



## Greece: a gateway for gas in SE Europe

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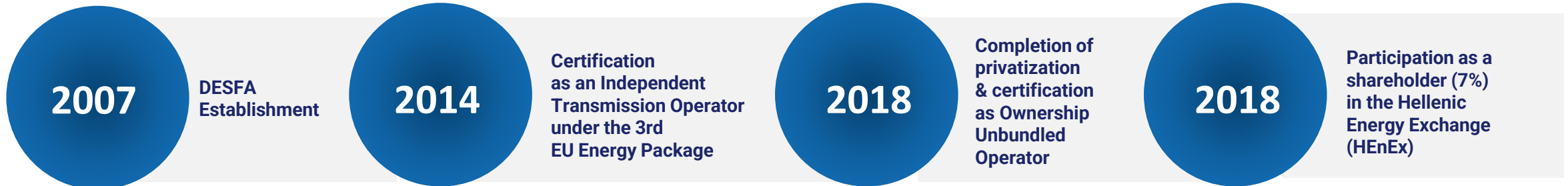
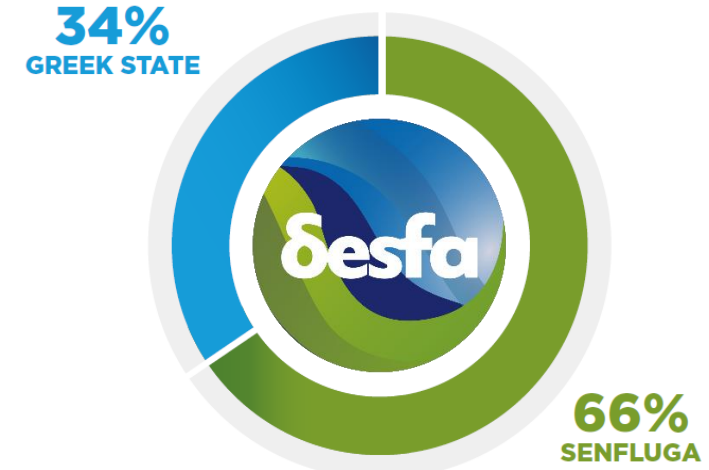
Market Development Manager, DESFA  
Member of the BoD, Hellenic Energy Exchange

ETCSEE | 15.06.2022

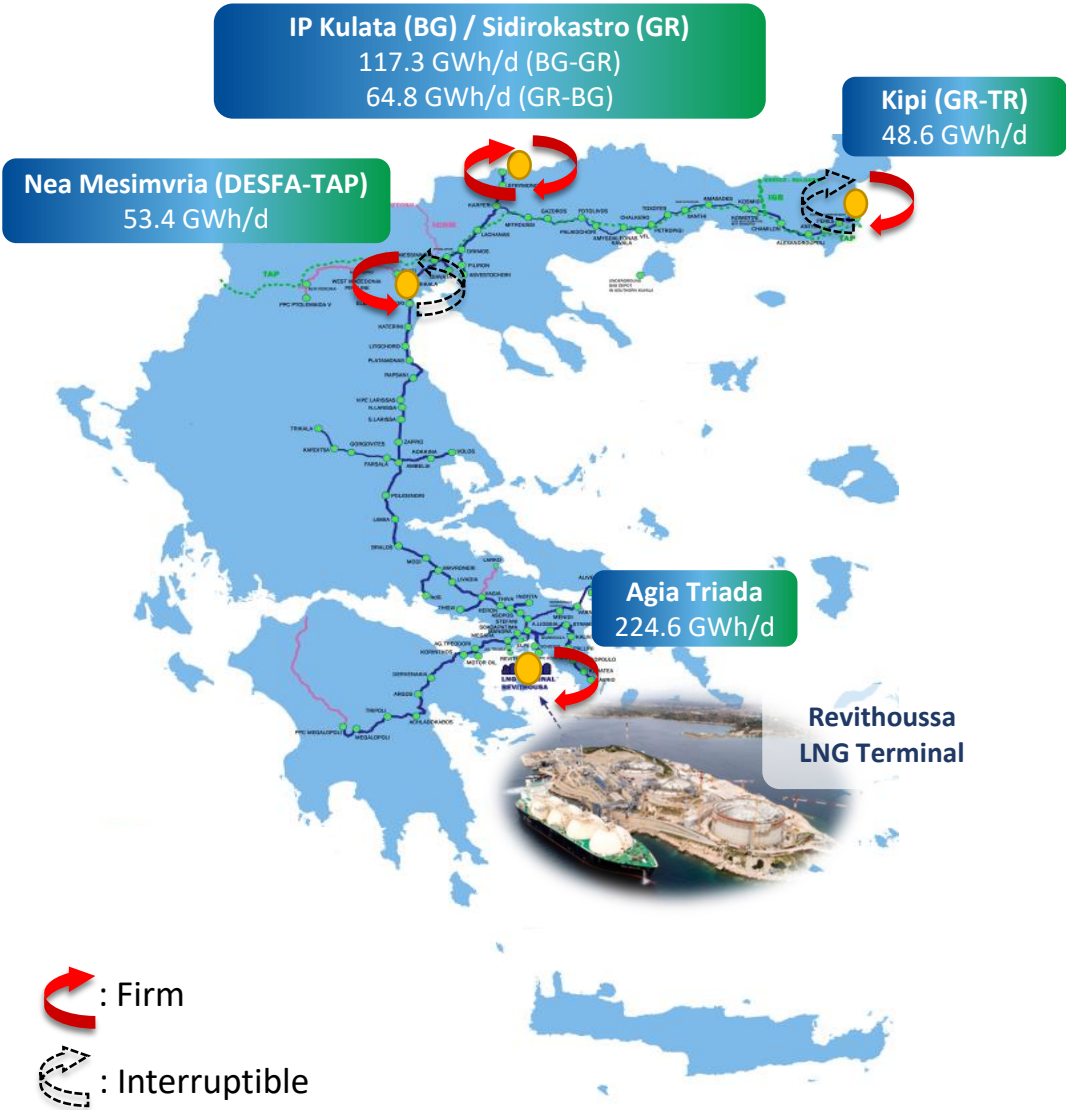
## DESFA counts 15 years of successful operation...

- Established in **March 2007**, DESFA owns & operates the **Greek Natural Gas System (NNGS)**, which consists 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 **December 20th 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

## Shareholders Structure



...managing a high-quality network & state-of-the-art LNG facility...

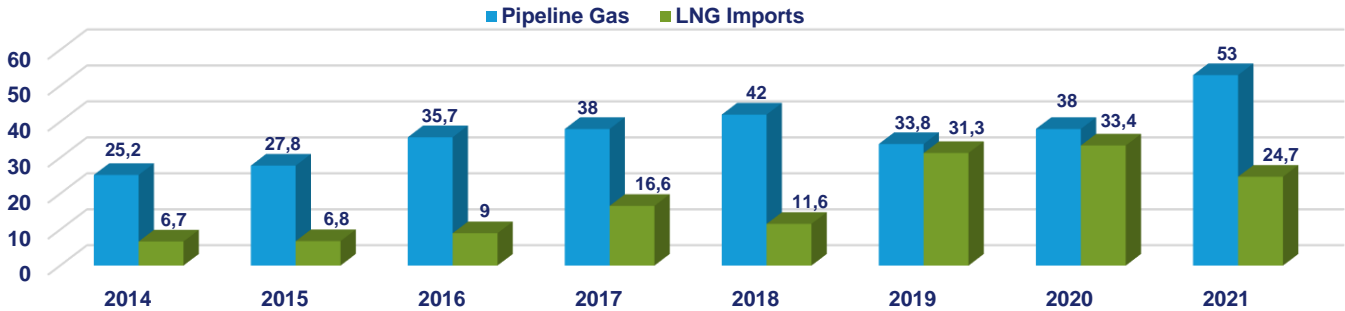


Firm Import Capacity:  
**394 GWh/d or 144 TWh/y**  
(12,5 bcma)

Firm Export Capacity (GR-BG):  
**65 GWh/d or 24 TWh/y**  
(2,0 bcma)

- 1,466 km**  
High Pressure Pipelines
- 6**  
Operation & Maintenance Centers
- 1 + 1**  
LNG Storage & Regasification Terminal Stations in Revithoussa & Kuwait
- 22**  
Exit Points to Distribution Systems
- 4**  
Interconnection Points
- 2**  
Dispatch Centers
- 53**  
Metering & Regulating Stations
- 1**  
Compression Station

Evolution of Natural Gas Imports 2014-2021 (TWh)



...with upgrades and expansions making Greece an energy gateway to SE Europe



DESFA's 10YDP 2022-2031 - €830 Mn. within the next 10-year period

1	HP Pipeline to Western Macedonia Shareholders: DESFA	2	HP Pipeline to Western Greece Shareholders: DESFA	3	Small-Scale LNG & TL Station Shareholders: DESFA	4	Interconnector Greece-North Macedonia Shareholders: DESFA	5	Supply of NG to Ioannina Shareholders: DESFA
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Participations

6	FSRU Alexandroupolis Shareholders: Gastrade
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Other Developers

7	Dioriga Gas FSRU Shareholders: Motor Oil 100%	8	Argo FSRU Shareholders: Power Globe 100%	9	Interconnector Greece-Bulgaria Shareholders: DEPA, Edison, BEH	10	TAP Shareholders: BP, Socar, Snam, Fluxys, Enagás, Axpo
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Tenders

11	UGS South Kavala DESFA has expressed interest to participate in the tender
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International

12	Operation & Maintenance of KIPIC LNG Terminal DESFA
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New "Repower EU" projects

Installation of a Floating Storage Unit in Revithoussa Upgrade of Compressor Station in Komotini Upgrade of the National Natural Gas Transmission System
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# Russian gas supply disruption challenge: The role of Greece for Balkans supply

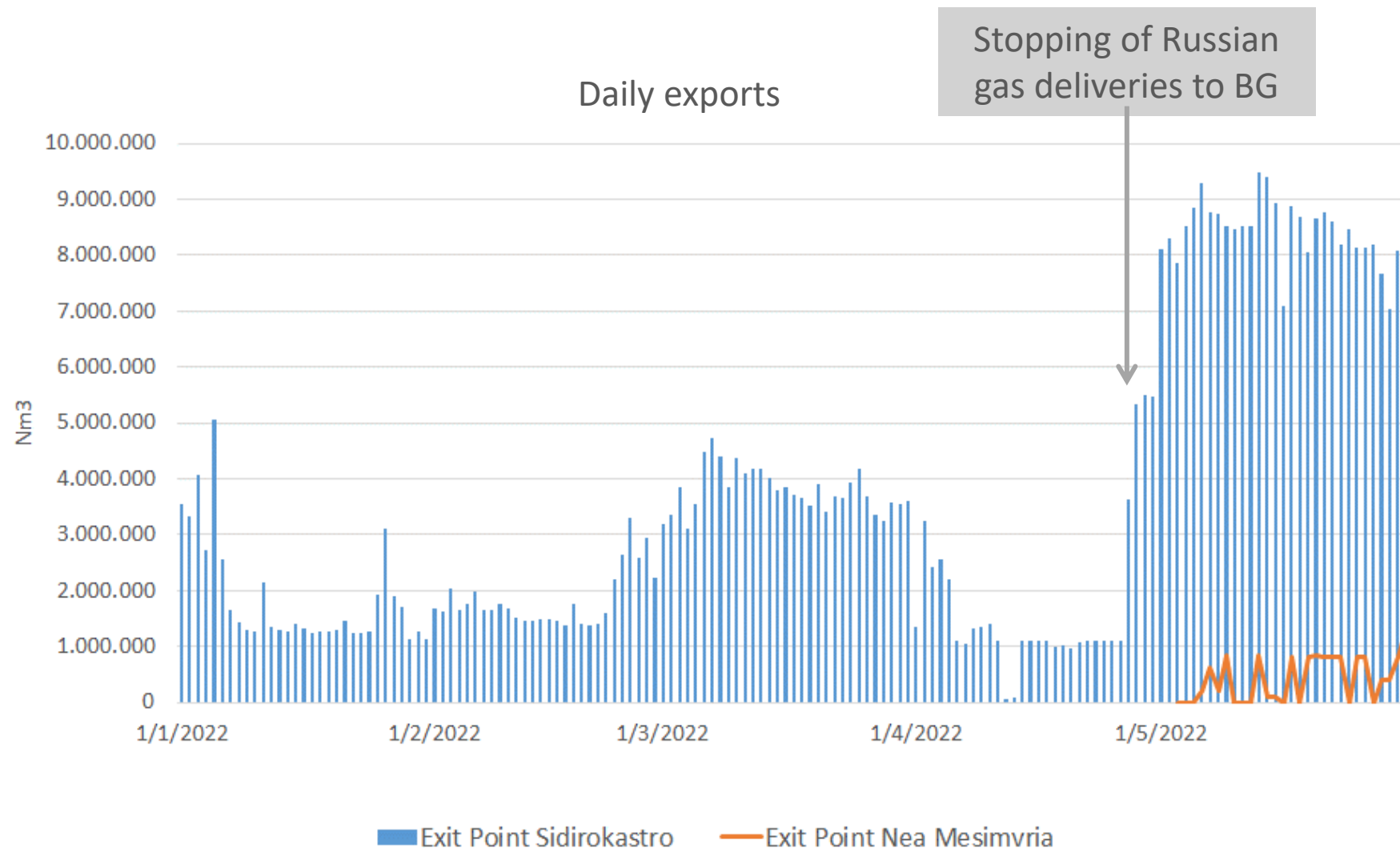


Greece has become a key supply source for BG after the interruption of Russian gas

The amount of exports in the first 5 months of 2022 equaled the average annual export quantity of previous years...

...mostly coming through LNG imports

Exports also started at the TAP/DESFA IP



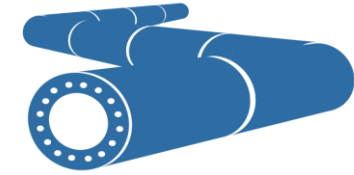


# Cross-border trading has been supported by a modern, user-friendly access framework...



## Access to transmission system

- Capacity auctions at PRISMA: TAP and Turkey IPs (competing capacity)
- Capacity auctions at RBP: Bulgarian IP
- Additional and interruptible capacity at all IPs in both directions (as applicable)



## An innovative framework for access to the terminal

- Transparency
- Maximum allocation efficiency
- Visibility
- Flexibility

A. Annual 5-year rolling auctions for booking standard slots and optimize bundled regasification/transmission capacity

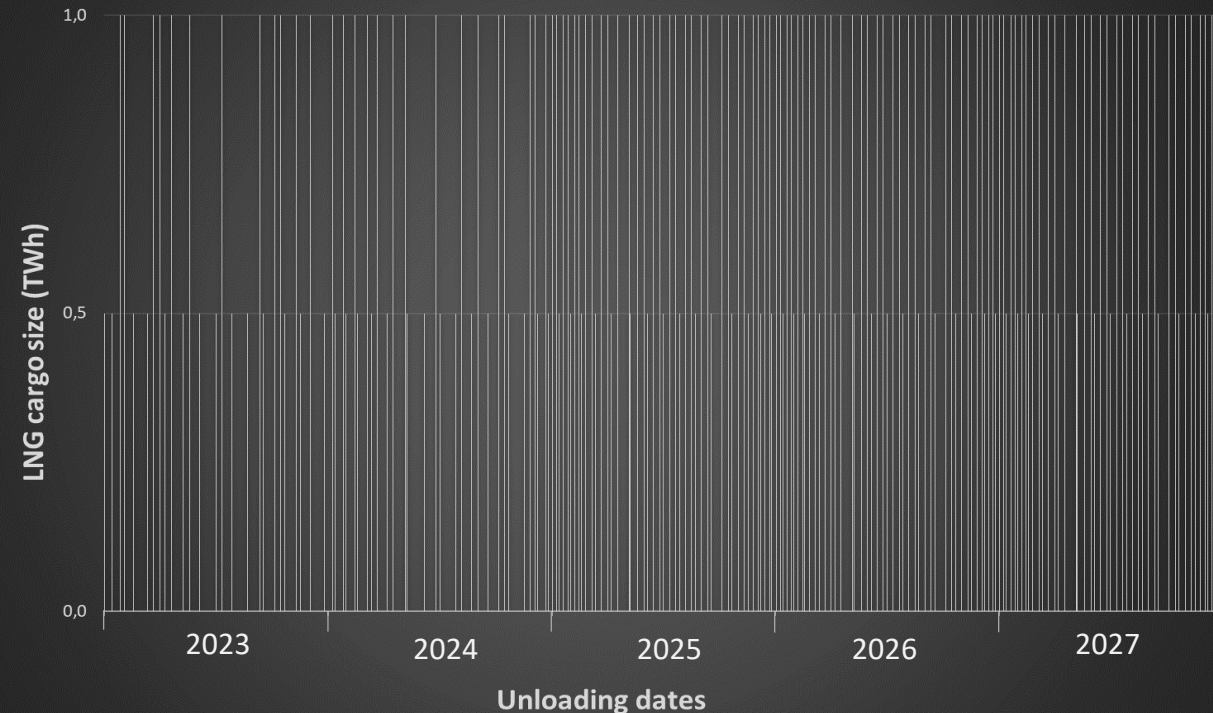
- Single slots
- Strips of slots

B. Further possibility of:

- Booking extra slots on a FCFS basis all year round
- Non-scheduled cargo unloadings at very short-term

C. Secondary market (slots, storage and bundled regas/transmission capacity, LNG quantities)

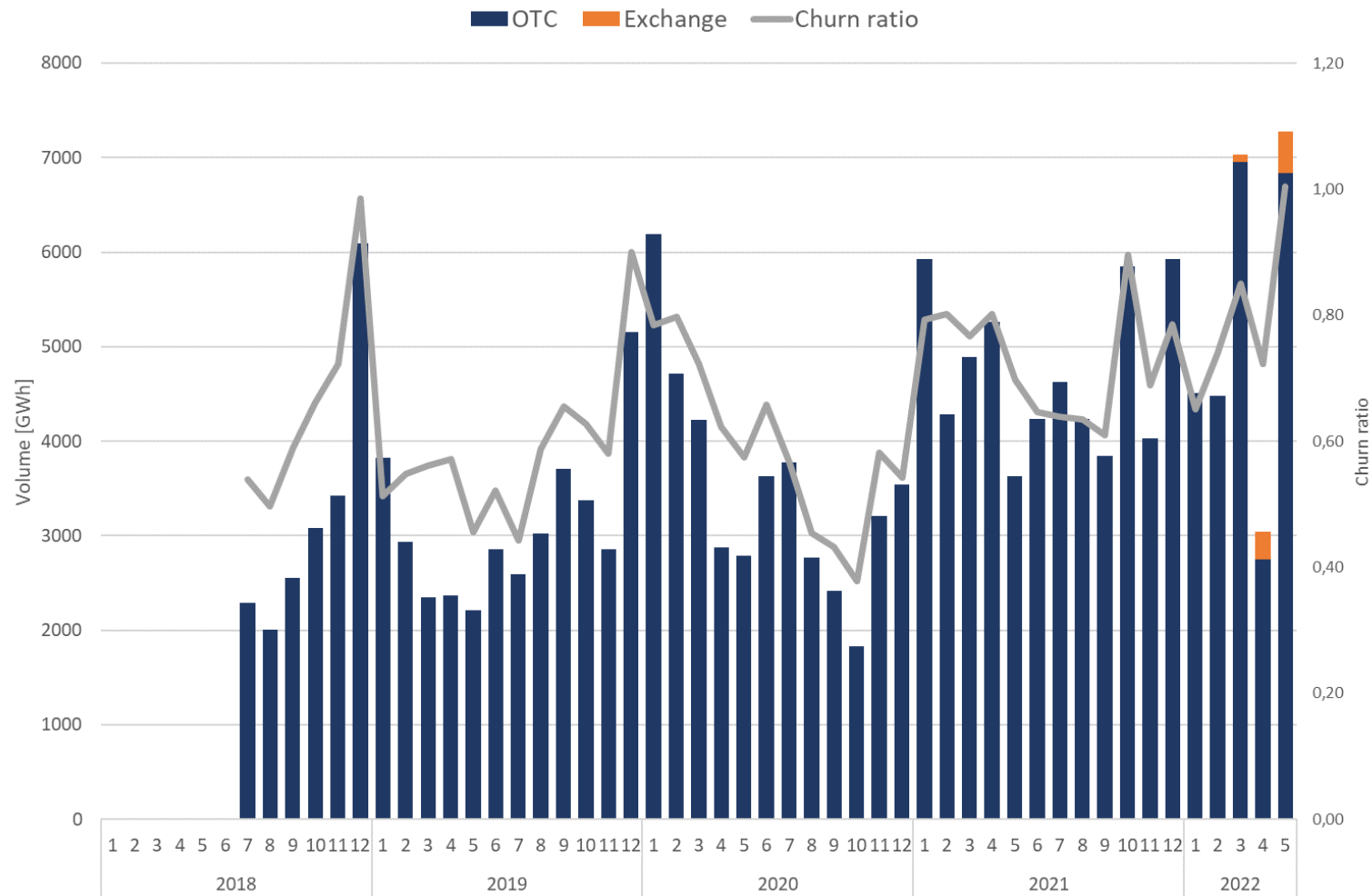
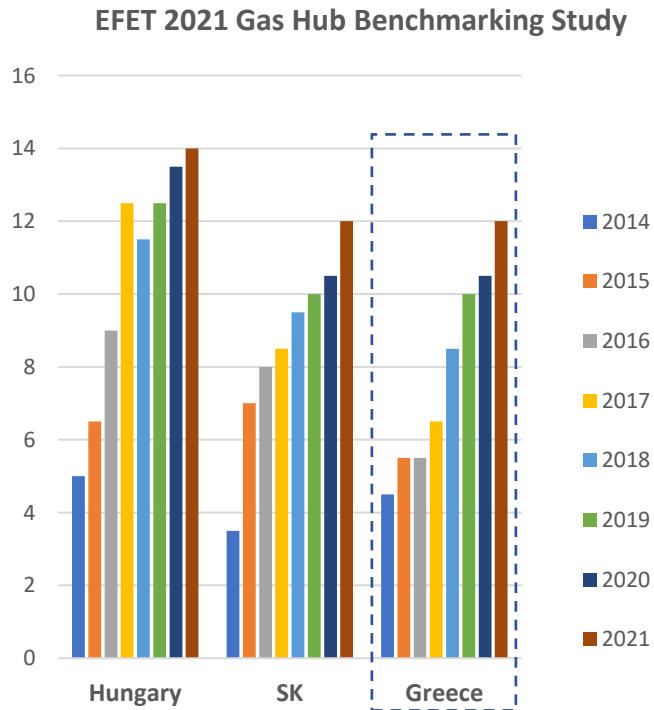
200 slots to be offered in the Q3 2022 auctions for 2023-2027



# ...and suitable trading arrangements built around the Hellenic VTP...



The Hellenic VTP has been operational since mid 2018, with an ever-increasing number of transactions and trading volumes and continuous improvement of the trading environment



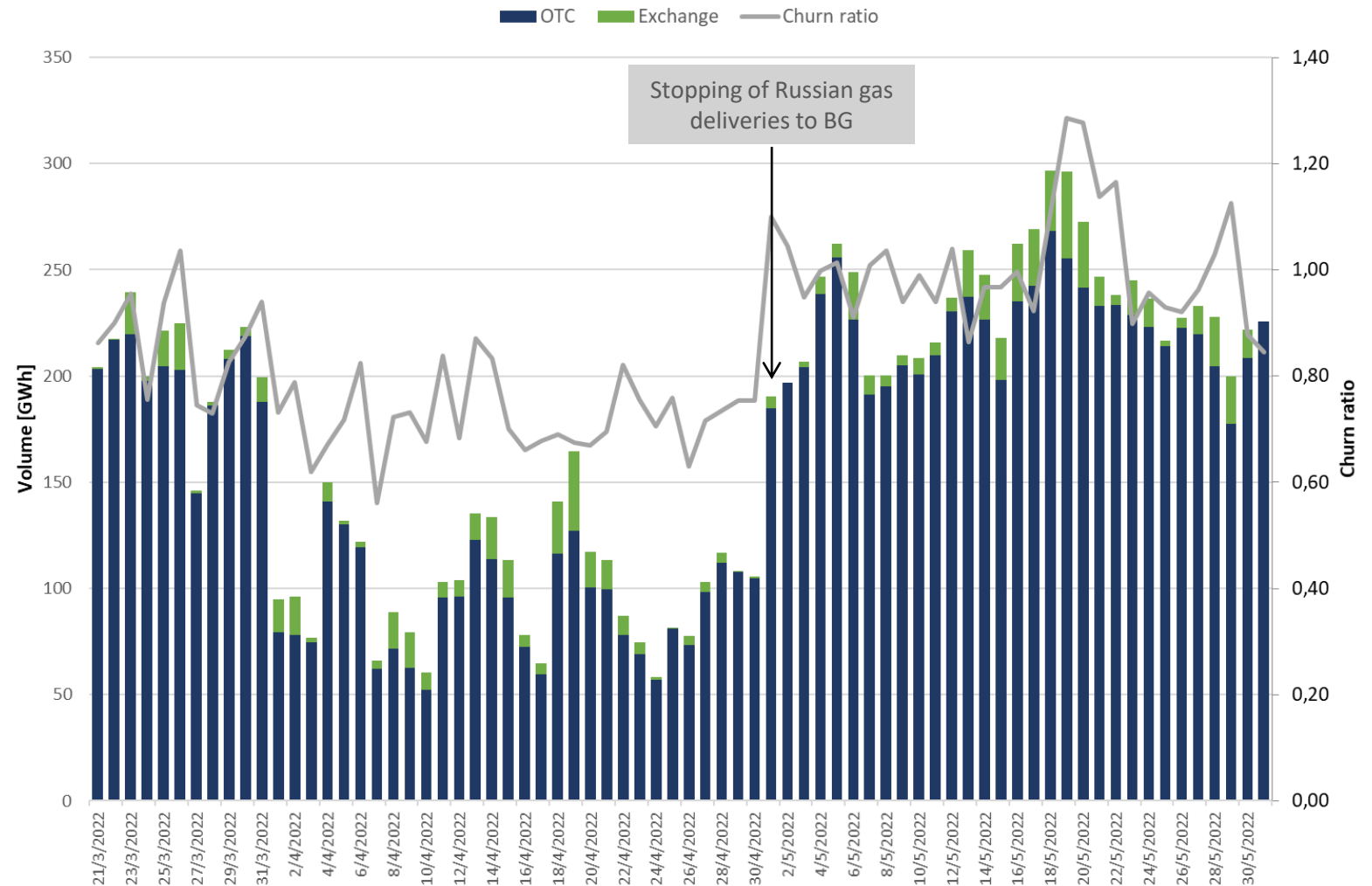
...complemented by the Hellenic Energy Exchange's trading/clearing system...



Trading Platform go-live:  
21 March 2022

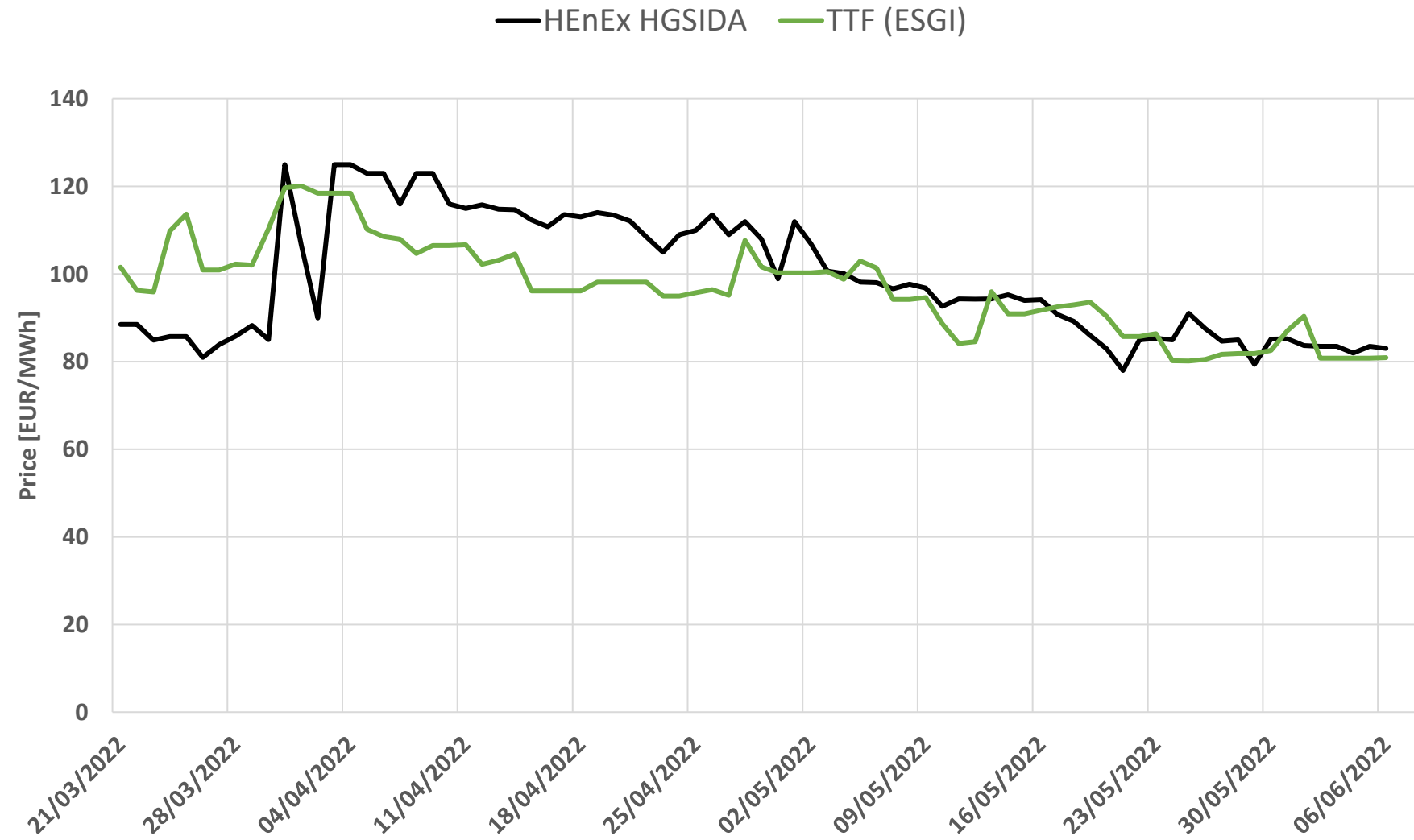


**EnEx**  
Energy Exchange Group





...providing -for the first time- local, short-term price signals



# Expanding the infrastructure limits: DESFA Repower EU Projects



1

## Installation of a FSU in Revithoussa

Installation of a Floating Storage Unit (FSU) to the Revithoussa LNG terminal increasing the total available storage capacity from 225.000 m<sup>3</sup> to more than 380.000 m<sup>3</sup>

2

## Upgrade of Compressor Station in Komotini (expansion of existing project)

Upgrade of the gas Compressor Station (CS) at Komotini to fully exploit the interconnection between DESFA's gas transmission System and IGB pipeline as well as the future interconnection with Alexandroupolis FSRU.

3

## Upgrade of the National Natural Gas Transmission System (NNGTS)

Upgrade of the NNGTS through parallel sections of pipelines, the upgrade of existing Compressor Station and new CSs.

The project has been included in the list of ENTSOE's TYNDP 2022 projects as 100% H2 ready.



## Projects Benefits

- Enables transportation of anticipated increased natural gas flows through the Greek Gas System & neighboring countries, currently restricted due to the existing technical constraints of the system.
- Enhanced security of gas supply and diversifying the entry routes to Greece and the whole SEE region - increased capability of the Greek gas System to receive gas quantities from the Eastern entry points
- Revithoussa will contribute to gas supply not only as a peak shaving facility, but as a baseload facility maximizing terminal's throughput
- The Greek gas transmission System will be able to supply neighboring countries with quantities up to the maximum capacity of IGB (5bcm/y vs. current 3bcm/y)

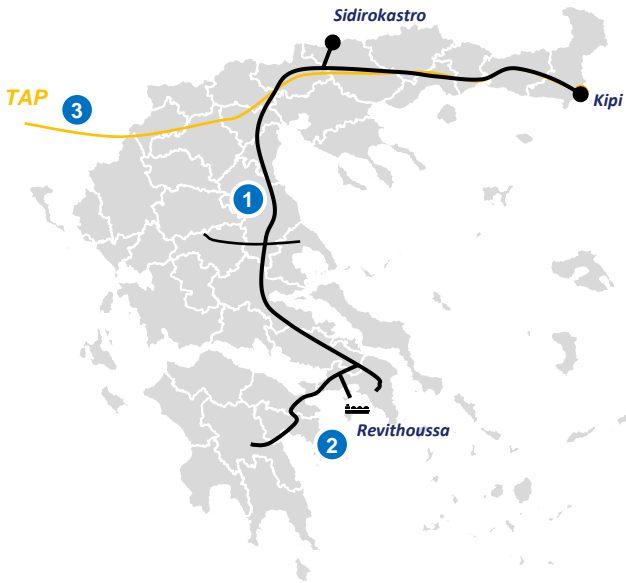
# A glimpse to the future: A complete methane/hydrogen dual system



## Gas network phased expansion

### 2020 state: dedicated to Natural Gas

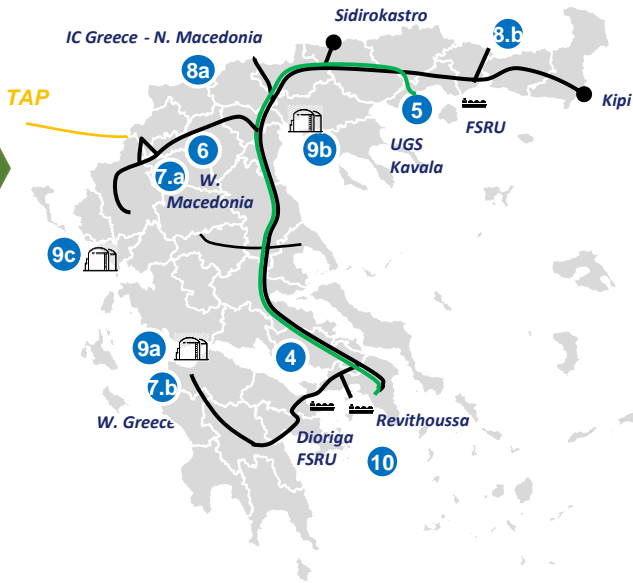
- 1 NG pipeline to serve power gen. and final consumption
- 2 LNG terminal active in Revithoussa
- 3 TAP connection for NG with other European networks



Hydrogen Pipeline: 0km

### 2030 state: expansion of NG + H2 line

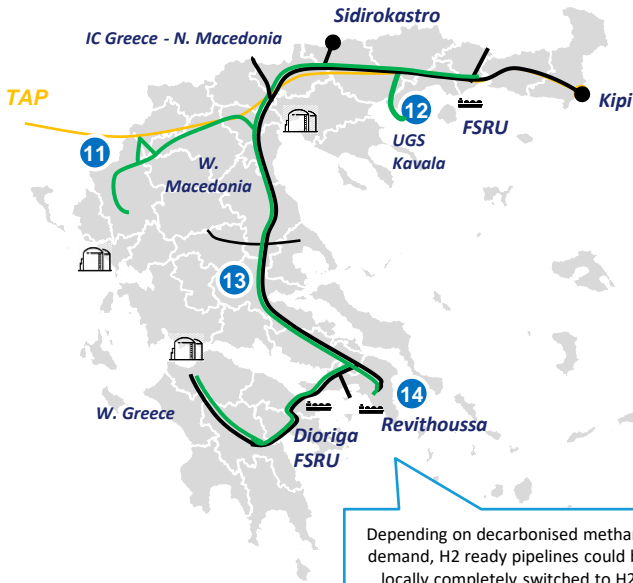
- 4 Dedicated H2 pipeline for industrial sites and final consumers
- 5 UGS for Methane potentially convertible to H2
- 6 Injection of H2 from White Dragon in dedicated pipeline
- 7 W. Macedonia (a) and W. Greece (b) NG branch (H2 ready)<sup>2</sup>
- 8 NG exit points in N. Macedonia (a) and IGB (b)
- 9 LNG Depot in Patras (a), Thessaloniki (b) and Igoumenitsa (c)
- 10 FSRU in Doriga



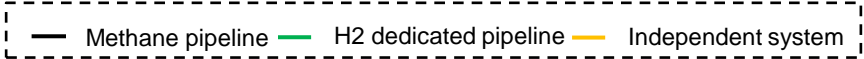
Hydrogen Pipeline: 600km

### 2050 Final state: dual system parallel

- 11 Connection for Hydrogen Export through TAP repurposing
- 12 Connection to UGS for H2 seasonal system balance
- 13 Completion of parallel Hydrogen network
- 14 Revithoussa LNG Terminal switched from gasification to liquefaction plant



Hydrogen Pipeline: 2,000km





Thank you

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[www.desfa.gr](http://www.desfa.gr)