



**National Hydrogen and Fuel Cell  
Codes and Standards Coordinating Committee  
(NHFCCSCC)**

**Wednesday, May 2, 2018  
TIME: 3:00 – 4:00 pm (Eastern Standard Time)**

**Draft Minutes**

**Attendees**

Alice Muna  
Amy Ryan  
Carl Rivkin  
Chris LaFleur  
Christine Daniels  
Elan Bond  
Juana Williams

Justin Lewis  
Karen Quackenbush  
Kelvin Hecht  
Laura Hill  
Mike Steele  
Morry Markowitz

Nha Nguyen  
Nick Barilo  
Rob Early  
Robert Davidson  
Stella Papasavva  
Yuk Wong

**I. Welcome and Housekeeping Items**

- Reviewed FCHEA's anti-trust guidelines - Available on FCHEA's members only website and a copy can be provided to you on request.
- Approved the meeting agenda
- Approved the previous meeting minutes

**II. DOE/HQ Update**

**Laura Hill**

AMR June 13-15. Reviewer e-mails coming out – appreciate the help.

June 12 event to be discussed later in the agenda.

Next week in Japan is steering committee meeting for IPHE – DOE taking over the Chair.

Exciting updates coming soon regarding the IPHE RCS Work Group.

Laura to go on maternity leave around the AMR. Chris LaFleur has officially started as MNO contractor to spearhead the Safety, Codes & Standards Program in Laura's absence. E-mail to reach Chris is [Chris.Lafleur@ee.doe.gov](mailto:Chris.Lafleur@ee.doe.gov).

**III. C&S Events and Fuel Cell Safety Information**

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

**Karen Quackenbush**

**Request:** technical resource updates for the Hydrogen and Fuel Cell Safety website. Any committee members who have materials they would like hosted on the website can send them to Karen Quackenbush ([khall@fchea.org](mailto:khall@fchea.org)) or Connor Dolan ([cdolan@fchea.org](mailto:cdolan@fchea.org)).

IPHE in Japan May 08-11, 2018

PHE May 08-11 2018

AMR June 13-15 2018

AMR Misc meetings June 11-12, 2018

FCHEA summit June 12, 2018  
WHEC June 17-22, 2018  
GTR 13 Phase II June 26-28, 2018  
ISO TC/197 WG24 July 10-12, 2018  
ASTM end of June

#### **IV. Global Technical Regulations**

**Nha Nguyen**

Nha provided an update after the February GTR meeting. A written meeting report is now available. June 26-28 is next GTR meeting in Seoul, Korea. Expect to have a draft proposal for material compatibility. Nha is working with Sandia National Laboratories on that proposal. If anyone wants to participate in this WG or any other WG, please contact Nha. All are welcome.

Please find the meeting notes for the Hydrogen and Fuel-cell vehicle GTR phase 2 in the below link (document number GTR13-02-27). Other technical documents are also can be found in the same link: <https://wiki.unece.org/display/trans/GTR13-2+2nd+session>

#### **V. Codes and Standards Organization Updates**

##### **IEC TC 105**

**Kelvin Hecht**

Nothing new to report.

##### **ISO/TC 197**

**Karen Quackenbush/ Glenn Scheffler/Jay Keller**

WG 22 DIS review is out.

WG 24 DIS review is ending. Comments to be addressed in July.

ISO 14687 is also out for DIS review in June. SAE working to ensure harmonization.

##### **NFPA 2**

**Carl Rivkin**

Public comment period for NFPA 2 and NFPA 55 is closing May 9<sup>th</sup>. Second week of August at NFPA in Massachusetts for NFPA Second Draft Review. Rob Early added NFPA 55 Second Draft in Rhode Island in July. Guests are welcome to register.

##### **ICC**

**Spencer Quong**

ICC held meeting a couple weeks ago. All but one proposal was accepted as proposed. The one not accepted relates to performance-based requirements for Repair Garages. Proposal to allow lowering chassis to access storage system was approved! Rewrite for clarity on outdoor storage to hand off cleanly to NFPA 55. The results can be viewed here:

<http://www.hydrogenandfuelcellsafety.info/s/2018-ICodes-HydrogenRelated-Results.pdf>

##### **CSA**

**Brent Hartman**

##### **SAE**

**Mike Steele**

SAE J2579 to start 28 day vote.

SAE J3089 (sensor characterization) TIR vote closes May 28. Extremely thorough.

**CGA**

**Rob Early**

Hydrogen Technology Committee is updating doc – needs testing, perhaps Spring or Fall. CGA 5.5 doc update pushed out to Sept 2019.

**ASTM**

**Jennifer Hamilton / Christine Daniels**

Reported that ASTM is having a D03 Meeting on Gaseous Fuels Tuesday June 26-27, 2018 at JW Marriott Phoenix Desert Ridge, Phoenix, AZ. Here is a link to the description:

[https://www.astm.org/MEETINGS/filtrexx40.cgi?+-P+MAINCOMM+D03+-P+EVENT\\_ID+2828+-P+MEETING\\_ID+97768+otherinfomain.frm](https://www.astm.org/MEETINGS/filtrexx40.cgi?+-P+MAINCOMM+D03+-P+EVENT_ID+2828+-P+MEETING_ID+97768+otherinfomain.frm).

**ASME**

**John Bendo**

No report.

**VI. Discussion Topics**

**Facilitating Deployment**

**Carl Rivkin**

Discussing a permitting webinar later this year. International effort through IPHE. Jay added IPHE RCSWG may be working more closely with HySafe in the future.

**H<sub>2</sub>USA Activities**

**Karen Quackenbush**

Nothing new to report.

**H2@Scale**

Thursday of AMR will have a poster session featuring the CRADA Call projects, focused on H2@Scale.

**Regulatory Matrix Review and Comment**

**Karen Quackenbush**

Karen noted the latest update shows changes through March 31<sup>st</sup>. The group was asked to please review the matrix and contact Karen at [kquackenbush@fchea.org](mailto:kquackenbush@fchea.org) with any questions, concerns, or updates. The matrix is available here:

<http://www.hydrogenandfuelcellsafety.info/s/FCHEA-Regulatory-Matrix-markup-March-31-2018.pdf>

**Permitting and Installation of Hydrogen Fueling Stations**

**CA Station Implementation**

**Jennifer Hamilton**

**Christine Daniels** reported as of March 30th, CA opened station #33 at 3102 Thousand Oaks Boulevard, Thousand Oaks, CA 91362. Also, Shell has started on their Citrus Heights station, one of the two in the Sacramento area they are building.

Jay noted a need to start adding dots on the HFS maps, particularly beyond California. He noted from the CHBC heavy duty workshop on April 30 the void of fueling stations outside of California was particularly troublesome for Hydrogen HDV deployment.

#### **CA DMS Fuel Quality / Metrology**

**Kevin Schnepf**

Jay noted a German hydrogen flow meter device recently got OIML certification.

<https://www.sensormag.com/components/hydrogen-flow-meter-carries-mid-002-certification>.

#### **Legal Metrology Standards Hydrogen Fuel Quality and Measurement**

**Juana Williams/Ralph Richter**

Nothing new to report. Proposed changes to hydrogen were sent through Ralph to the OIML group to relax some of the requirements.

### **VII. Open Discussion & Other Issues**

#### **Other Issues?**

Morry Markowitz announced that on June 12, FCHEA is holding Forum – all day. Washington, DC. 3M, Plug Power, Toyota, NGOs, Congressional Reception on Capitol Hill. To learn more or register, please visit <http://www.fchea.org/national-fuel-cell-forum-2018>.

ITM Power news release:

ITM Power (AIM: ITM), the energy storage and clean fuel company, is pleased to announce the award of a grant from the Massachusetts Clean Energy Center (MassCEC) to undertake a multi-MW Power-to-Gas (P2G) feasibility study for the Massachusetts region. The link is available here:

[http://www.itm-power.com/news-item/massachusetts-power-to-gas-feasibility-study?utm\\_source=emailmarketing&utm\\_medium=email&utm\\_campaign=itm\\_power\\_may\\_newsletter&utm\\_content=2018-05-02&cid=E2ZIUxnkw4THliu52tm7LqBH4suKztJZn6zce\\_KOZ3HOLioutylfy7ciAxlrvV8ejb3oYFzxgrdzh95eiWMnQ..](http://www.itm-power.com/news-item/massachusetts-power-to-gas-feasibility-study?utm_source=emailmarketing&utm_medium=email&utm_campaign=itm_power_may_newsletter&utm_content=2018-05-02&cid=E2ZIUxnkw4THliu52tm7LqBH4suKztJZn6zce_KOZ3HOLioutylfy7ciAxlrvV8ejb3oYFzxgrdzh95eiWMnQ..)

Jay also noted that Elan Bond from NEL energy announced at the CHBC HDV meeting that NEL had received UL approval for their station products. This should go a long way to easing permitting and deployment of NEL HFS.

### **VIII. Next Meeting**

Wednesday, May 30<sup>th</sup>, 3:00 pm Eastern, in order to avoid a conflict with SAE (1<sup>st</sup> week of June) or DOE AMR (second week of June).