



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

**Wednesday, January 4, 2017
TIME: 3:00 – 4:30 pm (Eastern Standard Time)**

Minutes

Attendees

**Bob Boyd
Brent Hartman
Carl Rivkin
Chris LaFleur
Connor Dolan
Elan Bond
Eric Nelson
Ernst Baumgartner**

**Jay Keller
Jennifer Hamilton
Juana Williams
Karen Quackenbush
Kelvin Hecht
Kevin Schnepf
Marcia Poxson
Mike Steele**

**Mike Veenstra
Nick Barilo
Norm Newhouse
Spencer Quong
Susan Bershad
Will James**

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 November minutes.

II. DOE/HQ Update

Will James

Jay Keller – We are in CR Jay's guess is that the CR which will probably last to the end of FY2017, do not expect changes until FY2018.

Will James – DOE will be in CR until end of April, hopefully more to come after transition in a few weeks.

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.

Jay Keller – ICHS meeting for 2017 will be held in September – Abstract deadline extended to end of this month

IV. Global Technical Regulations

Nha Nguyen

Will seek report next month.

V. Codes and Standards Organization Updates

IEC TC 105

Kelvin Hecht

Next month will submit report of all WGs and their status.

ISO/TC 197

Glenn Scheffler / Jay Keller

Plenary meeting held end of November / early December.

Two new co-conveners for WG 24, Glenn Scheffler and Guy De Reals from Air Liquide France. Jesse Schneider (BMW) and Guy Dang-nhu (Air Liquide France) were reassigned in their companies and had to resign their positions. Transition went very smoothly, progress to CD2 expected Q2 this year. CD1 did pass but had significant comments which are addressing. New version is more streamlined with more informative references pushed out to the annex's.

Other WGs met included 22 – Cd circulation

Hydrogen fuel quality folks met, working to refine fuel quality spec to ensure is aligned with SAE document, pulling all fuel quality specs into one new document. Primarily editing.

Working with Andre Tchouvelev for safety report article getting up to speed on all WGs and their activities. Some WGs had technical difficulties in the past, are being ironed out, such as harmonization on valves and fittings. Working through those issues and getting draft put together.

Strategic planning meeting held on Wednesday prior to the plenary, held with JRC from the EU and ISO TC 197. Question was what else can we be doing in the hydrogen space above mobility, US has H2@Scale, other countries have similar activities.

NFPA 2

Susan Bershada

NFPA 2 and NFPA 55 have both changed cycles to 2019.

Meeting notice will go out shortly, will be held 4th – 6th of April in Torrance CA at Toyota facility.

Agenda is tentative depending on how task group evolves. NFPA 2 committee members should plan to attend all three days.

Karen Quackenbush – Cycles are still in sync but have slipped for one year allowing more time to respond to issues / comments.

ICC**Bob Davidson**

Spencer Quong – International fire codes hearing (second round) – proposals for hydrogen were approved.

Previously Bob's efforts to align repair garages and other equipment efforts between fire, mechanical, and gas were successful. Have more to do with fuel gas code and IRC mechanical committee.

CSA**Sara Marxen**

Brent Hartman – HPIT 2 standard for dispensers for industrial trucks, out for ballot, expect to be published in week or two

CHMC2 materials compatibility for non-metallic materials, first meeting this month for subcommittee

FC5 standard for hydrogen generation via fuel processing, adoption of ISO 16011 out for ballot, published in Q1 this year

HGV4.3 kicking off third edition in Q1 2017, will be looking at updates to new version of SAE J2601 method

SAE**Mike Steele**

Mike Steele – Meetings coming up on 9 – 10 of February. Safety WG agenda busy for upcoming meetings. In absence of Mr. McGuire who is no longer Chair, Mike Steele as new chair is filling agenda now.

ASTM**Tommy Rockward**

No update at this time.

ASME**John Grimes**

No update at this time.

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

A lot of the focus now is directed at some of these issues in the Northeast corridor for getting hydrogen infrastructure in place and clearing obstacles for FCVs to use the existing infrastructure, i.e. tunnels.

Areas that are working on is trying to remove the obstacles to allowing the liquid transfer of hydrogen in NYC so you can have liquid hydrogen storage and eventually gaseous fueling of industrial forklift trucks.

H₂USA Activities

Karen Quackenbush

No report at this time.

H2FIRST

NREL/SNL

Carl – looking at difference types of storage, low-grade storage advantages/disadvantages, potential code requirements, etc.

Regulatory Matrix Review and Comment

Karen Quackenbush

New version of the matrix as of December 21, 2016, available here - <http://www.fcchea.org/s/FCHEA-Regulatory-Matrix-markup-December-31-2016.pdf>

VII. Permitting and Installation of Hydrogen Fueling Stations

Ca Station Implementation

Jennifer Hamilton

Ended 2016 with 25 open retail stations. Working on getting beyond 100 stations.

Understanding is that the CEC solicitation is still underway, expect to make awards this quarter.

Ca DMS Fuel Quality / Metrology

Kevin Schnepf

DMS still very active in supporting retail hydrogen network in CA. Initiated oversight program last quarter in CA to ensure compliance with fuel specifications. Working on inspections of new hydrogen dispenser design types. Five total type approvals expected by summer.

Juana Williams – new design types?

Kevin – every dispenser manufacturer supplied has different measurement components, every different design has to be submitted for approval.

Fueling Compliance

Sara Marxen

Legal Metrology Standards Hydrogen Fuel Quality and Measurement

Juana Williams

More information may be available soon on new project in Japan, proposals to modify R139 standard for compressed gaseous vehicle refueling.

Will James – Multiple proposals for same topic, or cover different areas of dispensing?

Juana – Specific areas interested in, some question of provisions on areas necessary for overheating during the fueling process, questions on pre-cooling hydrogen, planned at one point to expand maximum error and accuracy classes (similar to what CA had proposed to widen tolerances).

VIII. Open Discussion & Other Issues

Non-SAE J2601 Fuelings

Bob Boyd/Spencer Quong

Bob Boyd - NFPA task group is addressing this topic. Would discuss potential complications of over-filling receptacles, non-communication fueling to target pressure, question of whether to put that in for secondary confirmation.

Jay Keller - ISO WG 24 has stood up a special task force to look at what a protocol needs to comply with so that other people can write a protocol that may differ from J2601, may go to some of Bob Boyd's concerns over fueling. SAE is also investigating the same space, agreement between ISO WG24 and SAE is that SAE will take the lead, Bob Boyd has been anointed as a liaison between ISO WG 24 and the SAE activity.

Other Issues?

IX. Next Meeting

Wednesday, February 1st at 3:00 PM Eastern.