

MINUTES OF THE MAY 2007 TELECONFERENCE OF THE NATIONAL HYDROGEN AND FUEL CELLS CODES & STANDARDS COORDINATING COMMITTEE

MEETING DATE: May 2, 2007

MEETING TIME: 3:00 PM (ET)

MEETING PARTICIPANTS

A list of participants is shown in [Attachment A](#).

1.0 Introductory Remarks – Russ Hewett

Russ described the method of this collaboration – with NHA and USFCC and NREL and DOE participating along with the other stakeholders. He also described the plan to rotate the facilitation between the various organizations.

2.0 Reviewed Anti-Trust Guidelines – Robert Wichert, Sondra Ullman

Participants were asked to be mindful of the anti-trust guidelines:

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

and

[Memo on Antitrust Guidelines](#) (24Kb PDF)

3.0 Reviewed and approved the minutes of the April teleconference meeting

No corrections were necessary.

4.0 DOE Headquarters Update – Pat Davis / Antonio Ruiz

Pat Davis is still the acting manager of the DOE Hydrogen, Fuel Cell and Infrastructure Technologies (HFCIT) Program. Antonio Ruiz will be taking Pat's place in the Safety, Codes and Standards Subprogram.

The DOE Program Review is coming up. Please register if you plan to attend. The Program starts off with the Plenary on May 18th and continues all week.

The FY-07 budget resulted in the full request being granted, without any Congressional directives. This resulted in programs and projects being funded – even programs and projects that had languished for a long time without funding. One area that has been re-started is the hydrogen sensor work to support safety. Other areas being restarted include the Permitting Tool and other R&D work, such as Hydrogen Quality R&D to support the codes and standards efforts.

The minutes of the sensor workshop went out immediately after the workshop. Kathy Gregoire-Padro sent them out already. This information is documented in the April minutes of the Coordinating Committee.

Report from Gary Nakarado – Regulatory Logic is responsible for implementing 12 planned efforts. Prior to the Gary's last reporting, two had been approved. DOE has approved three additional contracts. This makes five in final form. Cost share and documentation are being handled now.

5.0 California Hydrogen Motor Fuel Quality Standard – John Mough

Work has progressed recently with CARB and SAE and the Western States Petroleum Industry representatives. The draft approach will be revised slightly. The specifications will not rely upon the SAE guidance since these are interim standards. There will be an interim variance for developmental engine fuels applicable to hydrogen, since a standard does not exist. Some information will be required to apply for this

variance, for fleet use only. When a final standard is promulgated, the variance will be withdrawn. Data should be collected and analyzed regarding the use of hydrogen fuels under the variances. Records will need to be kept, but they do not need to become public documents since the suppliers will hold them, not the State of California. Everyone will work hard to ensure that the intellectual property of the developers is protected.

6.0 California Hydrogen Motor Fuel Dispenser Standard – Gary Castro (John Mough)

Gary was not able to participate. John Mough briefed the group regarding the work going on. Juana Williams reported that the draft code has been issued for comment. A second draft should be issued shortly. NIST is also developing a long-range plan for hydrogen and other issues. Juana Williams has been appointed as the “hydrogen person” at NIST.

7.0 Report on Hydrogen Industry Panel on Codes (HIPOC) Activities – Darren Myers, Patrick Serfass, Tom Joseph, Carl Rivkin

Patrick Serfass, Darren Myers and Carl Rivkin provided an update. The Panel met Tuesday, May 1. Most of the focus is on NFPA now since the submittals to ICC have already been submitted for the Final Action Hearings, May 21-27 in Rochester, NY. The Hydrogen Fuel Cell Safety Report has the proposals and the comments (<http://www.hydrogenandfuelcellsafety.info/hipoc>).

The deadline for NFPA 52 and 55 proposals is coming up: May 25. Canopy systems, composite storage systems, hydrogen generators, reforming systems, fuel cells and repair garages, and NFPA 50A/ 50B revisions to take the experience in Michigan into account along with hydrogen blends are all being discussed. More detail on these proposals can be found in the minutes from the latest HIPOC meeting at: <http://www.hydrogenandfuelcellsafety.info/hipoc/nextMeeting.asp>

The major goal of HIPOC is to coordinate and harmonize the ICC requirements with the NFPA requirements.

8.0 NFPA Activities: NFPA 2 – Carl Rivkin, Marty Gresho

With respect to separation distance requirements, Carl Rivkin reported on the work of Task Group 6 of the NFPA 2 Hydrogen Technology Technical Committee, which is working on revisions based on work being done at Sandia on a risk-based approach along with the work done by Hughes for the NFPA Foundation. Mike Short and UTC are fully engaged in this effort.

The NFPA 2 Technical Committee held in-person meetings during the period April 17 – 19 at NextEnergy in Detroit to continue work on the integrated hydrogen standards effort. The Committee is structured into six task groups – each working on specific parts of the planned document. Requirements relating to hydrogen in NFPA 30A will also be integrated into this effort.

9.0 IEC TC 105 – Kelvin Hecht

- [Kelvin Hecht's report](#) (81Kb PDF)

10.0 ISO TC 197 – Debbie Angerman

Comments on Hydrogen Detection Apparatus were discussed on Monday. Bob Mauro resigned last week, and must be replaced. ISO 16110-1 on Hydrogen Generators using fuel processing technologies has just been published.

11.0 ISO TC 197 Working Group 12: Hydrogen Motor Fuel Product Specification – Jim Ohi

Meetings in March, hosted by NHA, allowed the participants to discuss the test plan. Instrumentation work also continues. ASTM is working to develop a sampling apparatus for 70 MPa stations. A contract has been approved with GTI to develop this apparatus.

A small mass spectrometer using ion capture is being adapted by JPL for in situ gas sampling.

Modeling work is starting through the Modeling Sub-Team.

The next meeting is during the Annual Merit Review on Thursday night at 19:30 to go over status and progress.

A round robin is starting on the test cell. This will involve the University of Connecticut, Clemson University, the University of Hawaii and Las Alamos National Laboratory.

USFCC / FCCJ will hold a meeting on Friday May 18th to discuss the Fuel Cell Council Durability Round Robin.

13.0 Other Code Developing Organization and Standards Developing Organization Updates

SAE – Mike Steele

SAE meetings are being held during the week of May 21st. Safety will meet that week on May 23rd and 24th. Interface will meet on 22nd and 23rd.

ASME – John Koehr

John Koehr reported that ASME B31.12 is meeting next week.

DOE/NREL's plans to co-sponsor regional-based training sessions with NCSBCS-NASFM – Jim Ohi

Jim Ohi updated the group on the plans to implement this regional-based training with NCSBCS and NASFM to better enable the permitting of Hydrogen Motor Fuel Dispensing Stations.

13.0 Open Discussion / Issued for future meetings

The next In-Person meeting will probably be held in conjunction with the USFCC Fuel Cell Seminar that will be held in San Antonio, TX during the period October 15 – 19.

The US Fuel Cell Council is requested to suggest dates for this meeting.

14.0 Next Meeting

Teleconference Meeting on June 6th

3:00 PM US Eastern Time

Call In Number: +1 641 594 7000

PIN: 824011#

ATTACHMENT A: PARTICIPANTS IN THE MAY 2007 TELECONFERENCE MEETING OF THE NATIONAL HYDROGEN AND FUEL CELLS CODES & STANDARDS COORDINATING COMMITTEE

NAME	ORGANIZATION	PRESENT AT MEETING (Yes/No)
Adam	California Fuel Cell Partnership	

Gromis		
Andrei Tchouvelev	A. V. Tchouvelev & Associates, Inc.	
Anna Stukas	Angstrom Power	
Antonio Ruiz	USDOE/Hydrogen, Fuel Cell and Infrastructure Technologies Program	Yes
Bill Chernicoff	USDOT/Research and Innovative Technologies Administration(RITA)/Washington	Yes
Bill Collins	UTC Fuel Cells	Yes
Bill Hoagland	Hoagland and Associates	
Brad Smith	Shell Hydrogen	
Carl Rivkin	National Fire Protection Association (NFPA)	Yes
Carolyn Elam	DOE Golden Field Office	
Cathy Gregoire-Padro	Los Alamos National Laboratory (LANL)	
Chris Sloane	General Motors	
Christina Zhang-Tillman	California Fuel Cell Partnership	
Christopher Moen	Sandia National Laboratories/Livermore	
Dan Casey	ChevronTexaco	Yes
Darren Meyers	International Code Council (ICC)	Yes
David McClosky	USDOC/NIST	
Debbie Angerman	Compressed Gas Association (CGA)	Yes
Doug Horne	Clean Vehicle Education Foundation	
Gary Nakarada	Regulatory Logic	Yes
Glen Schleffler	Consultant to NREL	Yes
Greg Milewski	Shell Oil Products	
Hank Seiff	Clean Vehicle Education Foundation	Yes

Jacquelyn Birdsall		Yes
Jesse Schneider	DaimlerChrysler	
Jim McGetrick	BP	
John Koehr	American Society of Mechanical Engineers (ASME)	Yes
John Mough	California Division of Measurement Standards	
Jonathan Muntez	U.S. DOE	Yes
Jonathan Otero	BP	Yes
Juana Williams	NIST	Yes
Julie Cairns	CSA America	
Karen Hall	National Hydrogen Association (NHA)	
Kelvin Hecht	ANSI, IEC and Consultant to NREL	
Ken Krastins	Plug Power	Yes
Larry Moulthrop	Proton Energy Systems	
Laurie Florence	Underwriter Laboratories	Yes
Lesley Crowell	California Air Resources Board	
Mark Richards	Versa Power Systems	
Michael Sprague	Enersol, Inc.	
Michael Steele	General Motors Advanced Technology Vehicles	Yes
Nha Nguyen	NHTSA/Office of International Policy and Harmonization	
Nick Burkhead	Shell Hydrogen	Yes
Pat Davis	USDOE/Hydrogen, Fuel Cell and Infrastructure Technologies Program	
Patrick Flynn	Enersol, Inc.	

Patrick Serfass	National Hydrogen Association (NHA)	Yes
Paul Bouchard	Energy Conversion Devices	
Paul Buehler	Plug Power, Inc.	Yes
Prentiss Searles	American Petroleum Institute (API)	
Robert Wichert	US Fuel Cell Council (USFCC)	Yes
Rhoads Stephenson	Motor Vehicle Fire Research Institute	Yes
Roger Smith	Compressed Gas Association (CGA)	
Ron Coiner	CSA America	
Sam Sprik	National Renewable Energy Laboratory (NREL)	Yes
Samuel Lam	British Columbia Ministry of Transportation	Yes
Sheral Arbuckle	Ford Motor Company	
Sondra Ullman	Plug Power	Yes
Terry Conrad	Concurrent Technologies Corp.	
Thad Adams	Savannah River National Laboratory	
Tom Joseph	Air Products and Chemicals	
Tony Androsky	US Fuel Cell Council (USFCC)	
Jim Ohi	National Renewable Energy Laboratory (NREL)	Yes
Russ Hewett	National Renewable Energy Laboratory	Yes

Guests

Gerhard Achtelik (California Air Resources Board) – subbing for Lesley Crowell
David Mann (National Hydrogen Association)