



Public EV Charging City of Toronto Activities

Presentation to Toronto Parking Authority Board

July 19, 2024

Presentation Objectives

- Provide an overview of:
 - The city-wide context for public EV charging.
 - The approach to development of the upcoming City-led Public EV Charging Strategic Plan by the Environment & Climate Division in partnership with City Divisions, Agencies and Corporations.
- Enable alignment with Toronto Parking Authority charging network planning, deployment, and management activities, including the opportunity provided through the strategic partnership Expression of Interest.

TransformTO Net Zero Strategy – Critical Steps

TransformTO Targets (adopted December 2021):

- 45% GHG emissions reduction by 2025 (from 1990 levels)
- 65% by 2030
- Net zero by 2040

	Demonstrate carbon accountability locally and globally by establishing a carbon budget.
	Accelerate a rapid and significant reduction in fossil (natural) gas use in buildings.
	Increase access to low carbon transportation options, including walking, biking, public transit and electric vehicles.
	Increase local renewable energy to contribute to a resilient, carbon-free grid.

- 5% share of EVs in registered vehicles by 2025
- 30% share by 2030
- 100% share by 2040

The Electric Vehicle Strategy

The Strategy focuses on passenger vehicles (cars, vans, trucks, and SUVs), with actions the City will take to:

- **Increase charging availability**
 - Explore & leverage funding opportunities.
 - Develop policies & regulations and explore partnerships.
 - Explore options to integrate technologies & streamline installations.
- **Address cost and convenience barriers**
 - Develop policies to increase EVs in shared mobility.
 - Explore regulatory changes & pilots.
- **Increase public awareness & education**
 - Advocate to other levels of government.
 - Communicate social, environmental, and economic impacts of EVs.
 - Continue to transition City's fleet to zero emission vehicles.
- **Create economic opportunities that will benefit the local economy**
 - Support EV related research.
 - Promote economic benefits of EV technology.

Public EV Charging – Current State

- City Council has received updates and provided direction on EV charging at multiple times, including in 2022 to support installation of on-street charging infrastructure (IE30.11 and IE31.17) – refer to Appendix.
- Pending completion of City-Wide Strategy, TPA was directed to install 50 on-street EV chargers with priority for paid parking areas and to assume ownership and operation of 47 on-street chargers owned by Toronto Hydro.
- TPA's Off-Street EV Charging Strategy launched in 2022 was designed to drive the productivity of TPA's off-street parking business; network plan validated by third-party consultants Dunsky in 2022.
- Strategy presented to TPA Board & reflected in annual budget process approved by City Council.
- City of Toronto & TPA Net Income Share Agreement approved by Council includes the City's contribution of \$33 M over three years (2024 – 2026) to fund delivery of EV chargers at TPA's off-street locations.
- There are a total of 2,510 L2 & 235 L3 public chargers available in Toronto.
- TPA has deployed 407 EV chargers – the largest municipally-owned operator of EV chargers in Canada.

Public EV Charging – City's Initiatives

- 38 off-street chargers (31 Level 2; 7 DCFC) at 4 locations by the end of 2024 – 445 total EV charging stations at 84 locations (31 off-street / 53 on-street locations).
- Site selection of over 100 potential on-street EV charging locations in progress.
- Design and implementation to follow further definition of on-street EV charging through City-Wide EV Charging Strategic Plan.
- A new by-law mandates that all new residential parking spaces include an outlet capable of Level 2 charging, facilitating home charging for residents.

Public EV Charging Strategic Plan – Development

Objective – Long-term planning to help ensure that public EV charging will be available when and where it is needed across Toronto to support the transition to EVs.

Focus - provide information, considerations, and feedback from a range of sources to answer the following questions:

- How much of publicly accessible EV charging will be needed and where?
- What is the role of the City in delivering a network of publicly funded EV chargers?
- What are the roles and responsibilities of various City Divisions and Agencies with strategy development, delivery, and operation?
- What is the role of the private sector?
- How will the infrastructure be funded?

Public EV Charging Strategic Plan – Development

Activities Undertaken:

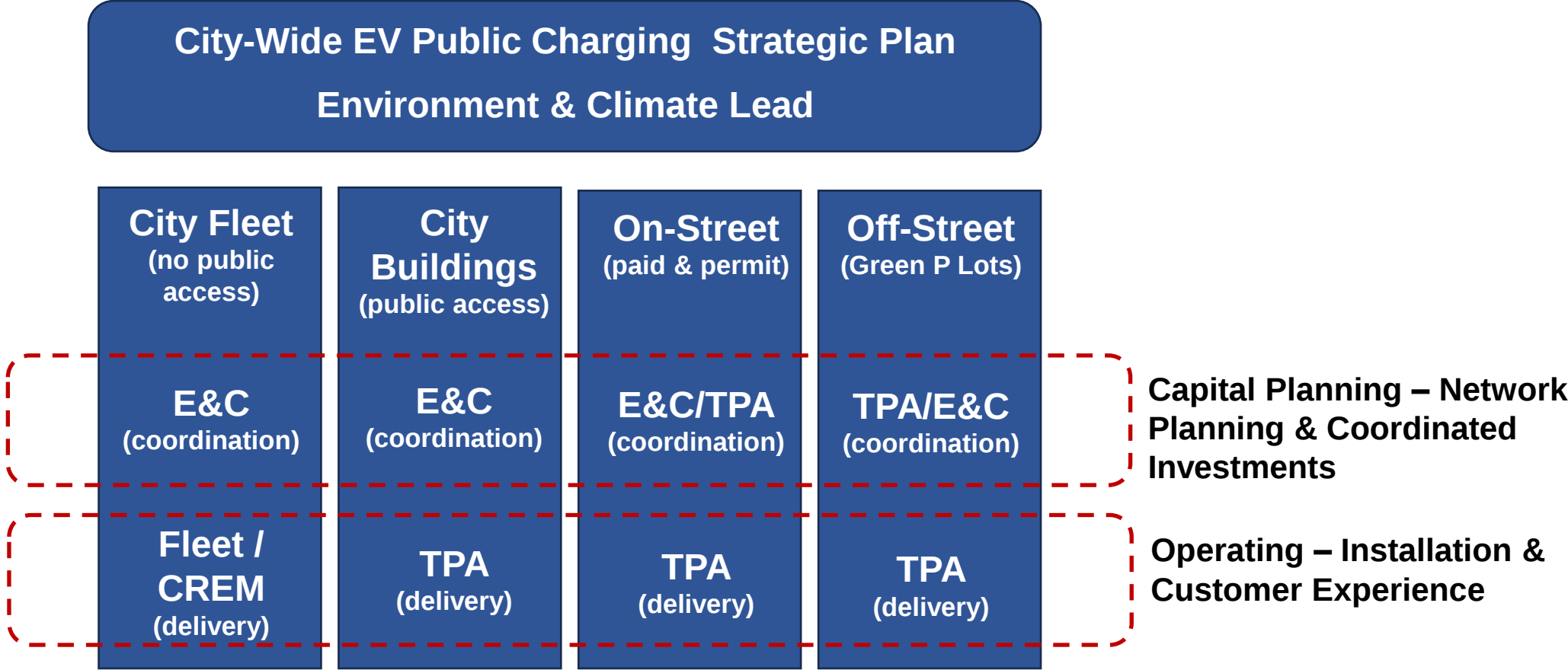
- Desktop Review
 - In addition to the review of existing policies, documentation, and strategies from public sector agencies in Canada and globally (jurisdictional scan), a range of academic and industry sources have been reviewed to help inform the EV charging infrastructure ecosystem.
- Public and Stakeholder Engagement
 - From April 2022 to March 2024, the Environment & Climate division undertook a multi-phase stakeholder engagement consultation process.
- Modeling
 - A data-informed analysis of existing and forecasted public EV charging demand and infrastructure requirements.

Public EV Charging Strategic Plan – Feedback

Public and Stakeholder Feedback:

- Key interests identified by existing and potential EV owners related to charger availability, accessibility, reliability, and user safety.
- Charger type preference - Level 1 & 2 chargers are sufficient for most EV users, while Level 3 would be more suitable for vehicle-for-hire drivers and other corporate vehicles without a centralized or accessible charging hub.
- Level 3 is more suitable in areas where parking is limited or subject to rush hour restrictions.
- Streamlining the process to install EV chargers, including permitting, utility upgrades, and developing turnkey solutions to expedite and incentivize installation.
- Concerns for the high cost of installation, operation, and return on investment.
- Concerns for feasibility of installation related to property management and energy capacity.

Coordination Overview



Moving Forward – City / TPA Coordination

- Public EV Charging Strategic Plan - Report tracking to September IEC and October Council.
 - Continued engagement on strategic plan development, including alignment of modeling and utilization data
 - Examine opportunities to address issues identified limiting EV uptake
 - Establish detailed governance framework for coordination of capital investments across all charging areas (city buildings, on-street, off-street), delivery of projects and customer experience.
- Capital Planning
 - Coordinate through 2025 Budget process on capital deployment across all charging areas.
 - Review work underway for 2024 EV charging installations.
- TPA Expression of Interest - Report for decision tracking to Q4 Board and Q1 Council, following Public EV Charging Strategic Plan.
 - City to participate on evaluation committee.
 - Engagement of CreateTO for alignment with development opportunity review of TPA portfolio, related to the City's Long-Term Financial Plan as directed by Council.
 - Work to enable alignment with other City work e.g., 2026-2030 TransformTO short-term action plan, parking strategy, etc.

Appendix

IE30.11

City Council on June 15 and 16, 2022, adopted the following:

4. City Council request the TPA to work with the GM, Transportation Services, THESL and relevant stakeholders to install a minimum of 50 on-street electric vehicle chargers by the end of 2023.

5. City Council request the ED E&E and TPA to report back on the results of the EV Charging Needs Study in 2023 and identify the number of on-street EV chargers that can be installed through 2024 and 2025.

6. City Council request the TPA to accelerate the installation of on-street electric vehicle chargers by prioritizing existing pay and display locations.

7. City Council request TPA to identify in its proposed 2023 Operating and Capital Budgets and 2024 – 2032 Capital Plan, the operating (including staffing) and capital budget requirements needed to support the operation, maintenance and continued expansion of the on-street EV Charging Program.

8. City Council direct the CFO to ensure that the City of Toronto / TPA Net Income Revenue Share Agreement provides TPA with sufficient retained earnings to fund the incremental costs associated with the operation, maintenance and continued expansion of the on-street EV Charging Program.

9. City Council request the GM Transportation Services and the ED, E&E to work with TPA to provide annual updates to City Council, beginning in the fourth quarter of 2023, on the installation of on-street and off-street EV charging stations.

Reference: <https://secure.toronto.ca/council/agenda-item.do?item=2022.IE30.11>