

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

**Wednesday, August 7, 2013
TIME: 3:00 – 4:30 pm (Eastern Daylight Time)**

Minutes

Attendees

**Anthony Androsky
Bob Boyd
Bob Davidson
Ernst Baumgartner
Jennifer Hamilton
John Grimes
Julie Weis**

**Karen Hall
Ken Loewenthal
Larry Moulthrop
Marty Gresho
Mike Steele
Nick Barilo
Peter Ehlers**

**Ron Nies
Sara Marxen
Spencer Qoung
Steve Tucky
Susan Bershad
Will James
William Collins**

1 Welcome and Housekeeping Items

Review of anti-trust guidelines

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

Approved meeting agenda.

Reviewed and approved June draft minutes.

2 DOE/HQ Update

Will James

Pretty quiet on DOE front. Returned from meeting in Germany, discussed infrastructure issues such as fuel quality, metering, hardware, etc. Good discussion. Hopefully will hold a webinar at the end of October, discussing output of that meeting.

International Conference on Hydrogen Safety, Brussels in September.

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

To be added: NFPA 55, October 8–10, Praxair in Buffalo, New York

4 Codes and Standards Organization Updates

IEC TC 105

Kelvin Hecht

Active Working Groups

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

- Draft Technical Specification posted for vote. USTAG voted to accept without comment.
- 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*)
 - 2nd edition in progress.
 - Next meeting scheduled for November 4-5 in Frankfurt, Germany.
- WG#6 (IEC 62282-4-101 – *Fuel Cell Systems for Forklift Applications – Safety*)
 - Committee Draft for vote (CDV) posted for comments and vote in July. Comments to USTAG by October 1st.
 - Next meeting scheduled for November 5-6 in Frankfurt, Germany.
- WG#8 (IEC 62282-6-101 – *Micro Fuel Cells – Safety*)
 - 2nd edition in progress
 - Next meeting scheduled for November 4-6 in Frankfurt, Germany.
- WG#9 (IEC 62282-6-200 Ed.2 – *Micro Fuel Cells – Performance*)
 - FDIS approved. Publication expected by March 2013.
 - Next meeting scheduled for November 6 in Frankfurt, Germany.
- WG#10 (IEC 62282-6-400 - *Micro Fuel Cells – Power & Data Interchangeability*)
 - Comments to CD posted in July. CDV will be posted by September.
 - Next meeting scheduled for November 5-6 in Frankfurt, Germany.
- 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 November 5-6 in Frankfurt, Germany.

ISO TC 197

Jill Thompson

Karen Hall - US TAG met two weeks ago and considering a number of new work item proposals for hydrogen fuelling stations. Also revising proposal US developing. Jesse Schneider has been the lead for the proposal from the U.S. side, the current NWIP is a merging of a NWIP submitted by the French and the one submitted by the U.S. Would re-launch work on hydrogen fuelling stations. Starting from the previous work embracing that effort as the new work moves forward. This combined NWIP is now being forwarded to ISO TC 197.

Three new work item proposals CAS read, feedback received and now moving forward with additional comments and clarifications from US TAG. Receiving other work item proposals from other international TAGs.

NFPA

Martin Gresho

NFPA 2 first draft meeting in June. The first version of the results of that have been published, are difficult to follow. First draft report, actual published what the NFPA 2 document will look like, published on September 6. Ballot due by October 2nd for those on the committee.

Following first draft report, 2nd meeting of NFPA 2 in Spring of 2014. Next deadline people concerned with, set up with NFPA 2, and for paper comments, deadline is December 11th, 2013, for online comments, deadline is January 15, 2013.

NFPA 55, public input closed in early July, and the first draft meeting will be held in early October, on the 8th – 10th in Buffalo, New York at Praxair.

NFPA 853 – Had first draft meeting and working on 2nd draft meeting.

ICC

Robert Sale

Bob Davidson – The schedule posted for Fire Code hearings - Atlantic City, October 3, 2013.

Two public comments posted so far, minor adjustment with one of the proposals from NREL. The other change emergency power requirements, not technical change. Spencer Quong proposal on the allowance for hydrogen fueled motor vehicles. Need for gas metering and ventilation requirements in the code, maximum cubic feet of hydrogen in the tank. Reworked and resubmitted for consideration.

CSA

Julie Weis

Reviewed the CSA update. The update is available online at www.fchea.org/core/import/NHFCCSCC/CSA-Update-2013-08-05.pdf.

HDTA Status Update

Ken Loewenthal

CSA Group will move forward with the project associated with the construction of the Hydrogen Dispenser Test Apparatus (HDTA). It is estimated that the construction of the HDTA will take between 6 – 9 months to complete. This scope project does not include the weights and measures module nor the fuel quality sampling and measurement module to support on site testing to NIST requirements.

Important – **Currently, only the construction phase of the project is approved.** The project may be put on hold if further support is not secured once the construction phase of the device is complete.

Specifically, the scope of the current approved project includes the project management services and the design, sourcing, fabrication and assembly of the components, sensors, and software to make up one HDTA for deployment in the US market. The scope of the current project does not include the validation of the device for use as a testing standard or any additional requirements needed for field deployment.

Before the HDTA can be deployed in the field, proper validation testing and calibration of the device in accordance to CSA HGV4.3 and the requirements outlined in SAE J2601 is required. Due to complexity of the test requirements outlined in the SAE and CSA standards, the costs associated with this task are significant and CSA Group seeks support from Government and Industry to help fund these activities.

It is currently estimated that the total cost associated with this validation testing / calibration requirement is approximately \$800K and will take several months of time to complete. The reason for this estimated high costs is there are currently no station locations available that comply with J2601 protocols and have the appropriate available capacity of hydrogen on site. CSA Group will have to work with its partners in securing the facilities and resources to complete this task.

UL

Laurie Florence

Nothing new to report.

SAE

**Mike Steele
Jesse Schneider**

Safety Working Group – J2 went through a vote, several comments. Glenn has to adjudicate.

There is a phone call scheduled for 14th of this month to discuss J2990-1, as well as an in-person meeting scheduled.

Interface Working Group – J2601 along with J2799. Document is almost ready for vote. Jesse put out final copy out last week. Will review comments and determine voting afterward. Anticipating good meeting in September, and hopefully will be ready in near-future.

ASTM

Tommy Rockward

Nothing new to report.

5 Discussion Topics

Regulatory Matrix Review and Comment

Karen Hall

Reviewed the Regulatory Matrix. Comments can be submitted to Karen Hall at khall@fchea.org.

Permitting and Installation of Hydrogen Fueling Stations

CAFCP Station Implementation Team

Jennifer Hamilton

CEC will have three workshops this month, August 12, 16, and 27.

The workshop on the 12th will be on California's hydrogen fuel infrastructure. The purpose of this workshop will be to discuss the current infrastructure and activities related to expanding the current infrastructure.

The workshop on the 16th will focus on Station Location Areas. This workshop has two major objectives: to review the discussions about Station Location Areas from the August 12, 2013 "Hydrogen Fuel Infrastructure Survey" Workshop and to provide a forum to discuss future opportunities for new methods and approaches for Station Location Areas selection.

The workshop on the 27th will focus on hydrogen gas metrology, standards, and dispensing. The purpose of this workshop will be to discuss the regulations for the commercial measurement of gaseous hydrogen used as a vehicle fuel in refueling applications.

The most recent round of CEC funding covered 7 stations and almost \$7M to develop and upgrade stations to make them accessible. Another Program Opportunity Notice from the CEC is expected to come out shortly.

Ca DMS Metrology

Norman Ingram

No new updates at this time.

Ca DMS Fuel Quality

Ron Nies

No new updates at this time.

SAE TIR J2601 Compliance

Jesse Schneider

No new updates at this time.

Hydrogen Fuel Quality and Measurement

NIST

**Juana Williams &
Marc Buttler**

No new updates at this time.

7 Open Discussion & Other Issues

Next meeting: Wednesday, September 4th, 3:00 – 4:30 PM EDT.