



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

**Wednesday, April 4, 2018  
TIME: 3:00 – 4:00 pm (Eastern Standard Time)**

**Draft Minutes**

**Attendees:**

Nick Barilo  
Owen Hopkins  
Stella Pappasawva  
Carl Rivkin  
Bill Collins  
Sara Marxen

Chris Ainscough  
Spencer Quong  
Justin Lewis  
Karen Quackenbush  
Jay Keller  
Susan Bershad

Chris LaFleur  
Christina Daniels  
Elan Bond  
Laura Hill  
Jennifer Hamilton  
Kelvin Hecht

**I. Welcome and Housekeeping Items**

- Review FCHEA's anti-trust guidelines - Available on FCHEA's members only website and a copy can be provided to you on request.
- Approve the meeting agenda
- Approve the previous meeting minutes

**II. DOE/HQ Update**

**Laura Hill**

Budget passed – DOE working on specifics. AMR June 13-15. Invited reviewers please respond on your availability. DOE taking over IPHE Chair in May – next meeting to be held in Japan.

**III. C&S 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 ([khall@fchea.org](mailto:khall@fchea.org)) or Connor Dolan ([cdolan@fchea.org](mailto:cdolan@fchea.org)).

Staff to add the following events to the calendar:

ICC Committee Action Hearings: April 15 – 23, 2018, Greater Columbus Convention Center, Columbus, OH

DOE AMR: June 13-15, 2018

GTR Phase II meeting in TBD June, 2018

ISO/TC 197 WG 22: July 10-12, Hamburg, Germany

NFPA 55 Second Draft Meeting: July 24 & 25 on the East Coast – location to be confirmed.

NFPA 2 Second Draft Meeting: August 13-17, 2018 on the East Coast – location to be confirmed.

ISO/TC 197 Plenary and related meetings: December 3-6, 2018 in Vancouver, BC.

#### **IV. Global Technical Regulations**

**Nha Nguyen**

Nothing to report. For background and status, see March Safety Report feature story at [www.hydrogenandfuelcellsafety.info](http://www.hydrogenandfuelcellsafety.info).

#### **V. Codes and Standards Organization Updates**

##### **IEC TC 105**

**Kelvin Hecht**

Last chance to express interest in IEC Fuel Cell standards for propulsion of:

- drones
- robots
- golf carts
- small and large boat/ships

IEC TAG is preparing comments on the following

- Micro Fuel Cells – Power & Data Interchangeability
- Energy Storage Systems using Fuel Cells in Reverse
- PEM Performance
- Power to Power Systems

IEC/TC 105 is holding a webinar with conveners on Friday April 6 on the WG restructuring the have been discussing.

##### **ISO/TC 197**

**Karen Quackenbush/ Glenn Scheffler/Jay Keller**

WG 22 ISO 19880-5 out for DIS review.

WG 24 ISO 19880-1 June meeting to address DIS comments.

##### **NFPA 2**

**Carl Rivkin**

NFPA 2: Public comment meeting Aug 13-17 on East Coast

NFPA 55: July 24 & 25 in Providence, Rhode Island

Closing date is May 9 for public comments on the First Draft Reports.

##### **ICC**

**Spencer Quong**

Committee action hearings are coming up in Columbus, OH. Bob Davidson and Spencer Quong made several proposals with help from others.

##### **CSA**

**Sara Marxen**

- CSA Group's Hydrogen Transportation Technical Committee will be meeting via teleconference on April 18 for an update on actions from the October 2017 in-person meeting.
- CSA HGV 4.3 (hydrogen fueling parameters) is an active project to develop the next edition. Steve Mathison of Honda is working on MC formula method updates, and the TSC will meet in May 2018.
- FC1 (stationary fuel cell power system) looking to reopen in the coming months. Waiting for the ISO 62282-3 document to be published and to harmonize with.

- CSA will be adopting 62282-2 (fuel cell modules standard) in the US and Canada. The US Working Group is small, so if you are interested in membership, please let us know.
- FC 5 (hydrogen generation standard) still on pause with the ISO 16110-1 standard to resolve.
- CHMC 2 (chemical compatibility for non-metals) technical subcommittee continues to meet with the goal of publishing in summer of 2019.
- ISO TC 197 Plenary will be co-hosted by CSA and SCC in Vancouver – December 3 - 6, 2018.

**SAE**

**Mike Steele**

Mike sent the following report in advance of the meeting:  
The voting on J2579 from the Safety Working Group has closed and the document was approved. Glenn has sent the document to SAE publishing.

The next set of in-person SAE meetings are scheduled for June 5 and 6 at Honda in Torrance.

**CGA**

**Rob Early**

Congratulations to Rob on the birth of a new grandchild. He has nothing to report on CGA this month.

**ASTM**

**Jennifer Hamilton**

Nothing to report.

**ASME**

**John Bendo**

Bill Collins reported ASME Section 12 on piping is active – meeting in September

**VI. Discussion Topics**

**Facilitating Deployment**

**Carl Rivkin**

NFPA 2 created a new Task Group, headed by Jennifer Hamilton, focused on Emergency Response guidance for HFS.

**H<sub>2</sub>USA Activities**

**Karen Quackenbush**

Nothing new to report.

**H2@Scale**

**Chris Ainscough**

Putting CRADAs in place. H2@SCALE poster session at AMR.

**Regulatory Matrix Review and Comment**

**Karen Quackenbush**

<http://www.hydrogenandfuelcellsafety.info/s/FCHEA-Regulatory-Matrix-markup-March-31-2018.pdf>

It is worth noting FCHEA's Portable Power Working Group is interested in understanding what applicable standards are out there for drones. Karen thanks those who report at these monthly meetings for helping keep the matrix up to date.

## **Permitting and Installation of Hydrogen Fueling Stations**

### **CA Station Implementation**

**Jennifer Hamilton**

Station #33 opened in Thousand Oaks. One or two more to open soon. Executive Order signed by the Governor with new target – 200 hydrogen stations by 2025. Funds earmarked for this program – \$98 million for hydrogen stations this year – less in out-years.

### **CA DMS Fuel Quality / Metrology** **Christina Daniels** ~~Kevin Schnepf~~

Christina Daniels reported continued support in testing throughout California. **FCHEA staff to update POC for this item for future meetings.**

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

**Juana Williams/Ralph Richter**

No report.

## **VII. Open Discussion & Other Issues**

**Other Issues?** None noted.

## **VIII. Next Meeting - May 2<sup>nd</sup> 3pm Eastern**