



Fuel Cell &
Hydrogen Energy
Association

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

**Wednesday, June 1, 2016
TIME: 3:00 – 4:30 pm (Eastern Standard Time)**

Agenda

Attendees

**Bob Boyd
Bob Davidson
Connor Dolan
Eric Nelson
Ernst Baumgartner
Herie Soto
Jay Keller**

**Jeff Puckett
Jesse Schneider
John Grimes
Juana Williams
Karen Quackenbush
Kelvin Hecht
Laura Hill**

**Marcia Poxson
Nha Nguyen
Nick Barilo
Sandra Curtin
Sara Marxen
Scott Lindsay
Will James**

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.
- Review the meeting agenda.
- Approve the May draft meeting minutes.

II. DOE/HQ Update

Will James

Reminder, U.S. Department of Energy Annual Merit Review held in Washington, D.C. next week.

Infrastructure session at the AMR – single track incorporating tech val, system analysis, market transformation, hydrogen delivery, and safety, codes, and standards

4th installment of infrastructure workshop – with joint research center in Netherlands. Looking at critical topics to come together as international community to support infrastructure commercialization. Included refueling (Sandia / H2FIRST on HySTEP, Jesse Schneider on WG 24), fuel quality (NREL evaluation technical center update), hydrogen metering (new metering validation and benchmarking project), infrastructure hardware (diverse session – Herie Soto from Shell presented). Progress of international community is great. Quite a bit of work to be done, come a long way. Germany, European Commission, Japan, and Scandinavia participated. First workshop of the four where invited additional countries starting to see infrastructure activity, China, Korea, South Africa (invited), India (invited). Focus on industry, collaboration. 60 – 75 participants. Next year to be hosted back in Germany.

III. C&S Events and Fuel Cell Safety Information

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

Kelvin Hecht

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

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

Action: To add ASME Pressure Vessel Piping Conference in Vancouver in July 17 – 21, will include hydrogen materials session, focused on metallics and non-metallics.

IV. Global Technical Regulations

Nha Nguyen

Expecting kick off meeting scheduled sometime at the end of this year. 1998 agreement discussed. Ongoing effort by US, Japan, and EU to streamline the agreement. Issue in regard to creating GTR and obstacles involved. Working to streamline the process to go quicker. Due to that work, asked to hold off current activity to start a new GTR. Do not expect delay for hydrogen phase 2, will be scheduled later this year, just have not received official approval from Geneva yet. Do not expect a problem.

V. Codes and Standards Organization Updates

IEC TC 105

Kelvin Hecht

Stationary fuel cell standard group meeting in Washington in two weeks.

NFPA 2

Martin Gresho / Susan Bershad

Karen Quackenbush – NFPA 2 now open for public input, available on www.nfpa.org. Deadline is June 29th. Advised not to wait until the deadline. FCHEA is working on a number of inputs to improve and harmonize NFPA 2 model codes. Once public input date is closed, will be a meeting in Alexandria, VA this August as a joint meeting for NFPA 2 and NFPA 55 committees. Each Committee will meet to discuss documents and comments impacting both.

Jennifer Hamilton – Susan Bershad and Jennifer held a webinar for 70 – 100 people. Comments back so far are positive. Some CA specific comments, a few broader spectrum. Some asked if this was a federal regulations at some point, pointing out National Park Service all use NFPA regulation. Successful event.

Carl Rivkin will be representing H2USA in making presentations at the State Fire Marshals conference in July.

ICC

Bob Davidson

Status quo. Process included online voting. Completed a week ago. Deadline to publish report is today. July will be next meeting. One item did not go through. Public comment on that item will be submitted at that time. Did a great job of convincing ICC to take NFPA 2 language, rather than the I-code.

CSA**Sara Marxen**

HGV 4.9 – dispense standard – published in April.

HGV 4.3 test methods for fueling evaluation ties into J2601 – recirculation ballot to committee, closes June 24th – recirculated due to negative vote.

Do anticipate fuel cell work at committee week in September. Will report more next month.

SAE**Mike Steele / Tim McGuire**

Karen Quackenbush – Meetings for June cancelled. Next meeting in September.

Jesse Schneider – June 17th will be hydrogen compatibility workshop at MPA Stuttgart, Germany between Sandia, Kyosho University, MPA Stuttgart, and industry. Goal of workshop is to finalize round robin test plan and establish sensitivity study goals between experts.

ASTM**Tommy Rockward**

No report at this time.

ASME**John Grimes**

No report at this time.

ISO TC 197**Jill Thompson**

Karen Quackenbush – a number of WG meetings coming up from calendar.

Jesse Schneider – ISO 19880-1 TS to be published in June. DIS vote to start in September of this year.

WG 24 meetings the week of the 20th of June will be the last face-to-face before DIS vote. The final topics to discuss are as follows: fueling validation, risk assessment, out of bounds fueling, and safety methodology. If you would like to attend, please contact Jesse Schneider at jesse.schneider@bmw.de.

FYI – there is a new fueling protocol for non-pre cooling for residential and service fueling to be discussed in June.

Karen Quackenbush – feature article on ISO TC 197 safety report in May. See www.hydroegnandfuelcellsafety.info for the latest report.

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

No report at this time.

H₂USA Activities

Karen Quackenbush

Joint RCS task Group working on developing papers on regulatory issues in various states and regions. Last 6 months focused on Maryland due to opportunity to propose clarification to permit FCEVs to travel on certain tunnels and bridges. This would be a clarification to reduce ambiguity. Carl Rivkin is leading the regulatory fix effort. Concurrently, potential legislative fix being discussed within FCHEA.

Focusing on New York as next area.

Connecticut regulators had raised questions on potential need for special placarding for FCEVs and concerns over parking in underground garages. FCHEA and others provided briefing information to the regulators and a bill has been passed that removes these potential onerous and unnecessary regulations.

H2FIRST

NREL/SNL

Chris LaFleur – Working on next iteration / phase of activities.

Regulatory Matrix Review and Comment

Karen Quackenbush

A new version came out in the end of March. Let Karen know if anything on the matrix is missing or outdated, or where it is regarding to priority-level of the activity. Everything is open to discussion.

<http://www.fchea.org/s/FCHEA-Regulatory-Matrix-mark-up-March-31-2016.pdf>

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

VII. Permitting and Installation of Hydrogen Fueling Stations

Ca Station Implementation

Jennifer Hamilton

Assistance to Linde with recent zoning commissioner meeting. Overcame issue of heritage trees and was approved.

Jay Keller –Tyson Eckerle recently noted that many of the things still seeing with station roll-out was no different from a normal building project, not necessarily raised over hydrogen.

Jennifer – Often issues are city planning, removing trees, community groups, etc. of the blanket permitting process.

Jennifer – Letter from OEM group to CARB formalizing that they are in agreement with HySTEP moving to next phase of deployment. Scheduled to go to next station next week to do fueling validation. Formality in the process.

Also a letter got finalized from the CaFCP to the national council of weights and measures of their relaxed tolerances of metering in response to request put in.

Ca DMS Fuel Quality / Metrology

Kevin Schnepf

Jennifer Hamilton – The fact that they have been able to cut down a bit on the timing for metrology because the counties are acting as agents. First Element Fuels acquired some equipment they can provide to the counties to help with the metering.

Fueling Compliance

Sara Marxen / Jesse Schneider

Jesse Schneider – The 19880-1 standard, when published will be the basis of fueling compliances as per the alternative fuels infrastructure directive (AFID) in Europe. It would be important to have station providers understand that now is the time to comment if there is a request for change at ISO WG 24 by June 20th.

Legal Metrology Standards Hydrogen Fuel Quality and Measurement

Juana Williams

(1) U.S. Weights and Measures Standards Development Process Commercial Devices

Upcoming tele/web conference meeting of the U.S. National Work Group on the Development of Commercial Hydrogen Measurement Standards will be held 3:00-5:00 p.m. [ET] Wednesday June 15, 2016. Audio Conference Details: Conference Number(s): 1-877-685-5350, Participant Code: 908127#. To join the meeting:
<http://nist.adobeconnect.com/h2usnwg15jun2016mtg/>.

The focus of the meeting will be to review and possibly develop input on two proposals to modify NIST Handbook 44 Section 3.39 Hydrogen Gas-Measuring Devices-Tentative Code that are before the July 2016 National Conference on Weights and Measures, Specifications and Tolerances Committee available at: <http://www.ncwm.net/>. Please contact juana.williams@nist.gov if you have questions.

(2) International Hydrogen Device Standards

OIML R 81 “*Dynamic measuring devices and systems for cryogenic liquids*” (1998)

On May 27, 2016, NIST OWM (Secretariat for OIML R 81) distributed the Secretariat’s response to the international project group’s comments on the first working draft of Part 1 *Metrological and technical requirements* and Part 2: *Metrological controls and performance tests* of R 81. These comments were incorporated, where possible, into a first committee draft (1 CD) also distributed on May 27th for review and input. Deadline for comments on the 1 CD is September 6, 2016.

Juana – There is a proposal to align all of the measuring device codes for sealing, metrological features, etc. can be made available electronically on a special category of hydrogen dispenser. Another item being considered for vote for national conference on weights and measures is July and was on agenda in January. If you saw the CA proposal, should probably take a second look, it includes the existing accuracy requirements for brand new and type evaluated equipment as well as equipment out for commercial use, in addition proposing to add one more accuracy class, date by which (expiration / sunset) by then all equipment must meet existing requirement on the books.

VIII. Open Discussion & Other Issues

IX. Next Meeting

The next meeting will be held on Wednesday, July 6th at 3:00 PM Eastern.