

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

Wednesday, September 5, 2012  
TIME: 3:00 – 4:30 pm (Eastern Daylight Time)

**Minutes**

**Attendees**

Aaron Harris	Jennifer Hamilton	Mike Steele
Anthony Amato	Jesse Schneider	Norman Ingram
Anthony Androsky	Jill Thompson	Norm Newhouse
Antonio Ruiz	John Grimes	Robert Davidson
Bob Boyd	John Moncrief	Robert Ingram
Chad Blake	John Mough	Robert Sale
Connor Dolan	Josip Novkovic	Robert Wichert
Dave Farese	Julie Weiss	Ron Nies
Douglas Horne	Karen Hall	Steve Tucky
Ernst Baumgartner	Kelvin Hecht	Steve Weiner
Jay Keller	Laurie Florence	Tommy Rockward

**1 Welcome and Housekeeping Items**

**Review of anti-trust guidelines**

[http://www.fchea.org/core/import/PDFs/ANTITRUST\\_GUIDELINES.pdf](http://www.fchea.org/core/import/PDFs/ANTITRUST_GUIDELINES.pdf)

**Review of or corrections to draft meeting agenda**

The agenda was approved.

**Review of or corrections to August draft minutes**

The August draft minutes were approved.

**2 DOE/HQ Update**

Antonio Ruiz

ISO Chairmanship – Dr. Andrei Tchouvelev has been nominated to be Chair for ISO/TC 197. The U.S. TAG for ISO/TC 197 has approved Dr. Tchouvelev's nomination. The vote by the ISO Technical Management Board on this nomination closes on September 14. A new secretary has also been proposed, Mr. Jim Ferrero.

The next ISO plenary meeting is proposed to be in Montreal on October 31<sup>st</sup>, with some working group meetings to be held on the 29<sup>th</sup> and 30<sup>th</sup>.

DOE is working to revise a roadmap, specifically for R&D activities, planning through 2020. This document will be publicly available.

DOE is expecting to work with a continuing resolution and is in the process of revising a number of contracts to be worked out, either through NREL or other venues.

DOE is also monitoring the progress on metering and J2601.

### 3 C&S Events and Fuel Cell Safety Information

[http://www.fuelcellstandards.com/calendar\\_new.html](http://www.fuelcellstandards.com/calendar_new.html)

Kelvin Hecht

Upkeep of website will become dormant on 9/10/12, but will hopefully resume in early October (fiscal year 2013). The status of *active* US hydrogen and fuel cell standards is as follows:

#### A. Published standards in active revision (22)

1. ASME B31.12
2. ASTM F326-96
3. ASTM F519-08
4. ASTM F 1624-06
5. ASTM F 2078-08a
6. CGA H5
7. CSA CHMC1
8. CSA FC1
9. CSA FC3
10. CSA HGV4.3
11. CSA HGV4.6
12. CSA HGV4.7
13. CSA HGV4.10
14. CSA HPRD1
15. SAE J1766
16. SAE J2578
17. SAE J2579
18. SAE J 2600
19. SAE J2601
20. SAE J 2799 (to be folded in to other documents, J2600 and J2601, in 2013)
21. NFPA 2
22. International Fire Code

#### B. New standard in active development (21)

1. ASTM WK 21162
2. ASTM WK 23815
3. ASTM WK 34574
4. ASTM WK 17122
5. ASTM WK 17123
6. CSA HGV2
7. CSA HGV3.1
8. CSA HGV4.8
9. CSA HGV4.9
10. CSA HPIT1
11. CSA HPIT2
12. IEEE P1547.7
13. IEEE P1547.8
14. SAE AE-7AFC
15. SAE J2601-2
16. SAE J2601-3

- 17. SAE J2783
- 18. SAE J2919
- 19. UL 2264C
- 20. UL 2265
- 21. UL 2266

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

Karen Hall

Jay Keller to supply information on HySafe Safety Workshop.

<http://www.hysafe.info/wp-content/uploads/2012/07/Registration.pdf>

<http://www.h2incidents.org/>

Steve Weiner

Linda Fassbender retired last week. Steve Weiner will be picking up these activities. Priorities will be reviewed for next year.

#### 4 Codes and Standards Organization Updates

##### IEC TC 105

Kelvin Hecht

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

- WG will meet November 7 in conjunction with TC105 Plenary

WG#4 (IEC 62282-3-201 Ed.1 – *Stationary Fuel Cells – Performance for small fuel cells*)

- WG will meet November 5 in conjunction with TC105 Plenary

WG#7 (IEC 62282-5-1 Ed. 2 – *Portable Fuel Cells*)

- **FDIS approved August 3 (Taiwan to use for motor bikes)**

WG#8 (IEC 62282-6-100 am 1 – *Micro Fuel Cells – Safety*)

- **US TAG voted to approve FDIS**
- WG will meet November 5-7 in conjunction with TC105 Plenary

WG#9 (IEC 62282-6-200 Ed.2 – *Micro Fuel Cells – Performance*)

- FDIS approved July 13

WG#10 (IEC 62282-6-400 - *Micro Fuel Cells – Power & Data Interchangeability*)

- **CD posted August 3 for review. Comments to USTAG by October 12.**
- WG will meet November 6-7 in conjunction with TC105 Plenary

WG#12 (IEC 62282-3-400 – *Small Stationary Fuel Cells with Combined Heat and Power Output*)

- WG will meet November 6-7 in conjunction with TC105 Plenary

TC105 Plenary

- Kyoto, Japan November 8-9
- Workshop November 12
  - University of Yamanashi (JEMA)
  - Standards, Regulations, Codes and Conformity Assessment Procedures
    - Japan
    - China

- Korea
- Europe
- North America

## ISO TC 197

Jill Thompson

### 1. Recent ballots

- Vote on nominee for ISO/TC 197 Chairman  
TAG votes were due on August 30. The proposed position for this ballot is "Approve." The ISO Technical Management Board (TMB) ballot ends on September 14.
- ISO/DIS 14687-3, *Hydrogen fuel — Product specification — Part 3: Proton exchange membrane (PEM) fuel cell applications for stationary applications*  
TAG votes were due on August 31. The proposed position for this ballot is "Approve." The ISO ballot ends on October 31.

### 2. Upcoming meetings

- Working Group 17, *Pressure swing adsorption system for hydrogen separation and purification*  
Meeting will be held September 26-27 in Huntington Beach, CA.
- ISO/TC 197 plenary  
Proposed meeting dates/location is October 29-30 for working group meetings and October 31 for plenary meeting in Montreal.

## NFPA

Paul May

Robert Wichert provided an update on NFPA. NFPA 2 meetings are on-going. The time for submittal is January.

NFPA 53 is open for comment and a meeting will be held in October.

\*\* Addendum from Martin Gresho NFPA 2, Hydrogen Technologies Chair

NFPA 2 and NFPA 55 have a new NFPA Staff Liaison Susan Bershad.

NFPA 2 has been very active and is now accepting public comments until January 4, 2013. After that date, input for the next edition is closed. There is significant development work going on now related to: separation distances, explosion control, refueling, parking garages and other areas.

Martin will call in next month to provide an update.

## ICC

Robert Sale

The Group A Code Hearings are going to be held in October.

The International Fire Code deadline for public comment is January 3.

ICC is working with authorities in New York City to incorporate the hydrogen provisions in the current 2012 IFC in the New York City Fire Code.

**CSA**

Josip Novkovic

The CSA Update is available online at  
[http://www.fchea.org/core/import/PDFs/CSAGroupUpdate\(2012-08-27\).pdf](http://www.fchea.org/core/import/PDFs/CSAGroupUpdate(2012-08-27).pdf).

**UL**

Laurie Florence

No update at this time.

**SAE**

Mike Steele

Meetings held next week on 11, 12, plenary on the 13<sup>th</sup>. Interface group on the first day and a half, dominated by 2601. 2600 will be discussed on the second day.

SAE is trying to get 2579 to a form to be voted on is a goal of this year.

Jesse Schneider provided an update on the Interface Working Group. The Working Group has put together a letter to the California Energy Commission (CEC) to use J2601 Infrastructure and specific recommendations to include types of fueling in the protocol, specifically because of a change in the document.

The document J2601 is working towards a first quarter next calendar year standardization plan, including finalizing the document draft this year. The release date will be dependent on final confirmation or final testing. There have been efforts to work with industry and DOE in that regard.

The Interface Working Group intends to release J2600 this year with the 70 MPa nozzle from 2799.

The Interface Working Group intends to request to put 2600 and 2601 into the NFPA 2 and IFC code cycles.

**ASTM**

Tommy Rockward

Jacquelyn Birdsall has stepped down and is temporarily replaced with Tommy Rockward.

Trace Gas Contaminants is being reviewed by this Committee.

The ASTM update is available online here  
[http://www.fchea.org/core/import/PDFs/ASTM\\_Update\\_7.16.12.pdf](http://www.fchea.org/core/import/PDFs/ASTM_Update_7.16.12.pdf).

**Others**

**5 Discussion Topics**

## Regulatory Matrix Review and Comment

Karen Hall

<http://www.fchea.org/core/import/PDFs/Regulatory-Matrix-8-29-12.pdf>

Any updates or modifications can be sent to Karen Hall at [khall@fchea.org](mailto:khall@fchea.org).

## Permitting and Installation of Hydrogen Fueling Stations

CaFCP Station Implementation Team

Jennifer Hamilton

Implementation Team is waiting for the release date from CEC for the solicitation. This is expected to be received on September 21<sup>st</sup>. In the meantime, the Implementation Team is working to address timelines to address stations that have been funded.

Ca DMS Metrology

Norman Ingram

NREL continues to make progress as continue to receive parts and components. These are being assembled. The scale delivery was delayed, but should be received in time. Some scale verification should be done by next week.

Ca DMS Fuel Quality

John Mough

Ron Nies at DMS provided a report. DMS continues to work on in-lab methods and is receiving some success.

SAE TIR J2601 Compliance

Jesse Schneider

The SAE Interface Group and J2601 are working with CSA to help accelerate their test device for dispenser validation.

J2601 compliance invites Norman Ingram to attend the next meeting to discuss collaboration between California Weights and Measures and SAE Interface.

## Hydrogen Fuel Quality and Measurement

NIST

Juana Williams &  
Marc Buttler

No update at this time.

## 6 Open Discussion & Other Issues

The next meeting of the NHFCCSCC will be held on October 3<sup>rd</sup> from 3:00 – 4:30 PM EDT.