

**Minutes – ANSI Z223 Committee**  
**REVISED AND APPROVED – SEPTEMBER 17, 2024**

**Pre-First Draft Meeting**  
**2027 National Fuel Gas Code**

Tuesday, March 12, 2024  
Microsoft Teams

**1. Call To Order.**

Franklin Switzer called the meeting to order at 1:00 pm on March 12, 2024.

**2. Introductions.**

Everyone in attendance introduced themselves.

Quorum: 23 out of 31 principals from ANSI Z223 Committee were on the call (74%). There is a quorum.

**3. Chair Report.**

We will make a concerted effort during this revision cycle to better align the ANSI Z223.1 and NFPA 54 documents. Also want to align the membership of both committees (understanding the different allowances for multiple representatives; i.e., Z223 allows multiple reps while NFPA does not).

**4. Staff Liaison Report.**

Alex Ing

- NFG-AAA is the designator for NFPA 54
- See Alex's presentation slides for his report

Luis Escobar

- PINS was published on January 19, 2024 with public comment due date of February 18, 2024. No public comments were received.
- Membership changes in 2023:
  - Richard Gilbert retired from the Texas LP Gas Association. Jean McDowell moved up to principal voting member and Eric Benstock was appointed their alternate.
  - Tom Dreary (AHRI staff) appointed new representative for AHRI.
- Membership ballot to include:
  - Bob Carpenter change of employment from Viega to Wavin
  - Duane Arnold Wolf (Wolf Engineering) as new applicant
  - Adam Smith (Viega) as new applicant
  - NFPA 54 members who confirmed they want to join ANSI Z223 (by membership ballot):
    - Charles Brown (AEI Corp) – alt. Zachary Jason
    - Jeremy Conjura (Corning) – alt. Joshua Askey
    - Gerald Davis (Williams Meter Co)
    - Nasir Hussain (Combustion Scient & Engineering)
    - Zuhair Ibrahim (Ibrahim & Associates)
    - James Kendzel (American Supply Association)
    - William Muray (Self)
    - Calvin Timmons (Willbanks & Associates)
    - Brian Williams (Ferguson Enterprises)
    - Ted Williams (Natural Gas Direct)
    - Young Han as alt to Steen Hagensen (ballot not required for appointment of alternate)
  - NFPA 54 members who declined to join ANSI Z223:
    - Ted Bukowski (GTI) – **NOT INTERESTED**
    - Alberto Fossa (NEWEN Creative Engineering) – **NOT INTERESTED**

- Roger Griffith (Griffith Engineering) – **NOT INTERESTED**
- Marek Kulik (Technical Standards and Safety Authority) – **NOT INTERESTED**
- Brian Kurtz (Carrier Corp) – **NOT INTERESTED**
- George Ragula (RagulaTech) – **NOT INTERESTED**
- Phillip Ribbs (PHR Consultants) – **NOT INTERESTED**
- NFPA 54 members who did not respond to inquiry:
  - James Bunsey (Propane Education and Research Council)
  - John Foley (Van-Packer) – who is he with?
  - Sean George (Steamfitters LU 449-Pittsburgh)
  - Tim McNulty (RM Manifold Group dba US Draft Company)
  - Tung Nguyen (Emerson Automation Solutions)
  - Brian Ryglewicz (Chimney Design Solutions)
  - Joel Sipe (Exponent Inc)

## 5. Previous Meeting Minutes.

Motion to approve the October 2022 meeting minutes was approved unanimously.

## 6. 2027 National Fuel Gas Code (NFPA 54 / ANSI Z223.1).

### a. Discussion Items.

#### i. **NFPA 54 Manual of Style.**

The TIA from last cycle was approved which reversed the reorganizational changes (multi-requirements and exceptions). The topic, however, is not done. Those changes must still go on to keep the NFPA 54 in line with the requirements of the Manual of Style.

The First Draft Meeting will include the TIA from the last cycle.

This group will break up sections that have multiple requirements and create sections for exceptions to the requirements.

**Manual of Style Task Force** (aka Multi-Requirements and Exceptions) created by unanimous approval: Chris Byers, Enrique Gonzelez, Gregg Gress, Ted Lemoff, Eric Smith, Andy Thielen, Bob Torbin (lead).

#### ii. **Alternate Fuels and Blends (Hydrogen Blending, DME, Pure Hydrogen).**

Franklin Switzer updated the committee on NFPA 2 (Hydrogen Technologies Code). This includes hydrogen *up to* 100%. They've taken the NFPA 86 on combustion furnaces/burners and incorporate it in NFPA 2 chapter 14. They are meeting in April 2024 in Indianapolis.

This committee should consider reviewing that NFPA 2 committee's work product when it becomes available. The CSA also has a similar task group.

On the propane side there's a push to include DME (dimethyl ether) as an alternative to LP gas. It's a renewable combustible gas.

Topic of interest: What percentage of hydrogen blends are appropriate? IAPMO, CSA, and ICC are all working on this larger topic in some fashion. This group will look at alternative fuel use into fuel gas systems.

**Alternative Fuels and Blends Task Force** created by unanimous approval: Jonathan Brania, Chris Byers, Jeremy Conjura, Ted Lemoff, John Puskar, Jason Stanek, Franklin Switzer, Andy Thielen (lead), Bob Torbin, Ted Williams.

**iii. Renewable Fuel Impact on Pipe Sizing and Equipment Operation.**

Bob Torbin notified us of potential future proposals for the effects of admixtures on pipe sizing and pressure drops.

Ted Williams noted that CSA group and their standards are looking at a definition of natural gas that would allow up to 5% hydrogen.

**iv. Common Venting of Other Than Category 1 Appliances.**

Both members who requested this topic were not present.

Calvin Timmons and Young Han (both members of NFPA 54) to develop a public input on this topic.

**v. New Piping System Materials.**

PEX-AL-PEX and other new materials. Interest in putting together a new Task Force to look into new piping materials? Let the manufacturers follow the normal procedure to seek approval for their materials.

George Ragula: There's a lot of new technology coming up for in-situ pipe repair, renewal, rehabilitation of systems. Could this be a new appendix? NFGC is about new installations so not appropriate to retrofit/rehabbing pipe.

**Repair, Renewal, Rehabilitation Task Force** created by unanimous approval: Chris Byers, Ted Lemoff (lead), John Puskar, George Ragula, Phil Ribbs, Bob Torbin, Brian Williams.

**vi. Pressure Limits Inside Buildings.**

No discussion.

**vii. Fuel Gas Detection.**

There's a lot of work going on in the NFPA 715 technical group. NTSB sent a letter to NFPA saying we need to add fuel gas detectors to the NFGC. We added it in the annex (not mandatory) during the last cycle.

There have been proposals submitted to the IFC and IBC (and probably IRC) mandating fuel gas detector installations per NFPA 715. Issue: NFPA 715 requires one detector per gas appliance in the house. Bob Torbin is leading the effort in 715 to change that requirement to just one detector per floor where there are gas appliances (depending on the detector type).

NPGA is currently working to oppose the IFC and IBC proposals. We should reiterate our stance that gas detectors don't belong in NFGC in case we get any proposals on the topic.

State of Maine has mandated these detectors for multi-family. NYC also requires a fuel gas detector in all apartments in the city (retroactively). Enforcement TBD. Seven other states are considering adding fuel gas detectors to their residential codes.

Add to agenda for First Draft Meeting: report on efforts to include fuel gas detectors in the code.

**viii. Leak Testing.**

No discussion.

**ix. Underground Piping and Understructure Requirements of Piping Systems.**

IAPMO gets asked about the conduit for underground piping and when is it required. Slab vs. Footing. The code could benefit from some guidance for these situations.

Bob Torbin put in a proposal into UPC on this topic. There is disjointed coverage on underground pipes in all three model codes (UPC, IFGC, NFGC). We don't prohibit penetration of foundation walls with gas piping, we just require it to be safe. IFGC does not allow this. UPC more consistent with us. Are we able to identify the disparate requirements and address the discrepancies?

Gregg notes that the prohibition in the IFGC only applies to house piping (like to pool heater or gas range) and specifically excludes utility piping.

**Underground Piping and Understructures Task Force** created by unanimous approval: Enrique Gonzalez, Mike Gorham (lead), Gregg Gress, Paul Gugliotta, Tung Nguyen, Phil Ribbs, Andy Thielen, Bob Torbin, Ted Williams.

Potentially develop a technical note on the topic, which also compares our requirements with the requirements of the other two codes.

**x. Regulator Venting.**

Paul Gugliotta: one of the most debated topics in codes and standards. Very little concrete requirements in 192 (the 3 foot rule).

NFGC only covers line pressure regulators. AGA's CFMS (Customer Field Service & Measurement) Committee and BECS (Building Energy Codes and Standards) Committee are working on this. BECS is working on more concrete guidance and a gas dispersion test; they will bring us a proposal once they have something.

**7. Other Business.**

Do we want to keep the following Task Forces going from last cycle?

- **Industrial Coverage Task Force** [Mike Gorham, Gregg Gress, Steen Hagensen, Ted Lemoff, John Puskar, Franklin Switzer, Andy Thielen] – YES
- **Flammable Air Gas Mixture Task Force** [Mike Gorham (lead), Ted Lemoff, Bill Murray, Franklin Switzer] – YES

**8. Future Meetings.**

Attendees selected Nashville the week September 16-20 for the First Draft Meeting. Plan for 2-1/2 days.

**9. Adjournment.**

**Advisory Panel – these have been removed from the NFPA process and should be removed from the ANSI Z223 Committee Procedures**

(The establishment of an Advisory Panel and the assignment of its responsibilities shall require a majority vote of the Committee. An Advisory Panel shall be a standing technical group which drafts recommendations for standards or standards revisions for consideration by the Committee and otherwise acts in an advisory capacity to the Committee.

Members of an Advisory Panel shall be appointed by the Chairman of the Committee and confirmed by the Committee. Members may include, in addition to members of the Committee, individuals who have knowledge and interest in the advisory panel's area of responsibility. There shall be no alternates for advisory panel members.)

- Appliance Installation
- Piping
- Venting

**Ad Hoc Task Force – see highlights above**

(The Committee, by a majority vote, may appoint an ad hoc task force to initiate the development of a standard not within the area of responsibility of an existing Advisory Panel or to investigate or study an individual standards matter of direct concern to the Committee. A task force shall report directly to the Committee and, upon completing its assignment, be discharged.

Membership of ad hoc task forces of the Committee shall be appointed by the Chairman of the Committee and may include, in addition to members of the Committee, individuals who have knowledge and interest in the subject of the task force's assignment.)

- Alternative Fuels and Blends
- Flammable Air Mixtures
- Industrial Coverage
- Manual of Style / Mutli-Requirements and Exceptions
- Repair, Renewal, Rehabilitation of Piping
- Underground Piping and Understructures

## Attendance

Cat.	Status	First Name	Last Name	Attd	Representing
M	PV	Eric	Adair	X	Hearth, Patio & Barbecue Association
SE	PV	Thomas	Andrews	X	Self
SE	PV	Michael	Bethany	NO	Gas Piping Safety Service
AR-TL	PV	Jonathan	Brania	X	Underwriters Laboratories:
I-M	PV	James P.	Brewer	X	National Chimney Sweep Guild
I-M	PV	Daniel	Buuck	X	National Assoc. of Home Builders
ES	PV	Christopher	Byers	X	American Gas Association
M	PV	Bob	Carpenter	NO	Viega
ES	PV	Ralph	Euchner	X	American Gas Association
AR-TL	PV	Marvin	Evans	X	CSA Group
M	PV	Pennie	Feehan	X	Copper Development Association
EA	PV	Enrique	Gonzalez	X	International Assoc. of Plumbing & Mech. Officials
ES	PV	Michael R.	Gorham	NO	The National Propane Gas Association
EA	PV	Gregg	Gress	X	International Code Council
M	PV	Steen	Hagensen	NO	ENERVEX, Inc.
EA	PV	Peter	Holmes	X	Maine Fuel Board
M	PV	Jeff	Kleiss	NO	Air Conditioning, Heating, and Refrigeration Institute
SE	PV	Theodore	Lemoff	X	Tlemoff Engineering
ES	PV	Jean	McDowell	X	Texas Propane Gas Association
ES	PV	Andrea	Papageorge	X	American Gas Association
M	PV	John	Park	NO	Association of Home Appliance Manufacturers
I	PV	Brett	Readout	X	EMC Insurance Companies
EA	PV	April Dawn	Richardson	X	Railroad Commission of Texas
ES	PV	Jon	Russell	X	American Public Gas Association
EA	PV	Eric C.	Smith	NO	International Fire Marshals Association
ES	PV	Jason	Stanek	X	American Gas Association
M	PV	Tom	Deary	X	Air Conditioning, Heating, and Refrigeration Institute
SE	PV	Franklin	Switzer	X	S-afe, Inc.
SE	PV	Andy	Thielen	X	ESi
M	PV	Robert	Torbin	X	Air Conditioning, Heating, and Refrigeration Institute
I-M	PV	Christopher	Wagner	NO	AmeriGas Propane L.P.
EA	A	Hugo	Aguilar	NO	International Assoc. of Plumbing & Mech. Officials
EA	A	LaToya	Carraway	NO	International Code Council
I	A	Kody	Daniel	X	EMC Insurance Companies
ES	A	Paul	Gugliotta	NO	American Gas Association
AR-TL	A	Travis	Hardin	NO	Underwriters Laboratories:
M	A	Andy	Kireta	NO	Copper Development Association
I-M	A	Vladimir	Kochkin	NO	National Assoc. of Home Builders
ES	A	Eric	Benstock	X	Texas Propane Gas Association
AR-TL	A	Colin	Moorhouse	NO	CSA Group
SE	A	John	Puskar	X	Technical Services LLC
ES	A	Stan	Smith	X	American Gas Association
ES	A	Bruce	Swiecicki	NO	The National Propane Gas Association
EA	A	Kent	Thompson	X	Railroad Commission of Texas
SE	A	Matt	Wilber	NO	ESi

Others:

Alex Ing, NFPA

NFPA 54 Committee members (see their minutes)