

## **CITY OF VAUGHAN**

### **EXTRACT FROM COUNCIL MEETING MINUTES OF SEPTEMBER 17, 2013**

Item 3, Report No. 9, of the Finance and Administration Committee, which was adopted without amendment by the Council of the City of Vaughan on September 17, 2013.

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#### **WORKPLACE ELECTRIC VEHICLE CHARGING POLICY**

The Finance and Administration Committee recommends approval of the recommendation contained in the following report of the Commissioner of Strategic and Corporate Services, dated September 9, 2013:

##### **Recommendation**

The Commissioner of Strategic and Corporate Services in consultation with the Manager of Environmental Sustainability recommend:

1. That the City of Vaughan adopt the Workplace Electric Vehicle Charging policy and commit to revisiting it for continual improvement opportunities within 10 months of adoption of the policy.

##### **Contribution to Sustainability**

This report is consistent with the priorities previously set by Council in the *Green Directions Vaughan*, Community Sustainability Environmental Master Plan:

- Objective 1.2: To promote reduction of greenhouse gas emissions in the City of Vaughan
- Objective 5.2: To share sustainable best practices and ideas between and among municipal staff and the community.

The City of Vaughan is committed to reducing greenhouse gases which contribute to climate change and which adversely affect local air quality. The installation of electric vehicle (EV) charging stations encourages the adoption and adaptation to electric vehicles as a more sustainable transportation choice for staff and the community.

##### **Economic Impact**

The dual electric vehicle charging station has been purchased by the Environmental Sustainability Office and installed by Building and Facilities. To date, staff using the charging station have been using the station free of charge. Once the Workplace EV Charging policy is implemented, staff will pay a monthly subscription fee of \$ 24.27 to re-charge their vehicles at work. Subscription fees collected will be used to off-set the City Hall electrical account.

##### **Communications Plan**

A separate external communications plan is not required at this time. As with previous initiatives impacting staff, the Environmental Sustainability Office will develop a communication piece for City Hall staff to alert them to this initiative. The Environmental Sustainability Office will consult with Corporate Communications on the timing and content of any messaging for the community. This is consistent with Goal 5 of Green Directions Vaughan "To be leaders in advocacy and education on sustainability issues" where "Vaughan is committed to sharing its successes with the community".

##### **Purpose**

The purpose of this report is to seek approval of the Workplace Electric Vehicle Charging Policy.

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##### **Background - Analysis and Options**

Electricity-fueled transportation is expanding across the globe as a result of improved vehicle and battery technologies, concerns about oil supplies, and public policy demanding increasing vehicle efficiencies. The current EV market is made up of two unique types of vehicles – battery electric vehicles (BEVs) and plug-in hybrid electric vehicles (PHEVs). Electric vehicles can be re-charged by establishing a connection between the vehicle and a power supply ranging from 120 -600V.

In January 2013, the City of Vaughan participated in an initiative led by PowerStream through an established relationship with Nissan Canada. This initiative involved offering employees an opportunity to lease a new 2012 Nissan LEAF 100% electric vehicle substantially below market value. As a way of demonstrating support and leadership, the City of Vaughan committed to installing an EV charging station for this initiative. Three City of Vaughan staff leased EVs under this initiative.

In May 2013, Building and Facilities completed installation of Level 2 EV charger, purchased by the Environmental Sustainability Office, in the east parking lot. The Level 2 dual charger installed at City Hall is a 240 V unit, capable of providing an EV boost of 12-30 km/hr using between 3-7 kW/h of energy to do so depending on a number of variables. Electric vehicle parking signage, designating three spots in front of the EV charging station, was secured and installed.

Although a majority of EV charging is expected to occur at home during off-peak electricity pricing times, research strongly supports the need for the workplace charging opportunities. The US based Electric Power Research Institute estimated that 54% of non-residential parking occurs at the workplace where layover is often between 4-8 hours. This extended period where vehicles are sitting in one place provides an opportune time to provide EV owners with an extension in range.

Research was conducted to help frame the Workplace EV Charging Policy. Given that the EV charging framework is in its infancy in Ontario and throughout North America, a variety of resources were consulted including those from commercial, institutional, corporate and municipal sources. Many British Columbia based municipalities, which have taken advantage of provincial funding to install publically accessible EV charging stations, have taken the position to provide free access to the stations initially with plans to charge based on time of use in the future. The Vaughan Workplace EV Charging Policy also provides a means to allow the public to access the EV charging station.

In terms of arriving at the monthly subscription fee for employees, PowerStream confirmed that their average cost to charge the Nissan Leaf they have within their fleet for an 8 hour period was \$2.33/day. In order to manage anticipated employee interest in accessing the EV charging station, the Workplace EV Charging Policy stipulates that employees have access to 4 hour windows at an estimated cost of \$1.165 per charge (i.e. a half day) hence \$2.33 divided in half. To achieve full cost recovery, the monthly subscription fee will be \$ 24.27 for each EV owner to access \$291.25 of estimated energy cost annually. The EV charger installed does have the capacity to be upgraded to have radio frequency remote control in order to charge more accurately for electricity consumed in the future.

The benefits of Workplace EV charging for the City of Vaughan include employee attraction and retention and demonstrating environmental leadership by supporting a cutting edge transportation mode. In addition, a Workplace charging station can be utilized for the City's own EVs should they become a more prominent component of the fleet in the future.

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**Relationship to Vaughan Vision 2020/Strategic Plan**

This report is consistent with the priorities previously set by Council and supports the City's objective to lead and promote environmental sustainability.

**Regional Implications**

As electric mobility becomes more prominent, the City Hall charging station will become part of growing network of charging stations. This has the potential to positively impact the economic, social and environment sustainability of the region as more EV owners are attracted here.

**Conclusion**

Through a wide range of initiatives, the City of Vaughan has already demonstrated its commitment to sustainability. As recommended by Green Directions, Objective 1.1, the City of Vaughan aims *to reduce greenhouse gas emissions*. By committing to a Workplace EV Charging Policy, the City of Vaughan will be able to demonstrate leadership in the community as well as to its employees as a strong environmental steward. It is important for the City of Vaughan to continue to make progress addressing the issue of climate change while continuing to integrate sustainability into the core culture of the organization.

**Attachments**

1. Electric Vehicle Workplace Charging Policy

**Report prepared by:**

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(A copy of the attachments referred to in the foregoing have been forwarded to each Member of Council and a copy thereof is also on file in the office of the City Clerk.)