

Leading Canadian Programs

The following is a summary of the programs underway in British Columbia, Ontario and Québec, along with details on how cities in those provinces have contributed.

British Columbia Programs

- **Clean Energy Vehicle Program:** The Province of BC has offered two rounds of grants to BC residents for the purchase of clean energy vehicles. The first round, which began in December 2011, offered up to \$5,000 per vehicle and supported the purchase of 950 electric vehicles and the deployment of 1,000 charging stations. The second round, which began in April 2015 and is ongoing, provides up to \$5,000 for qualifying new battery electric, fuel-cell electric, and plug-in hybrid electric vehicles and up to \$6,000 for a hydrogen fuel cell vehicle.
- **Fleet Champions Program:** This Province of BC program, established in June 2016, supports the electrification of private and public vehicle fleets. Fleet owners can apply for a rebate (to a maximum of \$2,000) on the purchase and installation of a Level II charging station. Fleets may also qualify for a free site assessment to understand charging needs and options.
- **Multi-Unit Residential Building (MURB) Charging Program:** This Province of BC program (which began in March 2016 and ended early due to full subscription) supported the installation of charging stations in multi-unit residential buildings (with 3 or more dwellings). Under the program, building owners were eligible to receive up to \$4,500 per station. So far, the program has accepted applications for the installation of 130 stations.

In step with these provincial programs, the City of Vancouver has undertaken the following programs and initiatives:

- **Charge-and-Go Pilot Project:** Under this pilot project, which ran from 2011 to 2014, the City of Vancouver installed 111 publicly accessible Level II charging stations in a variety of locations, including community

centres, shopping malls, curbside and other locations throughout Vancouver. Funded by the Federation of Canadian Municipalities, the Province of BC and BC Hydro, the project provided valuable insights into the use and locating of charging infrastructure.

- **Bylaw Revisions:** In 2008, the City of Vancouver amended its Building Bylaw -- requiring 20% of parking stalls in apartments and condos and all stalls in houses to be electric-vehicle-ready. In 2013, the bylaw was further amended, requiring 10% of stalls in mixed-use and commercial buildings to be electric-vehicle-ready.
- **Charging Privileges for Car Sharing:** The City of Vancouver encourages local car-share organizations to add electric vehicles to their fleets by allowing them to use City-owned charging stations.
- **Municipal Fleet Electrification:** The City of Vancouver's municipal fleet includes more than 30 electric vehicles -- the largest number of electric vehicles operated by a Canadian municipality. Thirteen of those electric vehicles purchased in 2012 saved the City \$20,800 per year in fuel and maintenance costs and reduced greenhouse gas emissions by GHGs by 29 tonnes per year.

Ontario Programs

- **Electric Vehicle Incentive Program:** This Province of Ontario program, introduced in 2010, provides financial incentives for the purchase of electric vehicles (4,800 vehicles funded to date) and home charging stations (1,100 stations funded to date). In February 2016 the program was modernized so that vehicles with high battery capacity and the ability to accommodate a large number of passengers receive the highest value incentives ranging between \$6,000 and \$14,000. Luxury vehicles retailing at \$75,000 to \$150,000 are now eligible for a reduced incentive, not exceeding \$3,000, and vehicles retailing for more than \$150,000 are no longer eligible for an incentive.
- **Electric Vehicle Chargers Ontario Program:** This Province of Ontario program involves a partnership of 24 public and private sector organizations working to create a network of electric vehicle charging stations in cities, along highways and at workplaces and public places across Ontario. Launched in December 2015 (with applications accepted until February 2016) the program received more than 200 applications and

distributed nearly \$20 million in funding, with the most competitive applications being chosen. Through this program, approximately 300 Level II and 200 Level III charging stations will be installed in more than 250 locations across Ontario.

In step with these provincial programs, the City of Toronto has undertaken the following programs and initiatives:

- **Electric Vehicle Working Group:** Co-chaired by the City's Environment & Energy Division and the Toronto Atmospheric Fund, this group is focused on a number of energy transition issues including the availability of charging stations, their impact on the electricity grid and the development of electric-vehicle-friendly policies.
- **City Planning:** The City of Toronto's performance measures for sustainable site design include accommodation for electric vehicles parking stalls in new construction developments in excess of what is required by Toronto's zoning bylaw.
- **Fleet Services:** The City of Toronto has replaced more than 500 of its conventional vehicles with low-impact alternatives, including 18 electric and hybrid vehicles (as of December 2013). The City has found that "most of the plug-in hybrid electric vehicles (PHEV) and battery electric vehicles (BEV) that have been added to the fleet would require higher utilization than they have had in order to reach their potential for reducing fuel consumption and lowering the total cost of vehicle ownership." They also found that "in real-world conditions, particularly in a climate with extreme temperatures, adequate range in BEVs is an impediment to high utilization that needs to be managed."

Québec Programs

- **Provincial Commitment:** The Province of Québec's goal is to reach 100,000 plug-in electric and hybrid vehicles by 2020. Supporting this goal, it has approved a \$116 million budget (2015-2020) for a variety of electric vehicle initiatives including the installation of charging stations and the Drive Electric Program.

- **Drive Electric Program:** The Drive Electric program includes the Electric Vehicle Purchase/Lease Rebate program and the Charging Station Rebate Program.
 - **Electric Vehicle Purchase or Lease Rebate Program:** Established in January 2016, this program offers a purchase/lease rebate for citizens, businesses, non-profit organizations and Québec municipalities to purchase electric vehicles or hybrid non-plug in vehicles. Rebates range from \$500 for hybrid vehicles to \$8,000 depending on vehicle battery capacity.
 - **Electric Vehicle Charging Station Rebate:** Rebates are available for charging stations in residences including \$350 for the charging station and \$250 for installation and power supply infrastructure.
 - **Electric Circuit Public Charging Network:** In June 2016, Hydro-Québec announced the electrification of Highway 20 (one of Québec's busiest corridors) with a goal to have 785 charging stations in service by December 2016.
 - **Green Licence Plates:** Since 2014, electric vehicles with a "green licence plate" have been permitted to travel on high occupancy vehicle lanes regardless of the number of passengers..

In step with these provincial programs, the City of Montréal has undertaken the following programs and initiatives:

- **Charging Stations:** The City of Montréal's goal is to install a network of 1,000 electric vehicle charging stations across the city by 2020 at a direct cost to the City of approximately \$10 million. By year-end 2016, 100 charging stations will be installed in Montréal's downtown, making it the largest installation of downtown charging stations in Canada.
- **Electric Vehicle Car Share:** In May 2016 the City of Montréal announced a plan to encourage existing car share companies to change their gas-powered cars to electric ones.

Elsewhere in Québec, the following initiative has been undertaken:

- **Group Purchasing Plans:** A grassroots initiative has been undertaken by a group called the Quebec Electric Vehicle Association to make electric vehicles more affordable for individuals. Through the Association,

Attachment 1

purchase plans have been negotiated with car dealerships that sell electric vehicles at a discount. The model has also been used Colorado when a coalition of local governments in the Denver metro area launched the US's first combined solar and electric vehicle group purchase program, dubbed Solar Benefits Colorado.