

On-Street Electric Vehicle Charging Stations - Pilot Conclusion and Next Steps

Date: May 11, 2022

To: Infrastructure and Environment Committee

From: General Manager, Transportation Services

Wards: All

SUMMARY

This report concludes the Residential and Downtown On-Street Electric Vehicle (EV) Charging Station pilots that were launched in October 2020 and provides the final metrics on charging station utilization, greenhouse gas (GHG) impacts, costs, revenues and parking regulation compliance rates.

This report also identifies thirty-two (32) new charging stations that will be installed prior to the end of 2022 with funding support from The Atmospheric Fund (TAF) and the Environment and Energy Division (EED) with project execution support from Toronto Hydro. The rapid nature in which these new stations were proposed and finalized illustrates that a refreshed framework for inter-agency collaboration has been solidified, expediting the roll-out of publicly available on-street EV charging stations city-wide in the coming years. The application of established siting criteria, ensuring Councillor participation and feedback in the site selection process and seeking additional funding through new incentive and grant funds have been critical to the success of this expanded roll-out and will continue to be in the future.

As the pilot concludes and the roll-out of on-street EV charging infrastructure continues, staff are proposing minor adjustments to charging rates, the creation of a set of updated design guidelines that will include feedback from the accessibility community and other stakeholders, and ongoing collaboration with various entities, including the City's Electric Vehicle Working Group responsible for the EV file.

To further ensure the continuation of this successful process, this report requests authorization for up to an additional year of a partnership agreement between the City of Toronto and Toronto Hydro. This extended partnership agreement will support the delivery of 32 new on-street chargers this year and will support the transition expected in Q2 of 2023 between Toronto Hydro and the Toronto Parking Authority, who will be responsible for operations and maintenance of the on-street chargers as well as the roll-out of additional on-street EV charging infrastructure in future years as part of its overall EV charging program.

RECOMMENDATIONS

The General Manager, Transportation Services, recommends that:

1. City Council authorize the General Manager, Transportation Services, to negotiate, enter into and execute an agreement with Toronto Hydro-Electric System Limited generally in accordance with the agreement terms listed on pages 12 and 13 of this report dated May 11, 2022 from the General Manager Transportation Services and on such other terms and conditions satisfactory to the General Manager, Transportation Services, and in a form satisfactory to the City Solicitor.

FINANCIAL IMPACT

Toronto Hydro estimates an average cost of approximately \$20,000 per EV charging station. This includes typical costs such as engineering design, equipment and labour. Accordingly, the project budget for 32 chargers in 2022 is \$640,000.

Toronto Hydro filed a funding application to TAF to mitigate deployment costs by \$5,000 per charger. If the application is successful, TAF will provide funding for a maximum of 20 chargers (in accordance with Federal Government fund disbursement rules), thus offsetting total costs by \$100,000. Additional funding from the Environment and Energy Division will further offset costs by \$240,000 which is part of the approved 2022 budget and poses no incremental financial impact to the City of Toronto.

To support the creation of 32 new EV charging stations in 2022, Transportation Services will install new signs and pavement markings with an estimated value of \$5,000, which is part of the approved 2022 Operating Budget.

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

DECISION HISTORY

The Infrastructure and Environment Committee, at its meeting of April 26, 2022, received a progress report on the implementation of the Pocket Plus Neighbourhood Climate Action project.

[Agenda Item History - 2022.IE29.8 \(toronto.ca\)](#)

The Toronto Parking Authority, at its meeting of February 18, 2022, authorized Electric Vehicle Detailed Design Consultant awards which will establish the Toronto Parking Authority's Electric Vehicle Charging Program.

[Agenda Item History - 2022.PA28.8 \(toronto.ca\)](#)

City Council, at its meeting of February 2 and 3, 2022, approved an extension of the Downtown and Residential Electric Vehicle Charging Station Pilot, which included direction to install additional 17 or more on-street charging stations in 2022.

[Agenda Item History - 2022.IE27.7 \(toronto.ca\)](#)

City Council, at its meeting of December 15 and 16, 2021 adopted TransformTO - Critical Steps for Net Zero by 2040 which included several Electric Vehicle Charging initiatives.

[Agenda Item History - 2021.IE26.16 \(toronto.ca\)](#)

City Council, at its meeting of December 15 and 16, 2021 adopted the Toronto Hydro Climate Action Plan.

[Agenda Item History - 2021.EX28.1 \(toronto.ca\)](#)

City Council, at its meeting of January 29, 2020 adopted the Electric Vehicle Strategy.

[Agenda Item History - 2020.IE11.17 \(toronto.ca\)](#)

City Council, at its meeting of November 7, 8 and 9, 2017 adopted a report entitled "Preparing Toronto for Electric Vehicles."

[Agenda Item History - 2017.PW24.7 \(toronto.ca\)](#)

City Council, at its meeting of July 11, 12 and 13, 2012, approved a pilot project to provide curbside charging stations for Electric Vehicles.

[Agenda Item History - 2012.PW16.4 \(toronto.ca\)](#)

EQUITY STATEMENT

As EV adoption continues to grow, so does the need for charging infrastructure. The provision of publicly available EV charging infrastructure will offset the cost of EV ownership by increasing access for households with limited ability to install on-site charging or who have less access to on-site dedicated parking opportunities, thus making EV operation more affordable.

It will be important to continue to emphasize the establishment of equity considerations as key siting criteria when planning investments in EV charging stations in order to avoid exacerbating existing disparities in the transportation system.

COMMENTS

In October 2020, Toronto Hydro and Transportation Services partnered to install seventeen (17) EV charging devices on nine (9) select streets as part of two comprehensive pilot projects with the overall goals of:

- Understanding charging usage in the city of Toronto
- Helping permit parking holders gain access to on-street charging
- Understanding charging in combination with paid parking

- Supporting the City's TransformTO and Net Zero ambitions

The Downtown On-Street Pilot consisted of the installation of two pedestal-mounted charging stations servicing two charging spaces each on Elizabeth Street and Wellington Street West¹. The Residential On-Street Pilot consisted of thirteen (13) charging stations installed at seven (7) locations throughout the city, one of which was a non-residential location in front of Toronto Hydro's work centre at 500 Commissioners Street to develop installation standards and monitor functionality. A map of the pilot charging stations is noted in Attachment 1.

Specific site selection criteria were assigned to both pilots, including the absence of parking restrictions and proximity to existing hydro poles that did not impact accessibility requirements for the Downtown On-Street Pilot, and permit subscription thresholds, lack of daytime or alternate side-of-street parking restrictions, and specific requirements for the location of hydro poles.

A marketing and communications campaign advertised charger availability through several channels to advise that the chargers were available at competitive charging rates (\$2 per hour for the Downtown On-Street charging stations and \$2 per hour between 8:00 a.m. and 7:59 p.m. and a flat rate of \$3 between 8:00 p.m. and 7:59 a.m. to support overnight charging for the Residential On-Street charging stations.)

Final Results of Extended Evaluation Period

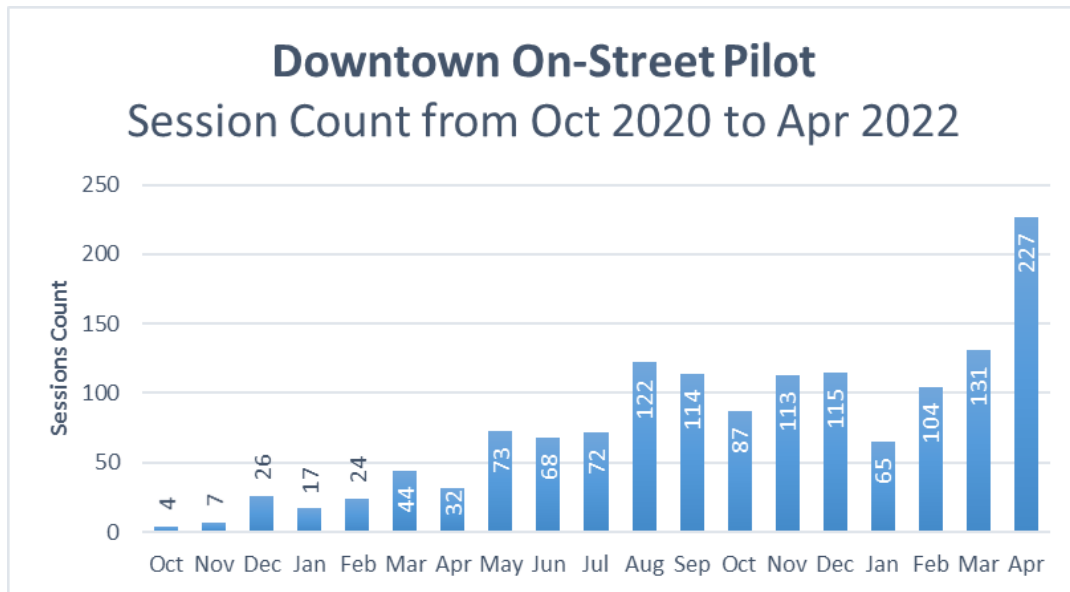
An eight-month extension to the one-year pilot was approved by Council in February 2022 to collect additional data in an attempt to address pandemic related impacts and provide a more accurate reflection of EV charging adoption rates as more of the workforce returned to work centres thus increasing the likelihood that EV owners would require steady-state charging of their EVs during the work day.

Usage

Over the 19-month period observed since the start of the two pilots (the period from October 2020 to April 2022), usage generally increased month-over-month, with Downtown On-Street charging stations increasing from a charger average utilization (average percentage of the month that chargers were in use) of 0.24% in October 2020, to 35.3% in April 2022 (a considerable uptick from the 15.3% observed in September 2021, at the one-year mark for the pilot). The total number of charging sessions per month also grew over the same period, from only four sessions in October 2020 to 227 sessions across both locations in April 2022 as shown in Figure 1.

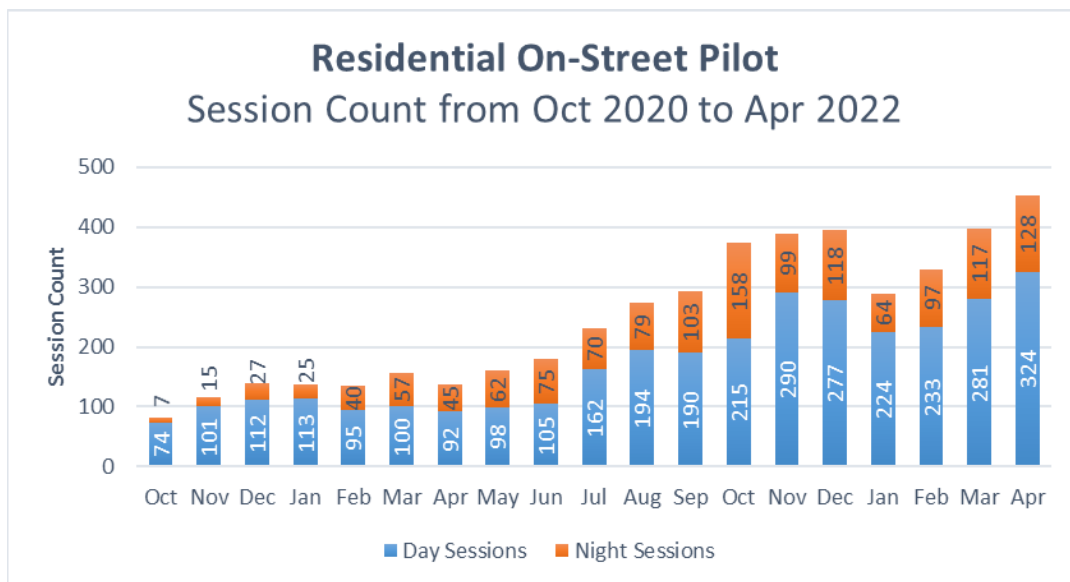
¹ The pedestal station installed on Wellington Street West between Blue Jay Way and Clarence Square will be decommissioned to accommodate the installation of new bi-directional cycling facilities.

Figure 1: Number of Downtown On-Street Pilot Location Sessions



Usage similarly increased over time for the Residential On-Street charging stations. Station average utilization increased from 2.4% in October 2020, to 22% in April 2022 (up from 15% observed at the one-year mark in September 2021). The number of sessions per month for Residential On-Street locations grew from 81 in October 2020, to 452 in April 2022, as shown in Figure 2.

Figure 2: Number of Residential On-Street Pilot Location Sessions



Attachment 2 includes detailed utilization rates for both the Downtown and Residential On-Street pilot locations.

GHG Impact

Both pilots saw an energy consumption total of 127,923 kWh from October 2020 to April 2022. At an average net GHG mitigation factor of 1.012 kgCO₂e/kWh, this represents nearly 130 metric tonnes of CO₂e that would otherwise have been emitted from Internal Combustion Engine (ICE) equivalents^{2,3}.

Revenues

From October 2020 to April 2022, the Downtown On-Street pilot collected \$7,843 (exclusive of taxes) in revenue for an average of \$5.43 per charging session and the Residential On-Street pilot collected \$20,686 (exclusive of taxes) in revenue for an average of \$4.44 per charging session.

Costs

Costs for electricity and transaction fees were only available for 18 of the 20 months of operation for both pilots at the time this report was written. This amounted to \$5,197 for an average of \$4.27 per charging session for the Downtown On-Street pilot and \$18,469 for an average of \$4.39 per charging session for the Residential On-Street pilot.

The above costs exclude Toronto Hydro costs of operating the pilot (e.g., monitoring, analysing data, managing and maintaining the sites), and also do not consider initial project capital costs.

The pilot was intended to stimulate up-take by EV users in order to drive utilization and obtain the associated information about public charging experiences, and accordingly, charging session rates were set low enough to achieve those objectives. As charging stations transition from Toronto Hydro pilot operations to TPA standard operations, pricing changes may be necessary.

Compliance with EV Charging Station Parking Regulations

During the first 12 months of the pilot, 95% of parking infractions occurred when a non-electric vehicle was parking in designated EV parking spaces and the rest (5%) occurring when non-permit parking holders exceeded the time in designated one-hour parking areas. To try and improve compliance rates, pavement markings clearly

² While EV efficiencies vary among makes and models, the estimated average for popular EVs is 18.7kWh/100km. The average efficiency for comparable Internal Combustion Engine (ICE) vehicles is 8.5L/100km. This means that, for every kWh consumed by an EV, a similar ICE vehicle would consume 0.45L of gasoline. At a factor of 2.3kgCO₂e/L of gasoline, every kWh represents 1.05kgCO₂e of avoided greenhouse gases (GHGs) from gasoline combustion. However, since Ontario's electricity grid has an average annual emissions factor of 0.031kgCO₂e/kWh, on a net basis, every kWh of electricity consumed by EVs represents 1.012kgCO₂e of total avoided GHGs.

³ Natural Resources Canada, Fuel Consumption Rating Tool, available at: <https://fcr-ccc.nrcan-rncan.gc.ca/en>

identifying charging spots with EV symbols and providing delineation markings for each spot were installed in October 2021. Staff are also ensuring that all EV charging spots have a three-hour limit for parking and are submitting reports to the appropriate Community Council area to seek appropriate parking amendments going forward.

There were 426 parking infractions issued in 7 out of 9 charging locations over the duration of the pilot phase (October 2020 to April 30 2022), for a total amount of \$25,560 in parking fines. In the period between October 1, 2021 and April 30, 2022, there were 84 parking infractions, 100% of which occurred when a non-electric vehicle or EV that was not actively charging was parked in designated EV parking spaces. No infractions were issued for non-permit parking holders exceeding parking time limits. The general downward trend in parking infractions issued in the pilot areas after the provision of additional pavement and delineation markings speaks to their efficacy and Transportation Services will include these strategies in EV charging station siting and design guidelines going forward. Attachment 3 provides further details on parking violations and fines in the pilot locations.

Installation of Additional On-Street EV Charging Stations

In February 2022, City Council directed staff to work with relevant stakeholders to install 17 or more additional charging stations in 2022. Toronto Hydro, TPA and Transportation Services mobilized quickly to ensure that this request could be met this year, thus establishing a refreshed approach to siting EV charging locations in an efficient manner that incorporates Councillor and resident feedback and which has set a framework for continued collaboration as expansion efforts intensify. Toronto Hydro is using this latest EV project as an opportunity to proactively trial-run its Climate Advisory Services (as set out in its Climate Action Plan), which is returning to City Council for approval in the near-term.

Staff chose to focus efforts on deploying the additional EV charging stations in residential on-street permit parking areas, particularly in areas where there is an abundance of housing stock without access to private parking pads or garages. A database containing suggested locations from resident outreach was accessed and from there shortlisted locations were presented to local Councillors across seven wards in the Toronto East York Community Council area. Site selection was predicated on the same criteria as the rest of the pilot locations in the Residential On-Street pilot, namely:

- In a permit parking area with available permits (i.e., <90% capacity)
- On a street block with at least two fewer permits issued than parking spaces available
- No daytime parking restrictions or alternate side-of-street parking
- The presence of electric or street light poles located between the back of the curb and sidewalk (considered the boulevard area) and where poles are located in the sidewalk directly adjacent to the curb
- On a street that allows for the placement of two parking spaces that are ideally end-to-end (single spaces are also acceptable when the end-to-end option is not available) without encroaching on driveways, intersections, fire hydrants, or other significant encumbrances

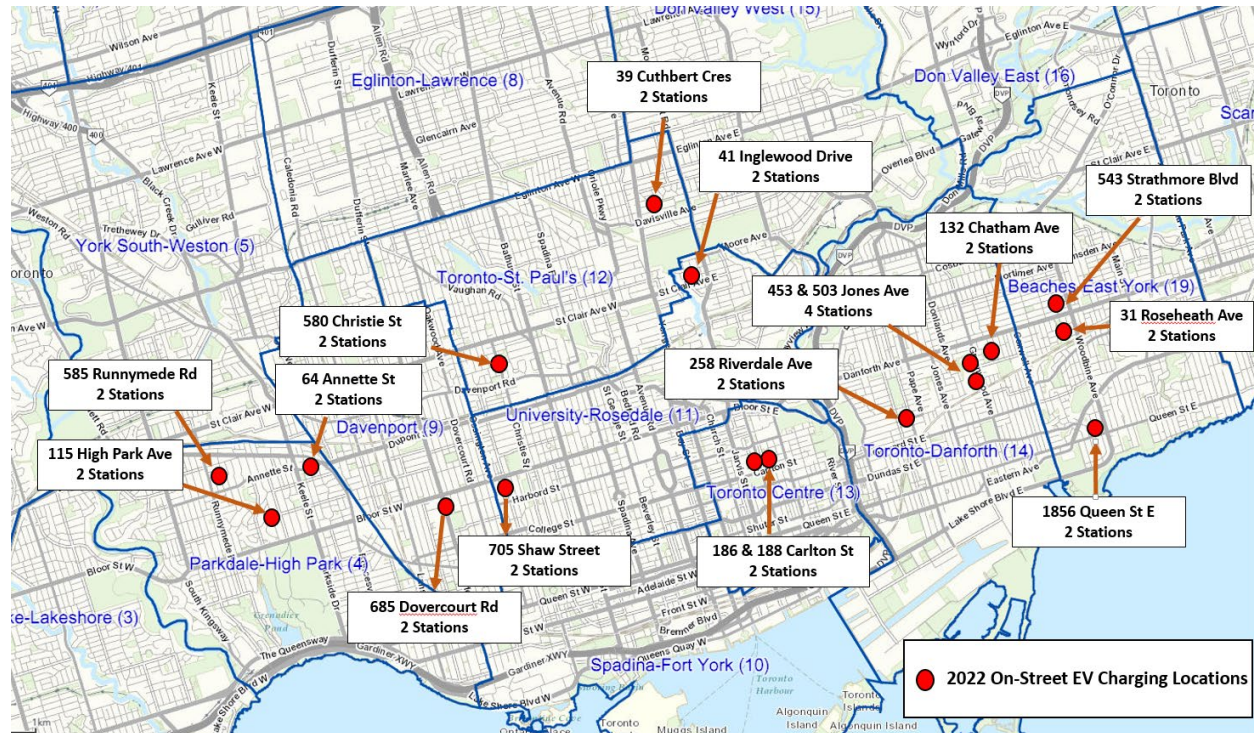
- The location provides sufficient electrical capacity and can otherwise support the EV charge stations

Councillors were invited to supplement the shortlist with additional location requests that staff investigated for feasibility with an aim of exceeding the initial direction to install 17 or more charging stations in 2022 by instead targeting 32 stations. The 32 locations that are expected to be installed before the end of 2022 are listed in Table 1.

Table 1: List of On-Street EV Charging Locations Expected in 2022

Ward	Locations	Number of EV Chargers
Parkdale-High Park (Ward 4)	535 Runnymede Road 64 Annette Street 115 High Park Avenue	6
Davenport (Ward 9)	685 Dovercourt Road	2
University-Rosedale (Ward 11)	705 Shaw Street 41 Inglewood Drive	4
Toronto-St.Paul's (Ward 12)	39 Cuthbert Crescent 580 Christie Street	4
Toronto Centre (Ward 13)	186 Carlton Street 188 Carlton Street	2
Toronto-Danforth (Ward 14)	453 Jones Avenue 503 Jones Avenue 132 Chatham Avenue 258 Riverdale Avenue	8
Beaches-East York (Ward 19)	31 Roseheath Avenue 543 Strathmore Boulevard 1856 Queen Street East	6
Total Chargers		32

Map 1: On-Street EV Charging Locations Expected in 2022



Staff will be submitting reports requesting necessary parking amendments to the June 29, 2022 meeting of Toronto and East York Community Council on some of the existing on-street EV charging station locations, including the additional 17 locations listed in Table 1. Toronto Hydro is in the process of applying for the maximum amount of financial support available through TAF's EV Station Fund which will fund up to 20 stations. Funding for 12 additional stations is being provided through the Environment and Energy Division (EED) which is intended to assist with the acceleration of the deployment of EV charging infrastructure in Toronto. It is anticipated that Toronto Hydro will undertake pre-construction activities in June, with construction beginning in August and continuing through November. Safety inspection and commissioning of the sites will occur in December with the intent that all new EV charging stations will be online prior to the end of 2022.

Funding

City Council requested staff from the City, TPA and Toronto Hydro explore any and all funding sources, including grant funding to cover the capital and operating costs associated with this program.

Toronto Hydro and TPA met with TAF to discuss incentives that are available for this project. TAF expressed interest in receiving an application for on-street charging.

Funding available from TAF is originally sourced from Natural Resources Canada's (NRCan) Zero Emissions Vehicle Infrastructure Program (ZEVIP). Accordingly, no additional NRCan funding is available through that program. In light of climate-related

announcements in the recent Federal Budget, Toronto Hydro is engaging the Federal Government to discuss other potential funding opportunities.

Rate Adjustments

Currently, Toronto Hydro's pilot project EV charging rates in residential areas is \$2 per hour during the day with a \$3 flat rate overnight. Those parking in the Downtown On-Street Pilot locations must also purchase Pay and Display parking for designated EV charging spots, which they can park at for a maximum of three hours. Those charging customers that are also non-permit parking holders using locations in areas with residential permit parking may park for a maximum of three hours during non-permit parking hours. Charging customers who are permit parking holders can park and charge for longer periods at the daily hourly rate and park and charge overnight at the nightly rate.

Toronto Hydro's rates for EV charging do not currently recover the cost of the EV chargers. Toronto Hydro expects that grants will continue to support the expansion of charging infrastructure in the near and medium terms - expectations that were affirmed in the recent Federal Budget. However, even after grants, the current hourly and flat rates are insufficient to recover the true cost of charging an EV.

It is important that EV charging rates at public chargers not discourage potential EV owners from choosing to purchase an EV. For EV owners who require the use of public chargers, these rates are part of the total cost of EV ownership. Since the time of the pilot, the cost of fueling an internal combustion engine (ICE) vehicle have risen considerably, which creates some additional room to raise EV charging rates to better reflect the true cost of charging an EV without creating a competitive barrier to transitioning from an ICE vehicle to an EV.

To address the true cost of EV charging, Toronto Hydro is proposing increases of 50 cents per hour for daytime charging rates (to a total of \$2.50 per hour) and an increase of \$3 for the overnight flat rate (for a total of \$6). This will ensure cost recovery of the operating expenses associated with the services as well as bring the costs in-line with competitive charging services nearby.

Siting Criteria and Design Guidelines

With the conclusion of the On-Street EV Charging pilots and the commencement of the expansion of the City's On-Street Electric Vehicle Charging Station program, the role of Transportation Services is transitioning to a circulation partner that will review proposed future locations for EV charging on the public right-of-way, starting in 2023 with the transfer of responsibility to the TPA of the existing charger stations and any new charger stations in the future.

As such, Transportation Services will develop a set of design considerations that will expand upon the existing siting criteria and which will include approval process charts that will ease the process of locating new EV charging stations. The goal of this work is to ensure the siting process is efficient, with the added objective to expand the

streetscape locations that could be considered for new charge stations, with approval from the local Councillor. This operational design guideline document will form the basis from which Toronto Hydro and the TPA can make decisions on which EV charging locations to propose to local Ward Councillors.

The key principle of the siting criteria is Councillor engagement to ensure that local Councillors will be able to apply their knowledge of the various requirements of their constituents in a flexible fashion on a neighbourhood-by-neighbourhood basis. It is intended that the design guidelines can evolve over time based on operational realities and as additional knowledge is gained about the acceleration of EV adoption rates in specific geographic areas.

Safety and accessibility in the public right-of-way is a principal concern for Transportation Services. In order to ensure that the placement of EV charging equipment aligns with existing accessibility and safety requirements on the sidewalk, the siting criteria in the design guidelines will have a focus on specific conditions including:

- Intersection setbacks
- Minimum pedestrian clearway requirements
- Utility and street furniture setbacks
- Avoiding sidewalks with cluttered furnishing zones where fire hydrants, bike parking, and other fixtures are typically installed
- Streets should have minimal curb cuts, which can lead to difficult siting
- Charging spots should not be located along protected bike lanes to ensure that charging cables do not interfere with safe operation

It is the intent of Transportation Services to consult with key stakeholders in the development of these guidelines including the accessibility community, TAF, and other relevant stakeholder groups as required including those that may emerge from the EED's Public EV Charging Plan consultation process.

Permit Parking Subscription Rates

A key component of siting on-street EV charging stations in residential permit parking areas is the subscription rates of the area. For the pilot locations and the new locations as part of the expansion described in this report, a permit parking area would only be considered for an EV charger if the area was at or below 90% subscribed and on a street block with at least two fewer permits issued than parking spaces available, thus ensuring there are available parking areas to accommodate both new EV vehicles and parking in the near vicinity for existing permit holders that might be slightly displaced from the installation of an EV charging station.

Going forward, requiring a permit parking area to be 90% subscribed or less may be an impediment to EV charging expansion efforts in certain areas. Given that all Councillors will ultimately be consulted on proposed EV charging locations, staff recommend a continued process of siting potential locations and seeking input from the Permit Parking office to determine permit subscription rates in the area. Guidance will then be

obtained from the local Councillor on whether they agree that permit parking spaces can be reassigned to EVs based on their knowledge of local parking issues.

Parking Restrictions

To date, any locations that have parking restrictions, in particular locations where parking is prohibited at specific times during the day (e.g., peak travel lanes) have not been considered as suitable locations. However, with the understanding that expansion efforts will require an exploration of the suitability of all available parking inventories for charging infrastructure, staff are proposing that parking restrictions no longer necessarily preclude the ability to site an EV charger.

At the outset of the pilot project, there were concerns that an inability to use an EV charger during restricted parking times would detrimentally impact the cost-benefit analysis of the individual charger. While 24-hour parking availability is still the preference to site an EV charging station, the expansion of the on-street charging network requires more flexibility in terms of ensuring a robust system. As such, through Councillor consultation and endorsement, a new EV charging unit may be located in a permit parking area where parking is restricted during rush hour periods. However EV operators will still be required to comply with the restricted periods of rush hour.

City Council has requested staff to include options for dedicated EV charging stations on streets that switch sides for parking, and work continues to determine the best approach on ensuring EV charging access for these specific residential parking conditions.

City of Toronto Agreement with Toronto Hydro

By Q2 of 2023, Toronto Hydro and the Toronto Parking Authority will negotiate and enter into an agreement that will transfer the hardware and ongoing maintenance of all of Toronto Hydro's existing charging stations to the Toronto Parking Authority, including those installed as part of the Downtown and Residential On-Street EV Charging Pilots and the additional 32 chargers noted in this report. The contribution of grant monies from the City of Toronto to Toronto Hydro to build additional EV charging stations are provided as an incentive to accelerate the installation of EV chargers in Toronto and monies do not need to be recovered as a result of the transference to the Toronto Parking Authority as part of any future agreement.

Staff propose a new agreement between the City of Toronto and Toronto Hydro-Electric System Limited (THESL), including but not limited to the terms below:

City of Toronto will be responsible for:

- Introducing parking by-law amendments required to implement EV charging stations in the right-of-way
- Installing pavement markings and signage
- Requesting periodic enforcement from Toronto Police Service of the City's parking by-laws in the vicinity of EV charger installations

- Authorizing THESL to operate EV charging services in the public right-of-way (including existing and new charge stations installed in 2020 and 2022) until assets are conveyed from THESL to TPA (subject to approvals) at which time this authority will transfer to the TPA
- Contributing grant money (\$240K) to Toronto Hydro to build 12 EV charging stations

Toronto Hydro will be responsible for:

- Continuing to operate and collect fees for pilot on-street charge stations that were installed in 2020
- Conducting engineering design, procuring, installing and commissioning new EV charging infrastructure units in 2022
- While stations remain owned by THESL, maintaining EV charging infrastructure units, as well as setting and collecting usage fees
- Facilitating the connection of the EV charging stations to the Toronto Hydro power grid
- Applying for and collecting incentive funds from TAF
- Selling new charge stations installed in 2022 and pilot charge stations installed in 2020 to the TPA (net of depreciations, grants from the City of Toronto and incentive funding from TAF) by the end of Q2 2023 (subject to TPA approvals).

The agreement with Toronto Hydro and the City of Toronto will formalize the terms and conditions that have been the basis of co-operation between the two organizations. The agreement formalizes this arrangement and hence does not impose any additional costs to the City of Toronto.

Toronto Parking Authority Program Responsibility

In Q2 2023, the responsibility of all existing and new on-street EV charging stations installations will be transferred to the TPA. Subject to approvals, TPA plans to purchase all active on-street charging stations from THESL⁴ and will be responsible for the operations and maintenance of the equipment. Additionally, TPA will lead all planning and delivery associated with public EV charging services at TPA off-street parking facilities as well as the future expansion of on-street charging services.

Environment and Energy Division Activities

Coordinating EV Initiatives

The on-street EV charging program is one of numerous City-led initiatives underway to support and encourage the transition to EVs. This work is a cross-corporate endeavour, involving several City Divisions, Agencies, and Corporations, working individually and in collaboration with each other.

⁴ The sale of assets from Toronto Hydro to the TPA must be in accordance with transfer pricing requirements set out in the Ontario Energy Board's Affiliate Relationship Code for Electricity Distributors and Transmitters

The Electric Vehicle Working Group (EVWG) provides a forum for cross-corporate coordination of initiatives related to EVs. The EVWG led the development of the City's Electric Vehicle Strategy and is now focused on its implementation. The EVWG meets quarterly and is chaired and coordinated by Environment and Energy Division (EED). Members include:

- City Planning
- Economic Development and Culture Division
- Environment and Energy Division
- Fleet Services
- Municipal Licensing & Standards
- The Atmospheric Fund
- Toronto Hydro
- Toronto Parking Authority
- Toronto Transit Commission
- Transportation Services

EED will be submitting a report to the July 7, 2022 meeting of the Infrastructure and Environment Committee to provide an update on implementation of the EV Strategy, with details on key City-led initiatives to support the transition to electric mobility.

Planning for Long-Term EV Deployment

To provide the detailed information needed to support future deployment of public EV charging across Toronto, the City is developing a Public EV Charging Infrastructure Plan. The Plan will determine specifically where public EV charging will be needed in Toronto between 2023 and 2040 and will identify locations where this infrastructure might be provided. This information will be used by the City in planning investments in public EV charging infrastructure, and could be used by other providers to plan their own investments. Recognizing that the scale of public EV charging infrastructure required is beyond the capacity of the City to provide on its own, the Plan will also identify and evaluate different models for investment in and ongoing operation of this infrastructure.

The Plan will be developed over 2022, with target completion in Q2 2023. The Plan will draw on work already underway, including the on-street charging pilots and installation of additional on-street EV charging stations discussed in this report in addition to TPA's deployment plans for EV charging services, and will involve extensive public and stakeholder engagement. The Plan will also integrate with relevant initiatives currently underway, including the City-wide Parking Strategy and the development of by-law updates and complementary programs to achieve the vehicle electrification targets that were approved by City Council in December 2021.

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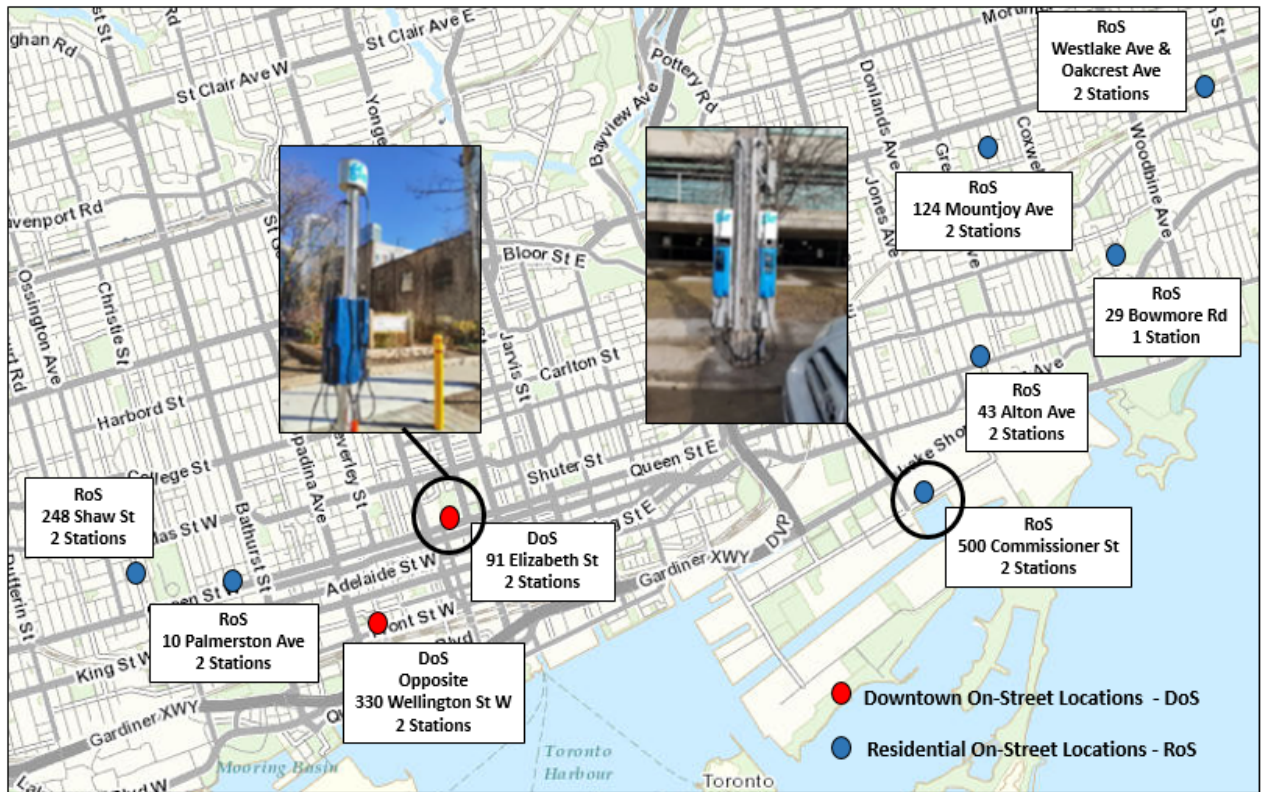
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Barbara Gray
General Manager, Transportation Services

ATTACHMENTS

Attachment 1: Downtown and Residential On-Street Pilot Locations
Attachment 2: Utilization Rates at Downtown and Residential Pilot Locations
Attachment 3: Parking Violations and Fines at EV Pilot Locations

Attachment 1 - Downtown and Residential On-Street Pilot Locations



Attachment 3 - Parking Violations and Fines at EV Pilot Locations

Locations	Number of Violations since Oct 2021	Parking Fines (\$)	Total Number of Violations since Oct 2020	Total Parking Fines
43 Alton Avenue	4	\$240	15	\$900
29 Bowmore Road	0	0	0	0
500 Commissioner Street	1	\$60	2	\$120
91 Elizabeth Street	14	\$840	119	\$7,140
124 Mountjoy Avenue	1	\$60	4	\$240
10 Palmerston Avenue	42	\$2,520	238	\$14,280
248 Shaw Street	8	\$480	31	\$1,860
355 Wellington Street West	13	\$780	17	\$1,020
Westlake Avenue and Oakcrest Avenue	0	0	0	0
Totals	83	\$4980	426	\$25,560

Note: The administrative penalty for parking violations at EV Charging spots is \$60 (e.g., unauthorized vehicle, not actively charging or exceeding permitted time limit).