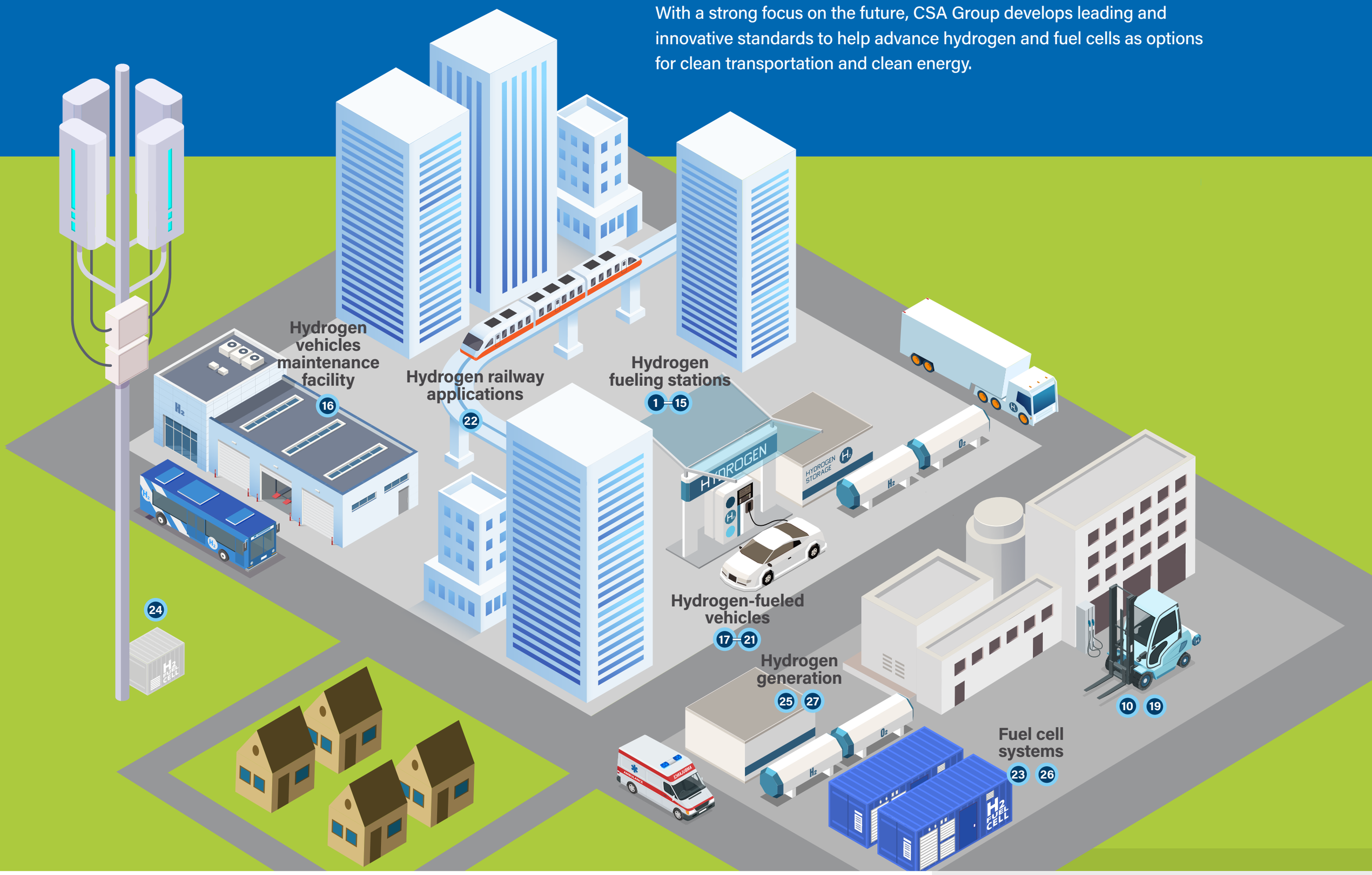
# Standards for Hydrogen Transportation and Fuel Cell Technologies

With a strong focus on the future, CSA Group develops leading and innovative standards to help advance hydrogen and fuel cells as options for clean transportation and clean energy.




## Standards publications

### Hydrogen fueling stations

1 - **CSA/ANSI HGV 4.1**, *Hydrogen-dispensing systems*

2 - **CSA/ANSI HGV 4.2**, *Hoses for dispensing compressed gaseous hydrogen*

3 - **CSA/ANSI HGV 4.3**, *Test methods for hydrogen fueling parameter evaluation*

4 - **CSA/ANSI HGV 4.4**, *Gaseous hydrogen – Fuelling stations – Valves*

5 - **CSA/ANSI HGV 4.5**, *Priority and sequencing equipment for hydrogen vehicle fueling stations*

6 - **ANSI/CSA HGV 4.8**, *Hydrogen gas vehicle fueling station compressor guidelines*

7 - **CSA/ANSI HGV 4.9**, *Hydrogen fueling stations*

8 - **CSA/ANSI HGV 4.10**, *Fittings for use in compressed gaseous hydrogen fueling stations*

9 - **CSA HGV 5.2**, *Compact hydrogen fueling system*

10 - **CSA HPIT 2**, *Dispensing systems and components for fueling hydrogen powered industrial trucks*

11 - **ANSI/CSA CHMC 1**, *Test methods for evaluating material compatibility in compressed hydrogen applications – Metals*

12 - **CSA/ANSI CHMC 2**, *Test methods for evaluating material compatibility in compressed hydrogen applications – Polymers*

13 - **CSA /ANSI B107**, *Enclosed hydrogen equipment – Safety*

14 - **CSA/ANSI TS-4.3.5**, *Test methods for high-flow hydrogen fueling parameter evaluation* (in progress)

15 - **CSA TS-5.3**, *Transportable hydrogen refuelling units* (in progress)

### Hydrogen vehicle maintenance facilities

16 - **CSA B401.3**, *Hydrogen vehicle and trailer maintenance facilities code*

### Hydrogen-fueled vehicles

17 - **CSA/ANSI HGV 2**, *Compressed hydrogen gas vehicle fuel containers*

18 - **CSA/ANSI HGV 3.1**, *Fuel system components for compressed hydrogen gas powered vehicles*

19 - **CSA HPIT 1**, *Compressed hydrogen powered industrial truck on-board fuel storage and handling components*

20 - **CSA/ANSI HPRD 1**, *Thermally activated pressure relief devices for compressed hydrogen vehicle fuel containers*

21 - **CSA SPE-2.1.3**, *Best practices for defueling, decommissioning, and disposal of compressed hydrogen gas vehicle fuel containers*

### Fuel cell and hydrogen generation systems

22 - **CSA TS-601**, *Hydrogen fuel cell power systems for rolling stock*

23 - **CSA/ANSI FC 1/CSA C22.2 NO. 62282-3-100**, *Fuel cell technologies – Part 3-100: Stationary fuel cell power systems – Safety*

24 - **ANSI/CSA AMERICA FC 3**, *Portable fuel cell power systems*

25 - **CSA/ANSI FC 5**, *Hydrogen generators using fuel processing technologies – Part 1: Safety*

26 - **CSA/ANSI FC 62282-2-100/CSA C22.2 NO. 62282-2-100**, *Fuel cell technologies – Part 2-100: Fuel cell stacks and fuel cell modules – Safety* (in progress)

27- **CSA/ANSI B22734**, *Hydrogen generators using water electrolysis – Industrial, commercial, and residential applications*

## CSA Group – the leader in hydrogen and fuel cell standards

**Our organization has a long history in the development of standards for alternative energy solutions:**

- CSA Group published the first North American fuel cell standard in 1998.
- In 2002, CSA Group started working with Natural Resources Canada, U.S. Department of Energy, and other industry stakeholders to develop safety standards for hydrogen vehicles and hydrogen fueling stations.
- Multiple international hydrogen standards are based on CSA Group standards.

CSA Group continues to update its key hydrogen and fuel cell standards to reflect technological advances in this field.

**CSA Group's Transportation program regularly seeks new volunteer members with expertise in hydrogen transportation, fuel cell, and hydrogen generation for binational technical committees.**

**Contact fuels@csagroup.org for more information.**

### Learn more

www.csagroup.org/H2transportation

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