



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

**Wednesday, October 7, 2015
TIME: 3:00 – 4:30 pm (Eastern Daylight Time)**

Minutes

Attendees

**Bob Boyd
Connor Dolan
Eric Nelson
Jennifer Hamilton
John Grimes
Steven Yip**

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

**Mike Steele
Nick Barilo
Norman Newhouse
Sara Marxen
Sondra Ullman**

I. Welcome and Housekeeping Items

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

II. DOE/HQ Update

Will James

Laura Hill – No updates at this time.

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

No update at this time.

V. Codes and Standards Organization Updates

IEC TC 105

Kelvin Hecht

Plenary met two weeks ago in Beijing. Two countries are very positive about the future of installed large fuel cell power plants (South Africa and South Korea). South Africa has serious energy issues and the government because of the prominence in platinum mining is

anxious to foster the future of platinum development. Commitments in the megawatt size which will be big on in the near-future. Korea because of nuclear incidents in Japan has decided not to shut down their power plants, but citizens do not want to build new ones. New construction as pushed by the government will largely be fuel cells.

WG 3 – (Stationary fuel cell power plants) – Met and started process for next edition to be published in 2018. Committee met and addressed several countries input. US working to harmonize international and US standards (mostly editorial and clarifications). Had recommendations received from Bloom Energy, the TC 105 Secretariat suggested changes to requirements for Hazard Analysis, and input from the German delegation on how to handle certain fuel containing components that do not have to be addressed as potential leak site (solid pipe for example, could also address fuel valve that meets certain tightness regulations). Being put in committee Draft and will be circulated in next few weeks. Japanese would like annex to the standard to modify requirements for small fuel cells (<10kW). Over next few weeks Japanese will develop annex for Committee draft. Meeting expected to be held first two weeks of June.

WG 8 – (Micro Fuel Cells) – Bottleneck since Harry Jones retired. Fumio Euno(?) has taken over as chairman. Also the Chairman of TC 105. Moving that work forward. Karen Hall has volunteered to assist in that process. Concern from many venues that WG 8 has come up with a scheme of numbering documents for different fuels / technologies. Those concerns were raised in the plenary, they understand the issues, and will be careful in how they number those documents realizing the potential impact in having those documents approved.

ISO TC 197

Jill Thompson

Karen Hall – In addition to prep for upcoming plenary, just had a call for US TAG for ISO TC 197 to discuss CD out for gaseous hydrogen fueling station valves, general and editorial comments. US TAG has the document for review. Deadline for response is in the next few days.

NFPA 2

Martin Gresho / Susan Bershad

NFPA 2 is out. Can view for free online at NFPA.org one page at a time. 2016 edition is available. You can also pay for the PDF and download it.

ICC

Bob Davidson

Group of us working together (CAFCEP, H2USA, and PNNL hydrogen safety program) to provide outreach at ICC during conference and expo. Started on Sept. 21st, Toyota brought in a Mirai. Very good outreach. Positive response to the car and information provided. Had videos playing, spoke on safety, codes, and standards. Surprised to learn that almost everyone discussed with was at least positive or at worst neutral. Great questions and information passed out. Good connections to support activities. Ride & Drive event on Monday, those that attended were enthusiastic. Tuesday information session. Wednesday had a tour of a station and Toyota facilities (including repair bay and stationary fuel cell). Toyota was a big supporter throughout.

CSA**Sara Marxen**

Committee week coming up on 26 – 29. HGV 4.3 and HGV 4.9 document are out for industry review, close later this month. HPIT 2 document – industry review closed, committee will review comments soon.

As part of National Hydrogen and Fuel Cell Day, all 16 hydrogen and fuel cell standards for CSA are available for free download this week. Link is available here - <http://shop.csa.ca/en/canada/landing-pages/hydrogen-and-fuel-cells-standards/page/h2-fuel-cells-standards>

SAE**Mike Steele / Tim McGuire**

Meetings in September. Two votes – J2600 to affirm as a standard (14 day ballot) other is J2719 for hydrogen quality (28 day vote out). 2016 review date for hydrogen quality ballot - No changes being made except for the issue date. Technical changes to come in next edition.

November 3rd and 4th have meetings in Detroit.

Jennifer Hamilton – J2990-1 is out for ballot.

ASTM**Tommy Rockward**

No update at this time.

ASME**John Grimes**

B3112 committee meeting was held. Minutes are not out yet.

VI. Discussion Topics**Facilitating Deployment****Carl Rivkin**

See ICC update.

Connor Dolan – Tomorrow is National Hydrogen and Fuel Cell Day 10.08, in reference to the atomic weight of hydrogen 1.008. For more information visit our website at www.hydrogenfuelcellday.org.

H₂USA Activities**Karen Hall**

The Hydrogen Fueling Station WG is performing a sensitivity analysis of applicable cost and utilization models to help identify key station cost drivers. Industry feedback is being sought on what sensitivity analysis data ranges should be. The WG is also looking at maintenance best practices. Further input for on-site reformers is being sought.

The Joint Regulation, Codes & Standards Task Group continues to focus on progress in facilitating states to adopt NFPA 2 and key jurisdictions to address transportation of FCVs using bridges and tunnels.

H2FIRST

NREL/SNL

No report 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. Comments can be submitted to Karen Hall at khall@fchea.org.

VII. Permitting and Installation of Hydrogen Fueling Stations

Ca Station Implementation

Jennifer Hamilton

If you are not aware, confirmation from California State Fire Marshal's office that path forward to adopt 2016 NFPA 2 with the IFC.

As of yesterday, another station approved in the inland empire to continue building that network.

Two new retail stations (retail-ready vs. demonstration). Some stations are going through new sites for various reasons. 15 are under construction. 6 fully constructed – on way to being open. There is a lot of activity going on. CAFCP's activities continue providing support for developers and outreach for first responders and communities.

Keith has put together a list of people to invite for ribbon-cutting ceremonies. Depending on the level of activity have a list of that.

Joe continues working with the fuel retailers.

A lot of support and outreach ongoing in California.

Ca DMS Fuel Quality / Metrology

Kevin Schnepf

No update at this time.

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.

VIII. Open Discussion & Other Issues

Next meeting timing – Wednesday, November 4th at 3:00 PM Eastern.