



TO: GENERAL COMMITTEE

SUBJECT: TESLA CHARGING INFRASTRUCTURE INVESTMENT

WARD: ALL

PREPARED BY AND KEY CONTACT: B. THOMPSON, MANAGER OF ENERGY, EXT #4557

SUBMITTED BY: R. PEWS, DIRECTOR OF CORPORATE FACILITIES

GENERAL MANAGER APPROVAL: D. MCALPINE, GENERAL MANAGER OF COMMUNITY AND CORPORATE SERVICES

CHIEF ADMINISTRATIVE OFFICER APPROVAL: M. PROWSE, CHIEF ADMINISTRATIVE OFFICER

RECOMMENDED MOTION

1. That the Director of Corporate Facilities be authorized to sign agreements necessary to enable the installation of Level II Electric Vehicle charging stations on City property by Tesla Motors Canada ULC, where such stations are installed at no capital cost to the City of Barrie.

PURPOSE & BACKGROUND

2. Motion 16-G-306 Investigation – Installation of Level II EV Charging Stations, contained a section that staff investigate and report back to General Committee on the following matters:
 - a) Possible partnerships or advertising opportunities for Electric Vehicle charging stations to reduce costs associated with them;
3. On May 31, 2017 staff met with Tesla Motors Canada ULC (Tesla) representatives to discuss an opportunity to install electric vehicle charging stations at no cost to the City.
4. Tesla staff indicated Tesla is looking to expand their existing “Destination Charging” program which provided free Tesla charging stations (but not installation costs) to restaurants and hotels.
5. Tesla now wants to expand this to municipalities and to help subsidize installation costs. Tesla has begun deliveries of the Tesla Model 3.
6. Tesla representatives indicated they were looking for opportunities to install at destination sites such as the waterfront and facilities where people would likely spend an hour or two.
7. Tesla indicated they were quite interested in the Centennial Beach area and the Collier Street Parkade but were willing to discuss other locations.
8. The Tesla Level II charging stations are only compatible with Tesla vehicles, however, to make the proposal more attractive to municipalities, Tesla is proposing to install universal charging stations at each location under the same financial conditions as the Tesla charging stations.



ANALYSIS

9. There are no municipalities in Ontario that presently charge for the use of Level II charging stations and it is recommended that this be the City of Barrie's practice to encourage use.
10. The number of electric vehicles in service in Ontario is expected to increase substantially in the longer term but for 2018 staff anticipates costs for electricity, for charging stations, to add approximately \$12,000 to the Corporation's electrical bill.
11. As part of staff report FCT005-16 it was stated that as the numbers of electric vehicles increase there should be cost recovery on the electricity used by the charging vehicle.
12. The Level II charging stations being proposed by Tesla are able to be used by anyone with a Tesla vehicle for the Tesla brand chargers and by any electric vehicle for the generic vehicle chargers. Cost recovery should Council wish to implement at a future date, can be accomplished by;
 - Replacing the end unit (but maintaining the electrical infrastructure installed in this proposal) with a unit that is capable of accepting payment.
 - If the charge station is at a metered spot a premium may be charged for that location to recoup the cost of the electricity.
13. The value of the electrical infrastructure installed by Tesla, that would remain should the City choose to remove the units, will be much more valuable than the actual charging unit. While every installation is unique, costs for installation of 3rd party Level II commercial units can be \$2,500-\$5,000 per unit.
14. Tesla has indicated the units are the City's to do with as it sees fit and the Legal Branch has provided guidance that they see no issues with this.
15. Staff do not anticipate use of the charge stations would warrant charging for the electricity used for several years but will develop a plan to monitor use of the charge stations and report back to General Committee yearly.
16. Staff intend to negotiate for as many sites as Tesla is willing to supply and install at no capital cost to the City while being cognizant of the total number of parking spaces available, and will require at least one or two universal charging stations at each location depending on total number installed.
17. A preliminary list of sites to be explored for charging stations includes the waterfront (one Centennial Beach lot and one at Heritage), the Parkade, Downtown Library, City Hall and the three Recreation Centres.
18. A summary of the Tesla proposal is below:
 - For each selected site, Tesla will supply as many Tesla Charging Units as the City of Barrie is comfortable with having
 - Tesla will also be contributing Generic J1772 charging units as part of deployment
 - Tesla does not require dedicated parking spots; the City's parking ratios will not be affected
 - Tesla will subsidize installation costs for each of these units up to a certain amount and threshold as determined by Tesla



- Once these City of Barrie locations are online, Tesla will be permitted to place a message on the City's website (and in every Tesla) saying that "Available to the Public, Paid Parking", etc.
 - Tesla's public-facing map is here: <https://www.tesla.com/findus>
19. Staff are recommending that units be installed where Tesla is willing to pay 100% of all capital costs as there is no budget for this project.
20. As a donation with no cost to the City for the purchase of the Chargers or installation this does not fall under the City's purchasing by-law.

ENVIRONMENTAL MATTERS

21. The installation of electric vehicle charging stations will assist in the adoption of electric vehicles which is a key plank in the Provincial Government's climate change action plan.

ALTERNATIVES

22. The following alternatives are available for consideration by General Committee:

Alternative #1 General Committee could recommend that staff not pursue any agreement with Tesla

This alternative is not recommended as the offer is financially beneficial to the Corporation. The City will avoid all capital costs associated with the purchase and installation of the Electric Vehicle charge stations.

Alternative #2 General Committee could direct staff to negotiate the installation of more Level 2 EV chargers than Tesla is willing to fund, or at locations where the installation will exceed Tesla's capped installation cost, thereby increasing the number of installed charging stations in the City.

This alternative is not recommended as installation costs are not currently included in the City's approved capital budget.

Alternative # 3 General Committee could choose to have staff charge for the electricity used by the Electric Vehicle charge stations immediately.

This alternative is not recommended as the goal at this time is to increase adoption of electric vehicles and this may act as a deterrent to use.

FINANCIAL

23. There will be an operating impact on the utility bills of every facility and park where the EV charging stations are installed. It is impossible to know the number of vehicles which may use the chargers, average length of time connected and starting battery charge. Information available on line indicates an average charge cost for an electric vehicle may be approximately \$3.00, which equates to about 19 kWh (and 2 hrs. average connected time) at today's electricity rates. Assuming an average of 19kWh used per charge and an average of 11 charges per day (this is an average number and is based on more uses on weekends and summer), the total cost at current electricity rates is approximately \$12,000.00/year. It's important to recognize that every site and every charging session is different.'



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- 24. This will not impact staffing levels and would have very little cost in the way of regular maintenance.
 - 25. As the charging stations and related infrastructure would be donated to the City, they would be included in the City's asset listing and amortized over their expected useful lives of 10 years.
 - 26. If it is eventually decided to start charging for the service, a connection price in order to fully recover the cost of the units would range anywhere from \$3-6/ connection (in 2017 dollars). The price would depend on the estimated number of connections which staff would be better able to estimate after a trial period; the more connections, the lesser the price.

LINKAGE TO 2014-2018 STRATEGIC PLAN

- 27. The recommendation(s) included in this Staff Report are not directly related to the goals identified in the 2014-2018 Strategic Plan.