

FINANCE AND ADMINISTRATION COMMITTEE – SEPTEMBER 9, 2013

WORKPLACE ELECTRIC VEHICLE CHARGING POLICY

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 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 \$ 20 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.

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 electric vehicle (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 fully charge the Nissan Leaf they have within their fleet 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. Thus, a City employee would be paying \$ 240 annually to access \$ 290 of estimated energy cost. 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.

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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Respectfully submitted,



Joseph Pittari, MSc.
Commissioner, Strategic and Corporate Services

**City of Vaughan
Policy Manual**

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| SECTION: | POLICY NO: |
| DEPARTMENT: | SUBJECT: Electric Vehicle Workplace Charging |

1. BACKGROUND

In April 2009, the City of Vaughan approved *Green Directions Vaughan*, the Community Sustainability and Environmental Master Plan, which outlines several initiatives related to encouraging sustainable transportation and leadership in environmental sustainability. The City of Vaughan has an active Smart Commute program that provides incentives to employees to consider sustainable transportation choices.

2. PURPOSE

The City of Vaughan recognizes that electric vehicles contribute to improving local air quality, employee retention/attraction and enhancing the overall image of the organization with respect to sustainability.

The purpose of this policy is to:

- Provide guidance to staff driving personal Electric vehicles.
- Promote a corporate culture at the City that recognizes and places a priority on sustainability.

3. SCOPE

This policy initially applies to Vaughan City Hall employees only.

4. GENERAL

4.1 Employees with Electric Vehicles (EVs) wishing to use the workplace charging station must register with the Environmental Sustainability Office who will coordinate with Building and Facilities, Legal and Finance. Upon registration, employees will be provided with a short information session on the proper use of EV charging equipment and additional program information.

4.2 EV parking spots will be clearly delineated by appropriate signage.

4.3 Employees with EVs will be allowed usage of the charging station for up to 4 hours during the regular business hours of 8:30 AM- 4:30 PM. EVs may continue to be parked in the designated EV parking spots if not connected to a charging station during regular business hours.

4.4 Employees with EVs using the charging station will be charged a monthly subscription fee of \$ 20/month. This fee will be deducted as a payroll deduction and revisited annually.

4.5 Any operational issues related to the EV charging stations or designated parking spots should be documented in writing and forwarded to the Environmental Sustainability Office for further action.

4.6 Employees with EVs violating the provisions of this Policy will have their Workplace charging privileges removed.

4.7 Any visitors with EVs requiring the use of the charging station will be asked to contact the Environmental Sustainability Office who will make the appropriate arrangements.

5. RESPONSIBILITY OF CITY STAFF

City staff, reporting and/or visiting Vaughan City Hall, are responsible to become familiar with this policy and apply the established principles.

6. CONTINUAL IMPROVEMENT

The City of Vaughan is committed to a process of continuous improvement through regular review of this policy, its scope and implementation processes on an ongoing basis.