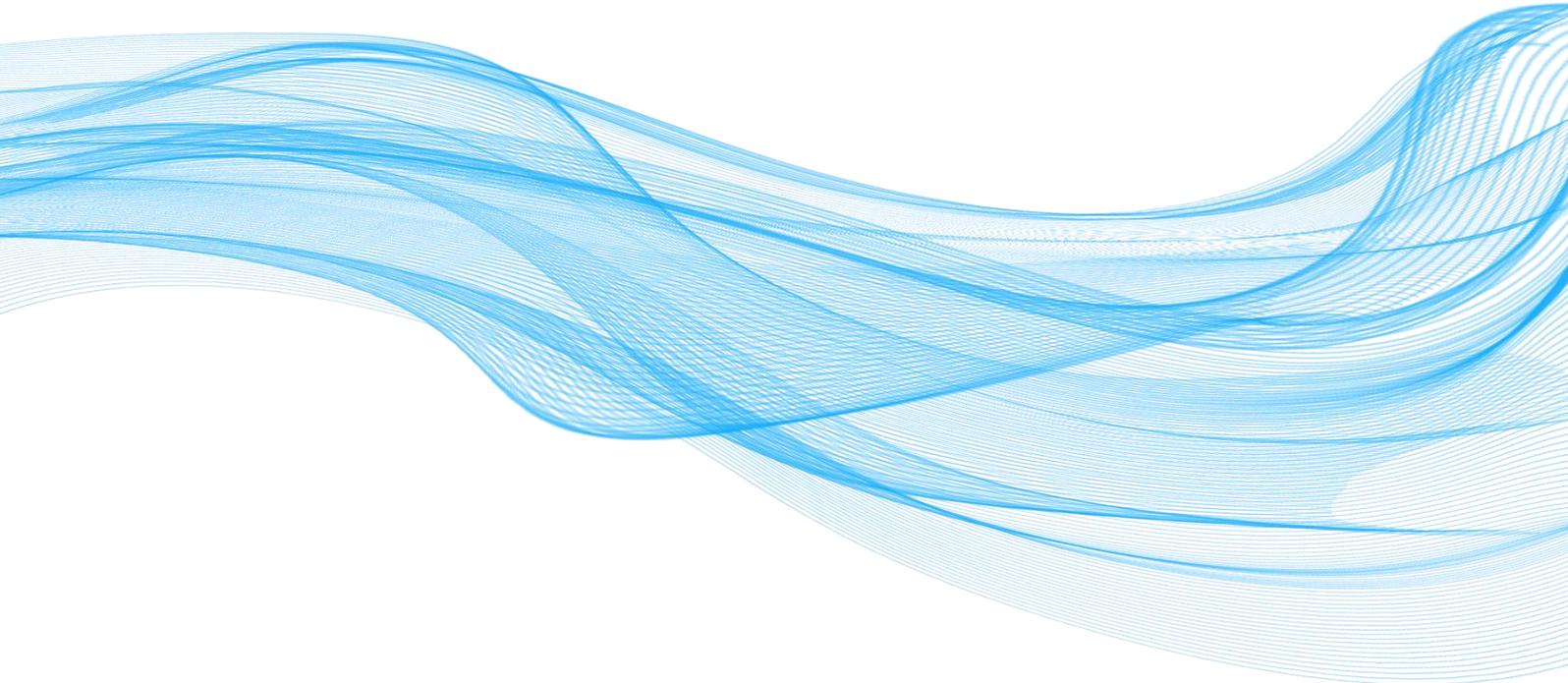




HELLENiQ ENERGY
Center for Sustainability and Energy
@ Alba Graduate Business School



Energy & Sustainability Insights 2025





HELLENiQ ENERGY
Center for Sustainability and Energy
@ Alba Graduate Business School

HELLENiQ ENERGY Center for Sustainability & Energy @Alba Graduate Business School

HELLENiQ ENERGY and Alba Business School are coming together to share a common vision establishing the “HELLENiQ ENERGY Center for Sustainability and Energy”, the first of its kind in Greece. This innovation hub aims to bring together stakeholders from across the energy sector, including academia, energy companies, energy users, regulators, and the government, fostering a systematic dialogue and collaborative approach to address challenges of the energy sector and advance sustainability for a brighter future.

The Center aims is to establish an ecosystem that bridges the academic, business, governmental, and societal spheres to foster meaningful dialogue among stakeholders in the energy sector and provide a 360° view of the energy sector. By leveraging fundamental and applied scientific research alongside business excellence, the Center aims to reshape the research landscape in energy, environment, and sustainability. This includes integrating economic, environmental, and social dimensions into research efforts, advancing innovative technologies and methodologies, and supporting the development of talent in the energy sector. The Center, through its activities and the knowledge it generates, facilitates the delivery of the Executive Program in Energy Business, offering training for managers, professionals and students.

1

<https://energy.alba.acg.edu/>



Foreword



Prof. Dr. Kostas Andriosopoulos

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

The European energy transition has reached a critical point where ambition must be matched by execution. In 2025, geopolitical realignments, the consolidation of LNG as a security pillar, and the maturation of renewable deployment have fundamentally reshaped Europe’s energy landscape. Greece now stands firmly within this transformation—not as a peripheral market, but as a strategic regional hub.

Energy & Sustainability Insights reflects the key insights of the *1st Energy & Sustainability Knowledge Forum*, capturing a moment in which Greece has largely completed the foundational phase of its transition. The challenge ahead is clear: sustaining progress while safeguarding competitiveness, affordability, and security of supply.

2

The discussions synthesized converge on three decisive priorities for the next phase: regulatory stability, smarter and scalable financing, and human capital development. These are the essential enablers for innovative renewable technologies, storage, carbon capture, hydrogen-ready infrastructure, and grid modernization. Without predictable frameworks and faster permitting, capital and technology will not scale—despite record global investment levels.

This publication reflects the mission of the HELLENiQ ENERGY Center for Sustainability & Energy @Alba Graduate Business School: to provide evidence-based insights that connect policy, markets, technology, and people. As the energy transition moves from targets to delivery, the insights in this report aim to support informed decision-making and practical action for Greece and the wider region.

The transition is no longer about targets.

It is about delivery.



Coordinator

Prof. Dr. Kostas Andriosopoulos is Af. Professor in Finance and Energy Management and the Director of the HELLENiQ ENERGY Center for Sustainability and Energy @Alba Graduate Business School. Kostas is a member in various professional and academic associations, including President of the Energy Committee of the American Hellenic Chamber of Commerce; Founder, former Chairman and active Member of the BoD of the Hellenic Association for Energy Economics; board member of the Global Gas Center - World Energy Council as a Gas and LNG markets expert; member of the board of the International Association for Energy Economics (IAEE); founding board member of the Financial Engineering and Banking Society. As of August 2018, he is the Country Manager of Akuo Energy in Greece.

Research Team

Konstantinos Sfetsioris is a Research Fellow at HELLENiQ ENERGY Center for Sustainability and Energy @Alba Graduate Business School. He holds an MSc in Mechanical Engineering with a postgraduate degree in Energy Production and Management from National Technical University of Athens. Since 2019, he has been an Advisor to the General Secretariat for Energy & Mineral Resources at the Ministry of Environment and Energy. He is a Regular Member of the Committee for the drafting of the National Hydrogen Strategy.

3

Eleni Ntemou is a PhD candidate at Aristotle University of Thessaloniki. She is a Research Associate at the HELLENiQ ENERGY Center for Sustainability and Energy @Alba Graduate Business School. Eleni obtained her MSc in Computational and Statistical Data Analytics and her bachelors (BSc) in Mathematics and from University of Patras (UoP), Greece.

Georgia Giannakidou is a PhD candidate at Aristotle University of Thessaloniki. She is a Research Associate at the HELLENiQ ENERGY Center for Sustainability and Energy @Alba Graduate Business School. Georgia graduated from ESCP Business School, where she obtained her MSc in Energy Management in London, UK. Georgia holds a bachelor's degree with distinction in Political Science, with a major in Geopolitics, from the National and Kapodistrian University of Athens, Greece. Her expertise includes ESG, sustainable investments and energy politics.



Executive Summary

The year 2025 stands as a definitive watershed moment for the European energy landscape. It was the year the EU decisively severed its remaining dependencies on legacy piped-gas routes, integrated the US as its primary strategic LNG partner, and formalized the Clean Industrial Deal to safeguard its economic future. Greece has positioned itself at the nexus of this realignment, having transitioned from an isolated energy consumer to a strategic, flexible gateway for the broader European market.

The consensus is clear: while Greece has achieved remarkable penetration in Renewable Energy Sources (RES), the "foundational phase" of the transition is now complete. As we look toward 2026 and beyond, the narrative shifts from ambition to execution. Greece's aspiration to serve as the "energy hub of Southeast Europe" is no longer a distant goal but a functional reality that requires a sophisticated, three-pillar strategy to sustain: regulatory stability, smarter financing, and the urgent development of human capital.

This report synthesizes the high-level dialogues of the 1st Energy & Sustainability Knowledge Forum, serving as a critical reflective platform to evaluate this progress, examining how Greece is navigating the "Energy Transition Dilemma"—the delicate balance between aggressive decarbonization and maintaining industrial competitiveness. From the expansion of the Vertical Corridor and pioneering Carbon Capture and Storage (CCS) projects to the transformative rise of Artificial Intelligence and Data Centers, the following sections outline a roadmap for a resilient energy future.

4

By converting the hard-won insights of 2025 into a mandate for action, Greece is positioning itself not just as a transit corridor, but as a strategic architect of European energy security and sustainability.

Contents

HELLENiQ ENERGY Center for Sustainability & Energy @Alba Graduate Business School 1

Foreword..... 2

Coordinator..... 3

Research Team 3

Executive Summary 4

The Strategic Mandate for Growth 6

 Session 1: The Strategic Role of Greece in Regional Energy Security 6

 Session 2: Unlocking the Transition: Market Tools, Financing and Economies of Scale 10

 Session 3: Balancing Cost, Climate & Competitiveness — The Energy Transition Dilemma ... 12

 Session 4: The New Framework of EU Carbon Regulation and its Implications for the Hellenic Industry 14

 Session 5: Aligning National Energy Plans with a Just Transition and the Skills Gap 16

 Session 6: AI and Digital Transformation in the Energy Transition 18

Key Takeaways..... 21

Conclusion..... 22



The Strategic Mandate for Growth

The 1st Energy & Sustainability Knowledge Forum established a clear mandate for the next phase of Greece's energy transition: a **secure, realistic, and strategic** pathway. While Greece has achieved impressive initial progress in renewable energy penetration, its continued success—and its ambition to become the "energy hub of Southeast Europe", now hinges on three critical and coordinated pillars:

1. **Regulatory Stability:** Establishing robust and predictable frameworks to de-risk investments and simplify permitting processes.
2. **Smarter Financing:** Mobilizing capital for next-generation projects (offshore wind, storage) through blended finance and de-risking mechanisms.
3. **Human Capital Development:** Addressing the structural deficit in specialized skills through targeted, systematic reskilling and upskilling programs.

Session 1: The Strategic Role of Greece in Regional Energy Security

6

Greece has transitioned from a mere energy bridge to a strategic regional power hub, a role underpinned by modern infrastructure and a stable institutional framework. This geopolitical shift is crucial for transatlantic energy resilience, as underscored by the need for strong cooperation to ensure a reliable supply chain. The Forum identified key infrastructure as central to this strategy:

- **Energy Gateway Status:** Greece is firmly positioning itself as the **region's crucial energy hub**.
- **Key Infrastructure:** Critical priorities include the **Vertical Corridor** gas infrastructure, new **Floating Storage and Regasification Units (FSRUs)**, and essential cross-border interconnections, all designed to enhance regional energy sufficiency and stability.
- **Corporate Mandate:** The paramount corporate and national priority remains ensuring a **reliable energy system** for the coming decades, until new green technologies reach full maturity, with sustainability guiding all strategic decisions.

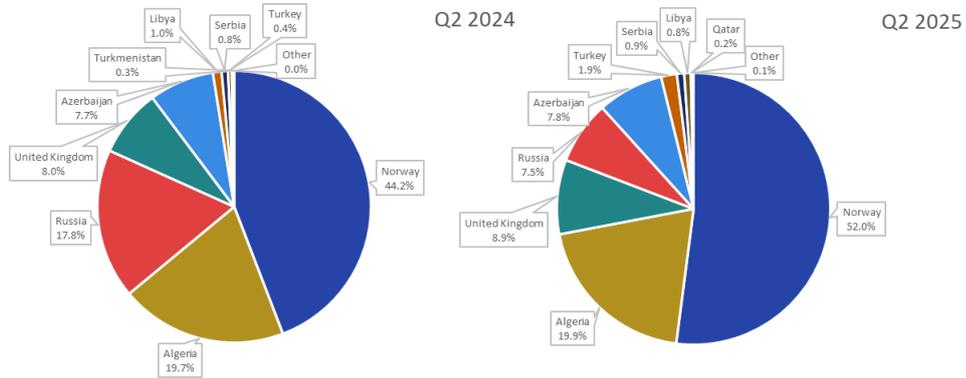


Figure 1 EU imports of NG by partner (share in traded volumes (%)), [Q2 2024, Q2 2025], Source: [Eurostat](#)

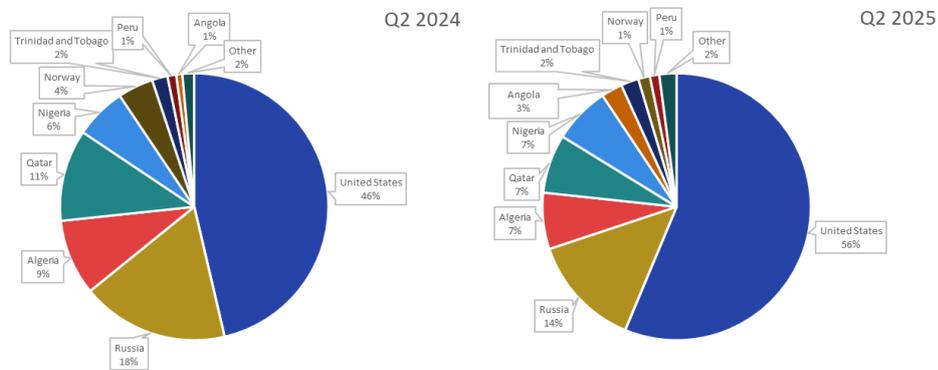


Figure 2 EU imports of LNG by partner (share in traded volumes (%)), [Q2 2024, Q2 2025], Source: [Eurostat](#)

In the second quarter of 2025 (Q2 2025), the US cemented its role as the dominant supplier of LNG to the EU, capturing a commanding 57.7% share of all EU LNG imports. This surge represents a substantial increase of almost 10% compared to its share in Q2 2024, underscoring the effectiveness of the transatlantic energy partnership and the increasing integration of US supply into European energy security. Simultaneously, the EU's detachment from Moscow's influence deepened across the gas sector. Imports of Russian LNG decreased, with its share falling by 4% in Q2 2025, while its share of piped NG also dropped significantly, by almost 10% compared to the previous year. This structural downturn, which accelerated following the finalization of the halt of Russian piped gas transit via Ukraine at the start of 2025, underscores that the shift is not

merely about volumes but fundamentally about security, diversification, and the geopolitical realignment of the EU's energy supply mix.

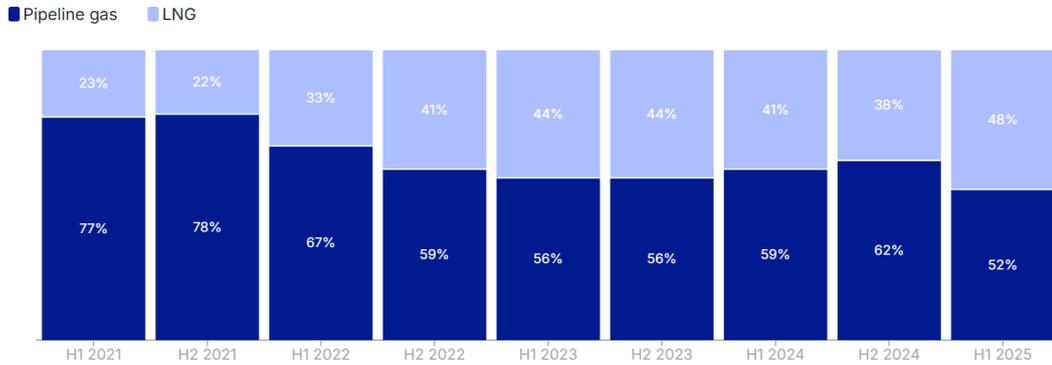
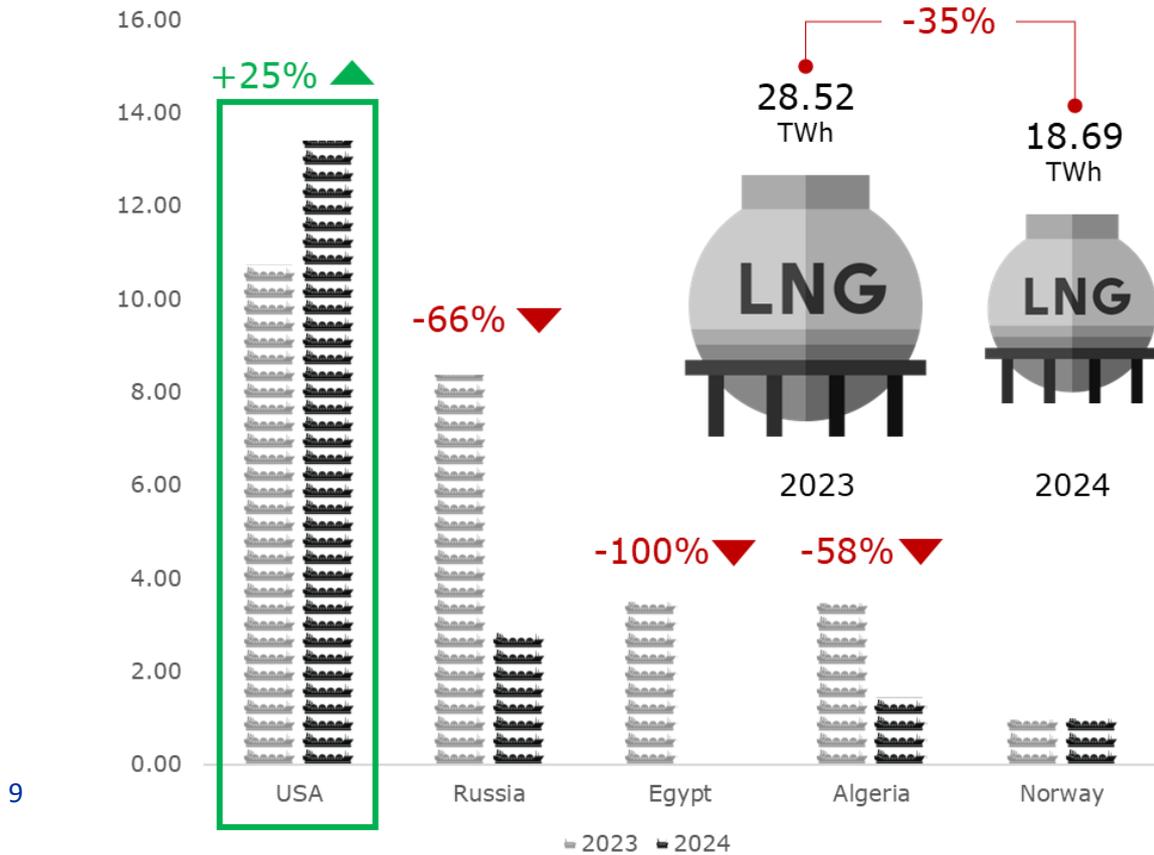


Figure 3 EU gas import mix (%), [H1 2021-H1 2025], Source: [Institute for Energy Economics and Financial Analysis](#)

8 Simultaneously, the EU's broader gas mix (pipeline NG and LNG) has decisively shifted, with LNG gaining a vast percentage of the share. This trend is reinforced by the IEA's forecast for a global surge in new LNG liquefaction capacity, largely driven by the US and Qatar, expected to further ease market tightness and enhance supply security for Europe up to 2030. The growing reliance on a flexible global LNG market, led by the US, strongly positions the latter as a sustainable and long-term strategic energy partner for the EU.



9

Figure 4 LNG Imports in Greece (TWh), [2023-2024]. Source: DESFA

Finally, Greece reinforced its role as a regional energy hub despite a 35% year-on-year decline in LNG imports. The contraction reflects changing regional flows rather than reduced strategic relevance. US LNG strengthened its dominance, rising by 25% and underpinning Greece's position as a key entry point for transatlantic gas into Southeast Europe. At the same time, imports from Russia, Egypt, Algeria and Norway declined sharply, signalling a reconfiguration of supply routes. Overall, the trends highlight Greece's transition from a pure end-consumer to a flexible gateway and redistribution hub, supporting diversification, security of supply and regional market integration across the Balkans and wider Eastern Mediterranean.

Session 2: Unlocking the Transition: Market Tools, Financing and Economies of Scale

Panelists unanimously agreed that the critical next leap requires robust capital deployment and superior policy clarity, moving beyond initial RES penetration to scale up emerging technologies. The pathway forward rests on two main pillars:

- **Regulatory Stability as the Foundation:** The number one requirement for investors is clear market rules, simplified permitting processes, and **predictable pricing** for RES, energy storage, and grid projects.
- **Smarter Financing:** To finance the future, the transition must utilize **blended finance** (combining public and private capital), **de-risking mechanisms**, and a strategic focus on **economies of scale** to translate large-scale plans (such as offshore wind, storage, and hydrogen) into realized, bankable infrastructure.

10

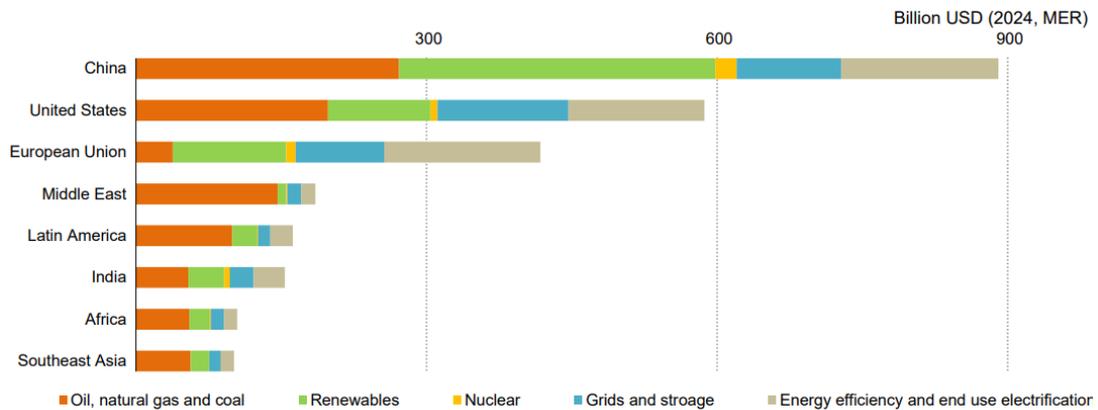


Figure 5 Energy investment by region (bill \$), [2025], Source: IEA

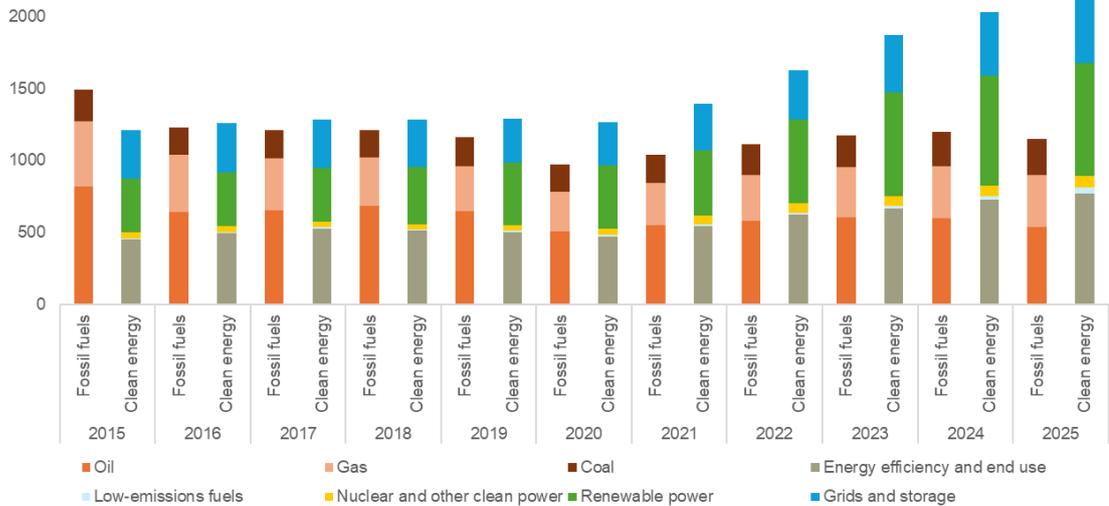


Figure 6 Global investment in clean energy and fossil fuels (bill \$), [2015-2025], Source: IEA

According to the IEA, global investment in clean energy in 2025 has reached \$2.2 trillion, doubling the \$1.1 trillion directed toward fossil fuel technologies. Due to economic and trade uncertainties, some investors are adopting a "wait-and-see" approach for new project approvals, but spending on existing projects remains stable. The European Grids Regulation (COM(2025) 1005 final) was implemented to lower energy prices for consumers, reduce the EU's dependence on fossil fuel imports, and ensure a secure, resilient supply while integrating massive amounts of clean, domestically produced energy.

11

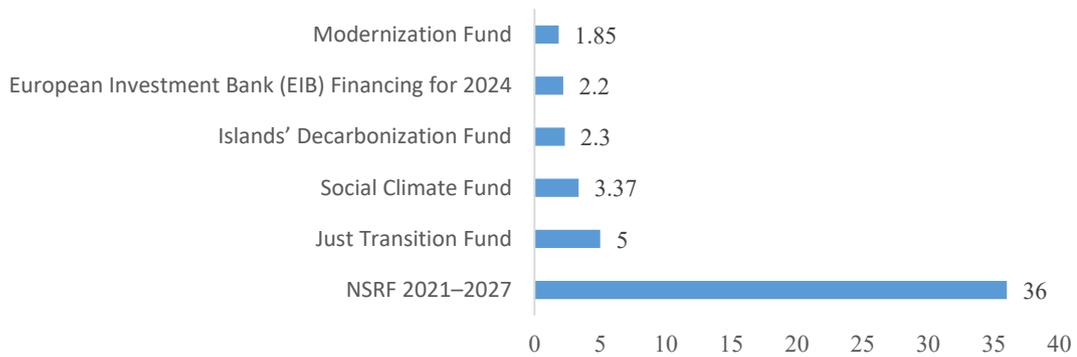


Figure 7 Greece's Available Funding Tools (excl. RRF), [2024]

Session 3: Balancing Cost, Climate & Competitiveness – The Energy Transition Dilemma

The central dilemma facing the Greek energy transition is maintaining a necessary balance between aggressive **climate ambition** and the need to retain **competitive energy costs**. Achieving Greece’s aspirational status as a regional energy hub requires coordinated infrastructure investment:

- **Infrastructure for Competitiveness:** Coordinated investment is required in domestic **hydrocarbons exploration**, expansion of gas infrastructure (including export capacity), essential **grid upgrades**, and large-scale **storage** projects.
- **Decisive Factor:** Across all major initiatives, from Carbon Capture and Storage (CCS) to hydrogen-ready infrastructure, the decisive factor for success and competitiveness was repeatedly identified as **faster permitting** and predictable regulatory certainty.

Even though the EU has set solid targets to achieve the energy transition, the matter of economic sustainability remains a priority. To achieve this balance, the role of liquid hydrocarbons remains immense, notably for Greece, which is positioning itself as an energy corridor via the Vertical Corridor and a strategic architect in Ukraine’s energy security.

12

Table 1 Running Hydrocarbon Explorations in Greece, Sources: [HEREMA](#), [HELLENiQ ENERGY](#)

Block Name	Primary Target	Geological Features	Involved Parties
South of Peloponnese	Gas/Oil	Multiple basin structures	HELLENiQ ENERGY & Chevron
A2-Ionian Block (Ionian Sea, southwest of the Peloponnese)	Gas/Oil	Moderate depth targets	HELLENiQ ENERGY & Chevron
South of Crete I	Gas reserves	Deep basin systems	HELLENiQ ENERGY & Chevron
South of Crete II	Major gas fields	Ultra-deepwater structures	HELLENiQ ENERGY & Chevron



Block 2 (Northwestern Ionian Sea)	Natural Gas	Explorator drilling	HELLENiQ ENERGY & Energean ExxonMob
Block 10 (Western Peloponnese)	Gas/Oil	Explorator drilling	HELLENiQ ENERGY
Ioannina (onshore block)	Gas/Oil	On hold	Energean

The development of Greece's offshore energy represents a significant economic opportunity, expected to generate substantial government revenue and enhance national energy security. Conservative estimates project €2–4 billion in direct investment over the next decade. This activity is anticipated to create 5,000 to 15,000 direct and indirect jobs during peak development phases, including highly skilled positions in engineering and geology, while also facilitating valuable technology transfer to build domestic expertise. In line with EU climate goals, CCS infrastructure is also accelerating in Greece, driven by a series of investments valued at up to €3.6 billion (~\$4.2 billion), as the country positions itself to build a national CO₂ management network connecting heavy industry with offshore storage under the Aegean Sea. This includes Greece's emergence as a regional CCS hub, with infrastructure designed to serve both domestic emitters and potentially overseas customers.

13

Table 2 CCS and H2 projects

Initiative Type	Project Name (Operator)	Involved Parties	Location/Scope
CCS	Prinos Offshore CO2 storage	Energean	Offshore Kavala
CCS Transport Network	Apollo CO ₂	DESFA	Connecting industrial hubs Revithoussa terminal
CCS	IFESTOS	TITAN Cement	Kamari, Boeotia



CCS	OLYMPUS	Heracles Group	Milaki, Evoia
CCS & H ₂	IRIS	MotorOil	Agioi Theodoros
H ₂ pipeline	H ₂ DRIA	DESFA	Mainland Greece (connecting production to consumption centers)
H ₂ refueling	LIFE GREENH ₂ ORN	DEPA	Kozani

14

Session 4: The New Framework of EU Carbon Regulation and its Implications for the Hellenic Industry

European regulatory developments, particularly the evolving carbon market mechanisms, introduce both financial incentives and significant hurdles for the Hellenic industry.

- **Carbon Pricing Framework:** A predictable yet flexible carbon pricing framework is necessary as these market mechanisms continue their international expansion.
- **Major Hurdles:** Key challenges for industrial and energy projects include **cost viability** (many projects require significantly higher carbon prices to be commercially viable) and the risk of **carbon leakage** for exports, underscoring the urgency for cohesive, large-scale European action.

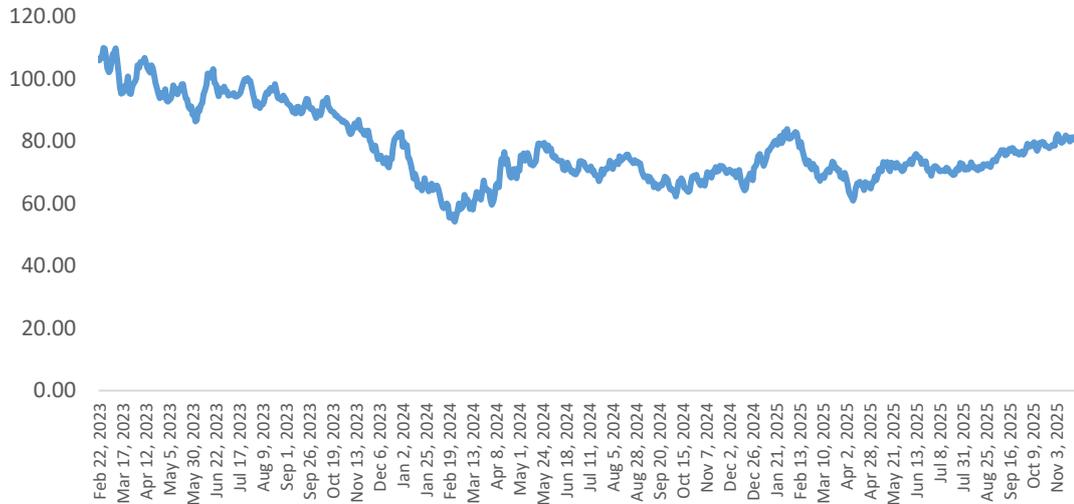


Figure 8 EU ETS price (Euro/tonne of CO₂), [2021-2025], Source: [Statista](https://www.statista.com)

Key EU Climate and Industrial Policies

Carbon Border Adjustment Mechanism (CBAM)

15

The Carbon Border Adjustment Mechanism (CBAM) is a flagship European Union (EU) climate policy designed to prevent "carbon leakage," which is the risk that EU companies might move carbon-intensive production abroad to countries with less stringent climate policies.

The mechanism works by imposing a carbon price on certain imported goods, such as cement, iron, steel, aluminum, fertilizers, and hydrogen, mirroring the carbon costs paid by EU producers under the EU Emissions Trading System (ETS). By ensuring that imported products face an equivalent carbon price, CBAM aims to level the playing field for EU industry, safeguard the EU's climate ambitions, and encourage global trading partners to decarbonize their own production processes. The CBAM entered its transitional, reporting-only phase in October 2023, with the full financial obligations set to begin in 2026.

Clean Industrial Deal (CID) and State Aid

The Clean Industrial Deal (CID) is a strategy to bolster EU competitiveness and turn decarbonization into a growth driver, focusing on energy-intensive industries (steel, metals, chemicals). Its key components are:

- Key Incentives: Mobilizing over €100 billion in funding, partly through a strengthened Innovation Fund and a proposed Industrial Decarbonization Bank.

- **Demand-Side Measures:** The proposed Industrial Decarbonization Accelerator Act, which will boost demand for EU-made clean products by introducing sustainability, resilience, and “Made in Europe” criteria in public and private procurements.
- **Supply Chain Resilience:** Launching Clean Trade and Investment Partnerships to diversify supply chains and forging mutually beneficial deals (e.g., with South Africa).

To combat the major hurdles, the EU Commission established the Clean Industrial Deal State Aid Framework (CISAF).

This framework (CISAF) replaces the previous Temporary Crisis and Transition Framework (TCTF) and governs how EU Member States can grant state aid (subsidies) to companies. Adopted in June 2025, CISAF is intended to remain in force until December 31, 2030, providing a stable and long-term planning horizon for investment.

Session 5: Aligning National Energy Plans with a Just Transition and the Skills Gap

The Forum highlighted that energy transition is fundamentally a **human capital challenge**. Achieving climate targets is impossible without a new, highly skilled professional workforce.

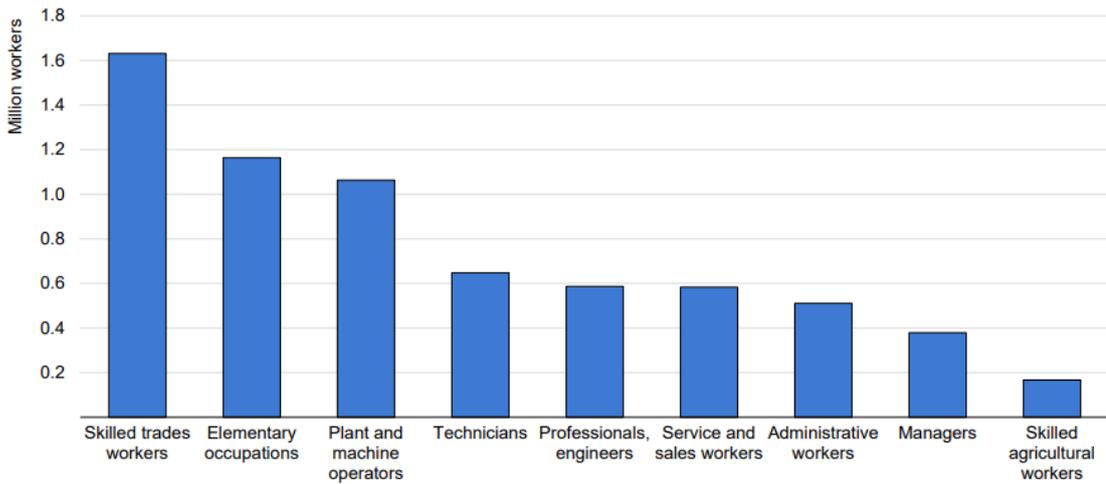
- 16
- **Skills Deficit:** There is an immediate and urgent need for **targeted and systematic reskilling and upskilling**, particularly in the **engineering and technical specialties** required by the growing Renewable Energy sector.
 - **Education Mandate:** Education must embrace **interdisciplinarity** and fully integrate **digitalization and Artificial Intelligence** into sustainability curricula to address the critical shortage of qualified personnel.

Table 3 Energy employment by region and sector (thousand employees) [2024], Source: [IEA](#)

Supply	Centr & South Ameri a	Euro e	Chi	Glob I
Coal	<50	100	280	6100
Oil & Ga	1100	600	140	1240
Low-emission fuels	500	300	200	2300
Generat n	700	1600	580	1420



T&D, storage	500	1000	240	8500
Vehicles	700	3500	630	1750
Efficiency	600	3300	380	1430
Critical Minerals	100	<50	<50	800



17 *Figure 9 Job addition by occupational group in the energy sector (million employees), [2015-2024], Source: IEA*

According to the IEA, globally, one in every fifty jobs in the economy is in the energy sector, which currently employs around 76 million people. Furthermore, it is estimated that over 6.1 million people have joined the energy sector across various occupational groups over the last decade.

Despite strong job growth, these numbers signify that a critical shortage of skilled workers immediately hampers the energy sector. This mismatch forces the industry to use costly short-term measures like higher wages and on-the-job training. To sustain growth and meet infrastructure goals, the sector must urgently invest in reskilling, upskilling, and formalized education to close the skills gap, or face risks to project quality and competitiveness. Expanding training capacity to this level would cost roughly USD 2.6 billion annually worldwide, a figure that represents less than 0.1% of global public spending on education.

While AI may seem like the panacea to most of our problems today, and while it is a powerful productivity tool that streamlines administration, permitting, and training in the energy sector, its current applications do little to ease the acute shortage of applied technical workers in manual roles like construction and maintenance. Energy companies

today lag in AI adoption. Therefore, while investments in the sector are rising, AI is not yet the solution for the industry's critical manual labor deficit.

Session 6: AI and Digital Transformation in the Energy Transition

Digitalization and Artificial Intelligence (AI) are confirmed as a **key optimizer** across the entire energy value chain, from real-time analytics to grid management.

- **Optimizing the System:** AI holds transformative potential for enhancing efficiency, market design, and system optimization, particularly for managing the growing flow of intermittent "green electrons" from RES.
- **Human Transformation:** However, the successful integration of AI is fundamentally a **human transformation**. It requires continuous upskilling of personnel and a necessary **redesign of organizational processes**, not merely the deployment of new technology.

The impacts of AI are especially prominent in the energy sector, particularly as the proliferation of generative AI and data centers has increased electricity needs to support them. In 2024, European data centers consumed around 3% of the total electricity (Source: European Commission, [AI and the energy sector](#)), making the sector an energy-intensive industry.

- 18 The energy sector shows broad engagement, with 86% of "Energy and materials" organizations reporting regular use of AI in at least one business function. However, the use of advanced AI "agents"—systems capable of autonomous, multi-step workflows—remains in the early scaling phase, with only 9% scaling agents in IT and 12% in Knowledge Management.

To realize the true potential of AI, the energy industry must shift its focus. Organizations that are AI high performers (those seeing the largest financial impact) are over three times more likely to use AI for transformative change, setting growth and innovation as core objectives rather than mere efficiency gains.

Despite popular opinion, AI is not yet seen as a definitive source of job reduction in the near term: the plurality of respondents (43%) expect no change in their workforce size in the coming year, although a significant portion (32%) anticipates staff decreases. The impacts of AI are especially prominent in the energy sector, as the latest happenings with generative AI and data centers have increased the electricity needs to support them.

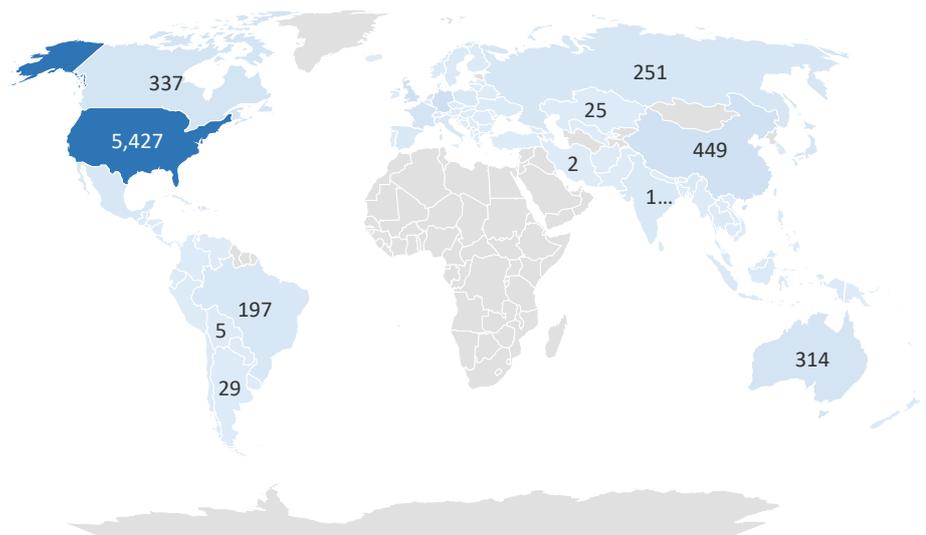
Percent of AI implementation	Knowledge management	Marketing and Sales	IT	Service Operations	Product & Service Development	Software Engineering	HR	Risk, Legal & Compliance	Strategy & Corporate Finance	Supply Chain/ Inventory Management	Manufacturing
Energy & Materials Sector	33%	33%	39%	32%	28%	30%	22%	17%	20%	19%	21%

Figure 10 Business functions in which respondents' organizations are regularly using AI (%), Source: [McKinsey & Company](#)

AI serves as the crucial intelligence layer for a complex, decentralized grid, enabling operators to better plan supply and demand. This significantly reduces the need for fossil fuel backup and minimizes renewable energy waste (curtailment).

Furthermore, AI is highly beneficial for Operational Efficiency and Asset Management through predictive maintenance, energy management systems, and smart grid applications. Specifically, AI-based prediction is vital in fostering efficient solar energy management and enhancing Smart Grid reliability and overall efficiency.

19



Powered by Bing
© Australian Bureau of Statistics, GeoNames, Microsoft, Navinfo, Open Places, OpenStreetMap, Overture Maps Foundation, TomTom, Zenrin

Figure 11 Number of Data Centers by country [November 2025], Source: [CARGOSON](#)

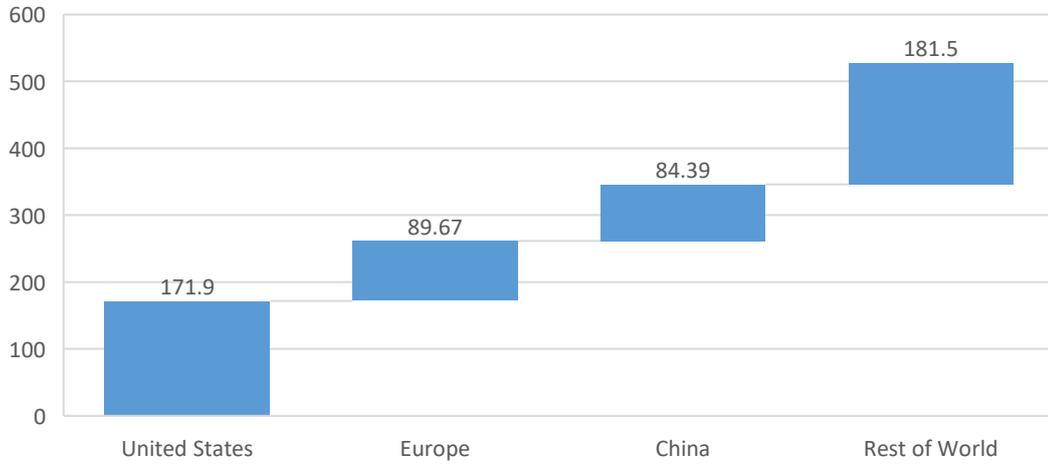


Figure 12 Market size (bill \$) of Data Centers by region [November 2025], Source: [CARGOSON](#)

Due to the increasing amount of data centers in the US, they have become the leading customer in electricity consumption, followed close behind by China.

20

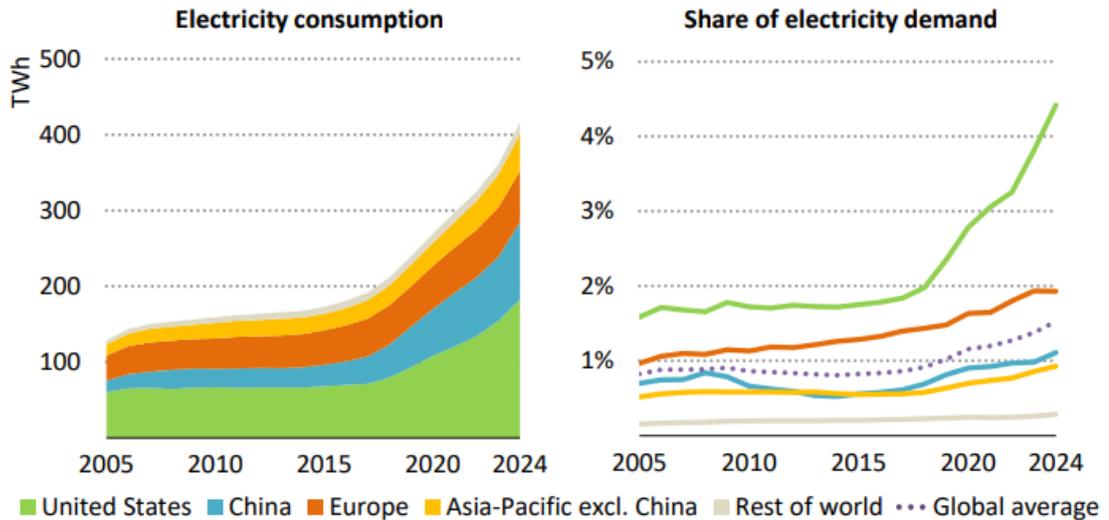


Figure 13 Electricity consumption and electricity demand share of data center by region [2005-2024], Source: IEA

Key Takeaways

21



Renewable Deployment Is No Longer the Main Constraint. Greece has already achieved high renewable penetration, while global clean energy investment reached \$2.2 trillion in 2025 compared to \$1.1 trillion in fossil fuels, indicating that future progress depends more on system integration, grids and permitting than on additional capacity targets.



Greece Functions as a Regional Gas Entry and Redistribution Hub. Greece's LNG imports fell by 35% year-on-year, while US LNG volumes increased by 25%, reflecting a shift in regional gas flows rather than reduced relevance, in line with the EU-wide trend where the US supplied 57.7% of LNG imports in Q2 2025 as Russian pipeline gas declined by almost 10%.



Energy Security Depends on Corridors, Interconnections and Storage. The Vertical Corridor, FSRUs and cross-border interconnections are now the main drivers of supply security, as Europe's gas system increasingly relies on flexible LNG and regional balancing rather than fixed pipeline routes.



Permitting Speed and Regulatory Certainty Determine Project Viability. Capital-intensive projects across offshore renewables, storage, hydrogen and CCS depend on predictable frameworks, as illustrated by CCS investments in Greece reaching up to €3.6 billion and requiring long-term regulatory visibility to reach financial close.



Investment Is Available but Projects Struggle to Reach Financial Close. Despite record clean energy investment levels globally, investor caution persists, making project scale, aggregation and risk-sharing mechanisms decisive for financing outcomes in Greece.



Energy Cost Levels Remain Critical for Industrial Activity. Several industrial decarbonization projects remain commercially unviable under current and volatile EU ETS prices observed during 2021–2025, reinforcing the importance of cost control during the transition.



Hydrocarbon Exploration Is Used as a Transitional Security Measure. Offshore hydrocarbon activity is treated as a risk-management tool, with expected investments of €2–4 billion over the next decade and employment impacts estimated at 5,000–15,000 jobs.



Carbon Capture Projects Are Advancing Faster than Other Low-Carbon Options. Greece's CCS pipeline, including Prinos, IFESTOS, OLYMPOUS and Apollo CO₂, represents up to €3.6 billion in planned investment and reflects clearer near-term industrial demand compared to other low-carbon technologies.



Hydrogen Infrastructure Is Being Built Ahead of Demand. Projects such as the 157 km IRIS pipeline and the planned 570 km H₂DRIA network are designed as hydrogen-ready, while end-use demand remains limited and dependent on regulatory and pricing signals.



Conclusion

Through targeted investments in LNG infrastructure, cross-border interconnections, and regional corridors, Greece has successfully shifted from a peripheral end-market to a flexible hub that supports diversification, security of supply, and regional market integration. This strategic role is further reinforced by Greece's alignment with EU climate policy and its expanding contribution to transatlantic energy cooperation and Eastern Mediterranean flows.

Looking ahead, Greece's ability to consolidate this position will depend on execution rather than ambition. The transition from visionary goals to operational reality requires a "secure, realistic, and strategic" pathway. Regulatory stability, accelerated permitting, and predictable market frameworks are the essential keys to unlocking large-scale investments in offshore renewables, storage, and carbon management. Simultaneously, the mobilization of blended finance and a systemic approach to closing the technical skills gap will be the decisive factors for long-term success.

If these challenges are met in a coordinated manner, Greece will evolve from a transit hub into a fully integrated regional energy platform, successfully balancing security, competitiveness, and decarbonization for the next era of the European energy transition.

The 1st Energy & Sustainability Knowledge Forum served as the definitive platform to confirm this new mandate, marking the successful completion of Greece's foundational transition phase. To explore the full Press Release and further insights from the Forum, please visit the Center's webpage.