IL VERDE INCONTRA IL BLU

FSRU Toscana Offshore LNG Terminal

Livorno, 18th October 2016

Alessandro Fino – Managing Director

OLT Shareholders

UNIPER Global Commodities SE (48.24%)

One of the largest energy groups in the world with entirely private capital, listed on the Frankfurt Stock Exchange.

IREN Group (49.07%)

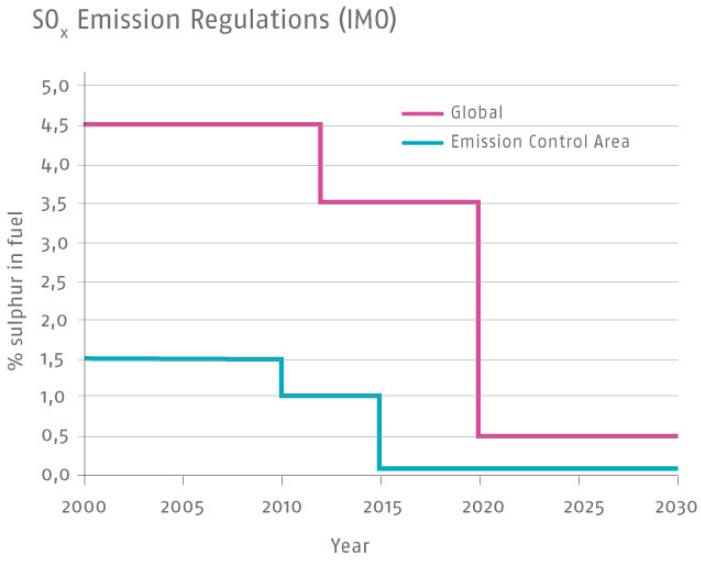
IREN Group is listed on the Italian Stock Exchange and was founded in July 2010 from the merger between IRIDE and ENIA - 49,07% (including 5,08% shares of ASA)

Golar LNG (2.69%)

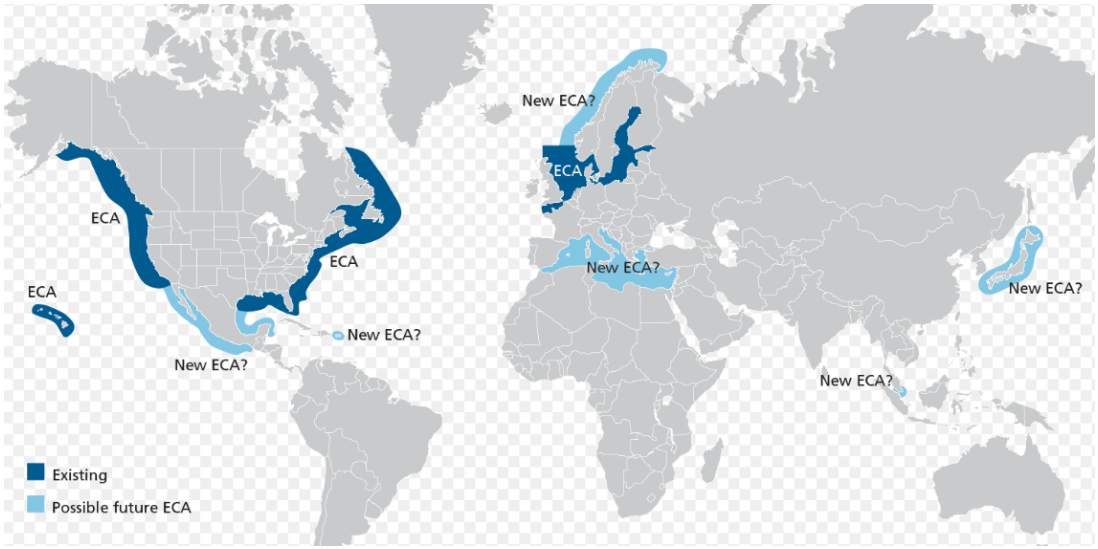
Golar LNG is an LNG shipping company, belonging to the Fredriksen Group (owner of the largest oil tanker fleet in the world), engaged in the acquisition, ownership, operation and chartering of LNG carriers and FSRUs

ECA Emission Control Areas

IMO MARPOL ANNEX VI sets the limit of Sox and Nox worldwide and in the ECA areas at 0,1% from 2015. North America coasts, North Sea and Baltic are ECAs.



Mediterranean Sea, Norwegian coasts, Caribbean and Mexico coasts, Singapore and Japanese Coasts are potential ECAs under discussion.



European Union policies

The **Directive 2014/94/EU** of the European Parliament and of the Council of 22 October 2014 requires Member States to develop national policy frameworks for the market development of alternative fuels and their infrastructure; foresees the use of common technical specifications for recharging and refueling stations; paves the way for setting up appropriate consumer information on alternative fuels, including a clear and sound price comparison methodology.
The required coverage and the timings by which this coverage must be put in place is as follows:

Fuel:	Coverage:	Timings:
Electricity in urban/suburban and other densely populated areas	Appropriate number of publically accessible points	by end 2020
CNG in urban/suburban and other densely populated areas	Appropriate number of points	by end 2020
CNG along the TEN-T core network	Appropriate number of points	by end 2025
Electricity at shore-side	Ports of the TEN-T core network and other ports	by end 2025
Hydrogen in the Member States who choose to develop it	Appropriate number of points	by end 2025
LNG at maritime ports	Ports of the TEN-T core network	by end 2025
LNG at inland ports	Ports of the TEN-T core network	by end 2030
LNG for heavy-duty vehicles	Appropriate number of points along the TEN-T core network	by end 2025

Following a public consultation process started in 2014, the Italian Government is going to implement the **Directive 2014/94/EU** by the end of November 2016 giving a clear regulatory framework; this will lay the foundations for the potential development of the SSLNG market in the Italian ports and islands.
The target is to build 5 LNG sea bunkering stations by 2020 and to reach the number of 10 by 2025.

Italian “DAFI” implementation draft

OLT appreciates the work done from the Italian Government in developing the “DAFI”, Directive on Alternative Fuels Infrastructures.

As Italian Mediterranean LNG infrastructure, OLT is working to be able to successfully achieve the challenges of the next future and as first link of the logistic chain of the Small Scale LNG business is committed to work in cooperation with the Italian institution in providing the services that LNG terminals are already providing in the North sea and in the Baltic sea.

The main arguments that can have an high impact on the development of the SSLNG market:

→ Authorization Process

→ Support to isolated and not methanised areas

→ Fiscal treatment

→ Unbundling for regulated infrastructures

FSRU Toscana loading operation summer 2016

SSLNG development news in the North EU

2016 September 19, the SSLNGc 7,500 m^3 Coral Methane loaded first LNG at the recently opened third jetty at the Gate LNG terminal in Rotterdam. The cargo was delivered to AGA AS, a Swedish industrial gas company. The third jetty at the Gate terminal enables the loading of small volumes of LNG, from 1,000 m^3 up to 20,000 m^3, with the potential for increase to 40,000 m^3 in the long term.

Re-load SSLNGc 7500 m^3 - Gate

2016 October 11, Hamburg-based LNG supplier, Bomin Linde LNG signed a time-charter contract with Bernhard Shulte for the 7,500 m^3 LNG bunkering vessel. Under the contract, signed at the end of September, the vessel is chartered by a joint venture, established in November 2015 by Bomin Linde and Klaipedos Nafta, the owner and operator of the Lithuanian LNG terminal in Klaipeda. The vessel is scheduled for late 2018.

FSRU Independence - Lithuania

2016 October 1, Skangas, bunkered the product tanker Ternsund the first time directly from its liquefied natural gas terminal in Pori, Finland. Pori first Finland LNG terminal, started its commercial operation early in September. The terminal area comprises a 30,000 m^3 LNG storage tank, loading docks, process units, flare torch, three loading docks for road tankers, a transformer building and a heat production unit.

Bunkering operation - Pori

2016 September 19 Lübecker Hafen-Gesellschaft, Germany's largest port operator on the Baltic Sea, and Lübeck Port Authority signed a letter of intent with Russia's LNG Gorskaya to set up LNG bunkering facilities.

Lubeck port

Source LNG World News website

SSLNG: Key Factors in the Logistic Model

OLT Offshore LNG Toscana

REGASIFICATION TERMINALS | **TRANSPORT** | **END USERS**

The main infrastructures onshore and offshore can receive the LNG carriers from the suppliers

Mini LNG carriers (1000-30000 m^3)
Bunker barges (400-1000 m^3)

Trucks/Trains/ISO containers
(50-80 m^3)

Transport

Industrial or civil facilities

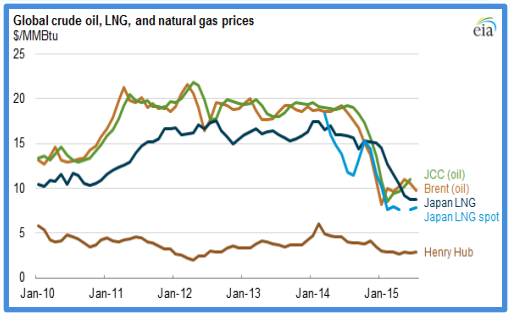
Coastal deposit

SSLNG: Key Factors in the Logistic Model

KEY FACTORS WITH SSLNG

- LNG Pricing vs Availability of alternatives
- MARKET LNG DEMAND GROWTH
- ENVIROMENTAL IMPACTS (CO_2, SO_x, NO_x, particles and noise emissions)
- INFRASTRUCTURES (existing terminals to be modified, vessels and/or barges to be built, bunker locations, relevant costs)
- FISCAL REGIME and PERMITTING PROCESS
- EUROPEAN STRATEGY AND FUNDING (e.g. LNG Blue Corridors project; CEF)
- STANDARDIZATION of LNG transfer processes (both marine and land transportation)

All the above KEY FACTORS will have different impacts due to different local infrastructure availability



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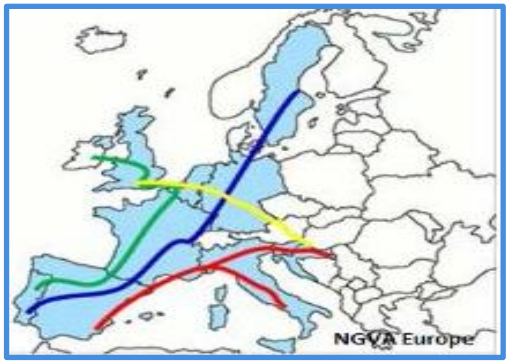
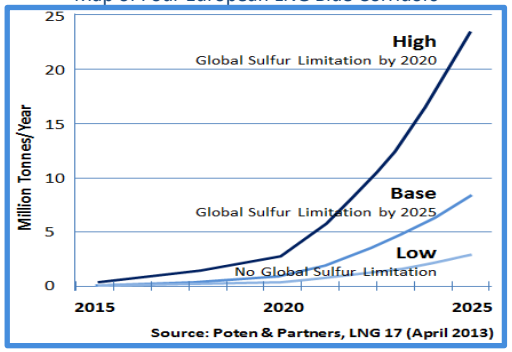


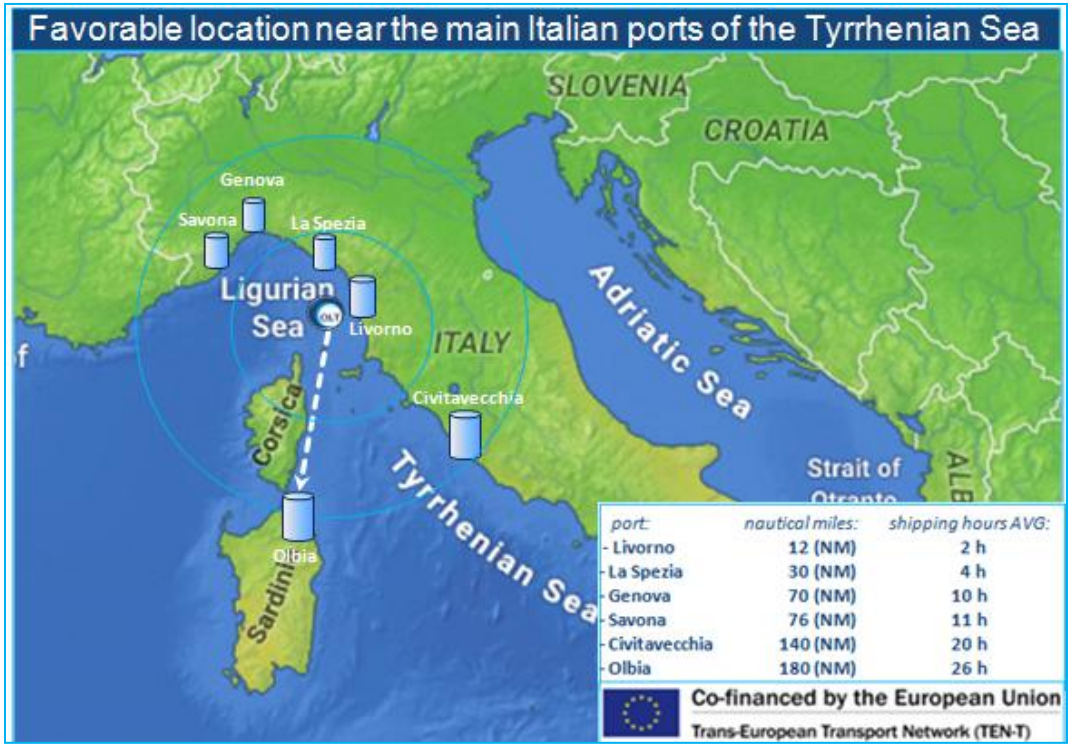
Map of Four European LNG Blue Corridors



Potential demand for maritime LNG

Challenges under the EU policies

In 2014-2015 a pre-feasibility study co financed by EU TEN-T program called “SEA Terminal project”, in cooperation with Valencia Port Foundation and Livorno Port Authority under the supervision of MIT, confirmed that “FSRU Toscana” can be able, with **minor modifications,** to perform the re-load service.
Small LNG carriers can dock on the port side of the terminal and receive the quantities of LNG to be delivered in to the main Tyrrhenian ports.



OLT “Sea terminal” study outputs

The pre-feasibility study that identified the capability of the terminal to perform the transfer of LNG to Small LNG carriers gave the following main output:

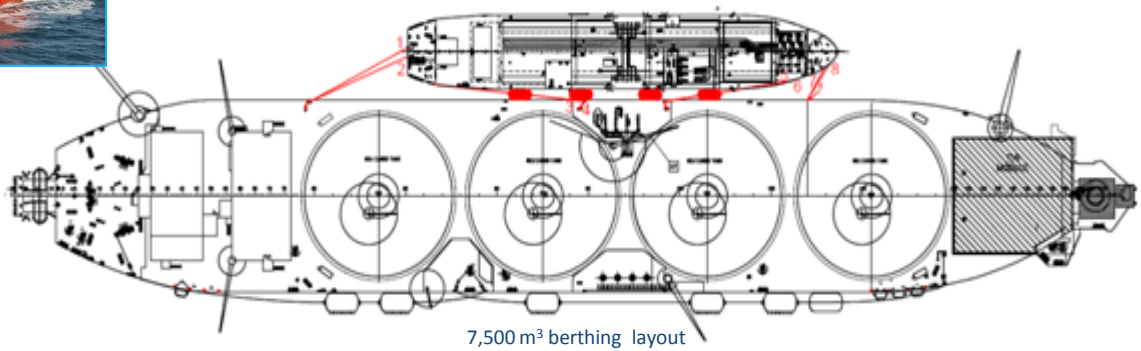
- Mini LNGC between a cargo capacity from 1,000 m^3 to 7,500 m^3
- Mini LNGC Length: between 60 m to 110 m
- Loading rate between 250 m^3 and 900 m^3 (the timing is the same required for larger LNG carriers)
- Manifold in accordance to OCIMF recommendation
- ESD in accordance to SIGTTO recommendation.

Small LNG carrier cargo capacity 7,500 m^3

Small LNG carrier cargo capacity 2,500 m^3

SEAterminals

Co-financed by the European Union
Trans-European Transport Network (TEN-T)



7,500 m^3 berthing layout

Currently OLT is involved in a further project called GAINN_IT under the EU CEF (Connecting Europe Facility) program in cooperation with many industrial partners and MIT for a detailed engineering study for SSLNG services.

GAINN_IT

OLT Offshore LNG Toscana

Thank you for your time

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