

CCUS Potential in Greece & SE Europe

IENE Workshop

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DESFA counts 16 years of successful operation post the liberalization of natural gas market in 2007



Key Points

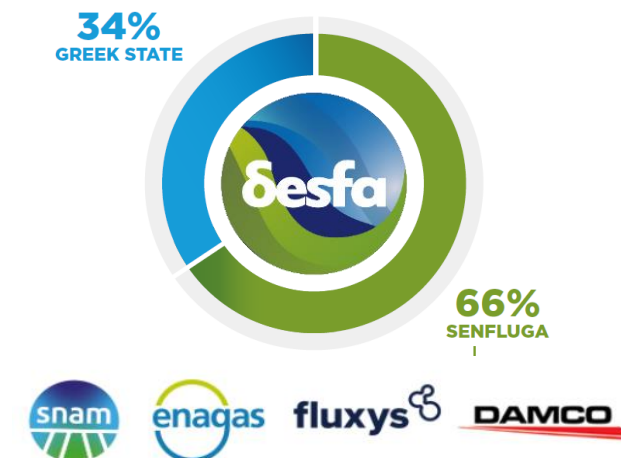
- Established in **March 2007**, DESFA owns & operates the **Greek Natural Gas System (NNGS)**, consisting of the **National Natural Gas Transmission System** & the **LNG Terminal** in the islet of **Revithoussa**
- DESFA has been certified as an **Ownership Unbundled Operator** under the **3rd EU Energy Package**, following the **completion of a privatization process on 20th December of 2018**
- DESFA operates, maintains & develops the Greek Natural Gas System in a **safe, reliable and economically efficient way**, offering:
 - **Regulated Third Party Access services** in a transparent and non-discriminatory way
 - **A range of non-regulated services** to a number of national & international clients
- DESFA has the **necessary know-how, highly trained staff and the proper equipment** to provide **high-level operation and maintenance services for LNG storage and gasification facilities**

Key Milestones

2007	2014	2018
<ul style="list-style-type: none"> • Establishment of DESFA 	<ul style="list-style-type: none"> • Certification of DESFA as Independent Transmission Operator under the 3rd EU Energy Package 	<ul style="list-style-type: none"> • Completion of privatization process & certification as Ownership Unbundled Operator • Participation as a shareholder (7%) in the Hellenic Energy Exchange (HEEx)

Note:¹72% of total revenues regard regulated activity

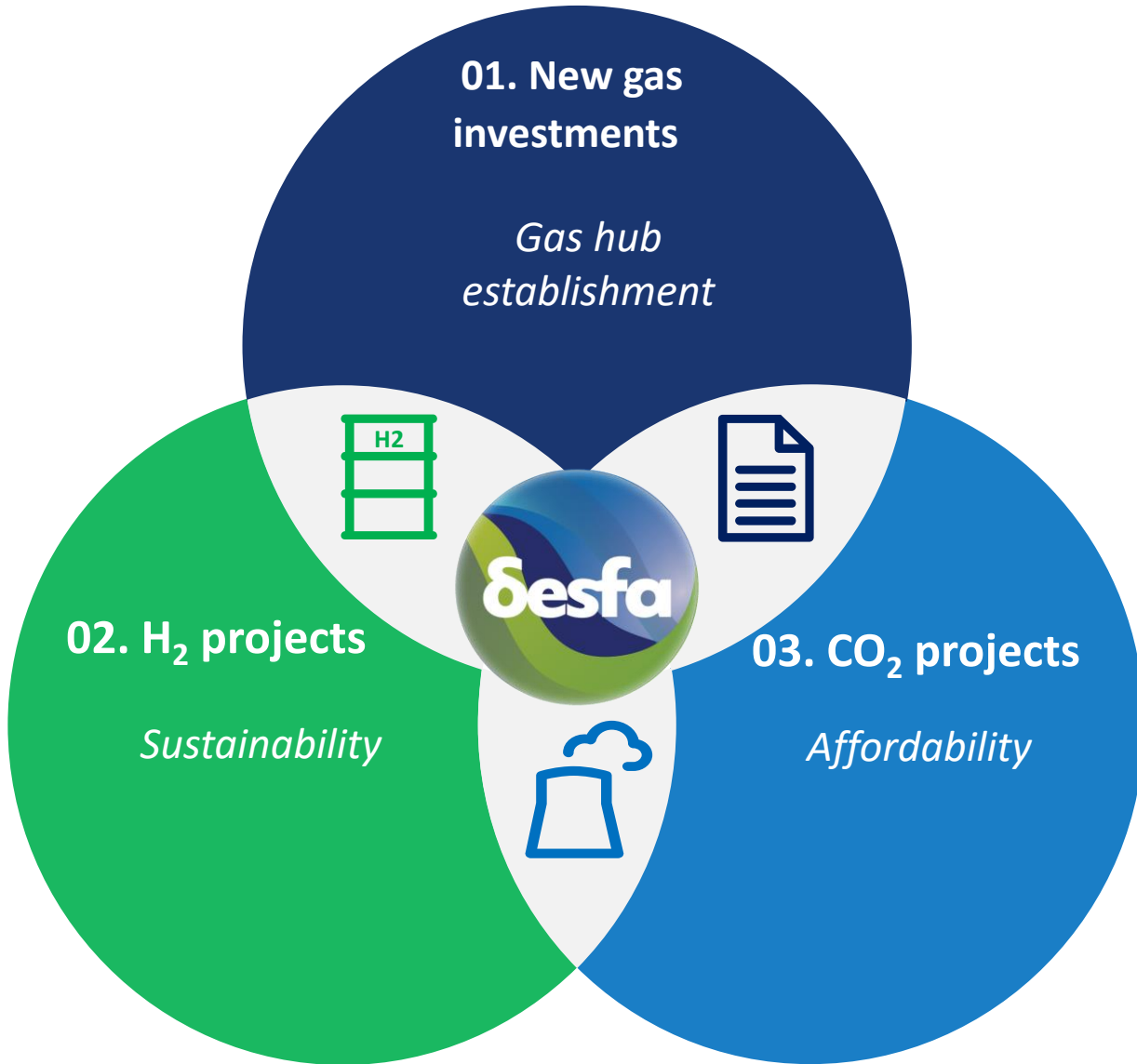
Shareholders' Structure



Key metrics '22

1		Total Demand	86 TWh
2		NG Domestic Consumption	57 TWh
3		Total RAB	730 €mn
4		Total Revenues ¹	278 €mn

DESFA's focuses on three main pillars to address the energy transition ambition as well as to support EU succeeding in its climate targets



01

Through **new (100% H₂ ready) gas investments** in Greek transmission system and in line with its **extroverted activity**, DESFA secure the supply of NG in SEE and central EU

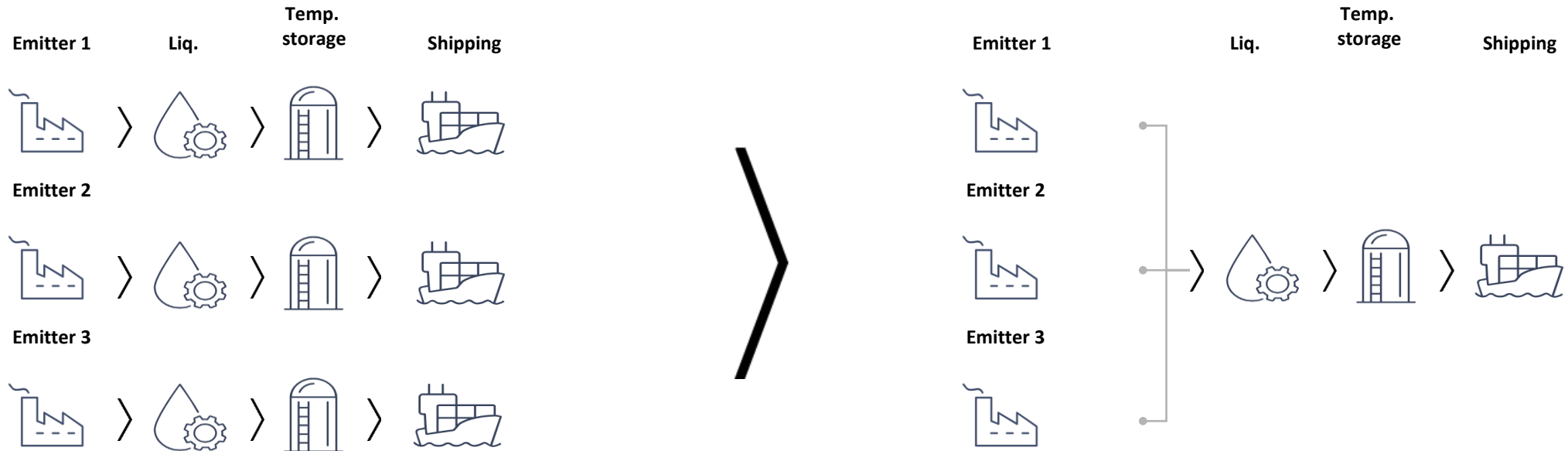
02

Based on **EU targets**, the Greek TSO has set as one of its **main strategic goals** the **development of H₂ sector in Greece** through the assessment of **Smart Gas Grid and H₂ pipelines projects**

03

DESFA focuses on being **integral part** and constituting a **vital role in the CCUS business in Greece**, activated in the **midstream** part of the value chain

Our view focuses on the provision of an aggregated service and not to standalone initiatives, leveraging TSO's infrastructures capabilities



Aggregate service benefits

- Aggregated scenario considers **a single export facility** located barycentrically with respect to industrial plants
- Single large-scale terminal **optimises unit cost** and once in place also offers a decarbonisation solution to small and medium size industries by providing **easy access to CO₂ network**
- Much **greater opportunity to access EU and National level subsidies** along the chain
- **Accelerated licensing** and permitting application and process

Main benefits from CCUS

- Strengthen the Energy Transition pathway, decarbonizing part of Greek industrial emission by 2030
- Support Greek Industry to stay in country by enhancing competitiveness in Green Products
- Green Job Creation for construction, engineering and innovation with opportunity for Local Labour Upskilling

The key outcomes of IENE's study can be categorized under 5 main groups

Timing

- ✓ CCUS is among the most **mature and direct technologies** that can effectively contribute to both decarbonization and circular economy development
- ✓ It is gaining constantly **increasing political momentum** at EU level

Topology

- ✓ Even though Greek industry is relatively small, the critical mass of emissions exists, and the fact that **key emitters are located within clusters**, enhances the **CCUS hub development potential**

Technology

- ✓ CO₂ treatment and **transportation technologies exist for a long period**, reducing the technological barriers for the implementation of CCUS projects
- ✓ **CO₂ pipelines** for short distances in combination with **liquid CO₂ carriers** (via sea for longer ones), appear to be the most suitable and **cost-effective transportation methods**

Synergies

- ✓ CO₂ capture provides **synergies with other ways of mitigating climate change** such as **blue hydrogen** and **synthetic fuels production**

Challenges

- ✓ The **absence of a harmonized legislative framework** is critical for the deployment of the market but developments both at EU and national level can be anticipated
- ✓ **Funding support schemes seem to be insufficient at the moment** considering the level of the competition and the number of the under development CCUS projects

**Thank you for your
attention**

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