

**REPORT TO ENVIRONMENTAL SERVICES COMMITTEE  
MEETING OF WEDNESDAY, JANUARY 19, 2022**

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**SUBJECT**     **Zero-Emissions Fleet Initiative – Final Study Report**

**ISSUE SUMMARY**

To present the Final Study Report to the Capital Regional District (CRD) Board as the final commitment of the Zero-Emissions Fleet Initiative (ZEFI).

**BACKGROUND**

In September 2017, the Federation of Canadian Municipalities' Green Municipal Fund approved a \$350,000 pilot project grant to fund the CRD's Zero-Emissions Fleet Initiative. The project was a multi-year, federally-funded partnership between the CRD, the University of Victoria's Institute for Integrated Energy Systems, and the BC Ministry of Energy, Mines and Petroleum Resources.

The project had three primary areas of focus:

- a zero-emission vehicle (ZEV) pilot in the CRD's corporate fleet
- research and analysis; and
- public outreach

The ZEV pilot included two electric vehicles, two plug-in hybrid electric vehicles, two hydrogen fuel cell electric vehicles and several e-bikes. Vehicle driving distances were recorded and driver feedback was gathered to better understand how ZEVs could be effectively integrated into the CRD fleet. The fuel cell electric vehicles were some of the first users of the newly-built hydrogen refuelling station in Saanich, a provincial government-supported project. Operation of the ZEVs resulted in a reduction of 41.8 tonnes of greenhouse gas emissions during their operation.

The research and analysis conducted as part of this project produced several reports that are appended to the Final Study Report (Appendix A):

- *A Fleet Telematics and EV Suitability Study* to enable the CRD to identify improvements to fleet use.
- *An E-bike Fleet Deployment Analysis* to understand the environmental, economic, and logistical performance of the operation of E-bikes in corporate fleets.
- *A Fleet Vehicle Energy Consumption Software Prediction Thesis Project* that proposes a data-driven model for prediction of the energy consumption of fleet vehicles in various missions.
- *A report on Earthquake Resiliency Implications of CRD EV Adoption* to examine possible post-earthquake use scenarios for Electric Vehicles.

Results of the project were shared with the public through two outreach sessions:

- *A ZEV Symposium*, an in-person event that enabled practitioners in government, non-profits, and industry to connect, share best practices and identify potential collaborations

- An *E-bikes in Fleets presentation*, as part of a West Coast Electric Fleets online webinar focused on E-bike adoption in the Pacific Northwest.

With completion of the final steps of the initiative, staff finalized a project report summarizing the activities, results and conclusions of the project.

### **ENVIRONMENTAL & CLIMATE IMPLICATIONS**

The project was integral in developing new information and experience for the CRD around ZEVs. With strong future goals for EV adoption and greenhouse gas emission reduction, the project was a key step on the CRD's path to its climate goals.

From 2017 to 2021, the grant funding provided a zero-emission vehicle jump-start for the capital region. It provided the opportunity for the CRD to purchase and test its first ZEVs and install charging infrastructure, leading to continued corporate EV purchases and charging infrastructure installations. The program supported the development of the first hydrogen fuelling station for vehicles on Vancouver Island. The project also supported and funded localized academic research regarding ZEVs.

The project was essential in CRD policy development, informing the development of the CRD's corporate Green Fleet Strategy and recently-updated Climate Action Strategy.

### **CONCLUSION**

The CRD has completed the Zero-Emissions Fleet Initiative that kick-started the organization's adoption and promotion of zero-emission transportation, both corporately and in the community. The project was funded through federal grant money aligned to promote a pathway to net zero by 2050. The information has been used for several initiatives under the CRD's Climate Action Strategy. The results motivate the continuing effort to transition the corporate fleet to Electric Vehicles through the corporate Green Fleet Policy and fleet procurement procedures. This rate of adoption is expected to accelerate as EV prices continue to decrease and more all-wheel drive and medium- and heavy-duty vehicle options become available. The summary report needs to be received by the Board as a final commitment to the grant funding.

### **RECOMMENDATION**

The Environmental Services Committee recommends to the Capital Regional District Board: That the Zero-Emissions Fleet Initiative Final Study Report be received for information.

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### **ATTACHMENT**

Appendix A: Zero-Emissions Fleet Initiative – Final Study Report