

LNGHIVE₂ Strategy

Decarbonising maritime transport

28th April 2022


Algeciras, MEDports Association Technical Seminar
Green Transition for Maritime Transport.

Fernando Impuesto
Enagás Emprende General Manager



Puertos del Estado

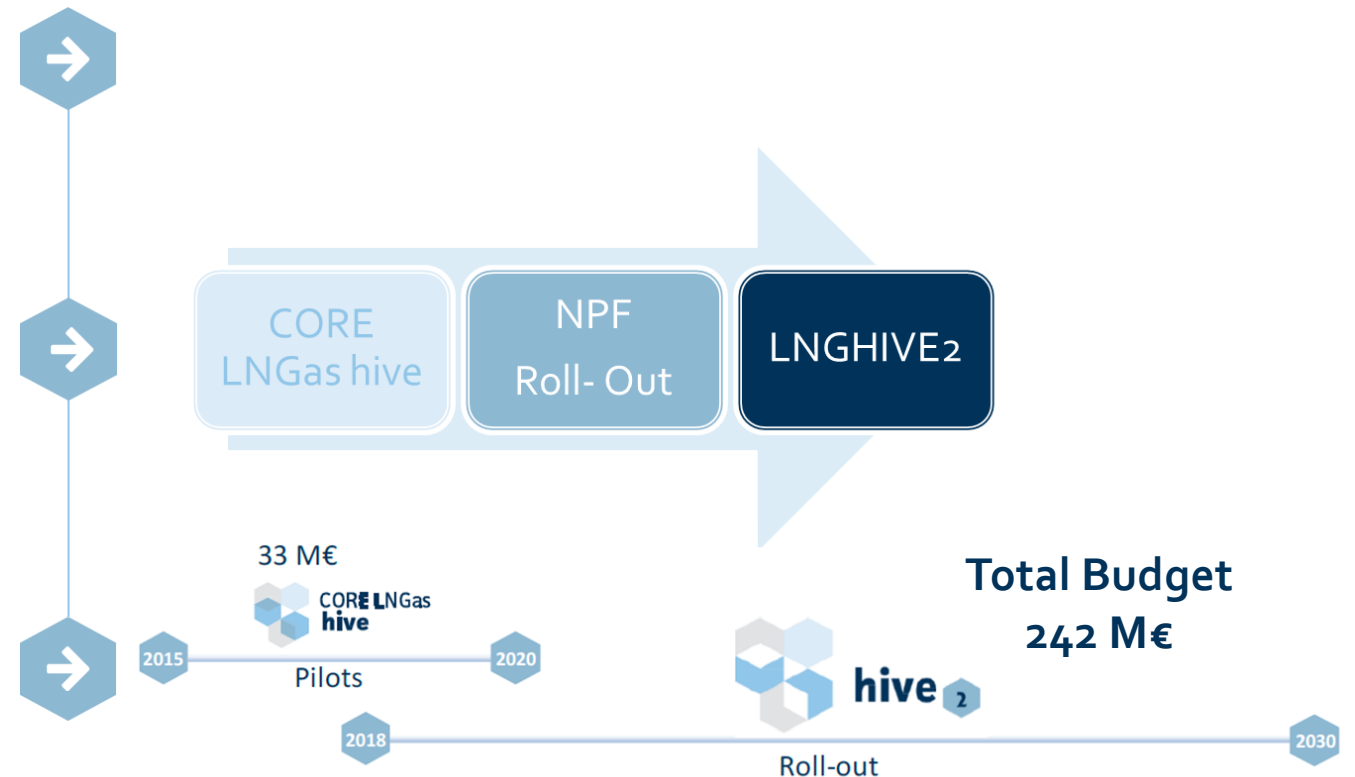


 Cofinanciado por el Mecanismo «Conectar Europa» de la Unión Europea

1. Introduction

The **LNGHIVE2** strategy aims to develop the technology and regulations necessary to deploy the infrastructure for the development of LNG as an alternative fuel.

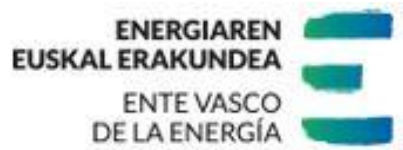
- Innovation project + roll-out . From 50% to 20% subsidy.
- Aligned with the European Regulation on alternative fuels and Spanish MAN.
- Basis for the development of new decarbonisation policies. LNG as a carrier for renewables + H2.



2. Partners



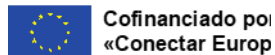
Puertos del Estado



Salvamento Marítimo



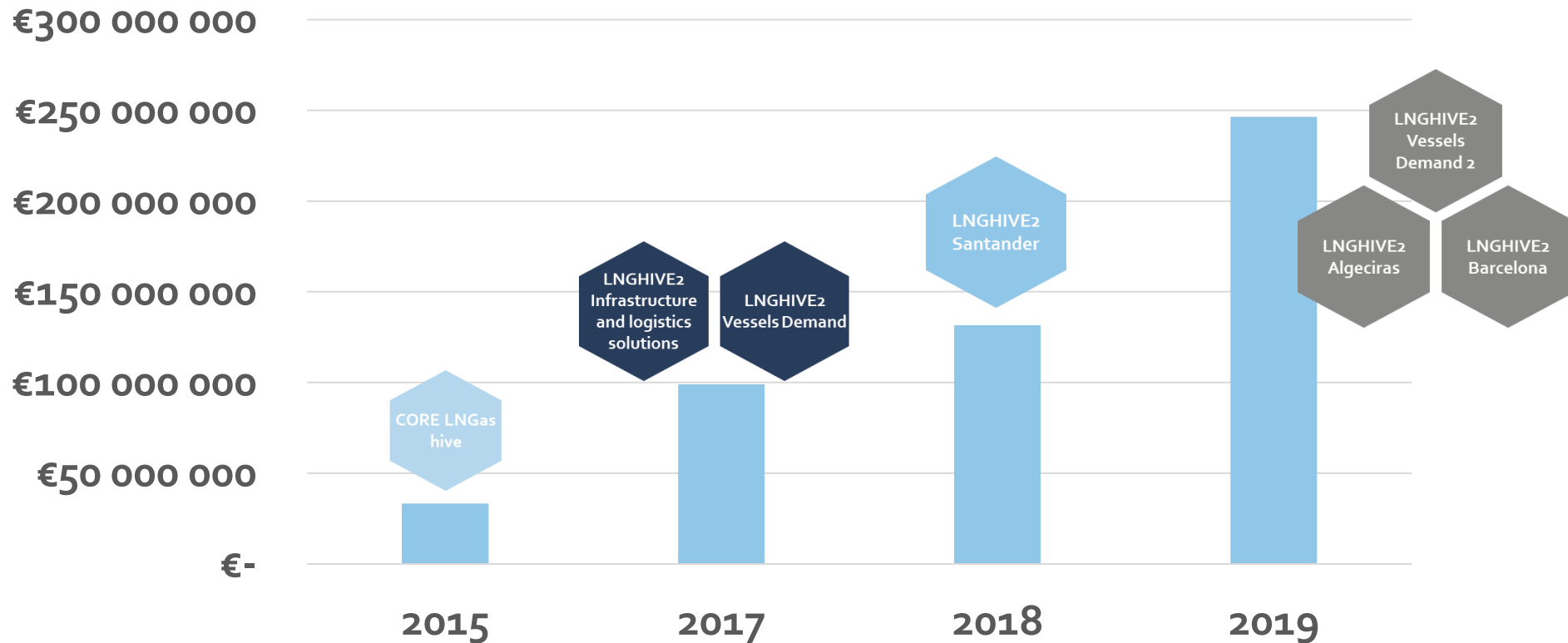
POLITÉCNICA



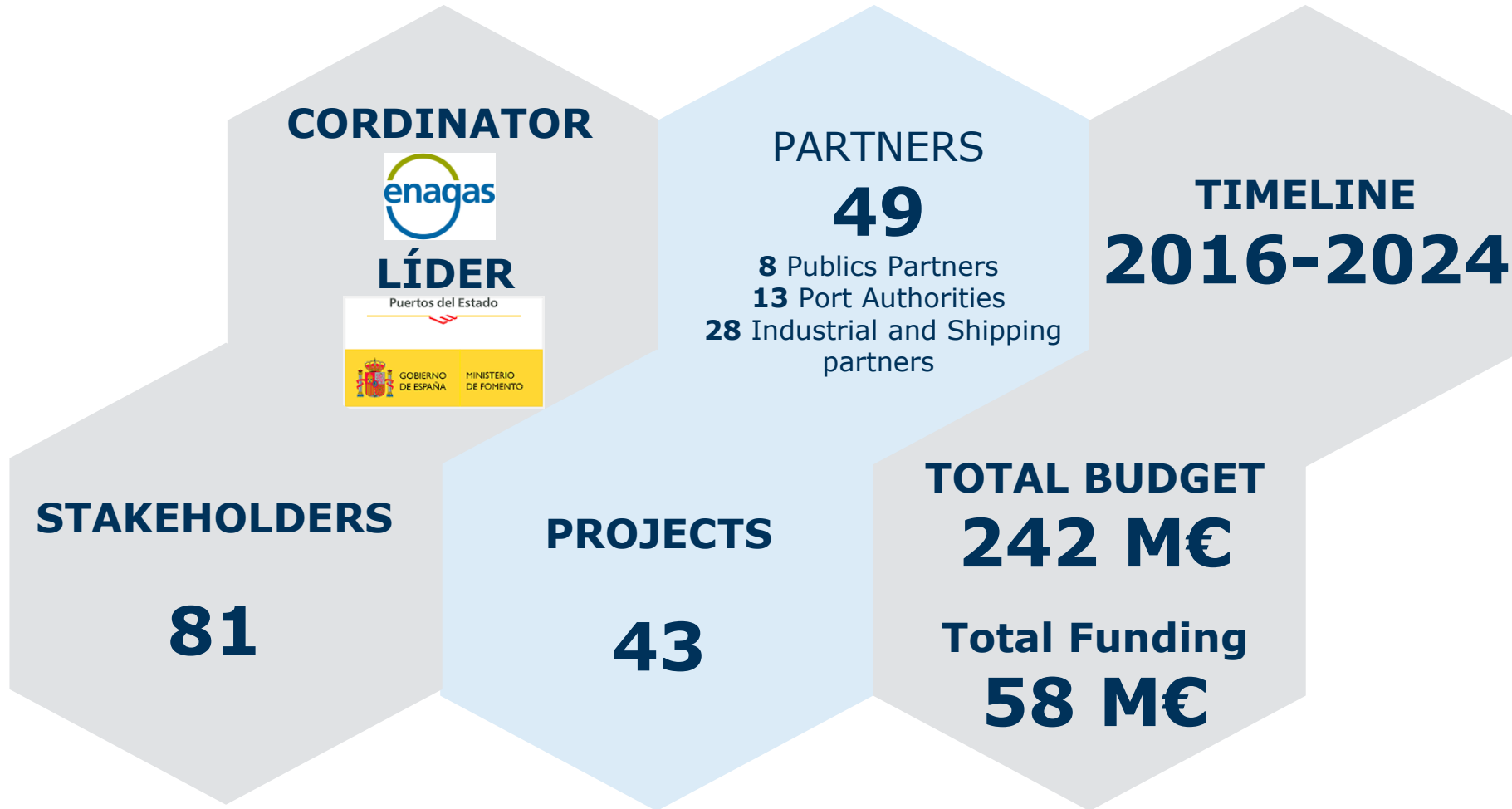
3. Evolution of LNGhive projects

Since 2015, with the start of the CORE LNGas hive project, a total investment of €248 million has been accumulated to boost the development of LNG as a maritime fuel in Spain.

Cumulative investment CEF project



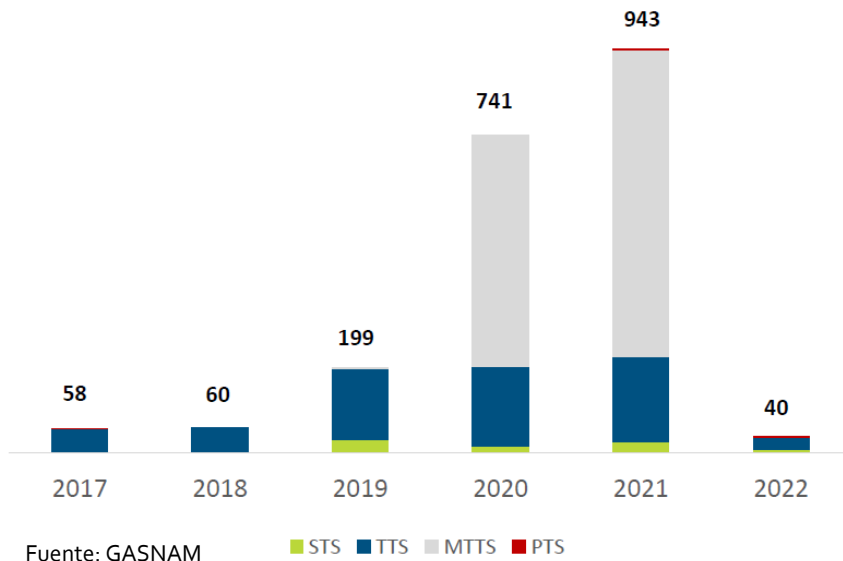
4. Key Aspects



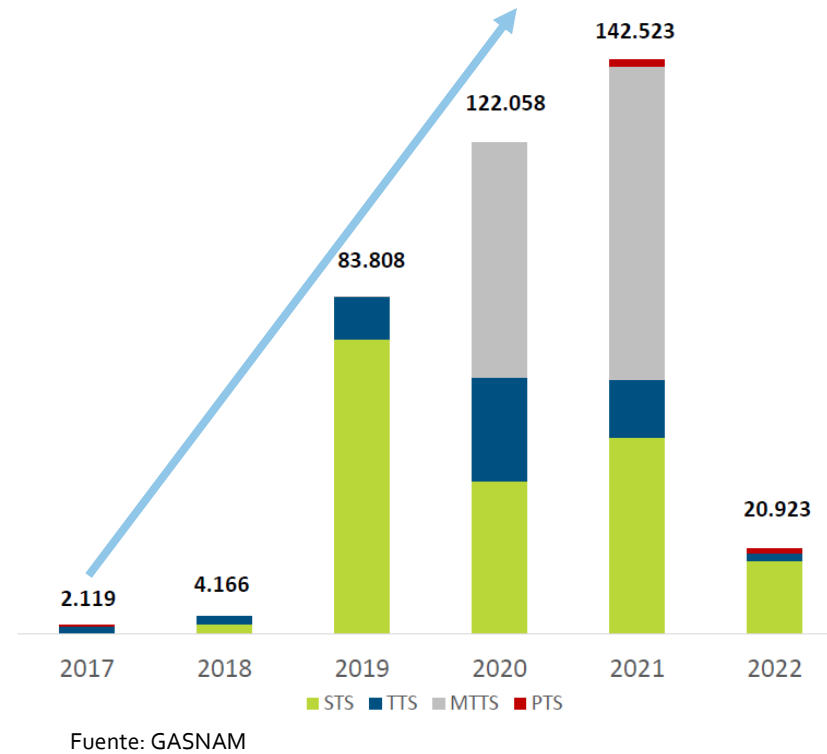
5. LNG bunkering development in Spain



LNG Bunkering operations



LNG Bunkering m³



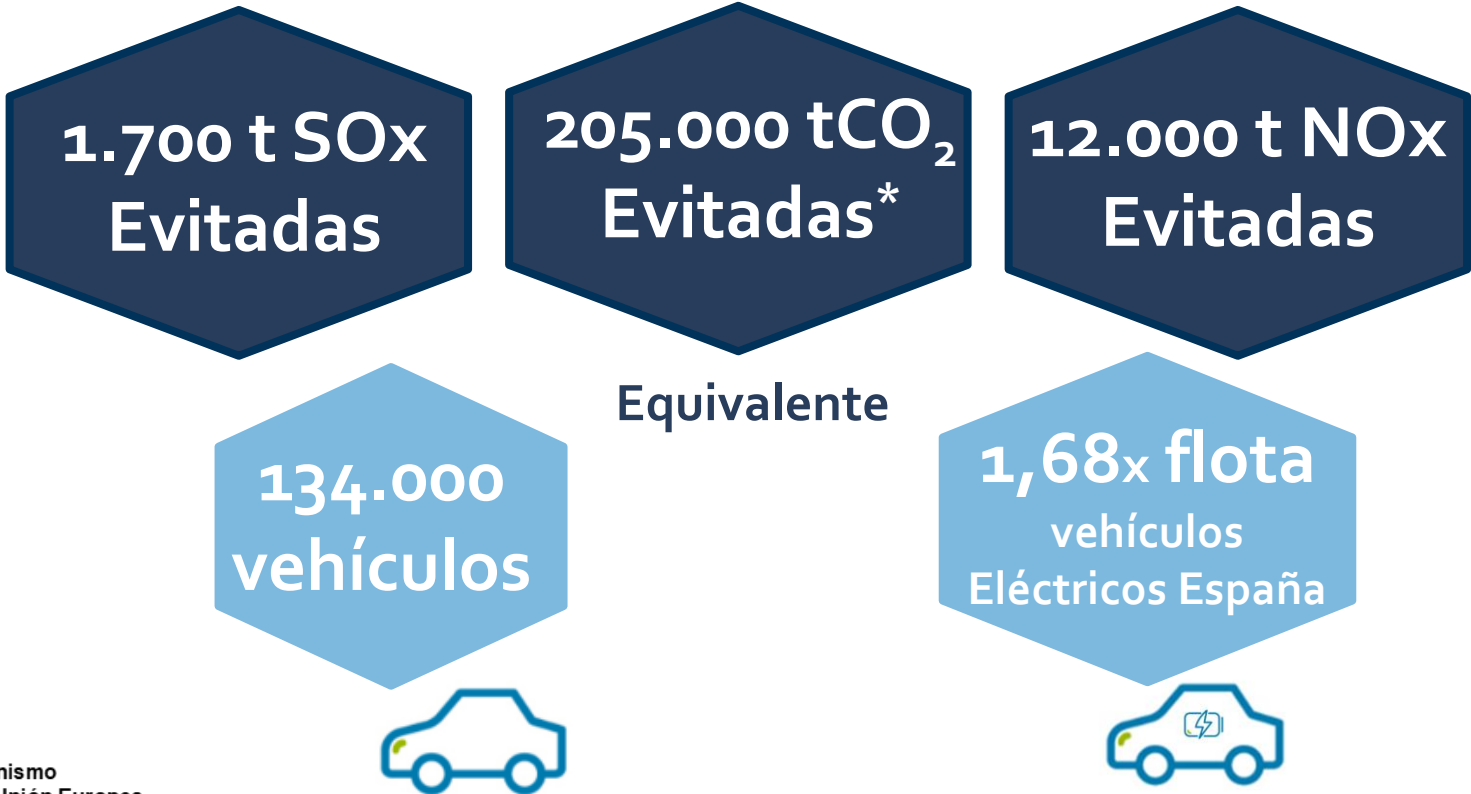
6. LNG- fuelled vessels in Spain



Vessels

Currently, there are 11 ships operating on LNG in Spanish waters on a regular basis. These ships belong to cruise companies such as Aida, Costa and P&O and Balearia shipping company, which has 9 Ro-pax ships.

Emissions avoided annually



(*)Estimated saving from vessel 1.12 tCO₂/kW

7. CORE LNGas hive and LNGHIVE2 impacts



DIRECT IMPACTS

INDIRECT IMPACTS



The HIVE project has supported a large part of the **INVESTMENT** in LNG as a marine fuel.

- 54M € public budget
- 242M € total budget
- 757 eq jobs created

- **261M €** indirect and induced expenditure
- **1,624** indirect and induced jobs
- **Multiplier 840% of public expenditure**



It has significantly **REDUCED pollutant and GHG EMISSIONS.**

- **34,000 t CO2 annual savings**
- **48.5 M€ annual savings** in external costs, including other pollutants

- **420,000 t CO2 annual savings**
- **289M € annual savings** in external costs



It has collaborated and assisted in the elaboration of the necessary **REGULATION for the implementation of LNG.**

- Compliance 2014/94
- Safety guidelines for port operation
- Emergency personnel training and shore operation

- Gas system tolls
- Homogeneity in the regulation of bunkering service
- Conscious" regulation and easy stakeholder dialogue

Muchas Gracias! Thanks!

fimpuesto@enagas.es



Puertos del Estado



Cofinanciado por el Mecanismo
«Conectar Europa» de la Unión Europea