

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

**Wednesday, December 11, 2013
TIME: 3:00 – 4:30 pm (Eastern Daylight Time)**

Minutes

Attendees

**Bill Collins
Connor Dolan
Ernst Baumgartner
Jackie Birdsall
Jay Keller**

**Jennifer Hamilton
Juana Williams
Karen Hall
Robert Boyd
Robert Ingram**

**Ron Nies
Susan Bershad
Tommy Rockward**

1 Welcome and Housekeeping Items

Review of anti-trust guidelines

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

Approved the meeting agenda.

Reviewed and approved the October 30 draft minutes.

2 DOE/HQ Update

Will James

Provided by Jay Keller – Toyota unveiled its Fuel Cell Concept vehicle at the Tokyo Auto Show, Honda unveiled its Fuel Cell Concept at the LA Auto Show, Hyundai also unveiled its production fuel cell electric vehicle (FCEV) at the LA Auto Show, which will be available for leasing beginning in Spring 2014 in North America. The Toyota Fuel Cell Concept Vehicle will have its North American debut at CES in Las Vegas in January.

3 C&S Events and Fuel Cell Safety Information

Fuelcellstandards.com

Kelvin Hecht

Contract has expired. Although DOE has said they plan to renew my contract, it hasn't happened yet.

<http://www.hydrogenandfuelcellsafety.info/meetings.asp>

Karen Hall

4 Codes and Standards Organization Updates

IEC TC 105

Kelvin Hecht

A new joint TC21 (Batteries)/ TC (Fuel Cells) activity is being formed in IEC to develop Flow Battery standards under the administration of TC21.

There appears to be significant international interest in this new technology with implications to grid stability, renewable energy systems, and large-scale energy storage.

My concern is that the US be represented on these activities.

- IEC 21/823/NP Flow Battery Safety chaired by Japan.
- IEC 21/819/NP Flow Battery Test, Definitions and Performance chaired by China.

The current TC105 US TAG does not have any Flow Battery experts.

The US Department of Energy is sponsoring flow battery programs at Sandia, PNNL and NREL.

Key dates:

- Voting on these activities will close in January/February 2014.
- An organizational meeting for these activities is scheduled in Washington in April.

If you can find any interest in the NHFCCSCC, please have them contact me at Kelvin Hecht (kelvinhecht@comcast.net).

Mike Perry at United Technology Research Center (UTRC) was offered as a Flow Battery Expert.

ISO TC 197

Jill Thompson

Jay Keller – The TC 197 Plenary was held last week. Over the course of the last couple of years, TC 197 has completely restructured its upper management. The December meeting had a lot of working group activity, consideration new work items were an outcome of the meetings. At this meeting, a large number of active working groups met.

There were a number of WG and activities that were stopped during the management change, WG 6 and WG 11. Both of these working groups were restarted with this plenary and are moving forward to generate new product.

There are a number of WG that are addressing individual componentry at this time.

Jesse Schneider of the USA and Guy Dang-Nhu of France are co-convening WG 24 on stations. Because of critical timelines in Europe that WG is on a very fast track.

The rest of the WGs are on a more standard track of ~ 3 years.

Karen Hall – An existing WG, only been around for a year and a half, focused on PSA units. There was interest in monitoring that. China is leading that effort. During the meeting, asked to focus on moving away from specification of the unit itself, approved by the Technical Committee. Title of the document was changed to reflect the focus on safety aspects, not on the units themselves. The new scope still needs to be approved by the P-Members.

NFPA 2**Martin Gresho**

Susan Bershad – NFPA 2 is now officially on an annual 2015 document, the same cycle as NFPA 55.

We had a meeting on November 12th, now have both documents back from production for review.

Balloting for the first draft on both documents will be issued right after the first of the year.

The 2nd draft meeting for both documents will be a joint meeting on the week of July 14th, 2014 at NREL in Golden, Colorado. The plan is for the first few days will be on NFPA 55, the last few days on NFPA 2. The middle day will be taken up by comments that are common to both documents as they have to do with hydrogen.

NFPA 2 has roughly 400 first revisions. They all need to be reviewed before distribution. The target is to have the first draft of both documents available at the beginning of January.

The deadline for posting of the first draft is March 7th, though it can be posted sooner. Public comment closing date is May 16th.

NFPA 853**Karen Hall**

Going through second draft meeting determination ballot, due tomorrow. Next meeting should have the results of the ballot. Susan Bershad noted there were no public comments received so it may be published soon.

ICC**Robert Sale**

No update at this time.

CSA**Julie Weis**

No update at this time.

HDTA Status Update**Ken Loewenthal**

HDTA Status Update – Nothing new to report.

UL**Laurie Florence**

No report at this time.

SAE**Mike Steele
Jesse Schneider**

Mike Steele - The SAE Fuel Cell Standards Committee status is pretty much the same as last time with one exception: voting has started on J2601 and J2799.

ASTM

Tommy Rockward

Just returning from travel from semi-annual ASTM meeting.

Update from that meeting:

D7649 - Status report on test method for determination of traces of CO₂, argon, nitrogen, oxygen, and water in fuel. An Inter-Laboratory Study (ILS) for this method. Sample cylinders procured by LANL was completed yesterday, now only need to provide Air Liquide with the labs. 5 labs have been identified, Smart Chemistry, Air Liquide, Advanced Biofuels, California Department of Food and Agriculture, and SHIMADZU.

Raul Dominguez sent two emails asking for interest on work items started under Jackie. The first is a method for determining trace helium, with the second being for identification of trace contaminants from hydrogen pressure vessels. As far as the helium standard is considered, that effort is being taken on by Ron Nies. A new lead is being identified for the hydrogen pressure vessels work.

Standard reference materials from Eric Stanfield and Bill Thorn at NIST is being looked into. Financial assistance may be needed.

Monthly webinars are being held on fuel quality testing, these are usually held on Fridays.

Action Item: Tommy Rockward will send an email to the NHFCCSCC group inviting Committee members to participate.

A discussion on the helium testing will be brought up at the next monthly webinar meeting.

5 Discussion Topics

Regulatory Matrix Review and Comment

Karen Hall

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

Permitting and Installation of Hydrogen Fueling Stations

CAFCP Update

Jennifer Hamilton

Working group meeting held on the 4th and 5th of December. A lot of discussion was held on station implementation.

Two solicitations that have stations that need to be built. The 2010 PON, the matter is time running out to be available (possibly October 2014 timeframe), the 2012 PON has the same deadline. There are basically 19 stations that all need to be online at the same time. There is a lot of involvement with the CEC and Governor's Office to help the station providers get these things on the ground.

There is a current 2013 solicitation out now from CEC for station implementation.

There is another solicitation from SCAQMD for updating current stations, these are due near the end of this month.

Ca DMS Metrology

Norman Ingram

NREL has completed the data collection and validation phases of the standard. Sent to us. Under review. Will publish results in the CEC final report. Included will be the validation data, whether or not the standards validate. Included for uncertainty. Will include the three methods, proving the dispensers delivery.

New lift mechanism for tanks on transport and balances on transport as well. Hopefully read to pack and ship on December 20th. A bit of outfitting left to do on the vehicles. Working with CEC, CARB, and SCAQMD so that we can get out and deploy the device to collect field data on the dispensers.

A rulemaking process to change some of the tolerances to get this introduced into commercial service. Workshop held back in August. Package sent to Office of Administrative Law. Published in the register. Comment period to end in January 2014. Working period to be begin in February. Hopefully will be fast tracked to begin immediately as of April 2014.

Web reference to OAL for viewing of and comments to the proposed changes of the California regulation is <http://www.oal.ca.gov>.

CA DMS Regulations Webpage <http://www.cdfa.ca.gov/dms/regulations.html>.

Ca DMS Fuel Quality

Ron Nies

We have gone out and started pulling samples from stations. Doing this to learn how to pull the samples to evaluate the sample taking procedures.

SAE TIR J2601 Compliance

Jesse Schneider

Bill Collins – J2601 is out for ballot.

Bob Boyd - J2601 compliant stations will be able to do communications and non-communications stations. Only the final pressure. With communications will be 100%, non-comm will be roughly 90%. The rate will be the same for both. Only the target pressure that's slightly lower for the non-comm.

The measuring device should not be affected much by the use of communications or not.

Whether all manufactures will meet communications or not is yet to be determined.

Hydrogen Fuel Quality and Measurement

NIST

Juana Williams

No report on the work being done at weights and measures or metrology. Working on dispenser field test methods. Phase 1 due to be complete at the end of this month.

7 Open Discussion & Other Issues

Next meeting to be held on Wednesday, January 8th at 3:00 PM EDT.