

42 PARTNERS



GOALS

**Regulation and normative development**  
 Implementation of the National Policy Framework, the needed specific regulation and normative for the development of LNG Bunkering activities according with the Directive 2014/94/EU on the deployment of alternative fuels infrastructure (Clean Power for Transport).

**Infrastructure development**  
 Infrastructure pilot development for the provision of LNG for transport services in the maritime and port sector, and roadmap for an investment plan to scale up the results.

- **Breaking** the egg-chicken dilemma, adapting the existing infrastructure (marginal investments) for the supply of LNG bunker and small scale services.
- **Developing** a safety, robust and secure logistic chain.
- **Boosting** the development of the normative needed around LNG bunker to adequately attend the demand.
- **Enabling** the Iberian Peninsula to offer holistic solutions to the new requirements of the shipping sector.

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# LNG bunkering and small scale services in Spain & Portugal

 Co-financed by the European Union  
 Connecting Europe Facility

COORDINATOR



LEADERSHIP

Puertos del Estado



MAP



**Adaptation of LNG terminals for bunkering**

- 1 Adaptation for LNG small scale services in big scale jetty in Bilbao LNG terminal
- 2 Dedicated LNG flexible hoses for bunkering in Barcelona LNG terminal
- 3 Adaptation for LNG bunkering/small scale services in Sagunto LNG terminal plant
- 4 Dedicated LNG mooring jetty ifor small scale services in Cartagena LNG terminal
- 5 Multimodal LNG bunker berth in port of Huelva
- 6 Engineering for new dedicated LNG jetty in Mugardos LNG terminal. Adaptation for LNG mixed bunker/big/ small scale services in existing jetty

**LNG utilization in ports**

- 1 New tugboat powered by LNG in Bilbao port
- 2 Straddle carrier retrofit in Barcelona port
- 3 Design of a tugboat powered by LNG in Barcelona port
- 4 Retrofit study of a port locomotive powered by LNG in Tarragona port
- 5 Construction of a LNG/CNG mixed station for vehicles and small boats in Valencia port
- 6 Design of a tugboat powered by LNG in Valencia port

**Bunkering barges and multimodal logistic**

- 1 Barge retrofit for LNG bunkering in the Cantabrian coast
  - 2 Multimodal transport for LNG logistics supply chain (rail/road/train)
  - 3 Barge retrofit for LNG bunkering within the port of Barcelona
  - 4 LNG powered electricity generator mobile unit for OPS
  - 5 Retrofit study of a rescue boat powered to LNG
- CORE LNGas hive activities  
 — EU Mediterranean Corridor  
 — EU Atlantic Corridor  
 — Iberian Peninsula main pipelines

SCOPE

Regulation, normative, market

- National Policy Framework
- Studies of demand and development of the logistic chain
- Safety, environmental and technical standards
- Social acceptance of LNG
- Training needs

TRANSVERSAL STUDIES

LNG advance training requirements

- National policy framework
- Observatory

MARKETING ANALYSIS

LNG demand and supply chain Atlantic corridor, Gibraltar strait & peripheral regions, and Mediterranean corridor

- To foresee LNG demand along the Iberian façades of the corridors
- To analyze different business models
- To define the most suitable logistic solution depending on distance and demand

Infrastructure equipments

- Adaptation of LNG Terminals to offer small-scale services and LNG bunker
- Developments on LNG logistic chain
- Use of LNG in maritime sector and port environment

Technical, safety environmental specifications

LNG social acceptance

