



# City of Richmond

## Report to Committee

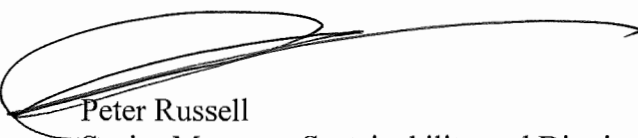
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**To:** Public Works and Transportation Committee      **Date:** April 11, 2018  
**From:** Peter Russell      **File:** 10-6125-07-02/2018-  
Senior Manager, Sustainability and District Energy      Vol 01  
**Re:** **UBCM Resolutions - Provincial Action on Zero Emissions Vehicles and Low Carbon Fuels**

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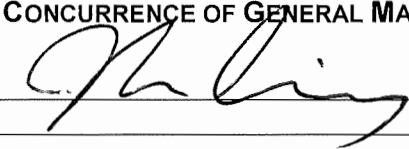

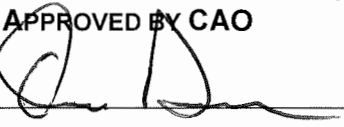
### Staff Recommendation

That the proposed UBCM resolutions titled “Zero Emissions Vehicle Mandate” and “Strengthen Low Carbon Fuel Requirement” be submitted to the Union of BC Municipalities, as attached to the staff report titled “UBCM Resolutions - Provincial Action on Zero Emissions Vehicles and Low Carbon Fuels” dated April 11, 2018, from the Senior Manager, Sustainability and District Energy.



Peter Russell  
Senior Manager, Sustainability and District Energy  
(604-276-4130)

Att. 2

| REPORT CONCURRENCE   |   |   |
|--|---|---|
| <b>ROUTED TO:</b><br><br>Transportation                          | <b>CONCURRENCE</b><br><br><input checked="checked" type="checkbox"/>                                    | <b>CONCURRENCE OF GENERAL MANAGER</b><br> |
| <b>REVIEWED BY STAFF REPORT /<br/>AGENDA REVIEW SUBCOMMITTEE</b> | <b>INITIALS:</b><br> | <b>APPROVED BY CAO</b><br>                |

## Staff Report

### Origin

This report supports Council's 2014-2018 Term Goal #4 Leadership in Sustainability:

*Continue advancement of the City's sustainability framework and initiatives to improve the short and long term livability of our City, and that maintain Richmond's position as a leader in sustainable programs, practices and innovations.*

*4.1. Continued implementation of the sustainability framework.*

### Analysis

#### Background

In 2010, Council adopted targets in Richmond's Official Community Plan to reduce community greenhouse gas (GHG) emissions 33% below 2007 levels by 2020, and 80% below 2007 levels by 2050. Transportation accounts for more than half of the greenhouse gas (GHG) emissions in Richmond's Community Energy and Emissions Inventory, with personal transportation accounting for more than 40% of emissions.

Richmond's 2014 Community Energy and Emissions Plan (CEEP) outlines strategies and actions for the City to take to reduce community energy use and GHG emissions, including:

- **Strategy 7:** Promote Low Carbon Personal Vehicles
- **Strategy 12:** Encourage Sustained Action by Senior Levels of Government

Modeling undertaken as part of the CEEP indicates Richmond's 2050 emissions reduction targets can only be achieved with the near-universal adoption of zero emissions personal vehicles by the 2040s. In addition, achieving these targets requires that transit ridership, walking, bicycling and rolling increase as a share of transportation; Richmond's 2041 Official Community Plan OCP includes a target that over 50% of trips made by year 2041 be made by transit, walking or biking.

Federal and provincial policies likewise are necessary to the adoption of low carbon personal transportation and attaining GHG emissions targets. Notably, the Pan-Canadian Framework on Clean Growth and Climate Change calls for the development of a national zero-emission vehicles strategy, and the implementation of a clean fuel standard to reduce emissions from fuels used in transportation, buildings and industry. The B.C. government established the Climate Leadership Team in May 2015 to provide advice and recommendations for the development of the provincial Climate Leadership Plan.

### City Action

The City of Richmond is a leader in supporting the transition to low carbon personal vehicles, as well as the shift towards walking, biking, transit and ride-sharing. The City's leadership actions span the City-owned fleet, provision of public charging infrastructure, and facilitating electric vehicle (EV) charging in private developments.

#### *City Fleet Vehicles*

Corporately, the City has adopted the Green Fleet Action Plan, which establishes a target to reduce greenhouse gas (GHG) emissions by 20% by 2020 (using 2011 as the baseline year). The key strategies of the plan are to:

1. Down-size & right-size vehicles
2. Buy best-in-class vehicles with improved emission & fuel consumption ratings
3. Make best use of electric & hybrid vehicles
4. Reduce demand for vehicle use overall

In November 2016, Council endorsed a tiered approach to vehicle procurement:

1. Full electric vehicle – as a first priority consideration
2. Electric vehicle with gasoline back up – as a second priority consideration
3. Hybrid vehicle – as a third priority consideration
4. Most fuel-efficient gasoline vehicle – where an electric or hybrid unit is not feasible

The City is implementing this tiered approach for its vehicle fleet, including evaluating fleet EV charging opportunities at various locations. The City was honoured in 2016 with the “E3 Fleet” Platinum level certification award from the Fraser Basin Council, the first and only municipality to be so rated.

#### *Public Charging Infrastructure*

In March, 2013 the City installed four public “Level 2” EV charging stations (total of eight charging ports) at the following locations:

- Steveston Community Centre
- Thompson Community Centre
- Cambie Community Centre
- City Hall

An additional station is in operation at the Richmond Olympic Oval. Usage of these stations has grown, suggesting growing demand for public charging. On November 28<sup>th</sup>, 2016, Council directed that staff investigate the potential expansion of the City-owned network of public EV charging stations, including DC Fast Charging infrastructure, and report back. In 2017, the City undertook a consultation on expanding EV charging infrastructure. The City has applied for federal funding for EV charging infrastructure expansion and staff will report back with recommended expansion options in 2018.

In addition to City-owned public EV charging infrastructure, there has also been an increase in the number of charging stations available for public use provided by other organizations; there were 36 publicly accessible L2 charging stations and 4 DC Fast Charging station locations in Richmond where drivers can charge their EVs as of April 2018.

#### *Supporting EV Charging in Private Developments*

On December 18<sup>th</sup>, 2017, City Council adopted a requirement in the Parking and Loading section of the Richmond Zoning Bylaw that all residential parking spaces in new developments, excluding visitor parking, feature an energized electrical outlet capable of providing Level 2 charging. The City was the first jurisdiction in Canada to make such a requirement. Other jurisdictions are now building from Richmond's leadership – the City of Vancouver adopted essentially the same requirement in March 2018, and a number of other local governments are considering such a requirement. The policy is also attracting provincial, federal and international interest. Notably, the City has been invited to participate as part of the Global EV Pilot City program to share Richmond's international best practice. The Global EV Pilot City program is an initiative of the Clean Energy Ministerial "EV 30@30" campaign, an effort to deploy at least 30 percent new electric vehicle sales by 2030; it is co-chaired by the governments of Canada and China, under the auspices of the International Energy Agency<sup>1</sup>.

#### Need for Provincial Leadership on Low Carbon Transportation

In addition to action taken at the local level, there is need for provincial and federal leadership to ensure the transition to low carbon transportation. Notably, the Climate Leadership Team's November 2015 recommendations to the BC government included two key transportation policies the province should pursue: Establishing Zero Emission Vehicle targets, and increasing the Low Carbon Fuel Standard.

#### *Zero Emissions Vehicle mandate*

Zero emissions vehicles (ZEVs), such as EVs or hydrogen vehicles, are a key opportunity to reduce emissions. ZEVs are capable of achieving zero GHG emissions on BC's clean electrical grid, and also result in zero local air pollution, reduce noise pollution, and reduce operating costs.

ZEV legislation sets minimum percentages of ZEVs that vehicle manufacturers have to sell in the province by a certain date. If a manufacturer does not meet the required percentage, they can purchase credits from manufacturers that exceed it. In Canada, Quebec has a ZEV mandate (2018 is the first compliance year), and California and nine other states have also established such requirements. These mandates are a key policy to ensure sufficient availability of ZEVs to achieve climate targets.

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<sup>1</sup> The International Energy Agency (IEA) is an autonomous intergovernmental organization established in the framework of the Organisation for Economic Co-operation. The IEA mission statement is to work to ensure reliable, affordable and clean energy for its 29 member countries and beyond.

The BC Climate Leadership Team's 2015 recommendations include establishing a Zero Emission Vehicle target of 30 per cent of sales by 2030 for light duty vehicles. This aligns with the Clean Energy Ministerial EV30@30 campaign, and is relatively modest compared to the levels of EV uptake already being achieved and targeted elsewhere. EVs already comprise over 4% of passenger cars (excluding light trucks) sold in BC, and market share is projected to increase. A growing number of countries have announced they will phase out sales of gasoline-only vehicles, including China, England (by 2040), France (by 2040), and Norway (by 2025), and other countries.

#### *Increasing the Low Carbon Fuel Standard*

BC's *Greenhouse Gas Reduction (Renewable and Low Carbon Fuel Requirements)* Act and the associated Renewable & Low Carbon Fuel Requirements Regulation make requirements for renewable and low carbon fuel requirements. Since 2010, fuel suppliers have been required to include 5 per cent renewable fuel content in gasoline, and 4 per cent in diesel. Fuel suppliers are also required to reduce the GHG intensity of the transportation fuel mix they supply. Compliance is measured in terms of trade-able credits which account for the different carbon intensity of transportation energy sources; transportation fuels encompassed by the regulation include gasoline, diesel, ethanol, biodiesel, electricity, hydrogen, and others. City staff are in the process of exploring the City's ability to generate revenue through the sale of carbon credits from the provision of low carbon electricity via the City-owned public EV charging network as part of the market for trade-able credits under the regulation.

Fuel suppliers must adhere to a schedule that will reduce the GHG intensity of the fuel mix in BC by 10% by 2020, relative to 2010. The province reports that these requirements reduced GHG emissions by 6.4 million tonnes between 2010 and 2016 – for reference, Richmond's total annual community emissions are approximately 500,000 tonnes.

The BC Climate Leadership team recommended increasing the Low Carbon Fuel Standard to 20 per cent by 2030, and broadening the LCFS coverage to include all vehicle fuel use with the exception of aviation fuel.

#### UBCM Resolutions

It is recommended that two resolutions be forwarded to the Union of BC Municipalities calling for the province to establish requirements for Zero Emissions Vehicles to comprise at least 30 per cent of passenger vehicle sales by 2030 (Attachment 1), and to increase the Low Carbon Fuel Standard to 20 per cent by 2030, and account for indirect land use change (Attachment 2). This action supports timely adoption of key policies that are critical to the City and province pursuing their respective climate targets.

#### **Financial Impact**

None.

## **Conclusion**

Continuing to encourage zero emissions vehicles and low carbon fuels is essential to meeting City, provincial, national and international climate change, air quality and sustainability goals. This report recommends that resolutions be forwarded to the Union of BC Municipalities calling for the province to establish requirements for Zero Emissions Vehicles to comprise at least 30 per cent of passenger vehicle sales by 2030, and to increase the Low Carbon Fuel Standard to 20 per cent by 2030.

A handwritten signature in black ink, appearing to read 'B. McEwen', is written over a horizontal line.

Brendan McEwen  
Sustainability Manager  
(604-247-4676)

BM:bm

Att. 1: Proposed UBCM Resolution – Zero Emissions Vehicle Mandate

Att. 2: Proposed UBCM Resolution – Strengthen Low Carbon Fuel Standard

## **Attachment 1: Proposed UBCM Resolution - Zero Emissions Vehicle Mandate**

### **ZERO EMISSIONS VEHICLE MANDATE**

**City of Richmond**

WHEREAS ten US states and the province of Quebec have adopted Zero Emissions Vehicle standards that require a progressively increasing share of new passenger vehicle sales to be zero emissions vehicles (such as electric vehicles or hydrogen fuel cell vehicles);

AND WHEREAS the Climate Leadership Team's 2015 Recommendations to the BC Government included establishing Zero Emission Vehicle targets of 30 per cent of sales by 2030;

AND WHEREAS Canada and China are the co-chairs of the EV30@30 campaign under the Clean Energy Ministerial, which is working towards 30 per cent of vehicle sales across participating jurisdictions to be zero emissions vehicles by 2030:

THEREFORE be it resolved that the Province be requested to develop requirements for Zero Emissions Vehicles to comprise at least 30 per cent of passenger vehicle sales by 2030.

## **Attachment 2: Proposed UBCM Resolution – Strengthen Low Carbon Fuel Requirement**

### **STRENGTHEN LOW CARBON FUEL REQUIREMENT**

**City of Richmond**

WHEREAS The Pan-Canadian Framework on Clean Growth and Climate Change calls the implementation of a clean fuel standard to reduce emissions from fuels used in transportation, buildings and industry;

AND WHEREAS British Columbia's Renewable and Low Carbon Fuel Requirements Regulation requires an increasing percentage of renewable content in transportation fuels reaching 10% by 2020, which has prevented 6.4 million tonnes of CO<sub>2</sub>e greenhouse gas emissions between 2010 and 2016;

AND WHEREAS the Climate Leadership Team's 2015 Recommendations to the BC Government included increasing the Low Carbon Fuel Requirement to 20 per cent by 2030:

AND WHEREAS including indirect land use change in calculation of biofuels' greenhouse gas intensity is a best practice used in California's and Oregon's low carbon fuel requirements;

THEREFORE be it resolved that the Province be requested to increase the Low Carbon Fuel Requirement to 20 per cent by 2030.