

Clarington Corporate EV Action Plan

June 16, 2022

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Energy and Climate Change
Response

Municipality of Clarington

Clarington

Objectives

- Share an overview of Clarington's 5 year EV action plan
- Outline of our EV policy
- Share how our municipality distributes the responsibilities associated with our new EV fleet, infrastructure buildout and maintenance

Clarington Electric Vehicle Action Plan (EVAP)





Objectives of the EVAP

1. Guide the transition of the Municipal fleet to EVs
2. Encourage the public adoption of EVs
3. Provide needed EV charging infrastructure

Why Clarington Is Going Electric?

Benefits:

- Reduced GHG emissions
- Improved air quality
- Reduced noise pollution
- Reduced maintenance costs
- Reduced fuel costs
- Increased predictability of fuel supply

Why Clarington Is Going Electric?

- Reduce GHG emissions 35 per cent by 2030 from 2018 levels and achieve net-zero emissions by 2050
- Alignment with the Region of Durham and Area Municipalities
- Increasing support from the Provincial and Federal Governments
- Many new EVs coming to market

Plan Methods

- Vehicle Inventory
- Purchase Projections
- Site Selection
- Staff Consultation



EV station Site Selection

Fleet

- Near municipal offices or depots
- Near where staff are working
- There are enough parking spaces for staff personal vehicles and fleet vehicles
- There is enough space for an adequate grouping of EV chargers (4-8 stations)
- There is a transformer or electrical panel with sufficient capacity to accommodate the EV chargers

Public

- Significant traffic at the site
- Potential to attract users
- The area is currently underserved by charging stations
- There is enough space for an adequate grouping of EV chargers (4-8 stations)
- There is a transformer or electrical panel with sufficient capacity to accommodate the EV chargers

Yearly Overview

Year	New EVs/Hybrids purchased	New public chargers installed	New fleet chargers installed
2021	7	5	8
2022	3	6	8
2023	9	8	6
2024	1	8	0
2025	2	2	2
2026	3	10	0
Total	25	39	24

EVs purchased, Public Chargers and New Chargers Installed by Year

**SWITCHING
TO AN ELECTRIC
VEHICLE IS...**



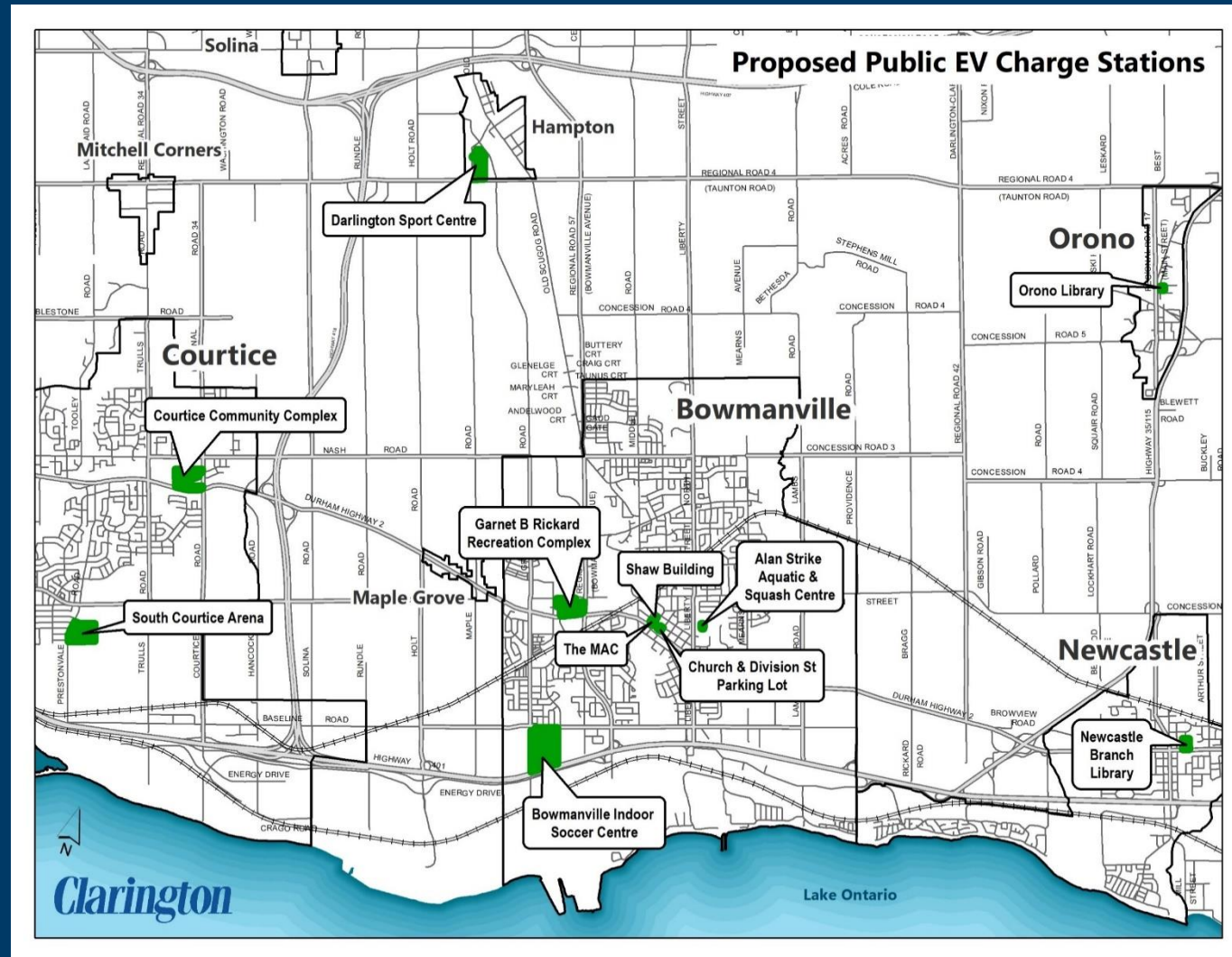
**BETTER FOR
THE PLANET**

Switching to an EV reduces CO₂ tailpipe emissions by the same amount as **FLYING ACROSS CANADA 25 times.**

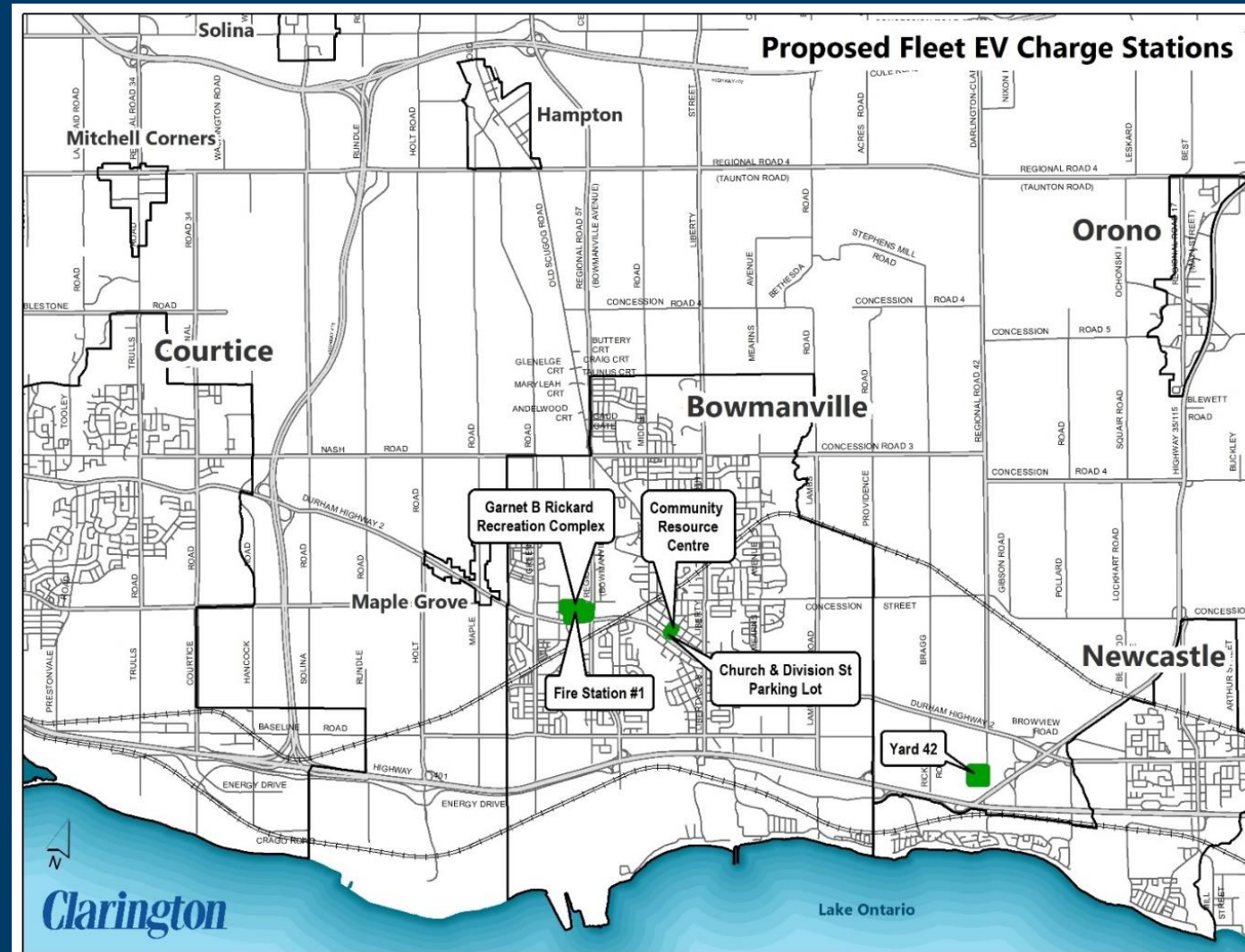


Canada

Community Charge Station Locations



Fleet Charge Station Locations



EV purchases by year



Year	New EVs/Hybrids purchased	Estimates upfront EV costs by year.	Potential Savings to the Municipality over the lifespan (7 years or 91,000 km)
2021	7	\$315,000	\$21,000
2022	3	\$155,000	\$9,000
2023	9	\$543,000	\$27,000
2024	1	\$73,000	\$3,000
2025	2	\$167,000	\$6,000
2026	3	\$165,000	\$9,000
Total	25	1,418,000	\$75,000

Fleet EV Purchases by Year and Saving on Fuel and Maintenance over the lifespan of EVs

Fleet EV Charge Station Installations By Year

Year	Charge Points Installed	Total Estimated Cost	Potential ZEVIP Contributions	Estimated Cost to Clarington
2021	9	\$95,525.00	\$40,724.44	\$54,800.56
2022	8	\$93,550.00	\$40,000.00	\$53,550.00
2023	6	\$66,162.50	\$30,000.00	\$36,162.50
2024	0	\$0.00	\$0.00	\$0.00
2025	2	\$24,137.50	\$10,000.00	\$14,137.50
2026	0	\$0.00	\$0.00	\$0.00
Total	27	\$279,375.00	\$120,724.44	\$158,650.56

Fleet EV Charge Station Installations by Year

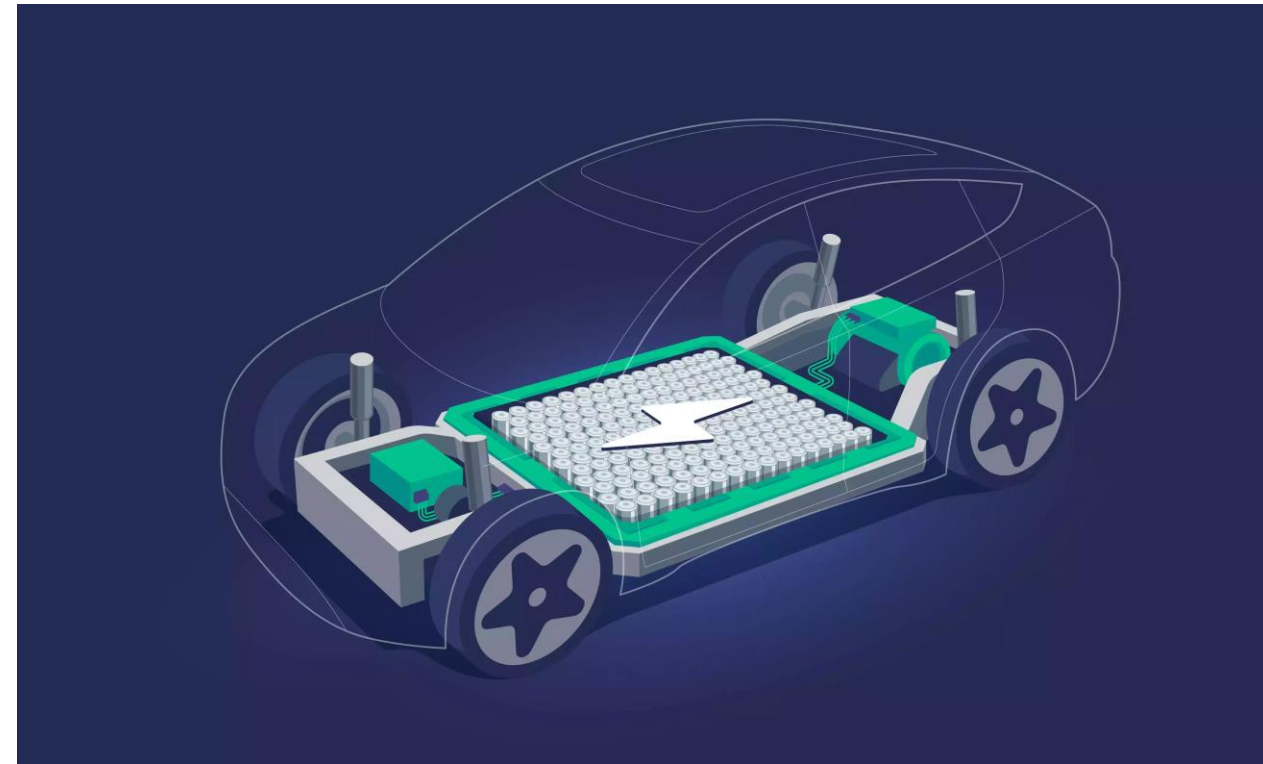


Other Considerations

Vehicle Exemptions



Expanding EV Technology



Policy

- Purpose
- Scope
- Definitions

Policy - Usage and Fees

- EV Parking Spaces are solely for EVs actively using the charging equipment
- Users are responsible
- Use by the public for a fee
- User fees are assessed by the total time a vehicle is connected to an EV Charging Station
- Vehicles must be plugged into the station to be parked in an EV parking spot
- Fees increase to encourage users to move
- User-fee supported.
- Fees reviewed and updated bi-annually
- Fleet vehicles do not pay a fee

Fees Schedule

Service	Time and Description	Fee
Daytime electric vehicle station use under 3 hours	7:30 a.m. to 5:00 p.m. Monday to Sunday	\$1.50 per hour
Daytime electric vehicle station use after 3 hours + 30 - minute grace period	7:30 a.m. to 5:00 p.m. Monday to Sunday	\$4 per hour
Nighttime electric vehicle station use	5 p.m. to 7:30 a.m. Monday to Sunday	\$1.50 per hour
Reservation no-show	Always in effect	\$3 flat fee

Policy - Maintenance

- Day to Day Maintenance – Community Services and Public Works
- Operational issues – Community Services, Public Works and Bylaw enforcement
- Snow removal – included in snow removal contracts

Policy – Municipal Fleet

- Fleet vehicles have designated charging locations
- Some parking spaces are designated solely for fleet EVs. Some locations shared between fleet and the public
- In EV Charging Station locations designated for fleet and workplace/public charging, fleet EVs have exclusive access to charging after 3 p.m. on weekdays, and all day on weekends, the Civic holiday and Statutory holidays.
- All fleet locations must have signage
- Each fleet vehicle has a designated RFID network payment cards.

Policy – Restrictions and Enforcement

- Only EVs can Park in EV parking spots.
- Vehicles must be plugged in while parked in EV parking spot
- Only Fleet EVs may park at EV Charging Stations that have been designated exclusively for fleet use.
- Electrical outlets at Municipal facilities may not be used for EV charging except those designated for use by EVs that is clearly indicated by signage.
- Enforcement related to EV station use and parking is covered under Clarington's Traffic By-law (signage)

Policy – Data Collection and Sharing

- Data Collection must comply with Municipality's privacy policies and stored within Canada
- EV Charger Service Provider is responsible for management of fees collected
- EV Charger Service Provider is responsible for ensuring compliance with Payment Card Industry Standards
- Municipal staff will use data collected from the stations to monitor station usage trends and assess EV policies and EV Charging Station fee structures
- Any data collected will be retained in accordance with the Municipal Freedom of Information and Protection of Privacy Act, R.S.O. 1990, c. M.56.
- Any data collected, which may be shared for reporting purposes, will be anonymized before shared.
- Data sharing will be assessed on a case-by-case basis.

Policy – Design Criteria

- All public EV parking spaces must follow a consistent guideline criterion for accessibility as outlined in the Accessibility for Ontarians with Disabilities Act (AODA), 2005, where reasonably practicable.
- Charger location recommendations
- Parking spot dimensions
- Signage and pavement markings
- Charging equipment specs

Organizational Responsibilities

Role	Department	Description
EV station Administration and troubleshooting	<ul style="list-style-type: none"> Planning and Development Services, Special Projects Community Services, Facilities 	<ul style="list-style-type: none"> Receive and respond to emails/phone calls about any operational issues reported by Users. Coordinate the repair, replacement, and continued operation of EV stations including snow removal
EV Station Network Lead	<ul style="list-style-type: none"> Planning and Development Services, Special Projects Public Works, Fleet Community Services, Facilities 	<ul style="list-style-type: none"> EV network planning and expansion, policy updates, reporting, and funding applications * Guided by the Clarington EV Action Plan
Site design and assessment	<ul style="list-style-type: none"> Public Works, Technical Services Public Works, Operations Community Services, Facilities 	<ul style="list-style-type: none"> New Site selection, coordinate the design and installation of EV charge stations on municipal property * Guided by the Clarington EV Action Plan
Fee structure	<ul style="list-style-type: none"> Finance, Account Services Finance, Asset Management 	<ul style="list-style-type: none"> Assess and update EV charge station fee structure based on data collected from stations.
Data Management	<ul style="list-style-type: none"> Planning and Development Services, Special Projects Finance, Asset Management 	<ul style="list-style-type: none"> Manage and interpret data collected from EV charge stations Facility internal and external data sharing
Purchasing of EVs and EV stations	<ul style="list-style-type: none"> Finance, Purchasing Finance, Asset Management Public Works, Fleet 	<ul style="list-style-type: none"> Coordinate the procurement of EV chargers for installation on municipal property.
Accounts Management	<ul style="list-style-type: none"> Finance, Account services 	<ul style="list-style-type: none"> Manage expenditures and accounts related to the fueling corporate EVs. Facilitate the acquisition and distribution of fleet EV RFID cards, connecting fuel cards to the appropriate departmental fuel account. Manage corporate EV reserve fund, which generates revenue from fees charged by public stations to repair and replace EV stations.
Enforcement of bylaws related to EV stations	<ul style="list-style-type: none"> Legislative Services, Municipal Law Enforcement 	<ul style="list-style-type: none"> Enforce EV-related bylaws as outlined in Clarington's EV policy, parking bylaws and fees bylaws
EV Communications	<ul style="list-style-type: none"> Office of the CAO, Communications Planning and Development Services, Special Projects 	<ul style="list-style-type: none"> Coordinate with the Region to promote information related to EV stations. Coordinate with service provider to ensure EV stations are being included on online EV station maps, Develop and manage corporate EV station web page
Budgeting for New Stations	<ul style="list-style-type: none"> Each Department is responsible for budgeting for the EVs and EV charge stations that will be used to charge their fleet vehicles. Community Services is responsible for budgeting for EV stations that will be located at municipal facilities, as outlined in the 5-Year EV Action Plan. Operations is responsible for budgeting for EV stations that are located at operations facilities, operations depots, and municipal parking lots, as outlined in the 5-year EV Action Plan. 	
EV Station Monitoring and bylaw enforcement	<ul style="list-style-type: none"> All staff who use EV charge stations for fleet vehicles are responsible for monitoring stations for functionality, vandalism, and damage. Please report non-functional, vandalized, or damaged to the station administrators listed above Facilities staff are responsible for monitoring EV charge stations at municipal facilities for functionality, vandalism, and damage. Please report non-functional, vandalized, or damaged to the station administrators listed above Operations staff are responsible for monitoring EV charge stations at operations depots for functionality, vandalism, and damage. Please report non-functional, vandalized, or damaged to the station administrators listed above Bylaw Enforcement staff are responsible for monitoring EV charge stations at in municipal parking lots for functionality, vandalism, damage and bylaw compliance. Please report non-functional, vandalized, or damaged to the station administrators listed above. 	

Thank you

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