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Editor's Letter

Dear reader,

As part of Egypt's ambitious target to position itself as a regional energy hub, the country is expanding across related industries and adopting cutting-edge technologies that will accelerate this path. In our February issue, we take a deep dive into one of the sector's most promising frontiers: battery energy storage systems (BESS) which emerge as a critical enabling technology. This activity has recently attracted significant attention, with landmark agreements signed between Egypt, Norway, and China to establish Africa's largest battery storage projects, an essential step toward stabilizing renewable power integration and enhancing grid resilience.

In parallel, our newly launched Energy Transition section explores the role of Carbon Capture, Utilization, and Storage (CCUS). We examine how the CCUS is considered a potential mechanism to decouple industrial output from emissions growth, particularly in sectors where reducing carbon emissions is exceptionally difficult, expensive, or currently impossible with existing technology such as cement, fertilizers, refining, and petrochemicals.

We also feature insights from the top executives of Hydrogen Egypt, who walk us through the nation's potential to emerge as a hydrogen hub. Their perspectives shed light on the opportunities for green hydrogen exports, as well as the infrastructure and policy challenges that must be addressed to unlock this new industry.

Our Insight section analyzes the evolving dynamics of the global LNG market, underscoring Egypt's initiatives to secure domestic power supply while expanding export potential. Meanwhile, the Politics piece examines how the global oil market is being reshaped by recent U.S. actions toward Venezuelan oil facilities, and what this means for producers and consumers worldwide.

We hope this issue provides you with an informative and engaging read, offering both clarity and depth on the forces shaping Egypt's energy future.

Warm regards,

Sherine Samir
Editor in Chief

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Egypt's Leading Oil & Gas Monthly Publication

EGYPT OIL&GAS NEWSPAPER

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TOP FIVE NEWS 5

New Discoveries Boost Oil and Gas Output

Khalda Petroleum, General Petroleum Company (GPC) and Disouq Petroleum Company (DISOUCO) have successfully drilled several productive wells across their concession areas in the Western Desert, Eastern Desert, and Nile Delta, adding around 47 million cubic feet of gas mmcf and 4,300 barrels per day (bbl/d) of oil and condensates to the national output.

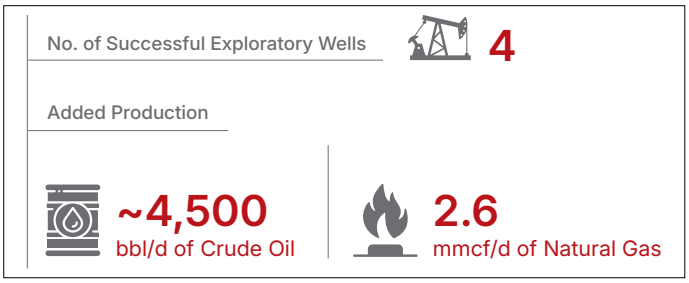
Khalda Petroleum, a joint venture between the Egyptian General Petroleum Corporation (EGPC) and Apache Corporation, reported three new oil and gas discoveries: WKAN-X W-2X in West Kanayes, TAYIM W-13X in West Kalabsha, and TUT-29 (ST1) in the Khalda development. Testing showed an output of approximately 2,550 bbl/d of oil and condensates, as well as 29 mncf/d of gas, with plans to bring the wells onstream soon while continuing reserve evaluation.

In the Nile Delta, DISOUCO, in partnership with Harbour Energy, drilled the appraisal well Az-2, confirming a 23-meter gas-bearing sandstone layer in the Abu Madi reservoir. The earlier Az-1 discovery has already been tied in, producing 10 mncf/d of gas and 500 bbl/d of condensate, with preparations underway to connect Az-2 to the production infrastructure.

Meanwhile, GPC, wholly owned by the Egyptian Petroleum Corporation (EGPC), successfully brought new wells online in both the Western and Eastern Deserts, with production coming at 8 mncf/d of gas and over 1,250 bbl/d of oil and condensate. Notably, the GPR-3 well was tied in to the Abu Sennan condensate separation station within just two days, marking the first output from the Bahariya formation in the new GPR field.

In the Eastern Desert, the Kharaza-5 well was added with 1,000 bbl/d. This came as a result of seismic surveys conducted by United Energy.

Four New Discoveries in Western Desert Add 4,500 bbl/d of Oil



Drilling operations in four exploratory wells in the Western Desert yielded positive results, adding approximately 4,500 barrels per day (bbl/d) of crude oil and 2.6 million cubic feet per day (mmcf/d) of natural gas to domestic production, according to the Ministry of Petroleum and Mineral Resources (MoPMR).

Tharwa Petroleum Company achieved a discovery at the EAS Z-3 well in the East Abu Sennan concession, yielding an initial production rate of 1,500 bbl/d. Testing is ongoing to evaluate the total reserve size.

Chairman Mahmoud Abdel Hamid noted in May 2025 that the company increased its proven petroleum reserves in the area by approximately 3.5 mmbbl

Borg El Arab Petroleum Company (BURAPETCO) also reported a discovery at the AS Z-2X well within the Abu Sennan development area. Test results showed production rates of 1,305 bbl/d of crude oil and 0.9 mmscf/d of associated natural gas.

BURAPETCO Chairman Sami El Shahat has previously stated that $43.8 million has been allocated to complete exploratory projects and maximize economic returns.

Additionally, Khalda Petroleum Company made two discoveries in the SULTAN S-1X RC and ALEX NW-1X wells. Combined production from these wells exceeds 1,500 bbl/d of crude oil and 1.7 mmscf/d of natural gas.

Driven by the ministry's incentive packages, Khalda successfully made 23 oil discoveries during FY 2024/25, exceeding its annual targets.

Qatar to Provide Egypt with 24 LNG Shipments

Karim Badawi, Minister of Petroleum and Mineral Resources, signed a Memorandum of Understanding (MoU) on January 4 with Saad bin Sherida Al-Kaabi, Qatar's Minister of State for Energy Affairs and CEO of QatarEnergy, for the supply of 24 liquefied natural gas (LNG) cargos to Egypt.

This MoU reinforces the strategic partnership between Egypt and Qatar in energy. It builds upon a foundation laid during a May 2025 meeting in Doha, where Badawi and Al-Kaabi first discussed long-term contracts and infrastructure integration.

QatarEnergy currently operates across six offshore blocks in the Mediterranean. It aims to increase investment over the next five years and launch a new drilling campaign alongside leading global energy partners.

Dana Gas Receives $50 Mn Payment from Egypt, Reducing Arrears

Dana Gas, the Middle East's largest private sector natural gas company, has received a $50 million from the Egyptian government, reducing overdue receivables.

This payment supports the company's ongoing drilling program under the consolidation agreement signed with Egypt in December 2024. It optimized fiscal terms and designated additional acreage for exploration to incentivize new upstream investment in the Nile Delta and Mediterranean regions.

Since the program commenced, Dana Gas has drilled four wells that added approximately 18 million standard cubic feet per day (mmscfd) of production and a material increase in reserves, including the North El-Basant 1 discovery.

Richard Hall, CEO of Dana Gas, emphasized that timely payments are critical to ensuring the successful delivery of the drilling program, which not only strengthens the company's upstream position but also supports Egypt's objective of consolidating its role as a regional energy hub.

Egypt Seals $1.8 Bn Renewable Energy Deals with China, Norway

Egypt has signed agreements worth over $1.8 billion with Norway's Scatec and China's Sungrow to develop two major renewable energy projects, marking a significant expansion of the nation's green energy infrastructure, according to a statement by the Cabinet.The first project, titled "Energy Valley," will be developed by Scatec in Minya Governorate. The 1.7-gigawatt (GW) solar power plant will be integrated with 4 gigawatt-hours (GWh) of Battery Energy Storage Systems (BESS) distributed across Minya, Qena, and Alexandria.

The second agreement involves Sungrow establishing a battery storage manufacturing factory within the Tianjin Economic-Technological Development Area (TEDA) Egypt zone in the El-Sokhna industrial area, part of the Suez Canal Economic Zone (SCZONE).

Spanning 50,000 square meters (sqm), the facility will be the first in the Middle East and Africa to produce BESS. It is expected to have an annual production capacity of 10 GWh at full operation, with production scheduled to commence in April 2027.

Both projects are being implemented in cooperation with the Ministry of Electricity and Renewable Energy and the General Authority for SCZONE. The projects align with Egypt's plans to increase the share of renewable energy in the electricity mix, targeting over 42% by 2030 and 60-65% by 2040.

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EXPLORATION & PRODUCTION

UEE Drills 30 Wells in 2025, Increasing Production by 20%

The United Energy Egypt (UEE) has drilled around 30 wells in 2025, which successfully offset natural reservoir decline and increased oil production by more than 20%, according to Kamel Al Sawi, Regional President of UEE, in an interview with PetroCast, a podcast of the Ministry of Petroleum and Mineral Resources (MoPMR).

The company's recent acquisition of the US-based Apex Company has doubled production and lifted total reserves to more than 60 million barrels (mmbbl). Al Sawi noted that UEE's investment activity in Egypt has evolved significantly since 2019, following its 100% acquisition of Kuwait Energy's shares and five concession areas.

Currently, UEE is targeting a doubling of production within the next five years and plans to increase drilling activity in 2026, while continuing to evaluate new acquisition opportunities.

Rashpetco to Double Natural Gas Production by FY 2029/30

Rashid Petroleum Company (Rashpetco) unveiled a five-year strategic plan (2025–2030), which encompasses Rashpetco and its subsidiaries: Burullus Gas Company and West Mina Gas Company. The plan aims to double its current natural gas production by the end of fiscal year (FY) 2029/30, according to a statement by the Ministry of Petroleum and Mineral Resources (MoPMR).

A primary highlight of the strategy is the West Mena region, located offshore the Mediterranean, where drilling operations for the first well are scheduled to commence in February. The project targets an estimated production of 160 million standard cubic feet per day (mmcf/d) of natural gas and 1,900 bbl/d of condensates by the fourth quarter (Q4) of 2026.

The 2025–2030 roadmap also includes the Phase 12-A development project, set to begin in Q1 2027 with investments of $350 million. Following the successful methodology of previous phases, this stage is expected to add 150 mmscf/d of natural gas and 2,700 barrels of condensate to daily output.

Rashpetco is a joint venture between British Gas Group (with a 40% interest), the Italian Edison Gas holding 10%, and the Egyptian General Petroleum Corporation (EGPC) with the remaining 50%.

NATURAL GAS

Egypt, Syria Ink MoUs for Gas, Petroleum Cooperation

Karim Badawi, Minister of Petroleum and Mineral Resources, and Ghiath Diab, Syria's Deputy Minister of Energy for Oil Affairs, witnessed the signing of two Memoranda of Understanding (MoUs), according to a statement by the Ministry of Petroleum and Mineral Resources (MoPMR).

The first MoU establishes a framework for supplying natural gas to Syria for electricity generation, utilizing Egypt's national gas transmission network and Floating Storage and Regasification Units (FSRUs). The second MoU addresses Syria's needs for petroleum products.

During the meeting, both officials discussed rehabilitating Syria's natural gas and petroleum infrastructure with the assistance of Egyptian technical expertise.

In December, Egypt signed a MoU with the Lebanese Ministry of Energy and Water to supply the Deir Ammar Power Plant with gas. Egypt continues to leverage its export infrastructure, including the Arab Gas Pipeline and Idku and Damietta liquefaction plants, to serve regional markets.

Egypt Exports LNG to Canada

Egypt has exported 150,000 cubic meters of liquefied natural gas (LNG) from Idku liquefication plant and is headed to Canada via French TotalEnergies' LNG Endeavour vessel, marking the first shipment of 2026.

According to the Ministry of Petroleum and Mineral Resources (MoPMR), this step supports the country's role as a regional Hub for gas trading as well as encourages foreign partners to pump more investments for increasing domestic gas production.

In 2025, Egypt exported over five LNG cargoes to European and Asian markets, including shipments to Greece, Türkiye, and Italy carrying 150,000–155,000 cubic meters each.

INVESTMENTS

NPIC Dedicates $100 Mn for Unlocking New Opportunities

North Petroleum International Company (NPIC), a subsidiary of China's state-owned Zhenhua Oil Company, plans to boost production through the optimization of existing assets and the acquisition of new concessions, according NPIC Country Manager and Director Sun Bao.

During an episode of the Ministry of Petroleum and Mineral Resources' podcast, PetroCast, Bao confirmed that the company has allocated a budget exceeding $100 million to pursue new opportunities, including brownfield assets and exploration blocks offered through Egypt's recent upstream bid rounds. NPIC is currently preparing an aggressive drilling program for 2026, targeting additional wells and multiple reservoir layers to enhance recovery rates.

Technical and commercial assessments for several potential acquisitions are already underway as the company seeks to leverage advanced Chinese technologies, such as horizontal drilling, to reduce development costs for both conventional and unconventional resources.

According to Bao, improved concession terms and better financing conditions have provided companies with the necessary confidence to inject fresh capital into Egypt's oil and natural gas sector.

Madbouly Opens $116 Mn Renewable Energy Complex in Sokhna

Prime Minister Mostafa Madbouly has inaugurated a Chinese technology industrial complex dedicated to manufacturing components for renewable energy projects within the Suez Canal Economic Zone (SCZONE), according to a statement by the Cabinet.

Located inside the Tianjin Economic-Technological Development Area (TEDA) in Sokhna, the $116 million complex includes two major production facilities. The first, EliTe Solar Suez Technology, focuses on solar cell manufacturing with an investment of $40 million and an annual production capacity of 2 gigawatts (GW).

The second facility, Elite Solar Green Energy, specializes in solar panels and related electronic components, representing a $76 million investment with a production capacity of 3 GW.

"This complex represents a significant step toward localizing renewable energy industries in Egypt," Prime Minister Mostafa Madbouly stated during the opening. He highlighted the project's role in attracting advanced technological investments and supporting national green economy initiatives.

Egypt Launches Africa's Largest Solar-Battery Project in Qena

Prime Minister Mostafa Madbouly has inaugurated the first phase of the Obelisk solar power project in Qena Governorate, marking a milestone in Africa's renewable energy landscape.

Developed by Norway's Scatec within 13 months of signing the Power Purchase Agreement (PPA), the project represents one of the fastest global executions in the sector.

The first phase delivers 500 megawatts (MW) of solar capacity, integrated with 200 megawatt-hours (MWh) of Battery Energy Storage Systems (BESS), the largest of its kind on the continent.

Upon full completion in 2026, the 1,000 MW complex will span 20 square kilometers (km^2) and supply electricity to approximately 1.6 million homes annually.

The project is expected to offset 1.4 million tons (mmt) of carbon emissions and save an estimated 513 million thermal units of natural gas over its 25-year lifespan, providing a cumulative economic value of approximately $5.1 billion.

Total financing for the project exceeds $600 million, backed by the European Investment Bank ($150 million), the African Development Bank ($160 million), and the European Bank for Reconstruction and Development (EBRD) (over $100 million).

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Egypt in a Volatile Energy World
Past Crises and Future Scenarios

By Mariam Ahmed & Mahmoud Yasser

Global energy markets have experienced a substantial transformation in recent years, influenced by shifting geopolitical dynamics, evolving supply strategies, and renewed focus on the security of international trade routes. Egypt holds a unique position within this dynamic environment.

As an expanding energy market, a regional gas hub seeker, the host of the Suez Canal, and one of the world's most critical transit corridors. Volatility in international oil and gas prices, shipping patterns, and upstream investment sentiments, therefore, has direct consequences for Egypt's fuel procurement and export prospects.

This report examines how recent developments in the global market since 2020 have created opportunities and adjustment challenges for Egypt's economy and energy sector.

It reviews key transmission channels through prices, trade flows, and investment patterns, examines forward-looking scenarios linked to developments in the US–Venezuela oil landscape, and outlines policy priorities that can further strengthen Egypt's energy resilience and strategic positioning in global markets.

Global Crisis Transmission Channels to Egypt's Energy System

Oil Price Volatility

Global Brent prices witnessed a sharp decline in 2020, followed by a strong price hike through 2021–2022, before moderating and fluctuating at a relatively lower, but volatile levels thereafter. International supply shocks, whether driven by geopolitical conflicts, imposed sanctions, demand shocks, or production cuts, transmit immediately through global price benchmarks. COVID-19 has caused a collapse in Brent prices, falling from about $64 per barrel (bbl) in January 2020 to around $20/bbl in April 2020, lowering import cost, but reducing export revenues and delaying energy projects.

Geopolitical conflicts such as the Russia–Ukraine war and the Gaza war added supply risks, causing temporary price spikes that further strained Egypt's import bill. Supply-side disruptions, including OPEC+ production cuts and Venezuelan sanctions, tightened global markets, increasing import bills and creating upstream investment uncertainty. Maritime and trade disruptions, such as Red Sea security incidents, further amplified costs through higher freight premiums, according to Investing .com data. Egypt's energy balance and economic budget remain partially exposed to this volatility despite significant hydrocarbon production.

Brent Oil Prices Trend ($/bbl)

It is worth noting that the West Texas Intermediate (WTI) crude oil futures contract plummeted to a historic negative settlement price approaching -$40 per barrel in April 2020, according to the U.S. Energy Information Administration (eia).

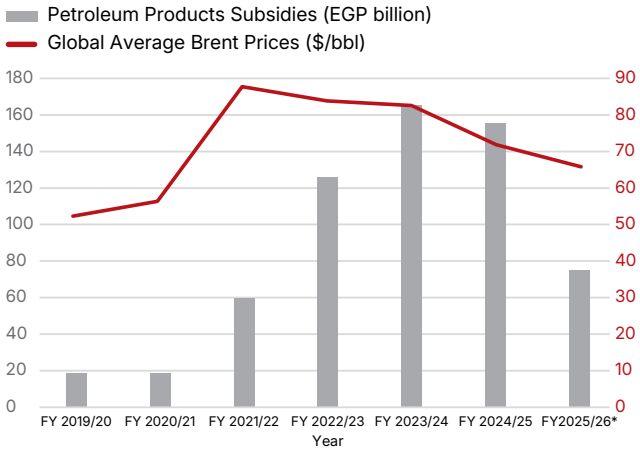
Local Petroleum Subsidies

During FY 2019/20 and FY 2020/21, global Brent prices remained moderate (averaging $50–55/bbl). The COVID-19 shock in 2020 temporarily lowered global oil prices, easing Egypt's fuel import bill. This allowed Egypt to maintain petroleum subsidies at approximately EGP 19 billion, following the 2018/19 fuel price reform, according to the Ministry of Finance (MoF) and the International Monetary Fund (IMF).

From FY 2021/22 onward, the post-COVID demand rebound, OPEC+ supply discipline, and the Russia–Ukraine war-driven supply shock pushed Brent prices above $100 per barrel; combined with currency depreciation and higher freight costs during Red Sea trade disruptions, the landed cost of imported fuels rose sharply.

With domestic price adjustments lagging international benchmarks, subsidy spending surged to EGP 165.1 billion in FY 2023/24. Projections suggest gradual normalization by FY 2025/26; subsidy levels remain structurally above pre-crisis norms.

Local Petroleum Subsidies Alignment with Global Oil Prices



*Forecast
Source: MoF, Investing

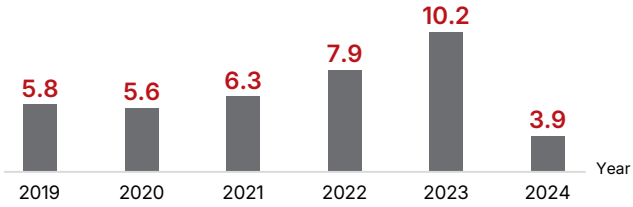
Supply & Trade Route Disruptions

Suez Canal Resilience

Global crises are transmitted to Egypt's energy and trade system through disruptions to global trade routes, with the Suez Canal acting as a key transmission channel. In 2020, Suez Canal revenues declined by 3.4% year-on-year (YoY), reflecting the contraction in global trade caused by the COVID-19 pandemic, according to the Suez Canal Authority (SCA).

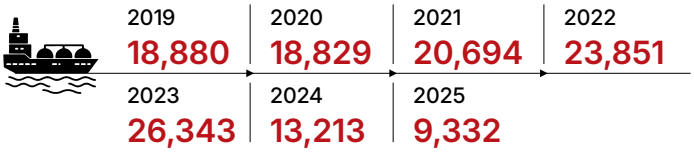
As global trade recovered in the post-pandemic period, Egypt benefited from its strategic location amid the reconfiguration of global energy flows. By 2021, Suez Canal revenues rebounded by about 12.5% YoY, supported by rising trade volumes and improved canal management, according to the SCA.

Suez Canal Revenues ($ billion)



Source: SCA

Total Tankers Numbers



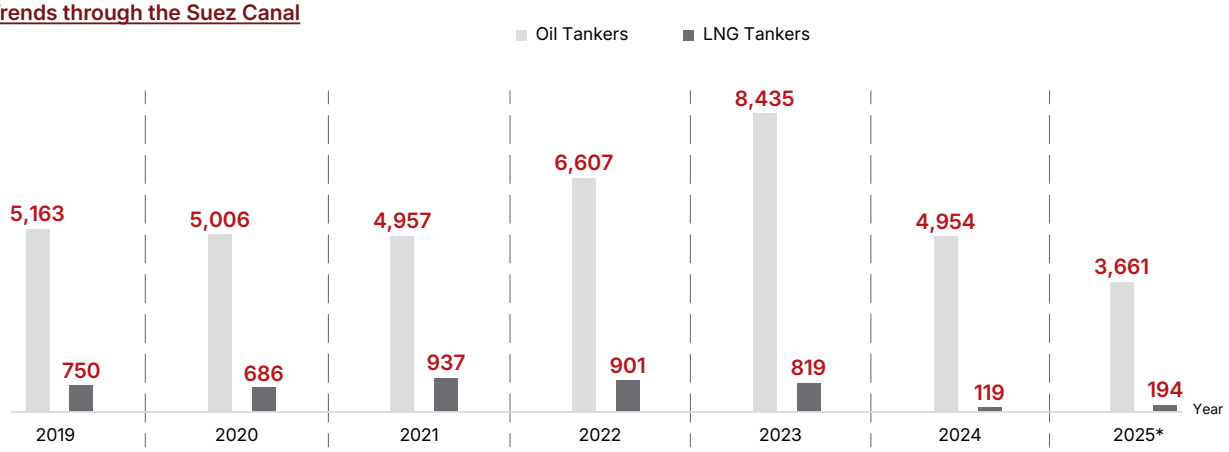
The Russia–Ukraine war in 2022 further amplified this trend, as crude oil and liquefied natural gas (LNG) cargoes were increasingly rerouted.

This was reflected in a 33% YoY increase in oil tanker transits through the Suez Canal, which helped drive canal revenues to approximately $7.9 billion, according to the SCA. This upward momentum continued into 2023, when revenues peaked at $10.25 billion, highlighting how energy trade temporarily strengthened Egypt's external income position.

However, the Red Sea security crisis in late 2023 and 2024 reversed these gains. Heightened maritime risks and widespread vessel rerouting away from the Bab el-Mandeb Strait led to a sharp contraction in canal traffic.

As a result, Suez Canal revenues collapsed in 2024 by 61% YoY, according to the SCA. However, early signs of a gradual recovery began to emerge in 2025, particularly following the Sharm El-Sheikh Peace Summit, which contributed to easing regional tensions and restoring confidence in Red Sea and Suez Canal navigation.

Traffic Trends through the Suez Canal



* In the first three quarters

Looking ahead, Fitch expects a gradual recovery in canal traffic starting in the second half (H2) of fiscal year (FY) 2025/26, with a return to pre-crisis levels by 2026/27, in line with official projections that anticipate revenues rising to $8 billion in FY 2026/27 and $10 billion in FY 2027/28, according to the Egyptian Cabinet.

These projections are supported by early market signals. In January 2026, when Maersk—the world's largest container shipping line—resumed its Middle East Container Line (MECL) service through the Suez Canal, a move seen as a bellwether for wider shipping normalization, according to Maersk.

Natural Gas & LNG Exports

Egypt's natural gas exports hike began in 2021, due to rising global prices during the post-pandemic rebound. Although export volumes remained moderate, favorable pricing lifted LNG revenues to $3.9 billion, reflecting improving external conditions rather than a structural expansion in supply.

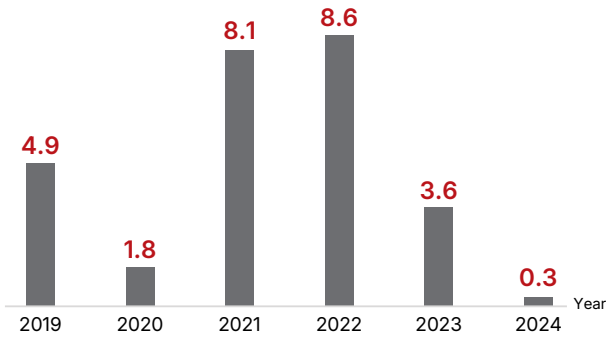
The situation changed sharply in 2022, as the global energy crisis created an exceptional window for Egyptian LNG. Europe's shift away from Russian gas, combined with Egypt's liquefaction capacity take off, pushed export volumes to 8.6 million metric tons (mmt) and revenues to $9.9 billion, marking a historic peak that helped ease external financing pressures.

This surge proved temporary. From late 2022 onward, tighter domestic gas supply and rising electricity consumption absorbed a larger share of locally produced output. At the same time, imports from Israel's Leviathan and Tamar fields—primarily intended for liquefaction and re-export through Egypt's LNG facilities—were curtailed, sharply reducing exportable volumes. By 2023, LNG exports had fallen to around 3.6 mmt, with revenues declining further as global gas prices normalized, according to the Egyptian General Petroleum Corporation (EGPC) data.

Exports had fallen to around 3.6 mmt, with revenues declining further as global gas prices normalized, according to the Egyptian General Petroleum Corporation (EGPC) data.

The contraction continued through 2024 and early 2025, as domestic energy security took priority over exports. Lower production from mature fields and sustained local demand limited Egypt's ability to resume large-scale LNG shipments, highlighting the dependence of gas exports on domestic supply conditions rather than external demand alone.

Egypt's LNG Exports Movement (mmt)



Source: Capmas Data

Petroleum Imports

Egypt has also recorded a sharp increase in petroleum imports, adding another channel through which global energy shocks have strained the external balance. According to the Central Bank of Egypt (CBE)'s Balance of Payments (BoP), total petroleum imports rose by approximately $6.1 billion in FY 2024/25, reaching around $19.5 billion, up from about $13.4 billion in FY 2024/25.

This increase reflected higher import volumes across all fuel categories, as imports of natural gas rose by about $3.9 billion, petroleum products also increased by around $1.7 billion, and crude oil increased by roughly $495.3 million. The surge in the petroleum import bill underscores how global energy market disruptions and domestic supply constraints have translated into higher reliance on external fuel supplies to meet domestic demand

Financial & Investment Impacts

Oil & Gas FDI Under Global Volatility

Foreign Direct Investment (FDI) is influenced by a combination of factors, including both internal and external elements. International investors generally reassess risk during periods of global energy or geopolitical instability. Capital becomes more discerning, financing expenses increase, and oil and gas companies postpone long-term exploration initiatives.

This trend was observable during the 2020 pandemic and subsequently during the 2022 Russia–Ukraine crisis, according to a study by Scientific Journal for Financial and Commercial Studies and Research (CFDJ), Vol.6.

The energy price shock at the beginning of 2020 resulted in a 50% reduction in global investment announcements within the refined petroleum sector and a global decline of one-third in the value of announced projects.

Consequently, upstream project delays, reduced spending, and diminished demand have adversely affected investment across both the energy and infrastructure sectors, as stated in UNCTAD's World Investment Report 2021.

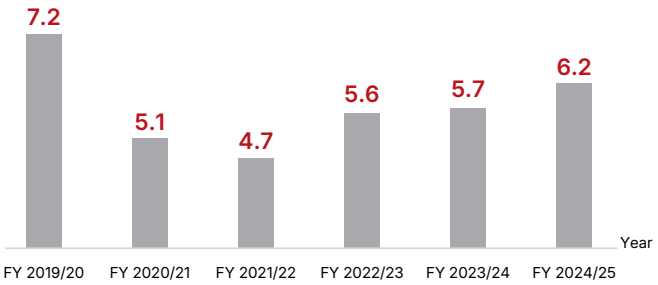
FDI in Egypt's oil and gas sector saw a roughly 35% drop between FY 2019/20 and FY 2021/22. This downturn was a direct result of the COVID-19 investment shock, coupled with the global oil price crash of 2020, as reported by the Central Bank of Egypt (CBE).

Investment flows started to pick up again in FY 2022/23 and beyond. This rebound was fueled by the post-pandemic recovery in oil and gas prices, along with a renewed focus on exploration.

The 2022 Russia–Ukraine war also played a role, tightening global gas markets and elevating the Eastern Mediterranean's status as a key supply region. Upstream investment in gas-producing areas that supply Europe increased after the disruption of Russian pipeline exports, according to the International Energy Agency (IEA) Gas Market Report 2023.

Egypt capitalized on this shift, launching new exploration licensing rounds and expanding its partnerships with IOCs. Besides, Egypt is actively resolving accumulated arrears to IOCs. From June 2024 to June 2026, outstanding dues are expected to drop from $6.1 billion to $1.2 billion, with $5 billion already repaid and monthly payments continuing, as stated by the Egyptian Cabinet.

Oil & Gas FDI Inflows into Egypt ($ billion)



Source: CBE

Forward-Looking Scenarios for the US–Venezuela Crisis

The preceding analysis shows that Egypt's energy system is highly sensitive to external shocks. Among current geopolitical uncertainties, the US–Venezuela crisis stands out as a key variable shaping global oil supply balances. The US–Venezuela crisis has constrained Venezuelan oil production since 2019, despite the country holding the world's largest proven oil reserves at 303 billion barrels, about 17% of global reserves, according to Reuters.

The evolution of this crisis remains a key uncertainty for global oil market balances and price dynamics.

In addition to sanctions, chronic underinvestment, degraded infrastructure, and the technical complexity of Venezuela's extra-heavy crude have raised operational risks, limiting the appetite of US oil companies to return despite the country's vast reserves.

Possible Oil Market Outcomes under the US–Venezuela Crisis

• Scenario A **Crisis Easing – Gradual Sanctions Relief**	Gradual recovery in Venezuelan output reduces geopolitical risk premiums and eases global supply tightness, supporting lower and more stable oil prices. For Egypt, this translates into reduced fuel import costs, easing subsidy pressures, and improved fiscal and external balances.
• Scenario B **Prolonged Crisis – Continued Supply Tightness**	Persistent sanctions keep Venezuelan output constrained, reinforcing OPEC+ market influence and sustaining price volatility. Egypt remains exposed to higher fiscal sensitivity to oil prices, requiring stronger hedging, supply diversification, and subsidy management.
• Scenario C **Escalation – Severe Disruptions**	Acute supply disruptions trigger sharp oil price spikes and higher shipping and insurance costs. Egypt faces heightened inflationary and fiscal pressures, potential widening of the budget deficit, and increased reliance on strategic reserves and regional partners.

Policy & Mitigation Priorities for Egypt

Supply, Contracting Diversification Strategy

Recently, as part of its supply diversification strategy, Egypt has moved beyond short-term contracting toward multi-year LNG supply agreements to stabilize procurement costs and ensure power-sector supply security.

Egypt has agreed to buy LNG from suppliers in June 2025, including Saudi Aramco, Trafigura Group, and Vitol Group, for over two and a half years. The deals were signed to bring in as many as 290 cargoes starting July 2025, to cut Egypt's reliance on volatile spot markets, according to Bloomberg.

Further, in January 2026, QatarEnergy and Egypt signed a Memorandum of Understanding (MoU) that includes an agreement to supply up to 24 LNG cargoes to Egypt for the 2026 summer, as stated by QatarEnergy.

As part of its energy security and supply diversification strategy, Egypt has expanded cross-border natural gas import agreements with Israel, positioning pipeline gas imports as a structural complement to LNG procurement. In December 2025, Egypt and Israel concluded $35 billion agreements to expand pipeline natural gas exports from Israel's Leviathan field to Egypt, as stated by S&P Global.

Infrastructure & Resilience Investment

In the face of global energy challenges, Egypt is prioritizing energy infrastructure investments in renewable energy and electricity grid modernization to enhance resilience and diversify its energy mix.

Natural Gas & LNG Infrastructure

Egypt has enhanced its import capacity to bridge the current gap in domestic production. It has leased four Floating Storage and Regasification Units (FSRUs), with a combined regasification capacity of 2.7 billion cubic feet per day (bcf/d) to meet peak summer demand, according to the Ministry of Petroleum and Mineral Resources (MoPMR).

Renewable Energy Expansion

Egypt aims to increase the share of renewables in its energy mix to nearly 20% by the end of the FY 2025/26 up from around 12% in FY 2023/2024, by heavily investing in solar and wind power, expanding allocated land, and increasing generation capacity to 6,470 megawatt (MW), as announced by the Ministry of Planning, Economic Development and International Cooperation.

Grid Modernization & Resilience

The state has allocated significant investments to upgrade the national grid to handle intermittent renewable energy flows and meet surging demand. It increased planned investments for the electricity and renewable energy sector in FY 2025/26 to EGP 136.3 billion, nearly doubling the EGP 72.6 billion allocated for the previous fiscal year , aiming to boost renewable capacity, modernize grids, and solidify its role as a regional energy hub, according to the Ministry of Planning, Economic Development, and International Cooperation.

Regional Energy Hub Development

Egypt is enhancing its role as a regional energy hub through major interconnection projects. Targets for FY 2025/26 include: increasing total interconnection capacity to 3,900 MW, up from 780 MW, according to the Ministry of Planning, Economic Development, and International Cooperation.

Global energy developments since 2020 have confirmed that external shocks are no longer temporary events but structural features of the energy market. For Egypt, these shocks have been transmitted through multiple channels, each affecting the energy sector and fiscal balance.

Egypt's experience also reflects a gradual shift from reactive crisis management toward a more adaptive energy policy framework. Periods of strong Suez Canal revenues and elevated LNG exports provided temporary buffers, while supply diversification, longer-term LNG contracting, regional gas integration, and investments in regasification, renewables, and grid modernization have strengthened energy security and system resilience.

Looking ahead, developments such as the evolution of the US–Venezuela crisis highlight that Egypt's exposure to global energy markets will persist. However, the scale of future impacts will increasingly depend on domestic policy choices, particularly in managing fuel subsidies, securing diversified supply, and sustaining investment under volatile global conditions.

HYDROGEN EGYPT (H^2EG):

SHAPING THE FUTURE OF CLEAN ENERGY

By Sherine Samir

While the world moves towards meeting climate goals heavily based on decarbonization and green energy, hydrogen is emerging as one of the most promising solutions. It can replace coal, oil, and natural gas in sectors that are notoriously hard to electrify, such as steelmaking, cement, and chemicals. Beyond industry, hydrogen is increasingly powering buses, trucks, trains, and even aircraft, offering zero-emission alternatives to diesel. It also plays a strategic role in reducing dependence on imported fossil fuels and diversifying energy supply.

Crucially, hydrogen makes storing renewable energy from solar and wind possible for long durations by acting as a flexible energy carrier: it can be produced when renewables generate surplus electricity and then used later when demand is high or renewable output is low.

In Egypt, investment in hydrogen is still in its early stages, yet the potential is immense. Europe's rising demand for green hydrogen opens opportunities for Egypt to position itself as a supplier, leveraging its abundant solar and wind resources to store excess power and export clean energy. Domestically, hydrogen can reinforce Egypt's industrial base, supporting energy-intensive sectors such as petrochemicals, fertilizers, and steel, while also aligning with the country's broader energy diversification strategy.

Hydrogen Egypt (H^2EG), an international association, was founded to align Egypt with the global push for carbon neutrality and to accelerate the country's role in the hydrogen economy. The association helps leverage Egypt's renewable resources to produce green hydrogen, opening export channels to Europe and Asia. It also acts as a collaborative platform, connecting local and international companies in hydrogen and ammonia projects, thereby strengthening Egypt's position in the emerging global hydrogen market. By engaging with policymakers, industry leaders, and investors, Hydrogen Egypt is working to ensure that Egypt becomes a regional hub for clean hydrogen and a key contributor to global Decarbonization efforts.

Against this backdrop, Egypt Oil & Gas (EOG) sat down with Khaled Nageib Hydrogen Egypt CEO and Managing Director and Dalia Samir the Co-Founder and Business Development Director of the association to explore where Egypt currently stands on the road to hydrogen, and to discuss the challenges and opportunities that lie ahead in shaping the country's clean energy future.

What motivated the creation of Hydrogen Egypt?

Hydrogen Egypt was inspired and supported by Hydrogen Europe, whose expertise and network helped us establish a similar platform in Egypt. For the first two years, we used their logo to reflect this guidance and collaboration while building local capacity. Today, Hydrogen Egypt operates independently, bridging industry, technology providers, investors, and regulators to translate Egypt's hydrogen ambition into practical, bankable projects.

Khaled Nageib
CEO and Managing Director
Hydrogen Egypt

> **Over the next decade, Egypt will function as a dual-role hydrogen hub, acting as an exporter of green hydrogen and ammonia to global markets and serving as a regional Decarbonization platform. This will enable Egypt to support hard-to-abate industries across Middle East and North Africa (MENA) and the African continent.**

Our mission is to leverage Egypt's renewable resources and industrial base to create green hydrogen, ammonia, and decarbonization solutions serving domestic and regional markets.

Hydrogen Egypt works with 400+ companies and 30+ associations. How do these partnerships translate into tangible projects in Egypt?

These partnerships form a real execution ecosystem, converting collaborations into tangible projects through green ammonia and fertilizer

Dalia Samir
Co-Founder and Business Development Director
Hydrogen Egypt

> **Hydrogen Egypt acts as a bridge between government and industry. Examples include advising on customs, tax treatment, and incentives for electrolyzes and renewable inputs; aligning carbon accounting and certification with European Union (EU) standards for Renewable Fuels of Non-Biological Origin (RFNBO) like green hydrogen.**

initiatives with industrial partners. This includes hydrogen injection pilots in cement and steel production, alongside port-linked export initiatives through the Egyptian Ports Development Group, which specializes in modernizing Egypt's ports and terminals.

Partnerships are actionable, enabling feasibility studies, technology transfer, pilot operations, and bankable investment structures that directly advance Egypt's hydrogen and Decarbonization agenda.

Does Hydrogen Egypt engage with regulators to align taxation, subsidies, and investment frameworks with global best practices? Give examples.

Yes. Hydrogen Egypt acts as a bridge between government and industry. Examples include advising on customs, tax treatment, and incentives for electrolyzes and renewable inputs; aligning carbon accounting and certification with European Union (EU) standards for Renewable Fuels of Non-Biological Origin (RFNBO) like green hydrogen; and coordinating port and logistics regulations to enable hydrogen export infrastructure. These engagements ensure Egypt remains an investable, globally competitive market.

Egypt hopes to become a hydrogen hub by 2040. What qualifies it for this position?

Egypt is uniquely positioned due to its abundant solar and wind resources, existing gas and ammonia infrastructure, strategic ports, and geographic proximity to Europe, Africa, and Asia.

Over the next decade, Egypt will function as a dual-role hydrogen hub, acting as an exporter of green hydrogen and ammonia to global markets and serving as a regional Decarbonization platform. This will enable Egypt to support hard-to-abate industries across Middle East and North Africa (MENA) and the African continent.

Hydrogen Egypt is helping realize this vision through projects like partnering with the EU-funded TRIERES Hydrogen Valley project in Greece to build a cross-Mediterranean hydrogen ecosystem, linking renewable hydrogen production in Egypt with infrastructure and demand in Europe.

What is the possibility of integrating hydrogen into Egypt's broader energy mix alongside natural gas and renewables?

Hydrogen integration is highly feasible and complementary. Near-term options include blending hydrogen with natural gas in industrial and power applications, fuel-switching pilots in heavy industry and transport, and using renewables as a backbone for green hydrogen production. Hydrogen Egypt supports these pilots and industrial projects, ensuring integration without compromising energy security.

What policy changes or incentives are most critical to accelerate hydrogen adoption in Egypt?

The key priorities are clear hydrogen certification and offtake regulations, predictable fiscal incentives and tax frameworks, streamlined permitting, land allocation, and industrial pilot approvals. Also, supporting technology localization and export-oriented infrastructure is crucial. These measures reduce investor risk and accelerate industrial-scale hydrogen deployment.

What do you think makes scaling hydrogen infrastructure in Egypt challenging?

Challenges include high capital expenditure for infrastructure, storage, and production. The lack of coordination across ports, industrial zones, and utilities is another obstacle. There is also the uncertain demand for different kinds of hydrogen in both domestic and export markets. Hydrogen Egypt mitigates these by coordinating government facilitation, industrial anchor agreements, and integrated project planning.

What financing models are proving most effective for hydrogen projects in Egypt?

Blended finance is the most effective approach in Egypt's case. This involves combining facilities from development financing institutions, sovereign funds, export credit agencies, private investors, and strategic off takers.

Egypt can also resort to early-stage grants or concessional funding to de-risk pilot infrastructure. Moreover, project finance structured around long-term offtake agreements can be a resort, particularly for ammonia exports and industrial clusters. This model of mixing different means of financing balances risk and ensures projects are bankable.

How do you see Egypt's hydrogen industry evolving by 2030?

By 2030, Egypt will have operational hydrogen clusters, particularly in green ammonia and fertilizers, decarbonized cement and steel production, and hydrogen-based transport and shipping fuels. Certified hydrogen exports to Europe will complement growing domestic industrial demand, creating a fully functioning hydrogen ecosystem.

What message would you give to international stakeholders about Egypt's hydrogen potential?

Egypt is not just a future opportunity; it is a current market in execution. With a strategic location, renewable abundance, industrial readiness, and government backing, Egypt is one of the most compelling hydrogen investment destinations. Hydrogen Egypt facilitates projects, knowledge transfer, and bankable opportunities for international partners.

If you had to summarize Egypt's hydrogen ambition in one sentence, what would it be?

Egypt aims to become the Mediterranean's most competitive and integrated green hydrogen and ammonia hub, serving domestic industry and global markets.

What headline would you want to see about Hydrogen Egypt five years from now?

Hydrogen Egypt emerges as the leading platform for industrial decarbonization and green hydrogen exports in the MENA region.

FROM SHORTFALL TO STRATEGY: EGYPT REDRAWS LNG DYNAMICS

By Doaa Ashraf

For more than two decades, Egypt has positioned itself as the premier energy hub of the East Mediterranean. This status is underpinned by growth in domestic oil and natural gas production, alongside the steady expansion of renewable energy capacity, and liquefied natural gas (LNG) export infrastructure. While Egypt currently faces a domestic supply gap, the government is increasingly aligning with global energy trade practices, replicating the 'refinery hub' model used by India and China. Leveraging advanced liquefaction facilities to process both imported and domestic gas, Egypt is reshaping its infrastructure into a strategic hub for regional trade after satisfying local demand.

In 2018, Egypt achieved self-sufficiency in natural gas, driven by the discovery and rapid development of Zohr field. Discovered in 2015, Zohr began production in December 2017 and swiftly transformed Egypt's gas balance. By 2019, the country shifted from being an LNG importer to a net exporter. This transition was enabled by operating the Idku LNG plant at full capacity and resuming operations at the Damietta LNG plant in January 2021 after an eight-year halt.

As a result, Egypt's natural gas exports surged by 92% between 2018 and 2021, according to data from the Organization of the Petroleum Exporting Countries (OPEC). Export revenues rose even more sharply, increasing by 768% year-on-year (YoY) to reach $3.9 billion in 2021 compared to 2020, according to the Ministry of Petroleum and Mineral Resources (MoPMR). LNG exports from the Damietta and Idku plants jumped by 333% in 2021 compared to the previous year, as reported by the Organization of Arab Petroleum Exporting Countries (OAPEC).

Addressing the Production Gap

However, production has since recorded a decline, driven mainly by falling output from Zohr and lower investment in exploration due to accumulating arrears to international oil companies (IOC)s. A multi-pillar plan to secure gas supply during the last year succeeded in making things better but Egypt still has an energy supply gap.

"Egypt's current natural gas production stands at about 4.1 billion cubic feet (bcf), compared with around 7 bcf previously, creating a clear supply gap," said Tharwat Hassane, Petrophysical Advisor and Operational General Manager at Sahara Oil and Gas Company. "With daily consumption at roughly 6.5 bcf, the shortfall of about 2.5–3 bcf must be covered through imports."

Despite this, Hassane told Egypt Oil and Gas (EOG) that the Ministry's strategy to increase production and investments would eventually restore self-sufficiency. In 2025, Minister of Petroleum and Mineral Resources Karim Badawi revealed a five-year plan to drill 480 new wells with investments exceeding $5.7 billion. The Ministry aims to reverse declines and lift output toward 6.4–6.6 bcf/d over the medium term, as Badawi noted in November during the Ministry's podcast, PetroCast.

Since April 2025, Egypt supplied LNG to Asian and European markets, including Spain, Italy, Greece, Türkiye, and Canada, with volumes totaling around 891,000 cubic meters.

Cutting the LNG import bill

After importing a record 8.92 million tons of LNG in 2025, Egypt's gas dynamics are entering a new phase. Early signals point to a moderation in import volumes for 2026. Contractual flexibility enabled Egypt to cut January shipments by around 50% to six or seven cargoes, down from 14–16 cargoes a year earlier, supported by improving inventories and incremental production recovery.

"Egypt is working on reducing imported LNG as it is costly for the national economy, especially with the need for leasing floating storage and regasification units (FSRUs)," Mustafa Shafie, Head of Research at Acumen Asset Management told EOG.

He added that the government must cut short the LNG imports to lessen burdens on the balance of payment. "For realising this goal, the government followed a dual approach of steadily paying dues to the foreign companies working in the natural gas to enhance production and, at the same time, encouraging new explorations," he said.

Tackling Debt, Regaining Confidence

A cornerstone of this reset is clearing overdue payments to international oil companies (IOCs). Outstanding receivables owed to IOCs stood at $6.5 billion at the start of 2025.

The Egyptian government repaid $400 million of overdue arrears to foreign oil companies in early January, bringing the total repaid over the past four months to about $1.4 billion, an anonymous senior government official told Asharq Bloomberg at early January.

The official explained that the total outstanding arrears owed to foreign oil companies operating in Egypt fell to around $1.1 billion after the latest payment, with plans to fully settle them during the first quarter of this year.

Egypt repaid about $4.2 billion in arrears to foreign oil companies during 2025, the official added, noting that the repayment process came under "direct presidential instructions, as part of a strategy aimed at stimulating foreign companies' activity and re-establishing Egypt as a gas-producing and exporting country by 2027.

New Discoveries and Field Upgrades

Since July 2025, more than 18 new oil and natural gas discoveries have been announced, mostly in the Western Desert. Thirteen were rapidly

Egypt recently signed (MoUs) with Lebanon and Syria to provide them with gas through the Arab Gas pipeline. This step comes to take advantage of a gas surplus due to reduced consumption during the winter season and the entry of new concession areas in the Red Sea and Western Desert into the production phase.

integrated into the national system, adding around 14,000 barrels per day (bbl/d) of crude and condensates, and 44 million cubic feet per day (mmcf/d) of natural gas.

Production also increased in major existing fields. Italian energy giant Eni increased development at Zohr, where the Zohr-6, Zohr-13, and Zohr-9 wells reached outputs of 60 mmcf/d, 55 mmcf/d, and 70 mmcf/d, respectively. Additionally, Shell boosted production from Phase 11 of the West Delta Deep Marine (WDDM) project.

"To achieve production volumes sufficient to cover national demands, additional investments in development activities are essential," said Hossam Arafat, Head of the General Division for Petroleum Products at the Federation of Chambers of Commerce.

Egypt has recently received international investment commitments From Eni, bp and Arcius with a total value of $16.7 billion through 2030.

Re-supplying the Region

Egypt has extended its gas import agreement with Israel until 2040 and is advancing the interconnection project with Cypriot fields. Imports from both countries will help meet part of domestic demand while also being directed to liquefaction facilities for re-export to international and regional markets.

Now that it would have enough supply of imported gas, Egypt is pursuing deals to export gas to its neighbors: it signed in recent weeks memoranda of understandings (MoUs) with Lebanon and Syria to help alleviate chronic electricity shortages in both countries by providing them with gas through the Arab Gas pipeline. This step comes as Egypt take advantage of a gas surplus due to reduced consumption during the winter season and the entry of new concession areas in the Red Sea and Western Desert into the production phase.

Since April 2025, Egypt supplied LNG to Asian and European markets, including Spain, Italy, Taiwan, Greece, Türkiye, and Canada, with volumes totaling around 891,000 cubic meters.

Hassane noted that cooperation with Cyprus is expected to unlock incremental offshore volumes of Cypriot gas through a planned subsea tie-back into Egypt's established gas facilities and liquefaction infrastructure. In October, Egypt signed two commercial agreements with operating companies, Italian Eni and French TotalEnergies for the development of Cypriot Cronos field It is expected to speed up the Final Investment Decision process in order to commence operations as hoped for in 2027.

"I think once the Cronos field begins supplying gas to Egypt through Zohr's facilities, production is expected to rise gradually, supported by ongoing discoveries, particularly in the Mediterranean, as they are brought on stream. This will strengthen supply and eventually restore gas self-sufficiency," Hassane said.

Qatar is playing a key role in this hub strategy. Under a recent MoU between the Egyptian Natural Gas Holding Company (EGAS) and QatarEnergy, Doha agreed to deliver 24 LNG cargoes to Egypt during the summer months, providing the flexibility needed for Egypt to maintain its role as a regional energy gateway.

CARBON MARKETS, CCUS, AND EGYPT'S ROLE IN REGIONAL EMISSIONS MANAGEMENT

By Rana Al Kady

As global climate action moves beyond ambition and into implementation, Egypt is increasingly confronted with the challenge of reconciling economic development, energy security, and emissions reduction. While renewable energy remains the cornerstone of Egypt's long-term climate strategy, the structure of the national energy system means that fossil fuels (particularly natural gas) will continue to play a dominant role for decades. In this context, carbon markets and carbon capture, utilization, and storage (CCUS) are emerging as complementary tools that could help Egypt manage emissions while sustaining industrial growth. The viability of these mechanisms, however, depends on regulatory readiness, geological suitability, and private-sector engagement, as well as Egypt's ability to position itself within a rapidly evolving regional emissions landscape.

Rising Yet Modest Emmisons

Egypt's greenhouse gas emissions have grown steadily in line with population growth, urbanization, and industrial expansion. According to the 2024 Biennial Transparency Report (BTR1), total emissions rose from approximately 138 million tons (mmt) of CO_2 equivalent in 1990 to around 336 mmt in 2023. While this represents a significant long-term increase, recent data indicates a relative stabilization in emissions levels compared to the peak of 347 mmt recorded in 2017, reflecting the early impact of national mitigation and energy efficiency strategies. Despite this increase, Egypt remains a relatively small emitter in global terms, contributing less than 1% of worldwide greenhouse gas emissions, with per capita emissions below the global average.

Egypt's climate policies are becoming more important as global rules on carbon and green finance grow stricter. The launch of Egypt's regulated voluntary carbon market in 2024, overseen by the Financial Regulatory Authority (FRA),was a major step. It is the first platform of its kind in Africa. By the end of 2024, more than 18,000 verified carbon certificates were registered. By early 2025, nearly 30 projects had joined, offering over 170,000 carbon credits for trading, including both local and international projects.

The market's early focus is on areas where emissions cuts can be measured clearly, such as renewable energy, sustainable farming, and land-use projects. Trading activity is still small, but the strong regulatory system has attracted developers and investors who value transparency. Beyond trading, the market is also meant to direct climate finance into Egypt's own mitigation projects, supporting the country's wider development and sustainability goals.

The launch of Egypt's regulated voluntary carbon market in 2024, overseen by the Financial Regulatory Authority (FRA), was a major step. It is the first platform of its kind in Africa. By the end of 2024, more than 18,000 verified carbon certificates were registered in the market.

CCUS Potential in Egypt

At the same time, Egypt's emissions profile highlights the limitations of relying solely on carbon markets. Natural gas accounts for the majority of electricity generation, and Egypt's position as a regional gas hub means that absolute emissions reductions will be gradual rather than immediate. This structural reality has brought renewed attention to CCUS as a potential mechanism to decouple industrial output from emissions growth, particularly in hard-to-abate sectors such as cement, fertilizers, refining, and petrochemicals.

From a geological perspective, Egypt possesses several characteristics that could support CCUS deployment. Decades of oil and natural gas exploration have generated extensive subsurface data, particularly in the Western Desert and the Nile Delta. Depleted hydrocarbon reservoirs and deep saline aquifers in these regions are considered potential candidates for long-term CO_2 storage, subject to detailed site characterization and risk assessment. Preliminary regional studies suggest that Egypt's storage potential could be significant when integrated with existing energy infrastructure and industrial clusters.

Frameworks Still Missing

Despite this potential, CCUS in Egypt remains at an early stage. There are currently no large-scale operational CCUS facilities, and the country lacks a comprehensive legal framework governing carbon capture, transport, storage, and long-term liability. While pilot initiatives and feasibility studies have been discussed, commercial deployment faces several barriers. High capital costs, uncertain revenue streams, and the absence of incentives such as carbon pricing or tax credits limit private-sector appetite.

Unlike some Gulf countries that have embedded CCUS within national net-zero strategies and provided direct state support, Egypt's approach remains cautious and incremental. As suggested by a Senior Renewable Energy Specialist who asked for anonymity, "From my perspective, [Egypt] is better positioned than many think. Decades of oil and gas exploration have given the country valuable geological data. What is missing is not storage potential, but it is a clear framework that turns that potential into bankable CCUS projects. Bankability is often overlooked in this futuristic approach."

Policy readiness remains a central issue. Effective CCUS deployment requires clear rules on storage site permitting, monitoring and verification, liability transfer, and long-term stewardship of stored CO_2. Without regulatory clarity, investors face unacceptable levels of risk. Furthermore, CCUS must compete with other decarbonization options, including renewable energy expansion, grid upgrades, and energy efficiency measures, all of which are already attracting significant public and private investment in Egypt.

Additionally, private-sector engagement in emissions management is increasing. Large industrial players and energy companies operating in Egypt are increasingly measuring and disclosing emissions, driven by export market requirements, investor expectations, and access to finance. For some companies, participation in voluntary carbon markets offers a near-term pathway to manage emissions exposure, particularly where direct reductions are technically or economically challenging. Over the longer term, CCUS could become relevant for industrial clusters seeking to maintain competitiveness in a carbon-constrained global economy.

Regional Climate Role

Regionally, Egypt occupies a distinctive position. The Middle East and North Africa (MENA) regions are witnessing a growing divergence in climate strategies. Gulf countries are advancing large-scale CCUS projects and national carbon markets as part of broader net-zero commitments, while many African economies are focusing on carbon markets as a source of climate finance. Egypt sits at the intersection of these trends. Its regulated voluntary carbon market provides an institutional foundation that could attract regional projects and buyers, while its geological potential and energy infrastructure create opportunities for future CCUS development.

Egypt's experience also carries regional significance in terms of governance. By placing carbon markets under financial regulation rather than environmental oversight alone, Egypt has signaled an intent to integrate emissions management into the broader economic system. If the market continues to mature with strong standards and transparent oversight, it could serve as a model for other emerging economies seeking to balance environmental integrity with market growth.

Ultimately, carbon markets and CCUS are not silver bullets for Egypt's climate challenge. Renewable energy expansion, energy efficiency, and electrification will remain central to emissions reduction efforts. However, given the structure of Egypt's economy and energy system, emissions management tools are likely to play an increasingly important supporting role. The success of these mechanisms will depend on sustained policy development, credible regulation, and the ability to mobilize private capital at scale.

Finally, for Egypt, the question is no longer whether carbon markets and CCUS are theoretically possible, but whether they can be translated into practical, investable solutions that align with national development priorities. If successfully implemented, these tools could position Egypt not only as a participant in the global climate response, but as a regional player in the emerging economy of emissions management.

CCUS in Egypt remains at an early stage as the country lacks a comprehensive legal framework governing carbon capture, transport, storage, and long-term liability. While pilot initiatives and feasibility studies have been discussed, commercial deployment faces several barriers

EGYPT'S BESS REVOLUTION: POWERING A GREENER FUTURE

By Fatma Ahmed

Egypt stands at the forefront of renewable energy expansion in the MENA region, with ambitious targets to increase the share of renewables in Egypt's energy mix to 42% by 2030 and 60% by 2040. As the country accelerates the integration of renewable energy into its power mix, battery energy storage systems (BESS) emerge as a critical enabling technology. Once viewed as a supporting technology, battery storage is increasingly being treated as essential infrastructure—one that underpins grid stability, enables higher renewable penetration, and strengthens long-term energy security. BESS play a pivotal role in this transition, bridging the gap between intermittent solar and wind resources and the demands of a growing economy.

BESS Revolutionizing Egypt's Renewable Sector

Solar and wind power do not produce electricity on demand. Solar output drops sharply after sunset, while wind generation can fluctuate within minutes. For grid operators, managing these variations becomes increasingly complex as renewable capacity grows.

Mohamed Sherwali, Sustainability Expert at the Regional Center for Renewable Energy and Energy Efficiency (RCREEE), said "without storage, fluctuations in solar power directly translate into frequency deviations, voltage instability, and dispatch challenges." Battery systems address this problem at its core. "BESS absorbs excess generation during the day and releases energy during shortages to smooth power delivery and ensure grid reliability and stability," he explained.

In Egypt, where peak electricity demand often coincides with evening hours, battery storage enables solar power generated during the day to be shifted into the evening peak. This reduces reliance on fossil-fuel peaking plants and improves overall system efficiency.

Different Storage Technologies

Globally, energy storage takes several forms. Pumped hydro storage remains the most widely used large-scale option, relying on elevation differences to store energy in the form of water. However, this technology is heavily dependent on geography and requires long development timelines.

Thermal energy storage, particularly in concentrated solar power (CSP) plants, allows heat to be stored and later converted into electricity. CSP has seen limited deployment in Egypt compared to photovoltaic solar, largely due to cost considerations.

Additionally, flywheel energy storage is a mechanical technology that stores energy in a rapidly spinning rotor, delivering high power for short periods—typically up to 15 minutes—to manage sudden fluctuations in electricity supply and demand. It provides fast, short-term grid support while backup generation or longer-duration storage comes online.

Alongside established options, several emerging storage technologies—including compressed air, superconducting magnetic systems, underground pumped storage, and hydrogen—are under development, though most remain at early or pilot stages of commercial deployment.

Electrochemical storage, chiefly battery-based systems, has become the most adaptable solution. Batteries can be deployed at utility scale, connected directly to renewable plants, or installed as standalone grid assets. Their modular design allows projects to be scaled quickly, a key advantage in fast-growing power systems such as Egypt's. Within this category, lithium-ion batteries have emerged as the dominant technology.

Lithium-Ion Batteries Take the Lead

The vast majority of grid-scale storage projects in Egypt rely on lithium-ion batteries, with lithium iron phosphate (LFP) chemistry gaining increasing preference. Sherwali noted that "the latest studies showed that the lowest total lifecycle cost for utility-scale storage today is Lithium Iron Phosphate (LFP)."

Project-level decisions, however, go beyond headline costs. Alaa Yahia Faid, Technology Project Lead, explained that "project teams balance cost, safety, performance, and climate when selecting battery chemistries." Within lithium-ion technologies, trade-offs are critical. High energy-density chemistries save space, while chemistries with strong thermal stability, like LFP, cut cooling and fire risk—important in hot climates," he said, adding that "cycle life, expected duty, and total cost of ownership drive the final choice."

LFP batteries are particularly well-suited to Egypt's operating conditions. Sherwali highlighted that "LFP technology has high thermal stability, which matches Egypt's high summer temperatures that can reach 45°C in desert areas where most PV projects are installed."

From a financing and risk perspective, LFP's advantages are equally compelling. According to Faid, "LFP is bankable for utility storage because it offers long cycle life, good thermal safety, no cobalt exposure, and predictable O&M, lowering project and insurance risk." He added that "LFP delivers the biggest value in solar-plus-BESS for peak shifting and firming, fast frequency and ancillary services, and localized congestion relief or backup in weaker parts of the grid."

Modern lithium-ion BESS installations are complex systems. Thousands of battery cells are assembled into modules and containers, supported by inverters, control systems, and advanced software platforms. Together, these components allow operators to monitor performance in real time and dispatch stored energy in response to grid needs.

In practical terms, lithium-ion batteries in Egypt are already being deployed at scale. In hybrid solar-plus-storage projects, batteries store excess daytime generation and discharge it after sunset, such as the 300-megawatt (MW) BESS paired with a 500 MW solar PV plant in Abydos, Aswan, implemented by AMEA Power.

They are also central to Scatec's solar-plus-storage developments, including the 1.1-gigawatt (GW) Obelisk solar project with a 100 MW / 200 megawatt-hour (MWh) BESS in Nagaa Hammadi, and the 1.7 GW Energy Valley project in Minya. Together, these projects signal a fundamental shift in Egypt's power system—where battery storage is no longer an add-on, but a core grid asset enabling the country's renewable future.

Challenges and the Road Ahead

Despite the increasing strategic importance of battery energy storage within Egypt's power system, a number of regulatory, financial, and technical challenges remain, experts said. "BESS still lacks a clear legal classification—whether as a generation asset, a transmission and distribution asset, or an independent grid service—making clear classification essential to unlock investment," the Sustainability Expert explained. This challenge is reinforced by a "grid code gap," since "current grid codes were developed for synchronous generation, and therefore storage-specific grid codes are required," he added.

Sherwali noted that, from a financing perspective, "BESS remains capital-intensive and revenue-light under current rules," with investors constrained by the absence of standardized, bankable storage service agreements. Unlike power purchase agreements (PPAs)—long-term contracts between electricity producers and off-takers—or net-metering mechanisms that allow renewable generators to offset their consumption with self-produced power, storage lacks a comparable framework. As a result, financing remains largely project-by-project and concessional, underscoring the structural hurdles that continue to limit the sector's scalability.

On the operational side, effective integration will require "advanced SCADA system, to manage, automate, and optimize processes remotely, as well as real-time dispatch capability" to fully enable storage's role in grid flexibility and system support, he stated. SCADA are systems that monitor and control industrial or utility operations in real time.

Supporting this vision, Faid said that "Egypt needs storage-friendly market rules, including clear asset classification, dispatch, and compensation mechanisms, alongside tailored financing and guarantees for BESS projects, and stronger grid and local supply-chain planning covering cells, assembly, and recycling. Addressing these gaps would unlock higher renewable penetration at lower cost."

Looking Ahead

Battery storage is set to become a central pillar of Egypt's energy transition. As renewable capacity grows, these systems will ensure a reliable and flexible power supply, support solar and wind integration and reducing dependence on fossil-fuel peaking plants. Beyond electricity generation, BESS could enable emerging technologies such as green hydrogen production and regional power exports. With continued investment, regulatory support, and technical innovation, battery storage will play a pivotal role in building a modern, resilient, and sustainable Egyptian power grid.

In Egypt, where peak electricity demand often coincides with evening hours, battery storage enables solar power generated during the day to be shifted into the evening peak. This reduces reliance on fossil-fuel peaking plants and improves overall system efficiency.

VENEZUELA'S OIL FUTURE: FROM GEOPOLITICAL FLASHPOINT TO MARKET TRANSFORMATION

By Samar Samir

The dramatic capture of President Nicolás Maduro by U.S. forces on January 3, 2026, followed by the rapid seizure of national oil infrastructure, has ignited a fresh geopolitical flashpoint with profound implications for global energy. In the immediate aftermath, President Donald Trump announced plans via social media to acquire and sell between 30 and 50 million barrels of Venezuelan oil. This bold move directly targets the world's largest proven reserves—totaling 303 billion barrels, or roughly 17% of the global supply.

Recent data from Kpler, a leading data and analytics firm, shows production dipping toward 800,000 barrels per day (bbl/d) from 1.1 million bbl/d by late 2025, as export blockades and storage limits take hold, forcing Petróleos de Venezuela, S.A. (PDVSA), the state-owned oil and gas company, to utilize onshore tankers for unsold crude. Despite this localized turmoil, global markets remain remarkably calm; Brent prices held around $65 per barrel as of mid-January. This stability underscores a well-supplied global market supported by OPEC+, US shale, and rising output from Guyana. The situation now raises a pivotal question: will this intervention trigger a short-term price spike, or will it unleash a wave of heavy crude that reshapes markets for years to come?

Immediate Market Shock: Limited Disruption

While the global energy market initially reacted with alarm, causing a brief spike in prices, the volatility quickly subsided. Traders soon recognized that Venezuela's exports were already severely hamstrung by years of sanctions and "shadow fleet" operations. Providing deep expert context to this volatility, Homayoun Falakshahi's article in Kpler, "Maduro Captured: Venezuela's Oil Future at a Crossroads," identifies this moment as a critical turning point for the nation's energy sector. He notes that production has already begun to slip largely because PDVSA has been forced to utilize vessels for floating storage amid a tightening U.S. blockade.

Furthermore, Falakshahi warns that while current onshore storage buffers of 15–20 million barrels (mmbbl) can sustain these operations for approximately six to eight weeks, a continued stalemate will likely trigger accelerated shut-ins in the Orinoco Belt in central-eastern Venezuela. Consequently, without a swift political transition or the lifting of sanctions, output is projected to fall further to between 600,000 and 700,000 bbl/d in February, potentially cratering to just 200,000 bbl/d by the second quarter if critical diluent imports remain blocked.

Despite these regional threats, broader market analysts, including those at the IEA, see minimal near-term risk to global supply. They argue that any potential ramping of Venezuelan production would yield "limited short-term gains" given the current global oversupply. In the meantime, heavy crude alternatives from Canada, Saudi Arabia, and Guyana are readily available to fill any gaps. Consequently, while a geopolitical risk premium of approximately $10/bbl lingers in escalation scenarios, markets are currently pricing in a period of relative stability under U.S. oversight.

The Long Road from Decay to Potential

The long-term outlook for Venezuela is a study in contrast between current ruin and massive latent potential. The sector currently languishes from decades of underinvestment and corruption; production has plummeted from a 1998 peak of 3.5 (mmbbl/d) to 800,000 bbl/d (less than 1% of global supply). Rehabilitating the corroded infrastructure in the humid Orinoco Belt will require billions in capital to fix wells, pipelines, and power systems.

Despite these hurdles, energy giants see a major opportunity. Chevron is already targeting growth from its current share, while Repsol aims to triple its output, and Exxon is preparing technical teams to assess the region. According to the Center for Strategic and International Studies (CSIS), modest repairs could bring output to 1.5 mmbbl by 2028, with a path to 3 mmbbl by 2035 if major investment is secured.

As noted in an Americas Quarterly report, restoring production to these levels would effectively add the equivalent of a mid-sized OPEC producer to the world's supply. Such a shift would intensify competition among heavy crude exporters like Saudi Arabia, Iraq, and Russia. However, the path remains treacherous. A report by Direct Industries warns that PDVSA's facilities are so fragile that a chaotic political transition could cause a short-term production drop of 50%. This fragility explains why leaders like Exxon CEO Darren Woods remain cautious, even as the Trump administration seeks $100 billion in industry pledges to fuel a comeback.

U.S. Strategy: A Controlled Revival

Current U.S. policy appears focused on controlling oil flows rather than simply flooding the market. While a formal export ban persists, rules allow firms like Chevron to invest now and recover profits later. This strategy prevents undercutting U.S. shale while positioning Venezuela as a strategic lever against China, its top buyer. President Trump has emphasized that interim authorities will hand over oil control to the U.S., with proceeds "used for the benefit of the people of Venezuela and the United States."

Experts, however, urge patience regarding the "flood" of oil. Phil Flynn, Senior Market Analyst at The PRICE Futures Group, told Egypt Oil & Gas:

"Right now the market is in balance. There is a tightness of supply when you look at the {heavy crude oil grades, but it will take a little time for that flood of oil to come from Venezuela, but I do expect that this will lead to an era of more stable prices."

Flynn also identified security as a primary concern:

"The oil companies have to make sure that their people are safe and secure and that their contracts will be honored. I do think with the Trump administration strength that this is not going to be a problem, but it's definitely a concern."

If these security and infrastructure hurdles are cleared, the Council on Foreign Relations suggests that a $100 billion investment could eventually allow Venezuela to rival producers like Canada or Iraq.

If the security and infrastructure hurdles are cleared, the Council on Foreign Relations suggests that a $100 billion investment could eventually allow Venezuela to rival producers like Canada or Iraq.

Global Pricing and OPEC+ Pressure

In the short term (2026–2027), prices are expected to remain range-bound between $52–56/bbl. Heavy crude differentials will likely stay wide due to competition from Canada and Guyana, a situation that favors U.S. Gulf Coast refiners looking for discounted grades.

In the medium term, however, a recovery to 2 mmbbl/d would pressure OPEC+ cohesion. Ole Burkhard of S&P Global estimates that reaching 1.5 mmbbl/d is possible "within a year or two," which would be bearish for prices. Furthermore, Goldman Sachs estimates that a full recovery could create a $4/bbl downside to global prices by 2030. While this benefits adaptable refiners, it would strain the fiscal balances of Latin American exporters like Colombia.

These projections come with a caveat. Helima Croft, Head of Global Commodities Strategy at RBC Capital Markets, warns:"Venezuela's oil infrastructure is in disrepair after years of neglect and sanctions, so it could take years and major investments before production can increase dramatically. All bets are off in a chaotic change of power scenario like what occurred in Libya or Iraq."

Without a swift political transition or the lifting of sanctions, output is projected to fall further to between 600,000 and 700,000 bbl/d in February, potentially cratering to just 200,000 bbl/d by the second quarter if critical diluent imports remain blocked.

Wasted Reserves and Geopolitical Ripples

Beyond oil, Venezuela holds 200 TCF of gas reserves—the largest in Latin America—yet it currently flares roughly 40% of its output. While the country is not an LNG exporter, stability could enable new pipelines to Colombia and Trinidad, adding 1–2 bcf/d to the regional market and bolstering the Caribbean energy grid.

Ultimately, the US–Venezuela saga represents a potential supply overhang rather than a crisis. Regional stability now hinges on an orderly transition to avoid a refugee crisis in Brazil and Colombia. For stakeholders in the Middle East and North Africa (MENA), the primary focus must be on how OPEC+ responds to this emerging supply risk. As Venezuela moves toward potentially rejoining the market as a disciplined player, its unlocked reserves could redefine the dynamics of heavy crude by the end of the decade, cementing lower, more stable prices for the long term.

EYES IN THE AIR:

TRANSFORMING OIL & GAS INSPECTIONS WITH ADVANCED DRONE TECHNOLOGY

SMA and its affiliates are at the forefront of integrating drone technology into oil and gas inspection, monitoring, and emissions quantification across Egypt. With decades of expertise in safety, environmental compliance, and industrial services, SMA delivers innovative aerial inspection solutions.

Its industrial drones-equipped with Optical Gas Imaging (OGI), gas sniffer sensors, thermal, visual, and high-resolution cameras-help operators meet the highest environmental and safety standards. These solutions complement ground surveys, enabling comprehensive inspections of complex, hard-to-reach assets while reducing operational disruptions and personnel exposure to hazardous environments.

From methane emission quantification aligned with OGMP 2.0 Level 5, to live flare stack inspections and long-distance pipeline monitoring, SMA's drone services provide actionable, real-time data that supports proactive maintenance, regulatory compliance, and stronger environmental stewardship across the oil and gas value chain.

Using Drones at Oil and Gas Sites

Drones are an increasingly valuable tool for inspecting, monitoring, and quantifying emissions in the oil and gas industry. Here are some of the key applications:

1. Oil and Gas Inspection:

Drones equipped with advanced Optical Gas Imaging (OGI) sensors and high-resolution cameras are revolutionizing oil and gas leak monitoring and inspection. These state-of-the-art tools can detect a wide range of gases, including:

- Methane
- Hydrocarbons
- Volatile Organic Compounds (VOCs)

These versatile drones are deployed across a variety of critical oil and gas facilities, ensuring comprehensive monitoring and inspection of:

- Offshore platforms and onshore production facilities
- Pipelines and storage tanks
- Refineries and processing plants

Drones offer a significant advantage in terms of efficiency compared to traditional ground-based methods. Their ability to cover large areas quickly and accurately helps oil and gas companies:

- Reduce inspection times
- Minimize operational disruptions
- Ensure continuous monitoring
- Access hard-to-reach or hazardous areas, allowing for comprehensive inspections without putting personnel at risk
- Collect data that helps identify equipment issues, leaks, corrosion, and other problems early, enabling proactive maintenance and repairs

2. Emissions Quantification:

- Drones can be outfitted with specialized gas sensors and imaging systems to measure and quantify gas emissions from oil and gas operations.
- They offer significant advantages for methane quantification.
- The data collected helps oil and gas companies better understand their emissions footprint, identify and address leaks, and comply with regulatory requirements.
- The system provides advanced real-time data visualization and analytical capabilities. Users can access intuitive and insightful information for timely decision-making, enhancing operational efficiency and responsiveness to methane emissions.
- By utilizing drones equipped with gas sniffer sensors, companies can conduct inspections in hazardous areas without putting personnel at risk. This not only improves safety but also allows for more frequent and thorough monitoring of potential leak sources.
- In addition to methane, the sniffer sensor can detect and quantify various gases simultaneously, providing a comprehensive overview of air quality and emissions. This feature is particularly useful in industrial settings where multiple pollutants may be present.

3. Flare Stack Inspection

- Drones revolutionize flare stack inspections by being fast, safe, and cost-effective.
- Traditional flare stack inspections are dangerous, time-consuming, and costly, as flare stacks must be shut down during manned inspections. With drones, engineers can carry out inspections while the flare stack is live, dramatically reducing costs.
- Stabilized drones capture accurate and actionable data offshore and onshore, covering angles impossible to attain with conventional methods.

Key Differences between drone-based inspections and traditional aerial overflights

1. Enhanced Safety

Drones allow for inspections in hazardous environments without putting human operators at risk, significantly improving safety during assessments.

2. Cost-Effectiveness

Drone inspections are considerably less expensive than conventional fly-over techniques, reducing the overall cost of pipeline monitoring and maintenance.

3. Speed and Efficiency

Drones can cover vast stretches of pipeline quickly, flying at speeds of up to 60 MPH (100 km/h). This efficiency allows for faster inspections compared to manual methods.

4. High-Resolution Data Collection

Equipped with high-resolution cameras, thermal sensors, and LiDAR systems, drones can capture detailed images and data, enabling precise assessments of pipeline conditions.

5. Real-Time Data Analysis

Drones can transmit data in real time, allowing for quick analysis and decision-making, which is crucial for maintaining pipeline integrity and safety.

The data collected through drone-based oil and gas inspections and emissions quantification can be integrated with asset management systems and environmental reporting to help the industry improve safety, operational efficiency, and environmental stewardship.

STRATEGIC VALORIZATION OF RARE EARTH ELEMENTS IN EGYPT:

Pathways to Economic and Technological Sovereignty

Rare earth elements (REEs) are recognized as strategic materials underpinning advanced technologies. They are fundamental in electronics, clean energy, high-tech manufacturing, and defense. Key elements such as neodymium, dysprosium, and yttrium are vital for high-efficiency permanent magnets, wind energy systems, electric vehicles (EVs), and advanced communication technologies. Worldwide demand has grown rapidly, intensifying competition to secure reliable supply chains.

Egypt's diverse geological settings are favorable for hosting valuable mineral deposits, including REEs, though these resources remain underexplored. Effective development could boost economic growth, foster industrial advancement, and strengthen technological independence by reducing reliance on imported raw materials.

Egypt's structure includes provinces with considerable mineral potential, notably the Eastern Desert, Sinai Peninsula, and parts of the Western Desert. The Eastern Desert is distinguished by igneous and metamorphic formations associated with REE-bearing minerals such as monazite, xenotime, and allanite. Initial surveys reveal economically viable concentrations of both light and heavy REEs. Several localities report encouraging levels of neodymium, dysprosium, and yttrium, critical for strategic industrial applications.

This research integrates geological surveys, laboratory analyses, and pilot-scale initiatives. Sampling programs across prospective areas were followed by mineralogical and geochemical analyses to determine REE concentrations and distribution. Advanced techniques—X-ray fluorescence (XRF), inductively coupled plasma mass spectrometry (ICP-MS), and scanning electron microscopy (SEM)—were used to characterize ore composition and mineral associations. Beneficiation methods including gravity separation, magnetic separation, and flotation were evaluated to improve recovery efficiency.

Findings demonstrate promising technical and economic parameters for REE extraction in Egypt. Pilot studies show that with appropriate beneficiation and processing, viable recovery rates are achievable.

Strategic valorization extends beyond mining, emphasizing integration with downstream industries. Establishing local processing facilities for separation and refining can significantly increase material value. Developing domestic capabilities in REE processing fosters innovation, technology transfer, and skilled employment. Sustainable development is essential: mining and processing must follow environmentally responsible practices to minimize ecological impacts. Socio-economic benefits include job creation, regional development, and capacity building in mining and materials science.

The strategic valorization of REEs in Egypt represents a pathway toward sustainable economic development and technological sovereignty. Untapped resources offer opportunities to strengthen industrial competitiveness.

By Abdel-Mageed Mohamed, Vice chairman and Managing director at Shalateen Mineral Resources Co. & Tarek Sedki, Senior Exploration Geologist at Shalateen Mineral Resources Co.

VENEZUELAN OIL UNDER PRESSURE:

U.S. Interventions and their Far-Reaching Consequences

Venezuela's oil sector has long been defined by its complex relationship with the United States—a bond that has evolved from a strategic economic partnership into a cautionary tale of energy as a geopolitical weapon. Holding the world's largest proven oil reserves, Venezuela's petroleum industry remains the singular heartbeat of its economy. Consequently, any external intervention in the industry carries profound weight, moving beyond diplomatic posturing to fundamentally disrupt production, exports, and global market access.

Historically, US oil majors were deeply embedded in the Venezuelan landscape, and the nation served as a cornerstone supplier for North American heavy-crude refineries. This synergy fractured following the nationalization policies of the early 2000s and the expansion of state control via Petróleos de Venezuela, S.A. (PDVSA), the state-owned oil and Gas Company of Venezuela. While these shifts aimed to reclaim sovereignty, they simultaneously heightened Venezuela's dependency on oil revenues, leaving the domestic economy dangerously exposed to external shocks. This vulnerability reached a breaking point in the 2010s, as Washington imposed broad sanctions on exports and financial transactions.

While US sanctions were designed to exert political pressure by choking off the government's primary revenue stream, the operational fallout for PDVSA has been severe. Cut off from international financing, specialized spare parts, and traditional export markets, Venezuela's refining and upstream infrastructure has deteriorated rapidly. The result is acute logistical bottlenecks: with onshore storage at capacity, the country has resorted to using oil tankers as floating storage, leaving vessels anchored indefinitely in territorial waters. What began as a political instrument has now evolved into a technical crisis, exposing the physical limits of an energy sector under siege.

At the global level, the disruption of Venezuelan oil has also affected energy markets. The removal of heavy crude supplies forced refineries to seek alternative sources, reshaping trade flows toward other producers. Venezuela's reduced output weakened its influence and altered internal dynamics. At the same time, periods of global energy tightness exposed the contradictions of sanctions policy, leading the US to issue temporary licenses allowing limited Venezuelan exports to stabilize markets.

Now, Washington's tightened grip on Venezuela's oil sector- after capturing its president and the US president Donald Trump announcing himself the acting ruler of the country- has translated into a dramatic contraction of both revenues and export volumes. By restricting access to global markets and deterring traditional buyers, US sanctions have effectively severed the country's lifeline to hard currency. Once a top supplier to refineries across the Americas, Venezuela now struggles to place its crude, often forced to discount barrels heavily or reroute them through opaque channels. The result is a collapse in official export figures and a steep decline in state revenues, leaving PDVSA unable to reinvest in its crumbling infrastructure. What was once a geopolitical lever has become a structural chokehold, shrinking the nation's oil footprint on the world stage and deepening its economic isolation.

In conclusion, US interventions in Venezuelan oil demonstrate how energy resources can become instruments of geopolitical pressure, but also how such strategies generate unintended and far-reaching consequences.

By Mohamed Atia, Process engineer at the Egyptian Refining Company

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SMA is also a trusted leader in H_2S safety services, providing robust detection and quantification of hazardous gases to protect people, assets, and the environment across both offshore and onshore sites.

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EGYPT OIL&GAS RESEARCH & ANALYSIS

Energy Consumption in Egypt: Trends, Drivers, and Sectoral Dynamics

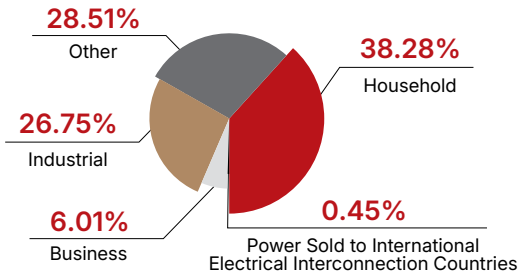
The level and distribution of energy consumption in Egypt reflect the breadth of economic activity across sectors. The energy sector, covering electricity, petroleum, natural gas, and renewables, accounted for approximately 9.2% of gross domestic Product (GDP) in fiscal year (FY) 2024/25, underscoring its pivotal role in meeting growing demand across all sectors of the economy. Rising consumption has been most evident in fossil fuel use, driven by rising demand across residential, industrial, and commercial activities, according to the Ministry of Planning, Economic Development, and International Cooperation.

Tracking Electricity Consumption

The Electricity sector experienced a consumption growth of 5.3% in FY 2024/25 compared to FY 2023/24 to reach 188.95 terawatt-hour (TWh). This reflects a broad-based increase across multiple sectors.

Residential demand led the expansion, rising by 8.2%, while industrial consumption registered a more moderate increase of 4%. Commercial electricity consumption saw the most pronounced growth, climbing 15.3%, whereas consumption in other sectors expanded by 1.5%, according to the Central Bank of Egypt (CBE).

Electricity Consumption by Sector in FY 2024/25



Hydrocarbon Consumption Patterns

Egypt's fossil fuel consumption exhibited mixed trends per category in FY 2024/25 compared with FY 2023/24, reflecting ongoing shifts in the country's energy balance. Crude oil and condensate consumption rose by 7.1%, driven by stronger demand from refining and other oil-linked activities, as refining output increased by 30%, according to the Ministry of Petroleum and Mineral Resources (MoPMR).

Petroleum products consumption also increased by 4.98%, underscoring growing reliance on refined fuels across the transport, power generation, and industrial sectors.

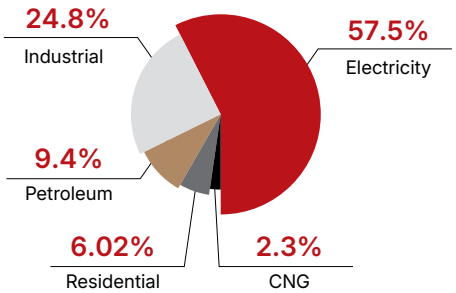
By contrast, domestic natural gas consumption declined by 2.6%, reflecting supply constraints rather than demand weakness. Reduced natural gas availability prompted greater use of alternative fuels, with mazut and diesel increasingly deployed in power plants to compensate for natural gas shortages and ensure continuity of electricity generation.

During these periods, gas supplies to some industrial activities were suspended, while liquid fuels played a balancing role in maintaining system stability, according to the Egyptian Cabinet and The Central Agency for Public Mobilization and Statistics (CAPMAS).

Fossil Fuel Consumption in FY 2024/25 (mmt)

Natural gas consumption is heavily concentrated in power generation, with the electricity sector emerging as the dominant consumer. The industrial sector ranks second, driven primarily by fertilizers, iron and steel, and cement production. Meanwhile the CNG sector accounted for the smallest share, according to the Egyptian Natural Gas Holding Company (EGAS).

Natural Gas Consumption by Sector in FY 2023/24*



As a result, efficiency initiatives have become a critical tool for managing consumption growth.

Energy efficiency projects implemented across oil and gas sector companies achieved a 7.7% reduction in energy consumption in FY 2024/25, generating annual savings of $162.3 million, equivalent to 11,100 barrels of oil per day (bbl/d), while cutting emissions by 1.37 million tons (mmt) of CO_2 annually, according to the Ministry of Planning, Economic Development, and International Cooperation.

*Latest Available Data

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Key Egyptian Economic Insights in December 2025

Annual Headline Inflation

10.3% | **+0.3** pp from November

Non-Oil Private Sector PMI

51.5 pts | **+0.4** pts from November

Avg Exchange Rate

47.57 EGP/USD | **+0.2%** from November

EGX Listed Petroleum Companies Performance in December 2025

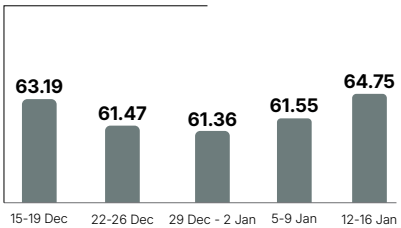
	Close Price	YTD Price Change	P/E*
TAQA Petroleum	14.49 EGP	↑ 23.11%	24.81
EDC	4.69 USD	0%	3.89
AMOC	6.76 EGP	↓ 5.97%	5.77
EGYPT GAS	44.26 EGP	↑ 10.1%	21.94
Sidpec	19.6 EGP	↑ 1.8%	7

*Price-Earnings Ratio (P/E): the ratio of a company's share price to the company's earnings per share.

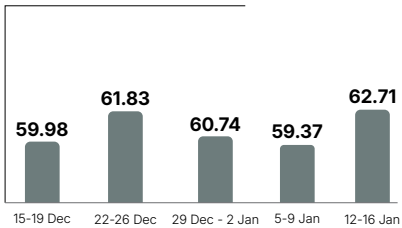
Petroleum Pricing Highlights

Average International Prices

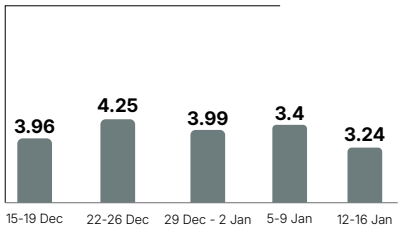
BRENT OIL ($/BBL)



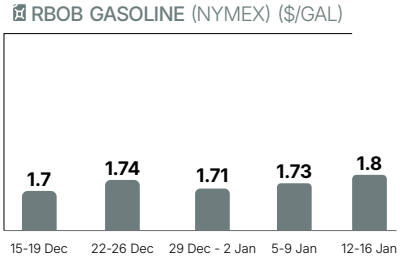
OPEC BASKET ($/BBL)



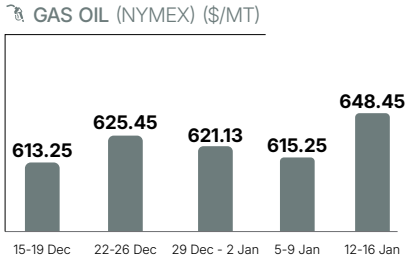
NATURAL GAS ($/MMBTU)



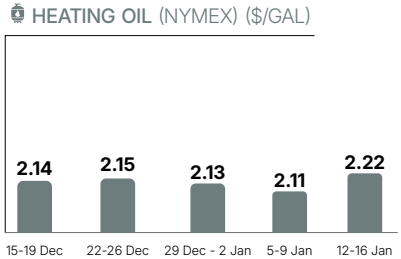
RBOB GASOLINE (NYMEX) ($/GAL)



GAS OIL (NYMEX) ($/MT)



HEATING OIL (NYMEX) ($/GAL)



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