Corrected Minutes of the In-Person Meeting of the
National Hydrogen and Fuel Cells Codes and Standards Coordinating Committee
Russell Hewett, NREL

MEETING DATE: November 16, 2005
TIME: 7:30 - 9:30 AM (PST)
LOCATION: Wyndham Palm Springs Hotel, Palm Springs, CA

1.0 PARTICIPANTS
The list of meeting participants (in-person and via teleconferencing) is provided in Attachment A.

2.0 REVIEW OF ANTI-TRUST POLICY
USFCC Codes and Standards Working Group meetings begin with the reminder to review and follow the anti-trust guidelines in the following documents:

Antitrust Guidelines (27Kb PDF)

Memo on Antitrust Guidelines (24Kb PDF)

3.0 CORRECTIONS TO MINUTES OF AUGUST MEETING
There were no additions or corrections to the Corrected Minutes of the October 12th teleconference meeting.

4.0 OPPORTUNITY FOR DOE/HQ SUBPROGRAM MANAGER TO REPORT ON WHAT'S GOING ON AT DOE/HQ
Pat Davis (DOE/HQ Technology Development Manager for Safety, Codes and Standards), participating by teleconferencing, reported that the Congressional Conference Committee had completed its report for action by the Congress.

While the Administration has requested $182 million for the Hydrogen, Fuel Cell and Infrastructure Technologies Program, the Conference Committee recommended $157 million:

$114 Million for the DOE Program
$43 Million in Congressionally-directed projects

If the Program is funded at the $157 million level, this will be about $15 million less than the Program received in FY05. Pat expects that there will be some negative impacts on the Safety, Codes and Standards Subprogram.

Pat also reported that the competitive solicitation -- to be issued by DOE/HQ -- to select a contractor to put all of the subcontracted codes and standards development work into a single large contract is still planned. Currently, most of the work being done by CDOs and SDOs is funded directly by NREL. The solicitation will be delayed (probably for two weeks) in order for DOE to determine what impact (if any) the Conference Committee's proposed budget for the FY06 program will have. Most of the subcontracts planned for FY06 will be executed by NREL. The new "super contractor" will take over starting in FY07.

The question was asked of Pat regarding what the roles of the national laboratories would be when the new contracting procedure begins. Pat stated that, while the new contractor would handle most of the subcontract administration issues, the role of the national laboratories (NREL) would not change and will include:

- Helping to formulate the codes and standards agenda
- Coordinating codes and standards development work (e.g., harmonization)

- Identifying priorities

The question was asked:

- Assuming the FY06 budget for the program is $157 million as recommended by the Conference Committee, would it likely be reduced even more by a recision?

Pat recognized the possibility of a recision, but stated that, if there were to be a recision, it would likely be on the order or 1-2% (as has happened in the past).

5.0 GLOBAL TECHNICAL REGULATIONS (GTR) PROCESS AND HOW IT FITS IN OVERALL SCHEME OF THINGS

The November/December In-Person meeting was planned with the expectation that there would be a briefing on the Global Technical Regulation (GTR) process and how it fitted into the scheme of things vis-à-vis hydrogen and fuel cell-related codes and standards development.

Mission Statement for the GTR process (34Kb PDF)

Bill Chernicoff, on behalf of the US DOT National Highway Traffic Safety Administration (NHTSA), briefly discussed USDOT involvement in the GTR process and presented a status report (below):

USDOT Involvement in the GTR Process (96Kb PDF)

In addition, Bill made arrangements for the US DOT representative for the GTR process to join the meeting via teleconferencing:

Nha Nguyen, Senior Energy Advisor
National Highway Traffic Safety Administration
Office of International Policy and Harmonization
400 Seventh Street, SW Room 5320
Washington, DC 20590
Telephone: (202) 366-6934
FAX: (202) 493-2290

Mr. Nguyen briefly discussed what the GTR process entailed and highlighted two issues that are being addressed:

1. Selection of a chairperson for the Safety Subgroup
2. The approach to be used in establishing GTRs: whether they should be design-based or based on self-certification (i.e., performance-based)

Since time was not available for Mr. Nguyen to completely address the GTR process, the question was posed as to whether or not it would be possible to have a teleconference meeting devoted totally to GTRs.

It was agreed that the January 2006 teleconference meeting would be devoted to the GTR process - the meeting to feature Mr. Nguyen.

6.0 REPORT ON HYDROGEN FUEL QUALITY WORK

Jim Ohi gave a report on the status of the efforts to develop an ISO hydrogen fuel quality Technical Specification (below).

ISO Hydrogen Fuel Quality Technical Specification (63Kb PDF)

Of special significance, Jim reported that:

1. The ISO draft technical specification that address hydrogen fuel quality for PEM fuel cell road vehicles (TS ISO 14687-2 Hydrogen Fuel - Product Specification Part 2) has been harmonized with SAE J2719 (Technical Information Report: Hydrogen Compositional Guideline), except for carbon dioxide. In generating the next version of J2719, SAE is expected to adopt the ISO carbon dioxide limit.
2. TS ISO 14687-2 is expected to be approved by ISO TC/197 in December 2006.
3. Working Group 12 agreed to work to move ISO 14687-2 from a technical specification to an international standard with a timetable to be specified by ISO TC/197.

7.0 RESULTS FROM ISO TC/197 PLENARY MEETING AND REPORT ON ISO ACTIVITIES

Bob Mauro (Chairman of the US ISO TC/197 TAG) reported on: (1) the results from the meeting of the US TAG held on October 27th in Chantilly, VA; and (2) ongoing TC/197, including documents in the comments process. Bob's report is available below:

US TAG Meeting Results (78Kb PDF)

Jessie Schneider (DaimlerChrysler) mentioned that there would be an important tank standardization meeting next week (December 8th) at SAE in Troy, MI, although it would not be an official SAE meeting. Members of the following would be participating:

- ISO TC/197 WG12, SAE J2579, the
- SAE J2579
- Japanese Automotive Research Institute (JARI)
- European Integrated Hydrogen Project (EIHP)
- European Union (EU)
- NHTSA
- CSA America

The objective of the meeting would be to try to gain a consensus for impending standards/regulations - some of which are going to be solidified in the next three months (e.g., ISO TC/197 WG12). Jessie mentioned that, for those unable to attend in person, there would be a call-in number.

Jessie sent out the following invitation:

To all those concerned,

This is to propose a joint hydrogen "Tank Standard" discussion with the different SDO's for the purpose of attempting to harmonize direction regarding content of the draft standards.

This would be a meeting where members of the SAE, ISO, EIHP, and CSA hydrogen standards developing committees could discuss concepts (such as performance based, system based, component based, etc)/ maybe details of direction(cycle life ,etc?) and timelines in an informal forum. The ultimate goal from this meeting would be to put together a skeleton document of who is doing what, and a roadmap forward.

There are time pressing issues such as regulations being proposed/ already finalized in some countries where such a meeting would be very timely.

What we are proposing is to have a meeting at the SAE headquarters in Troy, Michigan (yes, it's going to be cold!). The SAE J2579 meeting will be finished on 12/7/05 and many of those members will be there in person.

Please invite team members from your respective teams as well as other organizations that would be beneficial to get onboard.

Attached is a proposed agenda- please feel free to send me your feedback.

Please respond by EOB 11/ 21 to me directly.

Thank you.

Regards,

Jesse M. Schneider
DaimlerChrysler Corporation
Telephone: (248) 576-3324

The draft proposed agenda for the meeting is available below:

"Tank Standard" Meeting Agenda (69Kb PDF)

8.0 REPORT ON IEC TC/105 ACTIVITIES AND DOCUMENTS IN THE "COMMENTS" PHASE

Kelvin Hecht (chairman of the US IEC/TC105 TAG) reported on IEC TC/105 activities and documents in the "Comments" phase. Kelvin's report is available below:

IEC TC/105 Activities (103Kb PDF)

9.0 REPORT ON USFCC PRIORITIES FOR THE FUEL CELL INDUSTRY

Sondra Ullman (chairperson of the USFCC Codes and Standards Working Group) gave a report articulating the codes and standards development priorities (by application) from the USFCC perspective. Her report is available below:

C&S Development Priorities (102Kb PDF)

10.0 REPORT ON NATIONAL HYDROGEN ASSOCIATION (NHA) PRIORITIES

Karen Hall reported on the codes and standards development priorities of the NHA. Her report is available below:

NHA Priorities (134Kb PDF)

11.0 SOCIETY OF AUTOMOTIVE ENGINEERS (SAE) PRIORITIES

Ron Sims (outgoing chairman of SAE's Fuel Cell Standards Committee) reported on the codes and standards development-related priorities of SAE. His report is available below:

SAE Fuel Cell Standards Priorities (412Kb PDF)

NEXT MEETING OF THE HC&SCC

Since the In-Person meeting served as the November/December meeting of the Coordinating Committee, *the next meeting will be a Teleconference Meeting in January 2006.*

It will be conducted on the Second Wednesday -- rather than the First Wednesday -- as follows:

- DATE: January 11th (Second Wednesday)
- TIME: 3:00 - 4:30 pm EDT

The Call-In Number and the Agenda will be disseminated as part of the Initial and Final Announcements.

As mentioned earlier in the Minutes:

It was agreed that the January 2006 teleconference meeting would be devoted to the Global Technical Regulations process (i.e., what GTRs mean vis-à-vis commercialization of the fuel cell and hydrogen technologies). The meeting will feature Mr. Nha Nguyen (USDOT NHTSA/Office of International Policy and Harmonization).
Respectfully submitted,

Russ Hewett

ATTACHMENT A
PARTICIPANTS IN THE NOVEMBER/DECEMBER 2005 MEETING OF THE NATIONAL HYDROGEN AND FUEL CELLS
CODES AND STANDARDS COORDINATING COMMITTEE

NAME	ORGANIZATION	PRESENT AT MEETING (Yes/No)
Adam Gromis	California Fuel Cell Partnership	
Algis Vasys	Vista Consulting Group	
Andrei Tchouvelev	A. V. Tchouvelev & Associates, Inc.	
Antonio Ruiz	USDOE/Hydrogen, Fuel Cell and Infrastructure Technologies Program	Y
Bill Chernicoff	USDOT/Research and Innovative Technologies Administration(RITA)/Washington	Y
Bill Collins	UTC Fuel Cells	Y
Bob Mauro	Consultant to NREL	Y
Brad Smith	Shell Hydrogen	
Brian Walsh	US Fuel Cell Council	
Bruce Kinzey	Pacific Northwest Laboratory	
Carl Rivkin	National Fire Protection Association (NFPA)	Y
Cathy Gregoire-Padro	Los Alamos National Laboratory (LANL)	

Christina Zhang-Tillman	California Fuel Cell Partnership	
Christopher Moen	Sandia National Laboratories/Livermore	
Dan Casey	ChevronTexaco	
Darren Meyers	International Code Council (ICC)	
Debbie Angerman	Compressed Gas Association (CGA)	
Doug Horne	Clean Vehicle Education Foundation	
Gary Howard	A. V. Tchouvelev & Associates, Inc.	
George Kervitsky	SENTECH	
George Thomas	Consultant to SandiaNational Laboratories	
Gerry Myers	SPRINT	
Greg Milewski	Shell Oil Products	
Hank Seiff	Clean Vehicle Education Foundation	
Holly Thomas	National Renewable Energy Laboratory (NREL)	Y
Jeff Grant	Ballard Generation Systems	
Jesse Schneider	DaimlerChrysler	Y
Jim McGetrick	BP	
John Koehr	American Society of Mechanical Engineers (ASME)	
Juana Williams	NIST	
Julie Cairns	CSA America	
Karen Miller Hall	National Hydrogen Association (NHA)	Y
Julie Willets	SPRINT	
Keith Hardy	Argonne National Laboratory	
Kelvin Hecht	ANSI, IEC and Consultant to NREL	Y
Ken Krastins	Plug Power	

Larry Johnson	SPRINT	
Larry Moulthrop	Proton Energy Systems	Y
Laurie Florence	Underwriter Laboratories	Y
Mark Richards	Gas Technology Institute	Y
Michael Steele	General Motors Advanced Technology Vehicles	Y
Nha Nguyen	NHTSA/Office of International Policy and Harmonization	Y (New Member)
Patrick Serfass	National Hydrogen Association (NHA)	
Pat Davis	USDOE/Hydrogen, Fuel Cell and Infrastructure Technologies Program	Y
Paul Buehler	Plug Power, Inc.	(New Member)
Prentiss Searles	American Petroleum Institute (API)	
Robert Wichert	US Fuel Cell Council (USFCC)	
Rody Stephenson	Motor Vehicle Fire Research Institute	Y
Roger Smith	Compressed Gas Association (CGA)	
Ron Sims	Society of Automobile Engineers (SAE) and Consultant to NREL	Y
Sondra Ullman	Plug Power	Y
Spencer Grieco	CSA America	
Steve Turner	C&S Consultant	
Susan Townsend	General Electric Global Research Center	
Ted Williams	American Gas Association (AGA)	
Terry Conrad	Concurrent Technologies Corp.	
Tom Joseph	Air Products and Chemicals	
Tony	US Fuel Cell Council (USFCC)	Y

Androsky		
Jim Ohi	National Renewable Energy Laboratory (NREL)	Y
Russ Hewett	National Renewable Energy Laboratory	Y

OTHER PARTICIPANTS

(1) Anna Stukas (Angstrum Power, Inc.)
(2) Bill Lueckel (Renewable Fuels Association)
(3) Dr. Chi S. Wang (Da Yeh University)
(4) Gregory M. Smith (Millennium Cell, Inc.)
(5) John Kopasz (Argonne National Laaboratory)
(6) Leo Grassilli (Department of the Navy)
(7) Steve Kazubsky (CSA America)
(8) Vio Duma (Renewable Fuels Association)