



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

**Wednesday, November 4, 2015  
TIME: 3:00 – 4:30 pm (Eastern Standard Time)**

**Minutes**

**Attendees**

**Connor Dolan  
Bob Boyd  
Ernst Baumgartner  
Eric Nelson  
Jay Keller**

**Juana Williams  
Karen Hall  
Kelvin Hecht  
Laura Hill  
Marcia Poxson**

**Morry Markowitz  
Nick Barilo  
Sondra Ullman  
Steven Yip  
Susan Bershad**

**I. Welcome and Housekeeping Items**

- Reviewed FCHEA's anti-trust guidelines - Available on FCHEA's members only website
- Reviewed the meeting agenda
- Approved the October draft meeting minutes.

**II. DOE/HQ Update**

**Will James**

Jay Keller – ICHS – Held a week ago in Japan. It was very successful. The ICHS Meets every other year. This is the premier and only conference dedicated to hydrogen safety. About 200 people from around the globe and ~100 contributed papers. The meeting presentations will be posted on the ICHS website for your review at [www.ichs2015.com](http://www.ichs2015.com).

The week following ICHS was a series of ISO meetings in Japan (specifically WG24 and WG 28 kick off).

**III. C&S Events and Fuel Cell Safety Information**

[http://www.fuelcellstandards.com/calendar\\_new.html](http://www.fuelcellstandards.com/calendar_new.html)

**Kelvin Hecht**

<http://www.hydrogenandfuelcellsafety.info/meetings.asp>

**Karen Hall**

**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 Hall ([khall@fchea.org](mailto:khall@fchea.org)) or Connor Dolan ([cdolan@fchea.org](mailto:cdolan@fchea.org)).

Transportation Research Board of the national academies will have its annual meeting in January. This meeting is focused on general transportation issues, not just hydrogen. Jay Keller is a member of the Alt Fuel Committee. The Alt Fuels committee is organizing a special session on the roll out of the hydrogen infrastructure. Speakers from the State of California, Northeastern states, academia (to highlight further research needs) and others are being solicited. This should be very good outreach to this community.

#### IV. Global Technical Regulations

Nha Nguyen

No updates at this time.

#### V. Codes and Standards Organization Updates

##### IEC TC 105

Kelvin Hecht

WG#2 (IEC 62282-2 *Fuel Cell Modules*) -- Proposed revisions posted for comments. Comments to USTAG by November 16<sup>th</sup>.

WG#12 (IEC 62282-3-400 – *Small Stationary Fuel Cells with Combined Heat and Power*) -- Committee Draft posted for vote. Comments and vote to USTAG by December 7<sup>th</sup>.

##### ISO TC 197

Jill Thompson

Jay Keller – Working Group 24 met the week after the ICHS meeting in Tokyo. WG 24 had a first day overviewing the station risk assessment work that Shell is leading on behalf of WG 24. This is not in conflict with the safety distance separation work conducted by Sandia. Some issues highlighted with focus on: pressure, pressure relief, values and terminology. WG 24 initiated a pressure task force to straighten this out. The Technical Report passed the p-member vote with 13 pluses, 8 abstentions, no negatives. This is a much better experience than previous versions of this document. WG 24 is now proceeding with development of an International Standard over the next year.

At the end of the WG 24 meeting, the kick off for WG 28 on fuel quality assurance was held, not to be confused with fuel quality ISO 14687-(1,2,3). This will not modify the tolerance standards, but will focus on what a station or fuel provider needs to do to assure the fuel quality meets the appropriate standard if force. Some fuel providers expressed concern on tolerance levels. The fuel providers asked the auto's for help with assessing contaminant damage severity on the vehicle fuel system should the tolerance be exceeded. This information is needed to assist in performing a risk assessment. So as not to delay the fuel quality assurance work a very fast turn-around was implemented

WG 27 – will get started at the ISO TC/197 Plenary. This work will consolidate the three versions of ISO 14687 – (1,2,3) and revisit the tolerances given the technology changes in the vehicle fuel system.

##### NFPA 2

Martin Gresho / Susan Bershad

Not a lot to update. The 2016 edition is published and available. NFPA 2 members should receive them in the mail in the near-future. NFPA 2 2019 edition document public input comments are due June 2016. First draft meeting likely to be held in September 2016.

NFPA 1 – held first draft meeting, not gone to ballot yet with the first draft.

NFPA 30A – first draft meeting in San Jose on the 16<sup>th</sup> and 17<sup>th</sup> of November. Good portion of the input is hydrogen related. A number of NFPA 2 members are planning on attending (Spencer Quong, Marty Gresho, Susan Bershad - remotely).

Bob Boyd – what day will the hydrogen discussion take place?

Susan Bershad – I believe it will be on Monday.

**ICC**

**Bob Davidson**

No update at this time.

**CSA**

**Sara Marxen**

Jay Keller - CSA just held their annual meeting.

**SAE**

**Mike Steele / Tim McGuire**

No update at this time.

**ASTM**

**Tommy Rockward**

Jay Keller - As we get involved with fuel quality assurance, ASTM is at the top of the page. We will be working to embrace those efforts.

**ASME**

**John Grimes**

No update at this time.

## **VI. Discussion Topics**

**Facilitating Deployment**

**Carl Rivkin**

No update at this time.

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

**Karen Hall**

Karen Hall – Due to timing / scheduling constraints, we were unable to hold a meeting at the Fuel Cell Seminar. We are engaging in efforts regarding hydrogen / fuel cell electric vehicles in tunnels and bridges in the northeast.

Jay Keller – The efforts with AHJs and other officials to ensure operation of vehicles and transport of fuel in the northeast is critical. We are engaging in efforts in conjunction with FCHEA and H<sub>2</sub>USA

**H2FIRST**

**NREL/SNL**

No update at this time.

**Regulatory Matrix Review and Comment**

**Karen Hall**

Latest version developed on August 31st, available online at [www.fchea.org/s/FCHEA-Regulatory-Matrix-markup-31-August-2015.pdf](http://www.fchea.org/s/FCHEA-Regulatory-Matrix-markup-31-August-2015.pdf). Comments can be submitted to Karen Hall at [khall@fchea.org](mailto:khall@fchea.org).

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

### **Ca Station Implementation**

**Jennifer Hamilton**

Jay Keller - Attendees on this call are invited to pay attention to the spreadsheet maintained by Tyson Eckerle at California Go-Biz. They are making great progress. It appears that permitting process is going smoothly, particularly when the homework is done up front. Station approval has had a couple of hang-ups when the landowner has expressed discomfort in having a hydrogen station on their property.

### **Ca DMS Fuel Quality / Metrology**

**Kevin Schnepf**

Jay Keller – NREL and Sandia are involved in H2FIRST – engaged in a metrology hardware review for measurements per kilogram basis. We are excited to hear the results of this laboratory review.

### **Fueling Compliance**

**Sara Marxen / Jesse Schneider**

No update at this time.

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

**Juana Williams**

No update at this time. Possibly we may have an update in December.

Jay Keller – there are a few states in the northeast corridor considering adopting the approach that California has undertaken, in relaxing the metrology standards for hydrogen given the current state of the technology. California has sunset clauses in its standards to encourage the industry to develop new technology. There is potential that these new states will relax the standards without these sunset clauses.

Juana Williams – Which states?

Jay Keller – Unsure at this time, in the Northeast corridor is expectation.

Juana Williams – Please also pass along any suggested wording in the handbook.

Jay Keller – No one is suggesting modifying the handbook, the idea is to amend the current guidelines temporarily in order to eventually get to what the handbook says.

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

The next meeting will be held on Wednesday, December 16<sup>th</sup> at 3:00 PM Eastern.