Study on LNG demand and supply chain analysis for the roll out (Atlantic, Mediterranean and Gibraltar & peripheries Corridors)

ET2, ET3 & ET4

This project will analyze potential LNG demand for transport and possible supply chains in the Atlantic, Mediterranean and Gibraltar & peripheries area.

In order to facilitate the works and obtain better results, all the demand studies have been unify in one study and the same was done with the supply chain studies.

Demand studies finalized.
Supply chain studies ongoing.

Partners involved

Demand studies were assigned and developed by DNV. Results obtained shows an increasing trend in LNG use in a short period.

Supply chain studies have been awarded to SBC and the first part of the works is finalized (supply chain characterization).

• **ET2, ET3, ET4:** Studies on the actual and potential LNG demand for maritime transport and port services and the evolution of LNG efficient, secure and strong supply logistic chains in the Spanish and Portuguese core network with particular emphasis in the Atlantic and Mediterranean core corridors, including the extension to peripheral regions and third countries bye means an specific approach to the Gibraltar strait. The studies are proposed to address the specific needs for the Roll out of the innovative solutions to be piloted in the Action (WP.4.2) and the requirements of the Directive 2014/94 by means of the National Policy Frameworks in order to designate LNG refuelling points in the ports (ET0). Moreover, these studies could feed into the next update of the working plans and studies of the coordinators of these corridors and the working plan of the coordinator of Motorways of the Sea.

Key reference for CORE LNGas hive is both the corridor approach and the roll out of the different technologies being tested in the Pilot Actions as part of an implementation LNG infrastructure plan in the port/maritime sector, not only in the corridors but with a special emphasis along them.

Moreover Member States, by means of its National Policy Frameworks (Directive 2014/94), shall:

- Ensure an appropriate number of refueling points for LNG in maritime ports with an adequate coverage of the TEN-T Core Network by December 2025.
- Designate the maritime ports that are to provide access to the before mentioned refueling points for LNG, on the basis of market needs.

It is not possible to address a roll out plan neither designate refueling points for LNG without studying the actual and potential LNG demand for transport and the possible evolution of supply logistic chains.

Some key aspects would be:

- Expected evolution of LNG for maritime transport and port operations.
- Requirements to become distribution hubs for LNG supply.
- Development of LNG logistic chain.
- Infrastructure needed in the existing regasification plants.
- Industrial models for LNG supply to match different port acquisition conditions.

• **ET2** aims at doing this job with a corridor approach, not with commercial or market purposes, but rather to paint possible scenarios in order to fine tuning this LNG infrastructure planning along the corridor. For that reason Puertos del Estado (PdE) participate in the activity along with the main stakeholders and Port Authorities representing the LNG and maritime dimension of the corridor, in order keep the market edge of the exercise controlled by an institutional and common approach (PdE will be participating also in ET3 and ET4).

ET2 is focused on the **Mediterranean Core Network Corridor** (CNC-3) where 8 LNG regasification plants are located, 3 of them in Spain (Barcelona, Sagunto and Cartagena), 2 in France and 3 in Italy. Those facilities should be the hubs to supply LNG to the CNC-3 Corridor and the Mediterranean Sea nodes of the TEN-t network, having not only a national dimension, but also being one of the best gateways of LNG to the north of Europe, meaning that also rail-road logistic chains could be an option for supply logistic chains. Moreover, there are 12 core ports representing the major gateways of the Corridor regions for the intercontinental trade and revealing also the maritime dimension of the CNC3 for intra-EU traffic.

Therefore, ET2 will gather all this potential into a coherent approach to LNG demand and supply logistic chain in order to be able to set a reliable deployment of LNG infrastructure and innovative roll out. The results of the study will feed into the Work Plan of the CNC-3, published in December 2014, aiming at contributing with regards to LNG to the next updates of the corridor study and further deepening of the analysis and the Work Plan expected by December 2016 and 2018.

• **ET3** is focused on the **Atlantic Core Network Corridor** (CNC-7) where 2 LNG regasification plants are located (Sines and Bilbao), besides other 3 plants located in the Atlantic region, also in ports: 2 in Spain (Ferrol* and Gijon) and 1 in France (France). Those facilities should be the hubs to supply LNG to the CNC-7 Corridor and the Atlantic Sea nodes of the TEN-t network, where ECA areas are already settled. In particular, the Work Plan (WP) for the Atlantic Corridor, recently published, refers explicitly to the need of an LNG plan to be prepared for the Corridor in order to guarantee the supply needs in the short/mid-term.

Therefore, ET3 will gather all this potential and needs into a coherent approach to LNG demand and supply logistic chain in order to be able to set a reliable deployment of LNG infrastructure and innovative roll out.

In particular, the Study will feed into the explicit goal for a LNG plan settled by the Atlantic Corridor coordinator, considering the next updates of the corridor study and further deepening of the analysis and the Work Plan expected by December 2016 and 2018.

● **ET4: Gibraltar Strait axis**, from Huelva to Cartagena and from Canary Islands to Melilla, delivers the extension of both the Mediterranean and the Atlantic Core Network Corridors (CNC-3 and CNC-7) to third countries, in particular to north Africa. On the other side, the development of the Transeuropean Network extends beyond the core corridors to ultra-peripheral an extra-peninsular territories, such as Canary Islands to the west, and Melilla to the east, were both core and comprehensive sections and nodes of the TEN-t are located. LNG demand and logistics needs are substantially different when considering the extension to third countries and or these peripheral territories. It also appears the bunkering factor in a massive scale. Algeciras port, where CNC-3 and CNC-7 converge, is the second place for EU maritime bunkering after Rotterdam. In 2014 estimated maritime traffic is about 80,000 vessels crossing the Strait. Moreover, there are 2 LNG regasification plants in the area (Huelva and Cartagena, both located in ports) that should be the hubs for LNG supply in the strait, besides two more plants being in project in the Canary Islands.

The before mentioned proves that Gibraltar is a strategic place both for development of LNG bunkering to maritime transport and innovative LNG supply chain solutions for other territories, external and peripheral, and with a major role on the extension of CNC-3 and CNC-7 as forerunners of sustainable transport system.

ET4 will gather all this potential into a specific approach to LNG demand and supply logistic chain in the strait of Gibraltar in order to be able to set a reliable deployment of LNG infrastructure and innovative roll out planning, completing a global picture for the whole Iberian Peninsula along with ET2 and ET3 studies.

The study is proposed not with commercial or market purposes, but rather to paint possible scenarios in order to develop an efficient, secure and strong logistic chain within the Gibraltar Strait and a LNG innovative roll out within the area of analysis. For that reason Puertos del Estado (PdE) participate in the activity along with the main stakeholders and Port Authorities representing the LNG and maritime dimension in the area of analysis, in order keep the market edge of the exercise controlled by an institutional and common approach.