

*Regulations of Connecticut State Agencies*

TITLE 29. Public Safety & State Police

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*Agency*

**Department of Public Safety**

*Subject*

**Connecticut Liquefied Petroleum Gas and Liquefied Natural Gas Code**

*Inclusive Sections*

**§§ 29-331-1—29-331-5**

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CONTENTS

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Sec. 29-331-1.	The Connecticut liquefied petroleum gas and liquefied natural gas code: Purpose and applicability
Sec. 29-331-2.	Authority having jurisdiction
Sec. 29-331-3.	Security at liquefied natural gas (LNG) and liquefied petroleum gas (LP-GAS) facilities
Sec. 29-331-4.	Adopted standard
Sec. 29-331-5.	Connecticut supplement to NFPA 58-1995

**Connecticut Liquefied Petroleum Gas and Liquefied Natural Gas Code**

**Sec. 29-331-1. The Connecticut liquefied petroleum gas and liquefied natural gas code: Purpose and applicability**

(a) Regulations of the Department of Public Safety, Sections 29-331-1 to 29-331-5, inclusive, shall be known as the Connecticut Liquefied Petroleum Gas and Liquefied Natural Gas Code. Sections 29-331-1 to 29-331-5, inclusive, shall be referred to as “this code” or “the code” and may be cited as such, and are adopted under the authority of Connecticut General Statutes Section 29-331.

(b) This code shall apply to the design, construction, installation and operation of fixed and portable liquefied petroleum gas systems in bulk plants, domestic, commercial, industrial, institutional, and similar properties; transportation of liquefied petroleum gas; engine fuel systems on motor vehicles and other mobile equipment; liquefied petroleum gas automotive service stations; storage of containers awaiting use or resale; and security at liquefied petroleum gas and liquefied natural gas facilities.

(c) This code shall not apply to electric companies and gas companies, as defined in Section 16-1 of the Connecticut General Statutes.

(Adopted effective January 24, 1997)

**Sec. 29-331-2. Authority having jurisdiction**

As used in Sections 29-331-1 to 29-331-5, inclusive: (a) “The authority having jurisdiction” shall mean the Commissioner of Public Safety. The Commissioner of Public Safety is the authority having jurisdiction regarding the proper administration, application, interpretation, and modification of the requirements contained within this code.

(b) The local fire marshal or building official shall make the initial determination concerning compliance with this code except as stated otherwise in the wording of a section.

(Adopted effective January 24, 1997)

**Sec. 29-331-3. Security at liquefied natural gas (LNG) and liquefied petroleum gas (LP-GAS) facilities**

**(a) Liquefied natural gas (LNG) storage facilities.**

Liquefied natural gas (LNG) storage facilities shall have a protective enclosure for aboveground components and a security system with controlled access designed to minimize entry by unauthorized persons. The protective enclosure shall be illuminated and include a non-combustible peripheral fence, building walls or natural barriers and be a minimum of six feet in height, topped by a tamper-resistant system to discourage unlawful entry or trespass. The tamper-resistant system shall consist of at least three strands of barbed wire or other material sufficient to protect the facility. Peripheral fences, building walls, or natural barriers in excess of 10 feet in height shall not require a tamper-resistant material or system. The protective enclosure shall include major aboveground facility components, such as:

- (1) Liquefied natural gas containers;

- (2) outdoor aboveground process equipment areas, including fill station(s); and
- (3) on-shore loading and unloading equipment.

**(b) Liquefied Petroleum Gas (LP-GAS) Storage Facilities.**

(1) Liquefied Petroleum Gas (LP-GAS) Storage Facilities storing more than 4,000 gallons aggregate water capacity.

Liquefied petroleum gas (LP-GAS) storage facilities storing more than 4,000 gallons aggregate water capacity shall have a protective enclosure for aboveground components and a security system with controlled access designed to minimize entry by unauthorized persons. The protective enclosure shall be illuminated if operated during the hours of darkness and include a non-combustible peripheral fence, building walls or natural barriers and be a minimum of six feet in height and topped by a tamper-resistant system to discourage unlawful entry or trespass. The tamper-resistant system shall consist of at least three strands of barbed wire or other material sufficient to protect the facility. Peripheral fences, building walls, or natural barriers in excess of 10 feet in height shall not require a tamper-resistant material or system. The protective enclosure shall include major aboveground facility components, such as:

- (A) Liquefied petroleum gas containers;
- (B) outdoor process equipment areas; and
- (C) on-shore loading and unloading equipment.

(2) Liquefied petroleum gas (LP-GAS) storage facilities storing 4,000 gallons or less aggregate water capacity and facilities transferring liquid LP-Gas into a building piping system or another container of any size other than the motor vehicle fuel container.

Liquefied petroleum gas (LP-GAS) storage facilities storing 4,000 gallons or less aggregate water capacity and facilities transferring liquid LP-Gas into a building piping system or another container of any size other than the motor vehicle fuel container shall be protected with an enclosure with controlled access, which shall be designed to minimize entry by unauthorized persons and intruders, including a non-combustible peripheral fence, building walls or natural barriers a minimum of six feet in height to promote security of the facility. The protective enclosure shall include major facility components, such as:

- (A) Liquefied petroleum gas aboveground containers; and
- (B) outdoor process equipment areas, including remote transfer points.

(3) Liquefied petroleum gas (LP-GAS) storage facilities storing more than 2,000 gallons and up to and including 4,000 gallons aggregate water capacity aboveground and facilities where liquefied petroleum gas in the vapor phase is used to supply LP-GAS vapor at consumer sites, including but not limited to home(s) or residence(s), commercial or industrial buildings.

Liquefied petroleum gas (LP-GAS) storage facilities storing more than 2,000 gallons and up to and including 4,000 gallons aggregate water capacity aboveground, and facilities where liquefied petroleum gas in the vapor phase is used to supply LP-GAS vapor at consumer sites, including but not limited to home(s) or residence(s), commercial or industrial buildings, shall be protected with an enclosure with controlled access, which shall

*Regulations of Connecticut State Agencies*

TITLE 29. Public Safety & State Police

*Department of Public Safety*

§29-331-5

be designed to minimize entry by unauthorized persons and intruders, and include a non-combustible peripheral fence, building walls, or natural barriers a minimum of six feet in height to promote security of the facility. The protective enclosure shall include major facility components such as:

- (A) Liquefied petroleum gas aboveground containers; and
- (B) outdoor process equipment areas, including remote transfer points.
- (4) Liquefied petroleum gas (LP-Gas) storage facilities storing containers 2,000 gallons aggregate water capacity or less.

Liquefied petroleum gas (LP-Gas) storage facilities storing containers 2,000 gallons aggregate water capacity or less used to supply LP-GAS at consumer sites, including but not limited to a home or residence, commercial or industrial building, do not require protection with an enclosure.

(c) The protective enclosures for liquefied natural gas (LNG) and liquefied petroleum gas (LP-GAS) storage facilities may be met by either one continuous enclosure or several independent enclosures. When the enclosed area exceeds 1,250 square feet, not less than two exit gates or doors located as remote as practical from each other shall be provided for rapid escape of personnel in the event of an emergency.

(d) The presence of such protective enclosures shall not create significant hazards such as pocketing of liquefied natural gas (LNG) or liquefied petroleum gas (LP-GAS), interference with application of cooling water by fire departments, redirection of flames against containers and impeding egress of personnel in an emergency.

(e) Lockable metal cabinets housing the dispensing controls for liquefied petroleum gas (LP-Gas) storage facilities do not require protection with an enclosure.

(Adopted effective January 24, 1997)

**Sec. 29-331-4. Adopted standard**

(a) The following standard promulgated by the National Fire Protection Association (NFPA) is adopted as part of this code:

NFPA 58-1995, Standard for the Storage and Handling of Liquefied Petroleum Gases, except as amended, altered, or deleted and by the addition of certain provisions as indicated in Section 29-331-5 of this code.

(b) The standards promulgated by the National Fire Protection Association, (NFPA), are available from the National Fire Protection Association, Inc., Batterymarch Park, Quincy, Massachusetts 02269; telephone number, 1-800-344-3555. Copies of this code are available from the Department of Public Safety, Division of Fire, Emergency and Building Services, P.O. Box 2794, Middletown, CT 06457-9294; telephone number, (860) 685-8380.

(Adopted effective January 24, 1997)

**Sec. 29-331-5. Connecticut supplement to NFPA 58-1995**

The National Fire Protection Association, Inc., NFPA 58-1995, Standard for the Storage and Handling of Liquefied Petroleum Gases, is amended to meet the needs of Connecticut

as follows:

## CHAPTER 1 GENERAL PROVISIONS

(Amd) **1-5. Qualification of Personnel.** In the interest of safety, all persons employed in the liquid transfer of LP-Gases at a bulk plant, industrial plant, or LP-Gas dispensing station, and employees involved in the commercial transportation or movement of LP-Gas by any mode, responsible for the operation or maintenance of LP-Gas systems including containers, shall be trained by the employer in the physical hazards of the LP-Gases; system and equipment operation and maintenance requirements; and emergency procedures, which the employer shall document. Retraining shall be required at least once every two years.

(Add) **1-6 add the following new definitions as appropriate:**

**Cylinder Exchange Points.** The portion of a dealer or resale facility open to the public where cylinders, whether filled, partially filled or empty are received and stored for the primary purpose of exchange of cylinders between the dealer, reseller and consumer.

**Fleet Vehicle LP-Gas Automotive Service Stations.** That portion of a commercial, industrial, governmental, or manufacturing property where liquefied petroleum gases used as fuels are stored and dispensed into the fuel tanks of motor vehicles that are used in connection with such businesses, by persons within the employ of such businesses.

**Public LP-Gas Automotive Service Stations.** LP-Gas dispensing facilities open to the general motoring public with at least one attendant on duty while the station is open for business to store and dispense LP-Gas into the fuel tanks of motor vehicles.

## CHAPTER 2 LP-GAS EQUIPMENT AND APPLIANCES

(Amd) **2-2.6.6** LP-Gas fuel suppliers shall affix and maintain in a legible condition, their firm names and emergency telephone numbers in a readily visible location on or near LP-Gas supplier-owned Department of Transportation (DOT) and American Society of Mechanical Engineers (ASME) containers installed at consumer premises.

(a) Effective July 1, 1997, the firm name and emergency telephone number on ASME containers shall be in text at least one half inch in height.

(b) Effective July 1, 1997, the emergency telephone numbers shall be staffed 24 hours a day to ensure that the LP-Gas supplier is available in the event of an emergency at the consumer premises.

(Add) **2-2.6.7** The owner of a new ASME container, installing a new ASME container on and after the effective date of these regulations, shall maintain written records of the data report issued by the manufacturer and the information required in Section 2-2.6.5 at its place of business during the period of ownership of said container and for a period of one year after transfer, sale or disposal of said container.

(Add) **2-3.1.5** Container appurtenances, such as pressure relief devices, container shutoff valves, back-flow check valves, internal valves, excess-flow check valves, and liquid level gauges connected to a DOT or ASME container shall be maintained in operating condition at all times to provide the service for which they were designed and installed.

### CHAPTER 3 INSTALLATION OF LP-GAS SYSTEMS

(Amd) **3-2.4.1(c)** To minimize the possibility of damage to systems or DOT or ASME container(s) installed in any location exposed to vehicular traffic, such as in or near parking lots, entrances to driveways, streets or construction sites, the systems and containers shall be protected from motor vehicles and other motorized equipment including but not limited to cranes, forklift operations and other common hazards by means of a non-combustible peripheral fence, guard rail or post of metal or concrete, building walls, or natural or artificial barriers enclosing containers and piping.

The presence of such protection from damage shall not create significant hazards such as pocketing of LP-Gas, interference with application of cooling water by fire departments, redirection of flames against containers and impeding egress of personnel in an emergency.

#### (Amd) **3-9.3.8 Dispenser Protection from Vehicle Impact.**

(a) Dispensing devices, public and fleet vehicle, remote from and not a part of a storage and dispensing unit mounted on a common base installed in accordance with Sections 3-2.4.2(a)3 and 2-2.5.2(a), shall be installed in accordance with any dispenser vehicle collision requirements of the manufacturer and mounted on and bolted to a concrete island, a minimum of 8 inches adjacent to ground level and protected with concrete filled steel bollards, a minimum of 6 inches diameter schedule 80 steel, installed a minimum of 3 feet below grade and extending a minimum of 4 feet above grade, located to protect the dispenser from damage by vehicle impact.

(b) Dispensing devices, public and fleet vehicle, attached to or a part of a storage and dispensing unit mounted on a common base shall be installed in accordance with Sections 3-2.4.2(a)3 and 2-2.5.2(a) and shall be protected in accordance with vehicle collision installation requirements of the manufacturer or protected with concrete filled steel bollards, a minimum of 6 inches diameter schedule 80 steel, installed a minimum of 3 feet below grade and extending a minimum of 4 feet above grade, located to protect the dispenser from damage by vehicle impact.

(Amd) **3-9.4.3** Dispensing devices used to fill the fuel tanks of motor vehicles with LP-Gas shall be located at least 20 ft (6m) from cylinder exchange points and dispensing devices for Class I flammable liquids, liquefied natural gas (LNG), compressed natural gas (CNG) and dispensing devices used to fill portable containers with home heating fuels.

(Add) **3-9.5 Liquefied Petroleum Gas (LP-GAS) Automotive Public and Fleet Service Stations.**



*Regulations of Connecticut State Agencies*

TITLE 29. Public Safety & State Police

§29-331-5

*Department of Public Safety*

(Add) **3-9.5.1 Public LP-Gas Automotive Service Stations.** Public LP-GAS automotive service stations shall have an attendant on duty trained in accordance with Section 1-5 to dispense LP-Gases into the fuel containers used to power a motor vehicle.

(Add) **3-9.5.2 Fleet Vehicle (LP-GAS) Automotive Service Stations.**

(a) Fleet vehicle automotive service stations do not require a trained attendant on duty during dispensing of LP-Gas into the fuel tanks of motor vehicles.

(b) When a person or employee of a company, fleet, commercial, industrial, governmental or manufacturing establishment fuels a motor vehicle used for business purposes at an unattended fleet vehicle service station not owned or operated by said person(s), the owner of the fleet vehicle service station shall be responsible for training the person(s) using his or her facility in accordance with Section 1-5. Evidence of such training shall be documented and available for inspection.

(c) If an attendant is on duty, the attendant shall be responsible for the proper observation, supervision and control of the dispensing of LP-Gases into the fuel tanks of motor vehicles.

(1) The dispensing area shall at all times be in clear view of the attendant. The placing or allowing of any impairment of the view of the attendant shall be prohibited.

(2) The use of a closed circuit television camera system is authorized to supplement the attendant's view of the dispensing area. However, the use of such a closed circuit television camera system shall require the approval of the local fire marshal prior to such installation or use.

(3) The attendant shall at all times be able to communicate by voice with persons in the dispensing area.

(d) A fleet vehicle service station dispensing area shall be suitably illuminated by a reliable light source when in use.

(Add) **3-9.5.3 Signs.** Warning signs with the words "STOP MOTOR," "NO SMOKING," "NO OPEN FLAMES PERMITTED," AND "FLAMMABLE GAS" in English at least 1 inch in height with a contrasting background shall be posted at all dispensing locations. The location of warning signs shall be based on local conditions but shall be visible and legible from the point of liquid transfer into the motor vehicle.

(Add) **3-9.5.4 Marking Of Dispensing Devices When Liquids And Other Gaseous Motor Fuels Are Dispensed.** Warning signs identifying the type of motor fuel shall be posted at all dispensing devices where both liquefied petroleum gas and liquid or other gaseous motor fuels are dispensed into the fuel tanks of motor vehicles. Liquid motor fuels include gasoline, diesel fuel and kerosene. Other gaseous motor fuels include compressed natural gas (CNG) and liquefied natural gas (LNG).

Each warning sign shall be at least 3 feet above adjacent ground level and identify the fuel in English in letters at least 3 1/2 inches in height with a contrasting margin. The name of the fuel shall not be abbreviated. The contrasting margin shall be at least 2 inches from said letters. The warning signs shall be marked as follows:

*Regulations of Connecticut State Agencies*

TITLE 29. Public Safety & State Police

*Department of Public Safety*

§29-331-5

(a) “Liquefied Petroleum Gas” or “LIQUEFIED PETROLEUM GAS” or “Propane” or “PROPANE,” shall be centered in black letters with a yellow background.

(b) “Compressed Natural Gas” or “COMPRESSED NATURAL GAS,” shall appear in black letters with a yellow background.

(c) “Liquefied Natural Gas” or “LIQUEFIED NATURAL GAS,” shall appear in black letters with a yellow background.

(d) The common name of a flammable liquid, such as “Gasoline” or “GASOLINE,” shall appear in white letters with a red background.

(e) The common name of a combustible liquid, such as “Diesel Fuel” or “DIESEL FUEL” or “Kerosene” or “KEROSENE,” shall appear in white letters with a green background.

(Add) **3-10.4 Written Emergency Plans.** The fire safety analysis referred to in Section 3-10.2.3 and the special fire protection provisions of Section 3-10.3, if required at the facility, shall be incorporated into a facility emergency plan which shall be in writing and amended as required every two years. Written documentation of the current emergency plan shall be maintained at the facility and shall be provided upon written request to the local fire marshal and emergency response agencies.

CHAPTER 4 LP-GAS LIQUID TRANSFER

(Amd) **4-2.2 Cylinders or Tanks to be Filled, Evacuated, Disconnected or Transported and Disconnecting Regulator(s).**

(Amd) 4-2.2.1 Cylinders or tanks shall be filled, evacuated, disconnected or transported and regulator(s) disconnected only by the owner or upon the owner’s authorization. At consumer premises where the fixed container is owned by the LP Gas supplier, no person other than the owner and those authorized by the owner shall connect or disconnect any cylinder or tank or regulator(s) containing liquefied petroleum gas, whether in the liquid or vapor state unless the following requirements are met:

(a) Sufficient notice shall be given to the LP-Gas supplier to disconnect and remove its cylinder or tank or regulator(s) prior to the installation of another cylinder or tank by the person, firm, corporation or LP-Gas supplier requesting the disconnection. Sufficient notice shall be in writing received by the LP-Gas supplier or owner a minimum of four business days prior to the scheduled disconnection on the fourth day. Written notice shall include the person, firm, corporation or LP-Gas supplier requesting the disconnection, the address and name of the consumer, and the scheduled date and time of disconnection. Disconnection by the owner or the owner’s authorized agent shall be coordinated so as not to cause an interruption of service greater than the time required to disconnect the notified supplier’s equipment and reconnect the replacement equipment of the notifying owner, unless the user authorizes an extended interruption of service to the notified supplier.

(b) After providing sufficient notice, the person, firm, corporation or LP-Gas supplier



*Regulations of Connecticut State Agencies*

TITLE 29. Public Safety & State Police

§29-331-5

*Department of Public Safety*

requesting disconnection or transportation may then disconnect the LP-Gas supplier-owned cylinder(s), tank(s) or regulator(s) downstream of a meter or upstream of a non-LP-Gas supplier or downstream of a regulator(s) owned by the LP-Gas supplier if connected to the gas stream, in a manner that renders the cylinder or tank free of leaks, with valves turned off and all openings plugged, and move on the consumer premises the cylinder(s) or tank(s), whether empty or full, to a safe location meeting the separation distance requirements between tanks and cylinders in Table 3-2.2.2.

(c) No person, firm or corporation, other than the owner and those authorized to do so, shall transport or carry by any means of conveyance whatsoever over public highways and roads, any cylinder or tank containing liquefied petroleum gas, whether in the liquid or vapor state.

(d) The owner of the cylinder or tank shall remove the disconnected cylinder, tank or regulator(s) from the consumer premises within 15 business days after the actual date and time of disconnection.

(e) If the person, firm, corporation or LP-Gas supplier who requested disconnection does not disconnect the cylinder(s), tank(s) or regulator(s) on the day of the scheduled disconnection, the person, firm, corporation or LP-Gas supplier shall be required to reschedule the disconnection giving sufficient notice to the owner of the cylinder(s), tank(s) or regulator(s) as described in Section 4-2.2.1 (a).

(f) In the event of an emergency such as the need for domestic heating during extreme cold weather conditions, leak or fire involving a cylinder, tank or regulator(s), an LP-Gas supplier is authorized to disconnect or evacuate the cylinder or tank at the direction of a public emergency response agency such as the fire department.

(Amd) **4-3.3 Emergency Venting.** When conditions at any location indicate the need for emergency venting of LP-Gas into the environment, the local fire department within that jurisdiction or a regional fire dispatching facility shall be notified prior to any emergency venting activities.

(Amd) CHAPTER 5 STORAGE OF PORTABLE CONTAINERS AWAITING USE,  
RESALE OR EXCHANGE

(Amd) **5-4.1 Location of Storage Outside of Buildings.**

Storage outside of buildings for containers awaiting use, resale or part of a cylinder exchange point shall be located at least 10 feet from any doorway or opening in a building frequented by the public; 20 feet from any automotive service station fuel dispenser and in accordance with Table 5-4.1 with respect to:

- (a) Nearest important building or group of buildings;
- (b) Line of adjoining property that may be built upon;
- (c) Busy thoroughfares or sidewalks;
- (d) Line of adjoining property occupied by schools, churches, hospitals, athletic fields,

*Regulations of Connecticut State Agencies*

TITLE 29. Public Safety & State Police

---

*Department of Public Safety*

*§29-331-5*

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or other points of public gathering;

(e) Dispensing station.

Exception: Cylinders in the filling process shall not be considered to be in storage.

(Amd) **5-4.2.2** To minimize the possibility of damage to systems, where DOT or ASME container(s) are stored in any location exposed to vehicular traffic, such as in or near parking lots, entrances to driveways, streets or construction sites, the systems and containers shall be protected from motor vehicles and other motorized equipment including but not limited to cranes, forklift operations and other common hazards by means of a non-combustible peripheral fence, guardrail or post of metal or concrete, building walls, or natural or artificial barriers enclosing containers and piping. The presence of such protection from damage shall not create significant hazards such as pocketing of LP-Gas, interference with application of cooling water by fire departments, redirection of flames against containers and impeding egress of personnel in an emergency.

CHAPTER 8 ENGINE FUEL SYSTEMS

(Amd) **8-1.1** This chapter applies to fuel systems and the use of LP-Gas as a fuel for internal combustion engines. Included are provisions for containers, container appurtenances, carburetion equipment, piping, hose and fittings and provisions for their installation. This chapter covers engine fuel systems for engines installed on vehicles for any purpose, as well as fuel systems for stationary and portable engines. It also includes provisions for garaging vehicles upon which such systems are installed.

Note: See Section 3-8 for systems on vehicles for purposes other than engine fuel.

(Adopted effective January 24, 1997)