



Council report

Meeting date:	October 4, 2022
Title:	Level 2 Electric Vehicle Charging Stations
Prepared by:	Sarah Hanson, Environment and Capital Projects Officer Kodey Hewlett, Corporate and Community Initiatives Officer
Reviewed by:	Laura Johnston, CAO / Deputy Clerk

Recommendation

That council receive staff report “Level 2 Electric Vehicle Charging Stations”; and

That council directs staff to proceed with a “no-cost recovery” pilot project for six months to gather data for recommendations for the adoption of user fees; and

That bylaw 92-1028, the Regulation and Control of Traffic by-law be amended and approved at a future council meeting following completion of the pilot project .

Executive summary

The municipality has been pursuing the installation of eight electric vehicle (EV) charging stations in public locations. This report seeks council’s approval to launch a no-cost recovery model for six months, following the installation of EV chargers.

Background and discussion

Electric vehicle (EV) sales are set to accelerate rapidly over the next decade. The Canadian government has set a mandatory target for all new light-duty cars and passenger trucks to be zero-emission by 2035.¹ The provincial government has set a goal to build at least 400,000 electric and hybrid vehicles in Ontario by 2030.² Although the understanding of the EV market is speculative, it is predicted EVs will significantly increase in numbers and there will be an evolving demand for public charging stations.

¹ Natural Resources Canada: Zero Emission Vehicle Infrastructure Program – Source: <https://www.nrcan.gc.ca/energy-efficiency/transportation-alternative-fuels/zero-emission-vehicle-inafastructure-program/21876>

² Forbes Wheels: What are the different levels of electric vehicle charging? – Source: <https://www.forbes.com/wheels/advice/ev-charging-levels/>



Electric vehicles improve the urban air quality and with a clean energy grid, reduce global emissions compared to gas and diesel powered vehicles. The oil and transportation sectors are the biggest generators of Green House Gases in Canada with passenger vehicles accounting for at least half of the emissions in the transportation sector.³ Further to this, expanding the network of publicly accessible charging stations through rural areas, the municipality is assisting in reducing “range anxiety” – the fear of running out of charge while on the road either when completing multiple trips or when travelling out of town. Additionally, public charging stations provide opportunities to charge EVs for those without access to an at-home-charger, such as multi-family dwellings and rental units.

There are three types of charging stations available for use: Level 1, Level 2, and Level 3.

- **Level 1** stations would be a charger that would come with an electric vehicle when purchased and plug into a standard 120-volt, 15 amp wall outlet. Charging times at these stations vary with vehicle and charger, but will typically charge 200 km in approximately 20 hours.
- **Level 2** stations are the type the municipality is currently set to install. These are stations with 1 or 2 charging heads using 240 volts and either 40 or 50 amps. Typical charge times at these stations is 200 km in approximately 5 hours.
- **Level 3** or “Fast Chargers” operate at direct current (DC) voltage, sometimes as high as 800 volts, and can charge a vehicle 160 km in approximately 30 minutes.

All of the municipality’s charging stations are accessible to the public. Below is a table of the proposed charging stations, locations, and number of charging heads.

Location:	Number of stations:	Number of charging heads:
Riverside Park (Durham)	1	2
West Grey Administration Office (Durham)	1	2
Ayton Centennial Hall	1	2

³ Government of Canada: Greenhouse gas emissions – Source: <https://www.canada.ca/en/environment-climate-change/services/environmental-indicators/greenhouse-gas-emissions.html#transport>



(Ayton)		
West Grey Library (Neustadt)	1	2

For the present time, staff are not recommending any fees and charges. However, after a six-month EV charging station pilot, staff would submit a report to council with recommendations that would include:

- a) Data on location usage, average charge time and lessons learned for future locations;
- b) Recommendations for user-fees based on similar industry practices;
- c) Parking by-law amendments required to implement paying; and,
- d) Enforcement recommendations to maintain reasonable turnover.

Providing EV chargers at no cost is intended to encourage early EV uptake in the community as a measure to address the broad climate crisis. Implementing a six-month free user policy for electric vehicle charging stations will allow the Municipality to serve more drivers with existing infrastructure, support greater adoption of EVs by employees and community, while providing insight into operating costs for future consideration of user pay fees.

Legal and legislated requirements

There are no policy implications around the basic installation and management of EV chargers in municipal parking lots, or on municipal property.

Financial and resource implications

For the present time, staff are not recommending any special pricing policies for EV charger use by the public. Funding has been secured to install eight EV chargers by the end of 2022.

Staff anticipate operating costs from electricity, ongoing maintenance, and programming/data access for the charging stations to be minimal and will be absorbed in the annual operating budgets during the pilot program.

Following completion of the pilot program, once fees and charges are approved by council, revenues will be managed and collected by the charger provider and released to the municipality from the charger provider.



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Staffing implications

None

Consultation

- Laura Johnston, West Grey CAO / Deputy Clerk
- Kerri Mighton, West Grey Director of Finance / Treasurer
- Brent Glasier, West Grey Interim Director of Public Works
- Town of Caledon
- Town of Blue Mountains

Alignment to strategic vision plan

Pillar: Build a Better Future

Goal: Stewards of the Environment

Strategy: Look for sustainable practices throughout municipal venues and programming / support and encourage environmental sustainability projects.

Attachments

n/a

Next steps

Following council approval, staff will proceed with a no-cost recovery pilot for six months to gather data for recommendations for the adoption of user fees at a later date. Additionally, staff will launch a targeted communications plan to raise awareness of the additional charging stations.

Respectfully submitted:

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