



CORPORATE REPORT

To: CAO for the Regional and Corporate Services Committee
From: Micha Gutmanis, Environmental Services Coordinator

Date: 2019-02-12
File No: 1010-95

Subject: Electric Vehicle Chargers at the FVRD Main Office Building

INTENT

This report is intended to advise the Board of an expansion to the electric vehicle charging infrastructure in the parking lot of the main Fraser Valley Regional District office building. Staff is not looking for a recommendation and has forwarded this information should members want more clarification to discuss the item further.

STRATEGIC AREA(S) OF FOCUS

Support Environmental Stewardship
Support Healthy & Sustainable Community

PRIORITIES

Priority #2 Air & Water Quality

BACKGROUND

Recent Electric Vehicle (EV) trends show that their popularity has grown rapidly, as nearly 35,000 plug-in electric vehicles were sold in Canada through the first 9 months of 2018, an increase of 158% compared to a year prior. Governments at all levels have had a large impact on EV adoption through policy and infrastructure investments. In late 2018, the Province announced that proposed legislation will phase in targets for the sale of zero-emission vehicles: 10% of new light-duty passenger vehicle sales in B.C. will be zero-emission vehicles by 2015; 30% by 2030; and 100% by 2040. This will put additional pressures on EV charging infrastructure, including on the public charging network.

EV owners who will be most reliant on the public charging network will be the next generation of EV buyers, the Early Mainstream. Studies show that the EV Pioneers, those who already own EVs, tend to live in detached homes with access to home-based charging. However, the Early Mainstream buyers will have a higher percentage living in multi-family dwellings without access to home charging, therefore being much more reliant on public chargers. Level 2 charging, adequate for most plug-in hybrid vehicles, will need to be expanded rapidly to keep up with this future demand.

DISCUSSION

BC Hydro, in partnership with the Province, is initiating an innovative High Voltage Utility Connected (HVUC) demonstration project in the Lower Mainland, and local governments have been invited to participate. The primary objective of the HVUC project is to demonstrate a new type of Level 2 charger which addresses the challenges associated with EV infrastructure deployment in multi-unit residential buildings and commercial buildings. The chargers are designed to have low installation costs, low

operating costs due to their ability to turn off when not in use, and utility connectivity for metering and communications capabilities. BC Hydro would like to install four of the HVUC dual port chargers in the FVRD's main office parking lot, which can charge up to eight cars at once.

The chargers will be located in the parking stalls directly adjacent to the existing DC Fast Charger. Clustering the electric vehicle chargers together in a cohesive row will decrease electrical wiring costs and will allow for proper EV charging signage. Allocating eight parking stalls will allow for the next generation of EV adoption by the public, staff, and the FVRD's fleet. On days with Committee or Board meetings and other busy events, certain electric vehicle charging stations parking spaces may be opened up for general parking.

The existing Level 2 charger by the front doors will be removed and installed elsewhere in the Region, and the parking stall will be replaced with Director parking. For every Director parking stall that is removed for a Level 2 charger, it will be replaced with a new parking stall- in most cases closer to the main building. Appendix 1 displays the proposed parking arrangement with the new Level 2 chargers.

COST

The Level 2 chargers will be provided for free, with FVRD covering the one-time installation costs. The cost to install all four dual head chargers is quoted at \$24,130 which includes creating a new service from an existing transformer, running underground wiring to the charger locations and pouring concrete bases for the chargers. The funding for the FVRD contribution will come from the building maintenance budget under FVRD's General Buildings Area (Budget 114), generated as part of the Administration Support Recovery allocated to all FVRD service areas (regional and electoral area).

By setting up the Level 2 chargers with their own electrical service, it will allow the FVRD to analyze and separate usage data from the existing fast charger. The charger infrastructure will have the ability to provide for a cost recovery structure that would allow the chargers to cover the cost of the electrical supply, similar to how the DC Fast Charger operates.

CONCLUSION

Electric vehicles represent a technology advancement with significant potential to reduce harmful air pollutants and community GHG emissions while providing related social and economic sustainability benefits. In order to support this transition, charging infrastructure is needed in various forms and locations. The four new dual port HVUC chargers will assist in the development of new charging technology, while providing access to charging for the public, staff, and fleet vehicles.

COMMENTS BY:

Barclay Pitkethly, Director of Regional Programs:	Reviewed and supported.
Mike Veenbaas, Director of Financial Services:	Reviewed and supported.
Paul Gipps, Chief Administrative Officer:	Reviewed and supported.

Appendix 1

FRASER VALLEY REGIONAL DISTRICT & TENANTS CHILLIWACK FIRE DEPARTMENT HALL #1 DESIGNATED PARKING STALLS

