

Canada's Natural Gas for Transportation Deployment Roadmap

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THE DEPLOYMENT ROADMAP is a first-of-its-kind Canadian initiative. Natural Resources Canada has, in the past, partnered with other industries to develop “technology roadmaps,” but this is the first time that the focus has been on market deployment and on identifying barriers that need to be addressed in order to facilitate market development.

With more than three decades of experience with natural gas vehicles in North America, we have the natural gas vehicle technologies and we have an abundant, affordable fuel supply. We also know that there are environmental and economic benefits from natural gas vehicle use. The question posed at the start of the Roadmap process was, given where we are starting from in Canada, what is the best near-term market development focus for natural gas in the transportation sector?

Early in 2010 the Deputy Minister of Natural Resources Canada began a roundtable process that led to the release of the “Natural Gas Use in the Canadian Transportation Sector – Deployment Roadmap” report in January 2011. Along with Canadian Natural Gas Vehicle Alliance (CNGVA), CGA and other natural gas value chain representatives, end users, provinces, vehicle manufacturers and other industry stakeholders, a working group-based process was launched to verify the facts for natural gas use, assess the business case, better understand fleet end-user needs and identify the most promising segments for market development. The overall finding of the Roadmap work was the factory-built trucks and buses that operate in return-to-base and regional corridors offered the best near-term market development opportunity.

The Roadmap included 10 recommendations in four key areas: (1) de-risking investment and early adoption, (2) addressing information gaps, (3) increasing capacity to sustain markets and (4) ensuring ongoing competitiveness. In order to support development and guide joint industry-government efforts, a Roadmap Implementation Committee was created. Committee membership includes industry and federal government representatives along with the Provinces of Alberta, British Columbia and Ontario. Quebec is also in the process of joining. Reporting to the Implementation Committee are an Education and Outreach Working Group, a Technical Advisory Group and a soon-to-be formed Emerging Markets Working Group with an initial focus on marine applications.

Each group is composed of representatives from industry and government. Activities are cost shared with the CNGVA being the primary channel through which industry contributions, both financial and in-kind, are provided. Natural Resources Canada’s financial contributions total \$3 million over five years through the ecoEnergy for Alternative Fuels program. The Province of Alberta also recently advised that it intends to provide \$2.3 million to leverage federal and industry contributions for the Roadmap work.

Roadmap implementation activities target barriers ranging from fleet outreach and education to technical codes, standards and regulatory harmonization. The education activities underway over the past five months will culminate in a major launch event in September 2012 focused on a newly designed website going live and the initiation of outreach hubs to deliver workshops and act as local resources for fleets across Canada. All education activities will have a common look and feel as a branding for the initiative is being developed.

Technical accomplishments to date include re-initiating CSA committee activities, development of draft LNG refueling station content as an amendment to Canada’s CSA Z276 industrial-scale LNG code which is expected to be integrated into the code in 2013, and the release of a Technical Guideline for Indoor Maintenance, Storage and Loading of CNG and LNG Vehicles. Several new technical activities are soon-to-be launched including developing a “safety equivalency” rationale for CNG compressor stations that can be used to inform local authorities having jurisdiction and engaging a technical expert to look at impact loading requirements in Canada with a view to harmonizing with the U.S. requirements.

The Emerging Markets Working Group will initially focus on marine applications and Transport Canada has been invited to participate as a group co-chair. Transport Canada recently initiated work with the CNGVA to assess barriers to LNG as a fuel for West Coast marine applications. It is expected that this work will be monitored by the Emerging Markets Working Group for potential finding that could be applied in Eastern Canada including the Great Lakes region.

There has been a significant amount of work already accomplished to address barriers to natural gas vehicle deployment within the first year of the Roadmap implementation work. Looking ahead, industry and government will continue to collaborate over the next four years to open up channels to support fleet end users interested in deploying medium and heavy natural gas trucks and buses. 💧

