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## News Release

# Pollution Probe and Horizon Utilities release new report on Electric Mobility Adoption and Prediction (EMAP) for the cities of Hamilton & St. Catharines

TORONTO, June 30, 2015 – Pollution Probe and Horizon Utilities are pleased to announce the release of a major new report on the use of electric vehicle technology in Hamilton and St. Catharines. The report is one of a series of products from Pollution Probe’s Electric Mobility Adoption and Prediction (EMAP) initiative. With over \$1 million in funding from the Government of Canada’s ecoENERGY Innovation Initiative, EMAP combines sophisticated market research methodologies with detailed grid integration and impact analyses to develop the detailed information that electricity distribution companies need to confidently support and plan for the consumer adoption of electric vehicle (EV) technology in the urban markets they serve.

“Our Government is investing in clean energy projects that create high-quality jobs for Canadians while helping protect the environment,” said the Honourable Greg Rickford, Canada’s Minister of Natural Resources. “The knowledge generated by this project will help drive energy innovation and economic growth in the cities of Hamilton and St. Catharines.”

“We’re making sure our customers can ‘connect to tomorrow’ by closely monitoring the growth of the electric vehicle market,” says Max Cananzi, President & CEO, Horizon Utilities. “The number of electric vehicles on the road is increasing, and that means there is growth in the number of charging stations and the amount of electricity needed to power those vehicles. Horizon Utilities is proud to have completed this innovative and in-depth project that will be increasingly valuable as the popularity of these vehicles continues to grow. From the utility’s perspective, it lays out a proactive strategy to ensure that Horizon Utilities continues to be in a position ready to handle the adoption of these new vehicles.”

EMAP is a model of collaborative research and development in Canada,” says Bob Oliver, Chief Executive Officer of Pollution Probe. “With support from project partners Electric Mobility Canada and with the engagement of a volunteer team of experts and community stakeholders, Pollution Probe and Horizon Utilities produced a comprehensive, evidence-based strategy that ensures Horizon Utilities is ready to serve the evolving EV charging demands of its customers, the public and the business community.”

Pollution Probe’s EMAP initiative is supported by funding from the ecoENERGY Innovation Initiative at Natural Resources Canada. In 2015, Pollution Probe will be releasing EMAP studies for a further four municipalities across Canada in partnership with local utility companies.

The full EMAP Horizon Utilities report is available free-of-charge at <http://www.pollutionprobe.org/publications/electric-mobility-adoption-and-prediction-emap-hamilton-st-catharines-2/>

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### About Pollution Probe

Established in 1969, Pollution Probe is a national, non-profit organization that exists to improve the health and well-being of Canadians by advancing policy that achieves positive, tangible environmental change. Pollution Probe has a proven track record of working in partnership with industry and government to develop practical solutions to environmental challenges. Visit [www.pollutionprobe.org](http://www.pollutionprobe.org) for details.

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### About Horizon Utilities Corporation

Horizon Utilities Corporation (Horizon Utilities) is a holding company owned by the cities of Hamilton and St. Catharines, an arrangement that came about through the merger of Hamilton Hydro Inc. and St. Catharines Hydro Utilities Services Inc. in 2005. It is now the fourth largest municipal local distribution company (LDC) in Ontario, with 242,000 customers, 425 employees and \$566 million in assets. Horizon is a pioneer province-wide in conservation programs, an industry leader in sustainable development and the first member of the Canadian Electricity Association to receive Sustainable Electricity Company certification.

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## Horizon Utilities EMAP Report Summary – Hamilton and St. Catharines

- Pollution Probe’s EMAP research and development methodology was applied to the cities of Hamilton and St. Catharines in collaboration with Horizon Utilities (the local distribution company serving the region), Environics Research and Electric Mobility Canada. An advisory group of representatives from the Cities of Hamilton and St. Catharines and from Hamilton Mitsubishi provided guidance in the design and execution of the project.
- **Primary findings:**
  - Current patterns of EV charging in the Horizon Utilities service area do not represent a risk to the utility’s capacity to maintain a safe and reliable supply of power to all its customers. Nor is the demand for power to charge EVs at home expected, in the short term, to exceed the rated capacities of Horizon’s current infrastructure assets at the neighbourhood level. But, in the coming years, EV charging will increasingly put the integrity of the utility’s service at risk. The grid assessment shows that, if the effects of EV charging are taken into consideration in the process of scheduled infrastructure upgrades, such risks can be mitigated.
  - Encouraging charging between the hours of 11 p.m. and 5 a.m., when demand for power is lowest, would allow a greater number of EVs to charge without necessitating any changes to the existing electricity distribution assets. Additional transformer capacity may be necessary to accommodate greater numbers of EVs charging, but EMAP shows that upgrading to a transformer rated at 100 kVA would accommodate the majority, if not all, of the households charging EVs on most streets in Horizon’s service area.
  - Because EV adoption may, in the long term, pose challenges for the electricity distribution system but at the same time deliver significant consumer and environmental benefits, it makes sense for Horizon Utilities to pre-emptively address the risks associated with EV charging and to proactively capitalize on the benefits.

### ***Profile of the potential early adopter of EV technology in Hamilton and St. Catharines:***

- Potential early adopters are older, better educated and more affluent than the general population. The majority live in detached, single-family homes.
- Personal experience with an EV is linked to greater interest in owning one.
- The majority of potential early adopters use their vehicles every day.
- More than half of potential early adopters are considered vehicle commuters.
- Half of vehicle commuters leave home between 7 a.m. and 9 a.m., and four in ten return home between 5 p.m. and 7 p.m.
- The majority of vehicle commuters park in employer-provided lots.

### ***Barriers to, and opportunities for, EV adoption:***

- Among potential early adopters, environmental benefits are the most mentioned advantage of EVs. Purchase price and limited range are the most mentioned barriers.
- An EV would have to have a range of at least 200 kilometres on a single charge for most potential early adopters to feel comfortable.

- The majority of those who would consider purchasing an EV think that fully charging it should take less than four hours.
- Access to faster home charging is considered very important.

▪ **Key project output:**

A four-point strategy for Horizon Utilities and its stakeholders to mitigate the risks and optimize the benefits of EV use in Hamilton and St. Catharines

1. Enhance utility responsiveness to evolving patterns of EV charging
2. Explore ancillary service opportunities presented by EV technology
3. Establish an active engagement with customers to promote the benefits of EV technology and encourage uptake
4. Promote EV technology and charging infrastructure as important elements contributing to the economic development of the region