



# City of Port Moody

## Report/Recommendation to Council

Date: September 17, 2019  
Submitted by: Planning and Development Department – Policy Planning  
Subject: Electric Vehicle Charging Fees

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### Purpose

To present for Council consideration a pricing strategy to impose fees for electric vehicle charging at City-owned electric vehicle charging stations.

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### Recommended Resolution(s)

**THAT the electric vehicle charging fees be incorporated in the 2020 Fees Bylaw as recommended in the report dated September 17, 2019 from the Planning and Development – Policy Planning Division regarding electric vehicle charging fees.**

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### Background

In the Provincial Clean BC Plan<sup>1</sup>, the Province mandated that 100% of new cars will be zero-emissions vehicles (ZEVs) by 2040; 30% ZEV by 2030; and 10% ZEV by 2025. With the expected increased sales of electric vehicles in BC, investment and management of infrastructure will be required to support the associated increased use of electric vehicles (EVs) in Port Moody and throughout the region.

At the May 14, 2019 Regular Council meeting, the following resolution was passed:

#### RC19/219

THAT staff be directed to apply for the Natural Resources Canada Electric Vehicle and Alternative Fuel Infrastructure Deployment Initiative funding opportunity as recommended in the report dated May 2, 2019 from the Planning and Development Department - Policy Planning Division and the Community Services Department - Facilities Division regarding NRCan Electric Vehicle and Alternative Fuel Infrastructure Deployment Initiative - DC Fast Charger Funding Opportunity;

AND THAT a capital project be established for the installation of a DC Fast Charger with a budget of \$120,000, with up to \$55,000 funded from the Gas Tax Reserve;

AND THAT staff report back with a proposed public pricing strategy for DC Fast Charging and Level 2 electric vehicle charging stations.

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<sup>1</sup> [https://cleanbc.gov.bc.ca/app/uploads/sites/436/2018/12/CleanBC\\_Full\\_Report.pdf](https://cleanbc.gov.bc.ca/app/uploads/sites/436/2018/12/CleanBC_Full_Report.pdf)

## Discussion

The City does not currently require payment for the use of City-operated electric vehicle charging stations that are accessible to the public. Offering free charging has been an effective approach to encouraging early EV adoption through providing low barrier access to necessary infrastructure; however, over the past year, based on data collected from the stations and comments received from users, the stations are not being used most efficiently due to the lack of turnover. Imposing a fee for EV charging is a mechanism used by many other communities such as City of North Vancouver, City of Vancouver, and City of Coquitlam to ensure more efficient use of the stations in order to maximize the number of EV drivers accessing the stations.

The two types of stations owned by the City are outlined below:

- Level 2 (208V or 240V): provides approximately 30 km of range per hour of charging and takes between 4 and 8 hours to recharge a battery; and
- DC Fast Charger (DCFC) (200V - 400V): provides approximately 250 km of range per hour of charging and takes between 10 minutes and one hour to recharge a battery.

This report will discuss the following topics:

1. electric vehicle charging usage in Port Moody;
2. Natural Resources Canada EVAFII Grant;
3. electric vehicle fee regulation;
4. proposed fee structure; and
5. implementation.

### 1.0 Electric Vehicle Charging Usage in Port Moody

In the summer of 2018, the City installed Level 2 public charging stations, bringing the total number of publicly available charging ports to 11 in Port Moody. Since becoming active in late August 2018, there have been almost 15,000 charging sessions with more than 2,000 unique visitors. More details on EV charging in Port Moody can be found in **Attachment 1**.

Since the introduction of City-owned EV chargers, staff have received multiple comments from users reporting misuse of the stations. Reports have stated that some users leave EVs unattended for extended periods of time beyond charging needs, preventing other EV drivers from using the stations. Station usage data shows that between the period of August 2019 to September 2019, approximately 20% of sessions had a vehicle that was not charging for 25% or more of the total time the vehicle was parked in the stall. In order to ensure the charging stations are used more efficiently, staff recommend implementing an EV charging fee.

### 2.0 Natural Resources Canada EVAFII Grant

In May of 2019, Port Moody applied for funding through the Electric Vehicle and Alternative Fuel Infrastructure Deployment Initiative (EVAFII) to install one DCFC for public use at the City's Recreation Complex. Installation of a DCFC in Port Moody provides an opportunity for existing EV owners to quickly charge their vehicles on the go while making it possible for more residents to purchase EVs who may not have access to at home or workplace charging. On July 11, 2019 staff were notified by Natural Resources Canada that the City successfully secured \$75,000 of federal and provincial funding for this project. The City's approved contribution of up to \$55,000 to the project is funded through the Gas Tax Fund. Since notification, staff and

Natural Resources Canada have signed a Contribution Agreement and Planning and Facilities staff are working to install the DCFC. Staff estimate the DCFC will be available to the public in early 2020.

### 3.0 Electric Vehicle Fee Regulation

The City may sell electricity for a user fee at EV charging stations without regulation as a public utility under the British Columbia *Utilities Commission Act*. Municipalities are excluded from the definition of a public utility and therefore are able to own and operate EV charging stations with fees for usage. A time-based fee is recommended to encourage vehicles who are fully charged to relocate, as opposed to an energy-based charge that would not impose a fee beyond energy needs.

### 4.0 Proposed Fee Structure

Staff are proposing a fee structure at City-owned EV charging stations that would enable the City to collect fees for use of the public EV charging stations in order to increase turnover at the stations and recover operating costs. The following fee structure is proposed:

- Level 2 Charging Stations: \$2.00/hour for the first 4 hours and \$5.00/hour for any time thereafter; and
- DCFC Stations: \$0.26/minute.

The initial lower fee for Level 2 chargers is envisioned to help encourage the use of the charging stations, while the increase in price after the first four hours will help to motivate the turnover of users and aligns with the four-hour parking limit in City parking lots where the charging stations are located. The per-minute fee proposed for DCFC stations reflects the time-value of the DCFC. Since DCFC sessions typically last between 10 minutes to an hour to provide a usable charge, hourly rates would not be an appropriate mechanism to ensure efficient use of the station.

#### *4.1 Fee Management*

The proposed fees contribute to consistency throughout the region, as they are comparable to EV charging fees in communities such as City of Vancouver, City of Richmond, and City of Coquitlam. The proposed fee structure will support the financial sustainability of the EV charging stations and will allow for recovery of costs associated with the installation and operation of the stations. Revenues collected will be used to offset a portion of the energy and installation costs of the stations.

Accurate estimates of total utility costs incurred by the City for operation of the stations are difficult to determine. Total energy derived costs incurred by the City to-date from EV charging stations are estimated to be approximately \$6,528.59. Energy costs are estimated based on the kilowatt-hour consumption at an energy charge of \$.0606/kWh. This is the energy rate that the City pays to BC Hydro under the Large General Service rate class. Since electrical service for all stations is fed off panels from the nearest main City facility buildings and is not sub-metered, other utility charges specific to the EV charging stations cannot be inferred at this time and are consolidated on the building energy bill.

Estimations of station revenue from EV charging fees are difficult to determine in advance of real data due to the variation in station usage, charging times, and parking. EV charging fees are expected to change behaviour of station users and therefore extrapolations on current data would not be reflective of future usage. Staff will monitor the revenue in comparison to installation and operating costs. In other communities with EV charging fees, revenues have not exceeded installation and operating costs and contribute to ongoing partial recovery of costs incurred by the municipality.

#### *4.2 Parking Enforcement*

Parking stalls on City-owned property are subject to the City of Port Moody Street, Traffic and Public Places Bylaw No. 1528, specifically Section 6.2.7. As such, any vehicle parked in a stall on City property is subject to the posted time limit, whether or not the vehicle is plugged in and/or charging.

#### *4.3 Rationale*

The proposed fee structure is the recommended approach to meet the following objectives:

- **Increasing EV charging station availability.** Charging a time-based fee will encourage users to stay only as long as is required to receive a sufficient charge, making it available to other users.
- **Familiarity for users.** The proposed rates match those used in other surrounding municipalities. A time-based rate is easily understood and similar to those typically required at parking meters.
- **Encouraging home charging.** Requiring a fee for usage of the City's charging stations will encourage residents to charge at home when possible, further increasing the availability of the charging stations to users who lack access to home charging.
- **Differentiating between charging levels.** Level 2 charging stations have significantly lower capital and operational costs, and provide a lower charging level requiring a longer charging time. DCFC stations cost more to install and operate and provide a quicker charge. Charging user fees that reflect the different charging levels encourages drivers to use the type of station that is best suited to their needs, and increases the efficiency of the station use.
- **Encouraging the transition to EVs.** While these rates are more expensive than home charging, they are significantly lower than the cost of fueling a gasoline-powered vehicle.
- **Recovering costs.** It is anticipated that the proposed user fees will help recoup some of the operating and installation costs over time. Recovering some costs associated with the current stations may enable further investment in public charging infrastructure.

#### 5.0 Implementation

Through the ChargePoint network, the City can easily implement fees in City-owned stations. This is achieved by setting up a pricing policy on the administrator's site managed by the City's Sustainability and Energy Coordinator. Prior to usage of ChargePoint stations, users are prompted to set up a ChargePoint account including credit card information to use any ChargePoint stations. When the pricing policy comes into effect, users will automatically be charged for any time spent at the City's stations when plugged in.

ChargePoint will be responsible for collecting and managing payment, reducing the administrative requirements on City staff since the City does not currently impose pay parking and does not have dedicated staff to administer this. ChargePoint will retain a 10% administrative fee for this service and issue a cheque or electronic funds transfer (EFT) with the remaining revenue to the City on a monthly or quarterly basis, depending on the amount. The fees would apply to the City's current and any future installed Level 2 or DCFC stations with exemptions for City fleet EVs. Group exemptions can be implemented through the administrator's pricing policy.

Monitoring of station usage data and fees would continue on a regular basis and adjustments may be made periodically to the user fees to maximize utilization of the stations.

Should Council endorse the proposed EV charging fee structure, the introduction of the fee structure at the City's EV charging stations would be implemented in coordination with the installation of the new DCFC station at the Recreation Centre in winter 2020.

### Other Option(s)

1. THAT payments received from electric vehicle charging fees be directed to the Carbon Offset Community Reserve.

### Financial Implications

Revenue received from EV charging fees will be directed to offset costs associated with the installation and operation of the EV charging stations, which are extracted from the Facilities department budget.

### Communications and Civic Engagement Initiatives

If Council approves fees for charging electric vehicles at City-owned charging stations, a communication plan will be developed to inform EV charging station users of the new fee requirements.

### Council Strategic Plan Objectives

Implementation of EV charging fees is consistent with the strategic outcomes in the area of Environmental Leadership identified in the 2019-2022 Council Strategic Plan.

### Attachment(s)

1. EV Charging in Port Moody.

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## Report Approval Details

Document Title:	Electric Vehicle Charging Fee Strategy.docx
Attachments:	- Attachment 1 - EV Charging in Port Moody.docx
Final Approval Date:	Oct 1, 2019

This report and all of its attachments were approved and signed as outlined below:

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