

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

**Wednesday, February 5, 2014  
TIME: 3:00 – 4:30 pm (Eastern Daylight Time)**

**Minutes**

**Attendees**

**Anthony Androsky  
Barry Baum  
Bill Collins  
Bob Boyd  
Bob Davidson  
Connor Dolan  
Ernst Baumgartner  
Greg Chirdon  
Jackie Birdsall  
Jay Keller**

**Jennifer Hamilton  
Juana Williams  
Julie Weis  
Karen Hall  
Kelvin Hecht  
Ken Lowenthal  
Larry Moulthrop  
Mike Steele  
Nha Nguyen  
Nick Barilo**

**Norm Newhouse  
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](http://www.fchea.org/core/import/PDFs/ANTITRUST_GUIDELINES.pdf)

Meeting agenda approved.

Approved January draft minutes as modified.

**2 DOE/HQ Update**

Will James

The Fuel Cell Technologies Office recently was reorganized along with the Vehicles Technologies Office and the Office of Bioenergy under the Sustainable Transportation sector. There is a new Deputy Secretary who came previously from Proterra, a company which does electric buses as well as integrates fuel cells as range extenders for buses.

Based on some language, the Office of Fuel Cell Technologies budget is close to \$93 million.

**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

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

Karen Hall

## 4 Codes and Standards Organization Updates

### IEC TC 105

Kelvin Hecht

#### Active Working Groups

- WG#4 (IEC 62282-3-201 Ed.1 – *Stationary Fuel Cells – Performance for small fuel cells*)
  - Amendment initiated in November 2013 to address several editorial and technical issues
- WG#4 (IEC 62282-3-200 Ed.2 – *Stationary Fuel Cells – Performance*)
  - 2<sup>nd</sup> edition CDV scheduled for March 2014.
- WG#6 (IEC 62282-4-101 – *Fuel Cell Systems for Forklift Applications – Safety*)
  - CDV approved in November 2013. FDIS will be posted in March 2014.
- WG#7 (IEC 62282-5-1 – *Portable Fuel Cells*)
  - Posted for proposed revision for 2<sup>nd</sup> edition. Comments due by April 2014.
- WG#8 (IEC 62282-6-101 – *Micro Fuel Cells – Safety*)
  - 2<sup>nd</sup> edition in progress. IEC 62282-6-101 will be General Requirements. Specific technologies will be separate documents.
- WG#10 (IEC 62282-6-400 - *Micro Fuel Cells – Power & Data Interchangeability*)
  - CDV was rejected in December 2013
- WG#11 (IEC TS 62282-7-2 *Single Cell – Test Methods For Solid Oxide Fuel Cells*)
  - Draft approved for publication.
- WG#12 (IEC 62282-3-400 – *Small Stationary Fuel Cells with Combined Heat and Power Output*)
  - CD in progress.

### ISO TC 197

Jill Thompson

Jay Keller – Advised the NHFCCSCC members that are tracking WG 24, they are fast tracking a TR for the Plenary in December. It was also noted there will be several TC 197 Working Group meetings over the next few months. Please see the calendars above for additional information.

### NFPA 2

Susan Bershad

NFPA 2 ballot is out, it closes on February 13<sup>th</sup>.

### NFPA 853

Karen Hall

There is a meeting coming up, but no public comments have been received. It is not expected to be contentious and should be approved by the Committee.

**ICC**

**Robert Sale /  
Bob Davidson**

The cycle that ICC is on is the International Green Construction Code. Any proposals on that will come out and be posted on March 10. There is recognition on alternative energy in that code, uses of hydrogen would fall in there. Need to look at to see if any credits needs to be extended or clarified.

Next cycle starts the first week of January for building, fuel gas, and mechanical code.

ICC building code action committee, fire code action committee, and mechanical code action committees have been reappointed. They will meet in April to discuss changes to those codes.

Hydrogen will not come up until the 2016 cycle.

ICC has a call out for committee participation on its Code Development Committees.

**CSA**

**Julie Weis**

CSA's report is available online at:

[www.fchea.org/core/import/NHFCCSCC/CSA-Update-2014-2-5.pdf](http://www.fchea.org/core/import/NHFCCSCC/CSA-Update-2014-2-5.pdf)

**HDTA Status Update**

**Ken Loewenthal**

No further update on status to convey at this time.

**UL**

**Laurie Florence**

No update at this time.

**SAE**

**Mike Steele  
Jesse Schneider**

Mike Steele – Meetings on March 4 and 5.

Interface WG after finishing 2601 and 2799 moving now to 2719 and 2600.

Safety Working Group spending two days on 2788 and 2799.

SAE J2601 and J2799 have been voted on, going to be an affirmation ballot now. The content of them is there. It may take some time to get to publication. The affirmation ballot for J2799 started a few days ago and is on a 14 day ballot.

**ASTM**

**Tommy Rockward**

No update at this time.

## 5 Discussion Topics

### Facilitating Deployment

Carl Rivkin

Jennifer Hamilton - CAFCP is working with Carl Rivkin on workshops with permitting officials. Looking to schedule at least two in Southern California, and another two in the Bay Area.

Karen Hall – Permitting workshops in the past have been very successful, looking forward to more on this topic.

### Regulatory Matrix Review and Comment

Karen Hall

[www.fchea.org/core/import/NHFCCSCC/FCHEA-Regulatory-Matrix-Jan-29-2014.pdf](http://www.fchea.org/core/import/NHFCCSCC/FCHEA-Regulatory-Matrix-Jan-29-2014.pdf)

Comments can be submitted to Karen Hall at [khall@fchea.org](mailto:khall@fchea.org).

### Permitting and Installation of Hydrogen Fueling Stations

#### CAFCP Station Implementation Team

Jennifer Hamilton

Governor's Office of GoBiz announced the appointment of the Zero Emission Project Manager. CAFCP will be working closely with him and the Governors Office.

The Energy Commission held a workshop soliciting stakeholder input on the implementation plan for Zero Emission Vehicles. They had a PHEV and FCEV portion. Unsure of when that Solicitation will be out.

Will be working more on first responder outreach m

#### Ca DMS Metrology

Norman Ingram

Device NREL built to evaluate the dispensers is complete. 30 day control chart is here and in Sacramento. Norm is installing in a truck to get it out to the stations. Will be at UC Berkley next week to do a test of the device. If all goes well will hopefully performing the 1<sup>st</sup> station evaluation at AC Transit by the end of February.

Code proposal regulation change creating 3 new accuracy classes. Comment period over. Package downtown yesterday, on schedule to go into effect in April.

Come April whatever stations have been visited will have stickers put on the devices and that is what it would take to begin selling hydrogen by the kilogram in California. The stickers are available on the website.

#### Ca DMS Fuel Quality

Ron Nies

Funding has ended and CA DMS is no longer doing fuel quality work moving forward, at least until the new Fiscal Year which is July 1<sup>st</sup>.

## **SAE TIR J2601 Compliance**

**Jesse Schneider**

No report.

## **Legal Metrology Standards Hydrogen Fuel Quality and Measurement**

**Juana Williams**

NIST Office of Weights and Measures (OWM) on the Development of Commercial Hydrogen Measurement Standards

### (1) U.S. Weights and Measures Standards Development Process

The NIST Fluid Metrology Group (FMG) and Office of Weights and Measures (OWM) continue to work together to further refine hydrogen gas dispenser field test methods that are recognized in NIST Handbook 44. This work has two phases: (1) a laboratory test phase and (2) a field test phase. Phase I began August 1, 2013 and will now run through February 2014 in NIST's Transient Flow Facility. Phase II will be complete by September 30, 2014.

### (2) International Hydrogen Device Standards

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

On December 20, 2013, the BML distributed a Draft Recommendation (DR) for part 1 and part 2 of OIML R 139 for the on-line ballot of the member countries by its March 20, 2014 deadline. This International Organization of Legal Metrology (OIML) document corresponds to the legal metrology requirements in NIST Handbook 44 Section 3.39 Hydrogen Gas-Measuring Devices – Tentative Code.

The DR for OIML R 139 includes Part 1: Metrological and technical requirements and Part 2: Metrological controls and performance tests. The DR is the result of work by the OIML R 139 Secretariat (the Netherlands) to address comments received in April 2013 that were not purely editorial in nature, but could be resolved through further bilateral discussions. These comments were resolved in the DR by including explanatory notes and by indicating where member countries will vary their approach to requirements based on the structure of their individual legal metrology systems.

## **7 Open Discussion & Other Issues**

Juana Williams – When was the Facilitating Deployment topic added?

Karen Hall – It was added on the last meeting for discussion. Carl Rivkin provided a presentation last month and this will be a topic that we will continue to pursue.

**Next Meeting: to be held on Wednesday, March 5<sup>th</sup> at 3:00 PM Eastern.**