SECTION 1. Comm 2.44 and Table 2.44 are repealed and recreated to read:

Comm 2.44 Gas system equipment. Fees for examination of plans and site inspections under ch. Comm 40 for the storage or vehicle-fuel dispensing of liquefied petroleum gas, liquefied natural gas, compressed natural gas, gaseous hydrogen or liquefied hydrogen shall be determined in accordance with Table 2.44.

Table 2.44
Plan Examination and Inspection Fees for Gas System Equipment

Activity	Fee
Plan examination	$300
Site inspection, up to 2 in conjunction with plan examination	$400 per site
Site inspection, if more than the above 2 are needed	As specified in s. Comm 2.04 (2)
Plan revision examination	$175 per revised plan
Re-inspection, for plan revision	As specified in s. Comm 2.04 (2)

SECTION 2. Comm 14.01 (1) (g) Note is created to read:

Comm 14.01 (1) (g) Note: See chapter Comm 10 for orders of the Department relating to flammable or combustible liquids, and see chapter Comm 40 for orders of the Department relating to fuel gas systems.

SECTION 3. Comm Table 20.24–10, Line 2 is amended to read:

Table 20.24–10
(Partial Table)

NFPA	National Fire Protection Association 1 Batterymarch Park Quincy, MA 02269
Standard Reference Number	**Title**
2. ANSI Z223.1–2009/NFPA 54 ~~2006~~ 2009	National Fuel Gas Code

SECTION 4. Chapter Comm 40 is repealed and recreated to read:

Chapter Comm 40
GAS SYSTEMS
Subchapter I – Purpose, Scope and Application

Comm 40.10 Purpose. This chapter establishes minimum safeguards for fuel gas systems.

Comm 40.11 Scope and application. (1) GENERAL (a) This chapter applies to the design, construction, installation, inspection, operation, testing, maintenance, repair and alteration of gas systems for fueling purposes, such as for heating appliances or engines.

(b) All of the following gases are regulated by this chapter:

1. Liquefied petroleum gas.

2. Liquefied natural gas.

3. Compressed natural gas.

4. Gaseous hydrogen.

5. Liquefied hydrogen.

(2) EXCEPTIONS. (a) This chapter does not apply to a gas system or any portion of a gas system that is within a building or structure, or downstream of a pressure-regulator valve which reduces a gas pressure to a level used within a building or structure, except as specified in pars. (b) to (d).

(b) This chapter applies to every vehicle-fuel dispensing system that fits any of the following descriptions:

1. It is used for fueling vehicles other than at a home or residence.

2. If for compressed natural gas, it has a capacity exceeding 5 cubic feet per minute.

3. If for gaseous hydrogen, it has a capacity exceeding 18 cubic feet per minute.

(c) This chapter applies to every gas system that is used for filling containers.

(d) This chapter applies downstream of the point specified in par. (a) if the conveyed gas is burned in an industrial process, which includes heating appliances or equipment that is used for other than space heating for human comfort.

Note: See chapter Comm 41 for requirements relating to pressure vessels for gases that are not used to fuel industrial processes, or heating appliances or equipment. See chapter Comm 45 for requirements relating to gasses that are used in mechanical refrigeration systems.

(3) VEHICLES AND WATERCRAFT. This chapter does not apply to vehicles or watercraft that use or transport the gases addressed in this chapter, except as specified in s. Comm 40.43 (1) and subch. V.

(4) EXCLUSIONS. This chapter does not nullify any exclusions specified in the standards adopted under s. Comm 40.40.

(5) RETROACTIVITY. (a) The design, construction and installation rules of this chapter, including the applied criteria from the standards adopted in s. Comm 40.40, do not apply retroactively to gas systems or components existing prior to [the effective date of the rule…LEGISLATIVE REFERENCE BUREAU INSERTS DATE] unless specifically stated in the rule or standard.

(b) The operation, testing, maintenance and inspection requirements of this chapter apply to all gas systems that exist on or after [the effective date of this rule…LEGISLATIVE REFERENCE BUREAU INSERTS DATE].

(c) The design, construction and installation requirements of this chapter apply to any alterations, repairs, and replacement parts or components for any gas system that exists on or after [the effective date of this rule…LEGISLATIVE REFERENCE BUREAU INSERTS DATE].

Note: A proposed alteration for an existing system may necessitate modifying other components of the system in order to make the proposed alteration comply with this chapter – and some alterations may necessitate modifying other features of a building, such as an automatic fire sprinkler system, that must comply with requirements in chapters Comm 61 to 66, the Wisconsin Commercial Building Code.

(6) DIFFERING RULES. (a) Where any department-written rule in this chapter differs from a requirement within a standard referenced in this chapter, the department-written rule shall govern.

(b) Where a provision of this chapter prescribes a general requirement and another provision of this chapter prescribes a specific or more detailed requirement regarding the same subject, the specific or more detailed requirement shall govern, except as provided in par. (a).

(c) Where different sections of this chapter specify conflicting requirements, the most restrictive requirement, as determined by the department, shall govern, except as provided in pars. (a) and (b).

(7) INTERPRETATIONS. Under s. 101.02 (1), Stats., the department reserves the right to interpret the requirements in this chapter and in all adopted codes and standards.

Note: Section 101.02 (1) of the Statutes reads as follows: "The department shall adopt reasonable and proper rules and regulations relative to the exercise of its powers and authorities and proper rules to govern its proceedings and to regulate the mode and manner of all investigations and hearings."

(8) FIRST CLASS CITIES. All references in this chapter to submitting documentation to or having inspections performed by a first class city apply only to gas systems within that city.

Note: The scope of some of the standards that are adopted by reference in subchapter IV are broader than the scope of this chapter. For example, NFPA® 52 contains requirements for liquefied natural gas and compressed natural gas engine fuel systems on vehicles. Any requirements which are beyond the scope of this chapter cannot be enforced under this chapter, but may be adopted by local ordinances. Those ordinances may be adopted under statutory authority that is separate from the Department's statutory authority.

Note: Chapters Comm 61 to 66 contain the Department's requirements for fuel gas systems that are beyond the scope of this chapter and within public buildings and places of employment. Chapters Comm 20 to 25 contain requirements for fuel gas systems that are beyond the scope of this chapter and for one- and 2-family dwellings.

Note: See chapter Comm 10 for the Department's requirements relating to storage, dispensing, handling and use of flammable, combustible or hazardous liquids. Those liquids are defined in that chapter in a manner which differentiates them from the substances regulated by this chapter. See chapter Comm 14 for requirements relating to fire prevention. See chapter Comm 41 for requirements relating to pressure vessels for gaseous or liquid hydrogen that is not used to fuel heating appliances, industrial processes or engines. See chapter Comm 45 for requirements relating to gasses that are used in mechanical refrigeration systems.

Comm 40.12 Local requirements. This chapter does not limit the power of cities, villages and towns to make or enforce additional or more stringent requirements, provided the requirements do not conflict with this chapter, any other rule of the department, or law.

Subchapter II – Definitions

Comm 40.20 Definitions. In this chapter:

(1) "Alteration" means a change in a gas system that involves an extension or addition for, or involves the arrangement, type or purpose of, the existing installation or component.

(2) "Approved" means acceptable to the department.

Note: The Department will ordinarily accept items approved by a nationally recognized testing laboratory.

(3) "Certified inspector" means an individual who holds a valid credential issued by the department as a certified boiler-pressure vessel inspector.

(4) "Container" means a vessel such as a tank, cylinder, bottle or drum used for storing of a gas or liquid.

(5) "Department" means the department of commerce.

(6) "First class city" means a city of the first class, as established under s. 62.05, Stats.

Note: As of [the effective date of this rule…LEGISLATIVE REFERENCE BUREAU INSERTS DATE] only the City of Milwaukee had become a first class city.

(7) "Gas systems" means assemblies for storing, conveying, or dispensing the gases regulated by this chapter.

(8) "Liquefied petroleum gas" has the meaning given in s. 101.16 (1) (b), Stats.

Note: Section 101.16 (1) (b) of the Statutes reads as follows: " 'Liquefied petroleum gas' means any material which is composed predominantly of, or any mixtures of, any of the following hydrocarbons including their isomers:

1. Propane.
2. Propylene.
3. Butane.
4. Butylene."

(9) "Pressure vessel" means a container for the containment of pressure, either internal or external. This pressure may be obtained from an external source or by the application of heat from a direct or indirect source, or any combination thereof.

(10) "Repair" means the restoration of any portion or component of a gas system to a safe operating condition.

(11) "Vehicle-fuel dispensing system" means all the pumps, meters, piping, hose and controls used for the delivery of fuel to, and the removal of vapor from, a vehicle.

Subchapter III – Administration and Enforcement

Comm 40.30 Plan examination and approval. (1) PLAN APPROVAL BEFORE CONSTRUCTION. Plan approval shall be obtained from the department or a first class city before commencing construction, installation or alteration for any system described in Table 40.30.

Table 40.30
Plan Approval Required

Type of System	Size of System
Liquefied petroleum gas system	Uses a container with over 2000 gallons water capacity, or containers with an aggregate water capacity exceeding 4000 gallons
Liquefied natural gas system	Any size
Compressed natural gas system	Any size, except plan approval is not required if outdoors with no storage capacity
Gaseous hydrogen system	Has a total storage capacity of more than 400 cubic feet of compressed hydrogen gas
Liquid hydrogen system	Has a total storage capacity of more than 39.7 gallons of liquefied hydrogen
Vehicle-fuel dispensing system	Any size

Note: The 400 and 39.7 thresholds in this Table are based on the definitions in NFPA 52 for bulk hydrogen systems.

(2) PLANS, SPECIFICATIONS AND INFORMATION. Plans, specifications and information shall be submitted to the department or a first class city for review and approval, and shall contain all of the following:

(a) At least 4 sets of plans, which are clear, legible and permanent copies; 2 copies of applicable specifications; a completed application form; and the required fees.

(b) The name of the owner; the name of the person, firm or corporation proposing the construction or installation, if other than the owner; and the address of the facility, including the names of adjacent streets and highways.

(c) A plot plan, drawn to a minimum scale of one inch equals 20 feet, indicating the location of the facility or installation with respect to property lines, lot lines, adjoining streets or alleys and other buildings on the same lot or property. The layout of buildings, containers, loading and unloading docks, type of construction of each building and any stream or body of water within 150 feet of the containers shall also be indicated.

(d) The type of container heads; container diameter and length; and the location and capacity of each system and container.

(e) The type of container supports; foundation drawings with dimensions and clearances; piping schematic indicating pipe materials, valves and fittings; surface area calculations of tank; type of venting and pressure relief used; pressure relief valve manufacturer, model number, set pressure and capacity; and combined capacity of all venting and relief valves on each container.

(f) If the plans are for gas systems service stations involving the use of key-, card- or code-operated dispensing units, the location of emergency controls and the location and details of the key-, card- or code-operated dispensing devices.

(3) ADDITIONAL APPROVAL. Approval of plans is based upon compliance with the requirements of this chapter. Construction, installation and operation of gas systems may be subject to compliance with additional requirements in applicable codes, local zoning and similar ordinances.

(4) APPLICATION FOR APPROVAL. Application for approval of a gas system installation shall be made in writing on form SBD-6038.

Note: The Department forms required in this chapter are available for a nominal fee at telephone 800-DOC-SALES or Contact Through Relay, or at no charge at the Department's Web site at www.commerce.wi.gov, through links to Safety and Buildings Division forms.

(5) APPLICATION PROCESSING TIME. Pursuant to s. Comm 2.07 (3), the department shall review and make a determination on an application for plan review within 15 business days.

(6) EXPIRATION OF PLAN APPROVAL. (a) Plan approval by the department or the first class city shall expire one year after the approval date shown on the approved plans.

(b) The expiration date in par. (a) may be extended by the department or the first class city for no more than 18 months beyond the approval date shown on the approved plans, and only in writing, provided a written request is submitted prior to the expiration.

Note: The Department sends copies of its plan approvals and extensions under this chapter to the local fire department.

Comm 40.31 Certificate of installation. (1) Every person, firm, association or corporation installing a gas system shall complete a certificate of installation form, SBD-9656-E. The form shall be completed at the time of installation and shall be provided to the owner of the system. A copy of the form shall be kept at the installation site and available for review by an authorized representative of the department or the first class city. A copy of the form shall be submitted to the local fire department within 10 business days of the installation, except as provided in sub. (2).

(2) Submitting form SBD-9656-E to the fire department is not required for liquefied petroleum gas installations that are exempt from plan approval under s. Comm 40.30.

Note: The Department forms required in this chapter are available for a nominal fee at telephone 800-DOC-SALES or Contact Through Relay, or at no charge at the Department's Web site at www.commerce.wi.gov, through links to Safety and Buildings Division forms.

Comm 40.32 Revisions, alterations and piping upgrades. (1) PLAN REVISIONS. (a) The changes specified in par. (b) to approved plans for gas systems, that are made before commencement of system operation, shall be submitted for review and approval as a revision. Revised plans submitted to the department for review shall include the department plan number for the original plans.

(b) Plans shall be submitted to the department or a first class city for review and approval of any changes in tank location or capacity, piping arrangement or material, safety setback clearance,

point of transfer location, design of indoor fueling operation, and gas detection or monitoring equipment location.

(2) ALTERATIONS AND PIPING UPGRADES. (a) Alterations to gas systems after commencement of system operation shall comply with the requirements for plan approval in s. Comm 40.30, the certificate of installation in s. Comm 40.31 and the inspection in s. Comm 40.34.

(b) Piping upgrades shall be inspected by the department or the first class city prior to the start of fabrication.

Comm 40.33 Revocation of approval. The department or the first class city may revoke any approval issued under this chapter for any false statements or misrepresentation of facts upon which the approval was based.

Comm 40.34 Enforcement and inspections. (1) ENFORCEMENT. (a) This chapter shall be enforced by the department and by all local officials or bodies having jurisdiction to approve plans or specifications or issue permits for construction, alterations or installations within the scope of this chapter.

Note: Local fire departments have statutory authority to investigate and eliminate any fire hazards relating to the gas systems regulated by this chapter. Under section 101.14 (2) (a) of the Statutes, "The chief of the fire department in every city, village or town, except cities of the 1st class, is constituted a deputy of the department." Under section 101.14 (1) (b) of the Statutes, "The [department] secretary and any deputy may at all reasonable hours enter into and upon all buildings, premises and public thoroughfares excepting only the interior of private dwellings, for the purpose of ascertaining and causing to be corrected any condition liable to cause fire, or any violation of any law or order relating to the fire hazard or to the prevention of fire."

(b) Where a first class city administers and enforces this chapter, a regulated item or activity shall be directed to or addressed by the first class city before requesting input from the department.

Note: Under section Comm 40.11 (7), the Department reserves the right to interpret the requirements in this chapter and in all codes and standards adopted herein.

(2) GENERAL INSPECTIONS. (a) Gas systems for which plan approval under s. Comm 40.30 is required shall be inspected by the department or the first class city.

Note: Local governmental units may also conduct inspections in addition to those of the Department.

Note: See chapter Comm 41 for registration and inspections of gaseous and liquefied hydrogen pressure vessels that are not within the scope of this chapter.

(b) The installer shall notify the department district inspector or the first class city where the installation is located at least 5 business days prior to the start of construction to arrange for the inspection.

Note: The district inspector is indicated on the conditional approval letter.

Note: Copies of the Department's inspection reports under this chapter may be accessed at the Department's Web site at http://apps.commerce.wi.gov/SB_ServiceAgent/SB_RegObjMain.jsp.

Note: Gas systems for which plan approval is not required under section Comm 40.30 may be inspected by local governmental units to verify compliance with this chapter.

Note: Upon written request, the Department will provide assistance to local governmental units.

Comm 40.35 Fees. Fees shall be submitted to the department as specified in ch. Comm 2. Fees shall be submitted at the time the application for approval is submitted. No plan examinations, approvals or inspections may be made until the fees are received.

Comm 40.36 Appeals. As specified in s. 227.12, Stats., any municipality, corporation or any 5 or more persons having an interest in an administrative rule may appeal to the department requesting the adoption, amendment or repeal of the rule.

Comm 40.37 Petition for variance. The department shall consider and may grant a variance to a provision of this chapter in accordance with ch. Comm 3. The petition for variance shall include a position statement from the fire department having jurisdiction, and from any other local governmental unit having jurisdiction to enforce this chapter under s. Comm 40.34.

Note: Chapter Comm 3 requires the submittal of a petition for variance form (SBD-9890-X) and a fee, and that an equivalency is established in the petition for variance that meets the intent of the rule being petitioned. Chapter Comm 3 also requires the Department to process regular petitions within 30 business days and priority petitions within 10 business days.

Comm 40.38 Penalties. Penalties for violations of this chapter shall be assessed in accordance with ss. 101.02 (12) and (13) and 101.16 (5), Stats.

Note: Section 101.02 (13) (a) of the Statutes provides that penalties will be assessed against any employer, employee, owner or other person who fails or refuses to perform any duty lawfully enjoined, within the time prescribed by the Department, for which no penalty has been specifically provided, or who fails, neglects or refuses to comply with any lawful order made by the Department, or any judgment or decree made by any court in connection with sections 101.01 to 101.25 of the Statutes. For each such violation, failure or refusal, such employee, owner or other person must forfeit and pay into the state treasury a sum not less than $10 nor more than $100 for each violation.

Note: Section 101.02 (12) of the Statutes provides that every day during which any person, persons, corporation or any officer, agent or employee thereof, fails to observe and comply with an order of the Department will constitute a separate and distinct violation of such order.

Note: Section 101.16 (5) of the Statutes provides that any person, firm, association or corporation who violates s. 101.16, Stats., or any standard, rule or regulation adopted by the Department under that section, or issuing a false installation statement under section 101.16 (4) of the Statutes will be fined not less than $25 nor more than $100, or imprisoned not less than 30 days nor more than 6 months.

Comm 40.39 Reporting of accidents. If a gas system component fails and causes injuries to any person that require more than first aid treatment, the owner or user shall report in writing on form SBD-10789-E the facts involved to the department within the following 24 hours. The owner or user may not remove or disturb the gas system equipment or any of its components nor permit any such removal or disturbance prior to receiving authorization from the department or first class city, except for the purpose of saving human life or preventing further property damage. This section applies to those gas systems that are required to obtain department plan approval under s. Comm 40.30.

Note: The address for reporting accidents to the Department is the Safety and Buildings Division, Inspection Support Unit, P.O. Box 7302, Madison, WI 53707-7302; and the fax number is 608-283-7499.

Note: The Department can be contacted at 262/548-8617 during normal business hours. The State Division of Emergency Management can be contacted at 800/943-0003 during non-business hours.

Note: The Department forms required in this chapter are available for a nominal fee at telephone 800-DOC-SALES or Contact Through Relay, or at no charge at the Department's Web site at www.commerce.wi.gov, through links to Safety and Buildings Division forms.

Subchapter IV – Standards and General Requirements

Comm 40.40 Adoption of standards by reference. (1) PRIMARY STANDARDS. The following standards are hereby incorporated by reference into this chapter, subject to the modifications specified in this chapter:

(a) American Petroleum Institute, 1220 L Street Northwest, Washington D.C. 20005-: *Design and Construction of Liquefied Petroleum Gas Installations*, API standard 2510, 8th edition, May 2001.

(b) National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471, telephone 800-344-3555, www.nfpa.org:

1. *Code for Motor Fuel Dispensing Facilities and Repair Garages*, NFPA® 30A, 2008 edition.

2. *Vehicular Gaseous Fuel Systems Code*, NFPA® 52, 2010 edition.

3. *National Fuel Gas Code*, ANSI Z223.1–2009/NFPA® 54–2009.

4. *Liquefied Petroleum Gas Code*, NFPA® 58, 2011 edition.

5. *Production, Storage, and Handling of Liquefied Natural Gas (LNG)*, NFPA® 59A, 2009 edition.

Note: Copies of the listed standards are on file in the offices of the Department and the Legislative Reference Bureau. Copies for personal use may be obtained, at a cost, from the organizations listed. Copies of the NFPA standards may also be accessed free of charge at www.nfpa.org.

(2) SECONDARY REFERENCES. Any codes or standards referenced in the standards adopted in sub. (1) shall apply to the prescribed extent of each such reference, except as modified by this chapter.

(3) ALTERNATE STANDARDS. Any alternate standard that is equivalent to or more stringent than a standard incorporated by reference or otherwise referenced under this chapter may be used in lieu of the incorporated or referenced standard if the alternate standard is accepted in writing by the department.

Comm 40.41 Secondhand pressure vessels. The use of secondhand pressure vessels, having a water capacity in excess of 2,000 gallons, is prohibited, unless all of the following conditions are satisfied:

(1) MANUFACTURER'S DATA REPORT. The original manufacturer's data report is available. If the original manufacturer's data report is unavailable, documentation acceptable to the department or first class city shall be submitted.

(2) ALTERATIONS AND REPAIRS BY WELDING. All alterations and repairs by welding are documented in writing to verify compliance with ch. Comm 41.

(3) INSPECTIONS. An inspection of the secondhand pressure vessel has been performed at its new location by a certified inspector.

Comm 40.42 Vehicle-fuel dispensing systems. All vehicle-fuel dispensing systems shall comply with whichever of the following are applicable:

(1) NFPA 30A section 4.3.7.2 and chapter 12, if Class I or Class II liquids are dispensed as motor fuels along with a fuel gas regulated by this chapter.

(2) NFPA 52, if liquefied natural gas, compressed natural gas, gaseous hydrogen or liquefied hydrogen are dispensed in the absence of Class I and Class II liquids.

(3) NFPA 58, if liquefied petroleum gas is dispensed in the absence of Class I and Class II liquids.

Note: Class I and II liquids are classified in NFPA 30A as having a flash point below 140°F.

Comm 40.43 Dispensing to vehicle fuel tanks, recreational equipment and containers.
(1) PUBLIC SELF-SERVICE PROHIBITED. Self-service dispensing by the general public of any gas regulated by this chapter is prohibited, except trained members of the general public may fuel compressed natural gas motor vehicles through a fueling connection that complies with ANSI NGV1–2006.

Note: The ANSI NGV1–2006 standard contains construction and performance criteria for compressed natural gas vehicle fueling connection devices consisting of (1) a receptacle (mounted on the vehicle), (2) a nozzle (mounted on fueling dispenser), and/or (3) three-way valve (internal or external to the nozzle), having design pressures of 2400, 3000 or 3600 psig. Nozzle design will not permit gas flow until positively engaged to the receptacle and will not release the receptacle until gas flow has ceased and captured gas is safely vented. Intermating components are standardized. Nozzle and receptacle design prevent the fueling of a vehicle with lower service pressure by a dispenser with a higher service pressure.

(2) GENERAL. No person, except for the following, may dispense any gas regulated by this chapter unless the dispensing is through approved dispensing devices:

(a) A trained and authorized employee of a bulk storage plant, container charging plant or service station.

(b) A trained and authorized employee of an entity operating a commercial fleet of motor vehicles.

(3) LOCATION OF KEY-, CARD- OR CODE-OPERATED DISPENSING SYSTEMS. (a) *Public areas.* Vehicle-fuel dispensing systems may be located in areas accessible or open to the general public only if all of the following requirements are met, except subd. 3. does not apply to the fueling allowed in sub. (1):

1. The system is equipped with key-, card- or code-operated dispensing devices listed or approved by a nationally recognized testing laboratory.

2. The keys, cards or codes referenced in subd. 1. are provided only to trained and authorized personnel.

3. An attendant is on duty at all times when gas is being dispensed.

(b) *Non-public areas.* Dispensing of gas is permitted without an attendant only if all of the following requirements are met, except subd. 1. does not apply to the fueling allowed in sub. (1):

1. The dispensing system is located in an area that is not accessible or open to the general public.

2. The system is equipped with approved key-, card- or code-operated dispensing devices.

3. The keys, cards or codes referenced in subd. 2. are provided only to trained and authorized personnel.

(4) POSTING OF SIGNS. A permanent sign providing a 24-hour service-call telephone number in letters at least one inch high shall be posted at the vehicle-fuel dispensing device in all non-attended locations.

Comm 40.44 U.S. department of transportation vessels. Pressure vessels bearing the stamping of the United States department of transportation are not permitted as permanent storage containers, except they may be used either as cylinders for storage of compressed natural gas or gaseous hydrogen, or as replaceable service cylinders.

Comm 40.45 Welded repairs and alterations for containers and pressure vessels. Any repair or alteration that includes any welding on ASME containers or pressure vessels or their fittings, settings or appurtenances shall conform to the applicable standards adopted in this chapter and to the requirements for welded repairs and alterations in ch. Comm 41.

Note: See subchapter VI of chapter Comm 41 for the referenced requirements.

Subchapter V – Liquefied Petroleum Gas Systems

Comm 40.50 Scope. (1) APPLICATION. This subchapter applies to the storage, handling and use of liquefied petroleum gas, and to the transportation of liquefied petroleum gas by tank truck or tank trailer.

(2) EXEMPTIONS. This subchapter does not apply to any of the following:

(a) Liquefied petroleum gas systems owned and operated by utilities when the systems are part of the distribution facilities for the utility and are subject to the provisions of ch. PSC 135.

(b) The transportation of liquefied petroleum gas by railroads engaged in interstate commerce or to equipment used by them.

Note: Liquefied petroleum gas systems owned and operated for utility purposes by utilities are regulated by the Public Service Commission and are subject to chapter PSC 135, and the Natural Gas Pipeline Safety Act of 1968 (49 USC 1675, 49 CFR 192 - et seq.).

Comm 40.51 Design, construction, installation, operation and maintenance of liquefied petroleum gas systems. Liquefied petroleum gas systems shall be designed, constructed, installed, operated and maintained as specified in the following standards, except as otherwise provided in this chapter:

(1) API 2510.

(2) ANSI Z223.1/NFPA 54 and NFPA 58.

Note: Section Comm 40.42 contains requirements for vehicle-fuel dispensing systems.

Note: Section 101.16 (4) (b) of the Statutes contains the following requirements: "(b) 1. A person who owns, leases, or uses a propane gas system and who is a customer of a retail supplier shall notify the retail supplier of propane gas for the propane gas system of any interruption in the operation of the propane gas system due to the replacement, modification, repair, or servicing of the propane gas system by any person other than the retail supplier. The customer shall provide the notice at least 7 days in advance of the interruption in the operation of the propane gas system, except as provided in subd. 2. The retail supplier, or the person replacing, modifying, repairing, or servicing the propane gas system, shall perform a check for leaks or other defects in the propane gas system before placing the propane gas system back into operation in the manner required by rule.

2. If the interruption of a propane gas system subject to subd. 1. is due to emergency repair or servicing, the customer shall provide the notice to the retail supplier as soon as possible and no later than 24 hours after the repair or servicing is completed."

Comm 40.52 Amendments to NFPA standards. (1) PURGING REQUIREMENTS. Substitute the following wording for the requirements in NFPA 54 sections 8.3.1 to 8.3.4:

(a) *General.* The purging of all piping, appliances and equipment that exist on or after [the effective date of this rule…LEGISLATIVE REFERENCE BUREAU INSERTS DATE] shall be in accordance with this subsection.

(b) *Piping systems required to be purged outdoors.* 1. 'Application.' The purging of piping systems shall be in accordance with subds. 2. to 5. where the piping system meets either of the following:

a. The design operating gas pressure is greater than 2 psi.

b. The piping being purged contains one or more sections of pipe or tubing greater than 2 inches in diameter and having the lengths in Table 40.52.

2. 'Removal from service.' Where existing gas piping is opened, the section that is opened shall be isolated from the gas supply and the line pressure vented in accordance with subd. 4. Where

gas piping meeting the criteria of Table 40.52 is removed from service, the residual fuel gas in the piping shall be displaced with an inert gas.

Table 40.52
Size and Length of Piping

Nominal Pipe Size (in.)	Length of Piping (ft.)
2½	> 50
3	> 30
4	> 15
6	> 10
8 or larger	Any length

3. 'Placing in operation.' Where gas piping containing air and meeting the criteria of Table 40.52 is placed in operation, the air in the piping shall first be displaced with an inert gas. The inert gas shall then be displaced with fuel gas in accordance with subd. 4.

4. 'Outdoor discharge of purged gases.' The open end of a piping system being pressure vented or purged shall discharge directly to an outdoor location. Purging operations shall comply with all of the following requirements:

a. The point of discharge shall be controlled with a shutoff valve.

b. The point of discharge shall be located at least 10 feet from sources of ignition, at least 10 feet from building openings and at least 25 feet from mechanical air-intake openings.

c. During discharge, the open point of discharge shall be continuously attended and monitored with a combustible gas indicator that complies with subd. 5.

d. Purging operations introducing fuel gas shall be stopped when 90% fuel gas by volume is detected within the pipe.

e. Persons not involved in the purging operations shall be evacuated from all areas within 10 feet of the point of discharge.

5. 'Combustible gas indicator.' The combustible gas indicator used during purging operations shall be listed and shall be calibrated in accordance with the manufacturer's instructions and recommended schedule. The combustible gas indicator used for pipe discharge monitoring shall numerically display a volume scale from 0% to 100% with a resolution of not greater than 1% increments.

(c) *Piping systems allowed to be purged indoors or outdoors.* 1. 'Application.' The purging of piping systems shall be in accordance with subd. 2 where the piping system meets both of the following:

a. The design operating pressure is 2 psi or less.

b. The piping system being purged is constructed entirely from pipe or tubing of 2-inch nominal size or smaller, or larger pipe or tubing with lengths shorter than specified in Table 40.52.

2. 'Purging procedure.' The piping system shall be purged in accordance with one or more of the following:

a. The piping shall be purged with fuel gas and shall discharge to the outdoors.

b. The piping shall be purged with fuel gas and shall discharge to the indoors or outdoors through an appliance burner not located in a combustion chamber. The burner shall be provided with a continuous source of ignition.

c. The piping shall be purged with fuel gas and shall discharge to the indoors or outdoors through a burner that has a continuous source of ignition and that is designed for such purpose.

d. The piping shall be purged with fuel gas that is discharged to the indoors or outdoors, and the point of discharge shall be monitored with a listed combustible gas detector in accordance with subd. 3. Purging shall be stopped when fuel gas is detected.

e. The piping shall be purged by the gas supplier in accordance with written procedures.

3. 'Combustible Gas Detector.**'** The combustible gas detector used during purging operations shall be listed and shall be calibrated or tested in accordance with the manufacturer's instructions and recommended schedule. The combustible gas detector used for pipe discharge monitoring shall indicate the presence of fuel gas.

(d) *Purging appliances and equipment***.** After the piping system has been placed in operation, appliances and equipment shall be purged before being placed into operation.

Note: See Appendix for further information relating to purging.

(2) LP CONTAINERS. This is a department informational note to be used under NFPA 58 section 5.2:

Note: Section 101.16 (3) of the Statutes contains requirements for LP gas containers, and reads as follows: "FILLING, EVACUATING, AND USE OF CONTAINERS. (a) Except as provided in par. (b), no person, other than the owner of a liquefied petroleum gas container or a person authorized by the owner, may fill, refill, evacuate, or use in any other manner the container for any purpose.

(b) A retail supplier may evacuate a liquefied petroleum gas container not under its ownership in order to transfer the remaining liquefied petroleum gas that is in that container into a container that is under its ownership."

(3) RELIEF VALVES. This is a department rule in addition to the requirements in NFPA 58 section 5.7.2.5: Any previously used relief valves that are reinstalled under this section shall be certified prior to that installation by their manufacturer or its authorized representative as conforming to the applicable requirements of ANSI/UL132 or other equivalent pressure-relief-valve standard.

Comm 40.53 Fuel supply tanks for liquefied petroleum cargo tank trucks. No liquefied petroleum gas cargo tank that exists on or after [the effective date of this rule…LEGISLATIVE REFERENCE BUREAU INSERTS DATE] may be connected in any way to a liquefied petroleum gas fuel supply tank for a motor vehicle.

Subchapter VI – Liquefied Natural Gas Systems

Comm 40.60 Scope. (1) APPLICATION. This subchapter applies to the storage, handling and use of liquefied natural gas.

(2) EXEMPTIONS. This subchapter does not apply to any of the following:

(a) Liquefied natural gas systems owned and operated by utilities when the systems are part of the distribution facilities for the utility and are subject to the provisions of ch. PSC 135.

Note: Liquefied natural gas systems owned and operated for utility purposes by utilities are regulated by the Public Service Commission and are subject to chapter PSC 135, and the Natural Gas Pipeline Safety Act of 1968 (49 USC 1675, 49 CFR 192 - et seq.).

(b) The transportation of liquefied natural gas.

Note: The transportation of liquefied natural gas is subject to the regulations of the federal Department of Transportation under Title 49 CFR Parts 171-179.

Comm 40.61 Design, construction, installation, operation and maintenance of liquefied natural gas systems. Liquefied natural gas systems shall be designed, constructed, installed, operated and maintained as specified in NFPA 52 and 59A, except as otherwise provided in this chapter.

Note: Section Comm 40.42 contains requirements for vehicle-fuel dispensing systems.

Subchapter VII – Compressed Natural Gas Systems

Comm 40.70 Scope. (1) APPLICATION. This subchapter applies to the storage, handling and use of compressed natural gas.

(2) EXEMPTIONS. This subchapter does not apply to any of the following:

(a) Compressed natural gas systems owned and operated by utilities when the systems are part of the distribution facilities for the utility and are subject to the provisions of ch. PSC 135.

Note: Compressed natural gas systems owned and operated for utility purposes by utilities are regulated by the Public Service Commission and are subject to chapter PSC 135, and the Natural Gas Pipeline Safety Act of 1968 (49 USC 1675, 49 CFR 192 - et seq.).

(b) The transportation of compressed natural gas.

Note: The transportation of compressed natural gas is subject to the regulations of the federal Department of Transportation under Title 49 CFR Parts 171-179.

Comm 40.71 Design, construction, installation, operation and maintenance of compressed natural gas systems. Compressed natural gas systems shall be designed, constructed, installed, operated and maintained as specified in NFPA 52, except as otherwise provided in this chapter.

Note: Section Comm 40.42 contains requirements for vehicle-fuel dispensing systems.

Subchapter VIII – Gaseous Hydrogen Systems

Comm 40.80 Scope. (1) APPLICATION. This subchapter applies to the storage, handling and use of gaseous hydrogen.

(2) EXEMPTIONS. This subchapter does not apply to any of the following:

(a) Gaseous hydrogen systems owned and operated by utilities when the systems are part of the distribution facilities for the utility and are subject to the provisions of ch. PSC 135.

Note: Gaseous hydrogen systems owned and operated for utility purposes by utilities are regulated by the Public Service Commission and are subject to chapter PSC 135, and the Natural Gas Pipeline Safety Act of 1968 (49 USC 1675, 49 CFR 192 - et seq.).

(b) The transportation of gaseous hydrogen.

Note: The transportation of gaseous hydrogen is subject to the regulations of the federal Department of Transportation under Title 49 CFR Parts 171-179.

(c) Process gaseous hydrogen storage installations.

Comm 40.81 Design, construction, installation, operation and maintenance of gaseous hydrogen systems. Gaseous hydrogen systems shall be designed, constructed, installed, operated and maintained as specified in NFPA 52, except as otherwise provided in this chapter.

Note: Section Comm 40.42 contains requirements for vehicle-fuel dispensing systems.

Note: See chapter Comm 41 for registration and inspections of gaseous hydrogen pressure vessels that are not within the scope of this chapter.

Subchapter IX – Liquefied Hydrogen Systems

Comm 40.90 Scope. (1) APPLICATION. This subchapter applies to the storage, handling and use of liquefied hydrogen.

(2) EXEMPTIONS. This subchapter does not apply to any of the following:

(a) Liquefied hydrogen systems owned and operated by utilities when the systems are part of the distribution facilities for the utility and are subject to the provisions of ch. PSC 135.

Note: Liquefied hydrogen systems owned and operated for utility purposes by utilities are regulated by the Public Service Commission and are subject to chapter PSC 135, and the Natural Gas Pipeline Safety Act of 1968 (49 USC 1675, 49 CFR 192 – et-seq.).

(b) The transportation of liquefied hydrogen.

Note: The transportation of liquefied hydrogen is subject to the regulations of the federal Department of Transportation under Title 49 CFR Parts 171-179.

(c) Process liquefied hydrogen storage installations.

Comm 40.91 Design, construction, installation, operation and maintenance of liquefied hydrogen systems. Liquefied hydrogen systems shall be designed, constructed, installed, operated and maintained as specified in NFPA 52, except as otherwise provided in this chapter.

Note: Section Comm 40.42 contains requirements for vehicle-fuel dispensing systems.

Note: See chapter Comm 41 for registration and inspections of gaseous hydrogen pressure vessels that are not within the scope of this chapter.

APPENDIX

The material contained in this appendix is for clarification purposes only and is numbered to correspond to the number of the rule as the rule appears in the text of this chapter.

A-40.52 (1) (a) The process of purging gas piping of fuel gas or charging gas piping that is full of air with fuel gas must be performed in a manner that will minimize the potential for a flammable mixture to be developed within the piping. Also, a significant amount of flammable gas should not be released within a confined space. Natural gas and propane suppliers add a distinctive odor to their gas to aid in its detection. However, when a new system is brought into service and non-odorized gas is detected, the company supplying the gas should be informed of the situation to determine what action should be taken.

(b) 1. Section Comm 40.52 (1) (b) 1. describes the characteristics of gas piping systems that are required to be purged only to the outdoors. The criteria were selected to distinguish between piping systems located in industrial, large commercial, and large multifamily buildings from those located in light commercial and smaller residential buildings. The gas piping systems installed in industrial, large commercial, and large multifamily buildings are considered to be larger, more complex systems for the purposes of defining their purging requirements. Because of their larger pipe volumes or potential for higher flow rates, these systems require procedures to ensure that large volumes of fuel gases are not released indoors and that flammable mixtures do not occur within the piping itself. Installers of these complex systems deal with considerably more variables that may result in a higher potential for discharge of large gas volumes during purging operations. Specific occupancy categories such as industrial, manufacturing, commercial, and large multifamily were not included in the fuel gas code. Building codes define these occupancies for the purpose of construction and safety requirements. There is no general relation between the occupancy types, as defined by building codes, and the size of gas piping system to be installed in that occupancy. The gas piping size and operating pressure are based on the nature of the piping system and gas appliances to be installed and are not dependent upon a building's occupancy type or classification.

3. It is recommended that the oxygen levels in the piping be monitored during the purging process to determine when sufficient inert gas has been introduced. The manufacturer's instructions for monitoring instruments must be followed when performing purge operations.

5. Combustible gas indicators are available with different scales. For purging, it is necessary to use the percent gas in air scale and to follow the manufacturer's operating instructions. The percent LEL (lower explosive limit) scale should not be used as it is not relevant to purging.

(c) 1. The criteria were selected to describe typical gas piping systems located in light commercial and the smaller residential family buildings. Gas piping systems installed in these

buildings are considered to be smaller and less complex systems for the purposes of defining their purging requirements. Installers have familiarity with purging these systems and the potential for discharge of large gas volumes during purging operations is low. Also see paragraph (b) 1. above.

2. Where small piping systems contain air and are purged to either the indoors or outdoors with fuel gas, a rapid and uninterrupted flow of fuel gas must be introduced into one end of the piping system and vented out of the other end so as to prevent the development of a combustible fuel and air mixture. Purging these systems can be done either using a source of ignition to ignite the fuel gas or by using a listed combustible gas indicator that can detect the presence of fuel gas.

SECTION 5. Comm 65.0800 is amended to read:

Comm 65.0800 Referenced standards. This is a department rule in addition to the requirements in IFGC chapter 8: The following standard is hereby incorporated by reference into this code: ANSI Z223.1/NFPA 54–~~2002~~ 2009, National Fuel Gas Code.

(END)

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EFFECTIVE DATE

Pursuant to s. 227.22 (2) (intro.), Stats., these rules shall become effective on the first day of the month commencing after the date of publication in the Wisconsin administrative register.

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File reference: Comm 40/rules LRac