

NGV TECHNOLOGY FORUM

*Harmonization of North American
Codes & Standards*

- October 15, 2014



 **GO WITH
NATURAL GAS**
A smart choice for transportation

Regulatory Cooperation Council (RCC)

- Joint U.S.- Canada initiative focused on harmonization
- RCC established in 2011 in order to improve the way regulatory departments and agencies in both countries work together
- Aim to make it easier for businesses to operate in both countries
- Original *Joint Action Plan* covered 2011-2013 period
- Second action plan is *Joint Forward Plan*
- Natural gas for transportation 1 of 24 priority areas
- Focus in three areas:
 1. Development of harmonized codes & standards
 2. Information sharing between U.S. DOE & NRCAN
 3. Exploring shared challenges

Commitment Statement

“...NRCan and U.S. DOE will continue to build on previous work and facilitate the development of common codes and standards by industry organizations, and explore any opportunities for alignment among stakeholders. This includes a commitment to share information, identify emerging areas in natural gas deployment, and explore challenges in codes and standards harmonization.”

Stakeholder Session Outcomes

- Held on October 8th in Washington, DC
- Canadian & American stakeholders attended including CNGVA and NGVAmerica along with industry representatives and other associations
- Natural gas for transportation session led by NRCan & DOE
- Early focus will be on-road transportation
- Initial draft workplan by February 2015
- Expect annual updates and annual stakeholder session
- Total timeframe for work: 2-5 years

Issues List Advanced for Consideration

- CNGVA drafted list of 14 issues in 3 areas:
 - a. Codes & standards development needs
 - b. Information sharing priorities
 - c. Issues of mutual interest to explore
- Circulated list in advance to seek concurrence from CVEF, NGV America, and industry members including CSA Group, GM Canada, Shell & Canadian Gas Association
- Shared with NRCan and U.S. DOE at stakeholder session
- Current known issues

Develop Common C&S - CNG



1. Update existing dispenser standard & add temperature compensation
2. Create new standard for high flow receptacle
3. Create new standard for station-to-vehicle communication protocol
4. Create fuel quality standard
5. Create home refueling standard

Develop Common C&S - LNG



1. Create 4 new component standards for LNG vehicles & stations
2. Create fuel quality standard
3. Create L-CNG standard to address odorant issue
4. Update existing codes to add automatic ESD requirement

Share Information

1. Improve existing information sharing process related to incident observations and lessons learned provided to C&S committees:
 - CVEF's role & funding horizon also highlighted here
2. Develop a North American first responder best practice document:
 - Follow model established for hydrogen & fuel cell vehicles (SAE J2990-1) and hybrid & Evs (SAE J2990)
3. Develop a North American fuel system installation best practice document – for CNG and possibly LNG

Explore Challenges

1. Determine how best to systematically address CNG cylinder end of life issues
 - Similar situation in both countries with early generation vehicles having cylinders that are now reaching end of life
2. Gather data to better understand methane emissions
 - More information is needed in order to develop system-level requirements and related performance tests
3. Migrate CNG refueling infrastructure to 3,600 psi
 - March 2014 update to CSA B108 allows for 3,600 public station fill pressure; issue regarding how to ensure that vehicles designed with lower pressure cylinders do not fill at higher pressure stations

Moving Forward



- Enhanced department-to-department efforts
- Stakeholder engagement process to be further defined
- Not a specific focus on regulations given roles of NRCan and U.S. DOE
- Address current issues and ensure no future misalignments

Thank You

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