

MINUTES OF THE MARCH 2009 TELECONFERENCE MEETING OF THE NATIONAL HYDROGEN AND FUEL CELLS CODES & STANDARDS COORDINATING COMMITTEE

MEETING DATE: March 2009
FACILITATOR: Chad Blake, NREL

1 Roll Call - Chad Blake

Teleconference meeting participants (85Kb PDF)

2 Review of Anti-Trust Guidelines

Antitrust Guidelines (27Kb PDF)

3 Review of/Corrections to Draft Minutes of November 2008 Teleconference Meeting

Approved as written

4 DOE/HQ Update – Antonio Ruiz

Antonio provided an update regarding DOE headquarters work in progress. The House budget mark-up looked favorable, but the Senate debate will take place over the next few days. The stimulus package has money for clean cities and batteries. \$2 Billion is for batteries. \$350 Million is for Clean Cities. \$300 Million is out for proposals for Section 4 on petroleum reduction measures. The Fuel Cell Tech Team meeting is coming up. ISO TC 197 WG #11 is meeting this week. The central hydrogen solicitation will be out as early as next week.

5 California Hydrogen Standards - John Mough

John Mough provided an update. The California testing apparatus is up and running. Field sampling should start in March or April. Some changes to the SAE recommended practice on particulates may result in changes to the California standard. Effort on dispenser standards continues. Question – Where will the field sampling be done? Answer – At the hydrogen stations at the dispenser using the HQSA (Hydrogen Quality Sampling Adapter). This adapter is capable of 350 BAR system sampling only. Question – What equipment are you using? Answer – Varian GCMS for Nitrogen, Argon, Oxygen and CO. They need another Gas Chromatograph with a sulphur luminescence detector to sample for sulphur compounds. Funding for this may be coming soon. No particulate testing is being done yet due to uncertainties regarding the appropriate standard to use.

6 Hydrogen Industry Panel on Codes (HIPOC) Activities - Darren Meyers

Darren Myers provided an update. There was a HIPOC meeting today (March 4, 2009). The panel is reconstituted in a ten member format, including a Canadian member. Not much activity took place, but two items of interest occurred:

1. There will be an in-person meeting in conjunction with the NHA Meeting on March 30th from 2:00 PM to 6:00 PM and on March 31st from 10:30 AM to 3:30 PM. A possible third day of meetings may be necessary.
2. There are several significant proposals on the docket regarding:
 - a. Separation distances
 - b. Definition of bulk hydrogen installations as 400 standard cu. ft. of hydrogen or more. This determines where the International Fire Code may be used and when the NFPA 55 document must be used.
 - c. www.iccsafe.org "Code Development Changes" links to a slide show.

One change to previous plans decided was that no interim supplement to the I-Codes will be issued. Revisions due in April will be heard in 2011.

7 NFPA Activities – Marty Gresho/Paul May

Paul May provided an update. NFPA 2 has agreed to release NFPA 2 on March 11th for proposals. To find the documents, go to:

- <http://www.nfpa.org/itemDetail.asp?categoryID=163&itemID=19006&URL=Codes%20and%20Standards/Code%20development%20process/Proposed%20documents>
- <http://www.nfpa.org/assets/files/PDF/CodesStandards/NFPA2Draft.pdf>

The technical committee will continue to work on editorial issues.

The proposal closing date is May 29th.

8 DOE/NREL Activities – Carl Rivkin/Chad Blake

Chad Blake provided an update. The tentative workshop schedule has firmed up:

CSLA on March 25th

April 3rd in South Carolina, at the Columbia Fire Academy

April 29th in Seattle, location TBA

June 10th in Connecticut, Location TBA

July 17th in Florida at the Fire Bureau near Tampa

Fuel quality work continues on ISO WG #12 in preparation for a CD this fall. The fuel cell testing work continues. Instrumentation is being investigated, including field instrumentation. An upcoming analytical conference will be used as a possible source of additional technical information. Work is also going on to get PSA inlet and outlet samples.

NREL Codes and Standards Permitting Workshop Tentative Schedule		
Location	Partner (s)	Tentative Dates
NREL/Boulder, CO	Clean Energy Development Authority/Jefferson County Fire Department	Feb 11-12
Los Angeles	CAFCP, CARB, Orange County FD	March 25
Columbia, SC	South Carolina Fuel Cell Alliance, Local FD	April 3
Seattle, WA	Lynnwood FD	April 15
Florida	Florida Department of Environmental Protection, Florida Bureau of Fire Protection	June 10
Hartford, CT	Connecticut Hydrogen-Fuel Cell Coalition/ State Fire Marshals Office	July 17
Houston, TX	Houston Area Regional Council,	TBD

	Houston FD	
Bay Area California	BAAQMD, CAFCP, Local FD	TBD
Baltimore, MD	Held in Conjunction with the International Code Council Fall Meeting/ Maryland Department of the Environment	Sept. 2009
Honolulu, Hawaii	Hawaii Clean Energy Initiative	TBD
TBD/Possible Biofuels	TBD	TBD
TBD Possible Biofuels	TBD	TBD

9 Report on IEC/TC105 Activities and Documents in the “Comments” Stage - Kelvin Hecht

Robert Wichert provided an update, using a written update provided previously by Kelvin Hecht.

TC105 – Fuel Cell Technologies

- *Working Group #1 Terminology*
The committee is addressing comments to the Draft Technical Specification via electronic meetings.
- *Working Group #3 Stationary Fuel Cell Power Systems - Safety*
The committee met February 12-13 to address comments to IEC 62282-3-1 for the next revision cycle. The next meeting is scheduled in June in Korea.
- *Working Group #4 Stationary Fuel Cell Power Systems – Performance*
A Committee Draft of a second edition has been posted for national reviews. Comments are due to the USTAG by April 15th.
- *Working Group #10 Micro Fuel Cells –Fuel Cartridge Interchangeability*
The FDIS of 62282-6-300 has been posted for national reviews. Comments are due to the USTAG by April 15th.

New Work Item Proposal

Japan, on behalf of the Japan Electrical Manufacturer’s Association (JEMA) is proposing a new standard; Small Stationary Polymer Electrolyte Fuel Cell Power Systems – Performance Test Methods. The scope is proposed as:

- Output: < 10 kW < 240 V or DC
- Mode: Grid connect / independent or stand alone
- MAWP: < 0.1 MPa
- Fuel: Gaseous or liquid

Comments are due to the USTAG by March 6th.

Question for the group: DO YOU WANT THE US TO SUPPORT THIS EFFORT? Plug Power provided cautious support for this topic.

The www.fuelcellstandards.com website has been redesigned for simplification & differentiation

between published standards and standards under development. All comments are welcome www.fuelcellstandards.com - **October statistics**

- Visits - 5,672
- pdf download - 397

10 Report on ISO/TC197 Activities – Glenn Scheffler/Jill Thompson

ANSI-Accredited U.S. TAG for ISO/TC 197, *Hydrogen technologies*

- Recently closed vote
ISO/DIS 26142, Hydrogen detectors
The ballot concluded on February 15, 2009. The U.S. TAG voted approved with comments. This DIS vote was approved.
WG 13 is meeting March 11-12 in Berlin, Germany, to address all of the comments.
- Recently published document
ISO/TS 15869, Gaseous hydrogen and hydrogen blends—Land vehicle fuel tanks
This technical specification is available at www.iso.org or www.cganet.com. Three countries, including the US, voted against this document as a DIS.
- Adoption of ISO/TC 197 document in U.N. Model Regulations **ISO 16111, Transportable gas storage devices—Hydrogen absorbed in reversible metal hydride**
This International Standard is now referenced in the 16th Revision of the U.N. Model Regulations for the Transportation of Dangerous Goods.
Ned Stetson was the working group convenor for this effort.

11 Opportunity for CDOs and SDOs to Report on Their Activities

a. Report on NIST activities – Juana Williams

Juana Williams provided an update based on a previously submitted written update. NIST Weights and Measures Division on the Development of Commercial Hydrogen Measurement Standards NHFCCSCC March 4, 2009 by Juana Williams.

b. U.S. National Work Group (USNWG) for the Development of Commercial Hydrogen Measurement Standards

The USNWG met by teleconference/webconference on February 24th. The USNWG will consider an additional teleconference / webconference meeting to discuss several remaining issues before its in-person meeting at the CaFCP, Sacramento, CA on April 28-30, 2009.

The primary issues before the USNWG are the development of code language to address the minimum measured quantity delivered by a dispenser and requirements for wholesale applications. The USNWG is escalating its work to ensure that a fully developed code is ready for a vote and approval of the NCWM in July 2010.

The USNWG was advised that a report from NIST (WMD & PMD) on the uncertainty analysis of the three test methods currently recognized to verify the performance of hydrogen dispensers is tentatively scheduled for distribution in April 2009.

c. International Standards

OIML R 139 (2008)

The U.S. position on the first working draft of OIML R 139 "Compressed gaseous fuel measuring systems for vehicles" is being developed by NIST WMD based on input received from stakeholders. The U.S. position will be submitted to the Secretariat (the Netherlands) before the April 1, 2009 deadline.

OIML R 81 (1998)

A first working draft (1 WD) of R 81 "Dynamic measuring devices and systems for cryogenic liquids" is under development. The 1 WD is scheduled for distribution in spring 2009 to national stakeholders and TC 8 SC 6 for their review and approval.

12 CSA America Activities - Julie Cairns/ Connie Bielawski

Julie Cairns provided a written update on HG4 documents. The CSA HGV 4 documents are nearing finalization. The CSA HGV 4 Committee is reviewing comments received during the Technical Committee (TC) Ballot. There are several teleconferences scheduled over the next few weeks for the TAG to review and make recommendations to the TC. Most of the comments are editorial in nature but they will still need to address them and the discussions take time.

13 SAE Activities – Mike Steele / Glenn Scheffler

Mike Steele provided an update. The next SAE fuel cell meetings will be during the week of March 16th, on March 17th, 18th, and 19th. Changes to particulate concentration will be discussed and issued for review shortly.

14 ASTM D.03 Activities - Jackie Birdsall

Jackie Birdsall provided an update. Research continues on field instrumentation. An RFI for instrumentation will be issued shortly. The hydrogen quality sampling methods documents should be published by June.

15 Global Technical Regulations – Nha Nguyen

Nha Nguyen provided an update. The most recent Subgroup Safety (SGS) meeting was in Budapest, Hungary, in January. Both the US and Japan are co-chairing the meetings. The three major areas of focus are:

- Electrical safety
- Fuel System Integrity (leakage in use and post crash)
- Storage systems (cylinders up to 10,000 psi)

At the last meeting, German/TUV submitted a proposal for system integrity, including type approval requirements, that would be design specific, subjective, not performance based and difficult to enforce in the US. The US has submitted its comments on the proposal rejecting most of the proposed provisions. China and Korea support the US position. The EU Commission supports the German proposal. There was a prior agreement (HFCV GTR action plan) that the GTR would be performance based and it is hoped that this will be used as a reason to withdraw or significantly scale down the proposal. Also, at this meeting, OICA submitted a proposal for fuel storage systems. This proposal contains requirements similar to those in SAE J2579. The SGS subgroup will discuss the OICA's proposal in detail at the next meeting. The next SGS meeting will be held in Beijing, China, in May 2009. The next Electrical Safety meeting will be held in Brussels, Belgium, in April 2009 .

The information from the meetings of the informal groups on HFCV SGS and Electric Safety and can be found on the below web site address on the left column:<http://www.unece.org/trans/main/wp29/wp29wgs/wp29grsp/grspage.html>

16 NHA Activities – Karen Hall / Geoff Bromaghim

Geoff Bromaghim provided an update. NHA efforts are focused on the NHA conference. The conference starts on Monday, March 30, 2009. Please see www.hydrogenconference.org. If you plan to attend the in-person meeting on Friday, please respond to Karen Hall with an RSVP. See details below.

17 Report on USFCC Codes & Standards Priorities for 2009 – Sondra Ullman / Tony Androsky

Sondra Ullman and Tony Androsky provided an update. The Codes and Standards Priority Matrix has remained essentially the same for a few months. The USFCC will have a members meeting next week. The USFCC is currently evaluating the feasibility of harmonizing the USFCC, DOE and JARI durability protocols. A meeting with the Japanese JARI delegation on this topic will occur next week.

18 Open Discussion (And Issues for Future Meetings)

NHFCCSCC Meeting @ NHA Conference - Geoff Bromaghim

Schedule, Friday, April 3, 2009:

Leave Columbia: 8 a.m.

Arrive Greenville: 10 a.m.

Meeting: 10:30-noon (Call-in capability will be provided)

Lunch: Noon-1 p.m.

Tour of CU-ICAR facilities, test cells: 1-2 p.m.

Return to Columbia: 2 p.m., arriving at 4 p.m.

In accordance with the committee request during the January telecom, the NHA has provided the following link to airline schedules from Columbia: <http://www.columbiaairport.com/flightschedule.pdf>.

The flight schedule from Greenville is provided here: <http://www.gspairport.com/FSdepartures.shtml>.

Direct flights are available to and from Atlanta, Memphis, Detroit, Newark, Charlotte, Cincinnati, Dallas, Fort Lauderdale, LaGuardia, Philadelphia, and Washington, DC.

19 Next Meeting

In-person meeting in conjunction with the NHA conference:

Friday, April 3, 2009

10:30-noon (Call-in capability will be provided)