



Liquefied Natural Gas Road Transport Regulations

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Citation

These Regulations may be cited as the Liquefied Natural Gas Road Transport Regulations, 2024.

1 Introduction

1.1 Scope and Objectives

- 1) In the exercise of the powers conferred upon it by section 8(3)(c) and 123(e) of the Natural Gas Act, 2024, the Utilities Regulation and Competition Authority (“URCA”) hereby issues these Regulations relating to the road transport of liquefied natural gas in The Bahamas.
- 2) The objective of these Regulations is to set out the obligations for transporting LNG by road.

1.2 Application

- 3) These Regulations shall also apply to the road transport of liquefied natural gas.

1.3 Entry into effect

- 4) These Regulations shall come into effect on the date of their publication in accordance with section 15(1)(a) of the Natural Gas Act, 2024.

1.4 Definitions

- 5) In these Regulations, any word or expression to which a meaning has been assigned in the Natural Gas Act, 2024 has the meaning so assigned and unless the context otherwise requires, the following terms will have the following meanings:

“**Act**” means the Natural Gas Act, 2024

“**Cargo tank**” means a bulk packaging that:

- (1) Is a tank intended primarily for the carriage of liquids, gases, solids, or semi-solids and includes appurtenances, reinforcements, fittings, and;
- (2) Is permanently attached to or forms a part of a motor vehicle, or is not permanently attached to a motor vehicle but that, by reason of its size, construction, or attachment to a motor vehicle, is loaded or unloaded without being removed from the motor vehicle; and
- (3) Is not fabricated under a specification for cylinders, intermediate bulk containers, multi-unit tank car tanks, portable tanks, or tank cars.

“**Convey**” or “**Ship**” means the transport of liquified natural gas by road;

“Motor carrier operator” means the operator of commercial motor vehicles (CMV's) to transport property, passengers, or hazardous materials (HAZMAT) and is involved in commerce (transportation related to a business). It could be a company with several power units, or it could be an owner-operator.;

“LNG Container” means any portable vessel, tank, or receptacle specifically designed and constructed for the storage, transportation, or distribution of liquefied natural gas. An LNG container is equipped with appropriate safety devices, including but not limited to pressure relief valves, emergency shutoff valves, and insulation to maintain LNG at cryogenic temperatures; and

“Valve” means a device for the purpose of controlling or shutting off gas flow and includes a gas service isolation valve.

“Tank car” means any commercial motor vehicle that is designed to transport any liquid or gaseous materials within a tank or tanks having an individual rated capacity of more than 119 gallons and an aggregate rated capacity of 1,000 gallons or more that is either permanently or temporarily attached to the vehicle or the chassis. A commercial motor vehicle transporting an empty storage container tank, not designed for transportation, with a rated capacity of 1,000 gallons or more that is temporarily attached to a flatbed trailer is not considered a tank vehicle.

1.5 Interpretation

6) In these Regulations, unless the contrary appears:

- a) headings are for convenience only and do not affect interpretation;
- b) a reference to a statute or other law includes regulations and other instruments under it and consolidations, amendments, re-enactments or replacements of any of them;
- c) words in the singular include the plural and vice versa;
- d) words importing persons include a body whether corporate, politic, or otherwise;
- e) where a word or phrase is defined, its other grammatical forms have a corresponding meaning;
- f) mentioning anything after include, includes or including does not limit what else might be included;
- g) words and expressions which are not defined have the meanings given to them in the Comms Act;
- h) reference to a person shall include firms or companies; and
- i) cross references are marked with an open parenthesis. It is expressly stated that the use of an open parenthesis in these cross references bears no legal interpretation. The sole legally pertinent element is the reference number.

1.6 List of documents incorporated by reference partly or wholly in these Regulations

- 7) Certain material is incorporated by reference into these Regulations with the approval of URCA. Any changes to these Regulation will be made by URCA in accordance with its established Consultation Process. Changes to approved material will be made in accordance with the standards specified by the following institutions, said standards being incorporated by reference into these Regulations.

	Subject Matter	Document	Issuing Body
(a)	Standard for the storage and the transport of refrigerated liquefied gases, applying to sections Error! Reference source not found. , 2.5 and 3	ISO standard ISO/TC 220 for cryogenic vessels Cited as: ISO/TC 220	ISO Standards https://www.iso.org/home.html
(b)	Federal Motor Carrier Safety Regulations, applying to section 4.2	49 CFR Subchapter B Federal Motor Carrier Safety Regulations, Parts 390 through 397 Cited as: 49 CFR 390 through 397	US Code of Federal Regulations (CFR). https://www.ecfr.gov/
(c)	Hazardous Materials Regulations, applying to section 3	49 CFR Subpart H Specifications for Portable Tanks, Part 178 Cited as: 49 CFR 178.277	US Code of Federal Regulations (CFR). https://www.ecfr.gov/
(d)	Hazardous Materials Regulations, applying to section 2.4	49 CFR Subpart G Gases; Preparation and Packaging, Part 173 Cited as: 49 CFR 173.318 and 173.319	US Code of Federal Regulations (CFR). https://www.ecfr.gov/

2 Conveyance of Liquefied Natural Gas

2.1 General

- 8) No person shall use or cause or permit to be used any vehicle for the conveyance of LNG unless at the time of such use there is in respect of that vehicle an existing approval in writing of URCA.
- 9) The conveyance of LNG shall be carried out in a manner that ensures the safety of personnel, the public, and the environment. The motor carrier operator must comply with the following vehicle and safety requirements:
- a) Vehicles must be equipped with appropriate safety devices, including pressure relief valves, emergency shutoff valves, and automatic shutdown systems;

- b) The driver and any accompanying personnel must be trained in accordance with section 4;
- c) A pre-trip inspection of the vehicle and LNG containers must be conducted to ensure they are in safe operating condition. This includes checking for leaks, verifying the integrity of safety devices, and ensuring that all connections are secure;
- d) Each tank must be remotely monitored for pressure and location. Additionally, the person responsible for the conveyance must notify the carrier if the tank pressure rise exceeds 3 psig over any 24-hour period.
- e) During transport, vehicles must adhere to designated routes and schedules approved by the relevant authorities, minimizing travel through densely populated or environmentally sensitive areas;
- f) Adequate spacing and securement of LNG containers must be ensured to prevent movement or damage during transport; and
- g) Communication protocols must be established to maintain contact with the transport vehicle, allowing for real-time monitoring and rapid response in case of an emergency.
- h) All shipments of LNG must be transported without unnecessary delay, from and including the time of commencement of the loading until its final unloading at destination.
- i) If unforeseen conditions cause an excessive pressure rise, the driver shall manually vent the tank at a remote and safe location. For each shipment, the driver shall make a written record of the cargo tank pressure and ambient (outside) temperature:
 - i) At the start of each trip,
 - ii) Immediately before and after any manual venting,
 - iii) At least once every five hours, and
 - iv) At the destination point.
- j) No person may transport LNG in a cargo tank motor vehicle unless the pressure of the lading is equal to or less than that used to determine the marked rated holding time (MRHT) and the one-way travel time (OWTT), marked on the cargo tank, is equal to or greater than the elapsed time between the start and termination of travel. This prohibition does not apply if, prior to expiration of the OWTT, the cargo tank is brought to full equilibration as specified in paragraph 9)k) of this section.
- k) Full equilibration of a cargo tank transporting LNG may only be done at a facility that loads or unloads a LNG and must be performed and verified as follows:
 - i) The temperature and pressure of the liquid must be reduced by a manually controlled release of vapor; and

- ii) The pressure in the cargo tank must be measured at least ten minutes after the manual release is terminated.

10) Each person who offers for transportation in commerce or transports in commerce LNG must develop and adhere to a transportation security plan. The security plan must include an assessment of transportation security risks for shipments, including site-specific or location-specific risks associated with facilities at which the LNG is prepared for transportation, stored, or unloaded incidental to movement, and appropriate measures to address the assessed risks. Specific measures put into place by the plan may vary commensurate with the level of threat at a particular time. At a minimum, a security plan must include the following elements:

- a) Personnel security. Measures to confirm information provided by job applicants hired for positions that involve access to and handling of the hazardous materials covered by the security plan.
- b) Unauthorized access. Measures to address the assessed risk that unauthorized persons may gain access to the hazardous materials covered by the security plan or transport conveyances being prepared for transportation of the LNG.
- c) En route security. Measures to address the assessed security risks of shipments of LNG en route from origin to destination, including shipments stored incidental to movement.
- d) Identification by job title of the senior management official responsible for overall development and implementation of the security plan;
- e) Security duties for each position or department that is responsible for implementing the plan or a portion of the plan and the process of notifying employees when specific elements of the security plan must be implemented; and
- f) A plan for training hazmat employees in accordance with section 4.
- g) The security plan, including the transportation security risk assessment developed in accordance with paragraph 10) of this section, must be in writing and must be retained for as long as it remains in effect. The security plan must be reviewed at least annually and revised and/or updated as necessary to reflect changing circumstances. The most recent version of the security plan, or portions thereof, must be available to the employees who are responsible for implementing it, consistent with personnel security clearance or background investigation restrictions and a demonstrated need to know. When the security plan is updated or revised, all employees responsible for implementing it must be notified and all copies of the plan must be maintained as of the date of the most recent revision.
- h) Each person required to develop and implement a security plan in accordance with this paragraph must maintain a copy of the security plan (or an electronic file thereof) that is accessible at, or through, its principal place of business and must make the security plan available upon request, at a reasonable time and location, to an authorized official of URCA or the Ministry responsible for Explosives and Volatile Substances.

- 11) The motor carrier operator must maintain detailed records of all LNG conveyance operations, including:
 - a) The date, time, and route of each conveyance;
 - b) The identity and certification details of the driver and any accompanying personnel;
 - c) The identification and capacity of each LNG container transported; and
 - d) Any incidents or irregularities observed during the conveyance and the actions taken in response.
- 12) Regular audits and inspections of the conveyance operations must be conducted to ensure ongoing compliance with safety standards and regulations.

2.2 Approval of Vehicles Used for the Conveyance of LNG

- 13) An application for approval to use a vehicle in the conveyance of LNG shall be made in writing to URCA.
- 14) Subject to paragraph 15) an approval of an application for use of a vehicle in the conveyance of LNG shall expire on the date on which the certificate of inspection, issued under the Road Traffic Act in respect of that vehicle, next expires, or the date when such a certificate is next issued, following the approval, whichever occurs first.
- 15) The effectiveness of an approval referred to in paragraph 14) shall be subject:
 - a) to the condition that a certificate of inspection referred to in paragraph 14) in respect of that vehicle is in force;
 - b) to the observance of the requirements of these Regulations and such other conditions as may have been imposed by URCA at the time of issuing the approval; and
 - c) to the compliance with ISO/TC 220¹, incorporated by reference, as are applicable to the use of the vehicle for the purpose of conveying LNG.
- 16) Notwithstanding anything to the contrary in the foregoing provisions of this regulation it shall be deemed a condition of every approval issued by URCA that the vehicle to which the approval relates shall be submitted for inspection ensuring that there is no breach of the provisions of the Act or of the ISO/TC 220, incorporated by reference.
- 17) Upon any such inspection URCA may:
 - a) in the case of a major or dangerous breach direct that the vehicle shall not be used for the transportation of LNG until such breach is corrected; or
 - b) if the breach is relatively minor, direct that the breach be corrected within a specified time, and upon failure to comply with any directions, the Ministry responsible for Explosives and Volatile Substances

¹ ISO standard ISO/TC 220 for cryogenic vessels.

may suspend or revoke the approval.

- 18) URCA and the Ministry responsible for Explosives and Volatile Substances has the right to revoke the approval of any vehicle found to be non-compliant with the specified requirements and standards.

2.3 Inspection

- 19) Records, equipment, packagings and containers under the control of a motor carrier, insofar as they affect safety in transportation of hazardous materials by motor vehicle, must be made available for examination and inspection by a duly authorized representative of URCA or the Ministry responsible for Explosives and Volatile Substances.

2.4 Shipments and packaging

- 20) LNG in cargo tanks and LNG in tank cars must comply with the applicable requirement of 49 CFR 173.318 and 173.319², incorporated by reference, respectively.

2.5 Loading and unloading

- 21) No person, other than the person responsible for the conveyance or other person designated by the motor carrier operator, shall load or unload the LNG container unless prior permission has been obtained in writing the person responsible for the conveyance.
- 22) The loading and unloading of LNG containers shall be conducted in a manner that ensures the safety of personnel, the public, and the environment. The person responsible the operations of loading and unloading must comply with the following requirements:
- a) Only trained and certified personnel shall be permitted to load and unload LNG containers;
 - b) The loading and unloading process must be conducted at facility that complies with all relevant safety standards and regulations;
 - c) All LNG containers must be inspected for integrity and safety prior to loading and unloading. Containers showing signs of damage, corrosion, or wear shall not be load or unload until they are repaired and certified as safe;
 - d) Appropriate personal protective equipment (PPE) must be worn by personnel during the loading and unloading process;
 - e) Safety procedures must be in place to prevent overloading, including the use of automatic shutoff devices and proper venting systems to control pressure;
 - f) Compliance with ISO/TC 220³, incorporated by reference;

² 49 CFR Subpart G Gases; Preparation and Packaging, Part 173.

³ ISO standard ISO/TC 220 for cryogenic vessels.

- g) A safety zone must be established around the loading and unloading area to prevent unauthorized access and ensure a safe working environment; and
- h) Emergency procedures must be in place and communicated to all personnel, including protocols for dealing with spills, leaks, and other incidents.
- i) Smoking on or about any motor vehicle while loading or unloading LNG is forbidden.
- j) Extreme care shall be taken in the loading or unloading LNG into or from any motor vehicle to keep fire away and to prevent persons in the vicinity from smoking, lighting matches, or carrying any flame or lighted cigar, pipe, or cigarette.
- k) No LNG shall be loaded into or on, or unloaded from, any motor vehicle unless the handbrake be securely set and all other reasonable precautions be taken to prevent motion of the motor vehicle during such loading or unloading process.

23) Attendance requirements:

- a) Loading. A LNG cargo tank must be attended by a qualified person at all times when it is being loaded. The person who is responsible for loading the cargo tank is also responsible for ensuring that it is so attended.
- b) Unloading. A motor carrier who transports LNG by a cargo tank must ensure that the cargo tank is attended by a qualified person at all times during unloading. However, the carrier's obligation to ensure attendance during unloading ceases when:
 - i) The carrier's obligation for transporting the LNG is fulfilled;
 - ii) The cargo tank has been placed upon the consignee's premises; and
 - iii) The motive power has been removed from the cargo tank and removed from the premises.
- c) A person is "qualified" if he or she has been made aware of the nature of the hazardous material which is to be loaded or unloaded, has been instructed on the procedures to be followed in emergencies, and except for persons observing loading or unloading operations by means of video cameras and monitors or instrumentation and signaling systems such as sensors, alarms, and electronic surveillance equipment located at a remote control station, is authorized to move the cargo tank, and has the means to do so.

24) The motor carrier operator must maintain detailed records of all loading and unloading operations, including:

- a) The date and time of each operation;
- b) The identity and certification details of the personnel conducting the operation;

- c) The identification and capacity of each LNG container load or unload; and
 - d) Any incidents or irregularities observed during the operation and the actions taken in response.
- 25) Regular audits and inspections of the loading and unloading operations must be conducted by the motor carrier operator to ensure ongoing compliance with safety standards and regulations.

3 Requirements for the design, construction, inspection and testing of portable tanks intended for the transportation of LNG

- 26) All portable LNG tanks used for storage, transportation, or distribution must comply with ISO/TC 220⁴ and 49 CFR 178.277⁵, incorporated by reference.
- 27) For a portable tank used for the transport of LNG, the maximum rate at which the portable tank may be filled must not exceed the liquid flow capacity of the primary pressure relief system rated at a pressure not exceeding 120 percent of the portable tank's design pressure. A portable tank shall have an outage of at least two percent below the inlet of the pressure relief device or pressure control valve, under conditions of incipient opening, with the portable tank in a level attitude.
- 28) The owner of a portable LNG tanks shall ensure that the container:
- a) Is designed and constructed to withstand the pressures and temperatures associated with LNG storage and transportation.
 - b) Is equipped with appropriate safety devices, including pressure relief valves, emergency shutoff valves, and automatic shutdown systems.
 - c) Has been tested and certified by a recognized inspection authority to meet all relevant safety standards.
 - d) Is clearly marked with the manufacturer's information, date of manufacture, and maximum allowable working pressure.
- 29) The owner shall maintain a record of each portable LNG tanks, which includes:
- a) The tanks' design specifications and certification documents.
 - b) A log of all inspections, maintenance, and repairs performed on the container.
 - c) Any incidents or accidents involving the container, including details of any corrective actions taken.
- 30) Regular inspections and maintenance of portable LNG tanks must be conducted by qualified personnel in accordance with the manufacturer's recommendations and industry best practices. This includes:
- a) Visual inspections for signs of wear, corrosion, or damage.

⁴ ISO standard ISO/TC 220 for cryogenic vessels.

⁵ 49 CFR Subpart H Specifications for Portable Tanks

- b) Functional tests of all safety devices and valves.
 - c) Periodic pressure testing to ensure the integrity of the container.
- 31) Any portable LNG tanks found to be defective or unsafe must be immediately taken out of service and repaired or replaced before being returned to operation.
- 32) The owner must ensure that all personnel involved in the handling, inspection, and maintenance of portable LNG tanks are adequately trained and certified in LNG safety and handling procedures.
- 33) The requirements of this regulation shall apply to all portable LNG tanks, regardless of whether they are used for storage, transportation, or distribution, except for containers that are integral parts of LNG-powered vessels.

4 Training

4.1 General

- 34) Motor carrier operator shall ensure that each of its employees transporting hazardous material is trained in accordance with the following requirements:
- a) **General awareness/familiarization training.** Each employee transporting LNG shall be provided general awareness/familiarization training designed to provide familiarity with the requirements of this section.
 - b) **Function-specific training.** Each employee transporting LNG must be provided function-specific training.
 - c) **Safety training.** Each employee transporting LNG shall receive safety training concerning.
 - i) Emergency response information;
 - ii) Measures to protect the employee from the hazards they may be exposed in the work place; and
 - iii) Methods and procedures for avoiding accidents, such as the proper procedures for handling LNG.
 - d) **Security awareness training.** Each employee transporting LNG must receive training that provides an awareness of security risks associated with hazardous materials transportation and methods designed to enhance transportation security. This training must also include a component covering how to recognize and respond to possible security threats. New employee transporting LNG must receive the security awareness training required by this paragraph within ninety (90) days after employment.
 - e) **In-depth security training.** Each employee transporting LNG must be trained concerning the company security plan and its implementation. Security training must include company security objectives, organizational security structure, specific security procedures, specific security duties and responsibilities for each employee, and specific actions to be taken by each employee in the event of a

security breach.

- 35) Training conducted by motor carrier operator may be used to satisfy the training requirements in paragraph 34) of this section to the extent that such training addresses the training components specified in paragraph 34) of this section.
- 36) Initial and recurrent training:
- a) Initial training. A new employee transporting LNG may perform those functions prior to the completion of training provided:
 - i) The employee performs those functions under the direct supervision of a properly trained and knowledgeable employee transporting LNG; and
 - ii) The training is completed within ninety (90) days after employment or a change in job function.
 - b) Recurrent training. A employee transporting LNG must receive the training required by this section at least once every three (3) years.
 - c) Relevant Training. Relevant training received from a previous employer or other source may be used to satisfy the requirements of this section provided a current record of training is obtained from LNG transport employees' previous employer.
 - d) Compliance. Each employee transporting LNG is responsible for compliance with the requirements of this section regardless of whether the training required by this subpart has been completed.
- 37) Recordkeeping. Each motor carrier operator must create and retain a record of current training of each employee transporting LNG, inclusive of the preceding three years, in accordance with this section for as long as that employee is employed by that employer as a employee transporting LNG and for ninety (90) days thereafter. A employer must make a LNG transporter employee's record of current training available upon request, at a reasonable time and location, to an entity explicitly granted authority to enforce this requirements. The record must include:
- a) The name of the employee transporting LNG;
 - b) The most recent training completion date of that employee;
 - c) A description, copy, or the location of the training materials used;
 - d) The name and address of the person providing the training; and
 - e) Certification that the employee has been trained and tested, as required by this section.
- 38) The training may be provided by employer or other public or private sources.
- 39) A motor carrier operator shall ensure that each of its employee transporting LNG is tested by appropriate means.

4.2 Driver training.

- 40) General. No carrier may transport, or cause to be transported, LNG unless each employee who will operate a motor vehicle has been trained in the applicable requirements of 49 CFR parts 390 through 397⁶ and the procedures necessary for the safe operation of that motor vehicle. Driver training shall include the following subjects:
- a) Pre-trip safety inspection;
 - b) Use of vehicle controls and equipment, including operation of emergency equipment;
 - c) Operation of vehicle, including turning, backing, braking, parking, handling, and vehicle characteristics including those that affect vehicle stability, such as effects of braking and curves, effects of speed on vehicle control, dangers associated with maneuvering through curves, dangers associated with weather or road conditions that a driver may experience (e.g., blizzards, mountainous terrain, high winds), and high center of gravity;
 - d) Procedures for maneuvering tunnels, bridges, and railroad crossings;
 - e) Requirements pertaining to attendance of vehicles, parking, smoking, routing, and incident reporting; and
 - f) Loading and unloading of LNG:
- 41) Specialized requirements for cargo tanks and portable tanks. Each person who operates a cargo tank or a vehicle with a portable tank with a capacity of 1,000 gallons or more must have the appropriate commercial driver's license required under The Road Traffic Act Amendment Section 35 (A) and must receive specialized training which shall include the following:
- a) Operation of emergency control features of the cargo tank or portable tank;
 - b) Special vehicle handling characteristics, including: high center of gravity, fluid-load subject to surge, effects of fluid-load surge on braking, characteristic differences in stability among baffled, unbaffled, and multi-compartmented tanks; and effects of partial loads on vehicle stability;
 - c) Loading and unloading procedures;
 - d) The properties of the LNG transported; and
 - e) Retest and inspection requirements for cargo tanks.
- 42) The training required by paragraphs 40) and 41) of this section may be satisfied by compliance with the current requirements for a Commercial Driver's License with a tank vehicle or hazardous materials endorsement.

⁶ 49 CFR Subchapter B Federal Motor Carrier Safety Regulations.

43) Training required by paragraph 41) of this section must conform to the requirements of section 4.1 with respect to frequency and recordkeeping.