

## **National Hydrogen and Fuel Cell Codes and Standards Coordinating Committee (HFC4)**

### **HFC4 Mission**

The National Hydrogen and Fuel Cells Codes and Standards Coordinating Committee (HFC4) provides a forum for effective communication and collaboration between all stakeholders in the hydrogen and fuel cell REGULATIONS codes and standards community. HFC4 leadership will facilitate the development of the HARMONIZED, consensus-based, codes and standards that are critical to ensure public safety and to accelerate the commercialization of new hydrogen and fuel cell technologies for stationary, transportation and portable applications.

### **HFC4 Strategic Objectives**

HFC4 will encourage and facilitate the timely and efficient incorporation of data-based hydrogen and fuel cell safety criteria into the existing and proposed national and international codes and/or standards promulgated by:

- American Petroleum Institute (API)
- American Society of Mechanical Engineers (ASME)
- ASTM International
- Compressed Gas Association (CGA)
- CSA America / CSA International
- Institute of Electrical and Electronics Engineers, Inc. (IEEE)
- International Code Council (ICC)
- International Electrotechnical Commission (IEC)
- International Organization for STANDARDIZATION (ISO)
- National Fire Protection Association (NFPA)
- National Institute of Standards and Technology (NIST)
- Society of Automotive Engineers (SAE)
- Underwriters Laboratories
- Other applicable organizations through active collaboration with ANSI
- DEPARTMENT OF TRANSPORTATION
- CALIFORNIA DIVISION OF MEASUREMENT STANDARDS (DEPT OF AGRICULTURE)

HFC4 will promote development of codes, standards and regulations that establish a minimum level of safety for today without hindering new technology development and future commercialization. Performance-based codes, standards and regulations will be encouraged wherever practicable.

HFC4 will also promote development of performance measuring standards that take all applicable technologies into account, without creating any advantage for one or more technologies over others except for the inherent aspects of the various technologies. HFC4 will promote performance measuring standards that compare all technologies in a similar manner without prejudice.

HFC4 will facilitate consensus based codes and standards development by working cooperatively with all stakeholders to take their viewpoints and all technologies into account.

Stakeholders: The community of stakeholders includes codes and standards developers, industry members, technology developers, codes and standards users, architects and engineers, legislative and regulatory bodies that adopt codes, standards and other regulations, safety officials, first responders, and the US Government including the USDOE, USDOT, US EPA, US DOC (particularly NIST), OMB, National Laboratories, hydrogen and fuel cell users and consumers, and others. International stakeholders shall also be taken into account where their products or services might serve the US market.

HFC4 will support and encourage technical and operational consistency among and across the codes and standards developed by different organizations. The HFC4 will provide a forum to list the differences, understand the details, and facilitate consistency.

HFC4 will promote the harmonization of international hydrogen and fuel cell codes, standards and regulations by outreach to and collaboration with the international organizations involved in their development.

#### **HFC4 Charter**

HFC4 will convene meetings, in person and using teleconferencing, to allow the productive interaction of stakeholders to achieve these strategic objectives:

- Agendas shall be set beforehand, with input from affected stakeholders;
- Meeting minutes shall be published and accessible on the web at [www.hydrogenandfuelcellsafety.info](http://www.hydrogenandfuelcellsafety.info)
- Action items for members and affected stakeholders will be tracked and communicated; and
- Smaller working groups may be established to complete specific items within the NHA or USFCC codes and standards committees, depending on topic and staff resources. In this case, a roster of working group members will be reported to HFC4 to facilitate discussion and input from others, and the results of the working group will be reported to the HFC4, as well as provided to the SDO/CDOs.

Wherever possible, in person meetings will be co-located with applicable meetings or conferences to minimize unnecessary travel and maximize opportunities to engage stakeholders. A calendar of upcoming meetings and conferences will be maintained at [www.hydrogenandfuelcellsafety.info](http://www.hydrogenandfuelcellsafety.info) and [www.fuelcellstandards.com](http://www.fuelcellstandards.com).

HFC4 will provide a forum to discuss standards, proceedings, and rulemakings that are open for input and comment as part of their drafting, review, revision, or approval cycles. Information on how to comment, when to comment, and the process for defending comments will be provided with as much advance notice as practicable. SDO/CDOs will be encouraged to provide a 90-day notice and logistic details on upcoming comment periods to facilitate industry input.

HFC4 will help establish and communicate priorities and align resources for codes and standards development, and the necessary performance and safety data generation for decision making, with the existing codes and standards development cycles. Criteria will include assessing the potential safety risks and the impact of codes and standards availability on commercialization timelines.

HFC4 will facilitate coordinating and integrating the many global activities in hydrogen codes and standards development to help ensure their consistency and the best use of resources.

HFC4 will work to help familiarize building code and fire safety professionals, local/state/Federal policymakers and other strategic stakeholders (e.g., homebuilders, architects, transportation regulators, users and consumers, etc.) with relevant hydrogen and fuel cell technical and codes and standards information.

HFC4 will support [www.fuelcellstandards.com](http://www.fuelcellstandards.com) and [www.hydrogenandfuelcellsafety.info](http://www.hydrogenandfuelcellsafety.info) to provide up-to-date information on hydrogen and fuel cell codes and standards activities worldwide. [www.fuelcellstandards.com](http://www.fuelcellstandards.com) will maintain the matrix of ongoing and completed codes, standards and regulations, with status and contact information. [www.hydrogenandfuelcellsafety.info](http://www.hydrogenandfuelcellsafety.info) will provide minutes of the HFC4 meetings, as well as short written reports of timely safety, codes and standards activities and actions, and emphasize when documents are open for comment, new activities are formed, and opportunities to influence codes and standards are coming up.

HFC4 will identify critical gaps and deficiencies in hydrogen and fuel cell codes and standards and formulate recommendations to address them.