



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

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

Minutes

Attendees

**Aaron Harris
Brent Hartman
Connor Dolan
Greg Chirdon
Jackie Birdsall
Jay Keller
Jesse Schneider**

**John Grimes
Juana Williams
Kelvin Hecht
Marcia Poxson
Mike Steele
Nick Barilo
Norman Newhouse**

**Robert Davidson
Sandra Ullman
Sara Marxen
Spencer Quong
Steven Yip
Tommy Rockward
Will James**

I. Welcome and Housekeeping Items

- The Committee reviewed FCHEA's anti-trust guidelines - Available on FCHEA's members only website.
- The Committee reviewed the meeting agenda.
- The Committee approved the May draft meeting minutes.

II. DOE/HQ Update

Will James

DOE Annual Merit Review – Crystal City, VA June 8 – 12.

<http://www.annualmeritreview.energy.gov/>

Many announcements and things to come out soon. Good plenary speakers this year at the DOE AMR, former Senator Dorgan and Undersecretary Orr will be speaking.

Codes and standards on Tuesday, to ensure no overlap with SAE meetings later in the week.

Thursday morning cross-cutting session on hydrogen infrastructure.

Many side meeting discussions, DOE is reducing their number this year.

Out of C&S program, given support of gaseous hydrogen on separation distances, first program record on that front was published.

Feedback on contamination detection workshop held ~one year ago, report now public.

Working to get out document on history of fuel quality testing from ~2008 or so.

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).

Additional meetings to add:

WHTC meeting – October 11
IEA-HIA EXO Meeting – October 15
ICHS 2015 – Week of October 19
WG 24 – Week of October 26

IV. Global Technical Regulations

Nha Nguyen

Electric Vehicle GTR is being held this week in D.C. No additional update at this time.

Jesse Schneider – Two German automakers (BMW, Daimler) got together and developed a letter for the Secretariat of the GTR and request that hydrogen embrittlement be moved to SAE for near-term until such time that there is a conclusion to the activities there. This letter was sent in May 2015.

V. Codes and Standards Organization Updates

IEC TC 105

Kelvin Hecht

The US TAG voted to approve the micro fuel cell standard for performance, third edition, approved with whole series of comments.

ISO TC 197

Jill Thompson

Jesse Schneider - The WG 24 (hydrogen station guidelines) is meeting in France in two weeks. June 15 – 19, including one day meeting on hydrogen quality control, one day for risk assessment, and two days for main WG 24 meeting.

WG 24 is going to be sending the document (TR 19880-1) after this meeting for ballot to the P members.

WG 19 and WG 20 are also meeting in Paris, France to discuss the dispenser and valves. Led by Japan.

Jay Keller - WG 24 on aggressive timeline, outpacing some activities that will eventually feed into WG 24. WG 24 is generating language for hydrogen quality assurance (not tolerance or species). This will eventually be replaced by the work product of the new NWIP on this topic.. – see below.

ISO TC 197 is in final stages of launching new WG on hydrogen quality specification (species and tolerances). Led by the Japanese. This WG will revisit both tolerances and species that might affect fuel cell performance. This new effort will also include hydrogen quality assurance to ensure that fuel delivered at the end of the nozzle meets the published specifications.

EU has launched a similar activity. The expectation is that ISO will complete prior to and that EU will embrace the ISO work.

WG 15 – tanks – also restarting. French have suggested a new convener. The TPD was acting convener. At last plenary, TC 197 strongly suggested that a replacement convener be found. The TPD has nominated an individual and has gone to vote for approval.

NFPA 2

Martin Gresho / Susan Bershad

Nick Barilo – NFPA 2 has been through the process and approved. This should be published mid to late summer.

There will be a meeting in the next few weeks to discuss the next cycle, comments are due in ~1 year from now.

Jay Keller – FCHEA's Transportation Working Group (TWG) has launched a Hydrogen Codes Task Force (HCTF) to fill the hole that HIPOC had left. This HCTF operates under the auspices of the TWG. Two activities, one to create a strategic thinking team to identify current code revision and development needs (near and long term), and two, to create a writing team to write code change proposals and work them through the code change process.

The TWG met yesterday and approved the rosters for both sub-groups.

Those in the community with needs or issues can do so through Jay Keller, Karen Hall, Jennifer Hamilton, or Marty Gresho.

ICC

Bob Davidson

ICC in the middle of code development cycles for Group A codes.

The overwhelming majority of hydrogen changes has been scoped by the fire committee for Group B (next year). No hydrogen proposals in the Group A mixture. A little bit of ventilation that is scoped to the Mechanical Fuel Gas Code, will be working on that with the Task Group just mentioned. Just had green light as if it were the fire code.

CSA

Sara Marxen

CSA presentation provided. Available online at [Link here](#).

SAE

Mike Steele / Tim McGuire

Meetings are next week. Have 2601 topics to discuss. Full agendas have been published and are available online.

Will have a larger update for the next NHFCCSCC meeting.

ASTM

Tommy Rockward

A week and a half ago, had a conference call, results of ILS 751, GC mass spec test methods, technical contact is JP Sho. Mark could not follow the standard/procedure as written, made modifications. Those results should not be used for that test method, should put into other test method. JP Sho has developed some changes. Anthony Fleishmann at Air Liquide has retired, was the previous contact.

Jesse Schneider – Wish from ISO to have a joint discussion with ASTM D03 – sent this to Tommy in the past and to Raul Dominguez. Specifically with regards to analytical methods, many in Europe with issues to ASTM methods. Would like to meet with ISO TC 150(?). Tommy Rockward - In doing the agenda for upcoming ASTM meeting, Jesse is scheduled to be there? Requested to give a presentation.

Jesse Schneider - Will be able to call in from Japan. Can give an update from ISO and possibly have a colleague from Air Liquide attend.

ASME

John Grimes

No update at this time.

VI. Discussion Topics

Facilitating Deployment

Carl Rivkin

No update at this time.

H₂USA Activities

Karen Hall

Jay Keller – Full Participants meeting to be held at the DOE AMR on Tuesday, June 9. Closed meeting for H₂USA participants. General update and in-person working group meetings.

Hydrogen Fueling Stations, Locations Roadmap, and Investment and Finance groups have been very active. Modeling webinars/workshops reviewed models developed by the DOE over the past few years – it is important to educate the participants on how these models work and on how to proceed with the needs of H₂USA..

H2FIRST

NREL/SNL

Will James – Reports recently published mentioned on the last call.

HySTEP device – progress made, being built by PowerTech, update to come at the AMR.

Presentations on reference station design and contamination detection will also be held at the AMR.

Regulatory Matrix Review and Comment

Karen Hall

The latest version of the Regulatory Affairs Matrix is available online at <http://www.fchea.org/s/FCHEA-Regulatory-Matrix-May-22-2015.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

No update at this time.

Ca DMS Fuel Quality / Metrology

Kevin Schnepf

Jay Keller – California is moving ahead aggressively. Five(?) stations up and running able to sell hydrogen by the kilogram. Other stations are permitted/under construction making the total 21 which will be able to sell commercial hydrogen to the public..

California is developing under H2FIRST/DOE the HySTEP device that will qualify stations for SAE J2601 compliance. Scheduled release is for end of October/November timeline this year. This will alleviate some efforts from the gas suppliers and OEM's to qualify.

HySTEP is not the only device internationally; Europeans and Japanese have similar devices.

SAE J2601 Compliance

Jesse Schneider

DOE has approved the release of the P&ID (schematic) for the HySTEP device to insert into the 19880-1 document. The Japanese device is also being reference in the annex B of 19880-1. This will be discussed in further detail at the joint NoW / DOE / NEDO discussion in Tokyo, Japan on June 24-25.

Legal Metrology Standards Hydrogen Fuel Quality and Measurement

Juana Williams

No report at this time.

VIII. Open Discussion & Other Issues

Next meeting – Wednesday, July 8, 2015 at 3:00 PM Eastern.