



Tri-Cities Electric Vehicle Strategy – Background and Scoping

Executive Summary

Prepared by: Zeynya Alemayehu, UBC Sustainability Scholar

Prepared for: Laura Sampliner, Sustainability and Energy Coordinator, City of Port Moody

April 15, 2020

This report was produced as part of the UBC Sustainability Scholars Program, a partnership between the University of British Columbia and various local governments and organizations in support of providing graduate students with opportunities to do applied research on projects that advance sustainability across the region.

This project was conducted under the mentorship of the City of Port Moody staff. The opinions and recommendations in this report and any errors are those of the author and do not necessarily reflect the views of the City of Moody or the University of British Columbia.

Executive Summary

Project Overview and Objective

The transportation sector accounts for almost half of community greenhouse gas emissions (GHG) in Port Moody. It is, therefore, one of the key potential sectors for considerable GHG emissions reductions in order to achieve carbon neutrality. As elsewhere in the region, Electric Vehicles (EVs) have become key components in the transition to clean transportation in Port Moody. However, there are still several barriers to EV adoption in Port Moody. Among others, EV charging infrastructure remains a barrier to the uptake of electric vehicles in Port Moody. There is an increased request for charging infrastructure in Port Moody as well as throughout Port Coquitlam and Coquitlam (Tri-Cities). Due to the interconnected geography with neighboring municipalities of Coquitlam and Port Coquitlam, the City of Port Moody is exploring the possibility of developing a potential tri-cities or Port Moody specific Electric Vehicle Strategy. The purpose of this project is to support the development of the strategy by exploring and analyzing the policy context and feasibility of a joint public EV infrastructure expansion strategy among the tri-cities in addition to reviewing best practices of selected local governments in EVs strategy development.

Methodology

The project employed qualitative methods of research. The information for the project was collected through a literature review and interviews with seven local governments in the region who have completed similar EV strategies. Due to the limited availability of quantitative data in relation to EV demand and usage in the tri-cities and other surveyed local governments, the project includes a limited analysis of quantitative data.

Key Findings and Takeaways

EV Strategy Development Considerations

The growth in EV sales in British Columbia as well as the adoption of the Zero Emissions Vehicles Act increasingly requires local governments in the province to better formalize and harmonize their policies and programs in relation to EVs. Accordingly, several local governments in the region have developed or are in the process of developing an EV strategy. In developing such strategies, the importance of public and stakeholder engagement has been highlighted. Public engagement sessions have helped local governments to identify the unique needs of their communities as well as helped to confirm the findings and assumptions from literature. Public engagement results have also become important to obtain Council support and buy-in from the community in terms of what they need today and in the future.

Recommendation:

- *Explore public engagement tools that can be utilized to find out the needs of residents as the primary users of Port Moody's public EV charging infrastructure.*

Expanding Public EV Charging Infrastructure

For most local governments, home charging is a priority in terms of addressing the demands of residents as well as to facilitate the adoption of EVs. However, public charging stations also play an important role in EV adoption as they complement home charging as well as provide access to residents with no access to home charging. Surveyed local governments use different approaches to expand public charging stations in their communities. Some local governments are focused on supporting and enabling the private sector to become the primary provider of public charging stations through education and outreach as well as through potential incentive programs. Other local governments are considering to accelerate the expansion of public EV charging through exploring creative partnerships and ownership arrangements with private businesses, utilities, school districts and places of worship.

Recommendation:

- *Explore partnership opportunities with institutions such as schools, places of worship, utilities, and businesses to expand public charging stations within the City, including funding opportunities and encouraging the business case for private investment.*

Partnerships to Expand Public EV Charging

Currently, there is a limited collaboration between local governments in EV related policy-making in general and deployment of public charging infrastructure in particular. All the surveyed local governments are mainly focused on increasing charging access within their jurisdictions and do not currently see the business case for infrastructure expansion partnerships with other local governments apart from a more formalized information-sharing arrangement.

The tri-cities are at different stages of policy development and implementation in relation to EVs and EV public charging infrastructure deployment. Factors such as housing characteristics, commuting behaviour, urban planning, and climate action commitments in each community dictate the approaches adopted by each city. Currently, all the tri-cities similar to most local governments in the Lower Mainland, have policies to improve access to home charging which includes requiring new residential construction to install an energized outlet for all or certain percentages of parking stalls. City-owned public charging stations are available in the cities of Port Moody and Coquitlam with further development and expansion plans in the cities of Port Coquitlam and Coquitlam.

The expected increase in the uptake of electric vehicles in the tri-cities and the current positive developments in the province as well as nationally provides an opportunity for a more formalized collaboration among the tri-cities that would bring efficiency in terms of shared funding opportunities, data sharing and revenue sharing. There are three possible options for collaboration among the tri-cities, formal information sharing, establishing a regular task force, and development of joint EV strategy each with its pros and cons.

Recommendation:

- *Conduct detailed community-specific mapping and criteria analysis to gain a broader understanding of the EV charging use and demand of residents of the tri-cities as well as explore other factors that can influence collaboration.*