

Regulatory area to be addressed	<p>Natural Gas Use in Transportation</p> <p>The objective of this work is to facilitate the use of natural gas vehicles as part of the seamless Canada/U.S. transportation system which accounts for more than \$350B in cross border trade, by: supporting the alignment of existing codes and standards, where feasible; and, co-developing new binational codes and standards, where applicable. Although DOE and NRCan do not formally develop, promulgate, or enforce the use of vehicle-related codes and standards, DOE and NRCan do play an important role in the consensus-based development process, providing objective data and facilitating collaboration among key stakeholders, both domestically and internationally.</p>
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Work Stream A Standards	<p><u>Objective:</u> To foster the development of a comprehensive suite of voluntary performance-based component standards, pertaining to the use of natural gas as a fuel for on-road applications.</p> <p><u>Rationale:</u> Stakeholders have identified 11 standards, which should be developed to ensure comprehensive coverage of all aspects of liquefied natural gas (LNG) use in on-road applications. In the absence of these standards, multiple technologies may enter the marketplace, and cause confusion (for example, truck drivers may not be certain which type of nozzle will be available when refuelling). Variances can also lead to increased costs for manufacturers who need to develop products for each country based on differing technical requirements (such as the amount of force that a cylinder can withstand in a vehicle crash).</p> <p><u>Short Term:</u> The focus in year one will be on the top two priority standards (for refuelling nozzles and on-board vehicle storage) as identified by stakeholders.</p> <p><u>Mid/Long term focus:</u> Once the initial priority standards pertaining to LNG have been developed (in the 2-3 year range), an assessment of further industry needs will be carried out to identify future work. These may include: the development of additional standards for LNG; the revision of existing standards for compressed natural gas (CNG) to include advancements in technology; and/or the development of standards for refuelling infrastructure which could service multiple modes (marine, rail, heavy equipment).</p>
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Department/Agency	 United States Department of Energy	 Canada Natural Resources Canada
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Planned initiatives and sub-deliverables		Date
Initiative A - LNG Standards Development		
1	<ul style="list-style-type: none"> Facilitating the finalization of CSA LNG1 standard (refuelling nozzle and receptacle). 	March 2015

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2	<ul style="list-style-type: none"> Facilitating the development and finalization of CSA LNG2 standard (on-board vehicle NG storage container). 	March 2015 - January 2016
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Initiative B - Information Gathering/ Stakeholder Engagement		
1	<ul style="list-style-type: none"> Analysis of issues related to temperature compensation, ensuring that fuel pressure in vehicle storage tanks does not exceed allowable limits due to significant fluctuations in temperature (for example, when a vehicle is brought into a heated maintenance facility after refuelling in the cold). 	April 2015 - March 2016
2	<ul style="list-style-type: none"> Quarterly Canada/U.S. stakeholder technical teleconferences in conjunction with the Natural Gas Roadmap Technical Advisory Group (TAG). 	March 2015 June 2015 September 2015 December 2015

Work stream B Code Revision/ Development	<p><u>Objective:</u> To provide information and foster collaboration that facilitates the revision of existing codes, and enables the development of new binational codes for natural gas use in transportation, to address gaps in code coverage as identified and prioritized by stakeholders.</p> <p><u>Rationale:</u> Canadian codes have recently been updated for CNG use on board vehicles, and for LNG and CNG refuelling stations. These revisions were made to further align the codes with those in the U.S. and to include advances in technologies. However, in some instances, the Canadian codes are now more up-to-date than those in the U.S. Ensuring that any further revisions occur concurrently (as much as possible) would reduce confusion on the part of manufacturers, and end-users.</p> <p><u>Mid/ Long term focus:</u> There remain a number of areas, including maintenance facilities, mobile refuelling, and emerging markets (marine, rail, drilling, and mining), where no codes exist in either country. Facilitating the development of binational codes in these areas will ensure a common environment for new natural gas vehicle products and their operation. Once further alignment has occurred (1-3 years), the long term work will include identifying, prioritizing, and beginning the development of new binational codes, which could cover emerging markets, as recommended by stakeholders.</p>
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Department/Agency	 United States	 Canada
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Planned initiatives and sub-deliverables	Date
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Initiative A - Revision of Existing Codes		
	<ul style="list-style-type: none"> Facilitate revisions to CSA B109 (Natural gas vehicles code) to include LNG vehicles. 	March 2015
	<ul style="list-style-type: none"> Facilitate revisions to CSA Z276 Annex D (LNG vehicle fuelling stations) for temporary refuelling installations. 	December 2015
Initiative B - Information Gathering/ Stakeholder Engagement		
	<ul style="list-style-type: none"> Quarterly Canada/U.S. stakeholder technical teleconferences, in conjunction with TAG. 	March 2015 June 2015 September 2015 December 2015

Work stream C Regulatory Variances	<p><u>Objective:</u> To work within the existing Canadian regulatory framework to identify regulatory differences, and engage relevant regulators, on the feasibility of addressing these variances. NRCan will share information on issues, activities, and progress with their DOE counterparts, and U.S. stakeholders.</p> <p><u>Rationale:</u> Given the integrated nature of the North American transportation system (more than 60% of Canada/U.S. trade is carried by freight trucks), regulatory barriers to operating vehicles across multiple jurisdictions make the business case of using NG less favorable for fleets. Focus in year one will be on priority areas identified by Canadian stakeholders, where regulatory variances impede the operation of NGV's across provincial and federal jurisdictional boundaries, such as:</p> <ul style="list-style-type: none"> Weight allowance Migration of existing CNG refuelling infrastructure to 3600 psi LNG metering
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Department/Agency	 Canada
	Natural Resources Canada

Planned initiatives and sub-deliverables		Date
Initiative A - Weight Allowance		
	<ul style="list-style-type: none"> Continue dialogue with provincial regulators, and report back to the next interprovincial working group on weights and measures. 	March 2015 - February 2016
Initiative B - Accommodating Increased refuelling pressure		
	<ul style="list-style-type: none"> Analysis of the feasibility, and pathways to enable existing refuelling infrastructure to accommodate increased pressure allowance. 	March 2015 - December 2015
Initiative C - LNG Metering regulations		

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	<ul style="list-style-type: none"> Working with stakeholders to engage in developing a LNG metering certification. 	March 2015 - December 2015
Initiative D - Information Gathering/ Stakeholder Engagement		
	<ul style="list-style-type: none"> Regulatory issues are a standing agenda item for the monthly conference calls of the TAG. 	Monthly