

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

**Wednesday, January 8, 2015
TIME: 3:00 – 4:30 pm (Eastern Daylight Time)**

Minutes

Attendees

**Anthony Androsky
Bob Boyd
Bob Davidson
Brian Ladds
Carl Rivkin
Connor Dolan
Ernst Baumgartner
Jay Keller
Jennifer Hamilton**

**Jesse Schneider
John Grimes
John Mallo
John Mough
Karen Hall
Kelvin Hecht
Larry Moulthrop
Mike Steele
Nick Barilo**

**Norm Ingram
Robert Wichert
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.

December 11, 2013 draft minutes approved as amended.

2 DOE/HQ Update

Will James

Report on the recent meeting in Geneva – GTR – The meeting laid groundwork for the second phase of the GTR. Emphasis of the GTR is related to materials compatibility. The co-chairs are meetings early this year, with the first meeting is expected to be held in Summer to early Fall.

3 C&S Events and Fuel Cell Safety Information

http://www.fuelcellstandards.com/calendar_new.html

Kelvin Hecht

February 3-4 IEC TC105 WG 4 – Stationary Fuel Cells/Performance
IEC 62282-3-200 CD2
Ricerca Sistema Energetico
Milan, Italy

February 4-7 IEEE 1547- Interconnecting Distributed Resources
P1547.1a (test procedures)
P1547.8 (recommended practices)
Santa Clara, California

February 4-7	ISO TC22/SC21 - Electrically propelled road vehicle WG 1 – Vehicle operation conditions, vehicle safety & energy storage installation Berlin, Germany
March 10-14	ISO TC22/SC21 - Electrically propelled road vehicle 2014 Spring meeting Tokyo, Japan
April 23-24	IEEE 1547 – Interconnecting Distributed Resources P1547 (full revision) Las Vegas, Nevada
May 15-16	IEC TC105 WG 4 – Stationary Fuel Cells/Performance IEC 62282-3-201 CD comments European Institute for Energy Research / U. of Karlsruhe Karlsruhe, Germany
June 23-27	European Technical School on Hydrogen and Fuel Cells 2014 / University of Ulster (themes: hydrogen safety, storage and fuel cells) http://h2fc.eu/technicalschool Crete, Greece
Week of July 14	NFPA 2 (Hydrogen) / NFPA 55(Compressed Gases) Joint 2 nd Draft Meeting NREL Golden, Colorado
November November 7-8 (2 days) (2 days) (1 day) (2 days)	IEC TC 105 – Fuel Cell Technologies Plenary meeting WG# 4 – Stationary / Performance (IEC 62282-3-200 CDV comments) WG# 7 – Portable Fuel Cells WG# 9 – Micro Fuel Cells / Performance WG# 12 – Small Fuel Cells CHP Tokyo, Japan

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

Karen Hall

February 17 – 19 – WG 12 – Meeting in Sacramento, CA

4 Codes and Standards Organization Updates

IEC TC 105

Kelvin Hecht

Meetings by WG 4 and 12 already discussed above.

WG 4 – Committee draft comments are due this Friday to the US TAG. That is document 62282-6-200.

There is a new activity vote this week on flow batteries. This will be a joint activity between TC 105 and TC 21 (secondary batteries). As of yet, unable to find any US representative to participate on the two subcommittees that are starting, one being General Requirements (Chaired by China) and the other Safety Aspects (Chaired by Japan).

62282-5-1 Edition 2 Portable Safety entering maintenance cycle – for member/observer country comment this month.

ISO TC 197

Jill Thompson

Jay Keller – First “working” plenary held in December – WG meetings planned for very near future. The many new WG of the TC are now up and running and doing their work, many held their first meetings in Paris, others will be meeting for the first time over the next few months.

Jesse Schneider – WG 24 (gaseous hydrogen fueling stations) kicked off and has been supported by a good cross-section of the industry. Timeline for the WG on a call has been compressed to accommodate European timing so that it can be referenced in an upcoming directive (2-year timeframe.) There will be two US meetings this year with four total meetings in 2014, the other two being held in Japan and Germany. One of the US meetings will be LA in April, with the other being held in June at the Department of Energy Annual Merit Review.

Karen Hall – A two-year timeframe is aggressive, but doable with active participation.

NFPA 2

Susan Bershad

Deadline to go out to ballot is January 31st. Just finished up a second draft meeting. Hopefully beginning of next week. There will be a two-week turn-around for vote.

NFPA 853

Karen Hall

Based on the ballot results, will be a second draft meeting. Will be a part of the 850/851 second draft meeting, not a second meeting. No date set yet, tentatively set for March 2014, possibly in San Diego.

ICC

Robert Sale / Bob Davidson

ICC right now is working on Green Code for this cycle. In the meantime, they are in the process of putting together the actual code language as result of the code hearings, as well as documents for significant changes to building codes, hear from some of those authors in regard to the upgrades to the hydrogen language in those codes.

CSA

Steve Tucky

Presentation available online at: www.fchea.org/core/import/NHFCCSCC/CSA-Group-Update-2014.01.07.pdf

HDTA Status Update

Ken Loewenthal

Ken via email: HDTA Update – nothing new to date to report.

UL

Laurie Florence

No report given.

SAE

**Mike Steele
Jesse Schneider**

Mike Steele – The last meeting was held in November – next up is 5 – 6 of March.

Jesse Schneider – The voting has started on December 2 and ended on December 29th. Quorum was accomplished in the vote of both 2799 and 2601. 65 – 70 % of the team voted. Only positive votes, with six abstentions. No negative votes. Both 2799 and 2601 passed. One more affirmation ballot (two-week) with incorporated clarifications, this is anticipated to start by the 20th of January. Publishing is realistic for March 2014.

Jennifer Hamilton – A 2990 meeting is scheduled for Wednesday of next week, which is looking to explore I chart for crash with the group. Hopefully, with agreement, a draft will be put together shortly.

Mike Steele - J2600 is overdue for clarifications, will get on the road on that this year.

ASTM

Tommy Rockward

Tommy via email: As far as, ASTM...Nothing new to report now.

5 Discussion Topics

Facilitating Deployment

Carl Rivkin

Presentation available online at: [www.fchea.org/core/import/NHFCCSCC/CS-Overview - 8Jan14.pdf](http://www.fchea.org/core/import/NHFCCSCC/CS-Overview-8Jan14.pdf).

Carl Rivkin – One of the things that I think will happen from this group, or someone going through the process of permit applications. They will go through NFPA 2 and will put together a key process for permit application, a checklist. This sort of simplified presentation could greatly help the process and could become more standardized as the fire code is adopted and as the reference in NFPA 2 makes it the applicable document for fueling stations.

Bob Boyd – the next edition of the fire codes being adopted is the 2012 edition, the IFC has been modified to be the 2013 edition. Some local jurisdictions are still using the old California Fire Code based on the 2009 IFC. The current edition has a lot of requirements that are conflicting with NFPA 2, many of these have now been removed.

The new CA Fire Code references NFPA 55 for setback distances for storage in particular. I think the linkage of NFPA 55 to NFPA 2 will presumably be available to AHJs.

Carl Rivkin – Need to think of beyond California. The next area that will see projects is going to likely be in the Northeast. While California is obviously critical, we need to keep a national perspective.

Robert Wichert – Is there anything that obviously prevents a jurisdiction from using the current codes that prevents using NFPA 55? Such as the 2012 IFC (2013 CA Fire Codes which is now law).

Bob Boyd – It might not be law in a particular jurisdiction. Some areas are still dealing with older fire codes.

Carl Rivkin – All building / fire codes have provisions for variance. The concern being that you want to show compliance with current documents that may not be law. Many jurisdictions will accept that. Requests for variances can be a dangerous path to take as some AHJs will ask to hire a third party reviewer, which can be an additional cost/delay. Some jurisdictions will have much older fire codes on the books and know that they are out of date; they will be open to an application that shows compliance with current documents, this is not a variance, just showing compliance.

For instance, when working with CAFCP, the fire marshal sent a letter stating that NFPA 2 would encourage hydrogen safety. Having the letter can provide an additional consideration.

Jennifer Hamilton - The letter is now part of the Zero Emission Vehicle toolkit on the CA website. The ZEV action plan actually calls for the fire marshal to provide education and training.

There are a number of ways to support deployment, education is key, including local community outreach, supporting developers whenever possible, and education to community as well as first responders.

Carl Rivkin – With site location what a lot of people are objecting too / concerned about, is their home values and having the project making a negative impact on that.

Karen Hall – Unless there are major objections, would like to add this to our agenda moving forward. Additional questions will be taken up at our next meeting.

Regulatory Matrix Review and Comment

Karen Hall

The NHFCCSC is asked to submit any known changes to Karen by email at khall@fchea.org.

Permitting and Installation of Hydrogen Fueling Stations

CAFCEP Station Implementation Team

Jennifer Hamilton

The CEC PON 13607 went out on November 22 and the deadline for submission is February 14. There have been some addendums made to the submission.

Ca DMS Metrology

Norman Ingram

No update at this time.

Ca DMS Fuel Quality

Ron Nies

Nothing new to report.

SAE TIR J2601 Compliance

Jesse Schneider

Maybe an opportunity in February to present J2601 to the potential candidates for the CEC solicitation, coordinated by CAFCEP and SAE. Essentially, this will aid in the rollout of hydrogen infrastructure in California.

Legal Metrology Standards Hydrogen Fuel Quality and Measurement

Juana Williams

Juana will be participating in U.S. National Work Group meetings January 6-9, 2014.

7 Open Discussion & Other Issues

Next meeting to be held on February 5, 2014 at 3:00 PM Eastern.