



NOVEMBER 6, 2019

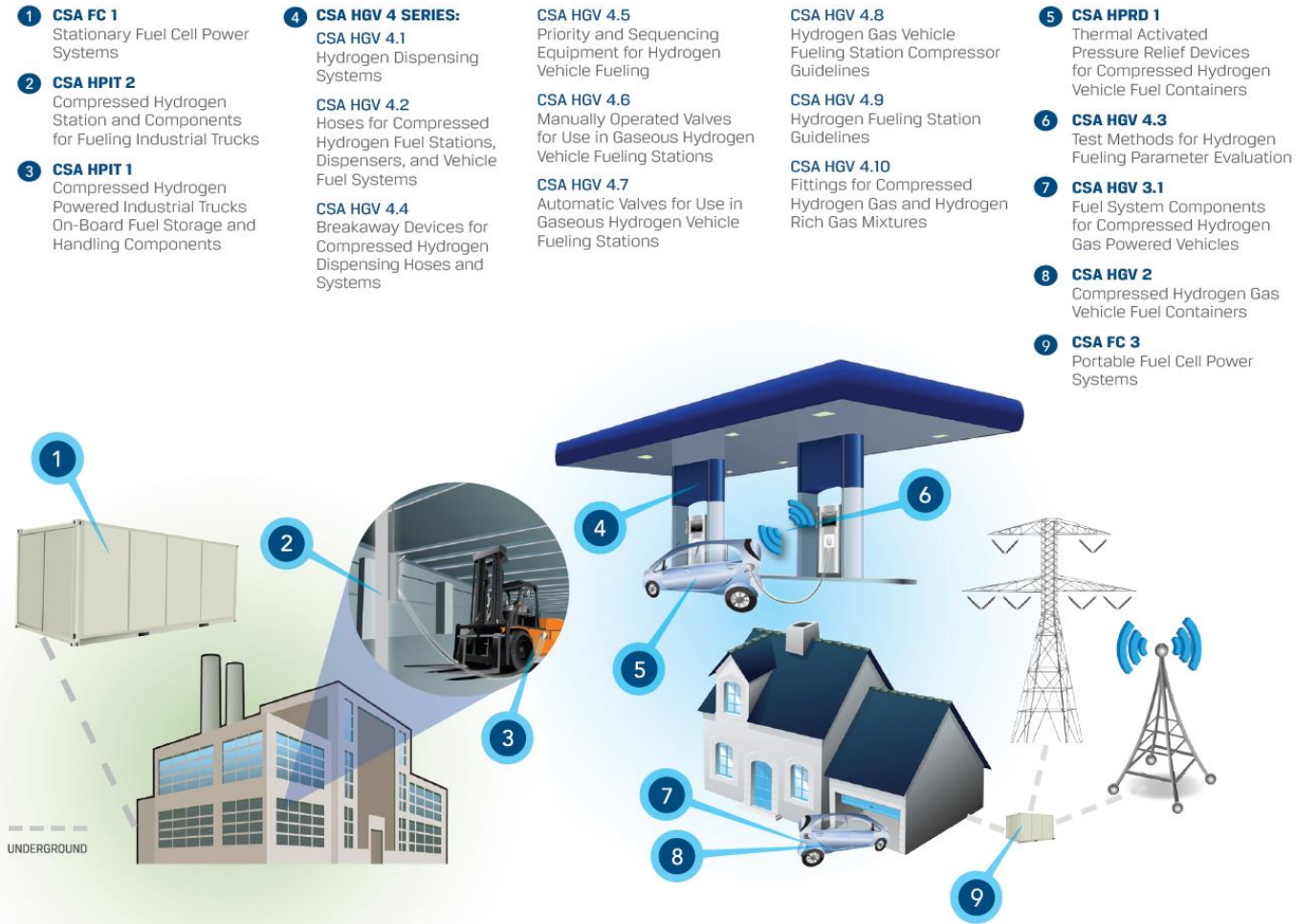
CSA Group Updates

7th Meeting for UN GTR 13 (Phase 2)

CSA Group's Hydrogen Standards

PUBLISHED BY CSA GROUP

- CSA Group has engaged with U.S. Department of Energy since early 2000s to develop initial suite of standards for FCEV and hydrogen station deployment
- 22 standards published to date
- 13 standards licensed to ISO for international standards development
- MOU with SAE International
- MOU with Bureau de normalisation du Québec

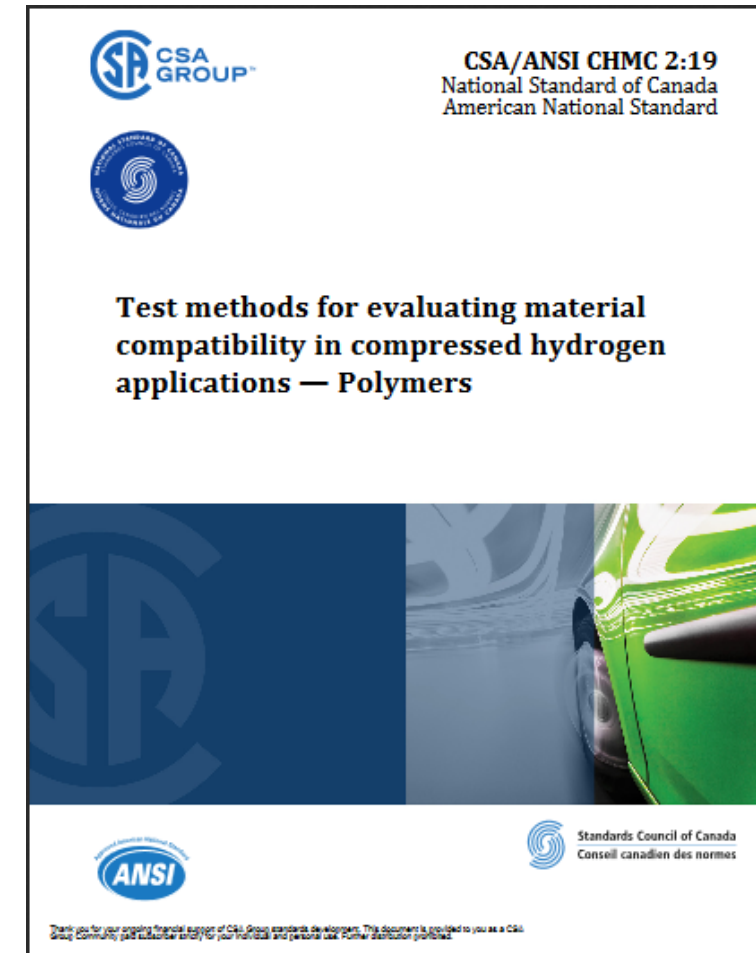


CSA Group's Hydrogen Standards

RECENT ACTIVITIES

Recently Published

- *HGV 4.3 Test methods for hydrogen fueling parameter validation*
 - Companion document to SAE J2601
 - First binational HGV standard published by CSA Group
- *CHMC 2 Test methods for evaluating material compatibility for compressed hydrogen applications – polymers*
 - Binational standard



CSA Group's Hydrogen Standards

RECENT ACTIVITIES

In Development

- *HGV 2 Hydrogen vehicle fuel containers*
 - Binational edition – due for public review Q4 2019
 - Harmonizing with ISO 19881
- *HPRD 1 Thermally activated pressure relief devices for compressed hydrogen vehicle fuel containers*
 - Binational edition – due for public review Q1 2020
 - Harmonizing with ISO 19882
- *HGV 3.1 Fuel system components for compressed hydrogen gas powered vehicles*
 - Project initiation in Q4 2019
- *HGV 4.3 Test methods for hydrogen fueling parameter validation*
 - Update to align with J2601-2019
 - Project initiation in Q4 2019



Questions?



Thank you.

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