

Approach to Public Electric Vehicle (EV) Charging Delivery Model

Date: June 26, 2025

To: Infrastructure & Environment Committee

From: Executive Director, Environment, Climate and Forestry

Wards: All

REASON FOR CONFIDENTIAL INFORMATION

The attachment to this report contains *commercial information* supplied in confidence to the *City of Toronto*, which, if disclosed, could reasonably be expected to prejudice significantly the competitive position or interfere significantly with the contractual or other negotiations of a person, group of persons, or organization.

SUMMARY

On October 10, 2024, City Council adopted the IE-16.5 - Approach to Public Electric Vehicle (EV) Charging to 2030 staff report. The report outlined a strategy and plans that will ensure sufficient public charging infrastructure will be in place to realize TransformTO's goal of 30 per cent EV ownership of registered personal vehicles by 2030. To support the recommended Collaborative Delivery Model, the initial three-year City-wide EV charging installation and funding strategy will be presented to City Council in Q4 of 2025. A key prerequisite to inform this plan is a decision around a preferred public EV charging delivery model.

This report evaluates public EV charging delivery models to inform and support delivery model decision as a strategic decision that will enable the most efficient and effective way to achieve associated near- and long-term goals and objectives within the City of Toronto's ("the City") Strategic Planning Framework.

Based on the evaluation completed on a City-led Model against a Collaborative Model, and considering the magnitude of the City's unfunded capital program and the cost of generational programs such as the housing plan, transit, and climate action initiatives, City staff are recommending that Environment, Climate and Forestry (ECF), in coordination with the Toronto Parking Authority (TPA), begin negotiations with three

Short-Listed Proponents, guided by Key Negotiating Principles, both outlined in Confidential Attachment 1, with the objective of identifying a Successful Proponent by Q4 2025 to inform the three-year funding plan and strategy around public EV charging, and report back to the Infrastructure and Environment Committee by the end of Q1 of 2026, on the results of those negotiations.

RECOMMENDATIONS

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

1. City Council direct the Deputy City Manager, Corporate Services, with the support of applicable City Divisions, to work with the President, Toronto Parking Authority, to transition to a City-led negotiation of an agreement based on the Collaborative Model outlined in the report (July 10, 2025), with the Short-Listed Proponents, identified through the Toronto Parking Authority's Request for Expression of Interest (REOI) entitled "Electric Vehicle Charging Network" issued on March 23, 2023 (# BD-2023111), and based on the Key Negotiating Principles, both as set out in Confidential Attachment 1, for a multi-year Toronto-wide public Electric Vehicle Charging Delivery Model, and report back to the Infrastructure and Environment Committee by the end of Q1 of 2026 on the results of the negotiation.
2. City Council direct that Confidential Attachment 1 to this report from the Executive Director, Environment, Climate and Forestry Division remain confidential in its entirety in accordance with the provisions of the City of Toronto Act, 2006, as it involves a position, plan, procedure, criteria or instruction to be applied to any negotiation carried on or to be carried on by or on behalf of the City or local board.

FINANCIAL IMPACT

There is no financial impact resulting from the adoption of the recommendations in this report.

Capital costs, operational complexities, and maintenance requirements associated with public EV charging infrastructure requirements identified in the Approach to Public Electric Vehicle (EV) Charging to 2030 report, present significant challenges for the City. To address this, an alternative delivery model, referred to as the Collaborative Model, has been examined and evaluated against a City-Led Model.

In the City-Led Model, the City is solely responsible for the full funding, planning, installation, operation, and maintenance of public EV charging infrastructure, carried out by its assigned Divisions, Agencies, and Corporations, and multiple third-party contractors. In the Collaborative Model, the City is responsible for identifying key priorities aligned with the overall approach to public EV charging, a third-party proponent is selected to finance and deliver a turnkey solution, and the TPA provides program oversight to ensure key performance measures tied to the rollout and sustainment of public EV charging infrastructure are achieved.

The 2025 [10-year Capital Budget](#) for TPA includes \$40.1 million in cash flow commitments for EV projects, and represents the City's capital funding to support the initial off-street EV charging expansion. While these planned investments are a positive step, it is insufficient for a City-wide buildout of EV charging infrastructure, which will require a significant additional capital and operating investments over-time.

The evaluation detailed in this report indicates that a Collaborative Model is best positioned to provide value and affordability for taxpayers and contribute to improving the City's financial health and helping support strategic, multi-year decision-making and priorities management.

New emerging technologies in the EV market, as well as uncertainties in the economy resulting from increasing geopolitical tensions and trade and economic policy instability have a potential to significantly impact supply chains and change the pace of EV adoption. Therefore, the full magnitude of potential financial impact is difficult to forecast at this point.

The Chief Financial Officer and Treasurer will be consulted by ECF and TPA during the negotiation process with the Successful Proponent under the recommended Collaborative Model, to identify potential financial future impacts to the City.

Any financial impacts that may result from a negotiated agreement will be identified when staff report back on the results of those negotiations in Q1 2026.

The Chief Financial Officer and Treasurer has reviewed this report and agrees with the financial impact information.

EQUITY IMPACT STATEMENT

It is important to ensure that the deployment of public EV charging infrastructure benefits all Toronto residents. Toronto has many diverse neighbourhoods with different charging needs influenced by many factors including access to at-home parking, housing type and age, household income, proximity to transit, and parking allocation, all of which inform public EV charging infrastructure needs across the city.

Matching the speed and level of ambition outlined in the TransformTO Net Zero target of "30 per cent of registered vehicles be electric by 2030" and Toronto's goal of "100 per cent zero emission vehicles-for-hire by 2030", favours a pathway for EV infrastructure which focuses in areas where EV adoption is certain to grow.

Equity and inclusivity can be supported through continuously monitoring EV sale trends throughout Toronto, particularly in the Neighbourhood Improvement Areas (NIAs), and identifying how to meet the needs of diverse communities. This includes the City building flexibility into public EV charging delivery models that allows for the funding and prompt deployment of infrastructure to those areas where the City have identified potential gaps in service.

A substantial proportion of the Vehicle-for-Hire (VFH) industry consists of lower-income individuals, and individuals who identify with equity-deserving groups. Shifting to EVs creates a unique opportunity for the VFH industry to be highly visible leaders in working towards Toronto's climate action goals.

In 2017, Toronto Public Health found that levels of traffic-related air pollution (TRAP) were higher along the inner-city highways and major arterial roads in Toronto. People who live, work, learn, or play near these roads are at greatest risk of adverse health outcomes associated with TRAP. Residents who live close to these traffic corridors are predominantly low income or equity-deserving groups. Increased EV uptake will reduce transportation related tailpipe emissions, thus improving local and city-wide air quality.

DECISION HISTORY

Sidewalks to Skylines: A 10-Year Action Plan for Toronto's Economy (2025 – 2035), adopted by City Council in November 2024, provides a roadmap to guide and shape Toronto's economic development decision making over the next 10 years.

<https://www.toronto.ca/legdocs/mmis/2024/ec/bgrd/backgroundfile-249432.pdf>

On October 10, 2024, City Council adopted the Approach to Public Electric Vehicle (EV) Charging to 2030. The report outlines a strategy and plans that will ensure sufficient public charging infrastructure will be in place to accommodate growth in EV ownership to 30 per cent of registered personal vehicles by 2030.

<https://secure.toronto.ca/council/agenda-item.do?item=2024.IE16.5>

On June 26 and 27, 2024, City Council approved the terms of the Net Income Share Agreement between the City and the Toronto Parking Authority for a three (3) year period, effective January 1, 2024.

<https://secure.toronto.ca/council/agenda-item.do?item=2024.EX15.9>

On March 29, 30, and 31, 2023, City Council adopted the Relationship Framework of the City with Toronto Parking Authority, amending to include that the Executive Director, Housing Secretariat and Chief Executive Officer, CreateTO identify underutilized parking facilities and parking facilities within Protected Major Transit Station Areas for the purpose of redevelopment and supporting plans for redevelopment of parking facilities that prioritize the provision of new affordable housing. An additional amended directions detailed the Toronto Parking Authority should do everything practicable to assist the City to reach net-zero climate pollution by 2040, in a manner consistent with TransformTO.

<https://secure.toronto.ca/council/agenda-item.do?item=2023.EX3.4>

At its meeting on February 2 and 3, 2022, City Council directed Transportation Services in consultation with Toronto Hydro and the Toronto Parking Authority to commence the expansion of the City's On-street EV Charging Program, including siting criteria, costs, and any other requirements to ensure a successful roll-out and future expansion.

Existing and future charging stations to be transferred to the responsibility of TPA in 2023. City Council also approved the extension of the Downtown and Residential EV Charging Station pilots by eight months until May 31, 2022.

<https://secure.toronto.ca/council/agenda-item.do?item=2022.IE27.7>

On December 15, 16, and 17, 2021, City Council endorsed the targets and actions outlined in the TransformTO Net Zero Strategy and approved a target to reach net zero emissions by 2040. The Net Zero Strategy includes a target that by 2030, 30 per cent of registered vehicles in Toronto are electric. The Net Zero Strategy's Short-Term Implementation Plan (2022-2025) includes actions to help ensure that Toronto is on track to meeting its 2030 and 2040 targets for EV adoption.

<https://secure.toronto.ca/council/agenda-item.do?item=2021.IE26.16>

January 29, 2020, City Council approved the EV Strategy which highlights 10 actions organized under four areas of opportunity: charging availability, cost and convenience, education and advocacy, and economic opportunities. Council directed Environment and Climate to work with the EV Working Group to oversee effective engagement, implementation, and evaluation of widescale EV rollout, including the On-street Charging Pilot and Residential On-street Charging Station Pilots.

<https://secure.toronto.ca/council/agenda-item.do?item=2020.IE11.17>

On October 2, 2019, City Council declared the Climate Emergency and Accelerating Toronto's Climate Action Plan.

<https://www.toronto.ca/legdocs/mmis/2019/mm/bgrd/backgroundfile-138112.pdf>

COMMENTS

The City's Carbon Accountability Framework supports actions across the City government that reduce greenhouse gas emissions in the community and from the City's own operations. This system aims to increase value for money and facilitate deeper engagement by Council, residents, and stakeholders on the City's implementation of the TransformTO Net Zero Strategy. To support this, the City's current approach towards net zero emissions by 2040 requires critical acceleration and could benefit from new innovative partnerships.

Cooperation between the public sector and third parties for the development and operation of infrastructure for a wide range of economic activities has significantly increased in Canada in recent years. Such collaborative arrangements are driven by limitations in public funds required for accelerated infrastructure development and by efforts to increase the quality and efficiency of public services.

Public EV charging programs around the world demonstrate that success in building robust and effective EV charging networks is achieved when collaboration with diverse stakeholders is at the core of this type of infrastructure development, saving time, money, and avoiding unnecessary duplication and stranded assets.

Highlighted in the City's Sidewalks to Skyline Action Plan for Toronto's economy, large urban centres across North America are reinventing themselves through partnerships and shared investment across governments and third parties. This Action Plan calls on all sectors to double down on collaborative strategies and investment to make Toronto work for those who live, work, and visit here, now and in the future.

To create a best-in-class EV eco-system that will accelerate the City of Toronto's transformation to net zero while facilitating EV adoption across Toronto in a customer-centric fashion, the TPA released a non-binding Request for Expressions of Interest (REOI) in April 2023. This process is detailed in Attachment 1.

Following the adoption of the staff report Approach to Public Electric Vehicle (EV) Charging to 2030 on October 9, 2024, a new governance structure was established that provides ECF with strategic oversight related to the continued expansion of public EV funding (both capital and operating). This responsibility includes the creation of an initial three-year funding outlook for consideration in Q4 2025. To ensure the necessary details are available to finalize the funding plan, a decision regarding a delivery model is required. To this end, information gathered from both existing City-led approaches to EV deployment and through the REOI was reviewed by ECF and TPA.

With that information in hand, an evaluation of a City-Led Model against a Collaborative Model was conducted to inform a final decision on a preferred delivery model. The main objective of this approach was to link the strategic, economic, risk, and jurisdictional aspects in an evaluation.

Strategic Evaluation

The City of Toronto, primarily through the TPA, has been actively involved in expanding public EV charging infrastructure. This includes installing charging stations in Green P parking lots, at on-street parking spaces, and at City facilities. Additionally, the City has established regulations and bylaws that help define the appropriate use of public space in relation to EV charging. However, considering the scope and size of the City's unfunded capital programs and the cost of critical programs such as the housing plan, transit, climate action, and state of good repair, the City faces significant challenges to support the scope and scale of a City-Led Model that will ensure sufficient public charging infrastructure will be in place to accommodate growth in EV ownership to 30 per cent of registered personal vehicles by 2030:

- Pace of Deployment: City-led initiatives face challenges in keeping pace with the growing demand for EV charging.
- Financial Resources: City budgetary constraints can limit the speed and scale of infrastructure development. However, if properly funded, a City-Led Model does generate higher short-term and long-term combined parking and charging revenue.
- Asset Management: A City-Led Model ensures full control of charging revenue, prioritization of charging locations, and use of its real estate assets.
- Operational Capacity and Expertise: Currently, the City does not possess the capacity and specialized expertise required for the optimal operation, management, and long-term sustainment of a large and complex charging network that would be required to accommodate growth in EV ownership to 30 per cent of registered personal vehicles by 2030.

By comparison, Collaborative Models offer a possible solution to the challenges of funding, developing, managing, and maintaining large-scale EV charging networks that could be beneficial to the City:

- Pace of Deployment: Avoids capacity building needed to resource a timely planning, permitting, and installation process. Also, additional marketing and outreach would increase the City's Green P parking revenue through increased parking volumes and utilization.
- Financial Resources: Reduces the City's budget burden, allowing for allocation of funds to other critical infrastructure projects and essential services, while insulating the City from the risk of investing in locations with low demand and utilization.
- Asset Management: Collaborative Models, while improving parking revenues, do not allow the City to realize charging revenue until a certain return on investment is achieved. It also prioritizes locations that generate revenue more quickly, which may require the City to invest in locations that may be deemed less profitable but are needed to provide more equitable access to EV charging.
- Operational Capacity and Expertise: Would ensure reliable and efficient service and reduce the City's operational burden. Third party involvement can improve reliability and reduce operational burden, while ensuring the long-term sustainability of the charging network, provided that the proper controls are in place to manage the on-going operation and maintain of infrastructure and equipment.

The provision of public charging is an important supporting component for achieving the City's TransformTO Net Zero Strategy goals and objectives. However, the skills required for efficient and effective deployment, management, and sustainment of a large-scale public charging network are not currently one of the City's core competencies, and would require a great deal of capacity building, which is highlighted in the evaluation of both models.

Economic Evaluation

With a mandate that has grown to include responsibility for the operation, maintenance, and continued expansion of EV charging infrastructure, TPA has invested \$21.2 million in expanding EV charging opportunities on City of Toronto property since 2021. This investment was funded through a combination of TPA's retained earnings of \$19.0 million and \$2.2 million in funding provided by Natural Resources Canada through their Zero Emissions Vehicle Infrastructure Program (ZEVIP).

On June 26, 2024, City Council approved a Net Income Share Agreement between the City and the TPA. Through this agreement, the City is providing capital funding of \$33.9 million over three years (2024-2026) to TPA to fund the capital expansion of its off-street EV charging program.

Currently TPA receives approximately \$0.5 million in revenue from EV charging. This revenue will be used for the state of good repair, maintenance, repairs, and upgrades to existing public EV charging infrastructure owned and maintained by TPA.

The City of Toronto requires a significant and sustainable amount of infrastructure investment to modernize aging assets, meet its growth demands, enhance mobility, and build resilience. The City's capability to deliver on key EV infrastructure has become progressively more challenged due to significant capital costs, increasingly complex

requirements, rapidly changing technology, and limited flexibility around sourcing and delivery practices.

A set of key capital and operating cost elements were used in the formulation of the City-Led Model and Collaborative Model evaluation:

a) Capital Costs

- Engineering, design, and construction;
- Chargers and other hardware and material;
- Installation and commissioning; and
- Service upgrades and energy systems.

b) Operating Costs

- Direct costs – staffing, network operation and management, maintenance and repairs, energy/utilities, marketing, and education and awareness;
- Indirect costs – procurement and legal, and other overhead;
- Capacity building costs – recruiting, training, technology, project and change management, testing and deployment.

c) Value and Long-Term Sustainability

The following Tables A-C outline estimated financial impacts of the two public EV charging delivery models on the City.

Table A: Estimated City Capital Funding Requirements

City Capital Funding Requirements (\$millions)	3-year Estimate (2026 – 2028)		10-year Estimate (2026 – 2035)	
	City-Led Model	Collaborative Model	City-Led Model	Collaborative Model
L2 Ports	10.8	0.0	70.7	0.0
L3 Ports	2.4	0.0	35.0	0.0
Construction & Upgrades	5.9	0.0	113.2	1.9
Energy Systems	0.0	0.0	11.0	0.0
Total	19.0	0.0	230.0	1.9

Table B: Estimated City Operating Funding Requirements

City Operating Funding Requirements (\$millions)	3-year Estimate (2026 – 2028)		10-year Estimate (2026 – 2035)	
	City-Led Model	Collaborative Model	City-Led Model	Collaborative Model
Salaries & Benefits	5.1	3.2	23.8	15.1
Network O&M	0.1	0.0	6.5	0.0
Maintenance & Repairs	0.1	0.0	1.5	0.0
Marketing	0.2	0.0	0.6	0.0
Education & Awareness	0.2	0.0	0.5	0.0
Procurement & Legal	0.4	0.0	0.8	0.0
Recruiting	0.4	0.0	0.4	0.0
Technology	0.7	0.0	0.7	0.0
Training	0.1	0.0	0.1	0.0
Project & Change Management	0.3	0.0	0.3	0.0
Testing, Setup & Deployment	0.3	0.0	0.3	0.0
Total	7.8	3.2	35.5	15.1

Table C: Estimated City Revenue (inclusive of parking and associated EV charging revenue)

Estimated City Revenue (\$millions)	3-year Estimate (2026 – 2028)		10-year Estimate (2026 – 2035)	
	City-Led Model	Collaborative Model	City-Led Model	Collaborative Model
	4.4	2.2	51.1	32.3

The above estimates figures are based on the following key metrics assumptions and estimates. For clarity, Level 2 (L2) chargers are alternating current chargers that utilize a 240V power source and often take a few hours to fully charge a vehicle, while Level 3 (L3) chargers are direct current fast chargers that can reduce charging time to 20-60 minutes. Numbers reflect net new deployment in addition to 2025 year-end baseline of deployed chargers:

Collaborative Model

- 700 L2 ports and 40 L3 ports deployed at the end of the initial three-year period (2026 – 2028);
- 2,100 L2 ports and 120 L3 ports by the end of 2030, and
- 3,500 L2 ports and 200 L3 ports by the end of 2035.

City-Led Model

- 235 L2 ports and 15 L3 ports deployed at the end of the initial three-year period (2026 – 2028);
- 1,400 L2 ports and 40 L3 ports by the end of 2030, and
- 3,500 L2 ports and 200 L3 ports by the end of 2035.

The estimated number of L2 and L3 ports is in addition to the total number of ports deployed by the City as at the end of 2025.

The evaluation indicates that a Collaborative Model is best positioned to provide value and affordability while limiting risk associated with achieving EV charging port targets.

Risk Assessment

A risk assessment of the two public EV charging delivery models, further outlined in Attachment 2, was conducted using the City of Toronto's Enterprise Risk Management (ERM) Framework.

Various types of economic pressures are continuing to create challenging financial conditions for the City and other levels of government. The City-Led Model is likely to have a major or severe impact on the City's ability to adequately invest in and support key components of its strategic planning framework. Requirements of a City-led program would not be possible to accommodate within current budget allocation or without service cuts and/or reserve funds. A complete assessment summary is provided in Table D.

Table D: Risk Assessment Summary

Risk Category	City-Led Model		Collaborative Model	
	Likelihood	Impact	Likelihood	Impact
Strategic	Almost Certain	Major to Severe	Possible	Moderate
Financial	Almost Certain	Major to Severe	Possible	Moderate
Operational	Likely to Occur	Major	Unlikely	Minor
Economic & Market	Almost Certain	Major	Likely	Moderate

Regulatory & Legal	Unlikely	Minor	Unlikely	Minor
People	Almost Certain	Major	Remote	Minor
Reputational & Community	Possible	Moderate	Unlikely	Minor
Technology & Data	Possible	Major	Unlikely	Minor
Contractual	Possible	Major	Possible	Moderate

Risk assessment of the two public EV charging delivery models indicates that risks associated with City-Led Model are more likely to occur and to have more severe impacts on the City in most key areas than with a Collaborative Model. Based on the results of the assessment, a list of material issues was generated to establish the Key Negotiating Principles highlighted in Confidential Attachment 1. These contractual guardrails are meant to frame conversations and negotiations with Short-Listed Proponents and mitigate the risks that were identified during the assessment by factoring them into any future commercial arrangements.

Jurisdictional Scan

To complement, and in many cases enable, rapid and efficient expansion of city-provided network of public EV chargers, major cities across North America have established collaborative agreements that allow third-party licensees to install and operate EV charging infrastructure on city properties.

- The Commercial Curbside EV Charging Program in Vancouver supports EV adoption by increasing access to public charging through collaboration with a third party. In collaboration with Hydro Quebec, the City of Montreal has deployed over 2,000 chargers during the past few years.
- The City of San Antonio, Texas, entered into a collaborative agreement in 2021 to deploy EV charging infrastructure, aiming to increase access to public charging and support the city's Electric Vehicle San Antonio Program.
- The New York City EV Charging Demonstration Project is a collaborative agreement to deploy Level 2 charging ports at curbside locations across the five boroughs.
- The City of Halifax is also actively exploring third party collaboration for the delivery of public charging.

In addition to these cities, many more local and provincial/US state governments are working on soliciting such agreements based on the outcomes of assessments like the City of Toronto's delivery model evaluation. Currently, based on staff research, no major municipal government in North America is undertaking large- scale public charging deployment and management on their own.

Conclusion

Based on the evaluation completed on both models, staff have determined that a Collaborative Model offers a viable avenue to finance and deliver on forecasted public EV charging demand, while addressing the key risks tied to a City-led Model. Staff recommend a tri-partite agreement between the City, a third-party proponent, and TPA outlining roles and responsibilities of each party. The third-party proponent would be accountable to the City, as the City's direct partner.

At this stage, staff are seeking Council support for the recommended delivery model and Key Negotiating Principles, which would inform and drive negotiations.

City staff are recommending that, in accordance with the governance framework identified in the Approach to Public Electric Vehicle (EV) Charging to 2030 report, ECF leverages information available through the REOI and works with the TPA to begin the transition towards City-led negotiations with the Short-Listed Proponents outlined in Confidential Attachment 1, with the objective of identifying a Successful Proponent by Q4 2025 to inform the three-year funding plan and strategy around public EV charging, and report back to the Infrastructure and Environment Committee by the end of Q1 of 2026, on whether an agreement consistent with principles adopted by Council was tentatively achieved. Discussions with the proponents would be guided by Key Negotiating Principles which are further outlined in Confidential Attachment 1 and are informed by the delivery model evaluation risk assessment as well as the information gathered through the REOI to date.

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SIGNATURE

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ATTACHMENTS

Confidential Attachment 1 - Public EV Charging Agreement Approach – REOI
Evaluation and Key Negotiating Principles

Attachment 1: Request for Expressions of Interest (REOI) Process
Attachment 2: Charging Delivery Risk Assessment