

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

**Wednesday, June 15, 2022  
TIME: 2:00 – 3:00 pm (Eastern Standard Time)**

**Minutes**

**Attendees**

**Mark Luth  
Karen Quackenbush  
Kelvin Hecht  
Laura Hill  
Juana Williams**

**Owen Hopkins  
Andrew Adkins  
Bob Boyd  
Jennifer Gangi  
Eric Nelson**

**Sara Marxen  
Martin Gresho  
John Eihusen**

**I. Welcome and Housekeeping Items**

- The committee reviewed FCHEA's anti-trust guidelines and the meeting agenda
- The previous meeting minutes were approved as drafted.

**II. DOE/HQ Update**

**Laura Hill**

The Hydrogen Program AMR happened last week, check out the website for more information:  
[https://www.hydrogen.energy.gov/annual\\_review.html](https://www.hydrogen.energy.gov/annual_review.html)

The Notice of Intent for the Regional Hydrogen Hubs is available here: <https://oced-exchange.energy.gov/Default.aspx#Foald4e674498-618c-4f1a-9013-1a1ce56e5bd3>

**III. Codes & Standards Events and Fuel Cell Safety Information**

<http://www.hydrogenandfuelcellsafety.info/events/>

**Karen Quackenbush**

**Request:** technical resource updates for the Hydrogen and Fuel Cell Safety website. Any committee members who have materials they would like hosted on the website can send them to Karen Quackenbush ([kquackenbush@fchea.org](mailto:kquackenbush@fchea.org)) or Connor Dolan ([cdolan@fchea.org](mailto:cdolan@fchea.org)).

**IV. Global Technical Regulations**

**Ian MacIntire**

An update on GTR-13 Phase 2 was provided before the meeting. GRSP is currently reviewing the Informal Document. Task Force 0 (drafting) held a meeting last week to resolve editorial comments (the comments were from IWG participants and GRSP reviewers). Some technical comments were forwarded from Task Force 0 to Task Force 3 (test procedures). Task Force 3 will now hold a meeting on June 23. There is a co-sponsors meeting scheduled for June 28, and the next IWG (#15) is scheduled for June 29 & 30. Current work includes resolving final comments/issues and planning for the Formal Document.

**V. Codes and Standards Organization Updates**

**Institute of Electrical and Electronics Engineers**

**Mark Siira**

No updates at this time.

**International Electrotechnical Commission IEC TC 105**

**Kelvin Hecht**

The 4<sup>th</sup> edition of the stationary fuel cell standard is ongoing. That document is rooted in the US CSA standard and previous standards, which were focused on natural gas. As hydrogen power plants have grown, it has been included awkwardly in the standard, which will be changed with this edition to include both fuels equally.

A. Posted intentions to initiate 3rd editions

- IEC 62282-3-200 Stationary Fuel Cell Power Systems - Performance Test Methods
- IEC 62282-3-201 Small stationary polymer electrolyte fuel cell power system – Performance test method

B. 2022 Plenary meeting

- October 20-21 (probably a hybrid)
- Opportunity for member countries to present “*Overview on National Hydrogen and Fuel Cells activities*”
  1. DOE
  2. FCHEA

**International Standards Organization ISO/TC 197**

**Karen Quackenbush/Jay Keller**

WG 30 held a joint WG meeting with TC 22/SC 41 on components on June 14.

WG 31 on O-rings meetings tomorrow, June 16.

WG 34 on H2 generators using water electrolysis test protocols and safety meets on June 22.

WG 31 on fuel quality has a series of meetings on June 28-30 and July 5-7.

WG 15 on cylinders and tubes for stationary storage meets on July 8.

WG 18 on GH2 land vehicle fuel tanks meets on July 12.

WG 24 has a document out for CD, 19885-1 closing date July 7<sup>th</sup>. There was a comment about the question being asked of reviewers provided to the WG based on recent ISO changes, so the wording will change over the upcoming documents.

There is an update being worked on for a technical report on safety protocols (TR 15916, closing date July 1st), which Jay Keller has updated the group on previously. New ISO rules indicate that recommendations are not allowed in technical reports, which will mean a change to the document wording.

**National Fire Protection Association NFPA 2**

**Chris LaFleur**

The technical committee is still waiting for the ballot. Once available, this will be reviewed with FCHEA's technical codes task force.

**International Codes Council (ICC)****Spencer Quong**

No update at this time, due to being between cycles.

**Society of Automotive Engineers (SAE)****Mike Steele**

No update at this time.

**CSA****Sara Marxen**

Active Projects		
TSC	Designation/Title	Status
HGV 5	HGV 5.2, Compact hydrogen fueling systems	This project is to develop a NEW standard for Compact Hydrogen Fueling Systems (HGV 5.2). The draft will be circulated for Technical Committee Ballot in June.
HGV 3	HGV 3.1, Onboard vehicle components for hydrogen gas vehicles	This project is a revision of an existing standard for technology updates, as well as inclusion of the on-board vehicle hose requirements (transferred from HGV 4.2). The TSC is dispositioning Technical Committee Ballot comments.
HGV 2	HGV 2, Compressed hydrogen gas vehicle fuel containers	This project is a revision of an existing standard. Content development meetings have concluded and this draft is currently available for public review. <a href="https://publicreview.csa.ca/Home/Details/4606">https://publicreview.csa.ca/Home/Details/4606</a>
HGV 4.1	HGV 4.5, Priority and sequencing equipment for hydrogen vehicle fueling	This project is to develop a standard to REINSTATE an updated edition of a Priority and Sequencing standard. A seed document draft has been prepared and a kickoff meeting with the HGV 4.1 TSC is being scheduled for July 2022.
C22.2 No. 22734	Hydrogen generators using water electrolysis	The CSA technical subcommittee continues to work on a binational adoption of ISO 22734. Contact Mark Duda ( <a href="mailto:mark.duda@csagroup.org">mark.duda@csagroup.org</a> ) with questions or for additional information.

**Compressed Gas Association (CGA)****Rob Early**

No update at this time.

**American Society for Testing & Materials (ASTM)****Jennifer Hamilton**

No update at this time.

**American Society of Mechanical Engineers (ASME)****Ray Rahaman**

No update at this time.

## VI. Discussion Topics

### Facilitating Deployment

All

### Center for Hydrogen Safety

Nick Barilo

No update at this time.

### Regulatory Matrix Review and Comment

Karen Quackenbush

Please direct any updates, questions, or comments to Karen Quackenbush by email at [kquackenbush@fchea.org](mailto:kquackenbush@fchea.org). The next updated matrix will be available at the end of June.

### Permitting and Installation of Hydrogen Fueling Stations

#### California Station Implementation

Jennifer Hamilton

No update at this time.

#### California Div. of Measurement Standards/Fuel Quality / Metrology

Christina Daniels

No update at this time.

#### Legal Metrology Standards Hydrogen Fuel Quality and Measurement

Juana Williams/Ralph Richter

No update at this time.

## VII. Open Discussion & Other Issues

FCHEA staff will work to proactively identify other relevant meetings occurring and possible scheduling conflicts to reduce overlap.

The previous meeting's discussion of UAV standards was revisited. One possible organization to look into is the AIAA which manages the U.S. Technical Advisory Group for ISO TC 20/SC16 on UAS standards.

## VIII. Next Meeting – Recommending Wednesday, August 3<sup>rd</sup> at 2:00 PM EDT