

CORE LNGas hive

Sustainable energy powering Europe

www.corelngashive.eu

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Study of social perception of LNG



During the months of January and February, Folia Consultores have carried out a social perception study within Core LNGas hive project in order to find out what citizens think about liquefied natural gas (LNG) as an alternative fuel. The study aimed at identifying the existing barriers to the inclusion of the natural gas liquefied as alternative

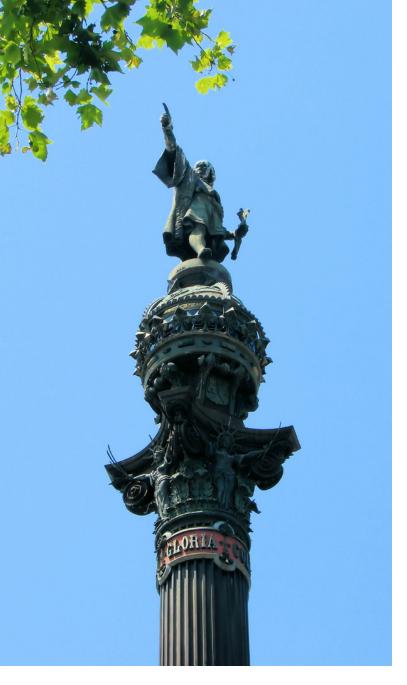
fuel in the transport and to determine the target audience to whom the awareness efforts of sub-activity LNG Social Acceptance should be addressed.

According to various sources, including general population, research centers and environmental

organizations touched upon for that purpose. And using a methodology based on individual and group on-site interviews and on-line interviews applying Delphi method, the study has tested the public's perception in five Spanish cities: Barcelona, Bilbao, Algeciras, Ferrol and Las Palmas, The results of this study are shaping the future strategy that the project will adopt in order to promote the use and acceptance of LNG through a promotional campaign which will go around Spain and Portugal, using a trailer propelled by LNG as a travelling exhibition and supporting LNG's benefits.







CORE LNGgas hive project event will be held in Barcelona on June 22, 2017

Save the provisional date, 22nd June 2017, Barcelona

The main results of the CORE LNGas hive project will be presented this year in the first public event in Barcelona on June 22, 2017. The event, the first of the proposed conferences that will be held will focus on LNG and sustainability; small scale developments and the use of LNG as a down to earth alternative fuel for transport. The event will underline the fact that the use of LNG would contribute to the decarbonisation of the transport sector following the IMO and EU targets and would play an important role in improving air quality, especially in port environments.

In this encounter, several sessions will be held also on the progresses of the project in Barcelona and the progresses widely such as the National Policy Framework, the demand studies and the LNG social perception study. The commercial and consumers view and other similar European projects will also be presented in Barcelona.

Other events organized by CORE LNGas hive for 2017 will be held in Lisbon, Portugal and Mugardos, Ferrol, Spain. Furthermore the project will be presented at several events of the sector such as:

- World Maritime Week, Futureport Bilbao, BEC (29 March)
- Gastech, Tokyo, Japan (4-7 April)
- 2nd International LNG Summit, Barcelona (24 and 25 April)
- Madrid LNG shipping forum (25 and 26 May)
- Ten-T days in Malta
- Green Energy Ports Conference Vigo (27-29 June)







Mobile exhibition starts its road show in April

in the messages to be shared with different performance on the handling of LNG as a magic

as natural licuado (GNL)

In April 2017 and for six months, the mobile exhibition created for CORE LNGas hive project within LNG social acceptance sub-activity will start its road show.

The mobile exhibition has the aim of travelling around Spain and Portugal showing the benefits of the use of LNG as fuel especially for the maritime sector. The Steering Committee of the project has supported this initiative driven by Enagás as leader of the initiative and coordinator of the project. The mobile exhibition will also take advantage of the outcomes of the LNG social perception study that will be built

in the messages to be shared with different stakeholders in the trailer created for that purpose. The partners of the project have been actively sharing pictures, videos and models for the exhibit and the itinerary of the mobile exhibition that has been proposed trying to incorporate most of the requests of the partners and the events of the sector. Furthermore IVECO freely granted the use of the LNG tractor head to the project for six months.

Until the October 2017 the mobile exhibition will carry out different events for the general and specialized public and will incorporate a

performance on the handling of LNG as a magic show. Moreover, depending on the specific location different port authorities or partners will be able to be in charge of the exhibit and to have it at their disposal for lectures, conferences, seminars or any use they find suitable for the specific location.

We hope you will all enjoy this opportunity and we make the most of it from the training point of view as well. Looking forward to meet most of you at the mobile exhibition, please check the itinerary at the web site of the project: www.corelngashive.eu





News from CORE LNGas hive partners

Vigo becomes the first port of Spain which is regular stop of a LNG powered vessel, Reganosa

The Port of Vigo has a regular stop of a Ro-Ro vessel powered by liquefied natural gas (LNG) since December 2016. The Auto Eco visits Galicia every week within a stable line for the exportation of vehicles manufactured in the PSA Peugeot Citröen plant located in Vigo.

The Auto Eco is 181 meters length and 30 meters of beam and it is the world's largest Pure Car/Truck Carrier (PCTC) which uses the clean energy of LNG. Belonging to UECC, it is the first of two twin ships that the shipping company has contracted to accomplish the regulations on sulphur emissions from the current law in the North of Europe, which gives a good example of



the international projection of LNG. Related to environmental subjects, it benefits the air quality of the cities where it docks to load or unload goods.

The weekly stop of the Auto Eco is part of Vigo Port Authority strategy for the promotion of LNG as a clean fuel. In this way, the entity participates in the CORE LNGas hive project. Vigo was already the first port in Spain where LNG refueling of a non-methane tanker was carried out.

In February 2014, Repsol carried to Vigo the precise LNG for the refueling of the Borgoy tugboat from Reganosa's regasification plant set

in the port of Ferrol. From Reganosa's terminal, company which is also involved in the CORE LNGas hive project, two tanker trucks where shipped and the cargo was transferred directly to the vessel. Borgoy ship, currently serving in Norway, is the world's pioneer tugboat using LNG.

This was the first operation of Reganosa in the business of supplying LNG for the maritime transport, in which it seeks to position itself as a reference actor. Within the CORE LNGas hive program, the Spanish transport company plans to improve its docking at the plant of Ferrol to favor small-scale services in the short term.







News from CORE LNGas hive partners

The Port of Barcelona pioneering Air Quality Improvement Plan, Autoridad Portuaria de Barcelona

The main lines of action include using LNG as an alternative fuel and an ambitious environmental policy

The Port of Barcelona has developed its Air Quality Improvement Plan, a pioneering initiative that aims to effectively reduce emissions from port activities. The most representative actions of the Plan are promoting LNG as an alternative fuel for vessels and for road freight transport, an ambitious policy of discounts for cleaner ships and replacing the Port's internal fleet with electric vehicles.





A port that leads the way in environmental issues

Since 1996, the Port of Barcelona has played a pioneering role in promoting actions to reduce the environmental impact of the activities it performs in the precinct, promoting the use of rail and Short Sea Shipping (SSS), environmental checks on all of the works developed by the Port, creating an air quality monitoring network in the port environment (the first and most complete in the Spanish port system), regulating handling of solid bulk and monitoring the emissions of the various concessions.

LNG as a fuel for mobility

Promoting liquefied natural gas (LNG) as an alternative fuel for ships, terminal machinery and trucks is one of the highlights of the plan, as LNG use cuts NOx emissions by 80% and stops particulate and sulphur oxide emissions.

This action aims to provide the Port of Barcelona with LNG supply infrastructure and to develop pilot and demonstration projects. Port infrastructure required to facilitate LNG fuelling for vessels involves installing a flexible cryogenic loading arm at the Enagás terminal to supply LNG to a barge and small boats and adapting a barge to supply LNG to larger vessels. Both initiatives are under way and receive EU funding, since they are part of the CORE LNGas hive project run by the European Union.

Of note among the projects are the addition of an auxiliary gas engine to Balearia's ferry Abel Matutes and the building of a gas generator on the wharf to replace the auxiliary engines of Ro-Ro vessels and providing them with electrical energy from the land side. Tests will also be run to convert two straddle-carriers (machines used in the container terminal) from diesel to LNG to analyse performance, efficiency and emission levels. If the results are satisfactory, the straddle-carrier fleet of the containers terminals will be renewed progressively.

Discounts for cleaner ships

The policy of environmental discounts on ships' fees is one of the most innovative aspects of the plan. "The discount applied to port fees is a very important tool, since it is a fundamental instrument for bringing about change in the vessels," said General Manager José Alberto Carbonell. The problem is that currently the law allows a maximum discount of 5% for environmental reasons on ships' fees, which is a very small margin for building an ambitious environmental strategy.

The renewal of the Port's internal fleet of vehicles, which is progressively being replaced by electrical units, is another of the operations under the organisation's Air Quality Improvement Plan. The aim is for the fleet to be around 90% electric by 2020.

NOTE: You can see the presentation of the Air Quality Improvement Plan by following this link:









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TARGET 1ST

Push forward the process of decarbonization in the Iberian

target 2nd

Contribute to the reduction of pollutant emissions in shipping

TARGET 3RD

Position the maritime industry and natural gas as maritime fuel

TARGET 4TH

Increase the European visibility within the Iberian Peninsula LNG sector

€16.65Mn

financial support from the European Commission

€33.3M project budget

42

partner entities from Spain and Portugal: 8 state-owned institutions, 13 port authorities; 21 industrial companies







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