

CHAPTER II

TERMINAL SPECIFICATIONS, ACCESS PROCEDURES AND SCHEDULING

II.1 DESCRIPTION OF THE PLANT AND SYSTEMS

II.1.1 Terminal specifications

The Terminal through which the Operating Company provides the Service shall have the following specifications:

- (a) the ability to receive, berth, and Unload LNG Tankers having the following specifications:

- (i) LNG Tanker specifications:

Minimum Capacity:	65,000 cubic metres
Dead-weight at arrival:	Maximum 84,000 metric tons
Displacement at arrival:	Maximum 120,000 metric tons
Overall length:	Maximum 300 metres
Beam:	Maximum 49.5 metres
Arrival draft:	Maximum 12.0 metres
Rate of discharge:	12,000 cubic metres per hour against an LNG head of 80 metres at the Delivery Point

- (ii) berthing facilities that comply with SIGTTO and OCIMF guidelines (as amended from time to time) at which the LNG Tankers can, when permitted by Maritime Regulations, safely reach, fully laden, and safely depart, and at which the LNG Tankers can lie safely berthed and discharge safely afloat, unless prevented from doing so by bad weather and/or sea conditions. The indication of the berthing facilities for LNG Tankers is given in Annex (n);
- (iii) Unloading facilities (including three (3) unloading arms) capable of receiving LNG at a rate that will permit the full discharge of a fully loaded LNG Tanker within twelve (12) hours of pumping time at a pumping rate of not less than twelve thousand cubic metres (12,000 m³) per hour;
- (iv) vapour return facilities (including one (1) vapour return arm) of sufficient capacity to transfer to an LNG Tanker quantities of regasified LNG, necessary for the safe Unloading of LNG at such rates, pressures and temperatures as may be required by the design of the LNG Tanker and good operating practice;
- (v) facilities for liquid or gaseous nitrogen adequate to purge the unloading arms;

Courtesy translation, not binding.

- (b) LNG storage tanks having an aggregate working capacity of at least two hundred fifty thousand cubic metres (250,000 m³);
- (c) LNG regasification facilities as follows;
 - i. LNG pressurization units: LNG is pumped from the storage tanks using in-tank pumps which feeds the high pressure (HP) send-out pumps. Boil-off gas from the storage tanks is compressed and recondensed in the boil-off gas handling system. The condensed liquid will also be fed to the HP send-out pumps. There are 4 (four) in-tank pumps, and 5 (five) HP send-out pumps are installed. Four of the HP pumps will be required under normal operating conditions, while the fifth HP pump will provide spare or capacity for peak send-out;
 - ii. LNG vaporization units: The LNG vaporization system vaporizes the discharged LNG from the high pressure send-out pumps and the resulting gas will flow to the natural gas send-out pipeline. The system includes 4 (four) Open Rack Vaporizers (ORVs) and one Waste Heat Recovery (WHR) LNG vaporizer. Three ORVs and one WHR LNG vaporizer are needed to operate in normal operating conditions. The fourth ORV is a spare during maintenance of one of the other vaporizers or to satisfy short-term peak requirements
 - iii. Boil-off gas (BOG) Handling: BOG from the storage tanks together with flash vapor and displaced vapor during a ship unloading operation will be collected in a vapor balance header. Most of the displaced vapor will be sent back to carrier tanks during unloading operation. All the gas from the LNG storage tanks, less the vapor sent back to the LNG Tanker during unloading, will be compressed by two BOG compressors and recondensed in the recondenser.
- (d) appropriate systems for: facsimile, telephone and radio communications with LNG Tankers and, emergency shut downs, in accordance with the SIGTTO recommendations and guidelines (as may from time to time be amended) for linked ship/shore emergency shut down;
- (e) required utility systems, including 3 (three) gas turbine electric power generators for the operation of the Terminal;
- (f) control and safety systems for the operation of the Terminal, control and safety systems of the Terminal are composed of two subsystems:
 - Distributed Control System (DCS) whose functions are collecting, processing and adjusting process parameters and the supervision of the Terminal;
 - Instrumental Security System (SIS), whose function is to implement a default auto safety in case of emergency;
- (g) a thirty inch (30") diameter gas pipeline comprised of an underwater section to the beach landfall and a subsequent onshore section that connects the offshore plant to the Cavarzere Entry Point;
- (h) a metering station for the Gas, immediately upstream of the Cavarzere Entry Point;

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- (i) the quantity of Gas and/or LNG required to make the Terminal operational; and
- (j) an Electronic Communication System built and implemented by the Operating Company in a manner designed to fulfil the requirements of this Regasification Code.

The Operating Company will not, as part of the Service, provide or procure the provision of tugs, pilots, escort or watch vessels, ballast, bunkering, mooring, line handling or payment of light dues that may be required by any User or LNG Tanker. The Operating Company may, if so requested by the Users, provide or procure the provision of maritime services as separate services to the Users and/or the LNG Tankers in order to allow the LNG Tankers to reach, lie at, and depart from the berthing facilities of the Terminal. The terms and conditions for the provision of such services and how to apply are posted on the Electronic Communication System and addressed separately on the basis of a standard contract, ensuring transparent and non-discriminatory and equal treatment for Users.

The Operating Company will provide and maintain the required quantity of Gas and/or LNG specified in clause 1.1 (j) of chapter II without any liability to Users.

II.2 CAPACITY

II.2.1 Calculation of the Terminal Capacity

The Terminal Capacity shall be determined by considering the technical and operational limits of the Terminal, as established by the Operating Company, taking into account the number and duration of Unloading Slots, Storage capacity, send-out capacity, and the available Gas pipeline capacity at the Cavarzere Entry Point.

The Terminal has a nominal capacity of 8 (eight) billion cubic meters of gas per year authorized by the Competent Authority. This capacity is the design capacity under normal operating conditions and without considering the operational constraints and the limitations imposed by infrastructure it is connected.

In order to achieve this nominal capacity the Operating Company has a peak capacity that, within the constraints of security and reliability, is the capacity that the Terminal can be reached by using all available equipment (including redundant equipment) within the constraints and operating restrictions imposed by the infrastructure it is connected.

To assess the Terminal Capacity the following values must be considered:

- a. unloading capacity: the unloading capacity within a reference period (e.g.: Thermal Year) of operations at the Terminal is defined taking into account :
 - i maximum number of Unloading Slots
 - ii amount of LNG unloaded by the LNG Tankers in each of the Unloading Slots, also taking into account the quality of the LNG
- b. send out capacity: the send out capacity depends, amongst other things on,
 - i the maintenance plan