CORE LNGas hive

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Coordination:

enagas

Puertos del Estado

GOBIERNO DE ESPAÑA MINISTERIO DE FOMENTO

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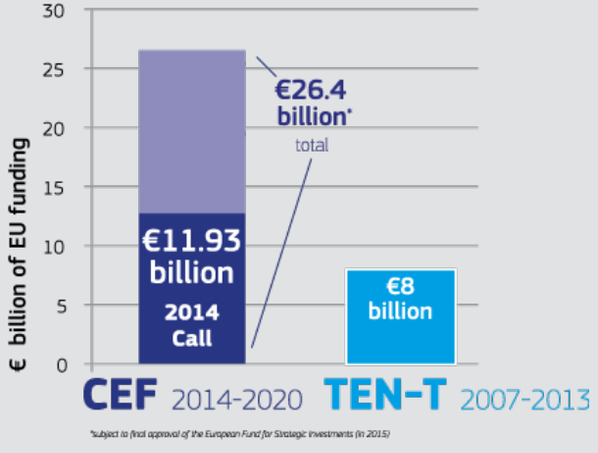
Background

2014 CEF Transport Calls

CEF FUNDING



STRUCTURE

ANUAL		• Innovation • Freight Services • Rail freight noise • Telematics applications • Core Network Nodes • Logistics platforms	930 M€
MULTIANUAL	FO-1	• Core Network projects • FFCC	6.000 M€
	FO-2	**Innovation** • Safety and Security	**160 M€** 90 M€
	FO-3	• Motorways of the Sea • Core Network Nodes • Logistics platforms • SESAR • RIS	250 M€ 500 M€
FEDER		Algunas Prioridades	4.000M€

CORE LNGas hive was granted with the 100% of the requested funds

Objectives of the action

DEVELOPMENT OF

LNG BUNKERING

IN SPAIN AND PORTUGAL

REGULATION AND NORMATIVE DEVELOPMENT

To make a proposal of the National Policy Framework, in view of fulfilling the requirements of the **Directive 2014/94/EU**

INFRASTRUCTURE DEVELOPMENT

To define a **roadmap** and an **investment plan to scale up the results** of the Action

Goals

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

Key Aspects

COORDINATOR

LEADERSHIP

PARTNERS

42

8 Public Partners
13 Port Authorities
21 Industrial Partners
(NG operators, ship owners, external services)

TIMETABLE OF THE ACTION

2014-2020

NUMBER OF PROJECTS

25

TOTAL BUDGET

33,3 M€

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Partners

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Puertos del Estado

GOBIERNO DE ESPAÑA MINISTERIO DE FOMENTO

ENERGIAREN EUSKAL ERAKUNDEA
ENTE VASCO DE LA ENERGÍA

REN

Salvamento Marítimo

POLITÉCNICA

USC UNIVERSIDADE DE SANTIAGO DE COMPOSTELA

GOBIERNO DE ESPAÑA MINISTERIO DE FOMENTO SECRETARÍA DE ESTADO DE INFRAESTRUCTURAS, TRANSPORTE Y VIVIENDA DIRECCIÓN GENERAL DE LA MARINA MERCANTE

Puerto Bahía de Algeciras

Port de Barcelona

Bilbao PORT

Puerto de Cartagena

Puerto de Ferrol

Puerto de Gijón

Puerto de Huelva

Puerto de Melilla

Puerto de Santander

Port de Tarragona

Puertos de Tenerife

valenciaport

Puerto de Vigo

ARMON

BOLUDA CORPORACIÓN MARÍTIMA

BUREAU VERITAS

CEPSA

Grupo suardiaz

FUNDACIÓN valenciaport

gasNatural fenosa

DRESSER-RAND A Siemens Business

HAM

Applus IDIADA

ItsasGas BUNKER SUPPLY

molgas ENERGÍA

reganosa

COMPAÑÍA DE REMOLCADORES IBAIZABAL

inega INSTITUTO ENERXÉTICO DE GALICIA

saggas

seaplace

HUTCHISON PORTS BEST

TCB

UTE Remolcadores de Barcelona - SAR

renfe Mercancías

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Stakeholders

Puerto de A Coruña
Autoridad Portuaria de A Coruña

Puerto de Sevilla

TANGER MED
PORT AUTHORITY

Puerto de Motril
GRANADA
Autoridad Portuaria de Motril

Ports de Balears
Autoritat Portuària de Balears

Puertos de Las Palmas
Autoridad Portuaria de Las Palmas

marmedsa
NOATUM MARITIME

IMT
INSTITUTO DA MOBILIDADE E DOS TRANSPORTES, I.P.

Gáslink
Gás Natural

Marflet Marine

repasa
Remolcadores de Puerto y Altura S.A.

NAVIERA MURUETA S.A.

SEAGO LINE

SGS

Almazán ingenieros

Navantia

acciona
Industrial

MAN
MAN Diesel & Turbo

TechnoKontrol™
WHERE YOUR SAFETY IS OUR PRIORITY

Tesicnor

COTENAVAL
INGENIERÍA NAVAL

GABADI S.L.

CRYOSPAIN

ASTILLEROS CARDAMA VIGO

GTT
Expert in LNG

GHENOVA
ingeniería

ASTILLEROS DE MURUETA

EVARM

BUREAU VERITAS 1828
BUREAU VERITAS

FURUISE EUROPE

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Stakeholders

VTG

BBG BAHIA DE BIZKAIA

capitalenergy

bp

edp

enel

Enérgya·VM Grupo Villar Mir

galp energia

ENERKIA

GUNVOR

gold energy

Compromiso de Servicio Incogas

UFG UNION FENOSA GAS

Marubeni

SEA Europe Ships & Maritime Equipment Association

gasnam

CAMPUS DO MAR KNOWLEDGE IN DEPTH

Cluster Energía BASQUE ENERGY CLUSTER

PYMAR

ifiec europe international federation of industrial energy consumers

sedigas

FORO MARITIMO VASCO EUSKAL HERRIKO ITSAS FOROA THE BASQUE MARITIME FORUM

Generalitat de Catalunya Departament de Territori i Sostenibilitat Direcció General de Qualitat Ambiental

UNIVERSIDADE DE VIGO

UNIVERSIDADE DA CORUÑA

ANAVE ASOCIACIÓN DE NAVIEROS ESPAÑOLES

energylab Centro Tecnológico de Eficiencia y Sostenibilidad Energética

IME Instituto Marítimo Español

Gradiant

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Stakeholders

Scope

REGULATION, NORMATIVE, MARKET

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

INFRASTRUC. 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

REGULATION, NORMATIVE, MARKET

REGULATION, NORMATIVE, MARKET

TRANSVERSAL STUDIES

NATIONAL POLICY FRAMEWORK

- National Objectives
- Incentives
- Measures to promote demand
- Observatory

TECHNICAL, SAFETY ENVIRONMENTAL SPECIFICATIONS

- Bunker infrastructures
- Use of LNG in port environment

LNG ADVANCE TRAINING REQUIREMENTS

- Training needs
- Training centers
- Accreditation processes

LNG SOCIAL ACCEPTANCE

- Improve social perception
- Advantages of the product
- Smooth landing of LNG

REGULATION, NORMATIVE, MARKET

REGULATION, NORMATIVE, MARKET

MARKET ANALYSIS

LNG DEMAND AND SUPPLY CHAIN ATLANTIC CORRIDOR

LNG DEMAND AND SUPPLY CHAIN GIBRALTAR STRAIT & PERIPHERAL REGIONS

LNG DEMAND AND SUPPLY CHAIN MEDITERRANEAN CORRIDOR

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

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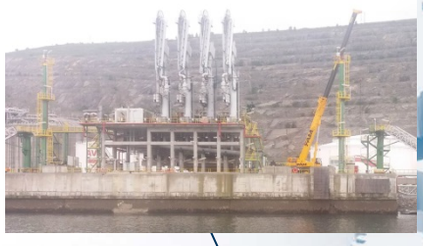
INFRASTRUC. EQUIPMENTS

INFRASTRUCTURE, EQUIPMENTS

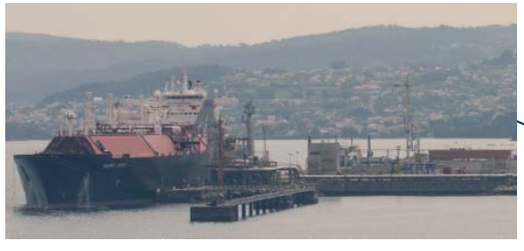
ADAPTATION OF LNG TERMINALS FOR BUNKERING

Adaptation for LNG small scale services in big scale jetty in BILBAO LNG TERMINAL



BARCELONA: dedicated LNG flexible hoses for bunkering

Engineering for new dedicated LNG jetty in MUGARDOS LNG TERMINAL



Adaptation for LNG mixed bunker / big / small scale services in existing jetty

Adaptation for LNG bunkering / small scale services in REGASIFICATION PLANT OF SAGUNTO

Multimodal LNG bunker berth in PORT OF HUELVA

CARTAGENA: dedicated LNG mooring jetty for small scale services

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INFRASTRUC. EQUIPMENTS

INFRASTRUCTURE, EQUIPMENTS

BUNKERING BARGES AND MOLTIMODAL LOGISTIC

BARGE RETROFIT for LNG bunkering in the Cantabrian coast

EPT2: Multimodal transport for LNG logistics supply chain (rail / road / train)

EPM2: Barge retrofit for LNG bunkering within the port

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INFRASTRUC. EQUIPMENTS

INFRASTRUCTURE, EQUIPMENTS

LNG UTILIZATION IN PORTS

New tugboat powered by LNG in Bilbao port

Straddle carrier retrofit in Barcelona port

Design of a tugboat powered by LNG in Barcelona port

Retrofit study of a rescue boat powered to LNG

Retrofit study of a port locomotive powered by LNG in Tarragona port

LNG Powered electricity generator mobile unit for Offshore Power Supply

Construction of a LNG/CNG mixed station for vehicles and small boats in Valencia port

Design of a tugboat powered by LNG in Valencia port

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Thank you

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