

MINUTES OF THE JUNE 2008 TELECONFERENCE OF THE NATIONAL HYDROGEN AND FUEL CELLS CODES & STANDARDS COORDINATING COMMITTEE

MEETING DATE: June 4, 2008

MEETING TIME: 1:00 – 2:30 PM (MST)

FACILITATOR: Robert Wichert, USFCC

1.0 MEETING PARTICIPANTS

Russ Hewett began the meeting by welcoming everyone and conducting the roll call. The Coordinating Committee is a collaborative activity of DOE, the National Hydrogen Association (NHA), the US Fuel Cell Council (USFCC) and NREL.

Russ also noted that a number of participants have recently announced their retirements. Jim Ohi retired from NREL in February. Debbie Angerman retired from CGA at the end of May. Cheryl Arbuckle has announced her retirement from Ford. Chris Sloane is retiring from GM in July, and Russ Hewett will be retiring from NREL at the end of July.

[Teleconference meeting participants](#) (85Kb PDF)

2.0 REVIEW OF USFCC ANTITRUST GUIDELINES

USFCC members were asked by Robert Wichert to be mindful of the anti-trust guidelines, which can be found on the USFCC members' website, as well as an attachment to the minutes of past meetings.

[Antitrust Guidelines](#) (27Kb PDF)

3.0 REVIEW OF/CORRECTIONS TO DRAFT MINUTES FROM PRIOR TELECONFERENCE MEETINGS

The Draft Minutes of the April 9th and the May 14th teleconference meetings were approved without additions or corrections. Both sets will become "final" and submitted for posting on the NHA Hydrogen and Fuel Cells Safety Report website.

4.0 OPPORTUNITY FOR DOE/HQ REPRESENTATIVE TO PROVIDE LATEST INFORMATION ON WHAT'S GOING ON AT DOE

Antonio Ruiz (Technology Manager for the DOE Hydrogen Safety and Codes and Standards Subprogram) reported on DOE activities.

First of all, Antonio reported that the DOE Annual Merit Reviews would be conducted the week of June 9th in Alexandria, VA at the Crystal City Marriott. The Review for the Safety and Codes & Standards Subprogram would be held, Thursday afternoon, June 12th. While the Reviews are in progress, there will be several "side" meetings – in particular, there will be a meeting of the **FreedomCar** Codes & Standards Tech Team on Monday.

Antonio invited Coordinating Committee members to register for and attend the Review, since participating provides the opportunity to become familiar with all the efforts of the Hydrogen, Fuel Cell and Infrastructure Technologies Program.

Antonio then mentioned that the **World Hydrogen Energy Conference** would be held in Brisbane, Australia June 15 – 18. The program includes sessions on safety and the development of international codes and standards as well as hydrogen and fuel cell technology education. Glenn Scheffler will be representing DOE at the Conference.

The planned competitive sensor technology solicitation has been delayed a bit, but will be conducted late in FY08 and the projects initiated in FY09. The projects will be funded using the \$2.0 million of FY08 funds. Antonio expects that multiple awards will be made, with parallel awards for industry and the laboratories.

Antonio then gave a brief synopsis of the **Hydrogen Fueling Station and Fuel Cells-for-Backup-Power for Telecommunications Permitting Process Workshop** held May 15 – 16 in Teaneck, NJ. (see Section 10.0 below for more details). While the workshop was very successful, one disappointment was that not as many building code and fire safety permitting officials from the New York City Port Authority were unable to participate. Officials from New York City were a prime target, since they are in the process of deciding how to include hydrogen and fuel cell safety issues in the City's codes that are in the revision process.

Antonio mentioned that the Subprogram plans to conduct two additional permitting workshops in FY08 and others are likely to be conducted in FY09. The Subprogram is in the process of determining where and when to conduct the two additional workshops in FY08.

Antonio mentioned the high level event being planned in California by the California Fuel Cell Partnership (CaFCP) and US DOT during the period August 11 – 22. It involves a tour by hydrogen fuel cell vehicles in a path across the country.

5.0 REPORT ON CALIFORNIA HYDROGEN FUELS PROJECT'S EFFORTS TO DEVELOP A CALIFORNIA-SPECIFIC HYDROGEN FUEL QUALITY STANDARD

John Mough (California Department of Food and Agriculture/Division of Measurement Standards (DMS)) reported on the status of development of the California hydrogen fuel quality regulation for public fueling stations.

After some delay, the regulation has been approved by the California Office of Administrative Law. The regulation will be published 15 days after it is signed and will go in effect 30 days later.

The California hydrogen fuel quality regulation is posted on the following website: <http://www.cdfa.ca.gov/dms/hydrogenfuel/hydrogenfuel/HydrogenFuelRegulations.pdf>

6.0 REPORT ON THE CALIFORNIA FUELS PROJECT'S EFFORTS TO DEVELOP A CALIFORNIA-SPECIFIC HYDROGEN FUEL DISPENSER STANDARD

John Mough briefly reported on this activity in Norm Ingram's and Gary Castro's unavailability. Norm is continuing to work with Juana Williams of NIST on dispenser issues. There will be a meeting later in June. In addition, DMS is looking at the guidelines for dispensers developed by the California Fuel Cell Partnership for use in developing the California regulation.

Julie Cairns reported that CSA America has provided the draft dispenser-related standards that CSA is developing to DMS for their use.

Unlike the hydrogen fuel quality regulation, the California legislature did not specify a date for completing development of the dispenser regulation.

7.0 FOLLOW-ON DISCUSSION REGARDING THE REPORT ISSUED BY THE US FEDERAL MOTOR CARRIER SAFETY ADMINISTRATION

During November 2007, the DOT Federal Motor carrier Safety Administration released the report:

Changes to Consider in the Federal Motor Carrier Safety Regulations and North American Standard Inspection Procedures to Accommodate Hydrogen as an Alternative Fuel: Final Report

The objectives of the report are to: (1) provide a review of existing Federal Motor Carrier Safety Regulations with respect to changes that should be considered to accommodate commercial vehicles that use hydrogen

as a fuel; and (2) provide a review of the existing North American Standard Inspection Procedures and identify changes to the procedures that should be considered for inspections of commercial vehicles using hydrogen as a fuel.

The website for the document is: http://www.trb.org/news/blurb_detail.asp?id=8934

The report was discussed in depth during the May 14th teleconference meeting. An action item was for USFCC and NHA (i.e., Robert Wichert and Karen Hall) to set up a webinar to discuss the report and determine how the hydrogen and fuel cell communities should react to the report.

The webinar will be conducted Monday, June 30th at 3:00 pm EDT.

8.0 REPORT ON HYDROGEN INDUSTRY PANEL ON CODES (HIPOC) ACTIVITIES

Since neither Tom Joseph (chairman of HIPOC) nor Darren Meyers (ICC facilitator) was available to participate in the meeting, there was no report on HIPOC activities.

However, it was mentioned that the next HIPOC teleconference meeting would be an open-to-all meeting to be held on Thursday, June 5th. The purpose will be to deal with leftover issues from the ICC Code Development Hearings (held February 18 – March 2) in preparation for the Final Action Hearings to be held September 17-23. One of the issues is Indoor Fueling.

9.0 REPORT ON NFPA ACTIVITIES

Paul May, the new NFPA staff liaison for **NFPA 52, 55** and **853**, was unavailable to participate in the meeting, so no report was given.

However, it was mentioned that the next meeting of the full technical committee for **NFPA 2 (Hydrogen Technologies Code)** will be held in Golden, CO at NREL on June 26 – 27. The separation distance information developed by the joint **NFPA 55-NFPA 2** task force will be presented to the full **NFPA 2** technical committee on June 27. The HIPOC membership has been invited to attend and participate. Others with an interest in participating are advised to contact Paul May of NFPA.

10.0 REPORT ON THE DOE/NREL/NASFM/NHA/USFCC "HFS AND FUEL-CELLS-FOR-BACKUP-POWER FOR TELECOMMUNICATIONS PERMITTING" WORKSHOP

While Antonio Ruiz gave a brief synopsis of the workshop, Russ Hewett gave a more detailed report on the **Hydrogen Fueling Station and Hydrogen-Fuel-Cells-for-Telecommunications Permitting Workshop** conducted collaboratively by DOE, NREL, the National Association of State Fire Marshals (NASFM), NHA and USFCC. The workshop was held May 15-16 in Teaneck, NJ.

This workshop was the second of several planned regional workshops to address the critical issue of facilitating the timely and cost-efficient permitting of hydrogen fueling stations (HFS) – to facilitate the introduction of hydrogen-powered vehicles in the US as they are introduced by the automotive industry. However, one of the applications of hydrogen being introduced into the marketplace currently is hydrogen-powered fuel cells for providing backup power for telecommunications. Consequently, the workshop also addressed facilitating the permitting process for telecommunication applications.

This particular workshop was targeted specifically at permitting officials in: (i) New York City; (ii) New York State; and (iii) New Jersey. New York City is in the process of revising their building, fire, mechanical and other construction codes based on the 2003 ICC codes. Some of the changes to the codes relate to hydrogen and fuel cells. The new codes go into effect July 2008.

- [Russ' Report](#) (35Kb PDF)

Russ pointed out that the workshop was successful. It was conducted similarly to the previous workshops, but with modifications for improvements based on recommendations made by participants in the previous regional workshop held in Buelton, CA.

For example, one of the recommendations made was to include electrical permitting officials in the mix as well as building code and fire safety officials. This was done in the Teaneck workshop.

Russ pointed out that DOE and NREL believe that we are at the point that, before conducting future workshops, we should address whether or not changes are required in the "model" we are using. This process was begun in a "retrospective analysis" teleconference meeting held on May 29th. This meeting involved DOE, NREL, NASFM, NHA, USFCC and the hydrogen and fuel cell industry companies that were involved in planning the workshop. While no decisions were made, the issue is still on the table. In addition, a follow-on action item is determining the sites and dates for the other two planned workshops.

When the **Proceedings** from the workshop are generated, they will be posted on the NHA website.

11.0 REPORT ON IEC/TC105 ACTIVITIES AND DOCUMENTS IN THE "COMMENTS" STAGE

Kelvin Hecht was participating in an IEC/TC105 working group meeting and was unavailable to participate in the teleconference meeting. However, he provided a report on IEC/TC105 activities:

- [Kelvin's report](#) (39Kb PDF)

The report also includes May1 statistics on usage of the *Hydrogen and Fuel Cells Codes and Standards Matrix and Database* website. The address for the website is: www.fuelcellstandards.com

12.0 REPORT ON ISO/TC197 ACTIVITIES AND DOCUMENTS IN THE "COMMENTS" STAGE

Jill Thompson and Glenn Scheffler reported on ISO/TC 197 activities.

- [Jill's report](#) (15Kb PDF)

The US TAG met on May 30th at CGA in Chantilly, VA to prepare for the upcoming ISO/TC197 plenary meeting to be held in Brisbane, Australia during the week of June 13.

Balloting closed on May 28th for **ISO/FDIS 22734-1 (Hydrogen generators using water electrolysis process – Part 1: Industrial and commercial applications)**. The US TAG voted to approve, but with comments.

Jill reported that **22734-1** has been approved by ISO/TC 197. She is expecting to receive the official document with comments received by the voting members shortly.

ISO/DIS 15869.3 (Gaseous hydrogen and hydrogen blends – Land vehicle fuel tank) is currently out for voting. At the request of the US TAG, the balloting had been extended out to August 2008. The TAG is concerned that it might be adopted prematurely and called out in requirements, such as regulations.

Working Group 5 has been re-activated and will be working on revising the standard **ISO 17268:2006 (Compressed hydrogen surface vehicle refueling connection devices)**. This document is essentially SAE J2600-2000. The US TAG is soliciting US experts to participate in the revision work – i.e., attending meetings, commenting on drafts, etc. The TAG needs volunteers by June 30th. The next meeting of WG5 will be in Munich on 29-30 July.

It was pointed out that SAE is in the process of updating **J2600**. There is the opportunity for SAE-ISO coordination and harmonization with regards to the configuration.

13. OPPORTUNITY FOR CDOs AND SDOs TO REPORT ON THEIR ACTIVITIES

13.1 NIST

Juana Williams was unavailable to participate, but provided this report:

- [Juana's report](#) (17Kb PDF)

Diane Lee represented NIST in the meeting.

13.2 CSA America

Julie Cairns reported on CSA activities.

Of the 12 documents in the **HGV4** Series of draft standards, CSA expects to publish seven this summer as **Interim Requirements**.

- **HGV 4.1 (Compressed Hydrogen Dispensers)**
- **HGV 4.2 (Hoses and Hose Assemblies)**
- **HGV 4.4 (Breakaway Devices for Hoses)**
- **HGV 4.5 (Priority and Sequencing Equipment)**
- **HGV 4.6 (Manually Operated Valves)**
- **HGV 4.7 (Standard for Automatic Pressure Operated Valves)**
- **HGV 4.10 (Hydrogen Fittings)**

HPRD1 (Pressure Relief Devices for Compressed Hydrogen Vehicle Fuel Containers) is expected to be published in December

For the following draft documents, CSA hopes to have the industry review process completed and the reviewed documents published in September.

- **HGV 4.3 (Temperature Compensation Systems)**
- **HGV 4.8 (Hydrogen Gas Vehicle Fueling Station Compressor)**
- **HGV 4.9 (Compressed Hydrogen Dispenser System)**

13.3 SAE

Mike Steele reported that the SAE Safety Working Group will have its next series of meetings during the period July 15 – 17 in Troy, MI.

The Safety Working Group is working to get two documents balloted in September, so that they can be made available for use in the Global Technical Regulation process:

- **SAE J2578 (Recommended Practice for General Fuel Cell Vehicle Safety)**
- **SAE J2579 (Technical Information Report for Fuel Systems in Fuel Cell and Other Hydrogen Vehicles)**

14.0 OPEN DISCUSSION AND OTHER ISSUES

One of the action items from the May 14th teleconference meeting was to consider establishing an ongoing relationship with the National Conference of States on Building Codes and Standards (NCSBCS). The primary objectives in doing so are to:

- Get access to NCSBCS's real-time database documenting codes and standards regulations adopted by all AHJs and the cognizant personnel in each AHJ

- Get access to NCSBCS's experience and expertise in interpreting codes and standards in the built environment

As of the June meeting, the action item had not been addressed. Russ Hewett volunteered to handle the action item and will report back at the July meeting.

15.0 NEXT MEETING

The next meeting will be a teleconference meeting as follows:

- DATE: July 9th (Second Wednesday)
- TIME: 3:00 – 4:30 pm EDT