

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

**Wednesday, November 1, 2023
TIME: 2:00 PM ET**

Minutes

**Bob Boyd
Chris Boyer
Connor Dolan
Mark Duda
Brian Ehrhart
Mike Force
Jennifer Gangi
Kelvin Hecht
Laura Hill**

**Shinichi Hirano
Will James
Chris LaFleur
Ian MacIntire
Sara Marxen
Norm Newhouse
Haboon Osmond
Eric Prause
Karen Quackenbush**

**Spencer Quong
Ray Rahaman
Akin Sadiku
Kelvin Sumba
Jillian Townsend
Svetlana Ulemek
Yuk Wong
Ben Xiong**

I. Welcome and Housekeeping Items

- a. The NHFCSCC reviewed FCHEA's Anti-trust Guidelines, approved previous minutes, and approved the meeting agenda.

II. DOE/HQ Update

Laura Hill

Regional Clean Hydrogen Hubs Selections Announcement

- o [Regional Clean Hydrogen Hubs Selections for Award Negotiations | Department of Energy](#)
- o [General Briefing](#)
- o [Environmental Justice Briefing](#)
- o [Labor and Workforce Briefing](#)
- **FHWA Webinar: Safety of Hydrogen and Other Alternative Vehicles in Tunnels, November 9th 2023, 1 PM ET**
 - o Alternative fuel light-duty vehicles, such as those powered by batteries, CNG, and hydrogen, each present unique hazards when operated within tunnels. Recent work by Sandia National Laboratories will be presented, which includes a literature review of multiple types of alternative fuel vehicles as well as safety analyses of hydrogen vehicles in particular. Various experimental and numerical analyses in the open literature have explored different hazards for alternative fuel vehicles; these works will be reviewed and compared between different types of fuel. Hydrogen vehicles in particular have been analyzed using probabilistic risk assessment and high-fidelity fluid/heat transfer modeling techniques for multiple tunnel geometries. Following the presentation of Sandia's work will be a discussion on developing a generalized framework for understanding safety of hydrogen and other alternative fuel vehicles in additional tunnel types and considering additional release scenarios.
 - o <https://usdot.zoomgov.com/meeting/register/vJltceghqjispH767vacvoGcIJOGcEqND6dA>

- **PHMSA Advanced Notice of Proposed Rulemaking, Hazardous Materials: Modernizing Regulations to Improve Safety and Efficiency**
 - Comment period extended to December 4th
 - “TT: Emerging Technologies” includes hydrogen
 - <https://www.federalregister.gov/documents/2023/09/21/2023-20440/hazardous-materials-modernizing-regulations-to-improve-safety-and-efficiency-extension-of-comment>

III. Codes & Standards Events and Fuel Cell Safety Information Karen Quackenbush

- Calendar of events: <https://www.hydrogenandfuelcellsafety.info/safety-report-calendar>
- Any committee members with materials they would like hosted on the website can send them to Karen Quackenbush (kquackenbush@fchea.org) or Haboon Osmond (hosmond@fchea.org).

IV. Global Technical Regulations Ian MacIntire

- NHTSA continues to work on an NPRM proposing new FMVSS with requirements that align with those specified in GTR No. 13. The NPRM has not yet been published.

V. Codes and Standards Organization Updates

Institute of Electrical and Electronics Engineers Mark Siira

- The revision process for the 2027 edition of IEEE 1547 continues.

International Electrotechnical Commission IEC TC 105 Kelvin Hecht

- No major activities to report this month
- New standards under development with little North American input:
 - [IEC 62282-6-106](#): Micro Fuel Cell Power Systems – Safety – Indirect Class 8 (corrosive) compounds
 - [IEC 62282-6-107](#): Micro Fuel Cell Power Systems – Safety – Indirect water-reactive (Division 4.3) compounds
 - [IEC 62282-6-401](#): Micro Fuel Cell Power Systems – Power and data interchangeability – Performance test methods for laptop computer
 - [IEC 62282-2-400](#): Fuel Cell Modules – Calculation of rated power and power density of a PEM stack and PEM module
 - [IEC 62282-3-202](#): Stationary Fuel Cell power Systems – Performance test methods for small fuel cell power systems that can be complemented with a supplementary heat generator for multiple unit operation by an energy management system
 - [IEC 63341-3](#): Railway Stock – Fuel Cell Systems for Propulsion – Performance test methods (*with TC 9*)
- Proposed new standard
 - [IEC 62282-4-401](#): Fuel Cell Power Systems for Propulsion and Auxiliary Power Units – Maritime sector – Safety of PEMFC Systems
- 2023 TC105 Plenary – Paris November 13-17
 - A draft agenda is available

International Standards Organization ISO/TC 197

Karen Quackenbush

- TC 197 and SC 1 Plenary will meet in Vienna, Austria, from November 13th to November 17th.
 - WG 22 (Gaseous hydrogen fueling station hoses) will be meeting there and will discuss the break-away force jointly with WG 5 and 19.

National Fire Protection Association NFPA 2

Chris LaFleur

- NFPA 2 will have a pre-first draft meeting on Tuesday, November 7th from 11-4 PM US Eastern Time.

International Codes Council (ICC)

Mark Fasel

- PMG Code Action Committee has voted to support the attached proposals that originate from the International Fuel Gas Code. The additional proposals listed under Fire Committee are heard through the FIRE Code Action Committee and were tabled at last meeting. There was a straw poll taken and there were no objections to the proposed language, there were some issues with a quorum to vote on the items due to a few people having to drop off the call towards the end of the meeting when the proposals items were slated on the agenda.

Society of Automotive Engineers (SAE)

Mike Steele

- No updates.

CSA

Sara Marxen

Technical Committee Meetings		
<ul style="list-style-type: none"> • If you are interested in joining hydrogen standards development committees with CSA, please contact Iris Monner (iris.monner@csagroup.org) • If you are interested in joining hydrogen fuel cell standards development committees with CSA, please contact Mark Duda (mark.duda@csagroup.org) 		
Active Projects		
TSC	Designation/Title	Status
HGV 5	HGV 5.2, Compact hydrogen fueling systems	This project is to develop a NEW standard for CompactHydrogen Fueling Systems (HGV 5.2). Working with the TC and TSC Chairs to disposition ballot comments. A second ballot is expected in early November.
HGV 5	HGV 5.1, Residential hydrogen fuelling appliances	This project is to develop a NEW standard for Residential fueling appliances. Content development continues.
HGV 4.1	HGV 4.5, Priority and sequencing equipment for hydrogen vehicle fueling	This project is to develop a standard to REINSTATE an updated edition of a Priority and Sequencing standard. Document was published in late September 2023.

HGV 4.3	HGV 4.3, Test methods for hydrogen fueling parameter evaluation	This project is a revision of an existing standard. Document has been revised for use as a certification document. Public review closed October 8, 2023. Meeting with TSC Chairs will be scheduled soon to review comments.
HGV 4.8	HGV 4.8, Compressors	This project is to revise an existing edition of HGV 4.8 compressor standard to address updates in compressor technology. We continue to seek compressor manufacturers to join the TSC. Please contact Sara Marxen (sara.marxen@csagroup.org) if interested in joining this work.
B107	Enclosed Hydrogen Equipment	The draft has been posted for public review will be available for review until December 24, 2023. Link to the CSA public review portal to view the CSA B107 draft: https://publicreview.csa.ca/Home/Details/5125
FC 6 * C22.2 No. 62282-2-100	Fuel cell/water electrolysis module	CSA Group is developing the first edition of the binational CSA FC 6 * C22.2 No. 62282-2-100 – Fuel Cell Technologies – Part 2-100: Fuel cell modules – Safety (IEC 62282-2-100, MOD). This project will be adopting IEC 62282-2-100 - Fuel Cell Technologies – Part 2-100: Fuel cell modules – Safety for US and Canada. The committee will be expanding the scope of the adoption to include water electrolysis modules including cell stacks as the requirements will be similar to fuel cell modules and there is an immediate industry need for a water electrolysis module safety standard. Contact Mark Duda (mark.duda@csagroup.org) with questions or for additional information.

Compressed Gas Association (CGA)

Rob Early

Updates from last month's report are highlighted.

Status of current and future publications:

Standard	Current edition	Status
CGA G-5, <i>Hydrogen</i>	8 th (2017)	The ANS committee has resolved all proposed changes. Next step is a 45-day public review. https://portal.cganet.com/WorkItem/Details.aspx?id=22-019
CGA G-5.3, <i>Commodity specification for hydrogen</i>	7 th (2017)	Deadline to submit proposed changes for next edition was 5/1/2023. A total of 7 PCs have been submitted. A PC resolution meeting is scheduled for 3 November 2023.

Standard	Current edition	Status
		https://portal.cganet.com/Publication/Workspace/Outline.aspx?work_id=22-013
CGA G-5.4, <i>Standard for hydrogen piping systems at user locations</i>	6 th (2019)	Deadline to submit proposed changes for next edition is 12/22/2024. https://portal.cganet.com/Publication/Workspace/Outline.aspx?work_id=24-54
CGA G-5.5, <i>Hydrogen vent systems</i>	3 rd (2014)	Deadline to submit proposed changes for next edition is 03/04/2026. https://portal.cganet.com/Publication/Workspace/Outline.aspx?work_id=26-3 The task force met 19 and 20 October 2023 to review test results.
CGA G-5.6, <i>Hydrogen pipeline systems</i>	1 st (2005 – reaffirmed 2013)	Deadline to submit proposed changes for next edition was 8/1/2023. https://portal.cganet.com/Publication/Workspace/Outline.aspx?work_id=19-018
CGA H-3, <i>Standard for cryogenic hydrogen storage</i>	3 rd (2019)	This publication is in staff review prior to Council Ballot. After council approval, H-3 will be sent for 45 day public review after council approval to move through the ANS process.
CGA H-4, <i>Terminology associated with hydrogen fuel technologies</i>	3 rd (2020)	Deadline to submit proposed changes for next edition is 12/1/2024. However, all the content has been added to the updated version of CGA G-5. Once CGA G-5 has been issued, CGA H-4 will be retired. For updates use the following link: https://portal.cganet.com/Publication/Workspace/Outline.aspx?work_id=24-59
ANSI/CGA H-5, <i>Standard for bulk hydrogen supply systems</i>	3 rd (2020)	The deadline to submit proposed changes for the next edition is 2/26/2024. https://portal.cganet.com/Publication/Workspace/Outline.aspx?work_id=24-010
CGA H-10, <i>Combustion safety for steam reformer operation</i>	2 nd (2018)	Deadline to submit proposed changes for next edition is 12/1/2023. https://portal.cganet.com/Publication/Workspace/Outline.aspx?work_id=23-038
CGA H-11, <i>Safe start-up and shutdown practices for steam reformers</i>	2 nd (2020)	Deadline to submit proposed changes for next edition is 8/11/2025. https://portal.cganet.com/Publication/Workspace/Outline.aspx?work_id=25-30
CGA H-12, <i>Mechanical integrity of syngas outlet systems</i>	1 st (2016)	Deadline to submit proposed changes for next edition is 6/1/2023. https://portal.cganet.com/Publication/Workspace/Outline.aspx?work_id=21-016

Standard	Current edition	Status
CGA H-13, <i>Hydrogen pressure swing adsorber (PSA) mechanical integrity requirements</i>	1 st (2017)	Council ballot due 21 Aug 2023, IHC Association approvals due 18 Sept 2023. Pending no comments, estimated publish date by the end of September. https://portal.cganet.com/Publication/Workspace/Outline.aspx?work_id=22-027
CGA H-14, <i>HYCO plant gas leak detection and response practices</i>	1 st (2018)	Deadline to submit proposed changes for next edition is 12/8/2023. https://portal.cganet.com/Publication/Workspace/Outline.aspx?work_id=23-045
CGA H-15, <i>Safe catalyst handling in HYCO plants</i>	1 st (2020)	Deadline to submit proposed changes for next edition is 9/1/2025. https://portal.cganet.com/Publication/Workspace/Outline.aspx?work_id=25-59
CGA H-17, <i>Small scale hydrogen production and delivery</i>	1 st (2023)	Publication has been issued. Deadline to submit changes for next edition is 9/20/2029. https://portal.cganet.com/WorkItem/Details.aspx?id=29-14
CGA P-28, <i>OSHA process safety management and EPA risk management plan guidance document for bulk liquid hydrogen supply systems</i>	5 th (2022)	Deadline to submit proposed changes for next edition is 08/01/2027. https://portal.cganet.com/Publication/Workspace/Outline.aspx?work_id=25-49
CGA PS-31, <i>Position statement on cleanliness for proton exchange membranes hydrogen piping / components</i>	1 st (2007 – reaffirmed 2019)	Deadline to submit proposed changes for next edition is 6/12/2025. https://portal.cganet.com/Publication/Workspace/Outline.aspx?work_id=25-16
CGA PS-33, <i>Position statement on the use of LPG or propane tanks as compressed hydrogen storage buffers</i>	1 st (2008 – reaffirmed 2020)	Deadline to submit proposed changes for next edition is 12/10/2026. https://portal.cganet.com/Publication/Workspace/Outline.aspx?work_id=25-41
CGA PS-46, <i>Position statement on roofs over hydrogen storage systems</i>	1 st (2017)	The ad hoc committee met on 8 August 2023 to resolve public comments and update PS-46. For updates see the link below: https://portal.cganet.com/Publication/Workspace/Outline.aspx?work_id=23-012
CGA PS-48, <i>Position statement on clarification of existing hydrogen</i>	1 st (2016)	The ad hoc committee met on 8 August 2023 to resolve public comments and update PS-48 to point to NFPA 2 for hydrogen instead of

Standard	Current edition	Status
<i>setback distances and development of new hydrogen setback distances in NFPA 55</i>		pointing to NFPA 55. For updates see the link below: https://portal.cganet.com/WorkItem/Details.aspx?id=21-062
PS-69, <i>Liquid Hydrogen Supply Systems Separation Distances</i>	1 st (2022)	CGA has developed a position statement pointing users to the new liquid hydrogen system distances in NFPA 2:2023. The position statement covers the process of requesting a variance to use the numbers from the NFPA 2 section of the NFPA web site. PS-69 is free for downloading at https://www.cganet.com/wp-content/uploads/PS-69_1.pdf
CGA work item 21-127, <i>Transfer and unloading of hydrogen at near-consumer use points</i>	New publication not released yet	Develop a new standard to update traditional hydrogen delivery practices for industrial users to improve practices for retail applications.
CGA work item 21-128, <i>Noise from hydrogen venting and hydrogen systems operations</i>	New publication not released yet	Develop a new standard to reduce the noise from hydrogen system operations, including venting, particularly at retail applications where hydrogen system noise is greater than ambient noise. The task force held a meeting November 1 and is working on developing content for the publication.
CGA work item 22-107, <i>Hydrogen system best practices</i>	New publication not released yet	Develop a new standard to capture recommended best practices for handling hydrogen, filling containers, starting up systems, maintaining hydrogen systems, and similar topics to ensure safe practices for those new to the hydrogen space and to share best practices from those already experienced with hydrogen. The first draft was sent out for a two-month membership review with a cutoff date of 15 August 2023. No member comments were received. The draft is now out to CGA Standards Council for review with a deadline of 13 September 2023. https://portal.cganet.com/WorkItem/Details.aspx?id=22-107

Standard	Current edition	Status
CGA work item 22-116, <i>Hydrogen separation distances</i>	New publication not released yet	CGA is developing a globally harmonized standard on the methodology for developing separation distances between hydrogen systems and exposures. The standard will provide details on mitigation techniques for reducing required distances, particularly in near-consumer locations (such as vehicular fueling) where room is limited. The working group has a first outline and continues to add content. The JWG met via web conference 5 April 2023, 4 May 2023, 18 May 2023, 8 June 2023, 7 July 2023, 30 August 2023, 29 September 2023, and 27 October 2023. Future meetings are 17 November 2023 and 15 December 2023, with an in-person meeting to be scheduled in the first quarter 2024.
CGA work item 22-127, <i>Hydrogen education plan</i>	New publication not released yet	CGA is developing a globally harmonized standard on hydrogen emergency response and safe hydrogen handling training. The JWG has finished work on the draft document.

Upcoming events:

CGA has established a new hydrogen membership category for those interested in hydrogen activities and not the whole range of industrial gases. The new membership category has a lower fee structure. More details can be found at <https://www.cganet.com/cga-announces-formation-of-hydrogen-membership/> . Those who are interested are encouraged to review the material at the CGA web site and/or contact Rob Early at rearly@cganet.com .

CGA has launched <https://www.safehydrogenproject.org/> to grow awareness and access to standards and safety information. More details can be found at <https://www.cganet.com/compressed-gas-association-announces-landmark-hydrogen-initiative/>

American Society for Testing & Materials (ASTM)

Christina Daniels

- ASTM D03 Gaseous Fuels Main committee ballot closes 11/17/2023.
 - D7653 Standard Test Method for Determination of Trace Gaseous Contaminants in Hydrogen Fuel by Fourier Transform Infrared (FTIR) Spectroscopy – ballot passed subcommittee with 3 editorial comments.
- ASTM D03 Gaseous Fuels Main Committee ballot closed 10/16/2023.
 - Revision of D7676 Standard Practice for Screening Organic Halides Contained in Hydrogen or Other Gaseous Fuels.
 - Passed with 0 negatives and comments.
- Withdrawal of D7649 Standard Test Method for Determination of Trace Carbon Dioxide, Argon, Nitrogen, Oxygen and Water in Hydrogen Fuel by Jet Pulse Injection and Gas Chromatography/Mass Spectrometer Analysis.
 - Passed with 0 negatives and 1 comment.

- [Registration](#) for the December committee meeting is open. The meeting is in New Orleans, LA from December 5-6 with the [Workshop on Natural Gas Blended with Hydrogen: Analytic Challenges and Standardization](#) occurring December 6 from 1:00 – 5:30 p.m. local time.

American Society of Mechanical Engineers (ASME)

Ray Rahaman

- No updates.

VI. Discussion Topics

Center for Hydrogen Safety

Jennifer Hamilton

- No updates.

Regulatory Matrix Review and Comment

Karen Quackenbush

- This Matrix is updated quarterly and keeps FCHEA members up-to-date in the development of codes, standards, and regulations.
- As of September 30, 2023:
<https://static1.squarespace.com/static/5668416ddc5cb4375e2a9ef8/t/6526d8c28822576439a6d948/1697044676664/FCHEA+Regulatory+Matrix+Markup+September+30+2023.pdf>
- Please direct any updates, questions, or comments to Karen Quackenbush via email at kquackenbush@fchea.org or Haboon Osmond at hosmond@fchea.org.

California Station Implementation

Ben Xiong

1. 55 open retail stations
2. 1 new station opened in October: True Zero Oakland - Foothill
3. 10 HRS currently unavailable
 - a. True Zero LAX, Palo Alto, Anaheim
 - b. Shell Citrus Heights, Berkeley, Sacramento, SF – 3rd St, SF – Harrison St
 - c. Cummins Ontario
 - d. Cal State LA
4. 6 HRS in commissioning
 - a. Iwatani Anaheim
 - b. Iwatani Corona
 - c. Iwatani La Mirada
 - d. Iwatani Santa Ana
 - e. HTEC Woodside

California Div. of Measurement Standards/Fuel Quality / Metrology

Yuk Wong

- Due to a disruption in the availability of gaseous hydrogen in Southern CA, the Anaheim Lab is limiting the routine sampling.
- Northern CA, the Sacramento Lab will continue perform hydrogen fuel quality sampling and analysis testing as usual.
- Anticipating to start particulate sampling in January 2024.

Legal Metrology Standards Hydrogen Fuel Quality and Measurement

Juana Williams

- U.S. Weights and Measures Standards Development Process
 - Industry proposals to modify legal metrology standards for hydrogen gas-measuring devices used to refuel vehicles are shown in TABLE 1 below. All four U.S. regional weights and measures associations have met this fall to consider those proposals. Reports for the Central- (CWMA), Western- (WWMA), and Southern (SWMA) Weights and Measures Associations are available and outlined in TABLE 2 below. Reports for the Northeastern Weights and Measures Association are anticipated shortly. The regional S&T Committees addressed a single proposal to include an owner safety requirement in NIST Handbook 44 *Specifications, Tolerances, and Other Technical Requirement for Weighing and Measuring Devices*, Section 3.39. L&R Committees addressed two separate fuel quality standard proposals to modify NIST Handbook 130 *Uniform Laws and Regulations in the Areas of Legal Metrology and Fuel Quality*, Section IV.G. All three proposals under consideration are available in entirety (submitter, justification, links to associated materials, etc.) each regional weights and measures association’s website available at: <https://www.ncwm.com/meetings>. Recommendations from the regional associations for each hydrogen proposal become part of the National Conference on Weights and Measures (NCWM) Committees’ agenda for its January 7-10, 2024 Interim Meeting to be held in New Orleans, Louisiana. The 2024 hydrogen proposals are outlined in the table below:

TABLE 1
2024 Hydrogen Related Legal Metrology Requirements Proposals

Committee	Committee Agenda Item No.	Agenda Item Title	Submitter’s Stated Purpose	Submitter’s Proposed Modification to the Code
S&T (Specifications and Tolerances)	HGM-23.1 This is the second year the proposal is being considered	UR.3.8. Safety Requirement	Add safety requirement for hydrogen gas measuring devices to NIST Handbook 44 Section 3.39.	Add a new user requirement paragraph UR3.8. to read: <u>UR 3.8 Safety Requirement –All hydrogen gas-measuring devices subject to this code shall maintain verification of testing demonstrating conformance with the latest version of SAE J2601 Fuel Protocols for Light Duty Gaseous Hydrogen Surface Vehicles, as determined by the latest version of ANSI/CSA HGV 4.3 “Test Methods for Hydrogen Fueling Parameter Evaluation. (Nonretroactive as of January 1, 20XX)</u>

TABLE 1
2024 Hydrogen Related Legal Metrology Requirements Proposals

Committee	Committee Agenda Item No.	Agenda Item Title	Submitter's Stated Purpose	Submitter's Proposed Modification to the Code
L&R (Laws and Regulations)	FLR-23.3 This is the second year the proposal is being considered	Section 2.20. Hydrogen Fuel	Add equivalent hydrogen quality standard, ISO 14687 to 2.20. Note the proposal amends NIST HB 130 IV. F. Uniform Fuels and Automotive Lubricants Regulation Section 2 under 2.20.	Modify Section 2 Standard Specification 2.20 as follows: 2.20. Hydrogen Fuel. – Shall meet the latest version of SAE J2719, “Hydrogen Fuel Quality for Fuel Cell Vehicles.” or ISO 14687 “Hydrogen fuel quality – Product specification”. (Added 2012) (Amended 20XX)
L&R (Laws and Regulations)	ITEM BLOCK 2 (B2) REFERENCE ASTM STANDARDS D8080 AND D8487 AND GRADE LABELING A new proposal	FLR-24.1 2.9. Liquefied Natural Gas (LNG) Vehicle Fuel, 2.10. Compressed Natural Gas (CNG), and 2.XX. Compressed Natural Gas (CNG) Blended with Hydrogen FLR-24.2 (corrects error in item numbering) Section 3.11.2 Retail Sales of Compressed Natural Gas; Labeling and 3.12.2 Labeling of Retail Dispensers of Liquefied Natural Gas Sold as a Vehicle Fuel	Amend NIST Handbook 130 Part IV. F. Section 2 under Sections 2.9 and 2.10 by replacing SAE J1616 and SAE J2699 with ASTM D8080 “Standard Specification for Compressed Natural Gas (CNG) and Liquefied Natural Gas (LNG) Used as a Motor Vehicle Fuel.” Amend NIST HB 130 IV. F. Section 2 by adding a new paragraph for ASTM D8487 “Standard Specification for Natural Gas, Hydrogen Blends for Use as a Motor Vehicle Fuel.” Amend NIST HB 130 Part IV. F. Uniform Fuels and Automotive Lubricants Regulation Sections 3.11 CNG and 3.12 LNG by adding labeling of grades to the method of sale for CNG and LNG.	Modify Section 2.9 and 2.10 as follows: 2.9. Liquefied Natural Gas (LNG) Vehicle Fuel. – Shall meet the latest version of SAE J2699, “Liquefied Natural Gas (LNG) Vehicle Fuel.” ASTM D8080 “Standard Specification for Compressed Natural Gas (CNG) and Liquefied Natural Gas (LNG) Used as a Motor Vehicle Fuel.” 2.10. Compressed Natural Gas (CNG). – Shall meet the latest version of SAE J1616, “Recommended Practice for Compressed Natural Gas Vehicle Fuel.” ASTM D8080 “Standard Specification for Compressed Natural Gas (CNG) and Liquefied Natural Gas (LNG) Used as a Motor Vehicle Fuel.” Include a new fuel quality requirement for CNG and hydrogen blended products to read:

TABLE 1 2024 Hydrogen Related Legal Metrology Requirements Proposals				
Committee	Committee Agenda Item No.	Agenda Item Title	Submitter's Stated Purpose	Submitter's Proposed Modification to the Code
				<p><u>2.XX. Compressed Natural Gas (CNG) Blended with Hydrogen. – Shall meet the latest version of ASTM D8487 “Standard Specification for Natural Gas, Hydrogen Blends for Use as a Motor Vehicle Fuel.”</u></p> <p>Modify to include proposed new grade labeling requirements in current HB 130 Part IV. F. Section 3. Classification and Labeling for Sale under Section 3.11 Compressed Natural Gas (CNG) and 3.12 Liquefied Natural Gas (LNG) as follows:</p> <p><u>3.11.2.1.X. Identification of Grade. – Each retail dispenser of CNG shall be labeled with an identification of the grade of the product.</u></p> <p><u>3.12.2.X. Identification of Grade. – Each retail dispenser of LNG shall be labeled with an identification of the grade of the product.</u></p>

TABLE 2 U.S. Regional Weights and Measures Associations Reports on Hydrogen Related Legal Metrology Requirement Proposals			
Regional Assn.	HGM-23.1 [SAE J2601]	FLR-23.3 [SAE J2719 & ISO 14687]	Block 2: 2.9 LNG, 2.10 CNG, and new 2.XX CNG & H Blend and 3.11 CNG and 3.12 LNG Dispenser Grade Labeling [SAE J2699/J16161 ASTM D8080/D8487]
CWMA	Recommend Withdrawing Item:	Recommend Developing Item:	-No status recommended:

<p style="text-align: center;">TABLE 2 U.S. Regional Weights and Measures Associations Reports on Hydrogen Related Legal Metrology Requirement Proposals</p>			
Regional Assn.	HGM-23.1 [SAE J2601]	FLR-23.3 [SAE J2719 & ISO 14687]	Block 2: 2.9 LNG, 2.10 CNG, and new 2.XX CNG & H Blend and 3.11 CNG and 3.12 LNG Dispenser Grade Labeling [SAE J2699/J16161 ASTM D8080/D8487]
	-Question merit of placing safety requirement in NIST HB 44 -Question posed on proposal not answered	-Develop until ready by NIST and the Submitter	Item assigned to NCWM FALS which meets November 2023
WWMA	Recommend Developing Item: -Data being collected by CADMS and CARB to address WWMA and NCWM concerns on the safety protocol's effect on device performance	Recommend Withdrawing Item: -ISO and SAE not on the same schedule for standards update that may not agree -Submitter has not determined which standard is appropriate -NCWM has issue with two fuel standards	Recommend Developing Item: -Submitter requested developing status -CADMS indicated ASTM standards are in use in Europe and are appropriate
SWMA	Recommend Developing Item: -Allow time for data being collected	Recommend Developing Item: -Modify item to specify a single standard by NCWM meeting, if not withdraw item	Recommend Developing Item: - Submitter requested developing status
NEWMA	Not Available	Not Available	Not Available

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Input and recommendations from the regional associations for each proposal will be included in the January 2023 NCWM Interim Meeting Agendas. Interim Meeting Agendas for the NCWM S&T and L&R Committees will be available in mid-November 2023. The NCWM posts documents related to each agenda item (i.e., proposal) on the NCWM Meeting Documents website available at: <https://www.newm.com/publication-15>.

At the conclusion of the January 2024 NCWM Interim Meeting deliberations and open hearings each proposal will be assigned a status. Agenda items intended for adoption during the July 2024 109<sup>th</sup> NCWM Annual Meeting must have achieved “V” voting status in January 2024.

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Comments on the proposals are encouraged early in the standards development process and welcomed up through July 2024. NIST OWM plans to prepare and submit comments in a technical analysis of the proposals. Members on NIST sponsored USNWG on the Development of Commercial Hydrogen Measurements will also be notified of the proposals’ latest status.

VII. Open Discussion & Other Issues
a. None.

VIII. Next Meeting – Wednesday, December 6th at 2:00 PM US Eastern Time