



IPLOCA 58th Annual Convention 2026

Athens

28 September-2 October



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*“The Geopolitics of the European Energy Shift:
Security, Equity, and Clean Infrastructure”*



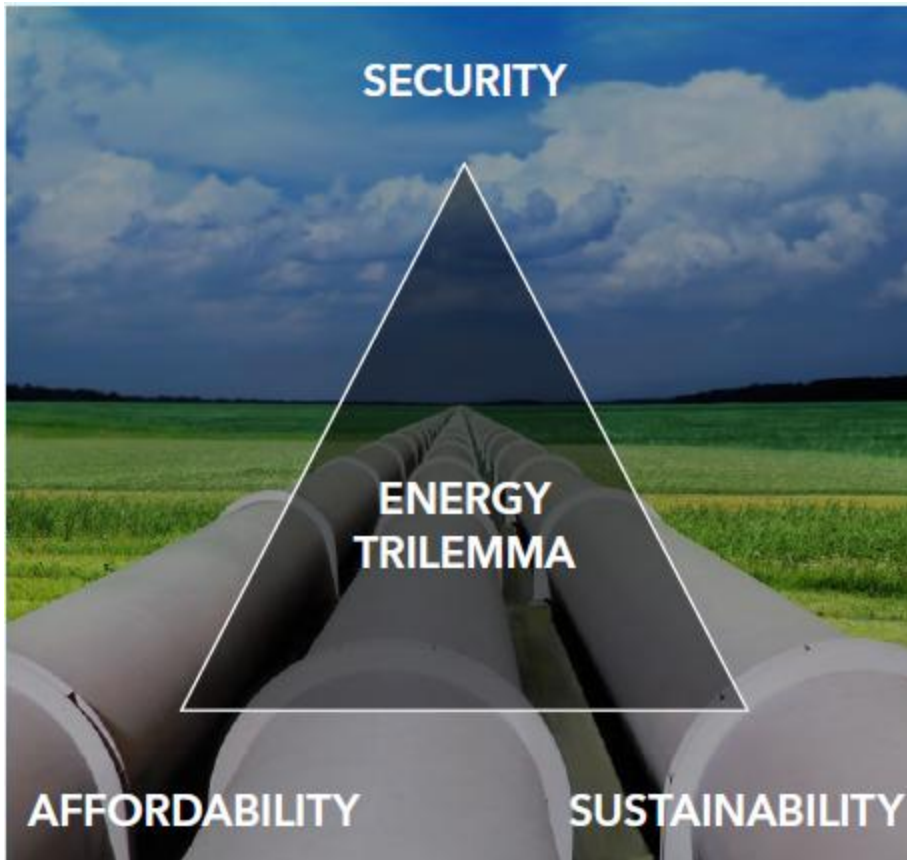
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The Energy Transition as a New Geopolitical Equation

The Energy Trilemma: Security of Supply vs. Affordability/Equity vs. Environmental Sustainability



The Post-Paris Era: Initial focus centered heavily on decarbonization and rapid RES deployment

The Current Reality: Weaponization of energy resources and regional conflicts have placed **Energy Security at the apex** of policy planning.

Energy Access & Geopolitics: Access to energy has been a fundamental driver of geopolitical power since the 19th century.

20th-Century Oil Era: Oil served as the core pillar of 20th-century geopolitical, political, and economic order.

Future Energy System: Shifting toward a highly diversified energy mix focused on energy efficiency and access to critical raw materials.

Yergin's Paradigm: Defined by Daniel Yergin as moving "*from a world of big oil to a world of big shovels*", emphasizing the strategic role of mineral resources for clean energy technologies.



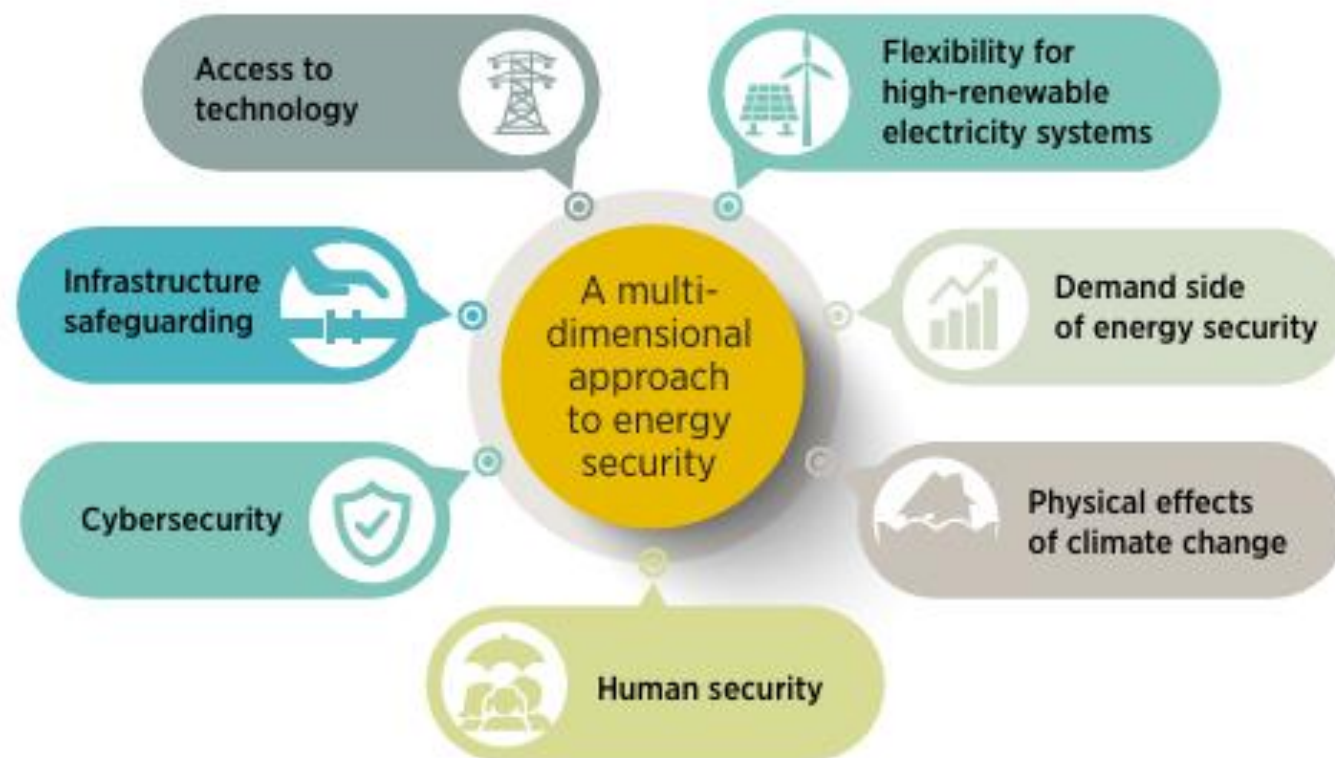
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A Multi-Dimensional Approach to Energy Security





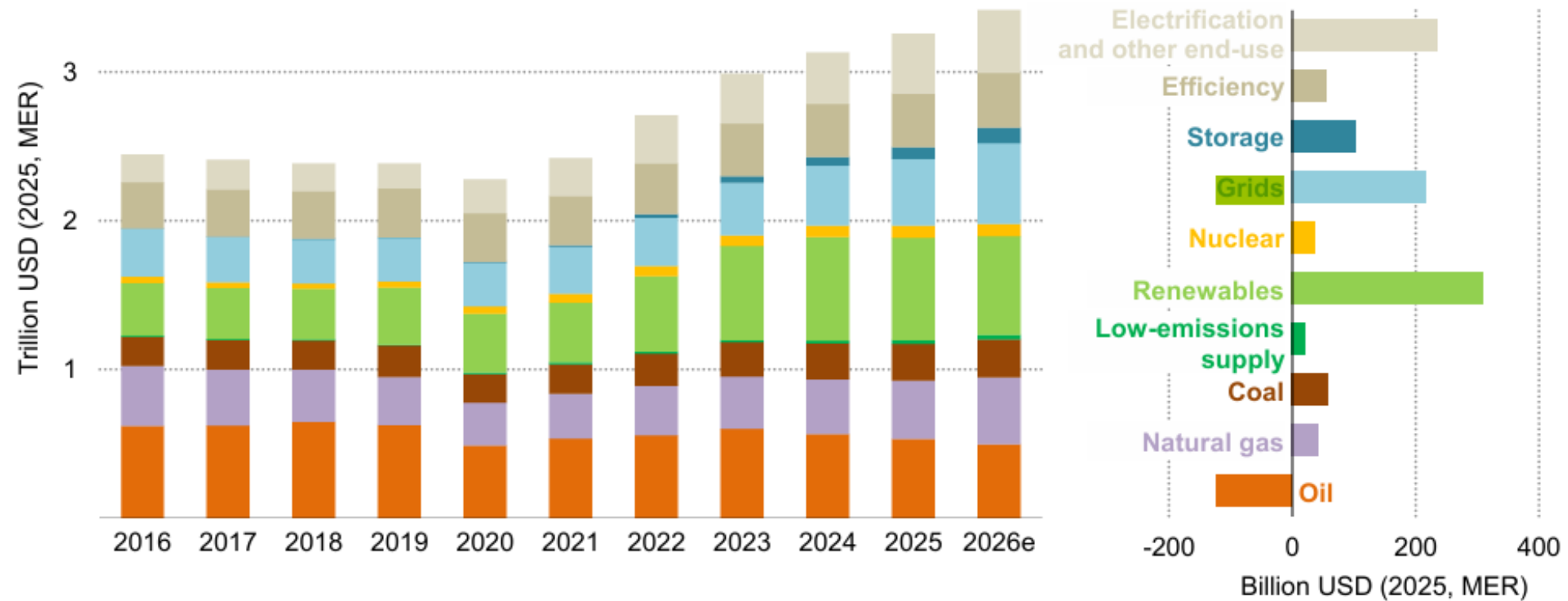
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Global energy investment reaching record highs (~\$3+ Trillion), heavily weighted toward clean technology, electrification, and grid infrastructure

Global investment in energy, 2016-2026e (left) and change in investment between 2016 and 2026e (right)



IEA. CC BY 4.0.

Source: IEA

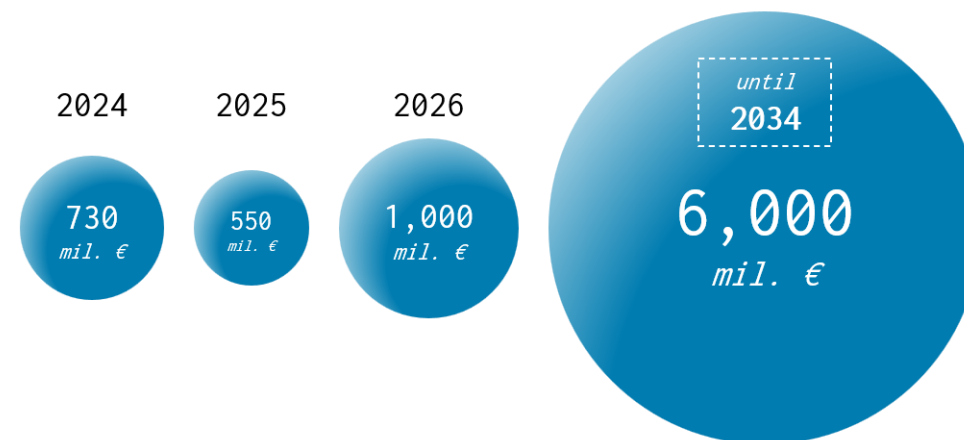
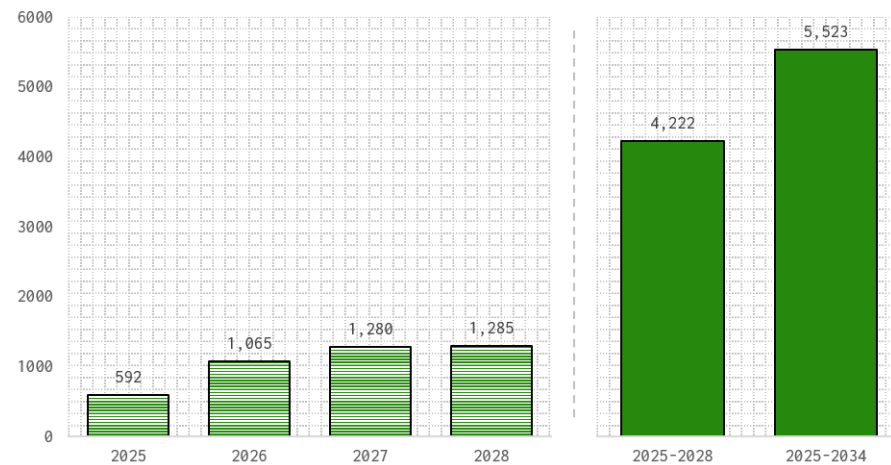
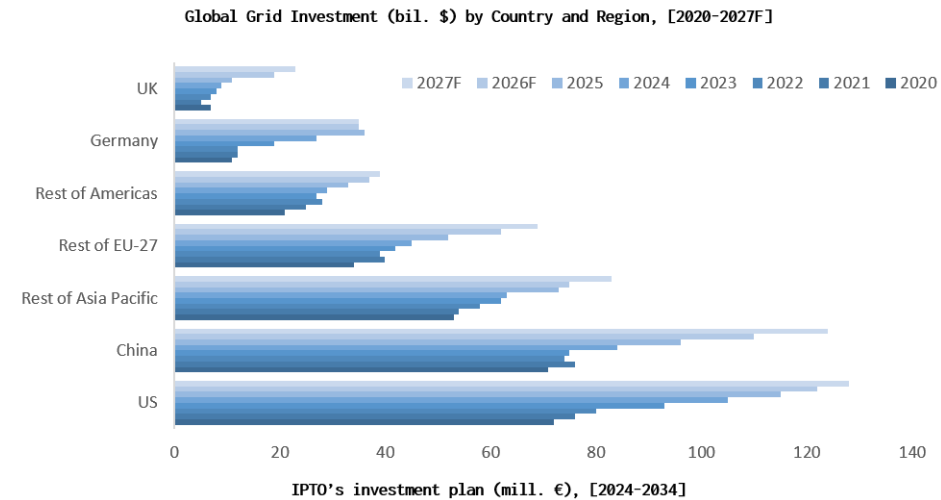
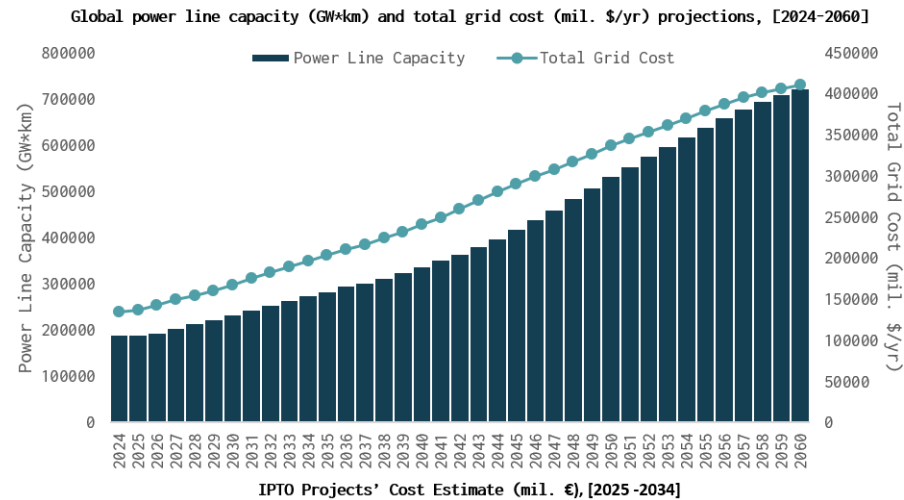


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Connecting to the Future: Grid Investments





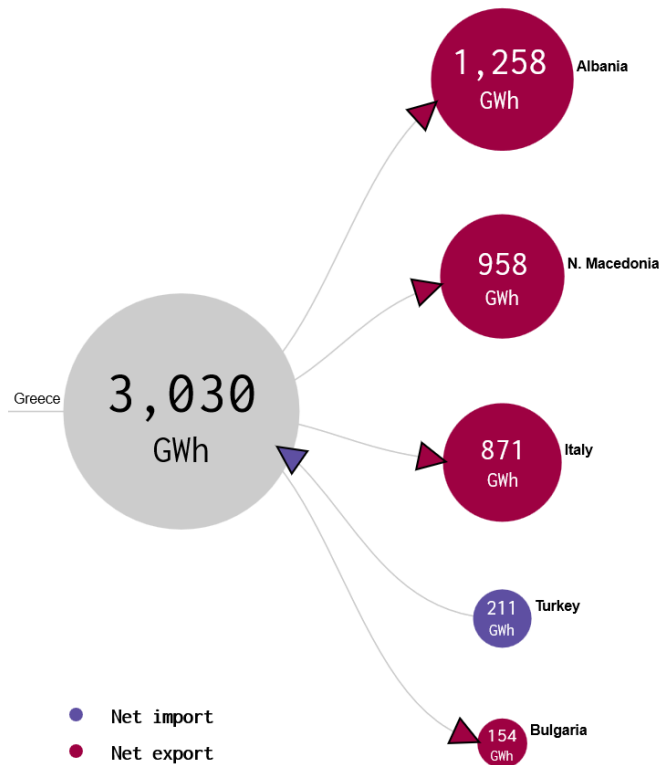
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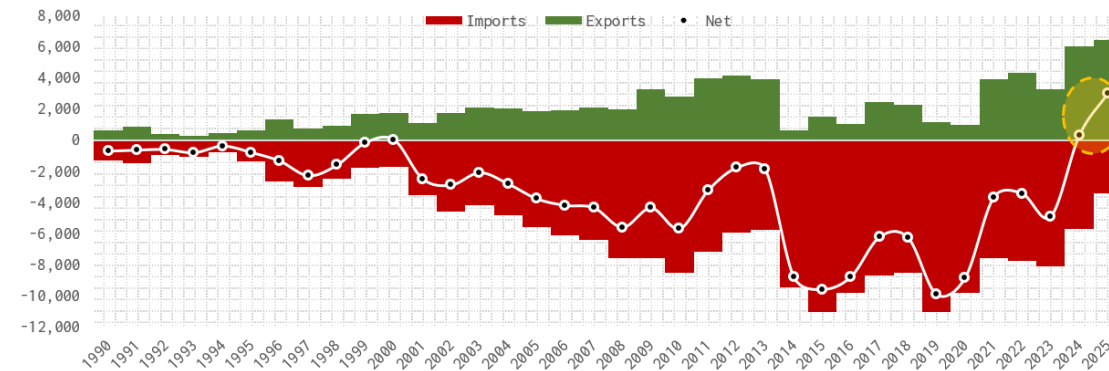


Greece's Interconnections: A regional exporter in the making

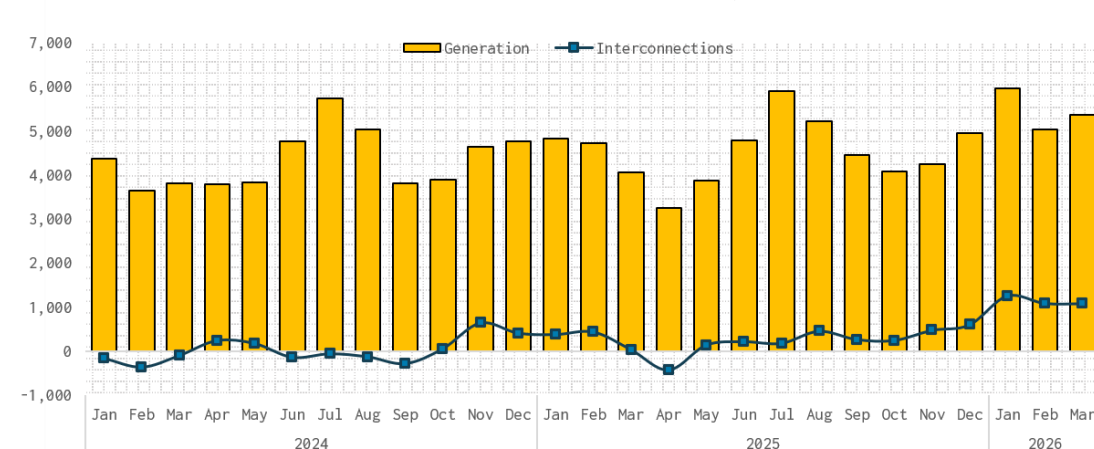
Greece Net Imports-Exports of Electricity (GWh) per Country, [2025]



Evolution of Greece's Imports and Exports of Electricity (GWh), [1990-2025]



Greece's Monthly Generation (GWh) and Exports-Imports (GWh), [Jan 2024-Mar 2025]



Notice: Negative values indicate net imports



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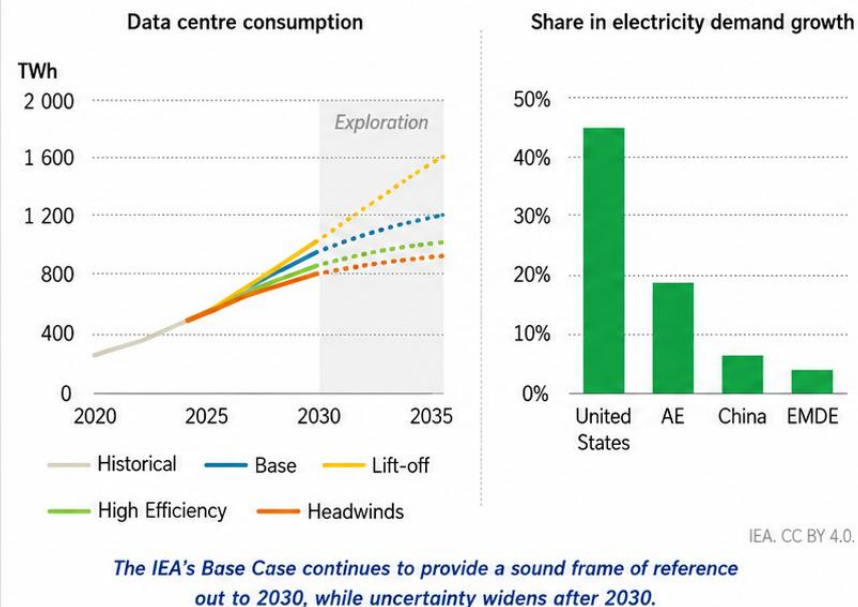
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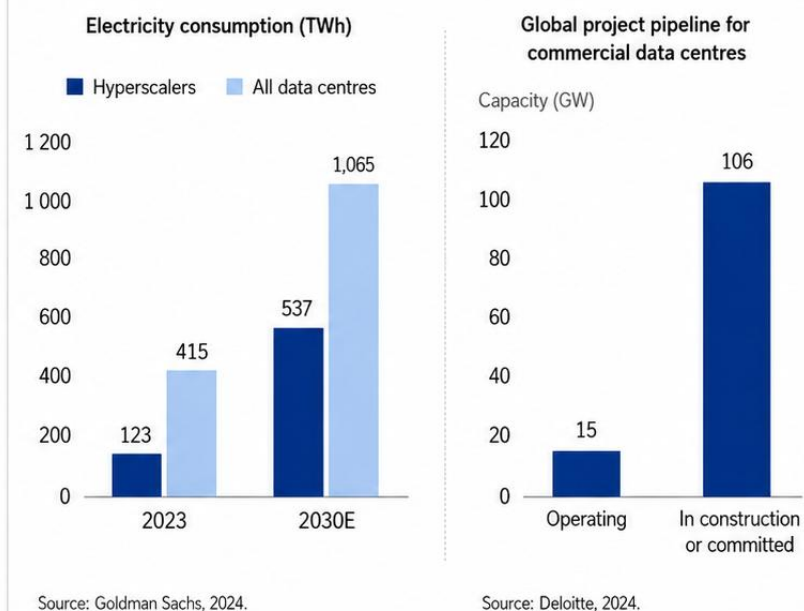
Data-center power demand is accelerating and becoming a material driver of electricity growth

Hyperscaler expansion, a large project pipeline and widening post-2030 uncertainty point to sustained growth in data-centre electricity demand.

IEA cases for data centre electricity consumption, 2020–2035



Electricity use by hyperscalers and all data centres, and global project pipeline



Key takeaway: Data-centre demand is gaining structural momentum and will play an increasingly important role in electricity demand growth across major economies.



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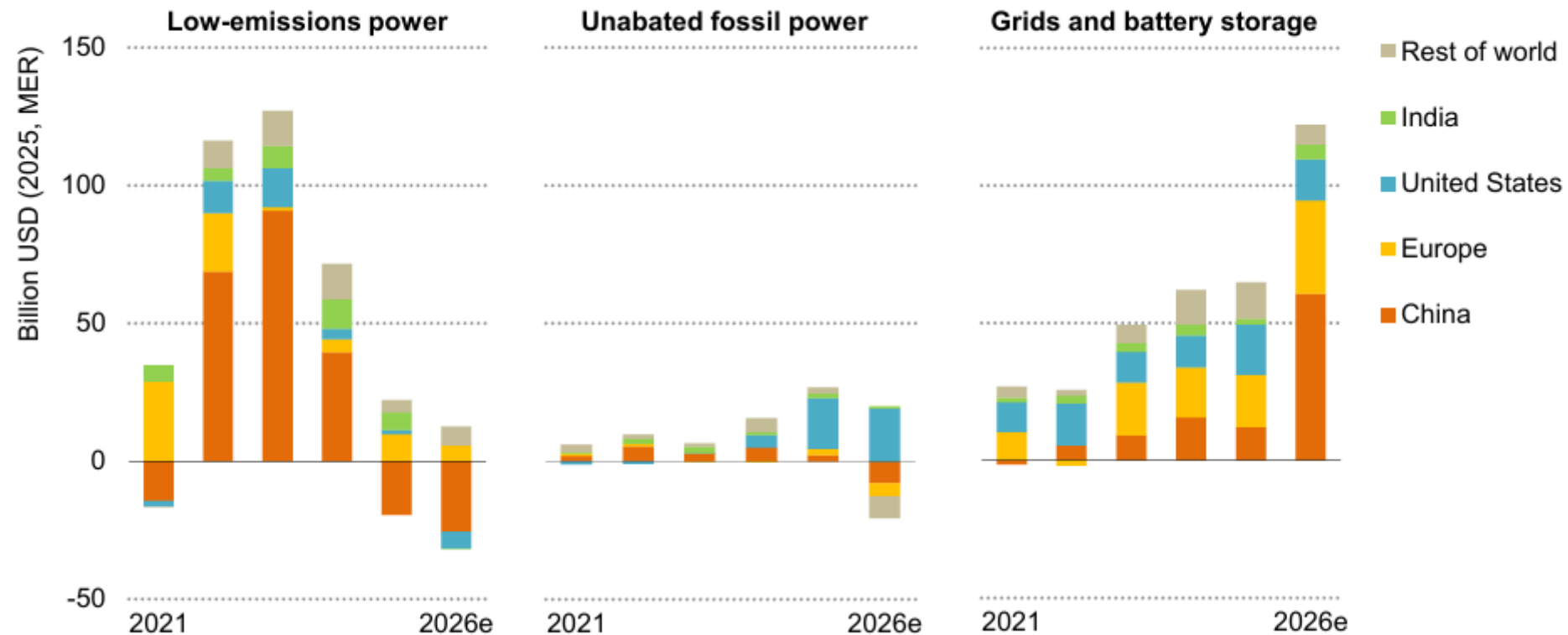
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Grids, baby, Grids! and Energy Storage

Massive growth in power grid expansion and battery energy storage systems (BESS)
across Europe, China, and the US to absorb RES generation

Annual year-on-year investment growth for the power sector by category, 2021-2026e



IEA. CC BY 4.0.

Source: IEA



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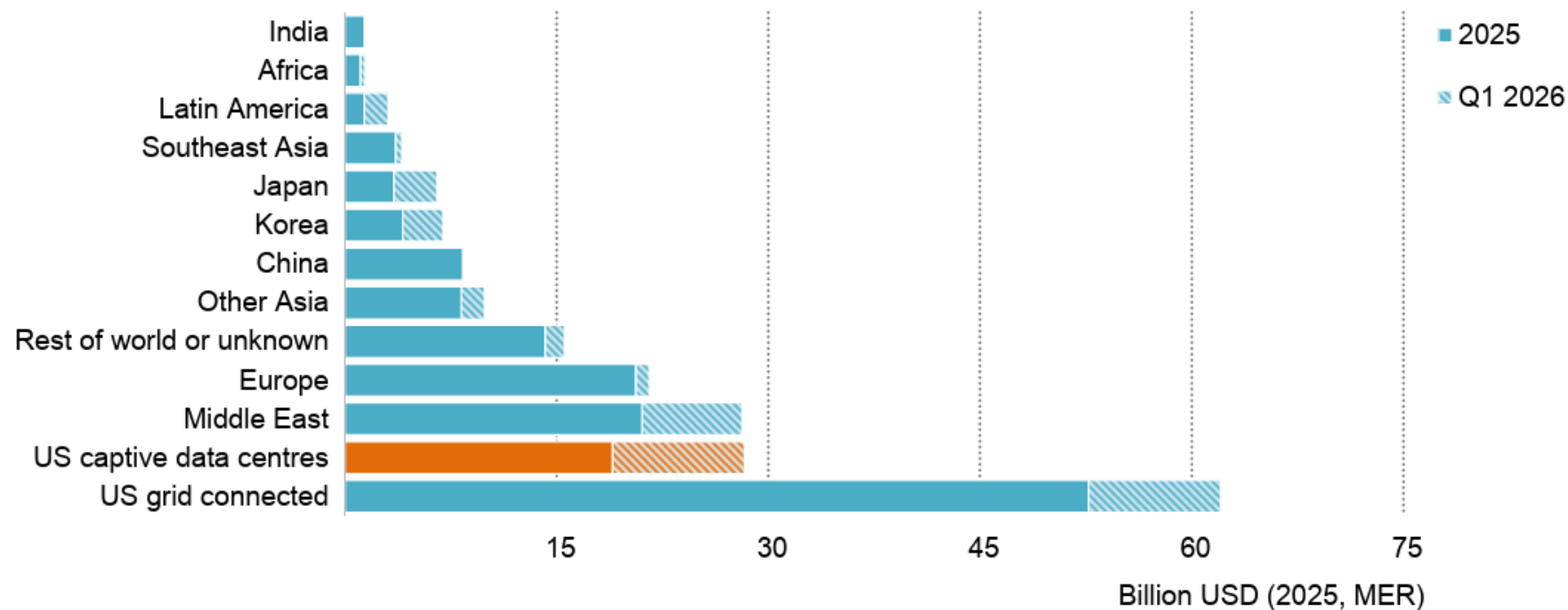
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Artificial intelligence is also central to gas investment trends: if data centers were a country, they would be the second-largest destination for gas turbines ordered from Q1 2025 to Q1 2026

Value of new gas generation FIDs by country or region and use-case, Q1 2025-Q1 2026



Note: US grid-connected refers to gas-fired generation connected to and supplying the wider electricity grid. US captive data centres refers to dedicated, on-site gas generation built primarily to supply data centres directly, often bypassing grid-connection constraints.



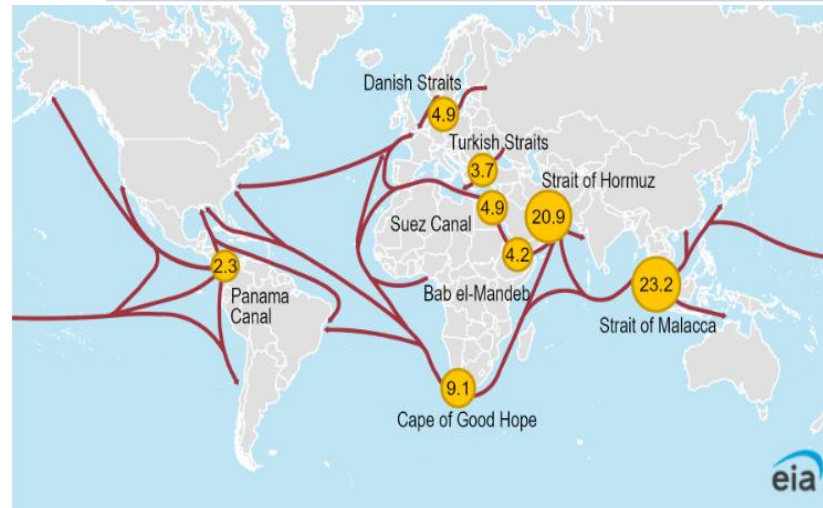
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Global Energy Transit Chokepoints & Middle East Dependence

Daily oil and other liquid fuel flows through key global maritime energy chokepoints (million barrels per day, 2025)



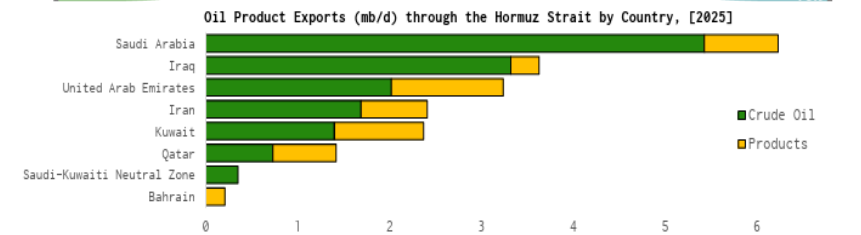
LNG trade through the Hormuz strait, [2026]



20%
of global LNG trade



83%
of Hormuz LNG sent to Asia



Hellenic Association for Energy Economics
Chart of the Month – vol.39

Source: investing.com, HAEE analysis

Source: IEA, eia, investing.com, HAEE Analysis



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Energy Commodity Price Dynamics & Geopolitical Risk Premium



Gas Price Rebound & Drivers: EU Natural Gas (TTF) increased to **~€78/MWh**—up from earlier lows—driven by pre-winter storage injection competition, Norwegian maintenance outages, and Middle East LNG transit risks.

Geopolitical Risk Premium: Crude oil (Brent at **~\$103/bbl**) and gas prices incorporate a persistent security risk premium due to potential disruptions in strategic maritime transit routes.

Structural Market Interdependence: While far below 2022 crisis peaks (>€300/MWh), European natural gas prices remain highly sensitive to global LNG competition and weather-driven demand fluctuations.



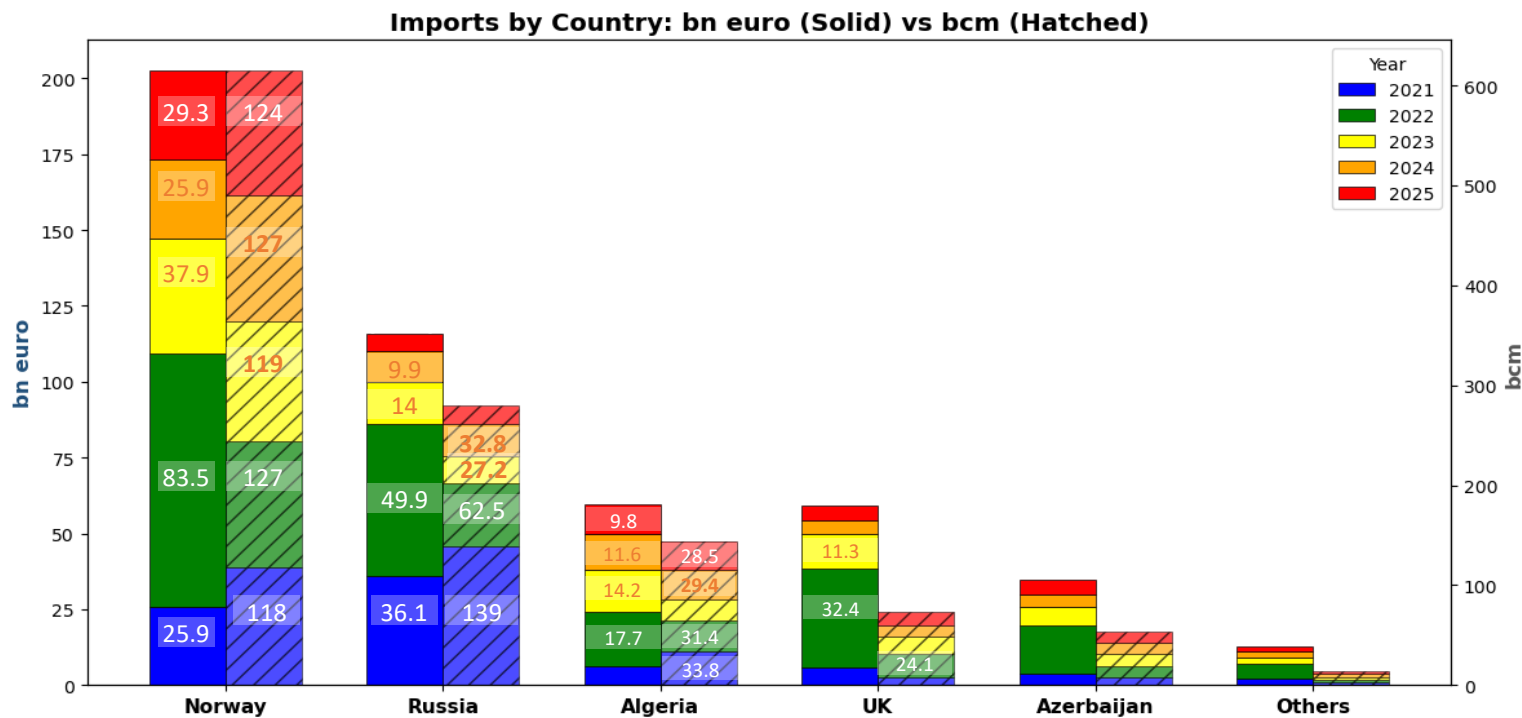
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Norway Emerged as the Main Beneficiary of Europe's Shift Away from Russian Pipeline Gas

EU Pipeline Gas Imports: Expenditure and Physical Volumes by Supplier, [2021–2025]



- Russian pipeline gas declined sharply after 2022, fundamentally reshaping Europe's supplier mix.
- Norway absorbed much of the shift, maintaining annual pipeline deliveries above 120 bcm and receiving more than €200bn in EU spending over 2021–2025.
- Import spending reflects both price and volume dynamics: similar gas volumes generated vastly different payments across years as prices fluctuated, determining how much of Europe's energy expenditure ultimately accrued to each supplier country.
- 2022 illustrates this price effect clearly: Norwegian volumes increased only moderately, from 118 to 127 bcm, while EU spending surged from €25.9bn to €83.5bn.



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Regional Interconnectivity: The Vertical Corridor

Expanded Regional MoU: Unifies **9 nations and 11 System Operators** (Greece, Bulgaria, Romania, Hungary, Slovakia, Ukraine, Moldova) into a cohesive energy spine.

Replacing Russian Transit: Serves as the primary operational replacement for expiring East-to-West transit routes, directing LNG imports from the South to CEE and Ukraine.

Auction Capacity Bookings & Market Dynamics: In DESFA's annual auctions, market participants booked 46% of total offered export capacity through 2030.

Market Harmonization: Transitioning from individual pipe capacity to a unified regional gas market with streamlined cross-border tariffs and joint auctions.



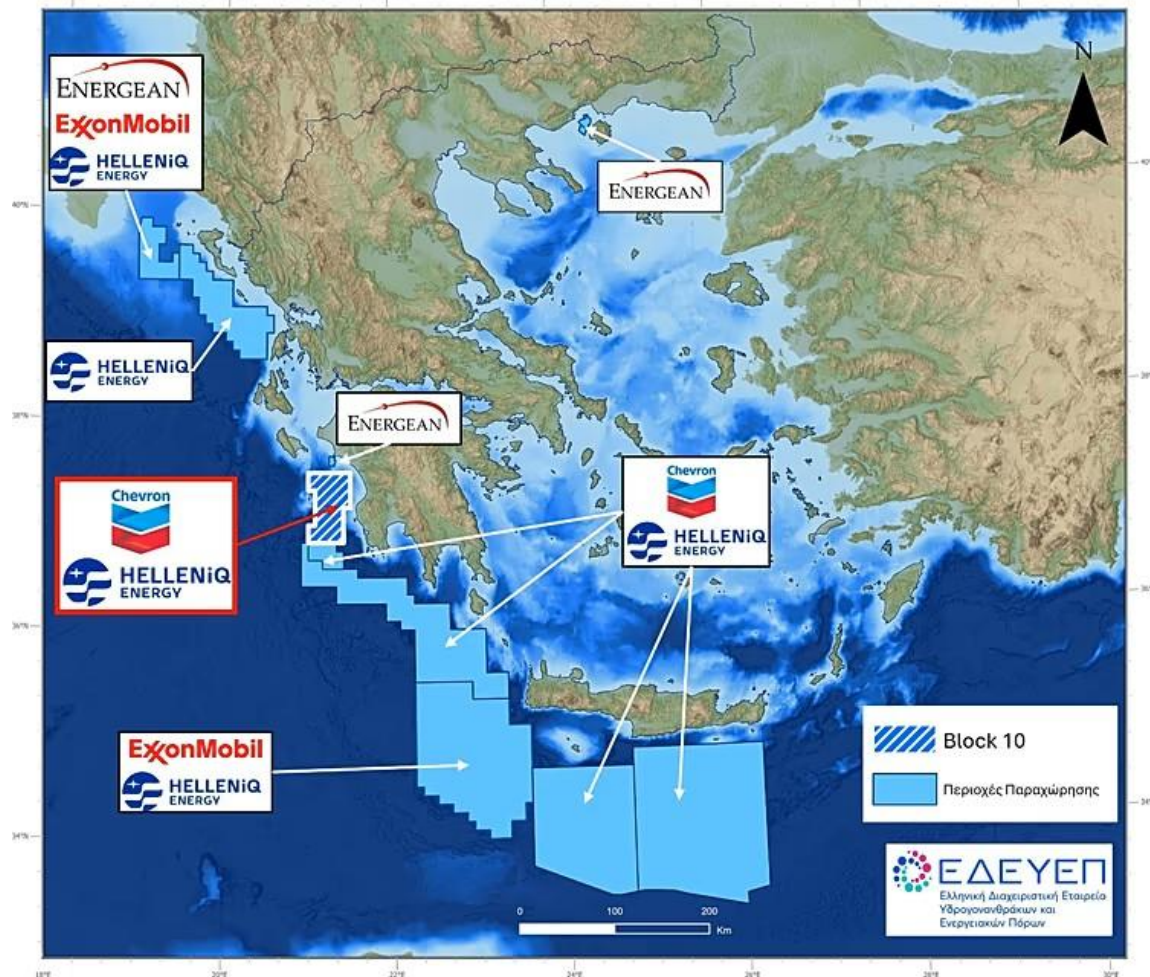


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Upstream Hydrocarbon Exploration in Greece & East Med



Strategic Concessions: Active offshore blocks in the Ionian Sea and SW Crete with major energy players (ExxonMobil, HELLENiQ Energy, Energean).

Drilling Timeline Outlook: Exploratory well decisions expected in **late 2025 – 2026**, with first drilling targeted for **2026–2027**.

Ionian Sea: 3D seismic processing in Block 10, completed by HELLENiQ Energy; final drilling decision targeted within **2025–2026**.

South / SW Crete: ExxonMobil & HELLENiQ Energy finalizing 3D seismic interpretation; target decision for first exploratory well in **2026**.



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Closing Reflection

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Europe will always lead when it comes to defending the rules-based system. But we can no longer rely on it as the only way to secure our interests. Or assume that its rules will shelter us from the complex threats that we face. In this new world, we must urgently reimagine our partnerships. And build global coalitions for our resilience and democracies.

Ursula von der Leyen, State of the Union Address (Sept 2026)

Thank you for your attention!

Prof. Dr. Kostas Andriosopoulos

Director, HELLENiQ Energy Center for Sustainability & Energy @ Alba Graduate Business School