

NATIONAL HYDROGEN AND FUEL CELLS CODES AND STANDARDS COORDINATING COMMITTEE

Wednesday, March 2nd, 2011

TIME: 3:00 – 4:30 pm (Eastern Daylight Time)

CALL-IN NUMBER: (641) 594-7000 Passcode: 824011#

WEBINAR: <https://www1.gotomeeting.com/register/952310161>

1 Roll Call

Anthony Amato	Kelly Jezierski	Tommy Rockward
Anthony Androsky	Tom Joseph	Antonio Ruiz
Chad Blake	Paul May	Glenn Scheffler
Bob Boyd	Matt McClory	Dan Shumaker
Marc Buttler	Steve McDermott	Mike Steele
Bill Buttner	John Moncrief	Rody Stephensen
Bill Collins	Larry Moulthrop	Steve Tucky
RJ Frame	Gary Nakarado	Mike Veenstra
Marty Gresho	Norm Newhouse	Steven Weiner
Karen Hall	Cathy Padro	Robert Wichert
Aaron Harris	Chris Radley	Juana Williams

2 Review of Anti-Trust Guidelines

http://www.usfcc.com/members/antitrust_guidelines_rev.pdf

3 Review of/Corrections to February Draft Minutes (attached and can be found at

www.hydrogenandfuelcellsafety.info/)

4 DOE/HQ Update

Antonio Ruiz

The President's budget rollout has happened. FY 2011 is being discussed in Congress. Possibly a short continuing resolution will be worked out soon. The FY 2012 request is \$100.5 Million with \$7M for Codes and Standards.

Question: Someone said the fuel cell program was reduced from \$49M to zero.

Answer: This is SECA.

Question: Can we get more details on the budget?

Robert Wichert will post the link.

http://www1.eere.energy.gov/hydrogenandfuelcells/pdfs/budget_webinar_fy12.pdf

Question: What does putting Codes and Standards as a stand-alone item mean?

Answer: This shows the importance of codes and standards.

5 Calendar of C&S Events and Fuel Cell Safety Information

http://www.fuelcellstandards.com/calendar_new.html

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

Kelvin Hecht

Karen Hall

Add AMR May 11, 2011 Codes and Standards

Please add www.hydrogenandfuelcellsafety.info/ to the www.fchea.org web site.

Please use khall@tccorp.com for Karen Hall.

FCHEA Priority Matrix

Robert Wichert

Add to metrology: NIST Handbook 44 on Hydrogen Gas Measuring Devices

A new NFPA 2 Task Group will be set up to address the issues related to fast indoor refueling of (for example) fork lift trucks.

5	Discussion Topics	Discussion Leader
	Hydrogen Fuel Quality	Jim Ohi – Not present
	ASTM	Jackie Button – Not present
	Work continues on publications. No change on the matrix. Inter-laboratory evaluation setup and preparatory work also continues	
	NIST	Juana Williams

Juana Williams provided the following update:

U.S. Weights and Measures Standards Development Process

Device Type Evaluation Criteria

On March 23, 2011, the NCWM National Type Evaluation Technical Committee-Measuring Sector Subgroup will meet to complete its review of the draft Hydrogen Gas-Measuring Devices Checklist. The checklist includes general criteria for (1) the design of the measuring, indicating, and recording elements, (2) operation of the discharge components and systems that are card or cash activated, and (3) marking requirements. The next step will be for the Subgroup to distribute an updated draft checklist to the U.S. National Work Group for the Development of Commercial Hydrogen Measurement Standards for its review and comments. The Subgroup plans to submit a final draft of the checklist to the Measuring Sector for its approval in late September/early October 2011.

(2) Upcoming Hydrogen Events

On May 18, 2011, NIST Weights and Measures Division will provide a presentation on “Commercial Hydrogen Measurement” to the Central Weights and Measures Association Annual Meeting in Grand Rapids, MI. The purpose of this event is to familiarize state, county, and local weights and measures officials and industry with the NIST Handbook 44 Hydrogen Gas Measuring Devices-Tentative Code and ongoing work on hydrogen - measuring devices test procedures, fuel quality specification and test procedures, refueling equipment, fuel cell vehicles, safety, properties, and other relevant facts.

Clarification

The code that is currently adopted in Handbook 44 gives the requirements. A separate document gives a checklist for evaluating certification of dispensing equipment.

There is also a test procedure for dispensers as well.

SAE J2719

Mike Steele

Mike Steele provided an update. There are ten references to ASTM documents. Six are published. The other four are in the process of being published, but they are not published yet. The SAE J2719 document may be re-balloted as a revision, with or without the full set of ASTM methods being published. This will be discussed at the next SAE meetings.

ISO TC 197 WG 12

Jim Ohi – Not present

Chad Blake provided an update. Comments are due to the US TAG by April 11, 2011.

ISO TC 197 WG 14

Karen Hall

Karen Hall provided an update. The Committee Draft is out for comments. The US TAG is providing comments. Comments are due to ISO TC 197, next week. After TC 197 receives comments from all the member countries, it will forward the comments to WG 14. At this point we expect an announcement for a meeting to address the comments.

Fuel Cell Forklifts

Aaron Harris

Aaron Harris provided an update. The Fork Lift Task Force has established a working group to develop proposals for NFPA 505 on industrial trucks. Further definitions and clarifications of CGH trucks is expected.

A new NFPA 2 Task Group will be set up to address the issues related to fast indoor refueling of (for example) fork lift trucks.

Tank Testing

SNL

Work continues. Daniel Dedrick provided an update. 25,000 cycles have been completed on as-manufactured tanks. The compressor is being rebuilt due to a piston seizure in a non-hydrogen section of the compressor. 12,000 cycles have been achieved on intentionally flawed tanks. These have exceeded expectations for cycle life. Sandia expects good information from the testing.

CSA

Josip Novkovic – Not present

Sandia Modeling

SNL/Aaron

Daniel Dedrick provided an update. Additional modeling of a spectrum of leak sizes and frequencies is being considered to support indoor refueling. The risk aspects are also being investigated. Characteristic refueler configurations will need to be provided by the industry experts. The new NFPA 2 Task Group should be able to provide some of this information.

6 Codes and Standards Organizations

All

This is the opportunity for CDOs, SDOs, Panels, Committees, etc. to provide updates and issues to the group.

US TAG

March 2011 Update

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

1. Comments requested

- **N486**, ISO/CD 14687-3, *Hydrogen Fuel — Product Specification — Part 3: Proton exchange membrane (PEM) fuel cell applications for stationary appliances*

The U.S. TAG was requested to comment on the draft of ISO/CD 14687-3. Comments were due by January 31.

Two TAG webconference were held, the first on February 10 and the second on February 22, to review all comments and prepare a consensus list for submission. The TAG's comments should be submitted to ANSI by March 3 to allow time for submission to ISO.

3. Ballot pending

- ISO/DIS 14687-2, *Hydrogen fuel — Product specification — Part 2: Proton exchange membrane (PEM) fuel cell applications for road vehicles*

The U.S. TAG is requested to vote by April 11.

A TAG webconference will be held at the end of April or in early May to review the comments and prepare a consensus list for submission with the U.S. position.

4. Future meetings

- WG 6, *Gaseous hydrogen and hydrogen blends — Land vehicle fuel tanks* (joint with ISO/TC 58/SC 3, *Cylinder design*, and ISO/TC 22/SC 25, *Vehicles using gaseous fuels*)
March 2-3 in Tokyo, Japan
- WG 15, *Gaseous hydrogen — Cylinders and tubes for stationary storage*
March 16-17 in Montreal, Canada
- WG 5, *Gaseous hydrogen land vehicle refuelling connection devices* (joint with ISO/TC 22, *Road vehicles*)
March 17-18 in Long Beach, CA

TC 105

**March 2011 Meeting
of the
DOE Hydrogen
Codes & Standards Coordinating Committees
(DOE/FCHEA)
Kelvin Hecht
TC105 – Fuel Cell Technologies**

- **WG#2 (IEC 62282-2 Ed.2, Fuel Cell Modules)**
 - **Vote on CDV by March 25th**
- **WG#3 (IEC 62282-3-1 Ed.2, Stationary Fuel Cells-Safety)**
 - **Vote on CDV by April 15, 2011.**
 - **US manufacturers are asked to comment.**
- **WG#3 (NWIP -Stationary Fuel Cells-Small systems serving as a heating appliance)**
 - **Fuel heat input based on net caloric value < 70 kW**
 - **Vote by April 29, 2011.**
- **WG#4 (IEC 62282-3-200, Stationary Fuel Cells – Performance)**
 - **CDV approved with comments**

- **FDIS by June 2011**
- **WG#7 (IEC 62282-5-1 Ed.1, Portable Fuel Cells – Safety)**
 - **CDV approved with comments**
 - **Meeting to resolve comments in the summer.**
 - **FDIS later this year**
- **WG#11 (NWIP – Single Cell/Stack Performance – Solid Oxide Fuel Cells)**
 - **Vote by May 6th**



NFPA

Paul May provided an update.

NFPA 55

NFPA 55 held its ROP meeting in February. Bulk gaseous is being re-defined from 400 cu ft to 5000 cu ft.

ROP should be published by June 24th. Comments will be due August 30th. Separation distance tables are being simplified. EIGA submitted an alternative approach. It was considered but it was not adopted.

NFPA 2

A new Task Group is being formed to address indoor refueling. April 26 – Pre ROP meeting at NFPA Headquarters.

NFPA 52

The Standards Council determined the scope change, although the results have not been released. May 23 is Proposal Closing date. August 1st, week of, for ROP meeting.

ICC – Not present

CSA – Not present

Others

No other updates

7 Open Discussion & Other Issues

- a. It was pointed out that high-vacuum applications use metallic seals.
- b. Next meeting – April 6, 2011, at 3:00 PM US Eastern Time