



Fuel Cell &
Hydrogen Energy
Association

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

**Wednesday, July 6, 2016
TIME: 3:00 – 4:30 pm (Eastern Standard Time)**

Minutes

Attendees

**Connor Dolan
Douglas Olenick
Greg Chirdon
Jay Keller
Jennifer Hamilton
Karen Quackenbush**

**Laura Hill
Marcia Poxson
Norm Newhouse
Sara Marxen
Steven Yip
Herie Soto**

**Sondra Ullman
Bob Boyd
Nha Nguyen
Chris LaFleur
Eric Nelson
Spencer Quong**

I. Welcome and Housekeeping Items

- The Committee reviewed FCHEA's anti-trust guidelines - Available on FCHEA's members only website and a copy can be provided to you on request.
- The Committee reviewed the meeting agenda.
- The Committee approved the June draft meeting minutes. Will be available on the Hydrogen and Fuel Cell Safety Report available later this month.

II. DOE/HQ Update

Will James

Laura Hill provided a report on DOE activities. The Annual Merit Review was held last month in June.

Current items include:

- Our HyTeST RFI is open at <https://eere-exchange.energy.gov/Default.aspx#Foaldbd38140e-de4a-48b9-bba6-e7dfe210fe1a>
- The Sustainable Transportation Summit registration link: <http://www.ceref.org/sustainable-transportation-summit-2016/registration>
- And the Sustainable Transportation Summit Agenda is located here: <http://energy.gov/eere/2016-sustainable-transportation-summit-agenda>

III. C&S Events and Fuel Cell Safety Information

http://www.fuelcellstandards.com/calendar_new.html

Kelvin Hecht

Action: Items to report to Kelvin that are incorrect/missing.

- WHEC dates are incorrect – WHEC was held in Zaragoza Spain June 13-16, 2016
- WG 20 (valves) is not meeting, it is WG 23 (Fittings)

- TC 197 will be issuing a CD2 – incorporating comments from original CD attempt – will have a document review meeting 7,8,9 of Sept in Munch

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

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

Request: Please notify Karen or Connor of any meetings / events to add to the calendar.

IV. Global Technical Regulations

Nha Nguyen

Nothing new to report. Waiting to get the co-sponsor set-up and have a kick-off meeting sometime by the end of the year.

V. Codes and Standards Organization Updates

IEC TC 105

Kelvin Hecht

Sondra Ullman – WG 03 met in Washington, D.C. on the 14 – 16 of June.

Karen - WG11 met the following week.

Will discuss the WG reports next month.

ISO/TC 197

Jill Thompson/Glenn Scheffler

ISO TC197 Hydrogen Technologies Working Group 22 (Hoses), Working Group 23 (Fittings), and Working Group 21 (Compressors) are meeting on July 18 – 21 at the CGA Facility in Chantilly, VA.

Bob Boyd - In Germany last week had WG 28 and 27. WG 24 met two weeks ago.

WG 24 meeting there was some no votes on going forward with the DIS as planned. The proposal is to have comments included in CD2. The document review team will be meeting in September.

Jay Keller - Important to note that there were only two no votes (Germany and Netherlands). Comments they had were similar to other countries which had voted yes. Taking a step back to clean up the CD, go out for another CD vote (CD2), priming the vote for a DIS submission by the end of this year.

Concerns expressed were on risk mitigation and the comments were motivated as Chapter 5 was not complete enough (did not have appropriate examples of risk mitigation analysis). The risk mitigation sub team met early in the week (as planned) to discuss and develop the risk mitigation examples. These were presented ahead of learning the concerns of the review process. As a result the countries expressing concern on this point agreed that the examples satisfied their concern. This chapter is now in good shape.

Other comments received were not directly relevant to new station roll-out. One comment was there were topics in the work product of WG24 which were not really relevant to station safety or what is needed for new station roll-out. One that was specifically noted was that of fuel quality control. This (and other topics) were inserted into the WG24 work product as temporary place holders while the appropriate WG developed their own work product. Such as the work of WG28 who has now produced and through approval a work product on hydrogen quality control. That section in 19880-1 (work product of WG24) will be removed since it is no longer needed. Bob Boyd – Last week had WG 27 and 28.

Spencer Quong – WG 28 (Hydrogen Fuel Quality Control). WG 28 submitted CD again, passed with no negative votes, result of comments from the meetings, came to agreement on all major issues. Will be available in September.

WG 27 (Hydrogen Fuel Quality specification) - Plan on how to move forward / what constituents to address.

Bob Boyd – Out of bounds fueling discussed. Basically means not 2601. Could mean road side fueling (concierge service type fueling), Air Products mobile fueler (350 bar and ambient temperature fueling), etc. Just commissioned some modeling, just now beginning. Reporting both to ISO and the working groups for out of bounds fueling.

NFPA 2

Carl Rivkin / Susan Bershad

Karen – public input deadline for NFPA 2 and NFPA 55 was June 29th. A great deal of comments were received. We put in 400-500 ourselves. A public input meeting will be held to discuss all of the comments received. Will be in mid-August in Alexandria, VA (co-located with NFPA 55). Will have more to report, such as topics being looked at. Task groups may be developed as a result.

Chris LaFleur – Several discussions with Carl and Susan on the possibility of Committee input to be put in during the first draft meetings. Those will come from re-working some of the input, etc.

Karen – Carl Rivkin is now taking the lead on NFPA 2 .

ICC

Bob Davidson

Bob Davidson is currently at the ICC Adhoc Committee meeting in Chicago.

CSA

Sara Marxen

Small holding pattern for 4.3 documents. Sustained negative vote, taking time to potentially appeal. Hope to be published by end of July.

SAE

Mike Steele / Tim McGuire

Karen - Only activities are planning for upcoming in-person meetings in September. Some documents going through review, no announcements to date on publication.

Spencer – J2990-1 (guideline for emergency responders) has been published.

J2601 fueling protocol passed ballot, comments are being resolved. Edition includes the MC method.

ASTM

Tommy Rockward

Nothing to report.

ASME

John Grimes

Nothing to report.

VI. Discussion Topics

Facilitating Deployment

Carl Rivkin

H₂USA Activities

Karen Quackenbush

H2USA held a Full Participant meeting in conjunction with the AMR, which was well attended and reviewed activities to date.

H2FIRST

NREL/SNL

No update at this time.

Regulatory Matrix Review and Comment

Karen Quackenbush

The latest version is available online at <http://www.fchea.org/s/FCHEA-Regulatory-Matrix-markup-June-30-2016.pdf>.

VII. Permitting and Installation of Hydrogen Fueling Stations

Ca Station Implementation

Jennifer Hamilton

20 open retail stations. Time for CARB to include in the upcoming AB8 report next month. Several other stations are in the process.

HySTEP continues to go out collecting data on stations. Some discussion to expand scope of HySTEP in the future.

Meeting with the Governors Office and State Fire Marshals Office on strategies to deploy a mobile fueler. The CEC has funded a portable fueling truck that is being developed by GTI/US Hybrid/Others. The Fire Marshals Office has a task force that defines mobile fueling which basically includes gasoline and diesel. This is really a concierge fueling for home / work personal fueling. This is very different from how we have been using hydrogen refuelers. Hydrogen is likely to be included in the concierge service definition in the near future.

Ca DMS Fuel Quality / Metrology

Kevin Schnepf

Upcoming National Council Meeting of Weights and Measures in Colorado. Letters of support have been sent by the governor's office, CAFCP, and other groups for the national council to adopt relaxed standards for weights and measures of hydrogen at a national level.

Fueling Compliance

Sara Marxen / Jesse Schneider

No report at this time.

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

Juana Williams

No report at this time.

VIII. Open Discussion & Other Issues

None at this time.

IX. Next Meeting

Next meeting to be held on Wednesday, August 3rd at 3:00 PM Eastern.