

## Bilbao: barge retrofit for LNG bunkering in the Cantabrian Coast

### EPA2

This subactivity has completed the retrofitting of a 100m-length existing barge for conventional fossil fuels and LNG bunkering. The new name for this vessel is Oizmendi.

Its LNG bunkering capacity is 600 m<sup>3</sup>, thanks to two 300 m<sup>3</sup> tanks, but it could be extended with the installation of more tanks.



*Project finalized. Tests ongoing.*

### Partners involved

ENERGIAREN  
EUSKAL ERAKUNDEA  
ENTE VASCO  
DE LA ENERGÍA



  
BUNKER SUPPLY

The barge is currently operational and the first bunkering test was realized between a docked vessel, Ireland, and Oizmendi on 30th of January of 2018.

Oizmendi is the first navigable LNG bunker barge in the Atlantic sea.

- **EPA2:** This IPS will deploy, looking for market conditions, a LNG technology by retrofitting an existing barge, currently in use, for conventional and LNG bunkering not only in the port of Bilbao but also along the Cantabrian coast, as the barge, of a 100m length, will have navigation capabilities in open sea. It will be the first navigable LNG bunker barge to operate within the scope of the Atlantic corridor, with a significant total LNG bunker capacity of 1000 m<sup>3</sup>. In order to test the navigation capabilities, the pilot will include a loading operation at port of Ferrol (see EPA4).

Adaptation of an existing ship to LNG bunker barge, ready to bunkering operations (ship to ship) at the Port of Bilbao and Cantabrian coast within the southwest Atlantic Corridor, in order to contribute to sustainability objectives through the supply of alternative fuels and the promotion of transport with low carbon emissions.

Fuelling for LNG fuelled marine vessels has traditionally been accomplished by tanker truck while at the pier. For vessels with tank capacities of roughly 160 cubic meter, this has typical been an acceptable option, despite involving up to four tanker trucks. Beyond this boundary however, refuelling becomes difficult. In addition to the logistical headaches of coordinating multiple trucks, this operation can add greatly to fuelling time and may delay passenger or cargo loading operations.

Although, for some operations fuelled marine vessels by tanker truck is and remains a perfectly acceptable option, based on the findings and conclusions of the comprehensive feasibility study developed, bunkering operations (ship to ship) has been identified as the most suitable for implementation in the port of Bilbao.

This action aims to adapt an existing ship to LNG bunker barge to provide a Ship to Ship LNG bunkering service to ships sailing the Cantabrian Coast within the southwest Atlantic Corridor in order to contribute to sustainability objectives through the supply of alternative fuels and the promotion of transport with low carbon emissions.

The purpose of this action is the retrofitting of "Monte Arucas/finally called Oizmendi" which is originally intended for oil recovery and bunker fuel oil, re-designed the cargo area with the installation of two high pressure tanks carrying a total amount of 1000 cbm LNG.

The result of the retrofitting will be a new LNG bunker vessel with the following capabilities:

- Ship-to-ship transfer oil and LNG fuel to ships sailing the Cantabrian Coast within the southwest Atlantic Corridor.
- Oil Recovery capacity at sea.
- 100% compatibility with Cantabrian LNG imports terminals.

Finally, It should be noted that this action is completed with other two:

- Design of resources, infrastructure and procedures necessary to supply LNG as fuel in Bilbao Port to ships sailing the Cantabrian Coast within the southwest Atlantic Corridor (see EPA1 sub-activity).
- Make the port of Bilbao a Green Port. The project includes, as well, a pilot project for the incorporation of the first LNG powered tugboat in the region: A LNG powered tug for daily operation in the Bilbao Port (see EPA3 sub-activity).