



Our **Mission** is to establish electric mobility, in all its forms, as the primary solution to Canada's growing transportation energy issues and to assist its members in the fulfillment of their mandate.

February 2010

**Newsletter**

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## New Members

EMC is pleased to welcome the following new member:

### **Electronic Transportation Engineering Corp**

(industry member)

430 S. 2<sup>nd</sup> Avenue

Phoenix, AZ 85003 USA

Web site/Site web : [www.etecevs.com](http://www.etecevs.com)

Kevin Morrow

Executive Vice President

Tel: 602 345 9003

FAX: 602 256 2606

Email/Courriel: [kmorrow@etecevs.com](mailto:kmorrow@etecevs.com)

### **AddÉnergie Technologies Inc** (industry member)

2750, rue Einstein, Bureay 130

Québec, QC G1P 4R1

Fax/Télécopieur : 418 656 1981

Louis Tremblay, ing., Président

Tel : 418 655 8867

Email/Courriel:

[ltremblay@addenergietechnologies.com](mailto:ltremblay@addenergietechnologies.com)

Total membership in EMC as of January 31, 2010 was 106, comprised of industry members [40]; energy providers [8]; NGOs and research centres [19]; end users [10]; supporters [26]; and associates [3].

See <http://www.emc-mec.ca/content/our-members> for a complete membership directory.

## News from EMC

**EV – 2010 – VÉ Conference and Trade Show and web site launch.** Canada's premier conference on EV mobility, September 13 to 16 in Vancouver, B.C., is ramping up on all fronts, supported strongly by local host, sponsor and EMC member, B.C.Hydro.

The conference web site was launched on February 17, at <http://www.emc-mec.ca/ev2010ve/en/home.html>. The site includes information on registration and accommodation at the Sheraton Wall Centre, and initial program and trade show details.

Meetings of Organizing, Technical Program and Communications Committees are well underway. The Organizing and Program Committees are targeting an impressive list of keynote and technical speakers and approaching a range of event sponsors. The successful program events of PHEV 09 are retained, and new events are planned. Media firm Rivers Edge of Vancouver will manage maximum public profile for this year's event. As with PHEV 09, event planners JPdL are handling all the logistics. Conference organizers are aiming for a delegation of 500.

**EMC Gaining Access to Reputable North American Plug-in Database and Resources.** With EMC Board approval, EMC has confirmed its Memorandum of Understanding (MOU) with the Electric Drive Transportation Association (EDTA), enabling EMC to gain timely and accurate access to web-based and other resources and data of the National Plug In Vehicle Initiative (NVPI). The initiative is dedicated to the development of the plug-in vehicle industry. Through membership on the NVPI Steering Committee and other sub-committees, EMC will also input into this clearinghouse, whose audiences are the public, media, and policy makers. EMC involvement covers the term from January 26, 2010 to December 31, 2010 and will begin with web and database development. EMC has approached 13 of its key members to contribute the total \$45,000 required for NVPI membership. NVPI is already underway and is creating a network of vehicle manufacturers, utilities and others dedicated to sharing information and data. Please contact Al Cormier for further details.

**EMC/CNTA launching an important first lap in Electric Vehicle Technology Roadmap project.** EMC, together with Quebec's Centre national du transport avancé (CNTA), is carrying out a strategic study of EV demonstration projects, funded by Natural Resources Canada (NRCan). Recommended in the Electric Vehicle Technology Roadmap (evTRM), the study is reviewing the characteristics of current and past Canadian PHEV and EV use in real-world operation. The project will also propose the desirable parameters and regulatory framework for future demonstration projects and establish a basis for a national database. The project will also identify the appropriate means of collecting and disseminating this monitoring data. The project is guided by a national

For more information, please contact:

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Advisory Committee. Webinars in French and English on the project are planned for Friday, March 12, 2010. The study report will be available in April and published on the EMC web site.

**EMC Responds to Proposed New Fuel-Efficiency Standards.** EMC's Technology and Energy Development Committee is finalizing EMC's response to the new Federal Regulations on Fuel Efficiency Standards for Passenger Cars and Light Duty Trucks, as proposed by Environment Canada. The Canadian proposal is intended to be in harmony with similar regulations being planned in the U.S. The proposal recognizes the benefits of EVs in achieving lower emission levels in vehicles in the coming years. Once finalized and approved by the EMC Board, the EMC response will be shared with the membership.

### News from Members

[\(Members are reminded to send us their company announcements for use in this newsletter.\)](#)

**CNTA has announced an agreement with the province's industrial cluster, Société de la Vallée d'Aluminium (SVA),** to collaborate on the inclusion of more aluminum in the manufacture of EVs and their components, with implications for reduced load in electric-powered vehicles, new technologies in the sector, and new high-quality jobs in the province. Quebec currently places third in the world in the production of primary aluminium. More actions out of the agreement will be announced in the coming weeks.

**Electrovaya Inc. is the energy storage partner for a new large-scale, multi-site utility demonstration project** led by CEATI International Inc., headquartered in Montreal. Other partners include major utilities and universities. The Government of Canada's Clean Energy Fund has conditionally approved partial funding for the project. Final contract negotiations are underway. The total project cost is estimated at \$7.5 million. The project will demonstrate the capabilities, versatility and economics of utility-scale electricity storage based on Electrovaya's modular Lithium Ion SuperPolymer® battery technology. According to industry experts, spending on the global energy-storage market is expected to exceed \$600 billion over

the next ten to 12 years (source: Piper Jaffrey 2009).

Electrovaya Inc. has also recently presented at two January 2010 conferences: the CIBC World Markets' Clean Energy Conference in Vancouver, B.C., with Chairman and CEO Sankar Das Gupta speaking on the Alternative Fuels Panel; and at the Electric Drive Transportation Association Conference and Annual Meeting at the Washington, D.C. Auto Show. Electrovaya also presented at Fleet Challenge Ontario's Green Fleet Management Breakfast Forum, in Toronto on February 23, 2010.

### **Azure Dynamics' Force Drive™ is accelerating Ford's first battery-powered vehicle to market.**

Ford's zero-emission EV version of its Transit Connect small commercial van, equipped with Azure Dynamics Corporation's (AZD) Force Drive™ battery electric powertrain, was officially launched at the Chicago Auto Show on February 10, 2010. The EV goes into production in late 2010. Ford Group's Vice-President of Global Product Development, Derrick Kuzak, introduced AZD CEO Scott Harrison and noted AZD's role in bringing the EV quickly to market. The AZD logo was prominently displayed on the EV, and Azure's Force Drive™ was the first thing seen under the hood. The New York Times, Wall Street Journal, Popular Mechanics, CNBC News and MSN, among other automotive, environmental and investor websites and blogs, covered the launch. Transit Connect Electric's top speed will be 75 mph, with a target range of up to 80 miles on a full charge.

### **EMC Members at the Vancouver Winter Olympics:**

**The world's "green Olympics" kicked off in Vancouver** in February 2010, with the announcement of the Green Capital Global Challenge. Mayor Gregor Robertson says the city is on track to win the competition from among a total ten world city competitors, but that more investment is needed to charge up Vancouver's status as the top city green economy. Billionaire Richard Branson of The Virgin Group and Virgin Atlantic Airways has praised the city's commitment and will hand out the "green medal" at the 2012 Summer Olympics in London, U.K.

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**QuickSider™ helps deliver Vancouver 2010.** The Purolator QuickSider™, a zero-emission EV courier truck manufactured by Unicell Limited (in partnership with ArvinMeritor) and co-designed by Unicell and Purolator, has been operating on Purolator delivery runs since it launched in Toronto in September, 2007. The truck reduces well-to-wheels emissions by as much as 80 percent over standard technology and is equipped with the ElectroVaya's SuperPolymer® battery pack. Now Quicksider™ has also gone to the Winter Olympics 2010 in Vancouver and was used by Purolator in its Vancouver deliveries.

**Azure Dynamics and Bullfrog Power, Olympic Torchbearers.** In December 2009, Azure Dynamics Corporation's Vice President of Marketing, Mike Elwood, participated in the Olympic Torch Relay for the Vancouver 2010 Winter Olympics, as did Bullfrog Power President Tom Heintzman.

**Future Vehicle Technologies (FVT) is entering its eVaro EV prototype in the \$10-million Automotive X 2010 Competition,** launching April 26 in Michigan. The X Prize Foundation will recognize the top production-capable car, among 51 entries, that achieves 100 miles per gallon or energy equivalent (mpge), for range, emissions and performance. Tests suggest the eVaro will exceed 300 mpge for combined city driving.

**Dr. Karim Zaghbi of Hydro-Québec's research institute, IREQ,** was recently awarded the 2010 prix d'excellence from the International Battery Materials Association for his work on the HQ Safe Li-ion battery technologies, which recharge to 100 percent in five minutes and present no loss of capacity after 20,000 cycles of 100 percent charge and discharge. Zaghbi presented on this topic at EMC's PHEV 09 in September 2009 in Montreal. He is the Chair of the 15<sup>th</sup> International Meeting on Lithium Batteries, taking place in Montreal June 21 – July 2, 2010.

**Hydro-Québec** has launched a new section on its web site to focus on its transportation electrification activities.

See <http://www.hydroquebec.com/transportation-electrification/index.html>

**VEVA test drives GM's Volt.** Members of the

Vancouver Electric Vehicle Association (VEVA) have test driven two pre-production Chevrolet Volts, at GM's invitation, while the Volts visited Vancouver for the 2010 Winter Olympics. Based on the limited course available onsite, VEVA has given the Volt highest marks at this stage for safety and its mobile interface [with schedule charging and vehicle monitoring on a downloadable app for the driver's mobile device]; and high marks for styling and design, electric-drive components, efficiency, recharging systems, and traction pack.

### Other EV Accelerators

**British Columbia to become the first Canadian province to be fully linked with EV charging stations.** Greenscape Capital Group Inc., through its Canadian subsidiary, energy retrofitter Green.Switch Capital, and in partnership with Garage Juice Bar, LLC, announced on February 4, 2010 that it is financing the installation of EV charging stations, single-stall plug-in kiosks, on properties owned or operated by existing Greenscape energy retrofit clients. Greenscape will also install on other third-party locations, through an extensive network across multiple industries. Revenues will be shared with partners. First installations will be complete in 30 days. A province-wide network is targeted for completion within a year. [[www.greenscapecapital.com/news](http://www.greenscapecapital.com/news)]

**The B.C. Throne Speech,** delivered by Premier Gordon Campbell on February 11, 2010, aims to strengthen B.C.'s economy and make positive social contributions. Among the priorities cited in the speech:

- The success of the new all-electric Canada Line has reinforced the government's commitment to invest record amounts in public transit, fix TransLink and get on with the Evergreen Line.
- New investment partnerships in infrastructure that encourage and enable clean modes of transportation, such as electric vehicles, hydrogen-powered vehicles and powered by compressed natural gas and liquid natural gas, will be pursued.

**Quebec's emissions lowest in Canada.** Quebec's Minister of Sustainable Development, Environment and

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Parks, Line Beauchamp, has announced that despite a 3.7 percent increase in greenhouse-gas emissions in the province between 2006 and 2007, Quebec is maintaining the lowest level of per-person greenhouse-gas emissions in Canada, at 11.5 tons, compared to the average Canadian level of 22.7 tons. Since 2003, Quebec has reduced its emissions by 1.4 percent. The announcement comes as part of a broader statement on the province's emissions since 1990. The province's action plan on climate change was launched in 2007.

**EVs poised to grow in China as two major obstacles eased.** China is tackling the issues of lack of necessary infrastructure and high price, toward the growth of EVs in China. The country plans to have approximately 10,000 HEVs, PHEVs and EVs on the road in 2010. This year, State subsidies on public electric-powered vehicles and taxi fleets will be extended to individual buyers of new energy vehicles. A framework benchmark for State standards on pure EVs will also be set up in the first half of 2010, and China's State Grid Corporation has announced plans to build EV charging facilities in 27 cities around the country in 2010. Local and global automakers are scrambling into the Chinese EV market, including Chang'an, Chery, BYD, Nissan, Toyota, BMW and Daimler. Low labour cost, abundant mineral resources, battery R&D production and government support will provide competitive advantages in China.

**Franco-German proposal recommends standardization mechanisms for EV/PHEV recharging.** During the February 4, 2010 Franco-German Ministers' Council, the two governments announced a pending common standardization proposal aimed at the creation of a single European norm with respect to electric vehicles and vehicle-recharging infrastructure. The groups are comprised of representatives from energy companies, automobile manufacturers, electrical equipment makers, public authorities and standardization agencies.

One of the principal recommendations of the Franco-German proposal is the Europe-wide use of a single electric plug and outlet, dedicated specifically to the recharging of EVs. Experts agree on the need for a specialized, thermally reinforced, heavy-duty electrical connection (wall socket or recharging terminal outlet plus pronged corded plug), as opposed to the common

domestic type. The recommendations stem from two major areas of concern: recharging safety and effectiveness, and anticipation of future needs within evolving norms and technological advances in Europe

**McGill University's Electric Snowmobile whistles into Vancouver 2010.** Welcomed by a crowd of thousands in Whistler, B.C. on February 6, 2010, McGill's electric snowmobile, developed in its Faculty of Engineering, carried injured local Olympian and freestyle skier Julia Murray on the relay leg from Squamish to Whistler—and to a relay rendezvous with Canadian ski legend Steve Podborski. Podborski skied the torch down to the last torch lighter and Whistler's waiting cauldron.

**The Resort Municipality of Whistler (RMOW)** has installed four new electric-vehicle charging stations in the first level of the Whistler Conference Centre underground parking lot, making it one of the first B.C. municipalities to have electric charging. Activated in mid-January, 2010, the stations allow electric vehicles to boost their batteries free of charge. Each charging station includes two plugs, one for overnight charges and the other for shorter-term charges.

**Coulomb Technologies of California** has installed six charging stations in Michigan, a month after touting the first of several charging stations installed in Vancouver in time for the Winter Olympics 2010. The company indicates that it has dozens of its stations in California and is aggressively expanding across the United States.

**PowerUp Canada's** Tzeporah Berman delivered the Olympic Torch via an E-Ride electric scooter during the Squamish, B.C. leg of the torch relay, on February 5, 2010.