POWER & GAS SUPPLY FORUM | Tuesday 06 April 2026



The challenge of safeguarding the security of natural gas supply:

The role of long-term underground gas storage as a facilitator of the Vertical Corridor

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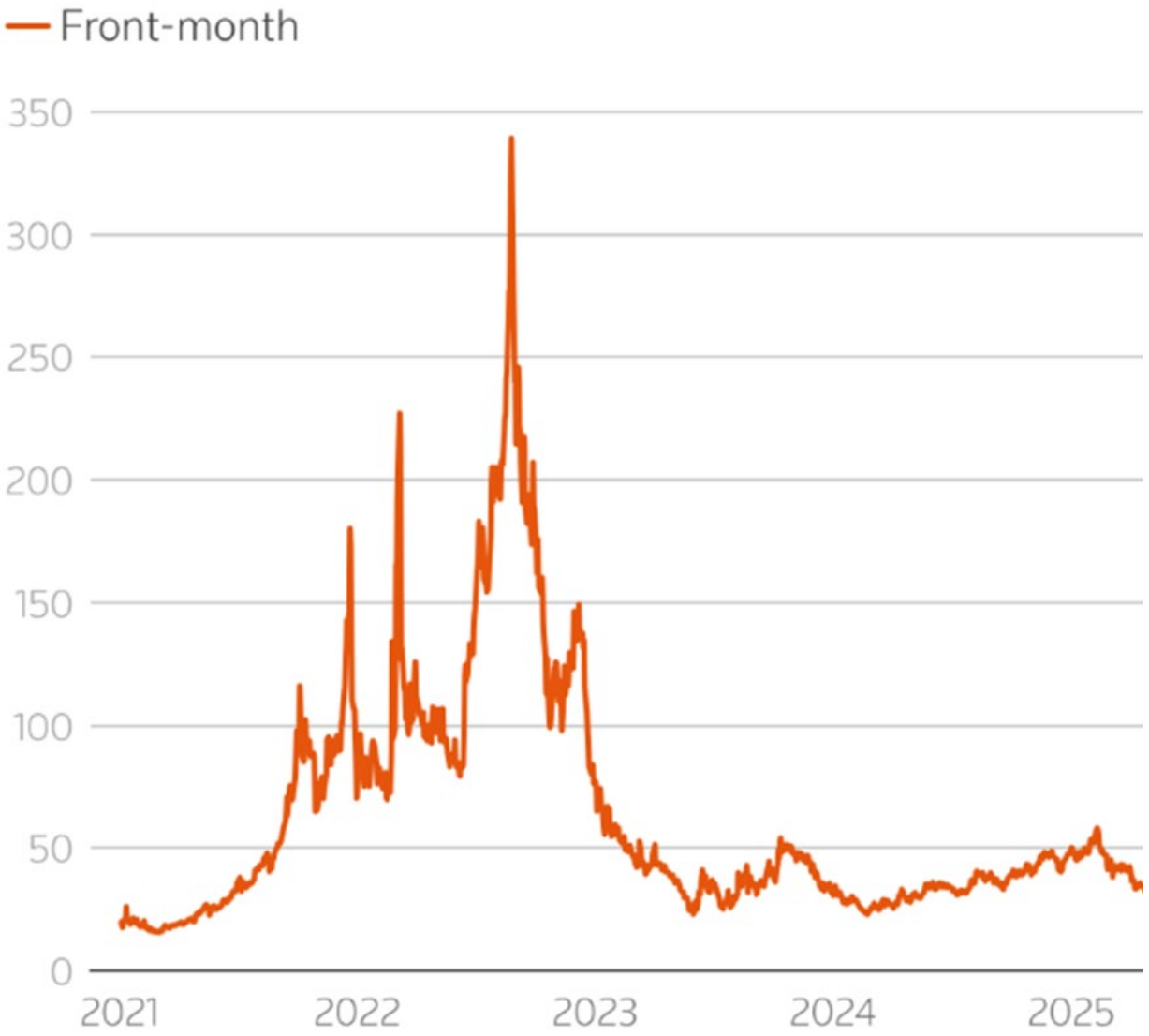
HERON ENERGY



Prices in euros per megawatt hour (MWh)

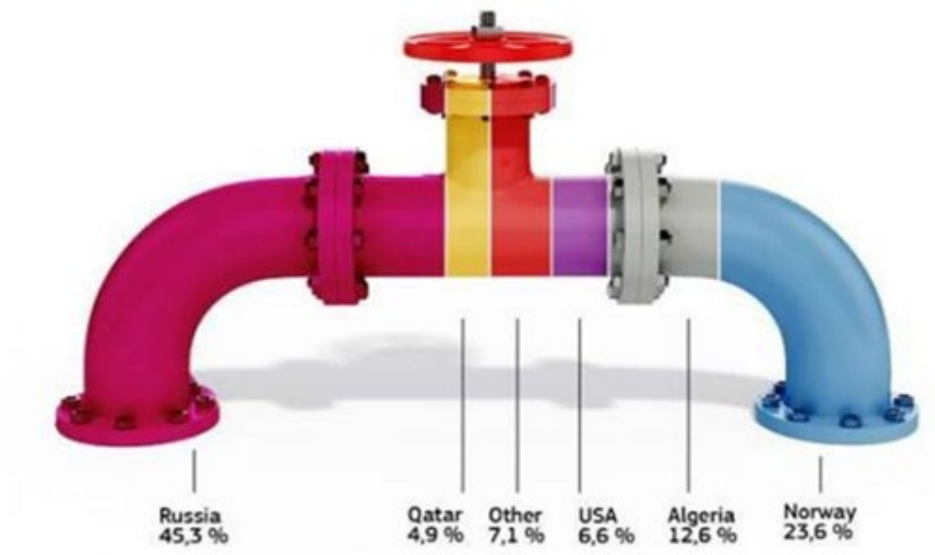
Source: Intercontinental Exchange/LSEG | Nora Buli



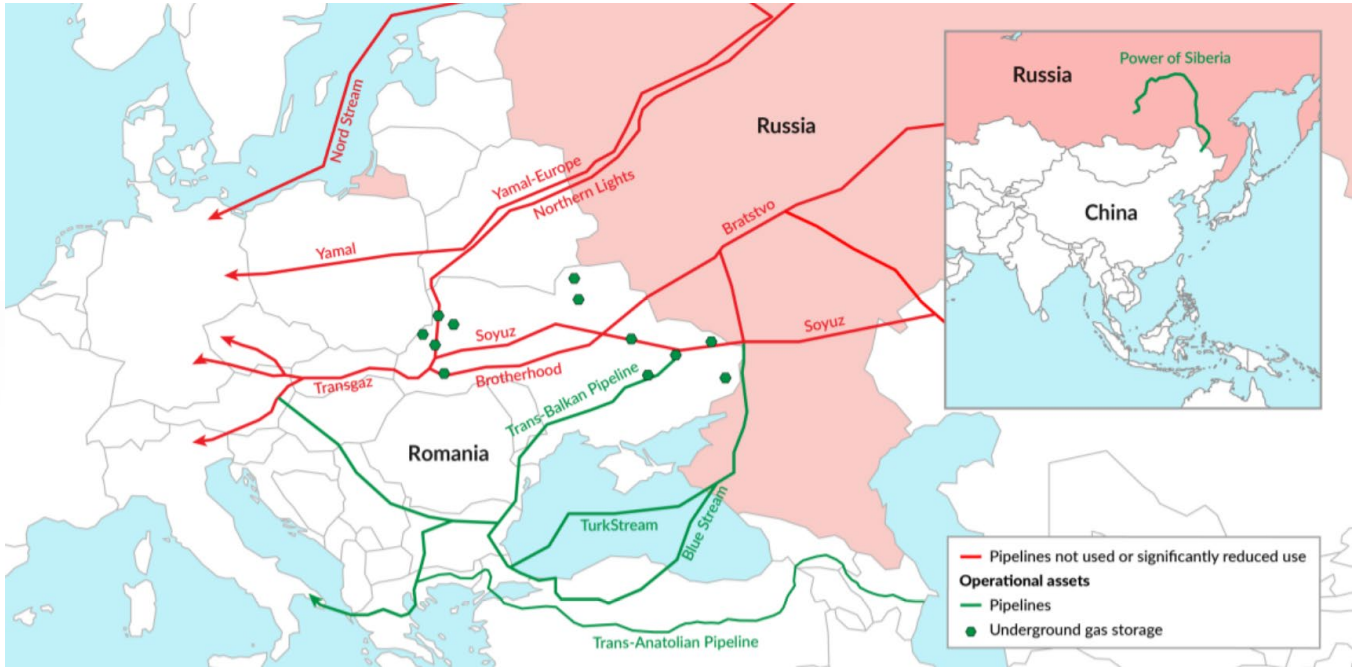


EU ban of Russian Gas Imports by 2027

Share in EU natural gas imports, 2021



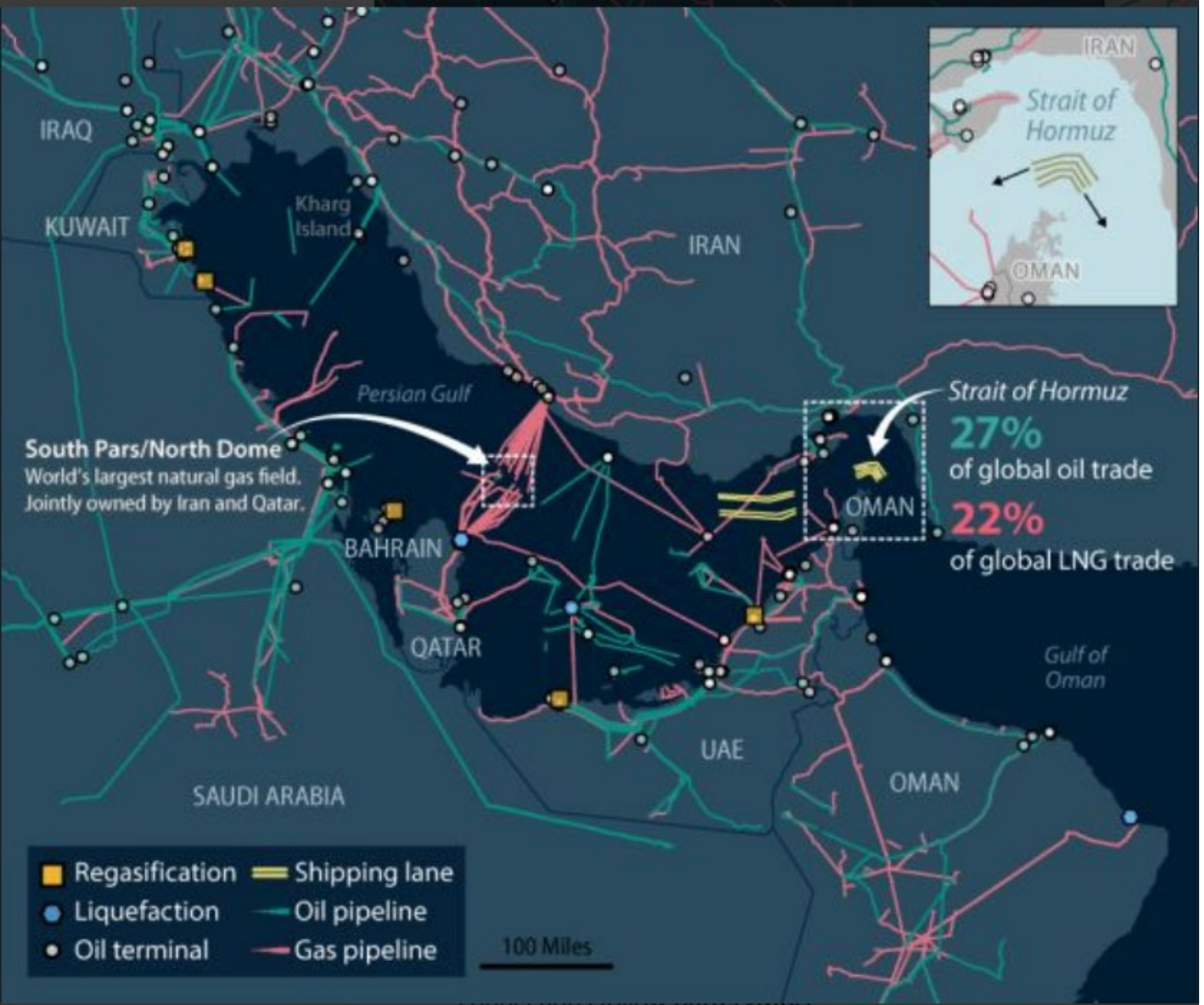
Source: European Commission



EU gas consumption

(bcm)	2015	2016	2017	2018	2019	2020
EU - 27 countries (from 2020)	361.8	382.0	407.6	399.7	412.2	399.6

Info...



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Strait of Hormuz:

- ❑ 27% of global oil trade
- ❑ 22% of global LNG trade

Vertical Corridor, a strategic natural gas pipeline network connecting Greece with Southeastern and Central Europe

The Vertical Gas Corridor is unleashing CSEE's full market potential

Key interconnection points and available bundled capacity products along the Vertical Gas Corridor

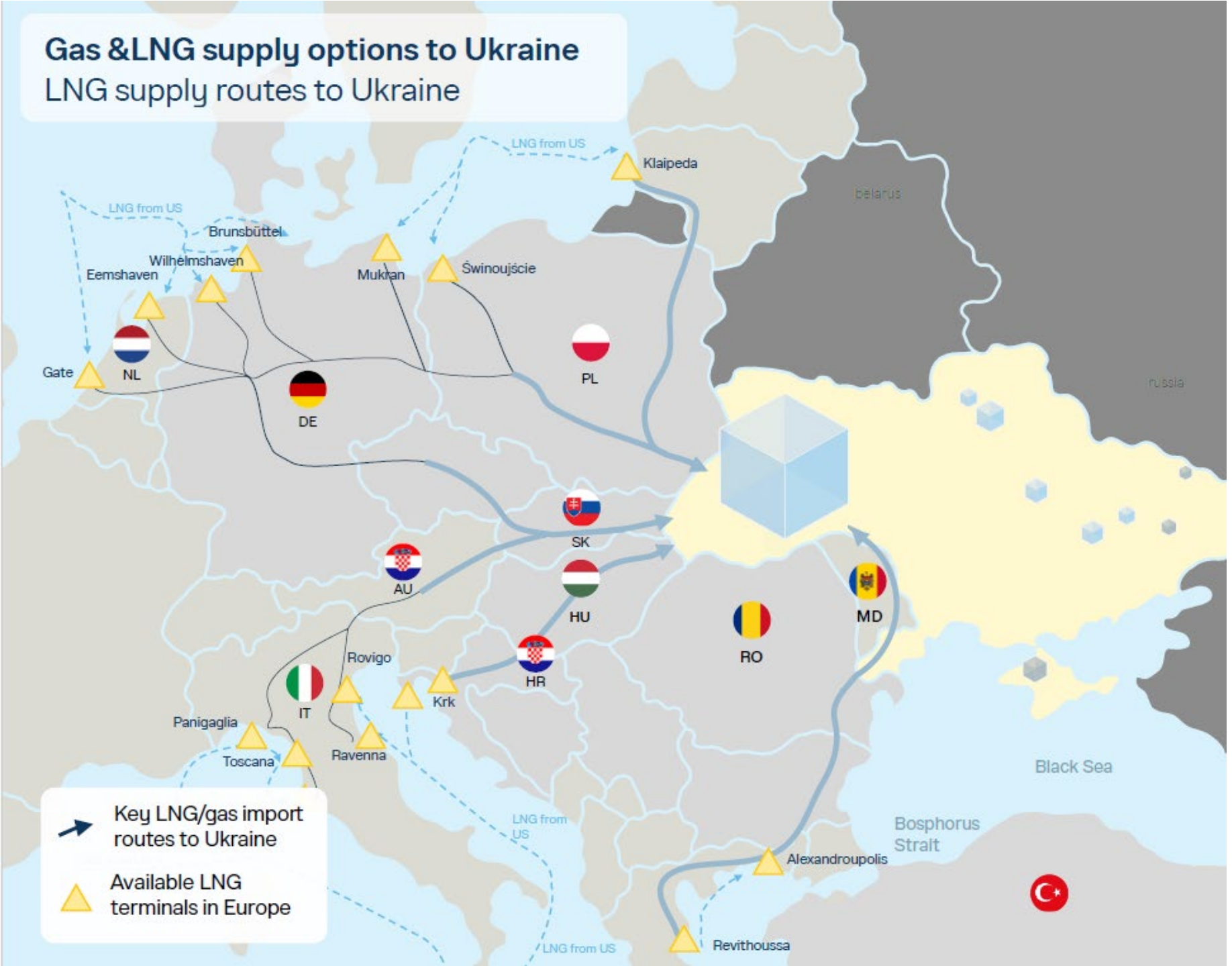


Route 1
Kulata/Sidirokastro → Negru voda 1/Kardam → Isaccea/Orlovka → Kaushany → Grebenyky

Route 2
Alexandroupolis LNG → Komotini (IGB) → Stara Zagora → Negru Voda 1 / Kardam → Isaccea 1 / Orlovka → Kaushany → Grebenyky

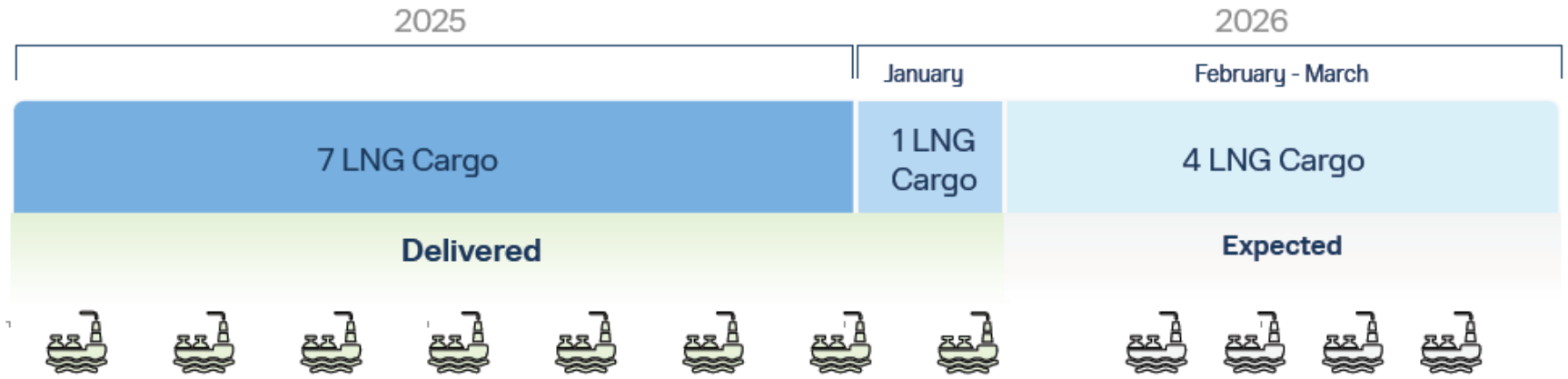
Route 3
Komotini (IGB entry from TAP) → Stara Zagora → Negru Voda 1 / Kardam → Isaccea 1 / Orlovka → Kaushany → Grebenyky

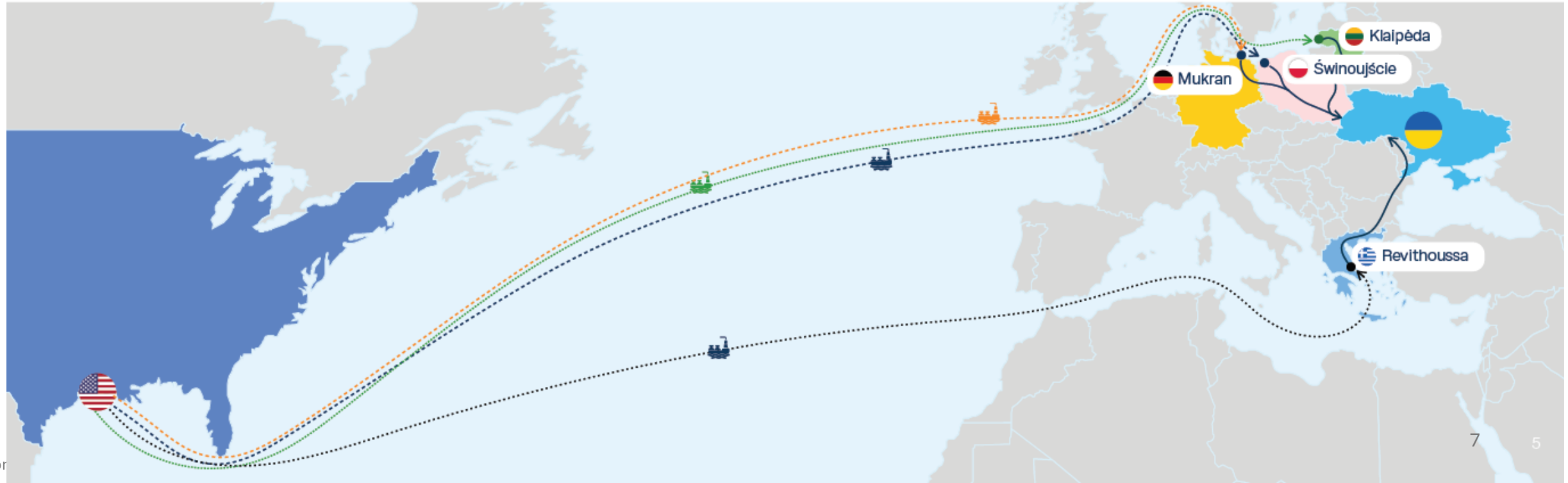
Information Classified as General



Alternatives of Vertical Corridor in the supply of Ukraine and SE Europe

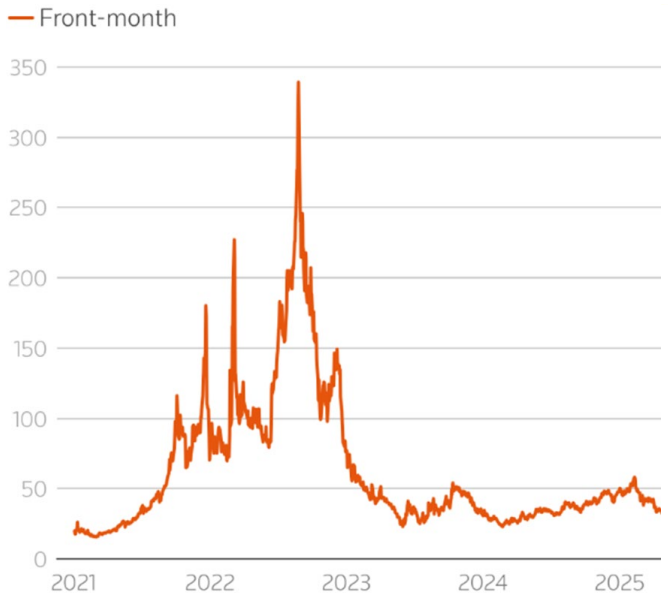
LNG supply in Ukraine via Greece and other EU import terminals





Underground/Long term gas storage is the pillar against every energy crises





Prices in euros per megawatt hour (MWh)

Source: Intercontinental Exchange/LSEG | Nora Buli

MARCH **2022**

Gas storage contributes to security of supply in Europe, in particular in case of strong demand or supply disruptions during winter.



Gas storage typically supplies

25-30%

of the gas consumed in Europe each winter.



Over the last six months, an unbalanced gas market has led to a **sharp increase in gas prices and an underfilling of storage –**

20% **less than usual in January 2022.**



Low gas storage, coupled with the fact that Russia, one of our major suppliers, has started a war against Ukraine, has amplified security of supply concerns and price volatility.



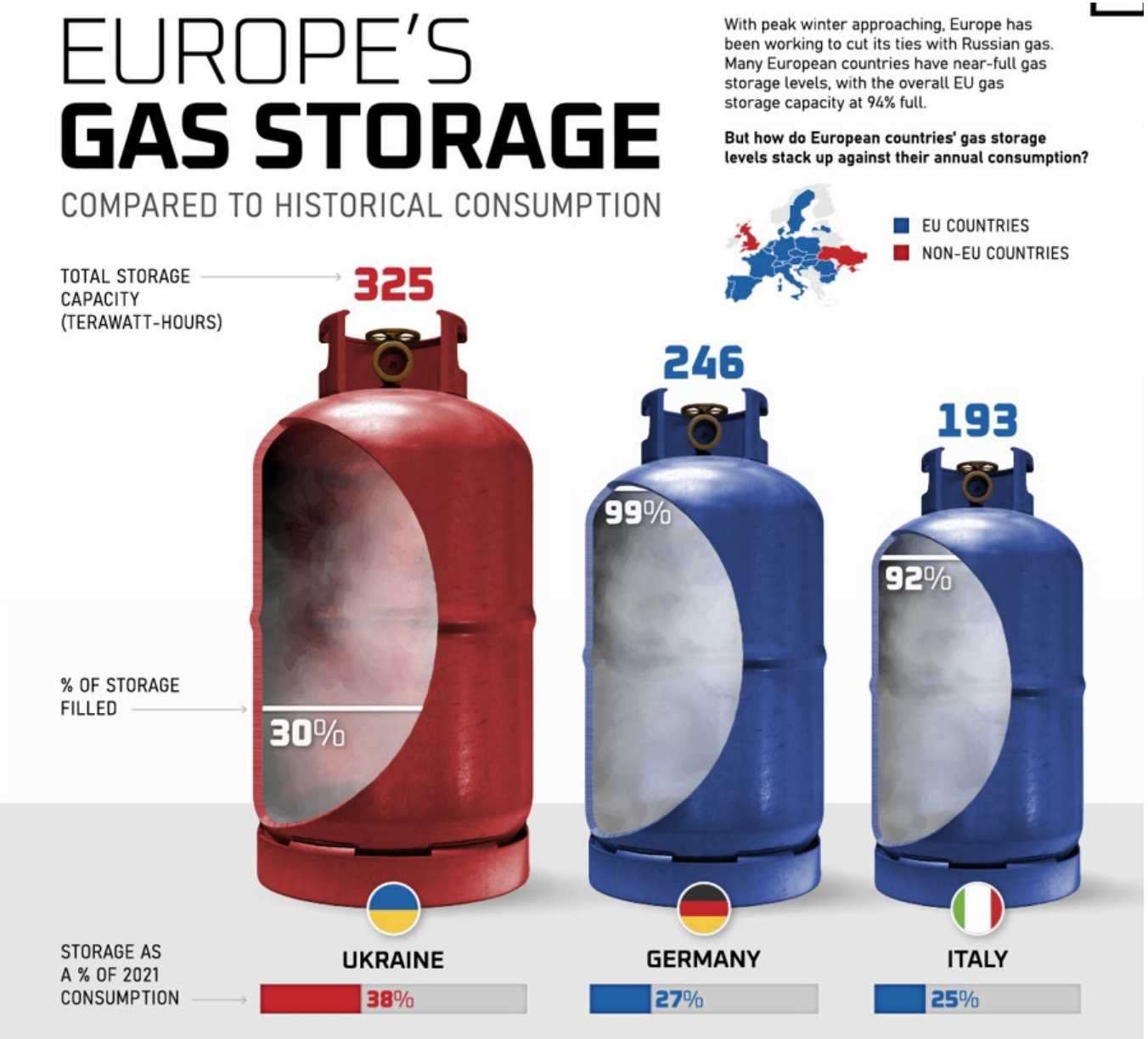
The Commission is therefore proposing a new legal obligation to **fill underground gas storage to**

80% **of its capacity by 1 November 2022, rising to 90% for following years.**

This will minimise risks for next winter with intermediary targets for each Member State in February, May, July, and September.

Information Classified as General

Greece remains fully exposed in the absence of long-term natural gas storage facilities

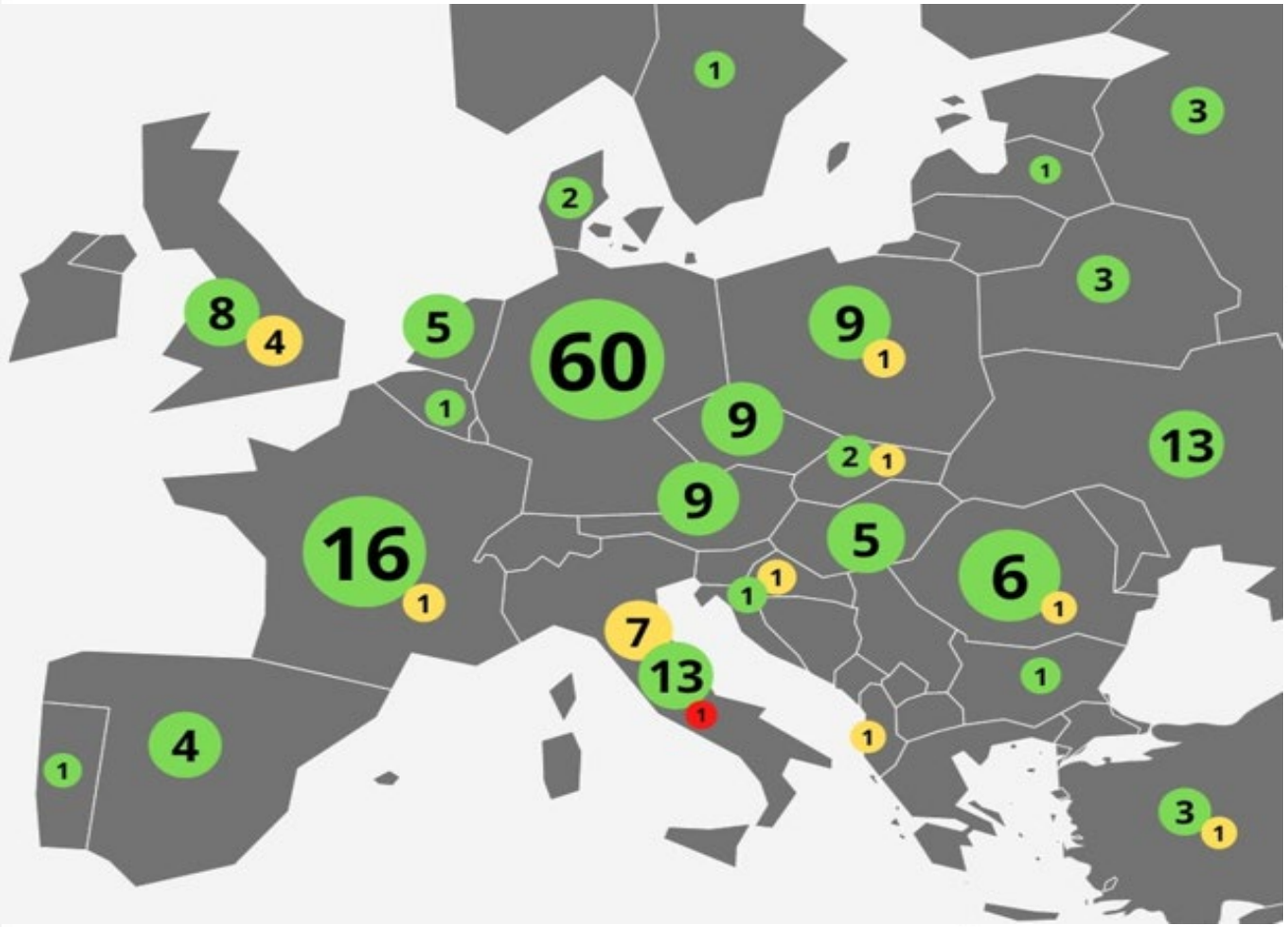


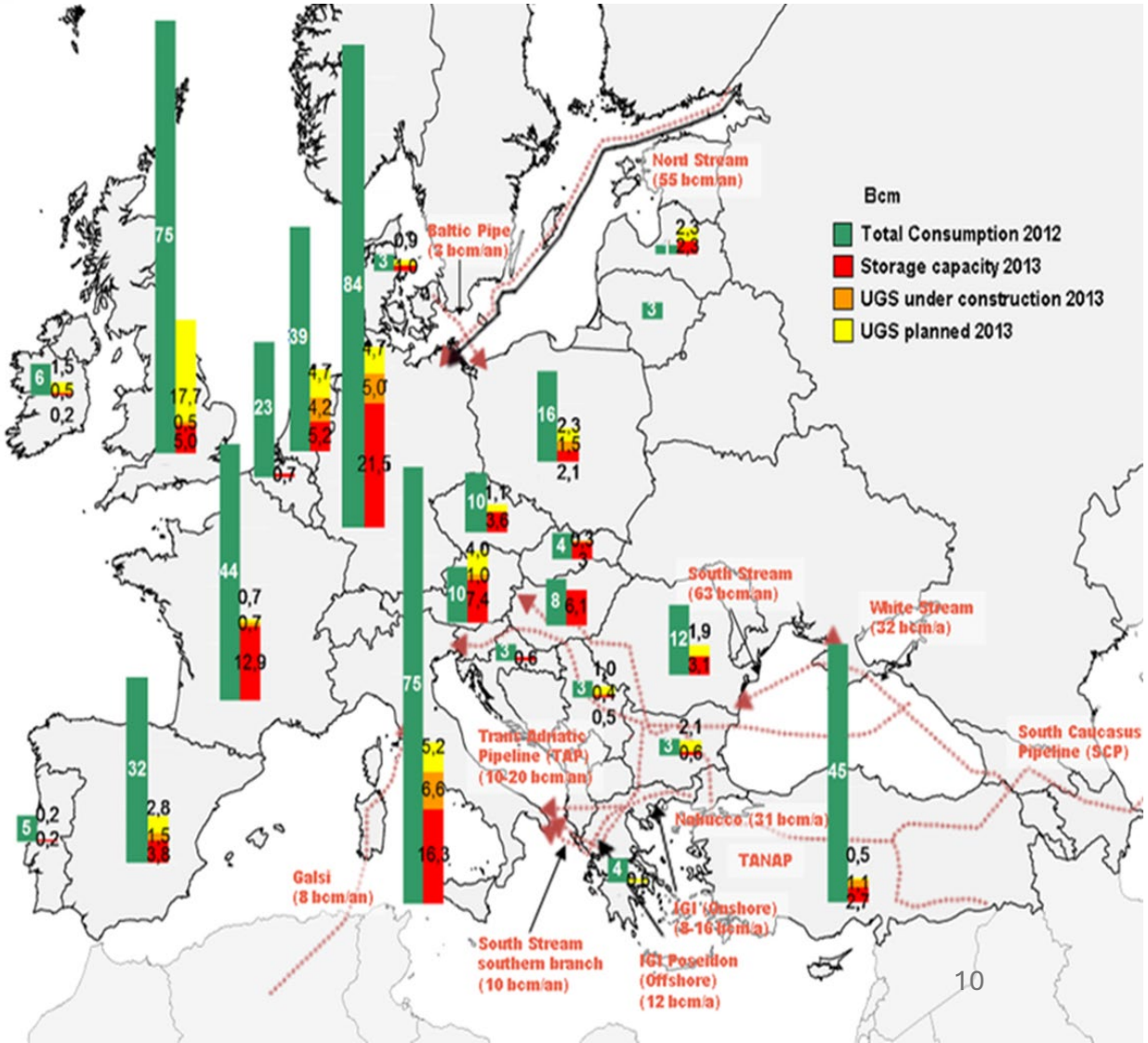


Each European country has a UGS gas capacity ~ 20% of the total Annual Consumption

Infrastructures

Underground storage sites for natural gas in Europe





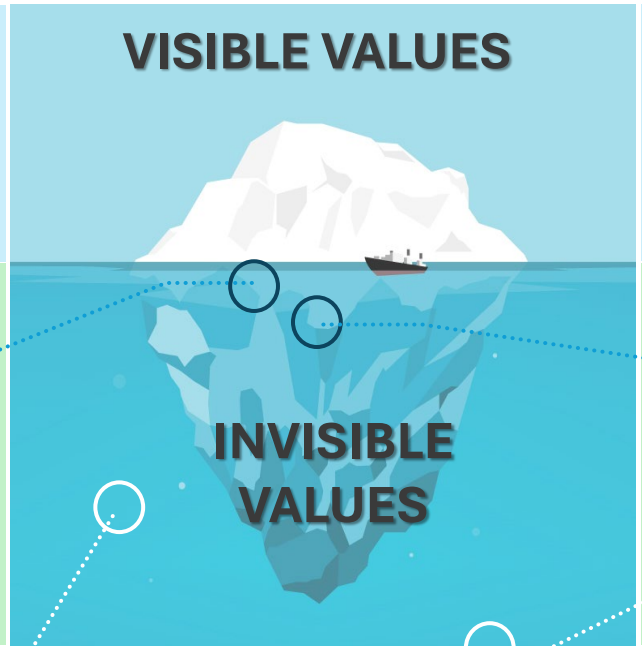
The Values for Greece having long term (underground) gas storage – South Kavala UGS

Seasonal Value

- Storing gas in low demand periods and withdrawing gas in higher demand
- Immediate gas availability during winter

System Value

- Reduce transmission networks oversizing and investments
- Improve gas congestion management
- Increase system efficiency



Flexibility Value

- Supporting day to day variations in gas demand.
- Providing flexibility to Gas Fired Power Plants (IPPs) reducing gas balancing costs.

Insurance Value

Security of gas supply insured against:

- Economical consequences of gas cut-off (pipeline flow)
- Extreme price spikes driven by factors such as weather conditions, asset failures and geopolitical events

Vertical Corridor Support Value

- Complementary to Vertical Corridor & LNG Imports
- Ban of Russian gas imports
- Greece as an energy hub of SEE Europe

Information Classified as General

South Kavala Underground Gas Storage
7-9 LNG cargoes (7 – 10 TWh) can be stored per year)

A geologically formed UGS with ideal technical characteristics for the proposed use and excellent proximity to key infrastructure expected to be the 1st UGS facility in the country, contributing significantly to the efficient operation of the Greek gas market

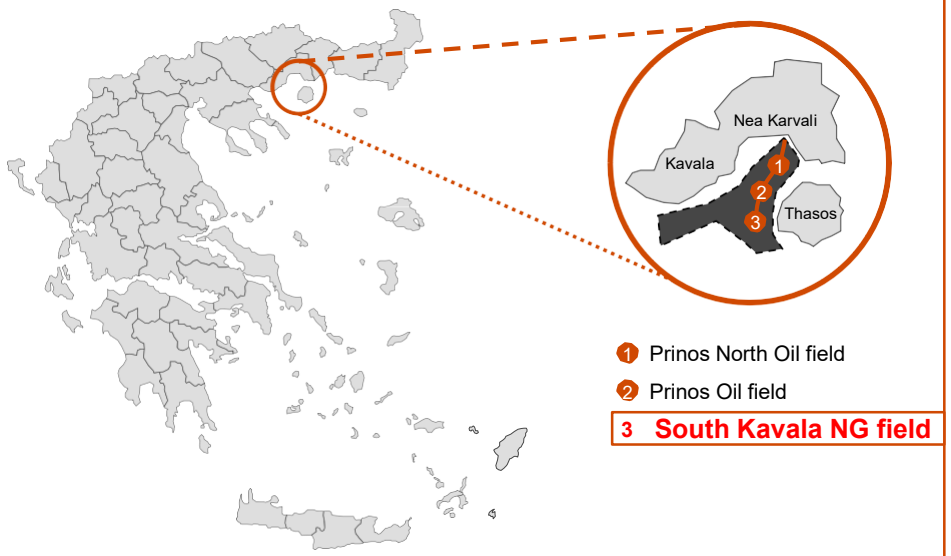
Offshore natural gas field
with existing infrastructure and proximity to other fields

- South Kavala natural gas field is located in Prinos basin, in proximity to Prinos offshore operating oil fields
- Came into production in 1982 through two active wells, a single well jacket linked to Prinos infrastructure with a 12" pipeline and platforms necessary for gas transmission and injection
- The current concessionaire retains its interests in the exploration license up to May 2021 or until the UGS concession commencement date

Technical characteristics(1)
considered ideal for the proposed use

- **~800 mn** Nm³/annum Working gas capacity
- **1 bn** Nm³ Gas initially in place
- **9 mn** Nm³/ day Maximum withdrawal rate
- **2 cycles** Per annum
- **100 mn** Nm³ Remaining gas
- **7.5 mn** Nm³/ day Maximum injection rate

Location of South Kavala natural gas field



1 Prinos North Oil field
2 Prinos Oil field
3 South Kavala NG field

The development and exploitation of the South Kavala gas field as a UGS aims to enhance the efficient operation of the Greek gas market

1. Enhances and safeguards the security of supply (improved ability to respond to unexpected supply disruptions)
2. Increases optionality on managing demand seasonality (summer / winter) and covering types of flexibility (supply / demand across days or weeks)
3. Reduces the cost of balancing the gas system and contributes to the optimization of the system

Information Classified as General

Italy, Romania and Turkey are developing new underground gas storages, Greece?

T.C. Enerji ve Tabii Kaynaklar Bakanlığı
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Thanks to the infrastructure we have developed and our resource diversity, our natural gas storages are currently 71% full as we leave the winter months behind. We continue to work to bring our warehouses back to full capacity against possible global shocks.

With the new investments we will make, we will be able to store at least 20% of the natural gas we consume in 2028.

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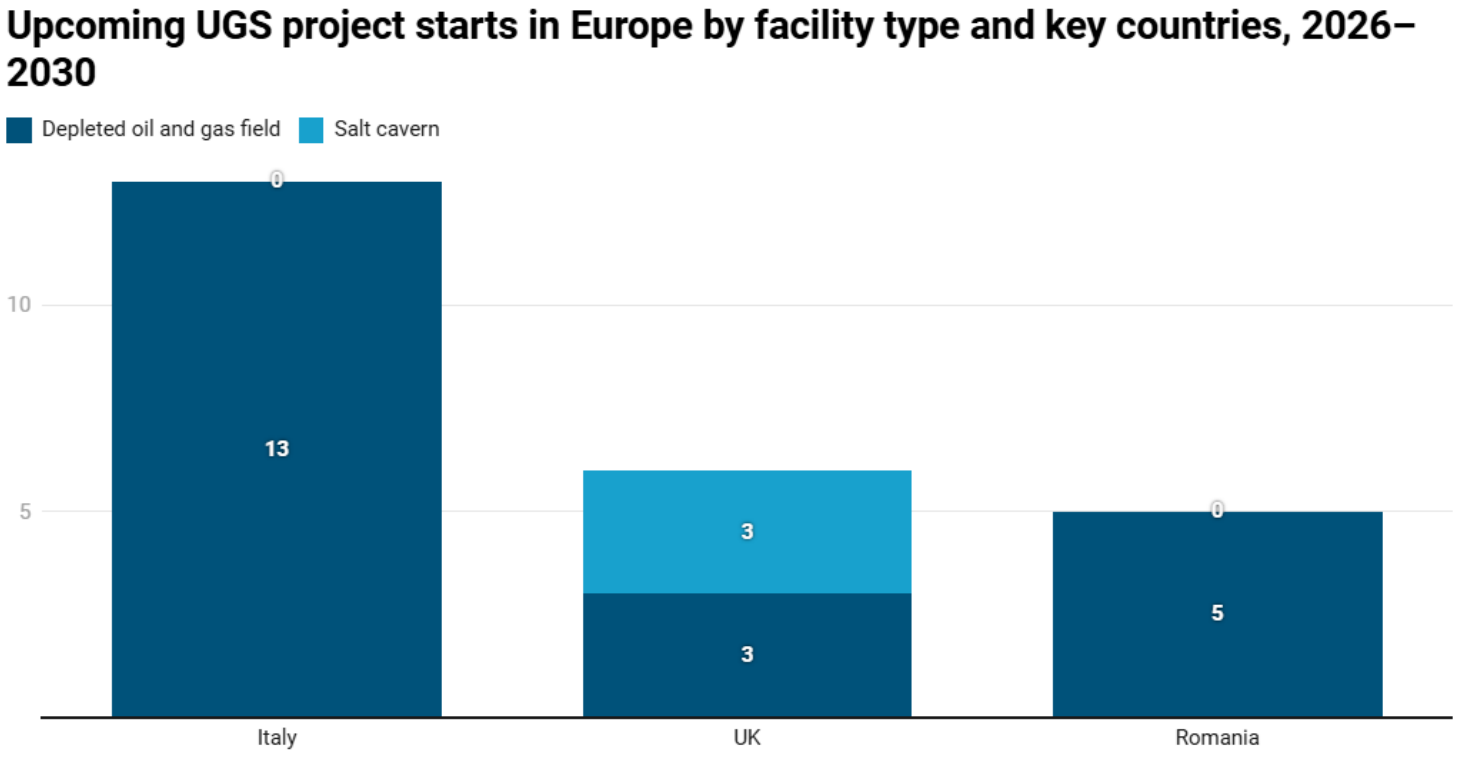

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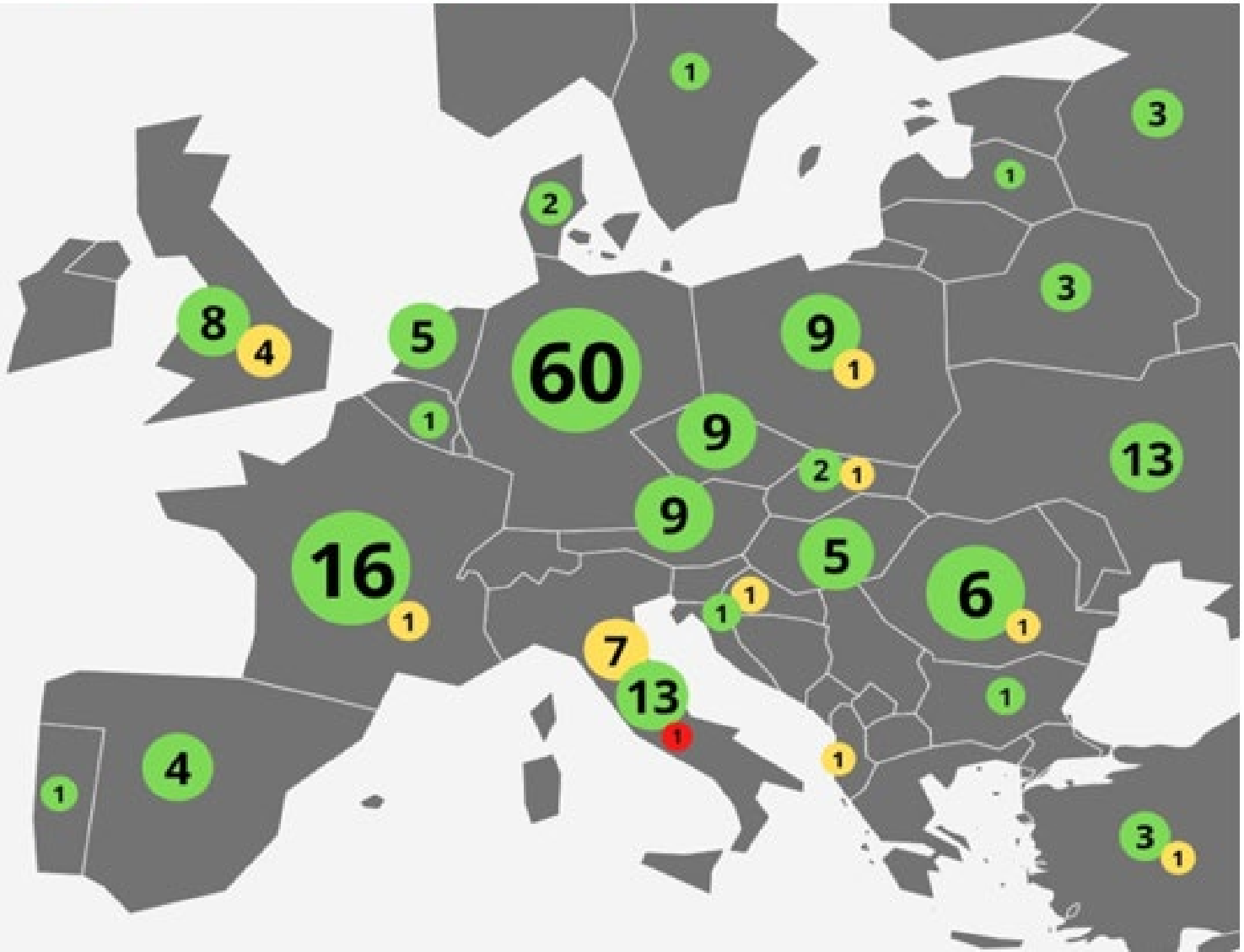

The realization of Greece's strategic objective to become a regional energy hub <u>is not feasible</u> without the development of SOUTH KAVALA Underground gas storage facility.

THANK YOU