Toronto and Region Conservation Authority

CORPORATE POLICY & PROCEDURE

POLICY TITLE: **ELECTRIC VEHICLE CHARGING**
POLICY NO.: **CS-5.07-P**

Chapter:	Corporate Services		
Section:	5. Property and Risk Management		
Effective Date:	December 1, 2019	**Last Review Date:**	November 12, 2019
Approval Authority:		Chief Executive Officer	
Issued to:		All TRCA Employees	
Policy Owner:		Property and Risk Management	

1. PURPOSE

1.01. The purpose of this Statement of Policy and Procedure is to establish and promote the standards and best practices for the use of and or the installation of electric vehicle charging infrastructure equipment at Toronto and Region Conservation Authority (TRCA) facilities, ensuring optimum usage to assist in a reduction of fuel consumption and associated reductions in environmental impact. Workplace EV charging supports Corporate Sustainability goals and or targets, in addition EV charging at TRCA facilities indirectly supports EV adoption within the communities served by TRCA.

1.02. This Statement of Policy and Procedure is intended to improve TRCA alignment with Canada Revenue Agency guidelines.

2. SCOPE

2.01. This policy applies to all employees using EV charging stations while working for TRCA, whether the EVs are personally owned or TRCA fleet vehicles, in addition to visitors and or guests of TRCA administrative facilities and Conservation Parks.

2.02. While TRCA supports the adoption of EVs on a wide scale TRCA is not in the business of providing fuel for the operation of vehicles and equipment outside of TRCA owned/rented or operated vehicles and equipment. However, third parties may use TRCA charging stations in compliance with this policy.

3. POLICY

3.01. With Electric Vehicles (EV) becoming more widely adopted and approaching the prominent choice of vehicle selection of alternative fueled vehicles, Toronto and Region Conservation Authority (TRCA) recognizes the importance of EVs in

contributing to the improvement of local air quality, a reduction of greenhouse gasses which cause climate change and reductions in operating and maintenance costs.

3.02. Where feasible and funding is available TRCA will install EV charging stations to support its own Fleet and will allow both staff and third parties to charge their personal vehicles as per the conditions of this policy.

4. RESPONSIBILITY

4.01. **Information Technology and Records Management** business unit is responsible for:

(a) The participation in the contract review process with the service provider if the charging stations services will utilize TRCA-operated technology infrastructure (e.g. network or Internet services); the administration of the charging provider's cloud-based service management portal as required.

4.02. **Project Management Office** business unit is responsible for:

(a) Assisting Facility Supervisors regarding feasibility assessments and recommendations in addition to the facilitation, coordination and management of implementation of contracts for the supply and installation of EV charging infrastructure.

4.03. **Corporate Sustainability and Community Transformation** business unit is responsible for:

(a) Collaborating with Program Manager, Fleet regarding sustainability targets, data analysis and progress reporting;
(b) Developing and submitting of applications for various grants and incentives related to the implementation of EV charging infrastructure within TRCA facilities.

4.04. **Program Manager, Fleet** is responsible for:

(a) Oversight all of the EV charging infrastructure within TRCA facilities;
(b) The inventory of all EV charging stations within TRCA facilities;
(c) The inventory and management of user groupings within cloud-based management system of charging stations;
(d) Liaising with Facility Supervisors regarding the feasibility including operating and maintenance associated with EV charging infrastructure;
(e) Coordinating the contract review process and service management portal administration with Information Technology and Records Management as required; and
(f) Collection, interpretation and management of data records collected from networked charging stations, and collaboration with Corporate Sustainability and Community Transformation regarding sustainability progress.

4.05. **Employees** are responsible for ensuring that electric vehicle charging systems are used/optimized in accordance with this policy and procedure.

4.06. On advice of the Chief Executive Officer, TRCA may accept, revise or rescind this policy.

5. PROCEDURE

Electric Vehicle Charging Infrastructure

5.01. EV charging at any TRCA facility is permissible at dedicated EV Charging Stations only. At no time is it permissible to charge an EV by plugging a vehicle, with any 'adaptor' charging cords, to standard 110v or 240v outlet.

5.02. The use of adapters to allow the J1772 plug to connect to other EV charging ports is permissible. TRCA will not stock adapters for alternative charging port connections.

5.03. Additional charging infrastructure differing from that outlined in section 5 may be required from time to time, to facilitate the charging of electrically powered equipment which may have different charging connections

5.04. Electric vehicle charging stations installed at TRCA facilities should be at minimum a Level 2 station supported by 'cloud' based operating system allowing for management of the station operating system.

5.05. Level 3 (DC Quick Charge) stations can be installed at TRCA facilities where practical and operating on a similar 'cloud' based service management portal as that of currently installed Level 2 stations.

5.06. Facility supervisors must consult with the Program Manager, Fleet along with the Project Management Office prior to installation, to assess feasibility and determine recommendations for charging stations.

5.07. Staff should consult with their facility supervisor regarding the desire for EV charging station installation at their respective facility.

5.08. Charging stations should be installed in locations at TRCA facilities which are accessible to all users including TRCA fleet vehicles, personal vehicles used on extended TRCA business and that of visitors and guests to TRCA facilities.

5.09. Preference should be made for 'dual wand' EV chargers over 'single wand' charging stations.

5.10. Any EV charger installed at TRCA facilities shall have the capacity of network management where practical.

General

5.11. Charging cords are not to be removed from another vehicle which it is plugged into without the owner's explicit consent.

5.12. EV owners are responsible to move their vehicle from the charging stall after their vehicle has sufficiently charged and relocate to an available parking stall at the facility to allow usage by other EV drivers and ensure optimum utilization.

5.13. At no time is it permissible for an EV to park in a charging stall when the vehicle is not actively charging, additionally it is not permissible for an ICE vehicle to park in a charging stall.

5.14. EV charging stalls are to be solely used for charging vehicles and not that of a 'preferred parking' location.

5.15. Charging stalls are to be clearly identified through signage and markings (asphalt painting) where applicable.

5.16. Employees with personal EVs will be allowed to charge their vehicles during regular business hours.

5.17. TRCA staff must consult with Program Manager, Fleet regarding procedures for charging of personal vehicles.

Charging Costs

5.18. In order to ensure the charging stations are in operating condition for all users', fees will apply on a time per use basis (per hour).

5.19. These fees are intended to cover the related capital and operating costs including capital depreciation, utility, software and administrative costs of the charging stations.

5.20. These fees may be subject to a cost of living adjustment to account for increasing costs associated with new equipment, and adjustment of operating costs as required.

5.21. TRCA charging station authorization cards or keys may not be used to initialize charging of personal or privately-owned vehicles. Owners are responsible for any costs associated with use of TRCA charging stations.

5.22. A plugged in EV will continue to be charged posted per hour cost until it is disconnected from the charging station by its owner.

5.23. Charging fees will be posted on the charging stations themselves and will be adjusted by Program Manager Fleet on a quarterly or as needed basis.

5.24. TRCA Fleet vehicles may not be subject to electricity costs.

EV User	Access Priority	Time Limits	Cost
TRCA Vehicles	1st	None	Per hour cost
Visitors (Business)	2nd	Regular business hours	Per hour cost
Visitors (Guest)	3rd	Site operational hours	Per hour cost
TRCA Staff	4th	Regular business hours	Per hour cost

Enforcement

5.25. Vehicles which do not comply with this policy and procedure or charging stall signage may be removed/relocated at the owner's expense.

5.26. Facility Managers and the Program Manager, Fleet will be responsible to enforce this policy, and will make best efforts to notify EV owners prior to relocating a vehicle. However, if it is not possible to notify the EV owner, the EV may need to be moved without further warning at the owner's expense.

6. DEFINITIONS

6.01. **"Electric Vehicle"** covers all types of vehicles including but not limited to battery electric vehicles and plug-in hybrid vehicles

6.02. **"Battery Electric Vehicle"** means a vehicle which is solely propelled by electric motor(s) using energy stored in rechargeable storage cells (batteries)

6.03. **"Plug-in Hybrid Vehicle"** means a hybrid vehicle whose battery can be recharged from an external source as well as by that of the onboard engine/generator

6.04. **"Hybrid Vehicle"** means a vehicle with two distinct types of power supply such as a conventional internal combustion engine and the use of electric vehicle technologies i.e. regenerative braking systems

6.05. **"Fleet"** means any Motor Vehicle (owned, rented, leased or personal), Off-Road Vehicles, Motorized Snow Vehicles, or equipment including but not limited to landscaping, agricultural, construction, industrial and vessels used in the conduction of TRCA business.

6.06. **"Fuel"** means all forms of energy used to propel vehicles and equipment including but not limited to that of petroleum products, propane, natural gas, electricity and biogenic based or blended fuels i.e. biodiesel, ethanol etc.

6.07. **"Charging Stall"** means a piece of land serviced by a charging station, signed and marked for electric vehicle charging and is solely used for charging electric vehicles and not short or long-term parking.

6.08. **"Level 1 Charging"** means a method of charging an EV wherein the vehicle is plugged in to a standard wall socked receptacle. Typically recharges a vehicle at a rate of approximately 8 kms of range per hour of charging.

6.09. **"Level 2 Charging"** means a method of charging an EV wherein the vehicle is plugged into a dedicated EV charging station. Level 2 chargers can be installed at the EV owner's residence. It is the most common charging platform for EVs using the J1772 charging cord. Level 2 charging typically provides approximately 30 kms of range per 1 hour of charge.

6.10. **"J1772"** is a North American standard for electrical connectors for electric vehicles. The connector became standard equipment in North America due to the quantity of charging stations equipped with the J1772 plugs.

6.11. **"Level 3 Charging (DC Quick Charge)"** is the fastest method of charging an EV commonly referred to as "DC Quick Charge". These chargers can recharge a vehicle at a rate of approximately 250 kms of range per hour of charge. The CHAdeMO is commonly found on Level 3 Charging stations.

6.12. **"CHAdeMO"** is a global industry standard quick charge plug used by most German and North American auto manufacturers. Dedicated charging stations equipped with CHAdeMO charging ports can convert the AC current from the electrical grid to DC current (required by EVs) at higher levels.

6.13. **"Combined Charging System (CCS)"** allows AC charging using Type 1 and Type 2 connector depending on the geographical region and incorporates two additional direct Current (DC) contacts for DC fast charging at rates of up to 80 – 350 kilowatts

6.14. **"Parking Stall"** means a designated piece of land where staff, guests and visitors to TRCA facilities can park their vehicle for the duration of their stay.

6.15. **"Networked Charging Stations"** means an EV charging stations which have a cloud-based operating system/software to manage station operations remotely. Networked stations require users to have an active account with the service provider to activate stations to charge vehicles.

6.16. **"Internal Combustion Engine (ICE)"** means a vehicle that is powered by an Internal Combustion Engine (ICE) fueled by petroleum or biogenically based fuels i.e. gasoline, diesel, conventional hybrid vehicles etc.

6.17. **"Visitors"** means non TRCA staff including external stakeholders or members of the public visiting TRCA administrative facilities for meetings and or attending Conservation Parks and Outdoor Education Centers.

7. ADMINISTRATION

Administered by the Clerk's Office

Review Schedule:	5 Years	**Next Review Date:**	November 12, 2024
Supersedes:	*N/A*		
Related Legislation, Regulations and Guidelines:	*Plug 'n Drive – Guide to EV Charging* *Clean Air Partnership – Creating an Effective Workplace Electric Vehicle Charging Policy*		
Related Policies and Policy Tools:	*CS-4.02-P Technology Access Control and User Access Management* *CS-4.04-P IT Passwords* *CS-5.04-P Fleet Safety and Driver Certification* *CS-5.05-P Employee Use of Vehicles for TRCA Business*		

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Revision History		
Version Number	**Version Date**	**Description**
1	December 1, 2019	Policy went into effect.