



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

**Wednesday, March 1, 2017
TIME: 3:00 – 4:00 pm (Eastern Standard Time)**

Minutes

Attendees

**Connor Dolan
Jay Keller
Kelvin Hecht
Mike Steele**

**Jennifer Hamilton
Marcia Poxson
Nha Nguyen
Brent Hartman**

**Spencer Quong
Herie Soto
Elan Bond
Norm Newhosue**

I. Welcome and Housekeeping Items

FCHEA's anti-trust guidelines - Available on FCHEA's members only website and a copy can be provided to you on request

Review meeting agenda

Approve January minutes

II. DOE/HQ Update

Will James

Jay Keller – Do not know very much at this point. DOE and the government are in transition. Messaging is being shifted to focus on petroleum security and recognition of standing up new industry -> job growth and economy. Expectation of budget to be flat through the current fiscal year, next year will be determined.

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.

NFPA 2 special task force on liquid releases going on right now.

Ottawa meeting will be to harmonize Canadian and US/North American codes and standards

ISO TC 197 / WG 24 – meeting in Korea the week following the AMR.
Add ICHS meeting in September (September 11-13, 2017 in Hamburg Germany)
ISO TC 197 / WG 24, 19 – September 18-22

IV. Global Technical Regulations

Nha Nguyen

Last December at the JRC advised the European Union, Korea, and Japan to start Phase II of the GTR. The US with new administration and transition cannot commit to anything. The EU, Korea, and Japan agreed to submit the proposal and will be submitted in two weeks for approval. The US currently does not have a position / advisement – also cannot commit to co-chairing the meeting at this time.

A kick-off meeting will be held once submitted, likely in June, where would start drafting terms of reference for the working group and identify all the major items to be addressed during the Phase 2. The document proposal has a short list of items to discuss.

A link to the document to the UN website is available here -

<http://www.unece.org/fileadmin/DAM/trans/doc/2017/wp29/ECE-TRANS-WP29-2017-056e.pdf>

Once kick off meeting start, will draft terms of reference, identify leadership, and work out a timeline of meetings.

Everyone is invited to this meeting, there are protocols involved. Have to be part of a member of an official sanctioned organization / group to put forth proposals and so on, for example SAE, ISO, etc. The industry manufactures can represent themselves.

Anyone with interest in attending this meeting, please contact Nha.

Estimated time to go through Phase 2? Normally when ask for a mandate, it is about 2 years. Can potentially extend mandate if needed.

V. Codes and Standards Organization Updates

IEC TC 105

Kelvin Hecht

WG 3 Stationary Fuel Cell Power Systems

CD for next edition posted

US TAG submitted comments

WG 4 Forklifts

Final Draft for *Forklifts-Performance* posted

US TAG by voted to approve

WG 5 Portables

CD for next edition posted

US TAG had no comments

ISO/TC 197

Glenn Scheffler / Jay Keller

Jay – Karen is in Japan right now working with her ISO working groups – hoses, valves, etc. WG 24 is still preparing for CD-2. Glenn Scheffler just received draft from Nick Hart and is going through that before we send out for CD-2 vote. On revised schedule, do not see is slipping.

Spoke with Glenn regarding concerns of pressure testing brought up on previous call. Glenn said would follow-up with appropriate folks who raised concerns.

WG 27 – out for CD

WG 28 – DIS – sent to ISO management, hopefully next week.

NFPA 2

Susan Bershad

Jay Keller - NFPA 2 special task force on liquid releases is meeting right now.

NFPA 2 – third first draft meeting coming up in April in Los Angeles. Provide Spencer or Susan your information if you are planning on attending. Several task group will be meeting. Detailed agenda to come out. Lot of activity right now.

ICC

Bob Davidson

Spencer Quong – ICC FCAC has started meeting again. ICC codes are off-cycle right now for most part.

CSA

Sara Marxen

Brent Hartman – Hydrogen Forum previously mentioned. NA Hydrogen Codes and Standards Forum coming up in Ottawa. Reception to occur right before. By end of the week, will have some room-block information. Short notice on this event, asked by NRCan to complete by end of March. Please notify CSA of any agenda items you would like to include.

<https://community.csagroup.org/groups/login.jsps?referer=%252Fgroups%252Fhydrogen-forum-codes-standards>

HGV 4.3 took off in January. Met this week. Two meetings in March 23rd and 27th.

FC5 – adoption for US is in final stages of production at CSA – ANSI ballot. Final version also submitted to Canada for potential harmonization as much as possible.

CHMC2 group meeting in March.

SAE

Mike Steele

Two days of meetings on 9th and 10th in Toyota.

Progress made in protocol documents 2601 and 2601-4.

Presentation on hy transfer activities – waiting on feedback.

Glenn had success in Safety WG meetings.

Next set of meetings to be held in June, some telecoms between now and then.

ASTM

Jennifer Hamilton

Dr. JP Hsu getting caught up with few documents, back to ballot for vote. Co-chair of DO314 works for Division of measurements and standards – working on one of the papers, input on methods.

The three documents from Dr. JP Hsu for renewal are-

- D7634-10 Standard Test Method for Visualizing Particulate Sizes and Morphology of Particles Contained in Hydrogen Fuel by Microscopy
- D7649-10 Standard Test Method for Determination of Trace Carbon Dioxide, Argon, Nitrogen, Oxygen and Water in Hydrogen Fuel by Jet Pulse Injection and Gas Chromatography/Mass Spectrometer Analysis
- D7651-10 Standard Test Method for Gravimetric Measurement of Particulate Concentration of Hydrogen Fuel - *method is being updated by Christina Daniels, CDFD DMS*

Organic Halides in Hydrogen (or other gaseous fuels) – Screening method document being sent to ballot (to complete the SAE J2719 table)

List of folks waiting for answer as to application to join DO314, will go through.

ASTM Standard D7941 (Cavity Ring-Down Spectroscopy Analyzer) - Discussion with Dr. Adler regarding the ILS for cavity ring down method. Some promise in attaining samples, how many we need, and labs to support.

ASME

John Grimes

No report at this time.

VI. Discussion Topics

Facilitating Deployment

Carl Rivkin

No report at this time.

H₂USA Activities

Karen Quackenbush

Working on publishing outward looking organizational roadmap document.

Locations Group has finished a draft roadmap document, currently in review.

Investment Group looking into opportunities for outreach to investor community this year.

Regulatory Matrix Review and Comment

Karen Quackenbush

New version of the matrix as of December 21, 2016, available here -

<http://www.fchea.org/s/FCHEA-Regulatory-Matrix-markup-December-31-2016.pdf>

VII. Permitting and Installation of Hydrogen Fueling Stations

Ca Station Implementation

Jennifer Hamilton

NOPA came out. 16 stations in Notice of Proposed Awards. 1 connector station to Air Liquide. The rest are split between Shell and First Element. More Northern California stations – 2 in Sacramento area.

Link to the NOPA here - http://www.energy.ca.gov/contracts/GFO-15-605_NOPA.pdf

Did not include who did not get awarded. Usually they include those that were not awarded. No insight as to what that means.

Continue fighting for stations beyond 100.

March WG for CaFCP coming up in Southern California.

Ca DMS Fuel Quality / Metrology

Kevin Schnepf

No report at this time.

Fueling Compliance

Sara Marxen

No additional report at this point beyond HGV 4.3 update earlier.

Legal Metrology Standards Hydrogen Fuel Quality and Measurement

Juana Williams

No report at this time.

VIII. Open Discussion & Other Issues

Non-SAE J2601 Filling Protocols

Bob Boyd/Spencer Quong

SAE has started a new document J2601-4 – ambient temperature flow control. Low cost stations that just have flow control. Work needs to be done for modeling and completed by end of March. Any interest / feedback to contact Spencer Quong.

Mike Steele – group doing a lot of good stuff. Aaron Harris is the sponsor of that document.

Spencer – Starting validation testing of the model.

Other Issues?

IX. Next Meeting - Wednesday, April 5, 2017 at 3:00 PM Eastern