

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

**Thursday, June 20, 2013
TIME: 3:00 – 4:30 pm (Eastern Daylight Time)**

Minutes

Attendees

**Aaron Harris
Bill Collins
Bob Davidson
Connor Dolan
Jackie Birdsall
Jay Keller
Jennifer Hamilton**

**Jesse Schneider
Julie Weis
Karen Hall
Kelvin Hecht
Marc Butler
Mike Steele
Nick Barilo**

**Norm Ingram
Norm Newhouse
Ron Nies
Spencer Quong
Steve Tucky
Susan Bershad
Will James**

1 Welcome and Housekeeping Items

Review of anti-trust guidelines

http://www.fchea.org/core/import/PDFs/ANTITRUST_GUIDELINES.pdf

Meeting agenda approved.

May draft minutes approved.

2 DOE/HQ Update

Nha Nguyen

Will James – Good AMR in May. Close to 1800 attendees. Next year's AMR will be in June in conjunction with Father's Day. It is also going to be the same week as WHEC.

Budget - Going through planning stages of next year. Safety codes and standards close to FY 12 mark.

Geneva meeting – global technical regulations up for vote. Big step towards regulation harmonization for hydrogen and fuel cell vehicles.

3 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

4 Codes and Standards Organization Updates

IEC TC 105

Kelvin Hecht

- WG#1 (IEC 62282-1 Ed.3 – *Terminology*)

- Draft Technical Specification posted for vote. Comments to USTAG by July 19th.
- WG#4 (IEC 62282-3-201 Ed.1 – *Stationary Fuel Cells – Performance for small fuel cells*)
 - Final Draft International Standard has been approved.
- WG#4 (IEC 62282-3-200 Ed.2 – *Stationary Fuel Cells – Performance*)
 - Comments to CD received.
 - Next meeting scheduled for June 17-18 in Grenoble, France.
- WG#6 (IEC 62282-4-101 – *Fuel Cell Systems for Forklift Applications – Safety*)
 - Comments to CD posted in June.
 - Committee Draft for vote (CDV) will be posted by July.
- WG#8 (IEC 62282-6-101 – *Micro Fuel Cells – Safety*)
 - 2nd edition in progress
 - Comments to CD posted.
- WG#9 (IEC 62282-6-200 Ed.2 – *Micro Fuel Cells – Performance*)
 - FDIS approved. Publication expected by March 2013.
- WG#10 (IEC 62282-6-400 - *Micro Fuel Cells – Power & Data Interchangeability*)
 - CD in progress.
- WG#11 (IEC TS 62282-7-2 *Single Cell – Test Methods For Solid Oxide Fuel Cells*)
 - USTAG voted to accept Draft Technical Specification.
- WG#12 (IEC 62282-3-400 – *Small Stationary Fuel Cells with Combined Heat and Power Output*)
 - CD in progress.
 - Next meeting scheduled for July 1-3 at California Fuel Cell Partnership, Sacramento, CA

ISO TC 197

Jill Thompson

Jay Keller - The next plenary is in the process of being announced. This will be the week of December 1 (miscellaneous WG meetings at the beginning of the week), with the plenary being held at the end of the week (December 5th and 6th). The meeting will be in Paris, France.

NFPA

Martin Gresho

Susan Bershad – We have completed the first draft meeting of NFPA 2 the first week of June. Now working on getting the draft ready for editorial and production. The ballot has been pushed off for two months due to the volume of response and it being late in the cycle. Originally, the ballot was beginning of August, now the beginning of October. There will be a preliminary first draft report submitted, this will be unedited. The first draft report will go out at the beginning of November. Second draft meeting to be held the first week of April in Golden, Colorado.

Karen – if the ballot comes in October and the first draft in November, is that enough time to put the draft together.

Susan – The ballot will be issued on Oct. 2, the first draft report will be posted on Nov. 6. What we are changing going forward in the revision cycle, is originally could submit comments online or on paper. Now there are two separate deadlines for comments, one for paper, one for online. Paper is due Dec. 11, electronic is due Jan 15. As we move forward, in a future cycle, paper comments will no longer be accepted. The schedule for the ballot is the same timeframe as normal and will be submitted electronically.

Bill Collins - Status of electrically generation committee in 853.

Susan - First draft meeting held already.

ICC

Robert Sale

Bob Davidson – Packets of changes put in for NREL all went through smoothly. One or two that Bob Boyd had covered that were pulled back. One other item that Spencer Quong has in for Toyota, we asked for comments and a denial by committee so that we could wait to see how NFPA handled the topic.

Only feedback received, comment on one of the changes, unrelated to the changes we made on emergency power, etc. Public comments in on July 15, ICC will publish those at the end of August, no later than Sept. 2, hearings on Oct. 2. Bob will monitor if objections/comments are raised, though not expected.

CSA

Julie Weis

CSA update available online at www.fchea.org/core/import/CSA-Update-2013.06.18.pdf.

HDTA Status Update

Ken Loewenthal

HDTA Status Update – Nothing new to report.

UL

Laurie Florence

Nothing new to report.

SAE

Mike Steele
Jesse Schneider

Mike Steele – Had our meetings last week on the 10 – 12. Most involved the interface working group and 2601. Some things that the Safety WG is working on, 1766, looking to get out at the end of the summer. This is an important document. Other Safety WG item of importance is 2990-1. In-person meeting held on harmonizing language on vehicle labeling, also looking up references to other documents. It looks like we are coordinating efforts within ISO and 2990 group. A lot of crossover happening. Notes will be posted within next few days to SAE.

Interface WG, J2601-3, fueling protocol for industrial trucks, just published last week. This is a TIR.

Jesse Schneider – 2799, final draft is out with the team for final review. Expect ballot within a month. Essentially the same as the TIR version, in terms of communications with IRDA. However, the 70 MPa receptacle is moved to 2600 and it has an additional data field for future development. This happened in January.

J2601 – just completed a successful field trial in Denmark with Shell, H2logic, Daimler, and Hyundai. The goal is to validate the lab testing in Powertech and the tables created from math models. The team had a successful test. There will be another test in the coming weeks in Japan. With Toyota, Linde, and Iwatani, essentially document work to take place in July. Thereafter, balloting will begin for J2601 and 2799. The data report with the complete Powertech lab testing and field testing will be published at a minimum at the SAE world congress, but made available to industry in short order, likely July/August. As soon as we have the data complete, the data will be made available.

ASTM

Tommy Rockward

Nothing new to report.

5 Discussion Topics

Regulatory Matrix Review and Comment

Karen Hall

A new version will be circulated prior to the next meeting.

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

Permitting and Installation of Hydrogen Fueling Stations

CAFCP Station Implementation Team

Jennifer Hamilton

Jennifer Hamilton – The CEC conducted their next business meeting and the remaining funding for the other 7 stations was approved. The site changes for some of the other sites is expected to move forward.

Ca DMS Metrology

Norman Ingram

Norman Ingram – Received high volume 70 MPa storage tanks to do the 70 MPa evaluations. In process of installation, purged, and processing. Expected testing within the month. A passive remote shutdown was added.

Ca DMS Fuel Quality

Ron Nies

Ron Nies – Laboratory is progressing, procedures being put together. Conversations with ASTM to share with laboratory. Cannot travel to Montreal to share in person but can discuss with international entities in a different venue. Can't travel outside of the country. Considering web conference to get the information out.

Need to get out in field and gather samples at stations to run real world samples through equipment. If any concern is raised, please ensure them that this is not regulatory. No negative effect for the station. Doing our part to ensure fuel quality. Please spread the word.

We are working with ARB now and talking to CAFCP members on the possibility of going out to operating stations now and looking at dispensers now, get an idea of what they do, do they have displays, print receipts, etc. Will repurpose NREL device and with station owner permission run the device through the dispensers. Looking at regs in CA and possibly loosening them. Putting together some language to loosen up specifications, most likely in August. If want to be part of the workshop, please contact Ron Nies.

As far as 2601 is concerned, not concerned with DMS. We are looking at changing CA rules, loosening them up.

The device NREL is developing has nothing to do with ensuring 2601 compliance.

SAE TIR J2601 Compliance

Jesse Schneider

Jesse Schneider – Question to CSA, when is a GTA device going to be available?

Carl Rivkin – Would be up to CEC to determine if the stations are compliant with 2601 TIR.

I don't think they will take that responsibility. Someone should contact them and see what is going to happen.

Carl – There is something in the CEC language. That is the driver.

Jay Keller – The notion that 2601 doesn't have a regulatory home is correct, which means that the only compliance issue with the CEC awarded stations is one of contractual agreements between the CEC and the awardee.

Bob Boyd – Once CSA publishes that standard, then 4.3 needs to be revised.

Jesse – First needs to be published as a standard, perhaps would be a good idea, once it is published to have communication with CEC that the standard is available and recommended for new station projects.

Regulatory bodies like to reference standard by publication date. Ensure that when it goes into fire codes that it goes by publishing date.

Hydrogen Fuel Quality and Measurement

International Hydrogen Device Standards

OIML R 139 "Compressed gaseous fuel measuring systems for vehicles"

The Secretariat (The Netherlands) has indicated that work continues on the second committee draft of R 139 as the result of comments received in April 2013. The outcome of this work will determine if a new committee draft is developed or a draft recommendation (DR) can be published. The status of OIML R 139 will be updated once these comments can be resolved.

OIML R 81 "Dynamic measuring devices and systems for cryogenic liquids"

NIST OWM is Secretariat for the International Organization of Legal Metrology (OIML) Recommendation 81 (R 81).

On May 20, 2013, the Secretariat distributed a first working draft (1WD) of R 81 to national stakeholders and the TC 8/SC 6 (the OIML international project group) for their review and comments by the September 30, 2013 deadline. This draft model regulation includes the metrological and technical requirements and metrological controls and performance tests that apply to measuring devices and systems used for the dynamic measurement of cryogenic liquids in stationary, vehicle mounted, and vehicle refueling applications. This 1WD includes: (1) new ISO and IEC Standards as recommended in OIML D 11, (2) new developments in hydrogen measurements, (3) revised density equations, and (4) any other remaining relevant standards and national documents.

7 Open Discussion & Other Issues

Next meeting to be held on Wednesday, August 7th at 3:00 PM Eastern.