

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

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

Minutes

Attendees

**Aaron Harris
Bob Boyd
Connor Dolan
Eric Nelson
Ernst Baumgartner
Karen Hall
Jay Keller**

**Julie Weis
Martin Gresho
Nick Barilo
Norman Newhouse
Sondra Ullman
Steven Yip
Juana Williams**

**John Grimes
Will James
Jesse Schneider
Jennifer Hamilton
Carl Rivkin**

I. Welcome and Housekeeping Items

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

II. DOE/HQ Update

Will James

Jay Keller - Secretary of Energy Ernst Moniz test drove the Toyota Mirai fuel cell electric vehicle last week. A video is posted online on Facebook / Instagram / Twitter.

NREL gave a component and sensor webinar this afternoon.

Will James – Progressing nicely on H2FIRST project in development on HySTEP device. Looking at J2601 protocol at the station.

Two additional tasks under H2FIRST is station reference design and hydrogen contaminant detection.

Two new SBIR projects – contamination detection at the station to meet the 2719 specification. They have been awarded.

III. C&S Events and Fuel Cell Safety Information

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) or Connor Dolan (cdolan@fchea.org).

IV. Global Technical Regulations

Nha Nguyen

Will ask Nha to join the call next month to provide an update.

V. Codes and Standards Organization Updates

IEC TC 105

Kelvin Hecht

No report this month.

ISO TC 197

Jill Thompson

Upcoming meetings for WG 24.

FCHEA's January 2015 Safety Report provided an update on the meetings held in Tokyo in December. <http://www.hydrogenandfuelcellsafety.info/2015/jan/Article1.asp>

NFPA 2

Martin Gresho/ Susan Bershad

Karen Hall - 2nd draft report is now posted on the NFPA website. NHFCCSCC members are encouraged to review this report.

After the publication of this 2nd draft report, if any objections are found, will need to file a motion and attend the next NFPA meeting to plead the case.

The next NFPA annual meeting will be held on June 22 – 25, 2015.

NFPA 853

Karen Hall

Completed its cycle, in publication, and is now available both online and in print.

ICC

Bruce Johnson

No report at this time.

CSA

Julie Weis

The CSA report is available online at <http://www.fchea.org/s/CSA2015-02-04.pdf>.

SAE

Mike Steele / Tim McGuire

Jesse Schneider – March 9th, a materials compatibility workshop at SAE in Troy.

The first step is just metals, polymers likely to follow at later date.

For any additional information, or to RSVP, members can speak to Glenn Scheffler.

Workshop material and survey to prepare for workshop are available at

<http://www.fchea.org/s/DRAFT-SAE-J2579-Survey-to-prepare-for-H2-Material-Workshop-V2.pdf>.

Jennifer Hamilton - A quick update about the SAE J2990-1 document (Gaseous Hydrogen and Fuel Cell Vehicle First and Second Responder Recommended Practice): The plan is for a draft to be circulated for review and initial comment by Feb. 6th. There will be a presentation to the FC Safety WG at the March in person meeting.

ASTM

Tommy Rockwood

Recently had annual meeting in San Diego. Two Interlaboratory studies (ILS).

One is underway, led by J.P. Hsu. Cavity ILS decided upon the actual constituencies for the test gases. Going to prepare them. Air Liquide confirmed whether can prepare those samples. Some challenges ongoing. Agreement reached. Okay to procure those samples. GP samples were received and tests are underway. Performed sequence of tests twice so far, will perform again. Will hold a conference call to discuss with other test participants.

Cavity Ringdown Test (oxygen, water, carbon dioxide, carbon monoxide, methane) and (low blend – oxygen, water, CO₂, CO, methane) – 3 test sites confirmed, looking for additional test sites.

GC Mass Spec – J.P. Hsu. led – constituents are similar, concentrations vary from Cavity Ringdown.

ASME

John Grimes

No updates at this time.

VI. Discussion Topics

Facilitating Deployment

Carl Rivkin

Issue of listing components for hydrogen fueling stations discussed previously. With the number of stations coming online in California, potentially some movement in that area. Discussed with FCHEA and other groups to have a webinar / workshop to discuss these issues, the relevant standards, etc.

H₂USA Activities

Karen Hall

Market Support and Acceleration Working Group – identified eight outreach opportunities and assigned champions for each target audience.

Locations Roadmap Working Group – Developing roadmaps for further hydrogen station deployment.

Investment and Finance Working Group – Incentives task team to develop online tool for investment opportunities, as well as an investment plan.

Hydrogen Fueling Station – Cost and utilization modeling. Report in development on moving beyond station design, optimizing stations on performance / economics on each design.

H2FIRST

NREL/SNL

Update included under DOE HQ report.

Regulatory Matrix Review and Comment

Karen Hall

The latest version of the Regulatory Affairs Matrix is available online at <http://www.fchea.org/s/FCHEA-Regulatory-Matrix-Dec-31-2014-clean.pdf>.

Comments can be submitted to Karen Hall at khall@fchea.org.

VII. Permitting and Installation of Hydrogen Fueling Stations

Ca Station Implementation

Jennifer Hamilton

The latest activity was on Monday this week. CAFCP and CEC gave presentations at CUPA annual conference. Gave a talk during the potpourri session, and a shorter talk during the managers session. One item that came up with 2 different AHJs (harbor city station and Santa Monica station) was integrating the e-stops with the hydrogen stations and those of the gasoline station. Well received overall.

CEC released a notice that the Palo Alto station will have an official station address change. Will move down the road. Notice received this morning.

Ca DMS Fuel Quality / Metrology

Kevin Schnepf

No report at this time.

SAE J2601 Compliance

Jesse Schneider

Clean Energy Partnership in Berlin about to start and release testing procedure and testing device for 50 stations in Germany, all according to J2601. The validation procedures will be confirmed with a movable fueling device operated by the CEP.

Legal Metrology Standards Hydrogen Fuel Quality and Measurement

Juana Williams

International Hydrogen Device Standards

*OIML R 139 "Compressed gaseous fuel measuring systems for vehicles"*¹

BIML has just announced that OIML Recommendation (R) 139 *Compressed gaseous fuel measuring systems for vehicles*, Part 1: *Metrological and technical requirements* and Part 2: *Metrological controls and performance tests* have just been published in English and are available on the OIML website at: <http://www.oiml.org/en/publications/recommendations>

The remaining Part 3 *Report format for type evaluation* will be submitted to CIML Preliminary Online Ballot shortly.

Please contact Juana Williams by email at: juana.williams@nist.gov, if you have questions or wish to discuss the international compressed gases vehicle fuel (i.e., hydrogen) device standard.

¹ “measuring systems that are covered by this Recommendation are intended for the refueling of motor vehicles, small boats, and aircraft with compressed natural gas, hydrogen, biogas, gas blends or other compressed gaseous fuels. They may also be applicable to other vehicles, for instance trains.”

Bob Boyd – How does the OIML 139 compare to US NIST standards?

Juana Williams – We looked at early versions of R 139, trying to harmonize wherever possible in the development of NIST Handbook 44 – 3.39 Hydrogen Gas-Measuring Devices-Tentative Code. The requirements in R 139 are more extensive, more rigorous test (e.g., for influence factors and software validation).

VIII. Open Discussion & Other Issues

Next meeting – Wednesday, March 4 at 3:00 PM Eastern / 12:00 PM Pacific.