

DESCRIPTION OF THE LNG TERMINAL AND ITS OPERATION

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1) INTRODUCTION

The Terminal, located in the port of Piombino, consists of nearshore and onshore facilities. The nearshore component is a regasification plant of the FSRU (Floating Storage and Regasification Unit) type moored to an onshore part consisting of a specially equipped quay, the mooring facilities of the FSRU, a security and fire-fighting system and the interconnection of the FSRU with the methane pipeline network, the latter consisting of high-pressure hoses to send the regasified LNG to the network.

The regasification process is ensured through the use of seawater by means of "shell tube" type vaporisers in full compliance with existing marine environmental regulations.

The FSRU is equipped with a propulsion system and can also be used as an LNG carrier.

The Terminal will be relocated to a new site in compliance with the provisions of the competent Authorities; shutdown, relocation and recommissioning of the Terminal will last for a maximum of twelve months, starting from October 1, 2026, or from the first day after the thirty-sixth month after the FSRU Terminal becomes operational, whichever is earlier.

In the event that the relocation operations take place during the Thermal Year 2025-2026, any assigned regasification capacity that is no longer available due to the starting of the operations will be reallocated in the Thermal Year 2026-2027, from the date of entry into operation of the Terminal following its relocation.

Should the recommencement of operations at the Terminal start before the end of the Thermal Year 2026-2027, Users assigned with regasification capacity will have the right to request the commencement of service, in whole or in part, from the date on which the Terminal becomes operational, in accordance with the overall capacity and the provisions made available by the Terminal.

2) TERMINAL DESCRIPTION

The following table shows the main technical characteristics of the FSRU.

Displacement	115,870 metric tonnes
Overall length	292.5 m
Gross tonnage Net tonnage	106,606 metric tonnes 33.219 metric tonnes
Maximum width	43.4 m
Draught (ballast) Draught (full load)	11.38 m 12.30 m

The main sections of the Terminal are divided as follows:

- Reception, mooring and unloading of LNG Ships
- Storage;
- Boil-Off Gas (BOG) Recovery;
- Regasification;
- High-pressure hoses for feeding regasified LNG conforming to quality specifications into the National Transmission Grid;
- Auxiliary Services; and
- Control and security systems.

2.1) Reception, Mooring and Unloading of LNG Ships

The Terminal can receive LNG from LNG carriers with a capacity between 7,500 m³liq and 175,000 m³liq (or equivalent to the "New Panamax" class). The LNG from the LNG carriers is unloaded into the Terminal's storage tanks through the use of cryogenic hoses with a maximum discharge capacity of 9,000m³liq/hour.

2.2) Storage

The Terminal is equipped with four membrane-type LNG holding tanks. The operational storage capacity is 167,818 m³liq. The LNG is stored in tanks at a temperature of approximately -161 °C and a pressure of 0.7 bar. An LNG pump system is located inside each storage tank:

- A stripping pump for complete emptying of the tank or in the case of very low flow rates;
- A pump, which transfers the LNG to the regasification module. This pump is retractable and installed inside a tubular structure dedicated to the pump itself;
- Two unload pumps should the FSRU function as an LNG carrier.

2.3) Regasification

The LNG pressurised by the booster pumps is fed into three vapourisation trains (one of which is a reserve), each of which consists of seawater/LNG shell tube type vaporisers.

The nominal daily regasification capacity of two steam trains is 12.893 MSm³/day.

Compatible with the maximum reception capacity of the network, it is also possible to use the third steaming train to compensate for potential temporary reductions in steaming capacity.

2.4) Boil-Off Gas Recovery (BOG)

BOG is generated in LNG tanks as a consequence of:

- heat input through the walls of storage tanks;
- Superheated LNG generated in the storage tanks during the unloading of the LNG carrier due to the heat generated by the LNG carrier's own cargo pumps and the entry of heat through the loading arms, lines/loading hoses.

The BOG generated in the LNG tanks is collected in the BOG manifold which, depending on the operating conditions of the Terminal, may be conveyed to (i) the LNG carrier, by means of the steam return boom (during LNG unloading operations) (ii) the plant for the use of the Gas as a fuel for the production of electricity (iii) the recondenser, by means of the BOG compressor, (iv) the Gas Combustion Unit (GCU) and (v) the atmosphere, exclusively in emergency situations.

The quantities transferred on board the LNG carrier are measured according to the procedure described in the GIIGNL document "LNG Transfer Handbook" published on the FSRU Italia website.

2.5) Final gas correction

With reference to the period following the relocation of the Terminal in compliance with the provisions of the Competent Authorities, the Terminal shall be equipped with a final gas correction system with the aim of maintaining the Wobbe Index of the regasified gas at values compatible with the quality specifications of the transportation network, guaranteeing the interchangeability of the regasified LNG with the transported natural gas¹.

¹ In connection with the period prior to the relocation of the Terminal FSRU Italia will make available the final gas correction service by blending with liquid nitrogen which will allow the update of the acceptability values of the Wobbe Index, as defined in the chapter 6.1 of Chapter 3.

2.6) Injection of gas in the National Gas Transportation Network SRG

Following the vaporisation process and after quality and quantity measurements have been carried out using gas chromatographs and ultrasonic meters respectively, the gas is fed into the Snam Rete Gas network through high pressure pipes. The quality and quantity characteristics of the gas fed into the network are also continuously monitored by Snam Rete Gas dispatching.

2.7) Auxiliary services

The auxiliary systems section includes all supporting activities to the main process without which the plant could not function. In particular, the Terminal is equipped with 4 main generators and 1 emergency backup generator to supply electricity for all the Terminal's services (including the ground facilities).

There is no electricity supply from the grid.

The FSRU is also equipped with a combustion unit called GCU used to dispose of up to 4.5 tonnes/hour of excess BOG if it cannot be re-condensed or consumed in the main engines

2.8) Security Control Systems

LNG regasification is controlled on board the FSRU by a centralised control room with an automatic system that is in turn divided into (i) the Distributed Control System (DCS), for the acquisition, processing and regulation of process parameters and plant monitoring and (ii) the Emergency Shutdown System (ESD), for the execution of shutdown and lockout of plant equipment in the event of an emergency.

FSRU Italia maintains the Terminal in accordance with the standards of a prudent and reasonable operator.

3) TERMINAL REGASIFICATION CAPACITY

The regasification capacity of the plant is identified in relation to the number of berthings that can be carried out at the Terminal and the maximum regasifiable capacity expressed in LNG volume.

With reference to the number of berthings that can be carried out, the duration of the mooring, unloading and unmooring operations of an LNG carrier at the dock allows at most one berth per day of Terminal operation.

With reference to the maximum daily regasifiable capacity (Cd), taking into account the necessary safety operating margins of a regasification terminal, the plant set-up allows a maximum guaranteed capacity of 21,490 m³liq/d of LNG.

Therefore, the regasification capacity of the Terminal on an annual basis is 21,490 m³liq/d multiplied by the days of operation of the Terminal in each Thermal Year.

Should the appropriate changes in the plant set-up allow it, FSRU Italia reserves the right to increase the maximum regasification capacity, which may lead to an increase in the regasification capacity that can be allocated.

4) TERMINAL MANUALS

The Shipper and the Terminal must comply with the provisions contained in the Terminal's manuals; the User must also ensure that LNG carriers and shipowners comply with the manuals made available by the Terminal. In particular, for the purpose of carrying out the unloading, the User is required to dock and unload at the Terminal exclusively with a valid LNG carrier having the SIRE - Ship Inspection Report certificate issued no more than 6 months prior.

On its website, FSRU Italia provides the documents relating to the procedures and operations involved in LNG unloading at the Terminal, including the Terminal manuals and the "Information and regulation booklet" document. FSRU Italia reserves the right to update the above-mentioned documents also in the event of new provisions issued by the competent authorities, informing the parties concerned accordingly.