Article 28 - NFPA 52-2002:Compressed Natural Gas (CNG) Vehicular Fuel Systems Code

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675 IAC 28-1-21 NFPA 52; compressed natural gas (CNG) vehicular fuel systems code

Authority: IC 22-13-2-2; IC 22-13-2-13

Affected: IC 10-19-2; IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 36-7

Sec. 21. (a) That certain document, being titled NFPA 52-Compressed Natural Gas (CNG) Vehicular Fuel Systems Code, 2002 Edition, published by the National Fire Protection Association (NFPA), 1 Batterymarch Park, Quincy, Massachusetts 02269-9101, be and the same is hereby adopted by reference, as if fully set out in this section except as revised hereafter.

(b) The following documents referenced in NFPA 52 are not adopted, are not enforceable, and are for information purposes only:

(1) NFPA 30.
(2) NFPA 30A.
(3) NFPA 54.
(4) NFPA 101.
(5) NFPA 259.
(6) NFPA 302.
(7) NFPA 303.
(8) NFPA 496.
(9) ANSI SI 10.
(10) ANSI Z 87.1.
(11) ANSI Z 89.1.
(12) API RP 2003.
(13) ANSI/ASME B31.3.
(14) ASTM A 47.
(15) ASTM A 395.
(16) ASTM A 536.
(17) ASTM E 136.
(18) CGA S-1.1.
(19) CSA B 51.
(20) ANSI/IAS NGV1.
(21) ANSI/IAS NGV2.
(22) IAS US 5-96.
(23) SAE J 1616.
(24) Title 49, Code of Federal Regulations.

(c) The following documents are adopted and are enforceable:

(1) NFPA 37, as adopted in section 15 of this rule.
(2) NFPA 70, as adopted in 675 IAC 17.
(3) ASME Boiler and Pressure Vessel Code, as adopted at 680 IAC 2-1-1.

(d) Delete Section 1.3 in its entirety without substitution.

(e) Amend Section 1.4 by deleting text and substituting "Alternate provisions are permitted as specified in 675 IAC 12-6-11.".

(f) Amend Chapter 3 as follows:

(1) Amend the following definitions:

APPROVED means acceptance by the authority having jurisdiction by one (1) of the following methods:

(1) Investigation or tests conducted by nationally recognized authorities; or

(2) Investigation or tests conducted by nationally recognized technical or scientific organizations; or

(3) Nationally accepted principles.

The investigation, tests, or principles shall establish that the method, material, equipment, design, or type of construction is safe for its intended purpose.

AUTHORITY HAVING JURISDICTION means the Division of Fire and Building Safety or officer of a local unit of government empowered by law to administer and enforce the rules of the commission.

LABELED means equipment or materials to which has been attached a label, symbol, or other identifying mark of an organization engaged in product evaluation, that maintains periodic inspection of production of labeled equipment or materials, and by whose labeling the manufacturer indicates compliance with appropriate standards or performance in a specified manner.

LIMITED-COMBUSTIBLE MATERIAL: Delete the phrase "(as defined in NFPA 220 Standard of Types of Building Construction)".

LISTED means equipment or materials included in a list published by an organization engaged in product evaluation, that maintains periodic inspection of production of listed equipment or materials, and whose listing states either that the equipment or material meets appropriate standards or has been tested and found suitable for use in a specified manner.

NONCOMBUSTIBLE MATERIAL: Delete the phrase "(as defined in NFPA 220 Standard of Types of Building Construction)".

(2) Add the following definitions:

BUILDING CODE means the Indiana Building Code in effect in Indiana at the time of construction, remodeling, alteration, addition, or repair of the structure.

DIVISION OF FIRE AND BUILDING SAFETY means the Division of Fire and Building Safety of the Indiana Department of Homeland Security created pursuant to IC 10-19-2.

ELECTRICAL CODE means the Indiana Electrical Code in effect in Indiana at the time of construction, remodeling, alteration, addition, or repair of the structure.

HAZARDOUS MATERIALS are those chemicals or substances which are hazardous as defined and classified in accordance with the Indiana Fire Code.

INDIANA FIRE CODE means the rules adopted at 675 IAC 22 in effect in Indiana at the time of inspection by the inspection authority or, with respect to construction required to be filed under 675 IAC 12-6, 675 IAC 22 in effect at the time of construction, remodeling, alteration, addition, or repair of the structure.

NFPA 70 means the Indiana Electrical Code (675 IAC 17).

INTERNATIONAL FIRE CODE (I.F.C.) means the Indiana Fire Code.

(g) Delete Section 3.2.6 in its entirety without substitution.

(h) Section 5.13.4 (3) is amended to read as follows: delete "proved suitable tests" and insert "approved by manufacturer".

(i) Delete Section 6.4.2.2 without substitution.

(j) Amend Section 6.4.2.3 to read as follows: Compression, storage, and dispensing equipment located outdoors shall be aboveground, shall not be beneath electric power lines or where exposed by power line failure, and shall be located in accordance with the Indiana Fire Code.

(k) Amend Section 6.4.2.8 by deleting "important".

(l) Amend Section 6.4.3 to read as follows:

6.4.3 Indoors

6.4.3.1 General. Compression, dispensing equipment, and storage containers connected for use are allowed to be located inside of buildings. The buildings shall be constructed in accordance with the building code and the requirements of the Indiana Fire Code Chapter 35 for flammable gases.

6.4.3.2 Quantity Limit. Storage shall be limited to not more than ten thousand (10,000) cubic feet (283,168 L) of natural gas in each building.

Exception: Compressed natural gas stored in vehicle-mounted fuel-supply containers.

6.4.3.3 Explosion Control. Explosion control shall be provided in accordance with the Indiana Fire Code Chapter 35.

6.4.3.4 Automatic Fire-extinguishing System. Rooms or buildings used for the storage, compression, or

dispensing of CNG shall be protected throughout by an automatic sprinkler system. The automatic sprinkler system shall be designed in accordance with the Indiana Fire Code Chapter 35 and the Indiana Building Code (675 IAC 13).

6.4.3.5 Mechanical Ventilation. Ventilation shall be provided throughout for buildings or rooms used for the storage, compression, or dispensing of CNG. Ventilation shall be by a continuous mechanical ventilation system or by a mechanical ventilation system activated by a supervised methane gas-detection system when a gas concentration of not more than twenty (20) percent of the lower flammability limit is present. Failure of the mechanical ventilation system shall shut down the fuel compression and dispensing system. The mechanical ventilation system shall be in accordance with the Indiana Fire Code Chapter 35 and the Indiana Mechanical Code (675 IAC 18). In addition, the mechanical ventilation system shall be designed for both lighter than air and heavier than air vapors.

Exception: The mechanical ventilation system can be designed for methane when the building or room is used exclusively for the dispensing of CNG.

6.4.3.6 Supervised Methane Gas-Detection System. A supervised methane gas-detection system shall be provided throughout buildings or rooms used for the storage, compression, or dispensing of CNG. The gas-detection system shall sound a distinct alarm signal when a gas concentration of not more than twenty (20) percent of the lower flammability limit is present. Activation of the gas-detection system shall shut down the fuel compression and dispensing system.

6.4.3.7 Electrical Service. Buildings and rooms used for the storage, compression, or dispensing of CNG shall be classified in accordance with Table 4-12 for installations of electrical equipment. Electrical equipment shall be installed in accordance with the Indiana Electrical Code (675 IAC 17).

6.4.3.8 Emergency Shutdown Devices. Emergency shutdown devices shall be provided in rooms or buildings used for storage, compression, or dispensing of CNG. Such devices shall be provided at each dispenser, at each exit, and at the room or building used for the storage or compression of CNG. Activation of the emergency shutdown devices shall shut down the compression and dispensing equipment.

6.4.3.9 Discharge of Relief Devices. Pressure-relief devices on storage and compression systems shall be provided with an approved means of discharging CNG outside of the building. The point of discharge shall be a minimum of ten (10) feet (3,048 mm) from building and ventilation openings, property lines, public ways, and paths of egress. The point of discharge shall not impinge on the building.

6.4.3.10 Signs. Rooms or buildings used for the storage, compression, or dispensing of CNG shall be provided with warning signs with the words WARNING-NO SMOKING-FLAMMABLE GAS. The wording shall be in plainly legible red letters on a white reflective background with letters no less than one (1) inch (25.4 mm) high.

(m) In Section 6.5.1, delete the last sentence and substitute the following: Where flooding can occur, they shall be secured in accordance with Section 3404.2.7.8 of the Indiana Fire Code.

(n) Chapter 2 and the annexes are not adopted as part of this code and are intended for use as a guide, and the standards referenced therein are not enforceable as part of this code. *(Fire Prevention and Building Safety Commission; 675 IAC 28-1-21; filed Aug 23, 2006, 4:03 p.m.: 20060906-IR-675050104FRA)*