization remains, City staff and the TPA are actively evaluating opportunities, starting in 2027, to rebalance infrastructure by relocating chargers to higher demand locations and have already started to increase charging speeds at popular stations. Under the Collaboration Agreement, the parties will periodically review underutilized EV charging locations and EV charging assets will be strategically relocated to better align infrastructure deployment with observed usage patterns and customer demand. In parallel, the TPA are in the process of launching a dual parking use EV and Internal Combustion Engine Vehicle pilot program at Car Park 221 (Dundas St. W and Simcoe St.) in May 2026. This will enable greater flexibility in parking operations, by allowing both vehicle types to park in the same space, while continuing to support EV adoption.
- Conversely, a recent example of this adaptive approach is Car Park 43, where slower 50 kW DC fast chargers were relocated to a site better aligned with their utilization profile, and Car Park 43 is being retrofitted with faster 100 kW chargers. This upgrade better matches charging power to customer dwell times and growing demand for higher speed charging, resulting in improved throughput, reduced wait times, and enhanced overall site performance.
- A combination of strategic overbuild, relocating chargers to higher-use locations, dual use parking spot pilot programs, and targeted fast charging upgrades will remain central to the City's approach to improving utilization, maximizing public value, and ensuring the City's charging network continues to meet current and future demand.

Factors Underpinning Installation of 109 Street Ports

The TPA have been able to install 109 street ports, including both permit parking and Green P (Toronto Parking Authority) pay and display locations, and have identified the following challenges in deployment:

- Design Complexity - The City of Toronto's street configurations and layouts are not homogenous. The presence of a boulevard raised sidewalk, bike lane, vicinity to an intersection, pedestrian crossovers, furnishing zone, pedestrian sidewalk, etc., dictate the type of installation design required to instal a charger on the right-of-way (ROW).
- Cost – Compared to off-street where the average cost of a Level 2 charger is $40,000, on-street charger installation costs in Toronto are three to five times higher (shown in updated Attachment 1).
- Congestion – In highly congested areas, when replacing an existing parking space with an EV parking space, any changes to curbside regulations need to be factored into time-of-day parking and stopping restrictions to avoid increasing congestion.
- Space Constraints / Limited On-Street Parking Spaces - Public ROW is often limited in space, making it challenging to fit charging stations without obstructing pedestrian pathways, bike lanes, or other street features.
- Power Availability - A minimum of 220 V electrical capacity is required on a pole that meets Toronto Hydro's standards, for installing new EV chargers.

City staff have an opportunity to review the existing EV network, through its continued work with City Divisions and Toronto Hydro, as well as with the Proponent through the Collaboration Agreement, to understand how to better address barriers to on-street deployment.

Oversight by the Proponent's Funder

All newly proposed locations will be reviewed and approved at the Program Executive Committee, detailed in the report, with ECF having responsibility for approving final locations that have been vetted in accordance with the process established in Attachment 2 and ensuring alignment with the City Council approved guiding considerations for electric vehicle charging. All new locations will be operated and maintained by the Proponent.

When considering investments in the City's EV Charging Program, while the Proponent's representatives on the Program Executive Committee will help provide oversight of operational and capital decisions, the Proponent will be required to seek authority from the board of their primary funder if the Collaboration Agreement materially changes, or when the next phase of investment is required following the initial three years of the program. Similarly, City staff will be required to report to City Council to approve any changes to the Agreement, including scenarios in which the City would like to exercise rights outlined in Confidential Attachment 1 that may have incremental financial implications.

For the treatment of the existing City-owned/TPA operated network of public EV chargers, the assumption by the Proponent is that existing chargers have a seven-year life cycle and depending on the condition and performance of those assets, will need to be replaced or redeployed after being considered and approved through the Program Executive Committee.

Annual revenues from Permit Parking Areas and 100-220 New Street Installations in Permit Parking Areas for 2026-2029

Since 2023, through the increase in user fees on permit parking, Transportation Services has budgeted a transfer of $1.389 million each year to TPA. The cumulative total from 2023-2025 is $4.167 million. Total revenue from permit parking from 2023-2025 was $44.8 million.

This funding can be used to install locations identified in Attachment 2 to the report (April 2, 2026) as Final Site List B, which are locations that did not meet the Proponent's return on investment requirements for siting, but meet City priorities such as providing equitable access to charging. As part of the Collaboration Agreement, the City will identify between 100 and 200 new street installations in permit parking areas for 2026-2029, following the process established in the siting and deployment process in Attachment 2.

On-street EV charging violations generated $83,745 during 2022-2024 period, resulting from 1,350 violations. During the same period, there were 948,684 permit parking violations generating $30.23 million.

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SIGNATURE

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ATTACHMENTS

Attachment 1 – TPA Parking & Electric Vehicle Charging Utilization (Updated)