NFPA 2 and the California Fire Code

California's Triennial Code Adoption Cycle adopts the most recent version of the International Fire Code to become the California Fire Code. For example, California adopted the 2018 IFC to become the 2019 CFC which, in turn, became law on January 1, 2020. California also has an Intervening Code Cycle for proposed code changes.

The first version of NFPA 2, Hydrogen Technologies Code, was published in 2011, and was adopted by reference by the California Office of the Fire Marshal into the CFC. Information bulletins from the CA OSFM were published to inform stakeholders of that adoption (see attachments 1 & 2). These information bulletins were useful for hydrogen project proponents for submitting to an Authority Having Jurisdiction, aiding in the permitting process.

The 2020 NFPA 2 was again adopted during the 2019 Intervening Code Cycle and became applicable on July 1, 2021. However, a bulletin was not issued for this round and, as a result, some AHJs may not be aware. As such, the Hydrogen Fuel Cell Partnership has drafted this document.

Appendix A of this document contains the following.

1. Excerpts from the final Intervening code cycle hearings, indicating the adoption of NFPA 2
2. Confirmation from the CA Codes Chief, Greg Andersen, confirming its adoption and effective date.

While the 2018 IFC (and 2019 CFC) reference 2016 NFPA 2, California has also adopted the most current 2020 version.

NFPA 2 is in a revision cycle now, and the next version will take effect in 2024 (expected to publish in August of 2023). California is on track to again adopt the most current NFPA 2.

Appendix A: 2020 NFPA 2 adoption

NFPA

Section: 02-20 Hydrogen Technologies Code
Reason:
The State Fire Marshal is proposing to adopt the latest edition of the National Fire Protection Association (NFPA) 2. The technology of hydrogen has advanced since the last edition. As California creates more initiatives for the use of hydrogen energy it is important for public safety to stay to recognized the best safety standards that are available.

The State Fire Marshal is proposing to adopt the latest edition of the NFPA 289 and 1124. As the standards advance, it is important to recognized the best safety standards are available to ensure public safety.

Response to Code Advisory Committee (CAC): Approve as Submitted

---

STATE OF CALIFORNIA
BUILDING STANDARDS COMMISSION

SFM agrees with the CAC recommendation.

Excerpt from Final Express Terms:

[Section: NFPA 02-20]

NFPA

02—16*20*: Hydrogen Technologies Code

Item: [SFM 04/19-15-6]
Chapter: [80, REFERENCED STANDARDS]
Section: [NFPA]
Express Terms:

[Section: NFPA13-16]

13—16: Standard for Installation of Sprinkler Systems *as amended
712.1.3.1, 903.3.1.1, 903.3.2, 903.3.8.2, 903.3.8.5, 904.12, 905.3.4, 907.6.4, 1019.3

Excerpt from email thread with CA OSFM Codes Chief:

From: Andersen, Greg@CALFIRE <xxxxxxx>
Sent: Wednesday, December 2, 2020 1:49 PM
To: Jennifer Hamilton <xxxxxxx>
Subject: Re: 2020 NFPA 2

Jennifer,

We adopted the NFPA 2, 2020 edition in the Intervening Code Cycle. It will be published, with the updated pages, by 1/1/2021. It will become effective 7/1/2021. So, if we were going to send out it is a little early.

Also, the SFM adopts and updates editions of around 140 NFPA standards. We do not normally send out IB on each one. We did send out the IB for NFPA 2 because it was new. The standards with the edition are found in CBC Chapter 35 and the CFC in Chapter 80. I do not [see] the need for a new IB as we continue to update the standard.

I hope this helps.

Gregory Andersen
Chief of Code Development & Analysis
xxxxxxx

Attachment 1: Excerpt from CA OSFM IB 14-010

California State Fire Marshal
Information Bulletin 14-010

Issued: November 18, 2014

ADOPTION OF NFPA 2 HYDROGEN TECHNOLOGIES CODE FOR THE SUPPLEMENT TO THE 2013 CALIFORNIA BUILDING AND FIRE CODE EFFECTIVE DATE

July 2014 California became the first state jurisdiction in the nation to adopt and approve the 2011 edition of National Fire Protection Association 2 (NFPA 2 Hydrogen Technologies Code). NFPA 2 is a science based code that provides fundamental safeguards for the generation, installation, storage, piping, use and handling of hydrogen in compressed gas or liquid form. It has undergone intense industry scrutiny and engineering peer review through the rigorous NFPA adoption process.

The adoption of NFPA 2 is part of a larger effort by the State to implement Executive Order B-16-2012 issued to "encourage the development and success of zero-emission vehicles." The Governor's Executive Order directs State government to meet a series of milestones toward a long-term target of 1.5 million ZEVs on California's roadways by 2025.

The Office of the State Fire Marshal through the California Building Standards Commission amended the 2013 California Fire Code (CFC) and California Building Code (CBC) to update and adopt by reference the 2011 Edition of NFPA 2 Hydrogen Technologies Code as part of the intervening code cycle. The amendments and adoption of NFPA 2 will be published in the January 1, 2015 supplement and become effective for statewide application July 1, 2015.

Hydrogen station designs will need to comply with California's Fire Code, California Code of Regulations, Title 24, Part 9 California Fire Code, and/or the local ordinances. These codes ensure proper setback distances, equipment and mitigation measures for fueling, infrastructure construction, and storage.

This Information Bulletin contains the approved amendments and adoption for the use of NFPA 2 prior to the statewide effective date. Both the CFC and CBC were amended to achieve this adoption. Early use of NFPA 2 and the amendments may be accomplished on a case-by-case basis in accordance the alternate means and methods of construction provisions contained in CFC or CBC Section 1.11.2.4.

For more information please visit our website http://osfm.fire.ca.gov

Attachment 2: CA OSFM IB 16-004

California State Fire Marshal
Information Bulletin 16-004

Issued: March 2016

ADOPTION OF 2016 EDITION OF NFPA 2 FOR THE 2016 CALIFORNIA FIRE CODE

California is the national leader for hydrogen vehicles and related infrastructure. This has been aided by the implementation of Executive Order B-16-2012 issued to "encourage the development and success of zero-emission vehicles." The Governor's Executive Order directs State government to meet a series of milestones toward a long-term target of 1.5 million ZEVs on California's roadways by 2025.

In December 2015, the Building Standards Commission approved the State Fire Marshal's rulemaking packages for the 2015 Triennial Code Adoption Cycle. The 2015 Triennial Code Adoption Cycle will culminate with the publication of the 2016 California Building Standards Code, Title 24, California Code of Regulations. The 2016 codes will be published on or before July 1, 2016 with an effective date of January 1, 2017 for statewide application.

The 2016 California Fire Code (CFC) adopts by reference the 2016 Edition of National Fire Protection Association 2 (NFPA 2 Hydrogen Technologies Code). NFPA 2 provides fundamental safeguards for the generation, installation, storage, piping, use and handling of hydrogen in compressed gas or liquid form. This standard has undergone intense industry scrutiny and engineering peer review through the NFPA adoption process. Local Authority Having Jurisdiction (AHJ) may consider using the 2016 edition of NFPA 2 on a case-by-case basis (in accordance the alternate means and methods of construction provisions contained in CFC Section 1.11.2.4 and 104.11 for permitting and installation of hydrogen facilities).

Questions or comments regarding this Information Bulletin should be directed to Andrew Henning, Deputy State Fire Marshal III (Specialist) at (916)445-8527, or by electronic mail to andrew.henning@fire.ca.gov.