

A light gray world map serves as the background for the slide, centered behind the title text.

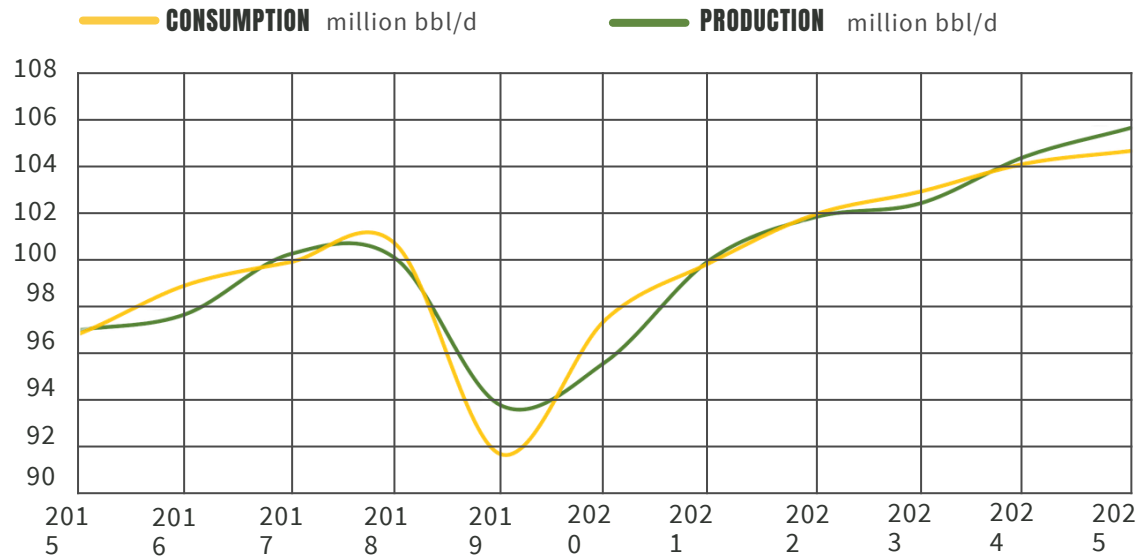
THE GEOPOLITICS OF THE ENERGY CRISIS: THE STRAIT OF HORMUZ AND BEYOND

THE WORLD REMAINS DEPENDENT ON HYDROCARBONS

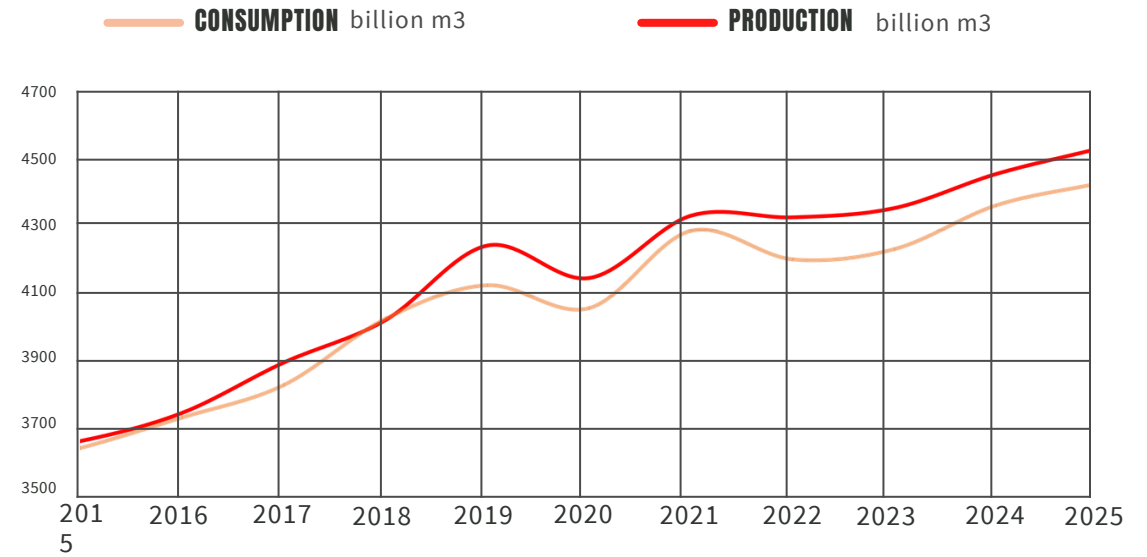


The energy transition has so far involved adding energy sources - not replacing them

GLOBAL OIL PRODUCTION AND CONSUMPTION 2015. - 2025.



GLOBAL NATURAL GAS PRODUCTION AND CONSUMPTION 2015. - 2025.



Oil and gas demand continued to grow through the end of 2025

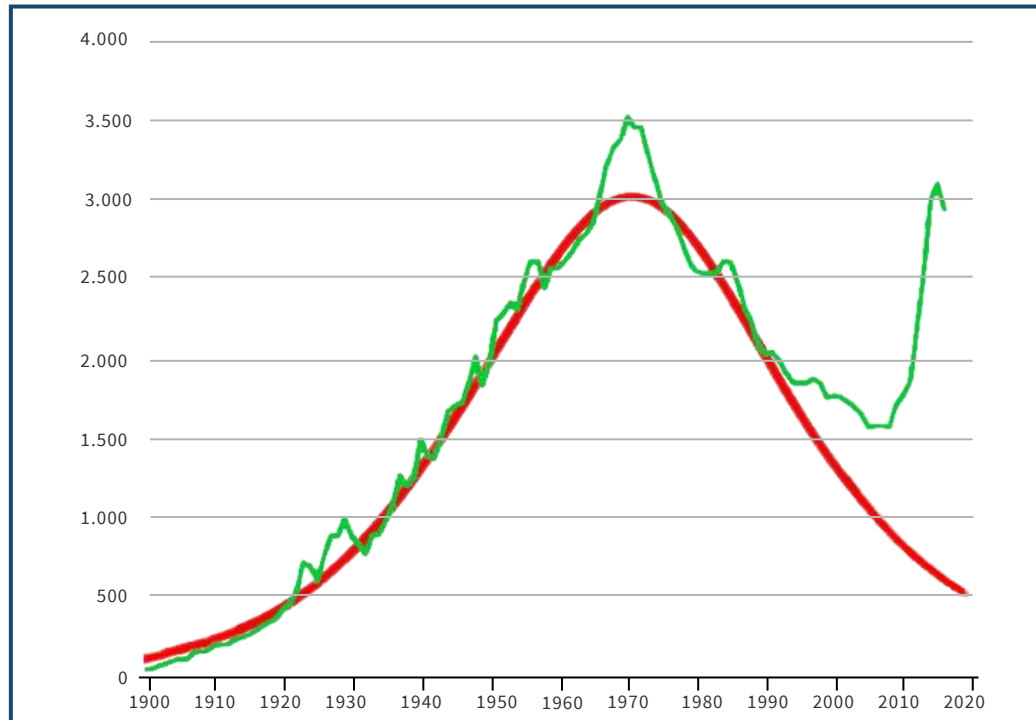
Sources : U.S. Energy Information Administration (EIA); World Energy Statistics Enerdata



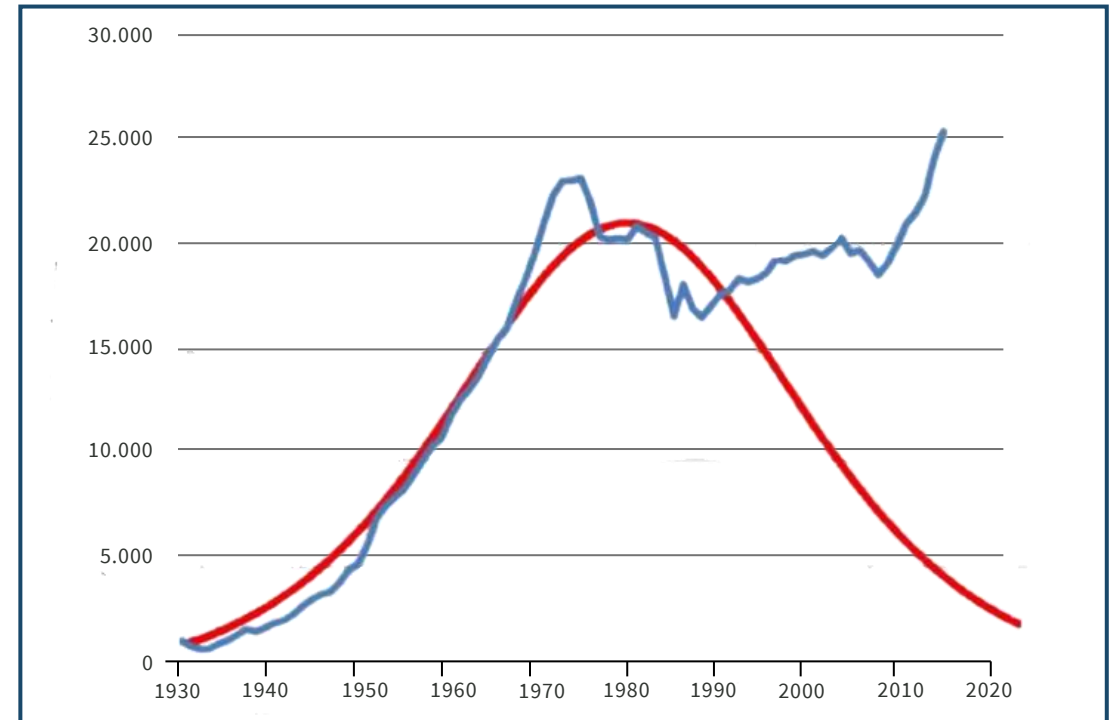
HUBBERT CURVE - "Drill, baby, drill"



HUBBERT CURVE **ACTUAL OIL PRODUCTION**



HUBBERT CURVE **ACTUAL GAS PRODUCTION**



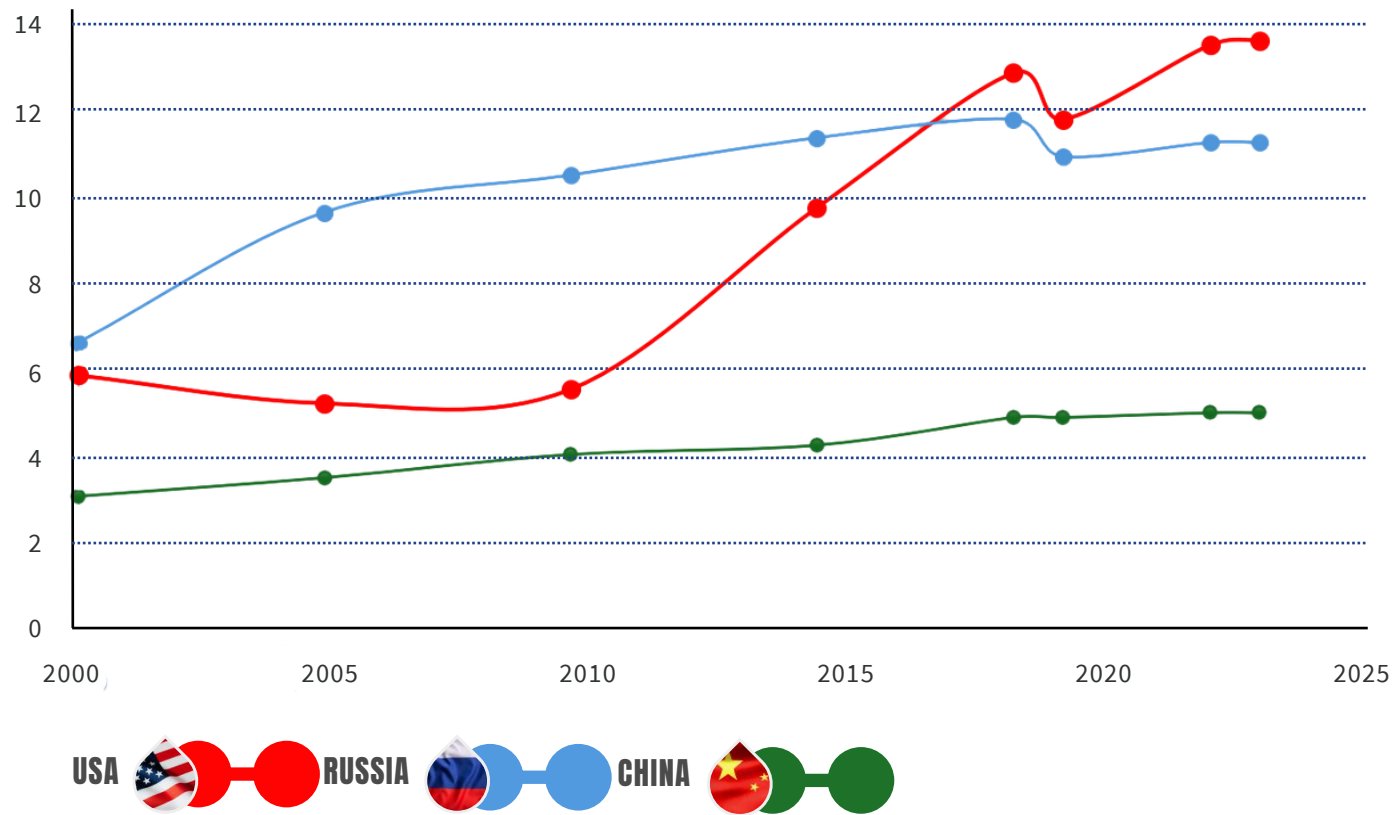
Hubbert was correct for oil and gas resources that were technologically recoverable at the time.
He was wrong in assuming that technology would remain unchanged (*3D seismic, horizontal drilling, gravel packing, log resolution*)



THE NEW ROLE OF THE UNITED STATES IN GLOBAL OIL PRODUCTION



OIL PRODUCTION Mbbbl/d

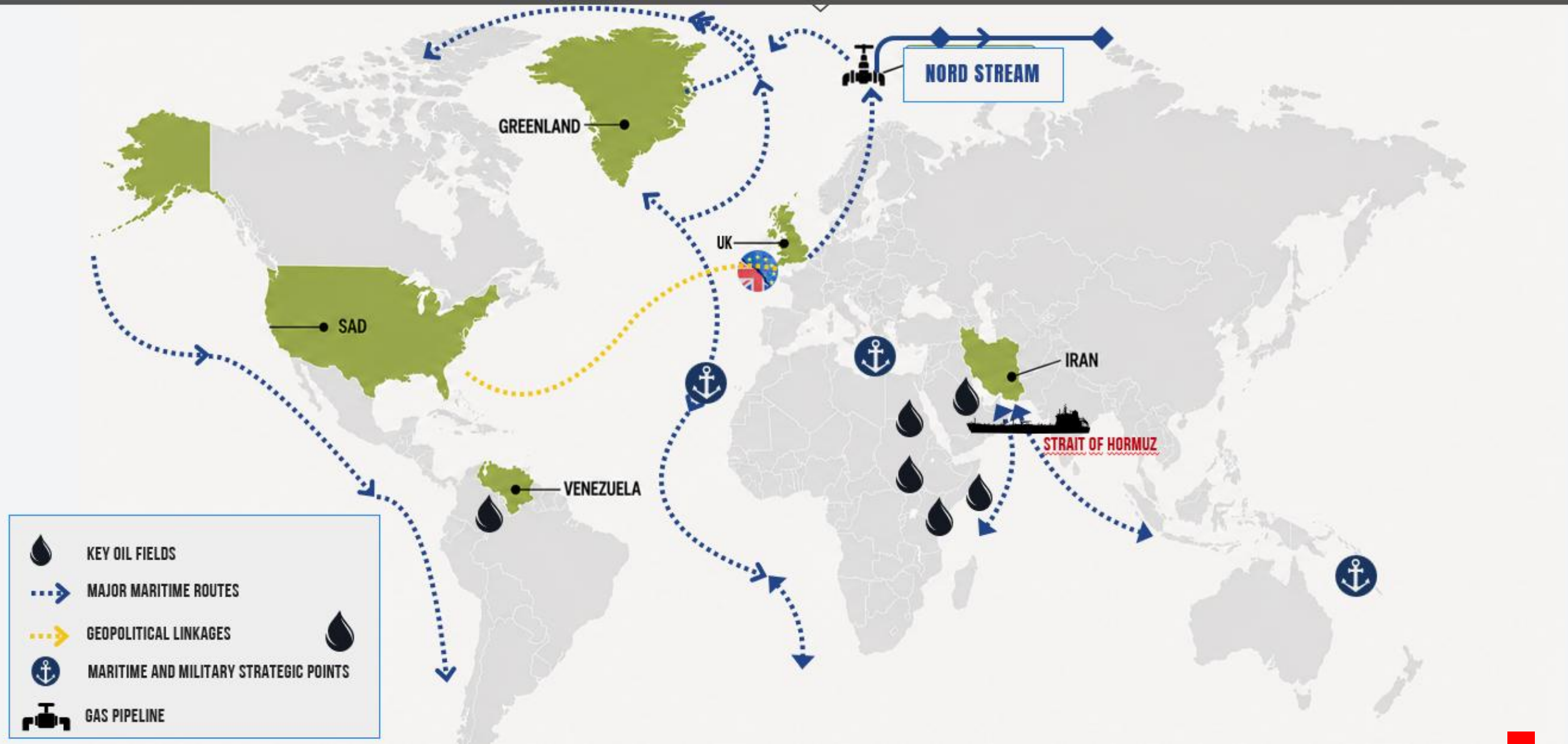


Every time technological progress accelerates the green transition, it also accelerates the development of fossil energy resources.

The green transition does not necessarily reduce global oil demand – it shifts demand from one sector and one geographic region to another.



ENERGY RESOURCES AS DRIVERS OF GEOPOLITICAL DECISION-MAKING



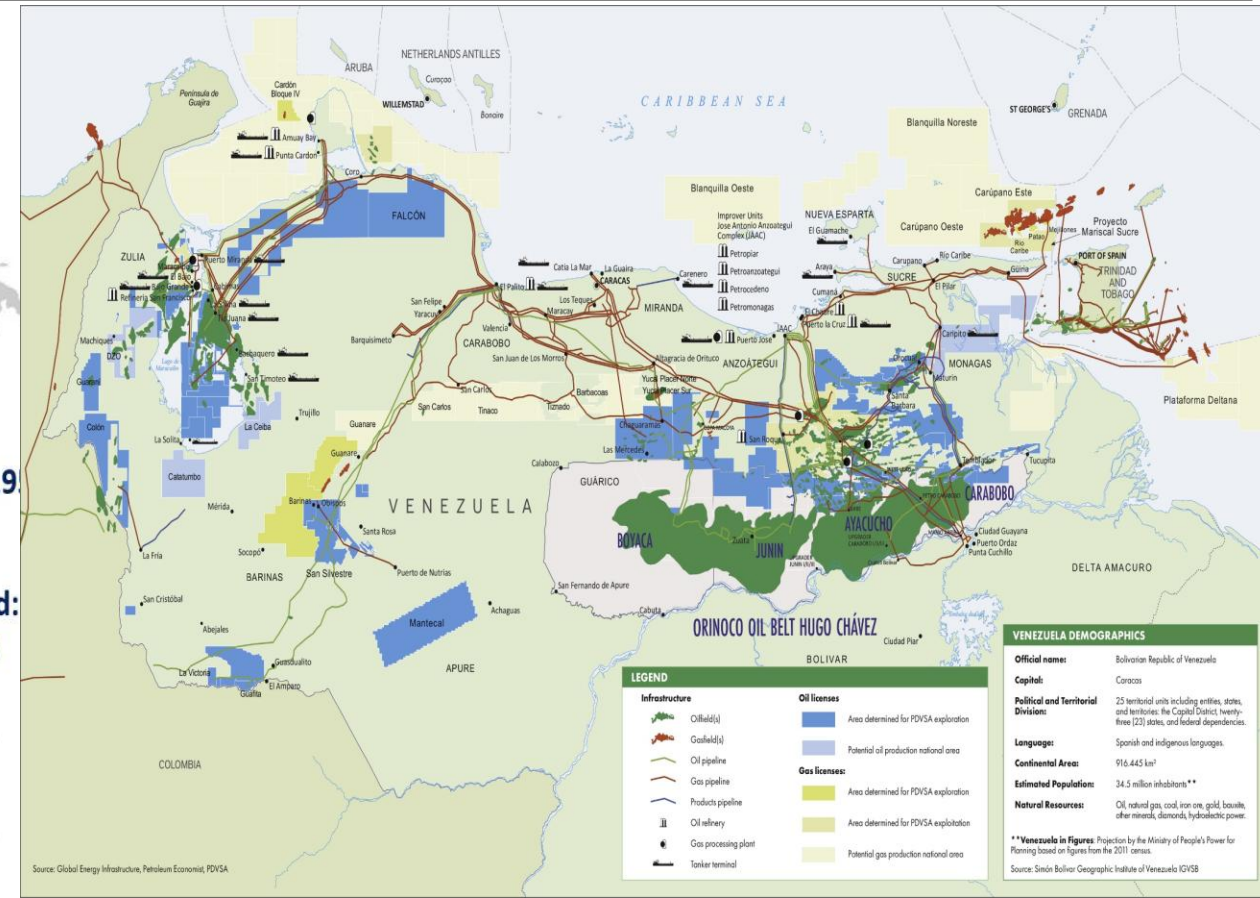
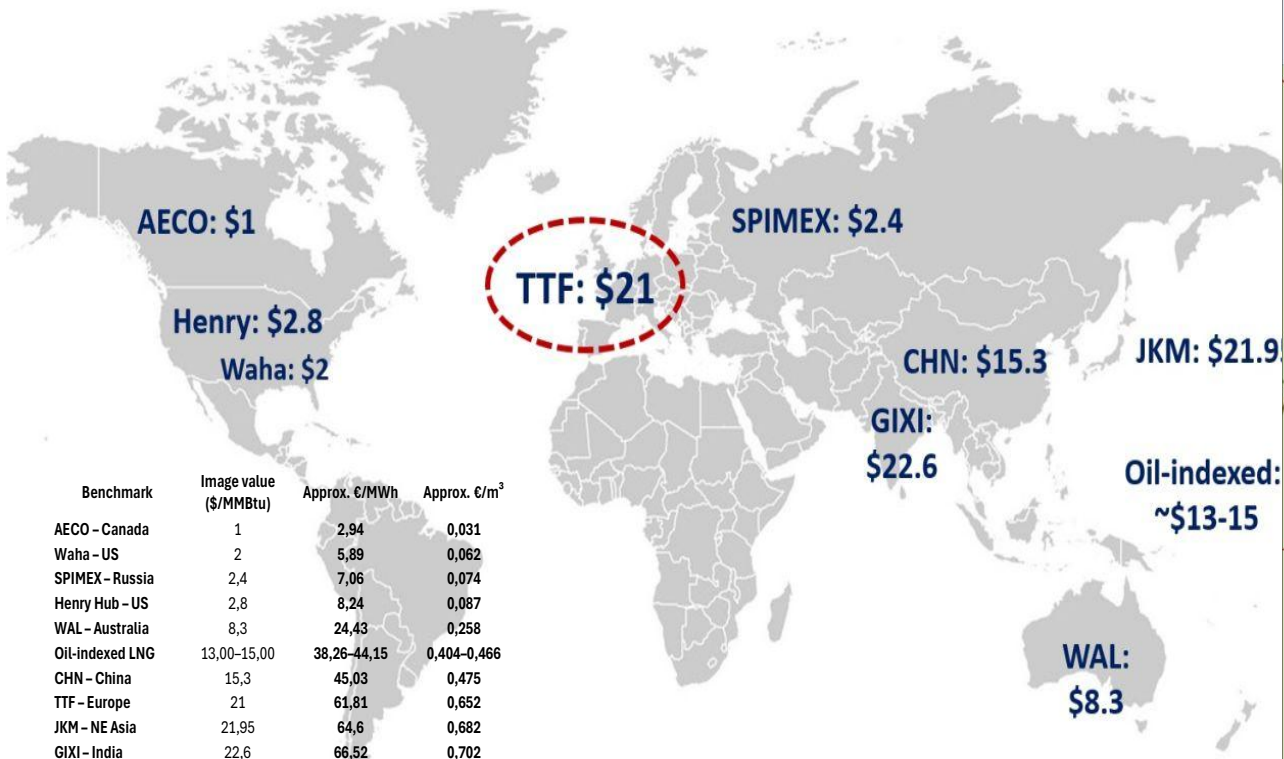
TRUMP - VENEZUELA DEAL



Venezuela holds around 303 billion barrels of proven oil reserves—the largest in the world.

- The U.S. would gain control over **65 billion barrels** of proven Venezuelan oil reserves **across 17 strategic oilfields**.
- The deal aims to attract 100 billion \$ in investment, increase Venezuelan production **and lower U.S. fuel prices**
- U.S. government would retain **55% control** of a joint venture with private operator, referred to a **100-year operating concession**.

Natural gas price benchmarks –August 2026 (\$/mmbtu)



ARCTIC RESOURCES AT THE HEART OF ENERGY AND GEOPOLITICS



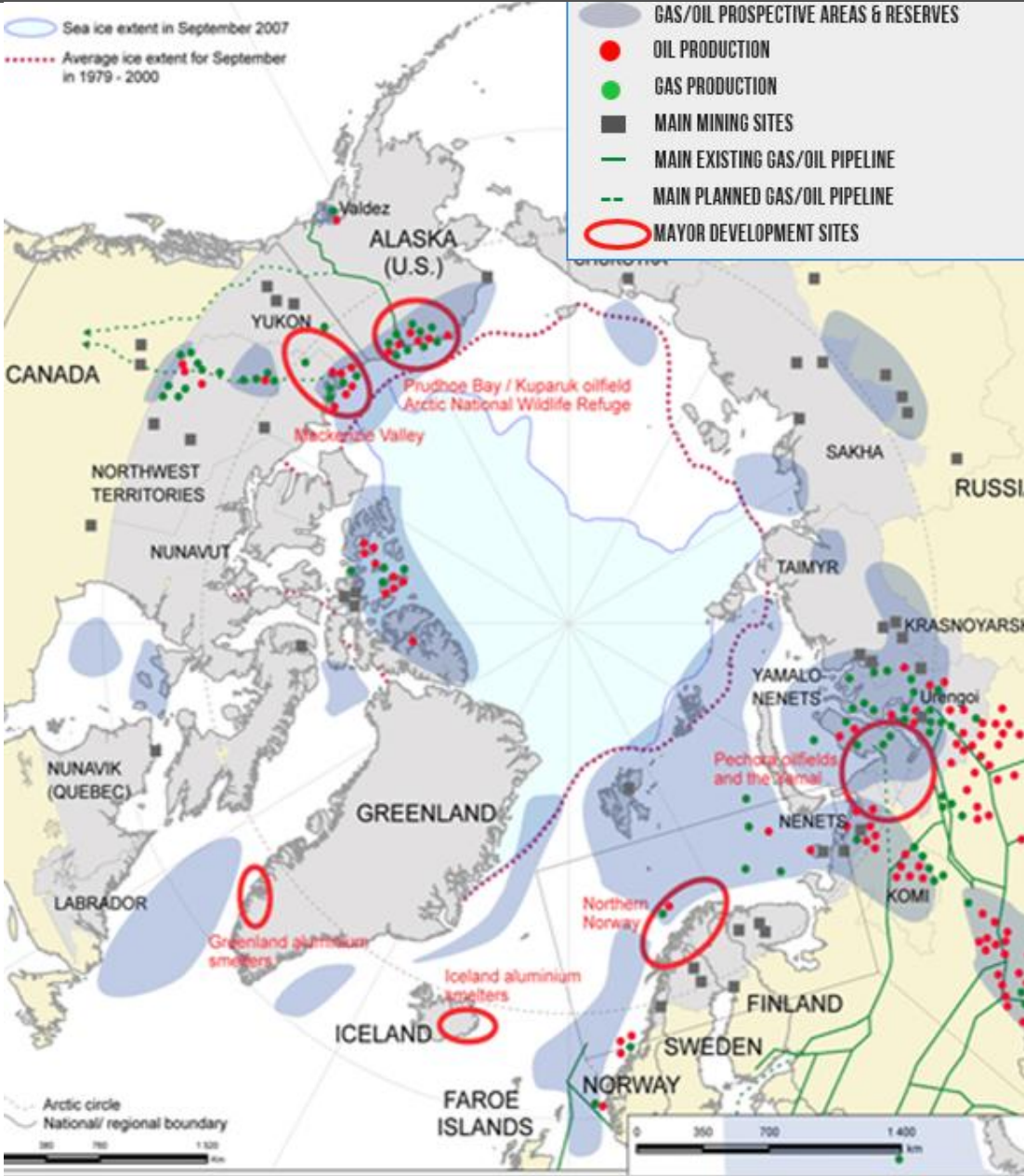
ARCTIC RESOURCE ESTIMATES

OF THE WORLD'S UNDISCOVERED CONVENTIONAL OIL AND GAS RESOURCES

≈22%

13% OIL	90 billion bbl	20% CONDENSATE	40 billion bbl
30% GAS	74 trillion m ³	84% OFFSHORE	

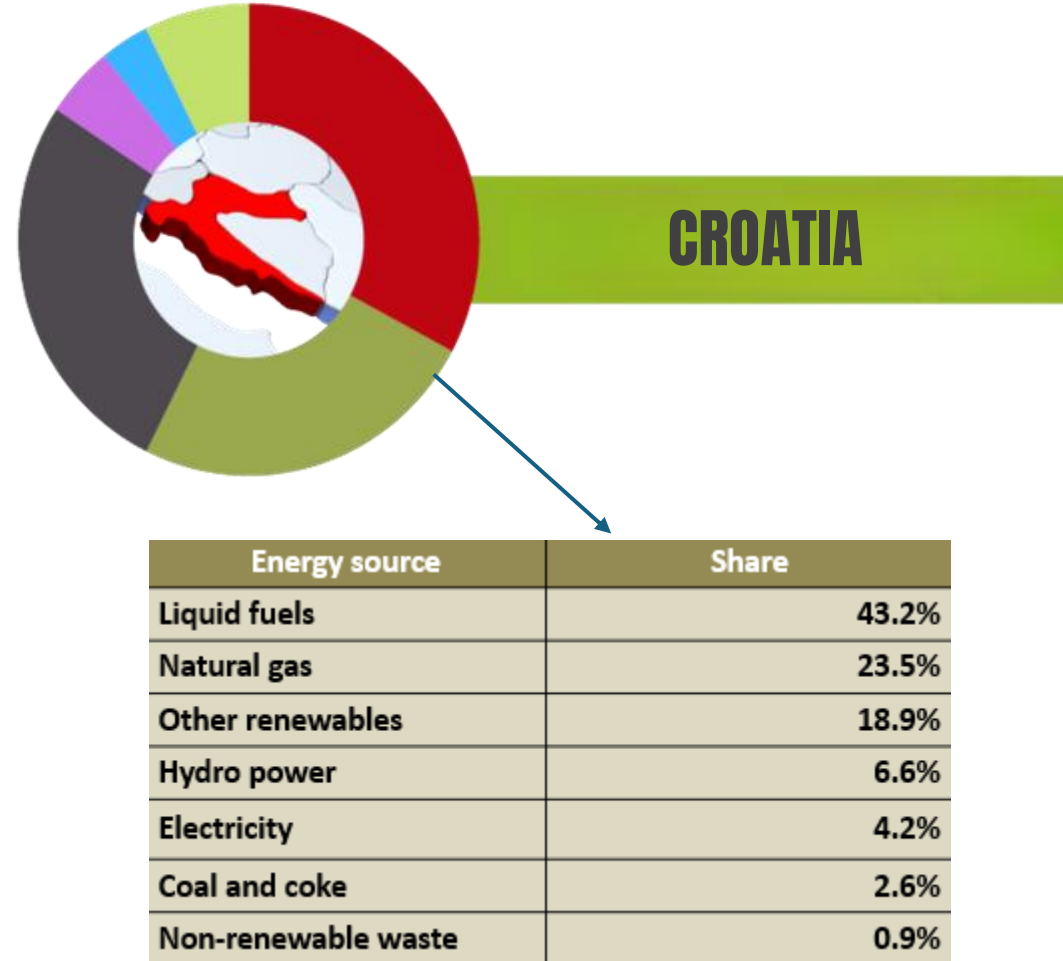
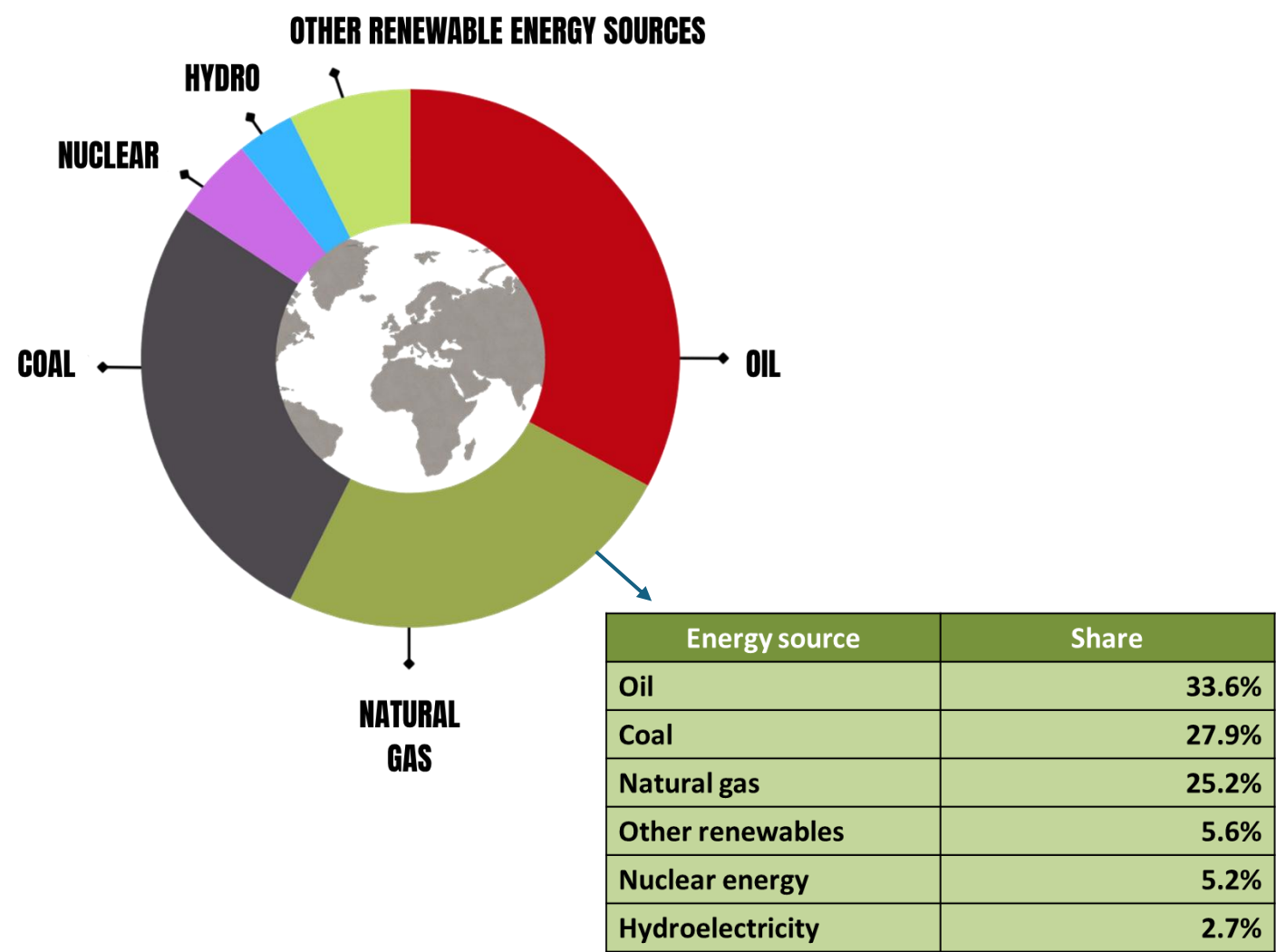
DISTRIBUTION OF ARCTIC CIRCLE RESOURCES BY COUNTRY



CONTINUED DOMINANCE IN CONSUMPTION



FOSSIL FUELS CONTINUE TO DOMINATE THE GLOBAL ENERGY MIX, ACCOUNTING FOR ~87% OF TOTAL ENERGY CONSUMPTION



Source: Energy Institute Hrvoye Požar, Energy in Croatia 2024, Table 2.4.1.

THE EU DEPENDS ON CRUDE OIL IMPORTS BUT RETAINS A KEY ROLE IN REFINING

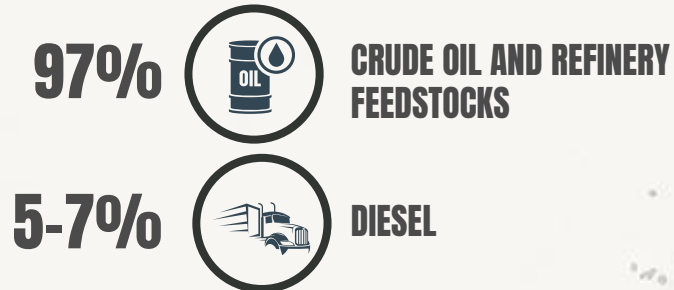


MAIN SUPPLIERS OF CRUDE OIL TO THE EU - 2025



CRUDE OIL
IMPORT 

97%



IMPORTS FROM RUSSIA BEFORE AND AFTER SANCTIONS

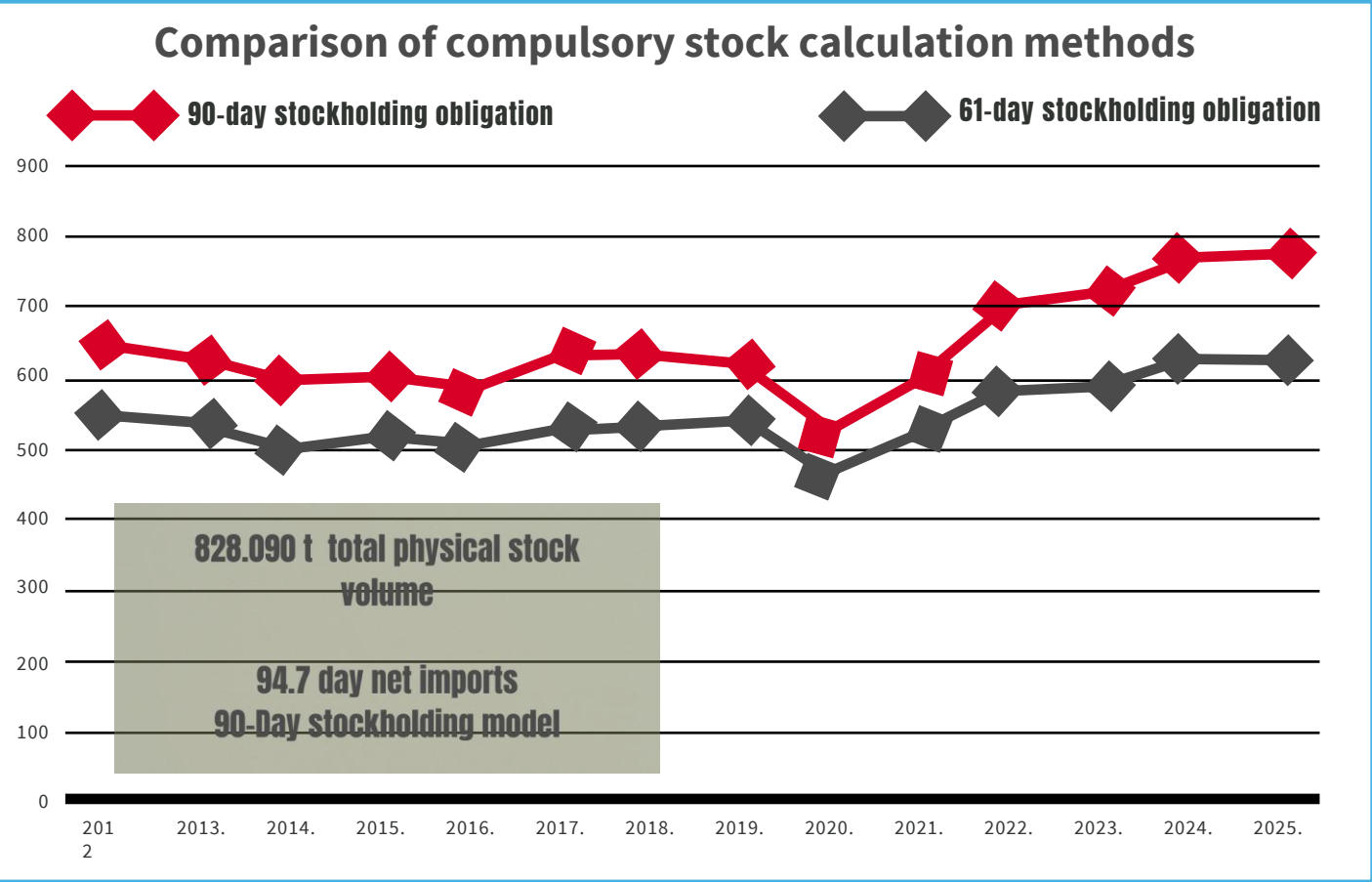
2019.
27,3%

2025.
2,2%



COMPULSORY OIL AND PETROLEUM PRODUCT STOCKS - SECURITY BEFORE MARKET CONSIDERATIONS

A core instrument of energy security - a strategic buffer between market disruptions and continuity of supply



2024

8.493 t COE/day

2025

8.579 t COE/day

+ 1,01% per year

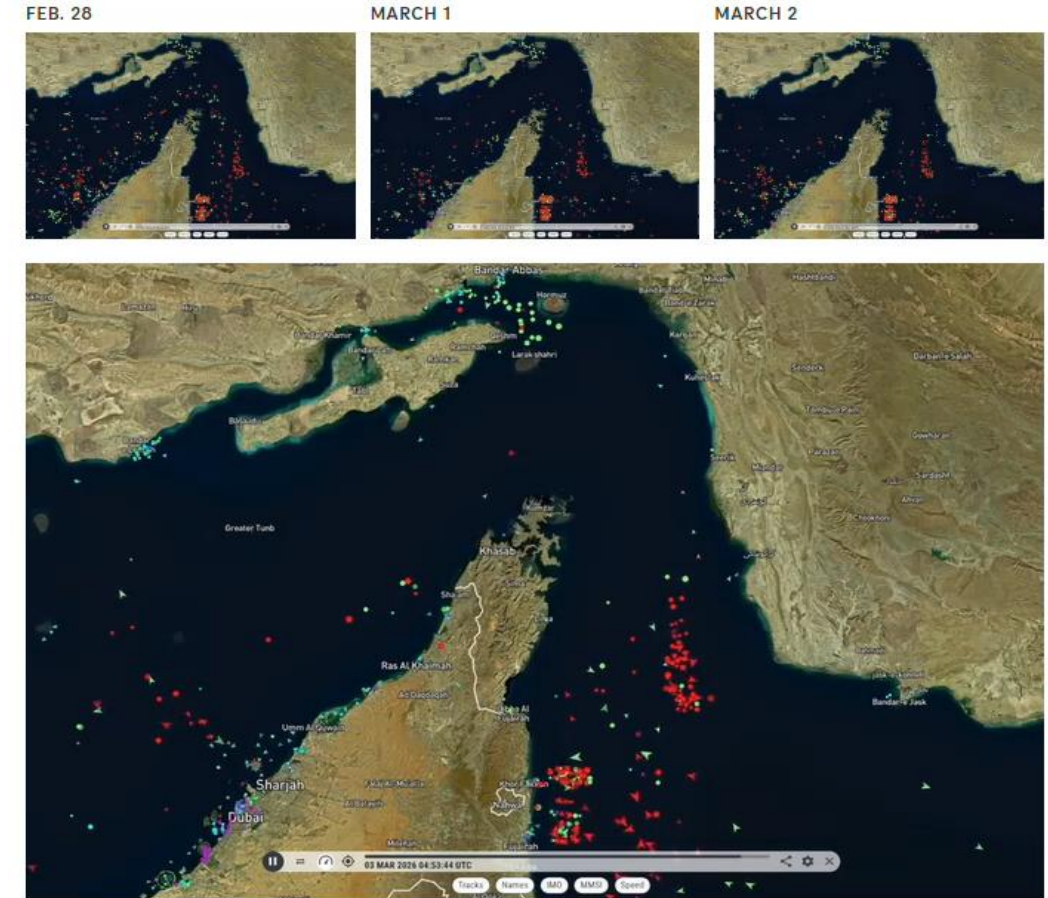
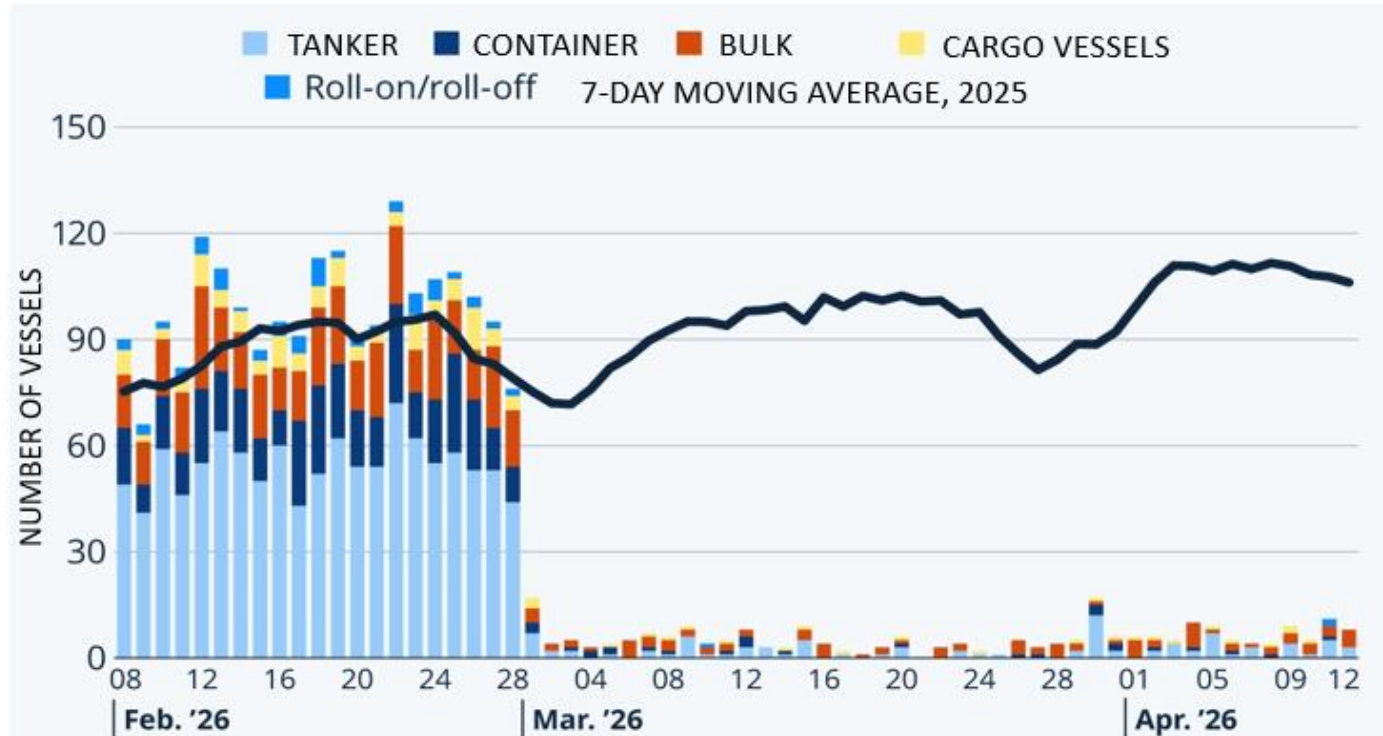
Source: CHA, based on data from the Croatian Bureau of Statistics (CBS) – 2024/2025 overview; Directive 2009/119/EC



STRAIT OF HORMUZ - A CRITICAL CHOKEPOINT FOR GLOBAL ENERGY FLOWS



VESSEL TRAFFIC THROUGH THE STRAIT OF HORMUZ BEFORE AND AFTER THE BLOCKADE



- Commercial shipping through the Strait of Hormuz has experienced a significant decline, affecting one of the world's most important energy transit routes.
- Reduced vessel traffic through the Strait may disrupt global oil and gas supply chains and increase uncertainty in international energy markets.
- Prolonged disruptions could have broader implications for energy security, including supply availability, transportation costs and global energy prices.

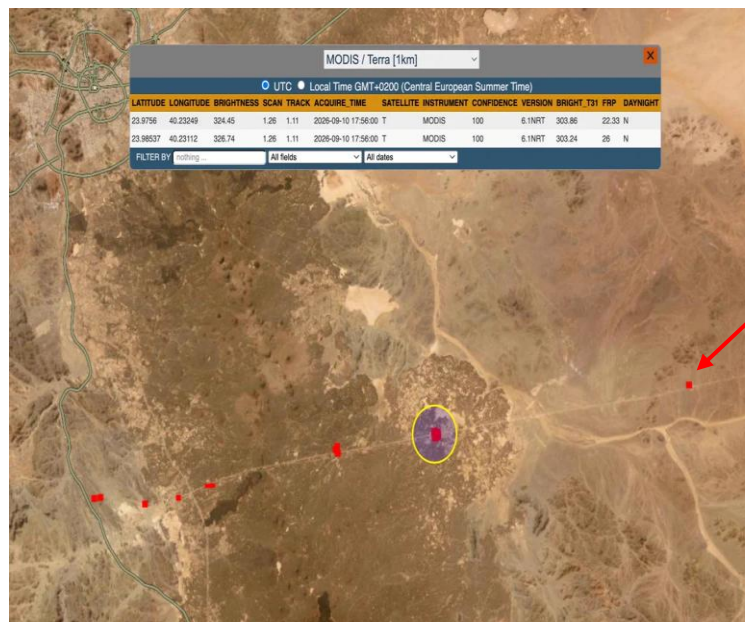
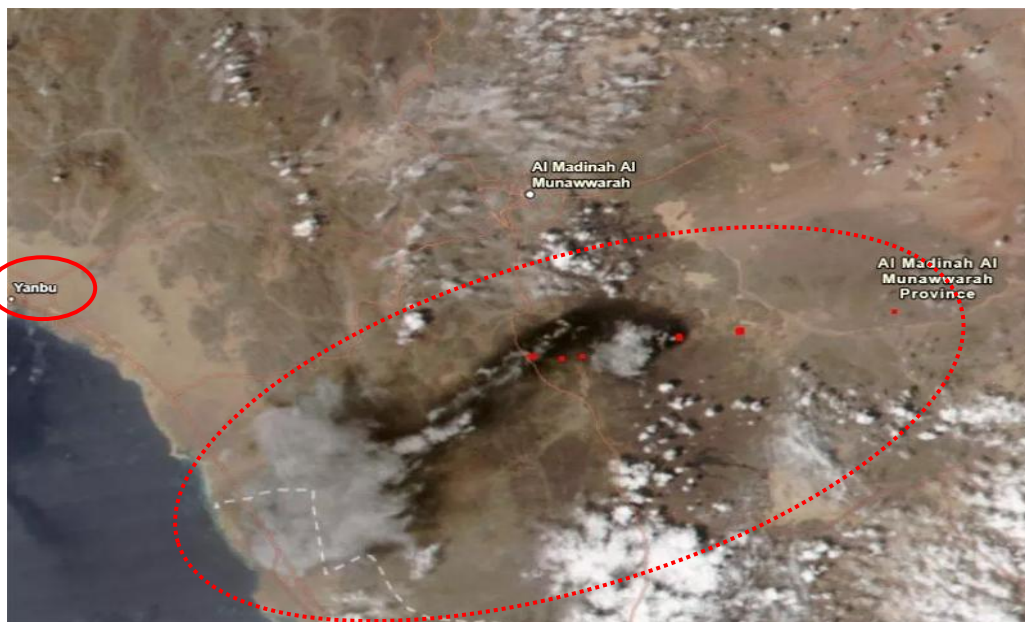


RED SEA TENSIONS



Saudi oil pipeline may be hit as Houthi attacks escalate

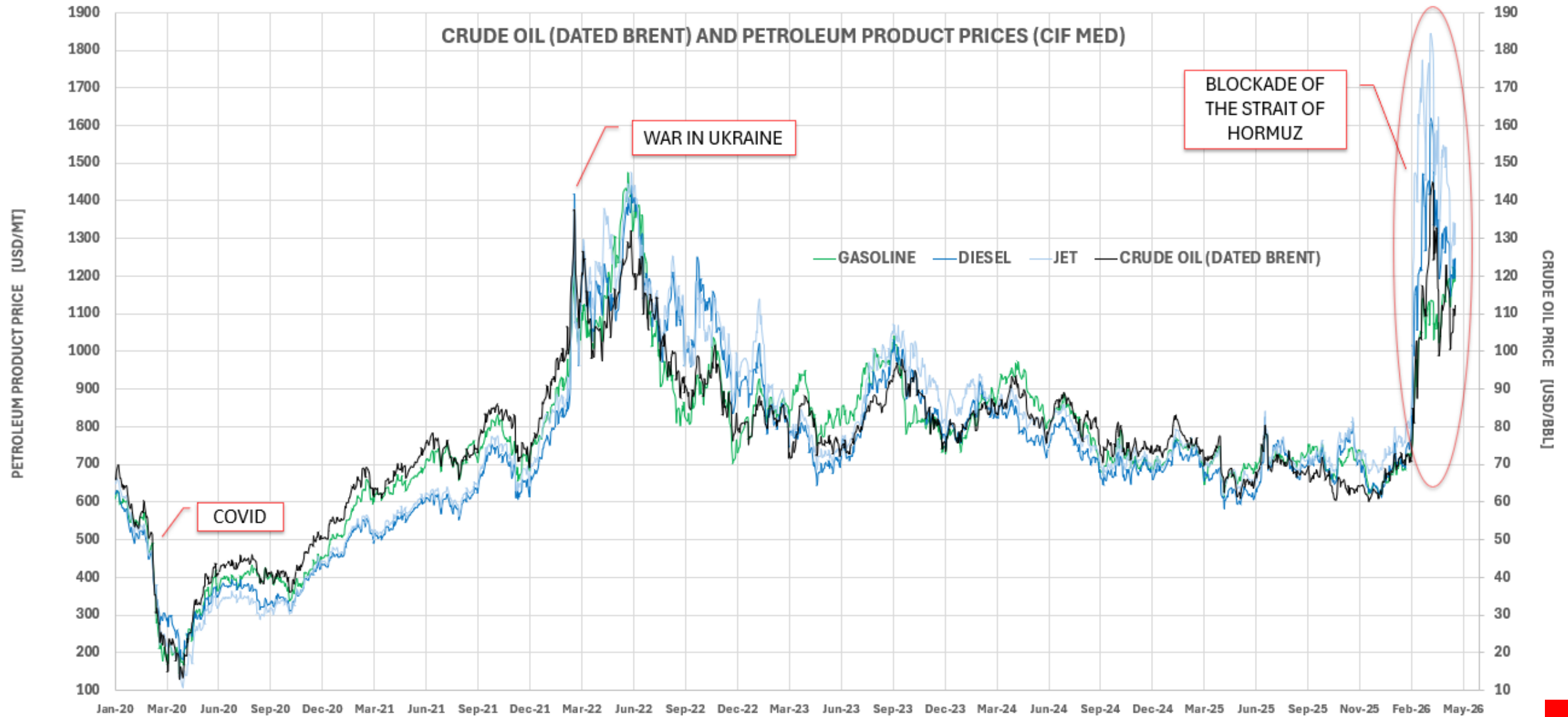
- Yemen's Iran-aligned Houthis have seized the strategic **Red Sea port of Mocha**, as well as **Dhubab** and **Zuqar Island**.
- These territorial gains **strengthen their position around the Bab el-Mandeb Strait**, one of the world's most important maritime chokepoints.
- Greater Houthi control could **threaten shipping through the Red Sea, disrupt global energy flows** and further **increase pressure on oil prices** especially amid continued disruption in the Strait of Hormuz.
- The Strait of Hormuz is about **34 km wide** at its narrowest point, compared with about **29 km** for Bab al-Mandeb.



Source: The Hormuz Letter News; 10.09.2026 (Sentinel-3 satellite imagery) A large smoke plume was reportedly visible over the desert southeast of Medina, along the general route of the 1,200-km East-West pipeline, or "Petroline", toward Mahd adh-Dhabab.



STRAIT OF HORMUZ - IMPACT OF A SHIPPING DISRUPTION ON PRICES

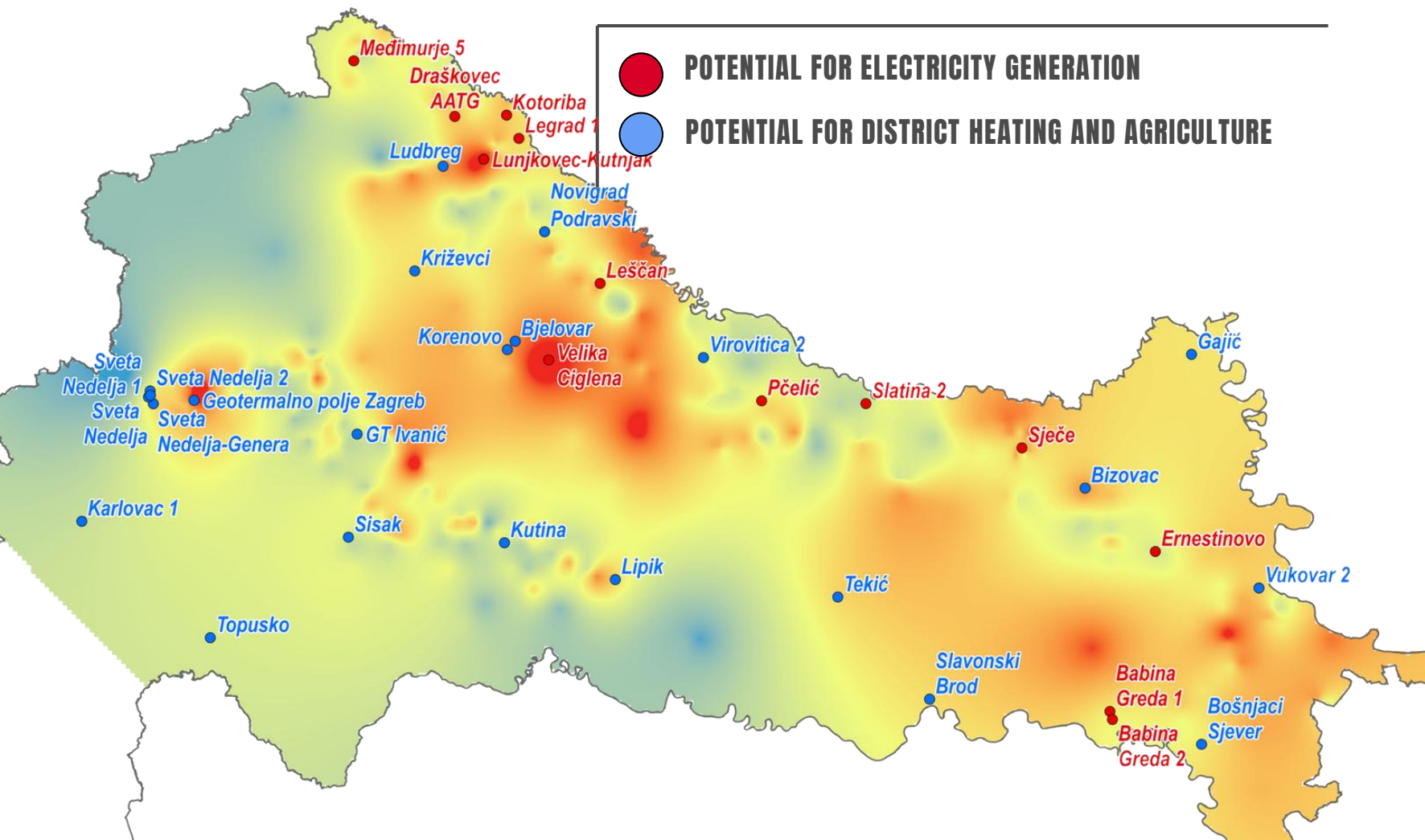


GEOHERMAL ENERGY

GEOHERMAL ENERGY - THE HIDDEN ENERGY OF THE PANNONIAN BASIN



GEO THERMAL ENERGY



60%

**HIGHER GEOTHERMAL GRADIENT
THAN THE EUROPEAN AVERAGE**

How can we systematically turn
this advantage into **energy and
economic value?**



GEOHERMAL ENERGY - EXCELLENCE PROVEN BY RESULTS



4/4

Major success of the NRRP project - proven workflow and CHA expertise

VEELIKA GORICA GT - 1



OSIJEK GT-1



VINKOVCI GT-1



ZAPREŠIĆ GT-1



100% SUCCESS



MULTIANNUAL FINANCIAL FRAMEWORK 2028-2034 - AMBITIOUS GOALS



CHA IS PREPARING A PORTFOLIO OF PROJECTS FOR THE NEW MFF*

Focus: geothermal energy as a driver of sustainable agriculture, district heating and industrial zones

URBAN DISTRICT HEATING

70 mil eur

ENERGY HUB - AGRICULTURE

450 mil eur

Energy security, local development and low-carbon transition

**MFF - Multiannual Financial Framework*

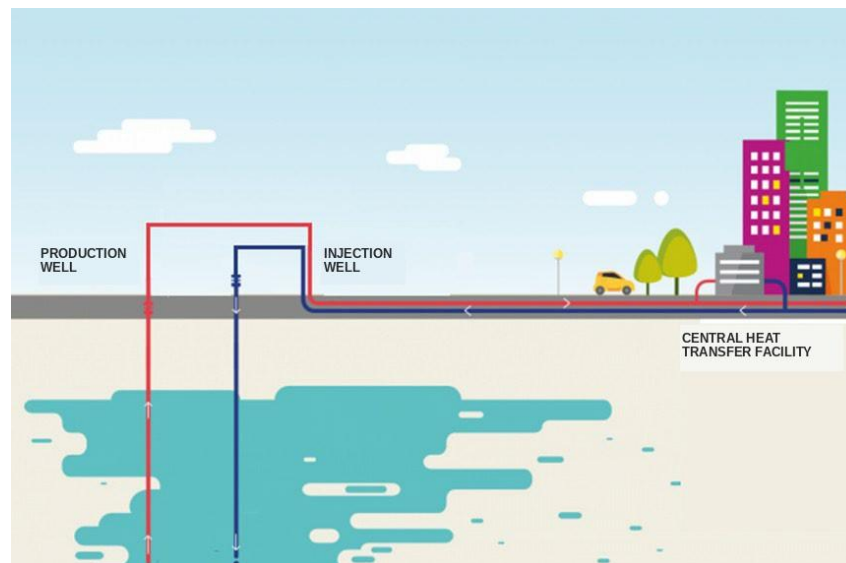


LOGIC OF INTEGRATED GEOTHERMAL PROJECT DEVELOPMENT



Geothermal energy offers a unique opportunity for integrated regional development that links the energy transition with economic growth. The development logic rests on a multi-sector approach that includes:

- ➔ **Energy independence** – reducing dependence on fossil fuels and external factors by using domestic renewable resources
- ➔ **Local economic development** – creating new jobs and industrial development linked to the geothermal industry
- ➔ **Spatial development** – integration with existing industrial zones and public facilities through smart spatial planning
- ➔ **Synergy with local industries** – links with construction materials, agriculture, trade and utility infrastructure



DISTRICT HEATING

- Required infrastructure:
- production–injection well pair
- heat infrastructure for heat production and distribution



AGRICULTURE

Positive examples in Croatia:

Ruris & Rajska

Existing geothermal water exploitation fields:
Bošnjaci Sjever & Sveta Nedelja



“ENERGY HUB” PROJECT UNDER THE MULTIANNUAL FINANCIAL FRAMEWORK



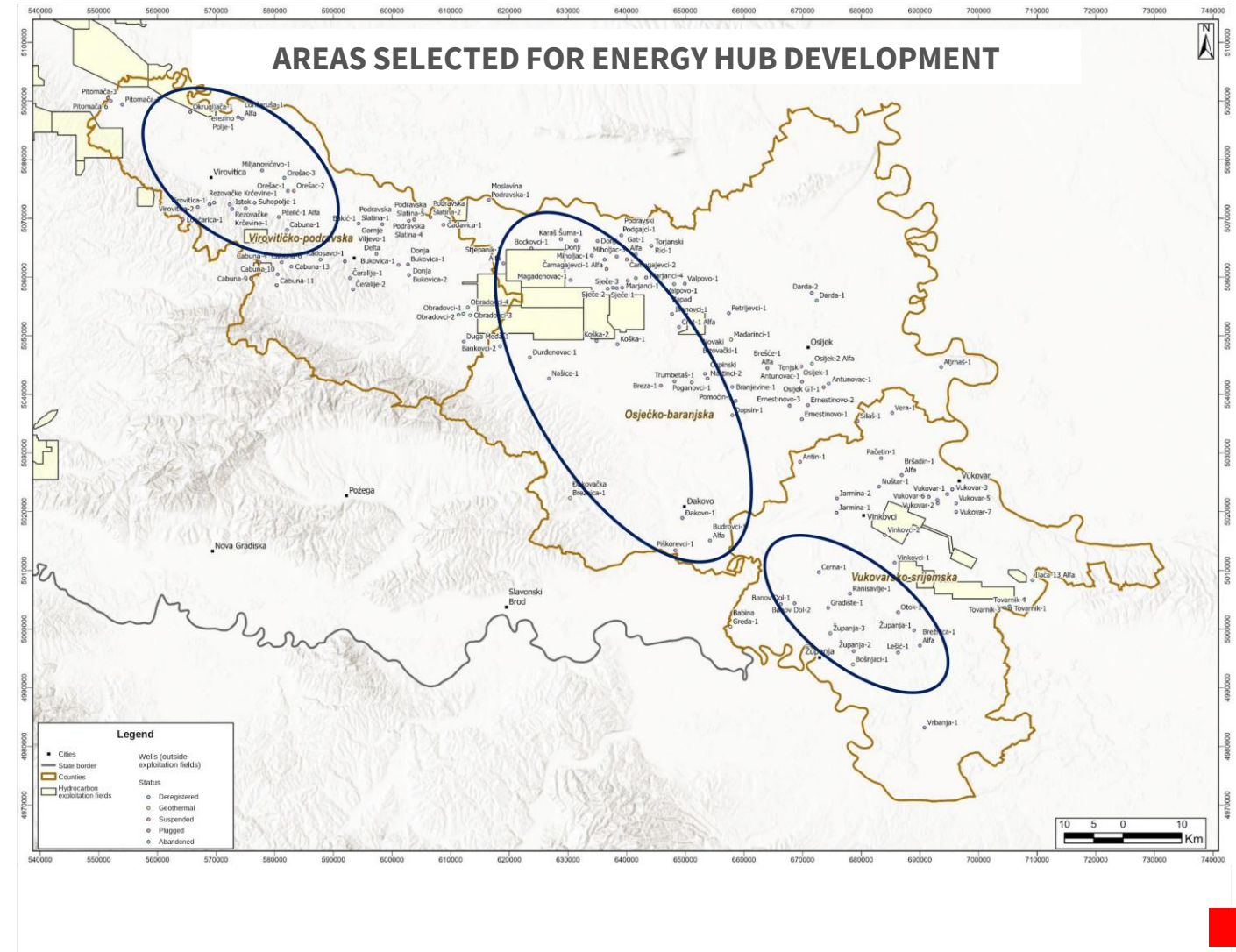
PROJECT PURPOSE

Drilling and testing of geothermal wells and implementation of geothermal projects in synergy with agriculture and the economy in the Slavonia region



BENEFITS

- Lower CO₂ emissions by replacing fossil fuels with geothermal energy (shown as CO₂ savings)
- Greater energy independence of local communities
- Longer growing season – sustainable development of agriculture
- Opportunity to develop eco-brands
- Opportunity to develop other industries





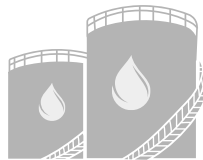
ONE INSTITUTION, FIVE AREAS OF EXPERTISE - FROM THE GEOLOGICAL SUBSURFACE TO THE MARKET

ALL PHASES UNDER ONE ROOF



HYDROCARBONS

Hydrocarbon exploration and production



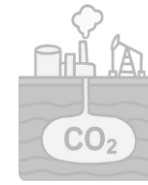
COMPULSORY STOCKS

Security of oil and petroleum product supply



GEOHERMAL ENERGY

Geothermal resource – from exploration to development project development



CCS

Geological CO₂ storage as a platform for decarbonisation



HYDROGEN

National Coordinating Body for the Hydrogen Strategy





THANK YOU

CROATIAN HYDROCARBON AGENCY

www.azu.hr

