

Multipurpose offshore platforms from traditional mining to a Blue Growth opportunity

The “Safe & Sustainable Decommissioning” Project
Focus on the pre-feasibility study on Liquefied Natural Gas (LNG) reuse

*European Maritime Day
The Future of our Seas
18-19 May 2017, Poole.*

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DIRECTORATE GENERAL FOR SAFETY OF MINING AND ENERGY ACTIVITIES
NATIONAL MINING OFFICE FOR HYDROCARBONS AND GEORESOURCES







Shared PTF List

Review:
Regulatory Framework






GL: Administrative & Authoritative

WHAT TO DO ?



HOW TO DO ?



- Multi Criteria Analysis
- C/B Analysis
- Risk Analysis

GL: Decision Making

GL: Technical and Operational

BAT & BRef Definition

Review: Removal Techniques & Other Uses/Multi-Purpose




Monitoring of the Decommissioning Plan

Dismantling

Re-Use

Working Group

Projects

Events



Energy

- Energy generation by RESs (wind, solar, wave/current)
- Energy carrier production (H_2)
- Use of alternative fuels (LNG)

Scientific

- Monitoring (seismic, meteo-marine, whales watching)
- Radio broadcasting (Wi-Fi free band)
- Artificial reef (biodiversity)

Commercial

- Aquaculture
- Tourism (resort) and Recreation (sport fishing, scuba diving)

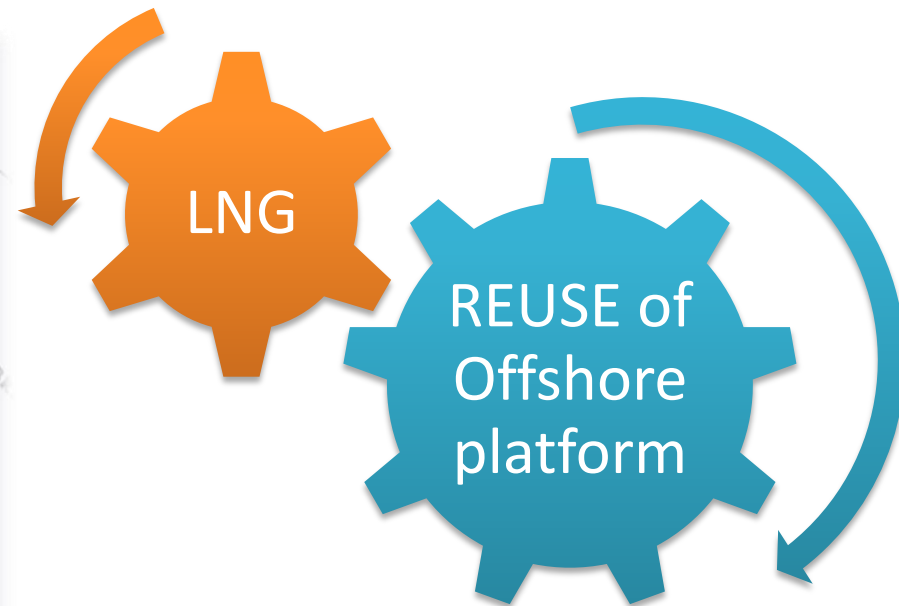
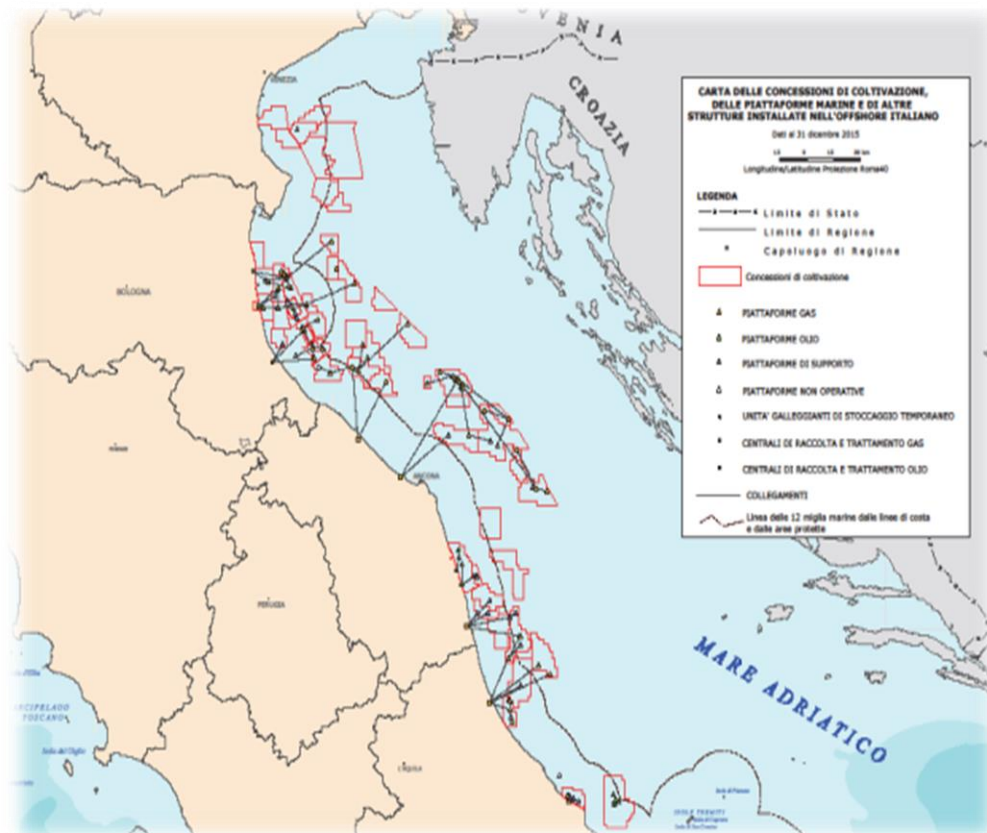
Multipurpose

- Energy + Aquaculture + Desalination + Monitoring



OFFSHORE PLATFORMS READY FOR DECOMMISSIONING

from mining activities BY EARLY 2020s: 16





- **International and Regional Regulation on decommissioning:**
 - The Geneva Convention on the Law of the Sea, 1958 (Art. 5.5)
 - London Convention, 1972 (Art. III (1) a) and b)
 - United Nations Convention On The Law of the Sea (UNCLOS Convention), 1982
 - OSPAR Convention for the Protection of the Marine Environment of the NorthEast Atlantic, 1982
 - Barcelona Convention, 1998 (Offshore Protocol)
 - IMO Guidelines and Standards for the Removal of Offshore Installations and Structures on the Continental Shelf and in the Exclusive Economic Zone

- **Italian Legislative Decree No. 257/2016 implementing Directive 2014/94/EU on the Deployment of alternative fuels infrastructure**

- **Italian Legislative Decree No. 145/2015 on safety for offshore operations**



ITALIAN LEGISLATIVE DECREE No. 257 OF 16 DECEMBER 2016

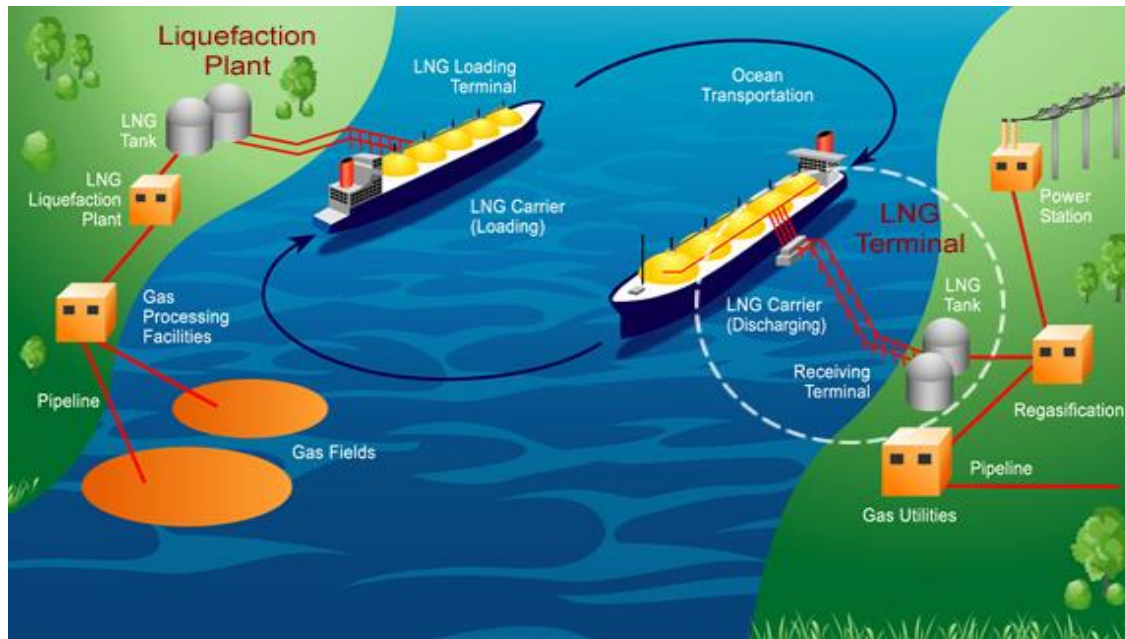
Art. 13 (5)

*“The provisions of this decree, subject to the respect for environmental, landscape and public health standards, security, and public safety, **apply to projects for the reconversion of infrastructures and energy sites existing to the storage activity and following discharge on of ships and LNG tank truck**”*



THE BENEFITS OF LNG

- ❖ LNG is an **alternative fuel for the future**
 - ❑ is natural gas (methane) chilled to $-161\text{ }^{\circ}\text{C}$ so that it **becomes a liquid**.
 - ❑ once liquefied, the methane takes up much less space (i.e. **LNG occupies about 1/600 of the space of gaseous methane**)
- ❖ **Clear logistic benefits** (exported in purpose-built tanker ships)
- ❖ Clear benefits in **low carbon economy** perspectives





- LNG has a high potential to **reduce fuel costs** which are the main cost factor of inland barging
- **Environmental benefits***:
 - Reduced air emissions SO_x of over 90%
 - NO_x 35% for diesel cycle
 - CO₂ up to 29%
 - GHGs up to 19%
 - PM 85%
- LNG has been used as fuel for decades (storage, transportation, usage), but yet limited in shipping
- Technical innovation in several connected sector

* International Gas Union «Enabling clean marine transport (March 2017)





WHAT POTENTIAL MAIN ADVANTAGES OF REUSE PLATFORM FOR LNG?

☺ **Valuing existing structures**

Storage

☺ **Avoiding congestion in ports**

Loading and reloading
+ ship fuel



- Environmental benefits
- Safety
- Space optimization and reducing time
- Economic growth
- Technological improvement and development
- Investments
- Creation of jobs



- ... See you soon for more update about the SSD project!
- Collaborations are welcome!

THANK YOU FOR YOUR ATTENTION!

<http://unmig.mise.gov.it>



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