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NEWSPAPER

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2028 — 2031
ALIGNING FOR A SUSTAINABLE FUTURE

وزارة البترول والثروة المعدنية
Ministry of Petroleum & Mineral Resources

NEW MINISTER BADAWI
STEPS UP TO CONTINUE LEGACY OF SUCCESS

EDITOR'S LETTER

Dear Reader,

The July issue arrives as the Egyptian oil and gas sector embarks on a new journey with our newly appointed Minister of Petroleum and Mineral Resources Karim Badawi at the helm. As a seasoned industry expert, Badawi inherits a legacy of success from his predecessor, Tarek El Molla, who oversaw nine years of significant transformation.

Looking forward, Minister Badawi emphasizes collaboration and leveraging past achievements to further contribute to the national economy. We, at Egypt Oil & Gas, are confident that his expertise will guide the sector through emerging challenges.

This month's issue pays tribute to El Molla's remarkable tenure while also examining the prospects for continued success under Minister Badawi.

This month, our issue is dedicated to the downstream sector, which has recently undergone significant transformation and holds the potential for further leaps in the future. We explore the various challenges and opportunities for this vital sector.

We trust you will find this issue informative and share our hope for a prosperous future for the Egyptian oil and gas sector, ultimately benefiting our lives.

Ihab Shaarawy

MANAGING EDITOR

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EGYPT'S **LEADING** OIL & GAS MONTHLY PUBLICATION

EGYPT OIL&GAS NEWSPAPER

Proudly the Official Publication

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TOP 5

Karim Badawi Appointed as Minister of Petroleum and Mineral Resources: A Well-Deserved Achievement for a Dedicated Leader

Prime Minister Mostafa Madbouly has announced the appointment of Karim Badawi as the new Minister of Petroleum and Mineral Resources, highlighting Badawi's extensive experience in the energy sector.

Karim Badawi brings a wealth of experience to his new role, having started his career with Schlumberger (now SLB) in 1996 as a Field Engineer in Indonesia. Over the past 28 years, he has undertaken several assignments in Aberdeen, Egypt, Paris, Houston, Russia, and Central Asia, before returning to Egypt.

Badawi is the Director – SLB New Energy – Middle East & North Africa, based in Cairo—a position he has held since May 2018. In this role, he is responsible for developing the company's portfolios in Characterization, Drilling, Production, Integrated, and Cameron projects for the region.

The new cabinet formation reflects the government's commitment to leveraging experienced professionals to drive Egypt's strategic sectors forward. Badawi's appointment is expected to bring significant expertise and leadership to the Ministry of Petroleum and Mineral Resources, contributing to the nation's energy and mineral resource development goals.

Energean Announces $945M Sale of Egyptian, Italian, and Croatian Assets to Carlyle

Energean plc has announced that it entered into a binding agreement for the sale of its portfolio in Egypt, Italy and Croatia to an entity controlled by Carlyle International Energy Partners ("Carlyle") for an enterprise value ("EV") of up to $945 million, of which $820 million is firm (the "Transaction"). Completion is expected by year-end 2024, subject to customary regulatory and antitrust approvals.

The company indicated that the sale enables Energean to rationalize the portfolio and focus on its gas-weighted, gas-development strategy, underpinned by the Karish Field in Israel and recent farm-in to the Anchois field in Morocco. This strategy aims to maximize asset monetization (through a develop and operate model), free cash flow generation and returns to shareholders.

The Transaction also optimizes the portfolio by divesting later life assets, removing over 60% of the Group's decommissioning liabilities, and improving free cashflow generation in the short to medium-term.

Mathios Rigas, Chief Executive Officer of Energean, commented: "This deal represents an exciting new chapter for Energean. Today we have realized a significant return on the investment made when we acquired this portfolio over four years ago. The transaction delivers on our strategy and Energean's ability to maximize value for our shareholders. It maintains our highly disciplined approach to capital allocation, as demonstrated by the accretive transaction metrics, coupled with an anticipated special dividend."

"Looking ahead, this transaction unlocks management capacity and financial flexibility to drive future growth. Our focus will now be to create enhanced value from our Israel assets and evaluate new opportunities that fit Energean's key business drivers: paying a reliable dividend, deleveraging, growth, and our commitment to Net Zero," added Rigas.

Harbour Energy Acquires Wintershall Dea Concessions in Egypt

Minister of Petroleum and Mineral Resources Tarek El Molla has met with Harbour Energy CEO Linda Cook to witness the signing of an agreement for the British company Harbour Energy to acquire the concession areas of the German company Wintershall Dea in Egypt.

The agreement was signed by Yasseen Mohamed, CEO of the Egyptian Natural Gas Holding Company (EGAS); Sameh Sabry, Senior Vice President & Managing Director-Middle East and North Africa, Wintershall Dea; and Howard Landes, General Counsel/Legal for Harbour Energy.

The signing came following the meeting of El Molla and Cook, during which El Molla confirmed that the Egyptian petroleum sector possesses an advanced infrastructure and the skills and experience of distinguished Egyptian cadres. He welcomed the entry of the British company to work in the Egyptian market, inject new investments and provide advanced technologies.

El Molla pointed to the successes that Wintershall Dea contributed to achieving in the oil and gas sector in Egypt.

The minister stated that the partnership with the German company is a model of successful strategic partnership and that he aspires to continue the successes with the British company Harbour Energy.

For her part, Cook indicated her aspiration to pump new investments into the petroleum sector in Egypt and work to expand operations and become one of the largest companies operating in the energy field in Egypt.

It is noteworthy that the British company Harbour Energy had announced its acquisition of the assets of the German company Wintershall Dea in a number of countries in addition to Egypt.

Maridive & Oil Services Announces 12% Growth in Revenues

Maridive & Oil Services has announced that its revenues increased to $16.5 million for the year ending on 31 March 2024, a 12% improvement compared to $14.7 million in the similar period 2023.

According to standalone unaudited financial statements for the period ending 31/03/2024, gross profit reached $6.61 million, a 17% rise from $5.56 million a year earlier.

Meanwhile, net profit reached $608,000, a 227% increase from $481,000 in the similar period 2023.

Maridive & Oil Services revealed that net EBITDA reached $10.7 million, compared to $8.4 million in the similar period 2023, reflecting a 28% improvement.

BMI Expects Recovery in Egypt's Natural Gas Production

BMI, the research company affiliated with Fitch Solutions, expects a limited recovery in Egypt's natural gas production by 2% to 60.51 billion cubic meters (bcm) in 2024 from 59.3 bcm in 2023, Al Arabiya citing a report from BMI.

The expected growth in gas production will come largely as a response to a significant decline in production recorded by Egypt in 2023 by 11.5% from 67 bcm in 2022.

BMI expects Egypt to export 4.9 bcm of gas in 2024, which is much less than the record level of 11.3 bcm that the country exported in 2022.

The report stated that Egypt has not exported any liquefied natural gas (LNG) since March and plans to halt exports during the summer to give priority to meeting domestic energy needs.

As for Egypt's crude oil production, BMI expects it to witness a modest increase of 1% in 2024 to reach an average of 669,730 barrels per day, supported by the start of operations in the North Safa field.

A BLAST FROM THE PAST

The Arab Gas Pipeline project was one of the strategic Arab cooperation projects that was first negotiated in late 1990. The 1,200 km pipeline aimed at delivering surplus gas supplies from Syria, Egypt, and Iraq to neighboring Jordan, Lebanon and Turkey, and eventually to Europe.

The project was implemented through three phases. The first phase started from Al-Arish to Aqaba, with a length of 265 km and a capacity of 10 billion m^3 annually. The supply of natural gas from Egypt to Jordan under this phase began in mid-2003.

The second phase extended from Aqaba to the Rehab area in northern Jordan with a length of 393 km. The supply of gas to power plants in the north of the Hashemite Kingdom began in February 2006, while the second phase from Rehab to the Jordan-Syria border was completed with a length of 30 km in March 2008.

The southern part of the third phase was implemented inside the Syrian territory, extending from the Jordanian-Syrian border to the city of Homs with a length of 320 km and was put into operation in July 2008.

The project was expected to improve the competitiveness of the region's energy sector by promoting the use of cheaper and environmentally cleaner gas over high sulfur fuel oil.

UNDER THE LIMELIGHT

Surge in Petroleum Refining Contribution to Total Public Investments in Q4 2022/23

217% (YoY)

Boosting Egypt's Petroleum Refining Sector

The Egyptian government directs significant public investments to the petroleum refining sector, highlighting its ongoing commitment to enhancing and sustaining this essential industry.

In this regard, during the fourth quarter (Q4) of the fiscal year (FY) 2022/23, petroleum refining accounted for EGP 5.26 billion, compared to about EGP 1.67 billion in the same period in FY 2021/22.

The petroleum refining sector plays a vital role in Egypt's economic growth, generating revenue and supplying vital energy resources essential for industrial power, development, and national energy security.

AGREEMENTS

Egypt, Norway Sign Green Ammonia Project Agreement

On the sidelines of the Egypt-EU Joint Investment Conference held in Cairo during the 29th and 30th of June, Prime Minister Mostafa Madbouly has witnessed the signing of a project agreement for the production of green ammonia in the city of Damietta.

The agreement includes the Egyptian Petrochemicals Holding Company (ECHEM), Misr Fertilizers Production Company (MOPCO), along with the Norwegian companies SCATEC and Yara International.

On the sidelines of the signing, El Molla confirmed that the agreement reflects confidence in the project and the investment climate in Egypt, pointing out that the initial investment cost of the project is estimated at approximately $890 million, with a production capacity of up to 150,000 tons of green ammonia annually.

El Molla noted that the project aims to generate renewable energy with a total capacity of up to 480 megawatts of renewable energy from wind and solar

energy. He added that the scope of the project's work also includes the establishment of a seawater desalination plant, and a sea pier to export green ammonia from the port of Damietta, and it is expected to start operating in 2027.

TAQA Arabia, Voltalia Sign Renewable Energy-Green Hydrogen Framework Agreement

TAQA Arabia, Egypt's leading private sector energy and utility provider, and its partner Voltalia, one of the largest international companies in the sector of generating, operating, and supplying all types of renewable energy, have signed a framework agreement during the Egypt-EU Investment Conference 2024, which was held on June 29 and 30 in Cairo.

The framework agreement is a continuation of a memorandum of understanding (MoU) signed in December 2022 to develop a cluster combining green hydrogen production with renewable power generation with a total investment that could reach up to $3.4 billion by the completion of all the project phases.

The project will be implemented in two identical phases, each comprising a 500 MW electrolyzer powered by more than 1.3 GW of solar and wind energy. The facility

will be located at a greenfield site near Ain Sokhna port in the Suez Canal Economic Zone and will have an annual production capacity exceeding 350,000 tons of green ammonia for each phase.

ADES, SUCO Seal Jack-Up Drilling Contract in Egypt

ADES Holding Company has announced the official signing of a Jack-Up Drilling Contract with Egypt's Suez Oil Company (SUCO).

The signing of the two years contract took place on June 13, as operations are expected to start in H2 of 2024, ADES said in a disclosure to the Saudi Exchange.

The company has declared that the contract tenor has been amended from the previously reported 21 months announced in May, to be two years, which raised the contract value from SAR 161 million to approximately SAR 185 million.

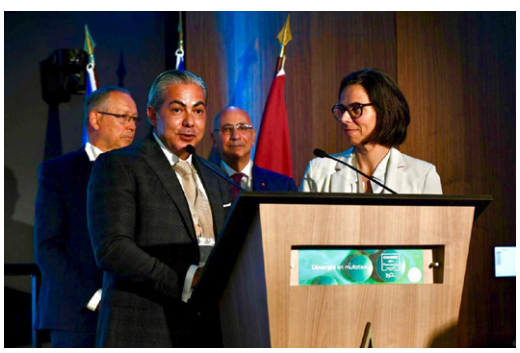
According to the contract, SUCO will utilize a standard jack-up rig from ADES's fleet and is expected to begin shortly.

Egyptian Gas Association and France Gaz Join Forces to Advance Green Gas Technologies, Carbon Neutrality

The Egyptian Gas Association (EGA) and France Gaz have announced the signing of a landmark Memorandum of Understanding (MoU) to advance their cooperation in the fields of gas and energy transition. The MoU, signed on the sidelines of France Gaz's celebrations of the 150th anniversary of its founding, marks a significant milestone as Egypt is the only country invited to formalize such an agreement during this event.

Tarek El Molla, Egypt's Minister of Petroleum and Mineral Resources, emphasized the strategic importance of this MoU, stating: "This partnership with France Gaz is a testament to Egypt's commitment to sustainable energy solutions. By leveraging our combined expertise, we aim to accelerate our progress toward a greener future, fostering innovations that will benefit both our nations and the global community."

Jean-Marc Leroy, Chairman of France Gaz stated: "We are honored by this memorandum of understanding, which will be made official at France Gaz's special 150th anniversary conference. The entire French gas industry, represented by France Gaz, is delighted with this alliance, which will enable our two countries to work



together to tackle the climate emergency. Thanks to this protocol, France and Egypt will be able to share their vision and their approaches to the different paths to be taken to achieve carbon neutrality by 2050."

EVENTS

Empowering Women in Energy: United Energy Egypt Unveils "Women in Influence" WII Network

United Energy Egypt has announced the successful launch of the "Women in Influence" (WII) event on Wednesday, May 29th, at its premises in collaboration with Carerha.

The event marked the inauguration of the WII Network, specifically tailored for women in the energy sector and other male-dominated industries. The WII network aims to connecting women professionals in the energy industry, elevating women's leadership and skills, celebrating women excellence and achievements at all career levels and working towards closing the gender gap to achieve equal opportunities.

The WII event marked a significant milestone in the UEE's commitment to fostering gender equality and empowering women in the energy sector. With impactful talks and powerful sessions to insightful discussions, practical advice, and inspiring stories, the event highlighted the importance of support, collaboration, and resilience among women professionals.

A panel discussion titled "Mentoring and Initiatives: Empowering Women in the Energy Industry" featured industry experts and keynote speakers from various male-dominated industries. The panelists discussed the importance of diversity and inclusion in creating a resilient oil and gas industry, the unique challenges women face in balancing work and personal life, and existing initiatives supporting women in the workplace.

EXPORT/IMPORTS

Egypt Receives First of 21 LNG Shipments

Ministry of Petroleum and Mineral Resources' Spokesperson Hamdi Abdel Aziz has stated that Egypt's natural gas production currently amounts to 5.7 billion cubic feet per day (bcf/d), Sky News Arabia reported.

Abdel Aziz added that the country has agreed on 21 shipments of liquefied natural gas (LNG) that will arrive in Egypt during the summer, in addition to other quantities and shipments of diesel.

Additionally, Abdel Aziz stated that the first gas shipment arrived on Monday July 1st, and is currently being unloaded to be injected into the national gas network.

By the third week of July, things will be in order and the national gas network's stock will be sufficient, Abdel Aziz noted.

Egypt's Fuel, Mineral Oils Exports to Jordan Reach $107M in 2023

Egypt has exported fuel and mineral oils worth $107 million to Jordan in 2023. Meanwhile, Egypt has imported fertilizers worth $105.6 million from Jordan during the same year, according to a press release published by the Central Agency for Public Mobilization and Statistics (CAPMAS).

The value of total Egyptian exports to Jordan is $658 million during 2023, compared to $732 million during 2022.

On the other hand, the value of total imports purchased from Jordan amounted to $206 million during 2023, compared to $259 million during the year 2022.

UPDATES

APEX Announces Operations Update for H1 2024

Apex International Energy (Apex or the "Company") has revealed an update on operations and commercial developments from its eight concessions (six operated) in the Western Desert oil producing region of Egypt for the first half of 2024.

To date in 2024, Apex has drilled 10 wells. Six of the 10 drilled wells are currently being produced, one has been completed as a water supply well for a water injection project, two are discoveries waiting on completions and one was a dry hole. The drilling campaign utilizing the EDC-65 rig has focused on continued development of Apex's Fajr and Farah fields, delineation of the Mashreq-N and RAM fields and exploration, all in the Southeast Meleiha (SEM) concession, and drilling a commitment well in the Zarif field in the Ras Qattara concession.

The most recent Fajr well, the Fajr-40, tested at a sustained rate of 500 barrels of oil per day (bbl/d) from the Upper Bahariya (UBAH) formation in late May and has now been placed into production. The successful test of the UBAH establishes the viability of further development of this horizon in the Fajr field area as well as the later recompletion to the UBAH formation in the existing Middle Bahariya (MBAH) producers once the MBAH is depleted in those wells.

In the Zarif field, the Zarif 47 drilled in February 2023, which was the last commitment well under the old Ras Qattara concession agreement, and the Zarif 49 drilled in April 2024, which is one of two commitment wells required under the newly signed Ras Qattara concession agreement, were both completed as producers in the UBAH and placed into production earlier in the second quarter.

Total working interest production has hit 12,000 boepd on several occasions and averaged between 11,500-12,000 boe/d throughout 1H 2024, placing Apex amongst the top 10 liquids producers in Egypt.

The Company's total budgetary commitment to exploration, development and production operations in Egypt during 2024 exceeds $100 million, including operating and capital expenditures for the work program.

PMS Completes Phase 1 of South Fields Development Project in Ras El-Ush Area

Petroleum Marine Services Company (PMS) has successfully concluded the first phase of offshore works for the South Fields Development Project in the Gulf of Suez.

This project, undertaken by the Gulf of Suez Petroleum Company (GUPCO) in the Ras El-Ush area.

The company's accomplishment involved laying an 18-inch undersea pipeline. This crucial pipeline connects offshore platforms in Ras El-Ush and Shaab Ali, facilitating the transportation of crude oil extracted from GUPCO's southern Ras El-Ush fields.

With its qualified and specialized team, PMS was able to implement this strategic project according to the highest standards of quality and safety. This effort involved the use of the company's advanced marine fleet, PMS 12 Barge, equipped with the latest global technologies for offshore pipeline laying as well as the specialized deep-water marine unit PMS Mayo, in addition to the supporting vessels.

It is worth noting that the project aims to improve production efficiency, increase the operational capacity of the region and support the daily crude oil production of the Gulf of Suez Petroleum Company (GUPCO) from the southern fields.

DOWNSTREAM

ADNOC Distribution to Expand in Egypt, Adding 6 Stations Annually

Minister of Petroleum and Mineral Resources Tarek El Molla has met with Bader Al Lamki, CEO of the UAE's ADNOC Distribution Company, and his accompanying delegation.

El Molla stated that ADNOC's presence in the Egyptian petroleum products market and its expansion therein is an important addition, especially since the Ministry is working to increase private sector investments in this large and vital market.

Al Lamki explained that the company's expansion plans in Egypt are continuing, with the current number of stations in Egypt standing at 10. The company plans to increase this number by 6 stations annually over the coming period, in light of its long-term vision and belief in the viability of investing in Egypt's large petroleum products market, which is witnessing expansions, opportunities, and growth.

He pointed out that the company had been a pioneer in this regard through its acquisition of a 50% stake in TotalEnergies Egypt's stations. He also noted that the company is expanding in the fields of ship and aircraft refueling, providing related technical and logistical services, and continuing its operations in the automotive lubricants industry, constantly working to introduce the latest technologies and methods in mixing and filling operations, ensuring the highest standards of quality and performance, and providing guaranteed and reliable quality products that meet the growing needs for these products in various consumer sectors.

Alexandria Petroleum Company, USTDA Seal HSE Feasibility Study Grant Agreement

Minister of Petroleum and Mineral Resources Tarek El Molla and Herro Mustafa Garg, the US Ambassador to Egypt, have witnessed the signing of a feasibility study grant agreement between Alexandria Petroleum Company and the United States Trade and Development Agency (USTDA) in the field of health protocols, occupational safety and environmental preservation (HSE) at the company's refinery in the El Max area in Alexandria Governorate.

El Molla highlighted the importance of signing the agreement as an affirmation of the continuation of the successful and strong strategic partnership between Egypt and the United States of America in many fields, especially the energy field, which has been extending for more than a century and represents a new achievement in the journey of partnership between the two sides.

The agreement aims to provide funding from the USTDA for a package of studies to determine and address the refinery's safety priorities. It will work to achieve progress and expand Alexandria Company's priorities in safety programs and equipment, support the capabilities of precautionary measures, detect risks, as well as develop protocols and training.

Garg noted that this agreement will provide advanced technologies that contribute to supporting worker safety and reducing the environmental impact in the Egyptian petroleum sector.

MEETING

Madbouly Highlights Egypt's Ambitious Plan for Green Hydrogen and Renewable Energy Expansion

Prime Minister Mostafa Madbouly has held a meeting at the government headquarters in the New Administrative Capital to follow up on the progress of green hydrogen projects.

Madbouly began the meeting by emphasizing that the Egyptian government has an ambitious plan to enhance its capabilities in the field of using renewable energy, especially energy generated from green hydrogen. This contributes to reducing dependence on traditional fuels and reducing carbon emissions.

Egypt has great capabilities that qualify it to be a regional center for the production and export of green hydrogen, especially in light of the green hydrogen strategy that was approved and grants many advantages and incentives to this promising sector, Madbouly pointed out.

During the meeting, First Assistant to the Prime Minister and Head of the Technical Secretariat of the National Green Hydrogen Council Randa Al-Minshawi reviewed the efforts made through the work of the Technical Secretariat, where she explained that 27 valid memoranda of understanding had been signed, 10 binding framework agreements, and preparations are underway to sign two agreements.

Around 41,700 square kilometers have already been allocated, and procedures for allocating an additional 900 square kilometers are being completed to expand the implementation of these promising projects, Mohamed El Khayat, Executive Chairman of the New and Renewable Energy Authority (NREA), explained.

El Khayat added that green hydrogen production project sites were distributed among 27 memoranda of understanding (MoUs) signed with several investors, with a total capacity of about 115 gigawatts, including 63 gigawatts of wind energy and 52 gigawatts of solar energy.

Petroleum, Transport Ministers Discuss Joint Projects

Minister of Petroleum Tarek El Molla has discussed with Minister of Transport, Kamel El-Wazir progress on key projects of shared interest, as part of ongoing coordination between their ministries.

During the meeting, they reviewed joint efforts regarding the liquid bulk terminal project at Dekheila Port, according to a statement issued by the Petroleum Ministry. The ministers discussed the potential continuation of studies related to the project.

This initiative is part of the Petroleum Ministry's plan to develop and expand production at Alexandria's petrochemical complexes and factories, which are affiliated with the Egyptian Petrochemicals Holding Company (ECHEM). The liquid bulk terminal project aims to maximize the benefits of Egyptian ports, aligning with the Ministry of Transport's vision to develop all Egyptian ports. This vision follows presidential directives to transform Egypt into a regional hub for transport, logistics, and transit trade.

COMPANY OF THE MONTH

Dragon Oil (formerly: Oliver Prospecting & Mining Co) was established in 1971 in Ireland as a leading international upstream oil and gas company. Following a majority stake acquisition by Emirates National Oil Company (ENOC) in 1999, Dragon Oil solidified its position as a wholly-owned subsidiary with headquarters relocated to Dubai, United Arab Emirates (UAE).

Dragon Oil's Activities in Egypt

Dragon Oil's presence in Egypt dates back to 2019 through the strategic acquisition of assets from bp in the Gulf of Suez. This acquisition included a 100% working interest (WI) in ten producing concessions and one exploration block. The concessions boast a substantial well network and comprehensive facility infrastructure, all managed by the Gulf of Suez Petroleum Company (GUPCO). It is a joint venture between Dragon Oil and the Egyptian General Petroleum Corporation (EGPC), with both parties holding a 50% stake.

Company Main Discovery in Egypt

Location	Al Wasl field In Gulf of Suez
Discovery Date	2021
Reserves (mmbbl)	95
Production Starting Date	January 2024
Capacity (bbl/d)	3000
Investments ($ million)	200

SHELL TO BUILD CCS PROJECTS IN CANADA

Shell revealed on Wednesday that its Subsidiary, Shell Canada Products has reached the Final Investment Decision (FID) for Polaris, a carbon capture project designed to capture approximately 650,000 tons of CO2 annually from the Shell-owned Scotford refinery and chemicals complex, in Alberta, Canada.

Besides Polaris FID, Shell also announced FID to proceed with the Atlas Carbon Storage Hub in partnership with ATCO EnPower. The first phase of Atlas will provide permanent underground storage for CO2 captured by the Polaris project.

"Carbon capture and storage is a key technology to achieve the Paris Agreement climate goals," said Huibert Vigeveno, Shell's Downstream, Renewable and Energy Solutions Director.

"The Polaris and Atlas projects are important steps in reducing emissions from our own operations," Vigeveno added.

Polaris and Atlas will build on the success of the Quest carbon capture and storage (CCS) facility at Scotford, which has safely captured and stored more than nine million tons of CO2 since 2015 that would otherwise have been released into the atmosphere.

Both projects are expected to begin operations by 2028.

ARAMCO SIGNS 5 MTPA LNG SALE, PURCHASE DEAL WITH SEMPRA FOR 20 YEARS

Aramco and North America energy infrastructure company, Sempra have concluded a non-binding Heads of Agreement (HoA) through their respective subsidiaries. This agreement paves the way for a 20-year Sale and Purchase Agreement (SPA) involving the offtake of 5 million tons per annum (mtpa) of liquefied natural gas (LNG) from the Port Arthur LNG Phase 2 expansion project in the US.

The HoA further contemplates Aramco's 25% participation in the project-level equity of Phase 2.

Port Arthur LNG is a natural gas liquefaction and export terminal in Southeast Texas with direct access to the Gulf of Mexico. The Port Arthur LNG Phase 1 project is currently under construction and consists of trains 1 and 2, as well as two LNG storage tanks and associated facilities.

The Port Arthur LNG Phase 2 project is a positioned expansion of the site to include the addition of up to two trains capable of producing up to 13 mtpa.

At the heart of Sempra Infrastructure's flagship Port Arthur Energy Hub, Port Arthur LNG has potential to expand to a total of eight trains.

Moreover, Sempra Infrastructure is advancing infrastructure projects within the Port Arthur Energy Hub, addressing both the rising demand for lower-carbon fuels and carbon intensity reduction. This includes the proposed Titan Carbon Sequestration project.

CHEVRON SIGNS PRODUCTION SHARING CONTRACTS OFFSHORE EQUATORIAL GUINEA

Chevron has signed production sharing contracts (PSCs) with Equatorial Guinea stated-owned oil company, GEPetrol and the Ministry of Mines and Hydrocarbons for the exploration, development, and production of offshore blocks in Equatorial Guinea, according to the African Energy Chamber website.

The contracts include provisions on aspects such as minimum investments, exploration programs, sustainable development and benefits for the state, therefore outlining a clear development plan for the assets.

The new PSCs also entail Chevron and GEPetrol's launching a new exploration and production campaign at EG-06 and EG-11 blocks, previously held by ExxonMobil.

Blocks EG-06 and EG-11, situated near the producing Block B, which houses the Zafiro field, are considered highly prospective and are poised to play a major part in revitalizing exploration and production offshore Equatorial Guinea.

Block EG-11 covers approximately 1,242 km^2, while Block EG-06 features an oil discovery at the Acestruz-1 well, drilled in 2017.

Notably, Chevron has stakes in three fields in Equatorial Guinea, including the Aseng field, the Alen field and the Yolanda field – located in Block 1.

EXXONMOBIL PARTNERS WITH AIR LIQUIDE TO ADVANCE WORLD'S LARGEST LOW-CARBON HYDROGEN PROJECT

ExxonMobil has signed an agreement with Air Liquide to support the production of low-carbon hydrogen and low-carbon ammonia at ExxonMobil's Baytown, Texas facility.

The agreement entails the transportation of low-carbon hydrogen through Air Liquide's existing pipeline network.

Additionally, Air Liquide will build and operate four Large Modular Air separation units (LMAs) to supply 9,000 metric tons of oxygen and up to 6,500 metric tons of nitrogen daily to the facility. The LMAs will primarily use low-carbon electricity to reduce the project's carbon footprint.

"Momentum continues to build for the world's largest low-carbon hydrogen project and the emerging hydrogen market," said Dan Ammann, President of ExxonMobil Low Carbon Solutions.

The facility is expected to produce 1 billion cubic feet of low-carbon hydrogen daily, and more than 1 million tons of ammonia annually while capturing more than 98% of the associated CO2 emissions. The project is planned to startup in 2027-2028.

Partnering with Air Liquide, ExxonMobil aims to enable the growth of a low-carbon hydrogen market along the US Gulf Coast to help industrial customers decarbonize their operations.

WINTERSHALL DEA MAKES GAS DISCOVERY IN NORWAY CUVETTE EXPLORATION WELL

Wintershall Dea and its partners, Petoro and DNO, have made a gas condensate discovery at the Cuvette prospect in the North Sea, with estimated recoverable volumes of 16-38 million barrels of oil equivalent.

The Cuvette discovery lies just south of the Wintershall Dea operated Vega Central field.

According to Wintershall Dea, the license partners will now evaluate if the gas condensate discovery can be fast tracked into production utilizing existing infrastructure in the Vega / Gjøa area.

The Cuvette exploration well encountered gas condensate in sandstones of Middle and Upper Jurassic age, with estimated recoverable volumes of 9 – 22 million barrels of oil equivalent (mmboe) in the primary Middle Jurassic target and 7 – 16 mmboe in the shallower Upper Jurassic target.

Wintershall Dea is one of the key operators in this area of the Northern North Sea with the Vega and Nova subsea fields, as well as several operated exploration licenses.

The company is also a major shareholder in the nearby Gjøa platform which is the export hub for the surrounding fields in this area.

BP TO TAKE FULL OWNERSHIP OF ITS BRAZILIAN BIOFUELS JV, ACQUIRING BUNGE'S 50% INTEREST

BP has acquired Bunge's 50% holding interest in its BP Bunge Bioenergia S.A. joint venture, one of Brazil's leading biofuels-producing companies.

Upon completion, BP will become sole owner of the industrial scale sugarcane and ethanol business.

The enterprise value of the stake to be acquired is approximately $1.4 billion. The acquisition will result in consolidation of 100% of the venture's financial results, including net debt of approximately $0.5 billion and lease obligations of approximately $0.7 billion.

The acquisition meets BP's expected returns threshold for bioenergy of more than 15% and is fully accommodated within BP disciplined financial framework, including capex targets of around $16 billion in each of 2024 and 2025.

Following completion, BP will have the capacity to produce around 50,000 barrels a day of ethanol equivalent from sugarcane through BP Bunge Bioenergia's 11 agro-industrial units across five Brazilian states.

The acquisition, expected to close by 2024 subject to regulatory approvals, also enables BP to unlock further growth opportunities in the region, and to develop new platforms for bioenergy such as next generation ethanol, sustainable aviation fuel (SAF) and biogas.

TECHNIPFMC SECURES IEPCI CONTRACT FOR XENA PHASE 3 DEVELOPMENT

TechnipFMC has been awarded an integrated Engineering, Procurement, Construction, and Installation (iEPCI) contract by Woodside Energy in Australia.

valued in the range of $75-$250 million, the contract entails TechnipFMC to design, manufacture, and install the subsea production system, flexible pipe, and umbilicals for the Xena Infill well (XNA03) to support ongoing production from the Pluto LNG Project.

The award follows an integrated front end engineering design (iFEED) study.

Notably, the project will use the Company's Subsea 2.0® production system.

Moreover, Xena Phase 3 will be tied back to existing subsea infrastructure previously supplied by TechnipFMC.

"We are proud to be delivering a fully integrated project from concept to execution. This project will help our long-term client meet their objectives, demonstrating the favorable impact iFEED™, iEPCI™, and Subsea 2.0® can have on project economics," said Jonathan Landes, President, Subsea at TechnipFMC.

CNOOC MAKES MAJOR GAS DISCOVERY IN LINGSHUI 36-1 GAS FIELD IN SOUTH CHINA SEA

CNOOC Ltd. has announced a major ultra-deep-water gas exploration in the Lingshui 36-1 gas field located in the western South China Sea. The gas field, with a 1,500-meter water depth, has been tested to produce over 10 million cubic meters per day (mmcm/d) of open-flow natural gas, according to CNOOC's press release.

Notably, the main gas-bearing play is the Ledong Formation of Quaternary, with an average burial depth of 210 meters.

"The exploration in ultra-deep water ultra-shallow gas plays in the South China Sea is faced with world-class engineering and technical challenges. The successful testing of Lingshui 36-1 is a breakthrough for the exploration in such plays," said Xu Changgui, Deputy Chief Exploration Officer of the Company.

In the same context, CEO and President of the Company, Zhou Xinhuai has emphasized the importance of south China Sea to boost the country's natural gas reserves and production.

"The successful testing of Lingshui 36-1 further expands the resource base for the development of a trillion-cubic-meters gas region in South China Sea," said Xinhuai.

"CNOOC Limited will continue to step up exploration and development of hydrocarbon resources in South China Sea and to enhance our capacity of energy supply," he added.

EGYPT'S ENERGY SECTOR GETS A NEW CHAMPION

> With a focus on the future and building upon past achievements, the petroleum sector embarks on a collaborative journey to contribute further to the national economy. We leverage our capabilities, rich history, reliable partners, established relationships, and extensive expertise to achieve this.

H.E. KARIM BADAWI
MINISTER OF PETROLEUM AND MINERAL RESOURCES

Sworn in early July in a landmark Cabinet reshuffle, Minister of Petroleum and Mineral Resources Karim Badawi, a longtime veteran of SLB (formerly known as Schlumberger), has inherited a burgeoning petroleum industry that has followed an ambitious Modernization program since 2016 but faces a myriad of different challenges that need to be tackled for the Egyptian energy sector to truly realize its vision and place within the global market.

Yet, challenges are no stranger to Badawi with his corporate experience bringing multiple advantages to the table, holding key leading positions in SLB as Director at SLB New Energy, Middle East & North Africa, and Managing Director of Schlumberger Egypt. Upon his recent appointment, he has already hit the ground running, vowing to end the country's power outages with prompt delivery of natural gas and mazut. With boosting production becoming a main priority to permanently resolve ongoing electricity shortages, the development of new discoveries has also become a key priority for the coming period under Badawi's leadership. His experience as a Field Engineer will prove to be a vital source of know-how. "To boost local oil and gas production (crude oil and natural gas), we're fast-tracking the development of newly discovered wells and intensifying exploration efforts across Egypt's land and maritime territories," Badawi stated in his early messages to the Egyptian people following his swearing-in as Minister of Petroleum and Mineral Resources.

Similar to other sectors, the petroleum industry has embarked on a rigorous long-term reform program, as part of Egypt's Vision 2030, that will completely reshape the face of the energy sector. As the Minister of Petroleum and Mineral Resources, Badawi comes with the promise to champion these necessary changes by steering the market in the right direction as he did in SLB (Schlumberger). Having occupied several key positions within the company, he was highly involved in organizational structures, managing change, generating result-oriented strategies, financing, and enabling effective operational performance. He also spearheaded several major initiatives to optimize management and efficiency within the petroleum sector, creating an ideal climate for innovation and emissions abatement. "With a focus on the future and building upon past achievements, the petroleum sector embarks on a collaborative journey to contribute further to the national economy. We leverage our capabilities, rich history, reliable partners, established relationships, and extensive expertise to achieve this," said Badawi. "We work together under a new government program that aims to continue the path of economic reform, focusing on attracting and increasing local and foreign investment, encouraging private sector growth, and making every effort to further develop the comprehensive economic performance of the state in all sectors, at the forefront of which are the petroleum and mining sectors."

Being Egypt's Minister of Petroleum is a local position with global implications, given Egypt's importance on the world stage. Egypt not only needs a petroleum minister who can ensure the sector grows internally but expands on a regional and global level. This is a key element behind realizing the country's ambitions of becoming a major regional energy trading hub that lies at the center of three global markets. This is a cause that Badawi himself asserts that he will remain committed to as Minister of Petroleum and Mineral Resources. "We prioritize solidifying Egypt's position as a leading energy hub for trade within the region, leveraging its established presence as a major center in Africa, the Middle East, and the Mediterranean, and its long-standing reputation as a source of top talent in the oil and gas sector."

For Egypt to realize its position as a regional trade hub, it has to effectively engage with other countries on a wider scale. Global exposure and the ability to build bridges across boundaries is never in short supply, as Egypt's new Minister of Petroleum was known to have participated in several prominent energy events taking place in different parts of the world.

With the energy transition being a key long-term objective, these global engagements in decarbonization will most certainly be an asset in Badawi's quest to realize Egypt's ambitions in emissions reduction through the promotion of cleaner energy supplies, with the Egyptian state aiming to increase the share of renewables for electricity generation in the energy mix to 42% by 2035. "We will champion Egypt's energy transition by actively diversifying the country's energy sources." In addition, he said, "We will actively seek new investments in exploration and development, with a focus on emerging energy sources like hydrogen."

Yet, the energy transition cannot be fully realized without an effective and swift digitalization strategy that will enable the Egyptian energy market to keep pace with its global competitors. Badawi himself is a pioneer of the digital world, playing a crucial role in the foundation of the digital platform Egypt Upstream Gateway (EUG). This platform was a key investment tool for the petroleum sector, successfully rounding up international bid rounds digitally. EUG is a trendsetter in the oil and gas world, effectively digitizing all geological data to attract investments while working to reduce risks for investors as well as open new opportunities for oil and gas exploration and production. For the coming period, Badawi asserts that the full integration of digital technologies in Egypt's petroleum will be on his priority list, saying: "Leveraging digital technologies, we will promote new investment opportunities in oil and gas exploration and production, alongside facilitating and offering attractive incentives to boost investment in this sector." Additionally, Badawi's background in seismic surveys using the latest technologies for effective oil and gas exploration and production operations in the Gulf of Suez should prove pivotal.

Corporate social responsibility (CSR) is a key challenge and a priority for the current Minister who said, "Empowering communities surrounding our operations is a key priority. We'll maximize the positive social impact of the oil and gas sector in these areas." Known for its many CSR projects, Badawi offers the kind of leadership the oil and gas sector needs.

Finally, it's important to note that building a petroleum sector that can reach its true potential is not a one-man show. It needs the contribution of the entire industry as a whole, a wisdom that is shared by many successful corporate leaders and Badawi happens to be one of them saying "We're committed to continuous upskilling and development of our petroleum workforce, fostering strong leadership." This highlights the most important challenge that the current Minister faces. Building the right people to build a better petroleum sector for a better tomorrow!

As Minister of Petroleum and Mineral Resources, Karim Badawi steps into a role laden with both significant achievements and formidable challenges. His extensive experience at SLB and his proactive approach to leadership are poised to steer Egypt's petroleum sector towards greater heights.

TRANSFORMING EGYPT'S ENERGY LANDSCAPE: EL MOLLA'S LEGACY

Tarek El Molla, a seasoned leader in the Egyptian oil and gas industry, has served as the country's Minister of Petroleum and Mineral Resources for nearly a decade. During his tenure, El Molla has overseen significant achievements in the oil, gas, and mineral resources sectors, positioning Egypt for a bright future in energy development.

Oil, Gas Journey

Former Minister of Petroleum and Mineral Resources, Tarek El Molla, held the ministerial position from September 2015 until June 2024. In 2016, during his first year as petroleum minister, the MoPMR developed a strategy to transform the oil and gas industry through the Modernization Program. This program aims to unlock the full potential of Egypt's oil and gas value chain to drive sustainable economic development, achieve financial self-sufficiency, and establish Egypt as a leading regional hub for a modernized oil and gas industry.

2016 further witnessed the Supreme Council of Energy approving the integrated and sustainable energy strategy until 2035. Additionally, in the same year, President Abdel Fattah El-Sisi inaugurated the largest petrochemical complex in Egypt and the Middle East, "Ethydco Complex."

In 2018, Egypt reached natural gas self-sufficiency at a production level of 6.8 billion cubic feet per day (bcf/d). Accordingly, in fiscal year (FY) 2021/22, Egypt's natural gas output was 50% higher than production in FY 2014/15, before El Molla's sector leadership. Meanwhile, Egypt ranked number 14th globally in natural gas production in 2020, compared to the 18th rank in 2015.

A year later, Egypt witnessed the opening of the sea dock of SUMED Company. The SUMED Sea Dock project, a global logistics center for trading petroleum products, is a crucial part of the Ministry of Petroleum and Mineral Resources' strategy to transform Egypt into a regional hub for energy trade and circulation.

The MoPMR's contribution to the country's economy kept growing over the years in which El Molla was minister. In June 2020, the Ministry of Finance announced that the oil and gas sector recorded a surplus in favor of the state's general budget of more than EGP 20 billion during the first nine months of the fiscal year, for the first time in years.

Moreover, Egypt has played a significant role in regional cooperation and integration. In 2018, Egypt introduced the initiative to establish the East Mediterranean Gas Forum (EMGF) to be a platform for structured dialogue on natural gas. In 2020, the founding countries of the EMGF signed the forum's charter, according to which it became an international governmental organization in the Mediterranean region that contributes to developing cooperation in the field of natural gas and achieving optimal exploitation of its resources.

The year 2020 further witnessed El Molla inaugurating the National Advanced Transmission and Automation control center (NATA) after its development.

In 2021, the Egypt Upstream Gateway (EUG) emerged as a game-changer for investors. This innovative digital platform serves as a one-stop gateway to Egypt's wealth of promising oil and gas investment opportunities.

Meanwhile, at the downstream level, El Molla participated in the 2021 ceremony for launching and delivering the first batch of new cars running on natural gas, part of the presidential initiative to replace and convert cars to use natural gas as fuel. Additionally, the same year marked the operation of the first mobile stations for fueling cars with compressed natural gas (CNG), an advanced solution introduced by the petroleum sector to enhance fueling services for natural gas vehicles.

In another significant move in 2021, El Molla inaugurated the remote monitoring and control system (SCADA System) for natural gas fueling stations operated by Gastec Company.

In 2022, for the first time in the history of climate summits and conferences, the Cop27 Climate Summit witnessed the historic participation of the oil and gas industry by organizing a day for decarbonization for the first time. The day was organized thanks to an initiative called for by the Egyptian MoPMR, led by El Molla, and approved by the presidency of the conference.

Meanwhile, in 2023, El Molla handed over the first two licenses in the field of international companies to provide fuel for ships in Egyptian ports to international companies, which supports Egypt's role as a regional energy hub.

The year 2023 further witnessed the delivery of the first oil rig (made in Egypt), at the factory of the Egyptian Chinese Company for Manufacturing Drilling Rig in Ain Sokhna.

To support Egypt's vision for becoming a regional energy trading hub, El Molla's ministry focused on developing oil and gas ports and storage facilities. Ports capacity reached 76 million tons per year in 2021/till September 2022, a 70% increase compared to FY 2014/15, which recorded 45 million tons per year. Meanwhile, petroleum products storage facilities' capacity grew by 130% reaching 2.5 million tons per year in 2021/till September 2022, compared to 1.1 million tons per year in 2013/15.

Brilliant Efforts in the Mineral Resources Industry

In the field of mining and mineral resources, El Molla also had notable imprint. In March 2018, the minister has put a vision and strategy to modernize the mining industry. This strategy consists of seven projects including the legislation reforms, regulating the financial system, restructuring, setting policies for investments attraction, building human capabilities, and communication and marketing.

Additionally, gold, and silver sales rebounded during his time as minister, as its sales value more than $700 million in fiscal year (FY) 2021/22 compared to over $500 million in FY 2014/15. Moreover, the amount of mining products and materials kept growing, recording a value of EGP 2.5 billion in 2020/21, an 80% increase from EGP 1.4 billion in FY 2016/17.

Also, during El Molla's period, Eqat mine, the great commercial gold discovery was achieved in July 2020. The mine's reserves estimated at more than 1 million ounces minimum with extraction rate of 95%. In addition, the first international gold bid round was launched in March 2020 during which 11 gold exploration contracts were signed between foreign and Egyptian companies in the eastern desert with total initial investments $60 million minimum.

Moreover, the first international bid round for various materials and minerals was initiated in November 2020 during his tenure and awarded to nine Egyptian companies. Another bid round for gold and minerals was launched in May 2022, with contracts awarded to four international and Egyptian companies. Furthermore, the financial system was revised, transitioning from dividends to a royalty system and free share model.

In 2022, the MOPMR organized the "Egypt Mining Forum" for the first time seeking to attract investments to this rich sector.

It was a remarkable journey for a dedicated and successful minister who cemented his place in the history of the petroleum and mineral resources industry, bringing not only glory to himself but also elevating the Egyptian petroleum sector.

BRIDGING THE GREEN GAP

Egypt's Green Finance & Investment Efforts

BY JOLLY MONSEF, MARIAM AHMED & ALAA AL MASRY

Key Takeaways

50% Green Investing Share of Total Public Investment in FY 2024/25

Green Investing Share of Total Public Investments by 2030

At Least 75%

$0.9 billion | Egypt's Cumulative* Volume of Issued Green Bonds

*2012-2023

Egypt's Sustainable Bonds

Issued Bonds: Samurai & Panda

Amounted to: Around $1 billion

Market: Japanese & Chinese

Egypt is taking significant steps to lead the transition to a green economy at the regional level. By establishing strong strategies, and promoting green investments, through providing essential incentives to investors, the country is capitalizing on its enormous and promising potential in producing renewable energy at a competitive price.

Many countries, including Egypt, are facing the challenge of balancing economic growth targets with environmental sustainability. Green financing and investments have emerged as essential tools for overcoming this challenge and accelerating green projects.

In line with the commitment to the 2016 Paris Agreement and National Sustainable Agenda: Egypt Vision 2030, Egypt has introduced many legislative reforms, investment incentives, and suitable green finance tools to solidify its position as a regional leader in the green sector.

Therefore, this report highlights Egypt's efforts to ease green financing and investments, along with its significant partnerships with various international institutions and banks. These efforts are further complemented by the latest government-approved incentives and laws promoting green investment and finance.

EGYPT'S STRATEGIES & INITIATIVES

NCCS 2050

In May 2022, Egypt launched the National Climate Change Strategy 2050 (NCCS), which contains five key goals directed to achieve several objectives. Its fourth goal is set to enhance climate financing infrastructure by working on the following objectives:

- Promoting local green banking and green credit lines
- Promoting innovative financing mechanisms and prioritizing adaptation actions, e.g., green bonds
- Private sector engagement in climate finance and promoting green jobs
- Compliance with Multilateral Development Banks (MDB) guidelines for climate finance
- Building on the success of the current climate finance programs

NISGP

In August 2022, the Egyptian Government launched the National Initiative for Smart Green Projects (NISGP) to cover all of Egypt's Governorates. It is seen as a pioneering initiative that aims at developing a governorate-level map of smart green projects, presenting innovative climate solutions at the local level.

NISGP targets mobilizing the necessary investments for implementing these projects and localizing smart solutions to mitigate the effects of climate change.

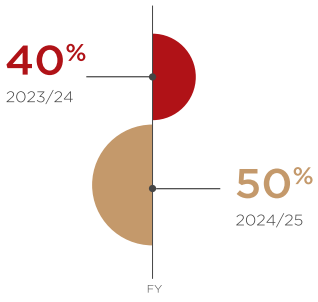
Green Investment Allocation

Egypt is committed to transforming strategies into actions by increasing green investments.

The government directs public investment towards adapting and mitigating climate change, with an allocation of about EGP 420 billion in the fiscal year (FY) 2023/24 investment plan.

Moreover, Egypt is pursuing a full transition to a green economy, aiming for 100% of its projects to be green by 2030. This will be supported by a significant increase in green public investments to at least 75% of the total, as stated by the Ministry of Planning and Economic Development (MPED).

Green Investing Share of Total Public Investments



MONETARY EFFORTS

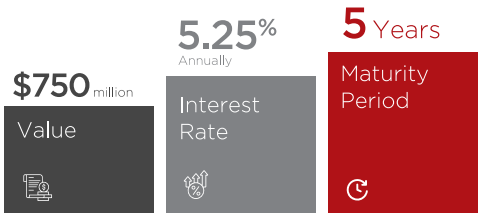
Green Bonds

As part of Egypt's journey towards a green economy, the country issued the first sovereign green bond issuance in the Middle East and North Africa (MENA) region in September 2020.

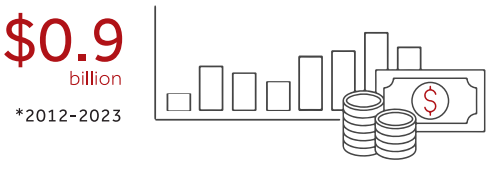
The green bonds are issued to provide sustainable funds for eco-friendly projects in various fields such as climate change mitigation and optimal use of energy resources.

These bonds specifically support projects focused on energy efficiency, renewables projects, or other projects that meet sustainability requirements, according to the Ministry of Finance (MoF).

Green Bonds Issuance Highlights



Egypt's Cumulative* Volume of Issued Green Bonds



Sustainable Finance

Sustainable finance plays a key role in achieving sustainable development goals (SDGs) by promoting the development of new banking products and services. These offerings integrate environmental, social, and governance (ESG) factors into banks' financing, lending, and investment activities.

In July 2021, the Central Bank of Egypt (CBE) issued guiding principles for sustainable finance, establishing a general framework for its implementation. The CBE also launched several initiatives to promote sustainable finance, focusing on environmental sectors such as renewable energy, according to the CBE.

Sustainable Bonds

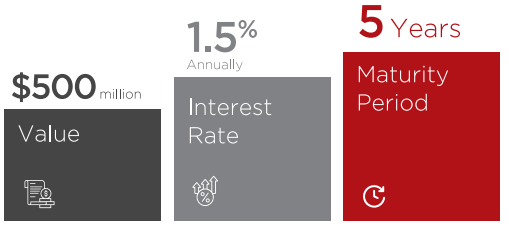
Egypt successfully issued its sustainable bonds, "Panda" and "Samurai" bonds, with the cooperation of international banks, reflecting the country's ability to diversify financing sources and tools. Panda bonds are worth about CHY 3.5 billion ($500 million), used to finance projects that support sustainable development goals; the second batch of Samurai bonds are worth about JPY 75 billion, equivalent to $500 billion, which aims to draw the attention of many Japanese investors.

In January 2023, the state announced the "Sovereign Sustainable Financing Framework" of Egypt, which defines the government's environmental and social priorities and represents a new step to maintain Egypt's leading position in the field of innovative climate financing, social and economic development in Africa and the Middle East. It is an update of the green financing framework that was launched in 2020, where Egypt issued the first green bonds, according to the MoF.

The 2nd batch of samurai bonds

In late August 2023, Egypt succeeded in returning to the Japanese markets by issuing its second international Samurai bond; its first batch was back in March 2022, according to the MoF.

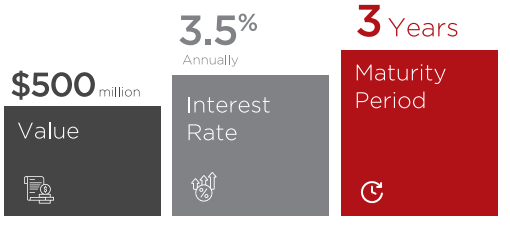
Samurai Bonds



Pioneering Panda Bonds

In October 2023, Egypt also succeeded in issuing the sustainable Panda international bonds. This makes it different from the interest rates on international dollar bonds, especially considering the challenges in the global economy. The issuance is special as it is backed by credit guarantees from international development banks like the Asian Infrastructure Investment Bank and the African Development Bank, according to the MoF.

Panda Bonds



Voluntary Carbon Market

In November 2022, at the 27th Conference of Parties (COP27), the Egyptian government launched Africa's first voluntary carbon certificate market for issuing and trading. These voluntary carbon markets support companies in recovering a part of their investment spending in carbon emission reduction efforts. The launch of this new voluntary market confirmed Egypt's participation in the international goal of carbon neutrality, according to the Financial Regulatory Authority (FRA).

PROMINENT APPROVED LAWS

Egypt provides a package of incentives to stimulate green investments and projects. For instance, the country provided incentives for green projects per Investment Law No. 72/2017, 30% and 50% discounts for investment projects, according to the investment law document.

Further, the Egyptian President ratified, in January 2024, law No.2 for 2024 to provide tax and non-tax incentives for green hydrogen projects.

PROMINENT INSTITUTIONAL PARTNERSHIPS

Egypt engaged in various partnerships to promote green, robust, and inclusive development.

GCF

In November 2022, the Green Climate Fund (GCF) and Egypt's Ministry of Environment announced that Egypt would be the first country to embark on the development of an Investment Plan (IP).

This was considered a move that could significantly accelerate efforts by Egypt to combat climate change by unlocking new investments.

The IP model shifts the focus from looking at climate projects on a project-by-project basis towards a systemic model for securing finance for a country's climate priorities, according to the GCF.

EBRD, EU, and GCF

In January 2023, the EBRD, in collaboration with the EU and GCF, provided new funding under the Green Economy Financing Facility program (GEFF) in Egypt to support green programs and investments for the private sector. The collaboration offered $175.5 million for the local financial institutions to lend to the private sector for investments in climate change mitigation and adaptation projects, supporting the decarbonization and competitiveness of the Egyptian economy, according to the EBRD.

WB

In March 2023, the World Bank (WB) approved a new Country Partnership Framework (CPF) for Egypt for fiscal year (FY) 2023–2027, which aligns with l Egypt's Sustainable Development Strategy (SDS), "Egypt Vision 2030," and the NCCS 2050. The CPF aims to achieve three main goals, starting with boosting private sector employment, by fostering an enabling environment and fair competition. Moving to improving human capital outcomes, by enhancing health and education services and implementing effective social protection. Then enhancing resilience to shocks, through better macroeconomic management and climate change adaptation, according to the WB.

CPF's Financial Envelope

$7 billion

Lenders

THE WORLD BANK
IBRD • IDA | WORLD BANK GROUP

$1 billion per year

IFC International Finance Corporation WORLD BANK GROUP

About $2 billion*

*During the entire CPF period

EBRD

The European Bank for Reconstruction and Development (EBRD) has a longstanding commitment to fostering Egypt's green economy, collaborating extensively with various institutions, particularly Banque Misr (BM). This partnership has been in place since 2017, according to the EBRD.

EBRD Funds Green Economy in Egypt

European Bank for Reconstruction and Development

Loan Amount: $100 million

Partners: EBRD & BM

Date: September 2022

Purpose: Green financing and on-lending to local small and medium-sized enterprises (SMEs)

GREEN FINANCE OBSTACLES

Despite the government's efforts to support green investment and attract green financing, there are still some obstacles that face the green investment climate in Egypt. One of the most critical challenges facing green finance is the dependence on fossil fuels in emerging and developing countries. For Egypt, the contribution of fossil fuels to electricity production was about 89% in 2023, according to the Egyptian Electricity Holding Company (EEHC). This dependence complicates the political and economic incentives to move to low-carbon energy sources.

Egypt's demographic growth coupled with development and industrialization policies are considered significant challenges as they have led to imposing great pressures on natural resources.

First Carbon Pricing Draft Law

In parallel with Egypt's attempts to keep up with global climate change and carbon emissions standards, the government is drafting a development tax on the carbon emissions of petroleum products, amounting to 25-30 piasters per liter for solar and gasoline. This comes within the framework of the Tax Policies Document 2024-2030, currently under study by the Ministry of Finance (MoF). The High Committee for the Preparation of this Document is finalizing the pre-launch of the community dialogue in the coming weeks, according to MoF Press Release on June 3.

Egypt is taking significant strides towards fostering green investment and finance within its economy. Through monetary initiatives, the issuance of green bonds, strategic partnerships with various institutions, and the enactment of new laws, the country is laying the groundwork for a sustainable future. Despite facing challenges along the way, Egypt's commitment to promoting environmentally responsible investment underscores its dedication to fostering economic growth while mitigating climate change impacts.

EGYPT'S DOWNSTREAM INDUSTRY: **POWERING PROGRESS**

BY SARAH SAMIR

Egypt's downstream industry, encompassing refining, and petrochemical plants, plays a critical role in the nation's economic development. This sector has the potential for increased refining capacity and product diversification. By understanding the current landscape and future aspirations, we can gain valuable insights into the role this vital industry will play in shaping Egypt's economic future.

Investing in Self-Sufficiency: The MoPRM's Downstream Strategy

Recognizing the importance of self-sufficiency in vital products, the Egyptian Ministry of Petroleum and Mineral Resources (MoPMR) launched a strategic initiative in 2016 to bolster domestic output of petroleum products and petrochemicals. This ambitious plan aims to enhance the performance of the refining industry and significantly increase production capacities.

The petroleum sector has come a long way in completing projects for new complexes and production units for petroleum refining during 2023, with a total investment of $7.3 billion. These projects come with the aim of producing high-quality petroleum products to contribute to securing the needs of the local market and reducing imports.

Meanwhile, the Egyptian oil and gas sector is going on in promoting and implementing a large package of new petrochemical projects to increase added value and provide local production of various raw materials and various products that are used in many fields to reduce imports and provide quantities for export to raise the dollar surplus.

Accordingly, 2023 witnessed the start of procedures for implementing a group of new projects to maximize the added value in the New Alamein and Damietta regions, which included the silicon metal and sodium carbonate (soda ash) production complexes in New Alamein. The projects further included the green ammonia and green methanol projects in Damietta, with a total investment of more than $2 billion, in addition to continuing to complete the various implementation stages of projects to produce MDF wooden panels from rice straw. Moreover, the 2023 petrochemical projects included the production of methanol derivatives, and the production of bioethanol from molasses, with a total investment of about 630 million dollars.

Downstream Development Projects: Fueling Growth and Economic Diversification

The Egyptian government is actively working to develop the downstream sector of its oil and gas industry. This sector takes crude oil and refines it into more valuable products like gasoline, diesel, and petrochemicals. Accordingly, the government is investing in downstream infrastructure, such as refineries expansion and establishing new refining units; and implementing best practices across the petrochemicals sector, in order to boost Egypt's ability to process crude oil.

This comes as Egypt wants to become an exporter of valuable downstream products, instead of a provider of raw materials like crude oil. This will not only generate more revenue but also solidify the country's position as a key player in the global energy market by providing high-value petroleum products.

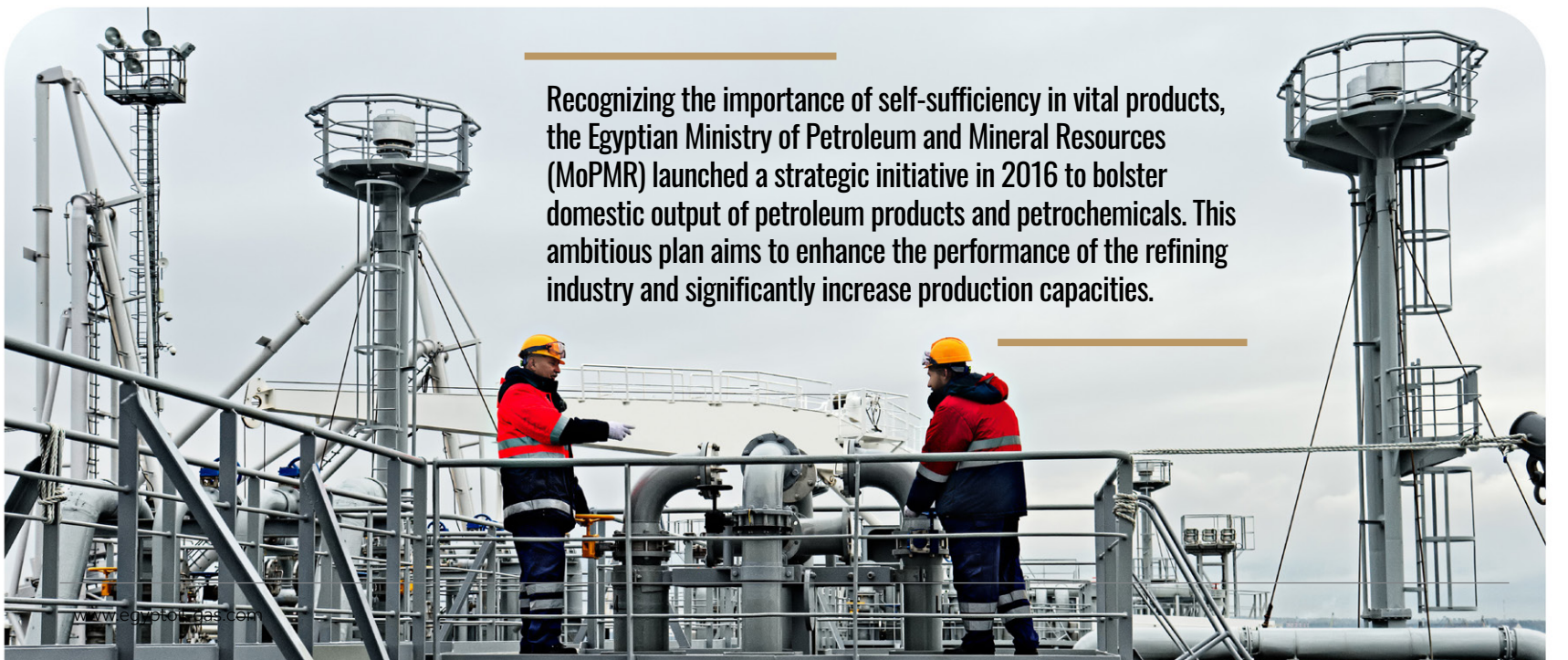
The sector's ongoing and planned projects that aim to enhance the downstream sector include the polypropylene production project (SIDPEC), which aims to generate polypropylene with a 450,000 tons annual capacity to cover local market's demand and export the surplus.

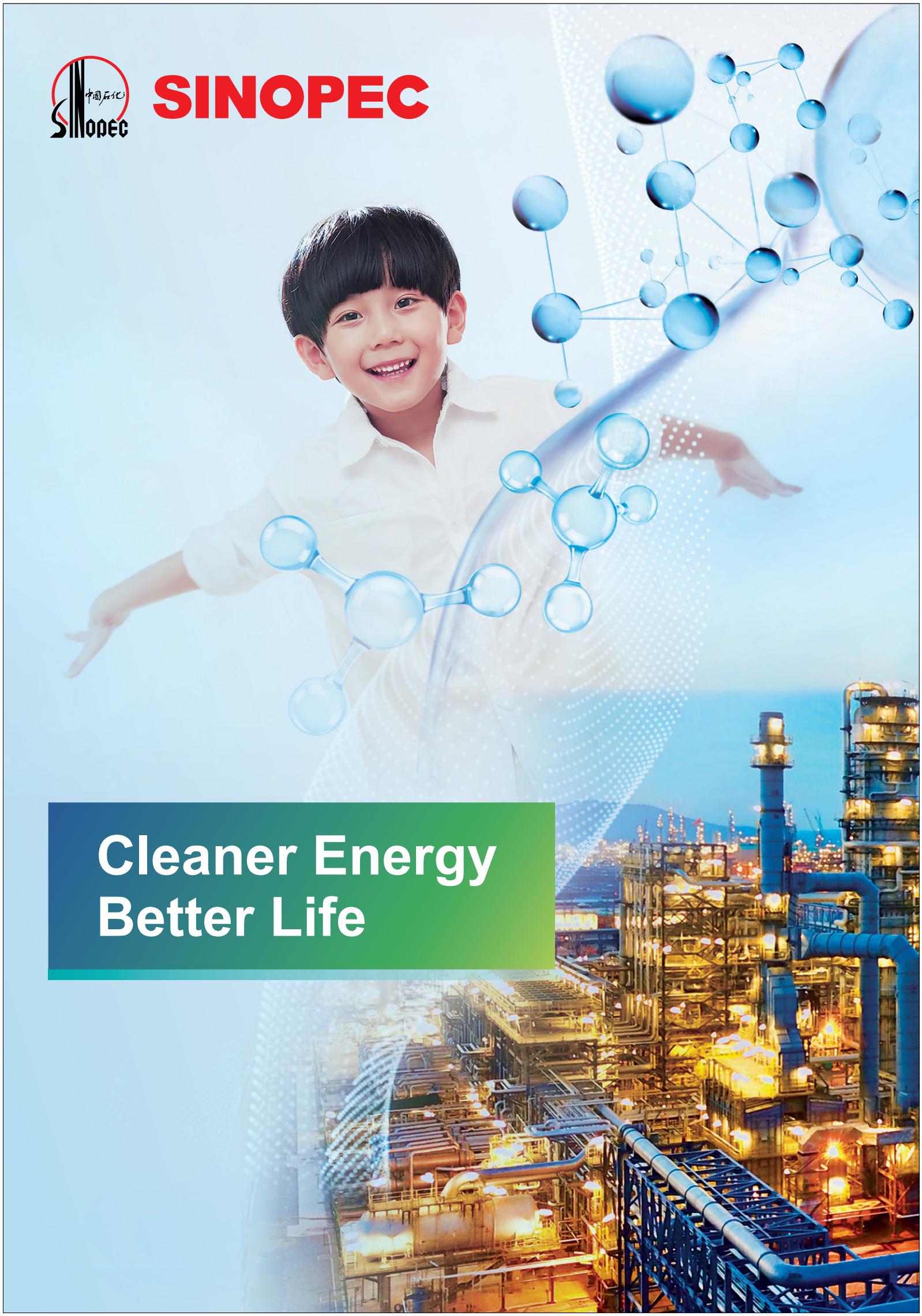
The projects further include the polybutadiene production project (ETHYDCO), which is set up to convert 20,000 tons per year of Butadiene, sourced from both Ethydco and SIDPEC, into 36,000 tons per year of Poly Butadiene. This maximizes the value of the resource. Meanwhile, the resin glue and medium density fiberboard (MDF) production project aims to annually produce 205,000 cubic meters of MDF panels based on 245,000 tons of Egyptian rice straw, which is to meet part of the growing needs of local market as well as to contribute in reducing the environmental pollution resulting from burning straw Rice.

Additionally, the projects underway and planned include the methanol derivatives Production project (SMD), which is set to increase the added value of methanol produced by Emethanex, the caustic soda produced by the Egyptian petrochemical company and the urea produced by MOPCO in order to annually produce 52,000 tons of formaldehyde urea and 26,000 tons of the formalized form of Naphthalene.

Meanwhile, the sector is currently studying a refining and petrochemicals complex project. A cutting-edge refinery is planned for the New Alamein area. This facility will boast a capacity of 2.5 million tons per year, processing both crude oil and condensates. It will leverage existing infrastructure at Hamra port and source crude oil from the Western Desert, with the flexibility to import additional volumes as needed. The refinery will be integrated with a petrochemicals complex, allowing for the production of a full range of high-quality fuels and valuable petrochemical products.

In conclusion, the Egyptian downstream sector has a promising future with many development projects that aim to boost the sector capacity and performance. With its vast potential for increased capacity and product diversification, this sector holds the key to unlocking significant economic growth. By analyzing the current landscape and ambitious future plans, we gain valuable insights into the downstream industry's role in shaping a more prosperous Egypt.

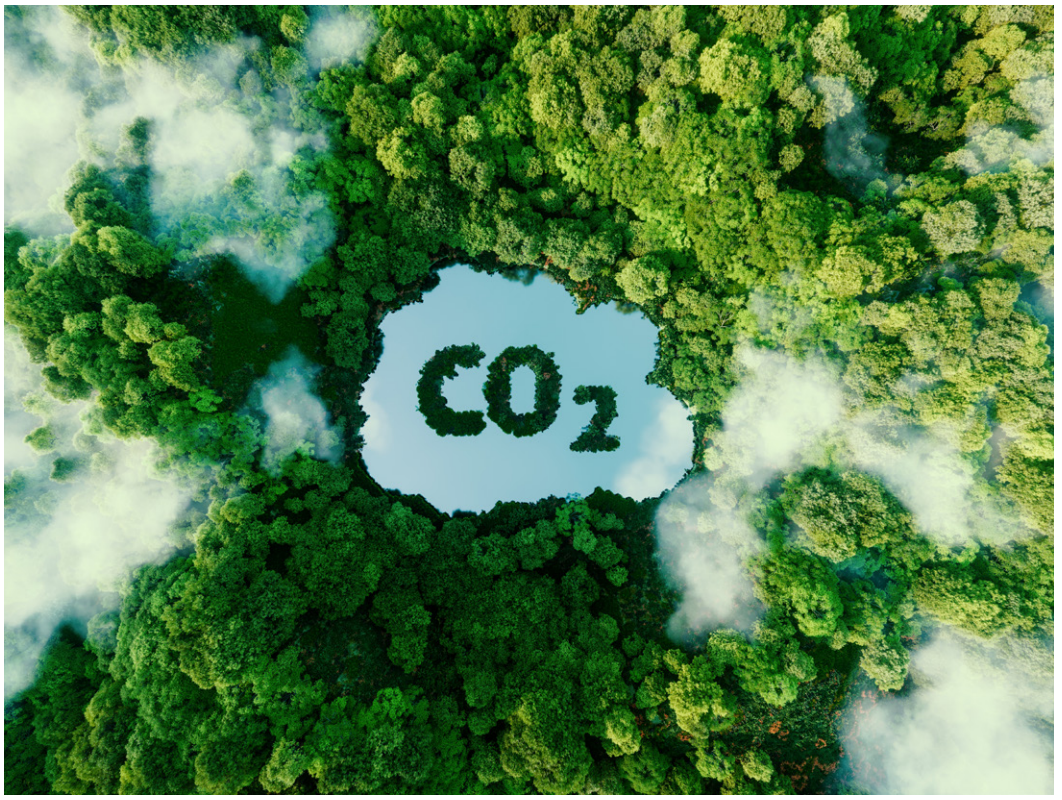




DECARBONIZING DOWNSTREAM: PRIORITIZING THE ENVIRONMENT

BY RANA AL KADY

In its pursuit of decarbonization, the downstream sector of the oil and gas industry, which includes the refining, processing, distribution, and selling oil and gas products, faces several obstacles. Downstream activities are essential to the sector's overall carbon footprint since they are the last stop in the supply chain for oil and gas. While companies are starting to feel the figurative and literal heat from environmentalists and policymakers, meeting SDGs is becoming more and more crucial in the oil and gas sector.



General Overview

First of all, decarbonization is a crucial but difficult task for the downstream oil and gas industry, including a blend of technical creativity, long-term strategy, and continuous interaction with regulatory developments. By adopting these tactics, the sector can take the lead in the shift to a more sustainable energy future while simultaneously meeting international environmental regulations. The path ahead is difficult and needs cooperation and dedication from all industry participants.

More than 40% of the world's greenhouse gas emissions come from the oil and gas industry, which is still subject to scrutiny from all parties involved. As a matter of fact, businesses are putting up sustainability goals and reducing emissions in response to these constraints, but this is insufficient. Just by going through the top 100 businesses in the industry, we are still on course to exhaust the sector's 1.5-degree Celsius carbon allowance.

The Market

The oil and gas sector must lower its greenhouse gas emissions by at least 3.4 gigatons of carbon dioxide equivalent (GtCO2e) a year by 2050. This is equivalent to approximately a 90 percent decrease from current emissions—in order to contribute to climate change mitigation to the required degree. It is obvious that if petrol and oil use decreased, achieving this goal would be simpler. Prioritizing the most economical solutions will allow the industry to reduce most of its emissions, even if demand doesn't decline significantly. The least expensive remediation methods will be promoted via process modifications and small tweaks that assist businesses in lowering their energy use.

Furthermore, one way of directly tackling greenhouse gas emissions is through the usage of natural carbon sinks. Using natural carbon sinks, such as soil, vegetation, trees, and seas, to absorb carbon dioxide and other greenhouse gases from the environment and lower the levels in the air, is one way to offset emissions. Every year, trees and plants sequester around 2.4 billion tonnes of CO2.4 In order to act as a carbon sink, the massive Italian energy company ENI has announced plans to plant 20 million acres of forest in Africa. Shell gives Dutch consumers the option to pay to offset emissions from retail petrol; other businesses are investigating ways to finance these offset programs. Depending on the source and the sequestration goal, estimates of the cost of carbon sinks in 2030 vary from $6 to $120 per tCO2e.

Moreover, naturally, efficiency plays a role in every aspect of the sector, but innovative technology tailored to the downstream can have a significant impact. For instance, medium-temperature heat pumps and waste-heat recovery technologies in refineries lower the quantity of basic energy required for distillation. By projecting its needed steam consumption hourly and combining this information into a thermodynamic model to ascertain the necessary requirements for replacement equipment; in fact, one corporation was able to save €15 million in capital expenditures.

The process of producing hydrogen by electrolysis has improved in both cost and technological sophistication. According to Bloomberg New Energy Finance, by 2050, the price of hydrogen may have decreased by up to two thirds. Refineries may be able to lower emissions by running the electrolysis using renewable energy instead of steam methane reforming (SMR), a process known as green hydrogen. Additionally, blue hydrogen, an alternative, combines SMR and CCUS. The local economy, in particular, the availability of inexpensive storage capacity for CCUS or inexpensive renewable electricity—determines how appealing the various technologies are. As suggested by a Green Hydrogen Specialist, "The integration of [Green Hydrogen] is a highly underestimated thing in oil and gas companies, but it is now becoming more and more popular to implement this new technology to help to lower the atmosphere carbon [. . .]so we can tackle environment goals."

In conclusion, in accordance with global climate targets, the oil and gas business must cut carbon emissions at all costs. With a particular emphasis on the downstream industry, which includes sales, distribution, and refining, the industry should investigate different methods of reducing carbon emissions, global strategies, and the financial effects of decarbonization. It is also essential that strict laws, financial rewards, and cutting-edge technology all work together to accelerate decarbonization, with different economic results depending on the location.

Decarbonization is a crucial but difficult task for the downstream oil and gas industry, including a blend of technical creativity, long-term strategy, and continuous interaction with regulatory developments.

NEW EFFICIENT METHOD FOR PRODUCING GREEN METHANOL FROM BIOGAS

BY DOAA ASHRAF

Methanol is one of four important fuels and chemicals being produced in the oil and gas industry. In 2022, global methanol production exceeded 111 million metric tons, growing by nearly four percent from the previous year, according to Statista. It is used in everyday products, including plastics, paints, car parts, and construction materials. Methanol is also used to fuel cars, trucks, buses, ships, fuel cells, boilers and cook stoves.

However, its production can lead to significant environmental impacts. The conventional method of producing methanol involves a catalytic process that uses fossil feedstocks, such as natural gas or coal, which release greenhouse gases into the atmosphere during the combustion phase. Therefore, efforts are being made to explore cleaner production methods for methanol and reduce its environmental footprint.

Currently, there are about five types of methanol production, grey, blue, green, bio-methanol, and E-methanol. Each has its own production methods. Grey methanol is derived from non-renewable natural gas or coal, while blue methanol incorporates carbon capture and storage to reduce pollution. Green methanol is produced entirely from renewable energy sources, and bio-methanol is derived from sustainable biomass gasification. E-methanol is synthesized from green hydrogen and captured CO2.

Furthermore, researchers from Technical University of Denmark (DTU) worked on a new method for producing green methanol from biogas, a process that is significantly more efficient and cost-effective than the previous methods.

The researchers used a technology that converts 95% of biogas into methanol without the need for added hydrogen, which is a substantial improvement over traditional green methanol production that relies on hydrogen from electrolysis.

"When methanol is produced from biogas, methanol is green because it comes from a renewable source. Biogas is a product of degraded waste from households, agriculture, and production," explained Associate Professor Philip Fosbøl, DTU Chemical Engineering, one of the researchers behind the project.

"We take biogas and turn it into synthesis gas, and then we take the synthesis gas and turn it into methanol. And we have a plant that can recycle and use CO2 together with hydrogen and produce even more methanol," said Fosbøl in the press release published by the DTU Chemical Engineering.

DTU's new method is particularly beneficial for small biogas plants that lack access to the gas grid or hydrogen producers, allowing them to convert their biogas into methanol for storage or use as a fuel. Therefore, it adapts to future energy needs and provides an alternative to flaring or using biogas only for heat and electricity.

"Our plant is designed to operate in a future where you adapt to changing needs. We can operate with different feed gases and switch very quickly," said Fosbøl.

In 2022, the technology was installed in a 40-feet container at Lemvig Biogas in Denmark, and a year later the plant produced the first liters of methanol. The technology offers a solution for storing methanol in a more combat liquid form, making it easier to transport than other gaseous fuels. It also has a lower carbon footprint compared to other liquid fuels and can be used in various applications, including internal propulsion engines and fuel cells.

While the cost of producing methanol from biogas is lower than traditional e-methanol production, it is still higher than methanol from fossil sources. However, Professor Fosbøl suggests that taxing fossil-based methanol could make green methanol production economically viable.

The demonstration plant at Lemvig Biogas has successfully produced methanol without operational breakdowns, with the next goal being to run the plant continuously for 500 hours. The researchers aim to scale up the technology to handle 200 m^3 of biogas per hour, which would be equivalent to a commercial-scale facility. This expansion would require substantial public support due to the high cost involved. When fully developed, the technology has the potential to produce 60,000 tons of methanol annually.

Furthermore, researchers from Technical University of Denmark (DTU) worked on a new method for producing green methanol from biogas, a process that is significantly more efficient and cost-effective than the previous methods.

EGYPT'S GAS DISTRIBUTION NETWORK, AN INTRICATE ECONOMIC WEB

BY NADER RAMADAN

As a key element in the energy transition and a cleaner alternative to other types of fuels, Egypt's natural gas has turned into the region's new "black gold". Rich in natural gas reserves and possessing the right infrastructure, Egypt is well on its way to championing the energy transition by achieving self-sufficiency and becoming a key regional hub for natural gas trade. None of this would have been possible without the economic policies that the Egyptian state has successfully put in place to build a sophisticated gas distribution system, featuring a series of both local and transnational pipelines, logistics networks, and stations that are fully equipped to cater to a variety of different needs.

With the nation's increasing energy demands, Egypt's natural gas distribution network has a vital role to play in ensuring all Egyptians nationwide have natural gas for all their essential needs. According to a recent study conducted by Egypt Oil & Gas based on an annual EGAS Annual Report from 2022/23, natural gas local consumption is at 2,136 bcf, averaging 5,853 mmcf/d. Research indicated that the electricity sector is the Egyptian economy's biggest consumer of natural gas reaching 1,214.5 bcf, accounting for 56.85% of the market's total consumption of this essential fuel. The industrial sector is also a significantly large natural gas consumer, making up 25% of total consumption.

Despite increasing demand, the state's strategy to ensure effective gas distribution has had substantial success. On a local level, natural gas has significant milestones with natural gas deliveries reaching about 14.7 million housing units since the start of activity until the end of March 2024. According to a March 2024 report by Egypt Oil & Gas referencing figures provided by the Egyptian Ministry of Petroleum and Mineral Resources, compressed natural gas has been a key enabler in covert up to 39,500 to operate on a dual fuel system (including both liquid fuel and natural gas), bringing the total number of cars that have been converted since the start of activity to about 550,000 cars. As part of its economic strategy, the state is also in an ongoing effort to build natural gas stations nationwide to ensure that natural gas is easily available for consumers regardless of location. Heavy investment in the retail component of the gas distribution network has been a key enabler in adopting natural gas as an alternative fuel.

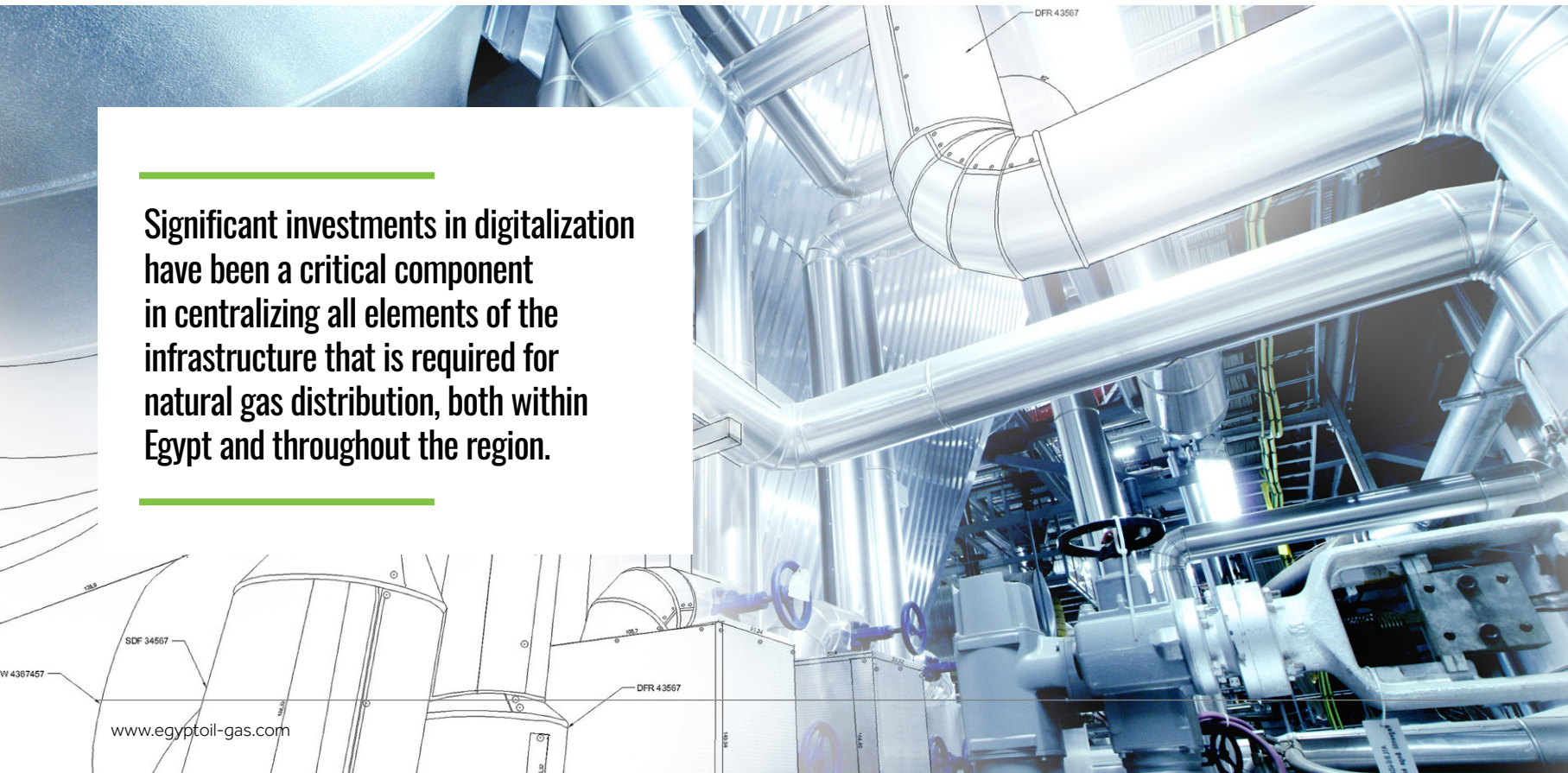
With the state emphasizing economic policies towards enhancing infrastructure, pipelines also form the backbone of Egypt's natural gas distribution. Connected the Gulf of Suez to the Sinai, there are seven natural gas pipelines with a total capacity of approximately 835.8 million cubic feet per day (mmcf/d), according to a Research & Analysis report by Egypt Oil & Gas referencing Wood Mackenzie. It is important to note that two of these pipelines, Trans Gulf Gas and Zaafarana-Korimat, play a critical role in transporting gas that is to be pumped in two stations, the Ras Bakr Transmission Station and the Korimat Power Station.

Moving to the Nile Delta, Cairo, and Nile Valley, there are also 10 main pipelines, having a total length of 612 kilometers and a total capacity of 2,200 mmcf/d, according to research from Wood Mackenzie. These pipelines include Abu Madi-Talkha I & II, Talkha-Tanta-Cairo, Abu Madi-Damietta, Meadia-Damanhur, Alexandria Network-Damanhur, Damanhur-Tanta, Cairo Ring-Port Said Line, Korimat-Al Tebbin, and Korimat-Beni Suef. The Damanhur-Tanta line has the largest natural capacity with 700.1 mmcf/d.

Though it may seem desolate, Egypt's Western Desert is rich with multiple natural gas pipelines, comprising seven pipelines that have a total length of 514 kilometers and connect several of the nation's regions, including the Western Desert itself, the Mediterranean Sea, and Matrouh. These seven pipelines have a total capacity of 2,892 mmcf/d, according to Wood Mackenzie. Having a capacity of 950 mmcf/d and a total length of 231 km, the Tarek-Amerya gas pipeline is the biggest of the Western Desert pipelines, the report added.

Apart from providing natural gas for its citizens, pipelines also play a significant role in not only transforming the nation into a natural exporter but also a regional hub for this essential transitional fuel. Of the most important pipelines in this regard is the Arab Gas Pipeline (AGP) connecting Syria, Jordan, and Lebanon with Egypt's essential gas supply with a capacity of 10 billion cubic meters per year (bcm/y), according to the sources from the Jordan's Ministry of Energy and Mineral Resources. The East Mediterranean Gas (EMG) Pipeline, also known as the Arish-Ashkelon Pipeline, has also played a significant role in promoting gas trade on a regional level. In May 2023, an additional 65-kilometer onshore pipeline was approved to be built which will connect the Negev desert to the Egyptian grid near Nitzana with a capacity of 580 mmcf/d, which further enhances Egypt's position as a natural gas trading hub.

Significant investments in digitalization have been a critical component in centralizing all elements of the infrastructure that is required for natural gas distribution, both within Egypt and throughout the region. The newly developed SCADA system has become and will continue to be a key enabler in monitoring the distribution in ways experts would have never known were possible. Though there have been significant challenges, the Egyptian state has been able to overcome them by adopting a clear strategy and decisive action to achieve positive results, a pattern that has paved the way for Egypt's success in the future.



Significant investments in digitalization have been a critical component in centralizing all elements of the infrastructure that is required for natural gas distribution, both within Egypt and throughout the region.

MIDDLE EAST ON EDGE: ISRAEL-HEZBOLLAH CLASH ESCALATES

BY IHAB SHAARAWY

In recent months, the conflict between Israel and Lebanon's Hezbollah has intensified, raising alarms about the potential for a wider regional war. This escalation, marked by regular exchanges of missile fire and airstrikes, threatens not only the immediate safety of civilians but also the broader stability of the Middle East, with significant repercussions for the global economy, particularly in the energy sector.

Rising Tensions and Military Actions

The conflict between Israel and Hezbollah, an Iran-backed militant group, has been simmering for decades. However, the latest escalation began with the eruption of the Gaza war in October. Since then, Hezbollah has been launching rockets into Israel in solidarity with Hamas, the group controlling Gaza. Israel has responded with airstrikes targeting Hezbollah positions in southern Lebanon leaving a number of the group's leaders and fighters killed.

The intensity of the conflict was underscored recently when Hezbollah leader, Sayyed Hassan Nasrallah, issued strong threats against Israel. In a televised address, Nasrallah warned that no place in Israel would be safe from Hezbollah's missiles and drones in the event of a full-scale war. He also threatened Cyprus, accusing it of supporting Israeli military operations, thereby expanding the potential scope of the conflict beyond the immediate region.

Broader Implications of a Wider Conflict

The potential for a wider conflict involving additional regional players such as the Syrian regime, Iraq's Iran-backed militias, Iran and Yemen's Houthi rebels is a significant concern. Iran, a major backer of Hezbollah, could become directly involved, further destabilizing the region. Yemen's Houthis, who are also aligned with Iran, have capabilities that could be directed against Israel or its allies, adding another layer of complexity to the conflict. Many experts also speculate about potential roles of other world powers such as Russia and China.

A broader war would have catastrophic humanitarian consequences. Tens of thousands of people have already been displaced on both sides of the Israeli-Lebanese border. An expanded conflict would likely result in even greater displacement, exacerbating the existing humanitarian crisis in the region.

Economic and Energy Sector Risks

The outcome of this war, however, is too vast in terms of global economic stability. The role of the Middle East in the production and transportation of oil and gas is very significant. Any disturbance in this area may be felt throughout the world.

For instance, Brent crude prices recently surged above $86 per barrel as fears of an all-out war between Israel and Hezbollah grew. Markets are particularly sensitive to the possibility that a regional war could disrupt oil supplies, leading to higher prices and potential shortages. This is especially concerning given the current volatility in global energy markets.

Diplomatic Efforts and International Concerns

International actors have been actively working to de-escalate the situation. U.S. President Joe Biden sent his special envoy, Amos Hochstein, to the region in an attempt to prevent a full-scale conflict. Secretary of State Antony Blinken has also urged Israeli officials to avoid further escalation.

European leaders, too, have expressed their concerns. German Foreign Minister Annalena Baerbock recently warned that any miscalculation could trigger an all-out war, emphasizing the need for restraint on both sides.

Both Israel and Hezbollah are aware of the high stakes involved in a potential full-scale war. Israel possesses one of the most powerful military in the Middle East, but Hezbollah is a formidable adversary with thousands of experienced fighters and a vast arsenal of missiles capable of striking deep into Israeli territory. The group's capabilities were demonstrated during the 2006 war when it successfully hit an Israeli warship in the Mediterranean.

Hezbollah's recent actions, such as the firing of anti-aircraft weapons at Israeli planes and the use of drones for surveillance and potential attacks, indicate a strategy aimed at deterring Israel from a broader confrontation. However, these actions also risk provoking a more aggressive Israeli response.

The Need for Caution

The current escalation between Israel and Hezbollah is a dangerous flashpoint with the potential to ignite a much larger conflict involving multiple regional and international actors. The humanitarian and economic stakes are incredibly high, underscoring the urgent need for effective diplomatic intervention to prevent a broader war.

While both sides appear to be engaging in a show of strength, it is crucial that cooler heads prevail to avoid a catastrophic escalation. The international community must continue to push for restraint and dialogue, emphasizing the severe consequences of a wider conflict not only for the region but for global stability.

The conflict between Israel and Hezbollah, an Iran-backed militant group, has been simmering for decades. However, the latest escalation began with the eruption of the Gaza war in October.

OPEC+: EXTENDING THE AGREEMENT TO CALM PRODUCTION QUOTA DISPUTES, ENSURE OIL MARKET STABILITY

Geopolitical and economic events play a significant role in shaping the outcomes of OPEC+ meetings. Member countries always strive to secure their interests without jeopardizing the overall health of global oil markets.

The enduring goal of the Organization of the Petroleum Exporting Countries (OPEC) and the OPEC+ alliance is to invest in spare production capacity for crude oil barrels. This strategy aims to utilize this spare capacity to counter any potential shocks, maintain the stability of crude oil prices, and retain the ability to intervene swiftly to restore balance and stability in global markets.

In a meeting held on Sunday, June 2, 2024, OPEC+ decided to extend its current crude oil production cut policy throughout 2024, with a gradual phase-out starting in 2025. This decision aims to support the market amidst slowing global crude oil demand growth, rising interest rates, and increasing US production.

Currently, OPEC+ members' total production cuts stand at approximately 5.86 million barrels per day (mmbbl/d), representing around 5.7% of global demand. These cuts comprise 2 mmbbl/d from all OPEC+ member countries, a first round of voluntary cuts from nine-member countries amounting to 1.66 mmbbl/d, and a second round of voluntary cuts from eight-member countries totaling 2.2 mmbbl/d.

For the past few years, OPEC has been grappling with the issue of production quotas, with each country asserting its production capacity. This is because increased crude oil production capacity translates into a larger production share for each country. Last year, OPEC+ adjusted some production quotas, granting the United Arab Emirates (UAE), OPEC+'s third-largest crude oil producer, a higher quota while reducing Angola's. This quota adjustment ultimately led to Angola's withdrawal from OPEC at the end of 2023.

Discussions within OPEC+ regarding the production capacity of certain members and their potential for increased quotas have become increasingly heated. These disagreements have tarnished the organization's image, as the issue of quota allocation remains an internal matter that must be addressed sooner or later. However, a decision to review the overall group's quotas has been postponed until the end of 2025, temporarily alleviating potential tensions.

Participants in the meeting agreed to grant the UAE a new reference production level of 3.51 million barrels per day (mmbbl/d) for the following year. This increase will be implemented gradually, starting in January and continuing through September 2025.

While the UAE's quota increase allows it to maintain the appearance of adhering to cuts while simultaneously boosting production, OPEC+ faces a significant challenge in 2025: phasing out production cuts without flooding the market with supply and causing prices to fall below the alliance's oil security level of $78 per barrel.

Current crude oil prices are hovering around the safe zone for both oil producers and consumers. This indicates that the market is relatively balanced, and there is no urgent need for a dramatic shift in OPEC+'s production policies.

It is essential to recognize that OPEC+ is not the sole factor responsible for the current volatility in oil prices. Numerous contributing factors have led to the surge in global energy prices, primarily stemming from the ongoing conflict in Ukraine and the escalating tensions in Gaza. These geopolitical and economic risks continue to pose threats to the stability of global oil markets. While OPEC+ plays a crucial role in maintaining market stability, it cannot single-handedly counteract the broader forces driving price movements. The alliance's primary focus is on addressing market imbalances that could lead to prolonged price deviations from equilibrium levels. Initial expectations pointed towards an extension of OPEC+'s current oil policy, reflecting the market's anticipation of the alliance's intervention to balance prices if they fall below equilibrium levels for an extended period.

Dr. Ahmed Sultan.

Chairman of the Energy Committee / Cairo Engineers Syndicate.
Member of the Board of Directors of the Cairo Engineers Syndicate.

EXPLORING SOLUTIONS TO EGYPT'S POWER OUTAGES

The Ministry of Electricity surprised us by extending the power outage period from two to three hours, just days after announcing its intention to export electricity to Europe and other countries. This contrast between the two announcements suggests a lack of a well-studied plan, relying instead on fluctuating data. Energy issues in Egypt remain a primary concern for decision-makers, as they pose significant obstacles to stability and hinder industrial and agricultural development.

Since 2000, energy subsidies have always been higher than government subsidies for education and health. With the increase in energy consumption annually and the increase in oil and gas prices, energy subsidies created a financial burden that the state could not endure, thereby increasing debts with international companies and negatively affecting investments in Egypt.

It is well known that gas consumption increases annually by 10% and the natural decrease in the gas reservoir production is about 10% as well, which means that we need to increase gas production by about 20%. This is impossible to achieve because it will lead to an increase in the debts of companies that invest in new discoveries and whose state budget cannot meet the payment of the difference between the price of gas that we buy from the partner's share and its accounting price for the Ministry of Electricity, homes, and factories; otherwise, the result will be in multiple increases in the price of gas and electricity compared with the current price. This is not affordable to the average citizen and hinders development in industry and agriculture.

We are spinning in a vicious circle because the debts of companies that invest in the petroleum sector in Egypt increase daily and the debts of the petroleum sector to the Ministry of Electricity and government ministries also increase daily. In addition, the Ministry of Petroleum cannot cut off gas supplies to the Ministry of Electricity, factories, or any of the other ministries, no matter how much these debts increase. The Ministry of Petroleum must provide diesel as an alternative to gas to the Ministry of Electricity and a large percentage of this diesel is imported at prices twice the price of gas. Here we need to explore solutions to escape this cycle.

Our opinion here is that it is necessary to develop a plan to increase the percentage of new and renewable energy that is produced from solar, wind, and hydro energy to 50%. This must be completed during the next ten years; in addition to nuclear energy, of which production will begin in the next few years.

Sabry El Sharkawy

General Manager & Managing Director of Wastany Oil Company

USES AND LEGAL CONSIDERATIONS REGARDING NUCLEAR ENERGY

Nuclear energy is called atomic energy because it has a direct relationship with the atomic nuclei of the elements and reshapes the bonds between atoms through the processes of nuclear fission and nuclear fusion, through which atomic bonds are broken or formed. Which results in the release of a huge amount of energy. Nuclear fission also occurs as a result of dividing the nucleus of an atom or atoms into smaller atoms in special devices called nuclear reactors, which are mainly used in power plants.

Nuclear fusion is the process of combining atoms together to form a larger atom, and it is the basic process responsible for supplying the sun with energy, as the process begins with the protons that consist of a single hydrogen nucleus inside the sun's core.

By going through several stages that end with the fusion of protons together and turning them into helium, and as a result of this transformation, enormous energy is released that radiates from the core to the rest of the sun. Though the term "nuclear energy" is always associated with wars and weapons, it can benefit humanity, particularly when it comes to its role in technology, medicine, energy, and space exploration.

This is especially true for electricity generation, with nuclear energy making continuous electricity generation possible as one of life's indispensable priorities. The use of nuclear energy to generate electricity occurs as a result of the nuclear fission process of uranium atoms inside nuclear reactors, which results in high heat that in turn heats water to the boiling point. The water vapor rises to reach the turbines in the nuclear power station, which resemble large windmills, water steam drives turbines and spins, generating electricity. Nuclear stations cool the rising water vapor again in a separate part located in the nuclear station called the cooling tower, or it can be dispensed in any natural body of water so that the cooled water is then reused in the electricity generation cycle again and continues to be supplied. Although nuclear energy is an inexpensive and reliable method of use, its by-products have raised controversy in many issues related to environmental and water pollution.

Nuclear medicine is one of the branches of medicine that relies primarily on nuclear energy. The most prominent of these techniques is the cobalt 60 technology, which uses gamma rays to sterilize many medical products and tools, such as gloves, syringes, clothes, and tools that heat sterilization leads to damage are considered economical techniques and have better effectiveness than heat sterilization techniques using steam. This is especially the case regarding heat-sensitive items, such as ointments, solutions, and biological preparations. In addition, nuclear energy is used in nuclear medicine in radiology.

Nuclear energy is effective in the field of food and agriculture, as nuclear technology is used to raise the level of effectiveness and safety in the process of sterilizing agricultural pests instead of using pesticides. It works to completely eliminate insect reproduction. Not only that, but it also works on testing foods to ensure the disappearance of harmful substances and pollutants, in order to prevent their harm from being transmitted to livestock or humans. This technology is one of the good technologies to improve the quality of agricultural products and the safety of their consumption.

Pros and cons of nuclear energy:

1. The operational cost of producing electricity is low compared to the cost of producing energy from fossil fuels, but the initial construction cost of nuclear power plants is very high.

2. A stable source of energy that is not affected by any external factors such as climate, but there is a possibility of nuclear accidents and explosions, and their impact will be long-term if they occur.

3. Stable and permanent energy production and the possibility of integrating it with renewable energy sources such as; Wind and solar energy, but the danger of radioactive waste resulting from nuclear energy production if it is not stored safely, which leads to environmental pollution.

4. Environmentally friendly, as it does not produce any carbon emissions during its operation. However, the impact on the environment is negative through the uranium enrichment process if a quantity of radioactive particles remains behind it; Which leads to it leaking into nearby water sources and polluting them.

5. Availability of fuel in sufficient and abundant quantities. However, there are limited supplies of nuclear fuel for the stock of uranium and thorium, which must eventually run out; Because of their reliance on the nuclear fission process to generate energy, and they have not yet found a way to create a nuclear reactor from nuclear fusion.

6. It achieves a high energy density compared to the energy density produced from fossil fuels such as gas and oil, equivalent to 8,000 times, but the need for a lot of water makes its use an obstacle in countries that suffer from scarcity of water and rain.

In the future, nuclear energy will contribute significantly to achieving sustainable development with the increase in the world's population and the increase in demand and need for energy. This is achieved by obtaining the production of a type of energy that is characterized by being environmentally friendly and economical in cost and provides a sufficient amount of energy to cover the needs of future innovations and industries, and contributes to climate change resistance

Technological development is now creating more innovative designs to create and manufacture nuclear reactors that are characterized by safety, efficiency, higher productivity, waste production, and less environmental damage, making nuclear energy the best option for achieving sustainability in energy production. In addition, future innovative plans are currently being contributed to by allocating funding between the private sector and governments to increase the pace of technological developments and deal more professionally with the high investment cost allocated to building nuclear power plants and infrastructure

The role of nuclear security has emerged on the scientific security scene, which is concerned with prevention, detection, and taking appropriate measures regarding the illegal and criminal use of nuclear materials or any other radioactive material or the facilities related to it.

Nuclear law is undergoing rapid developments in order to strengthen nuclear safety. We have seen international agreements on nuclear safety after the Chernobyl disaster, and we have also seen how objective nuclear civil liability provisions legally focused on the operator also aim to strengthen this safety. After the Fukushima accident, nuclear safety authorities around the world took new measures to achieve this goal.

ENG. MOHAMED ABDELRAOUF

Southern Area Gen Mgr

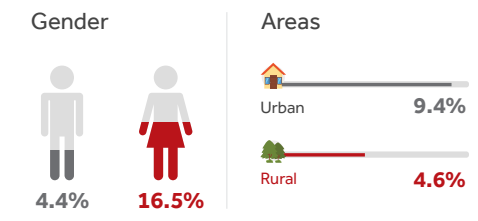
Khalda Petroleum Company

EGYPT OIL&GAS RESEARCH & ANALYSIS

QUARTERLY INDICATORS

Unemployment Rate

Unemployment Rate Breakdown



In the first quarter (Q1) of 2024, Egypt saw a 0.2% decrease in its unemployment rate compared to quarter four (Q4) of 2023. 43.5% of the country's population actively participated in economic activities, indicating a significant contribution to the nation's economic landscape. This comes as Egypt's total labor force increased by 1% to 31.4 million from 31.1 million, with urban and rural labor forces totaling 13.8 million and 17.63 million, respectively. Gender-wise, the male labor force comprised 25.5 million individuals, while the female labor force stood at 5.9 million individuals.

EGX HIGHLIGHTS

Performance of Listed Petroleum Companies

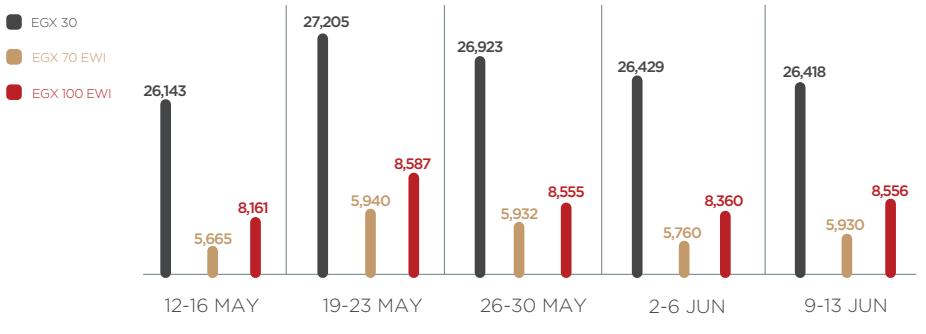
May 2024

TAQA	NDC	AMOC
Close Price EGP 9.85	Close Price -	Close Price EGP 9.09
YTD Price Change 26.77%	YTD Price Change 0%	YTD Price Change 7.81%
P/E* 20.77	P/E* 2.01	P/E* 8.56

Egypt Gas	ABUKIR
Close Price EGP 24.37	Close Price EGP 29.4
YTD Price Change 39.08%	YTD Price Change 1.14%
P/E* 20.6	P/E* 9.04

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

Capital Market Indicators



MONTHLY INDICATORS

Annual Inflation Headline

CPI (%)

April 2024	May 2024
31.8	27.4

Egypt's annual inflation rate continued to decline in May, which stood at 27.4%, reflecting a decrease from 31.8% recorded in April. The primary drivers behind this decrease stem from the fall in prices across various product categories such as the prices of the vegetables by 8.7%, meat and poultry by 4.6%, and dairy products, cheese, and eggs by 3.9%. Even though inflation went up in February 2024, it's been dropping overall in the last 3 months. Conversely, price increases were noted in fruits by 12.4%, coffee, tea, and cocoa by 0.8%, and textiles, ready-made garments by 1.7%.

Net International Reserves

($ billion)

April 2024	May 2024
41.057	46.126

Egypt's net international reserves saw a substantial increase of approximately 12.3% to reach $46.126 billion in May 2024 compared with April 2024. This increase stems from effective management of external financing risks through the Ras El Hekma deal, as Egypt receipted the second tranche from the United Arab Emirates (UAE), flexible exchange rates, stricter monetary policies, and boosting international financing and capital inflows. Foreign currencies still dominate Egypt's international reserves with a 79% share of the total as of May 2024.

Non-Oil Private Sector

PMI (Point)

April 2024	May 2024
47.4	49.6

Egypt's PMI recorded 49.6 in May 2024, to reach its highest level since August 2021. While still below the neutral 50 mark. May's PMI indicates that the rapid cooling of price pressures is starting to boost the Egyptian non-oil private sector. Businesses attributed increased stability to eased inflation. Policy measures in March improved currency availability, leading to greater price stability and confidence. Consequently, new business levels dropped at the slowest rate since September 2021, while new export orders rose amid growing foreign demand.

EGYPT OIL&GAS RESEARCH & ANALYSIS

Abu Qir Infill Well Drilling Campaign in Egypt

The Abu Qir infill well drilling campaign in Egypt has surpassed expectations. They encountered a net pay within the BKES-1 and Abu Madi formations, nearly twice as thick as initially anticipated. This significant discovery suggests the potential to recover substantially more resources from the area.

ENERGEAN

270 ft	North Abu Qir PII	Q3 2024
Net Pay	Platform	Targeted 1st Production

Preliminary Analysis

Gas-Initially-In-Place (GIIP) Volume	Net Pay of Liquids Column*
~87-129 bcf	Around 55 feet

*Requires Further Analysis

E&P Assets Sale Agreement in the Mediterranean

Energean plc has announced that it entered into a binding agreement to sell its portfolio in Egypt, Italy, and Croatia to an entity controlled by Carlyle International Energy Partners ("Carlyle").

The transaction is subject to customary regulatory approvals. This transaction will deliver to Carlyle a diversified portfolio of highly strategic gas-weighted assets with expected production equivalent to 47,000 barrels of oil per day (bbl/d) and operations across the region.

Signing Date	June 20
Acquired Areas	Cassiopea & Abu Qir
Enterprise Value (EV)	$945 million
Transaction	$820 million
Expected Completion Date	Year-end 2024

Expansion of Al-Nasr Petroleum Refinery in Suez

In June, a trial run marked the inauguration of expansions at the Nasr Petroleum Company (NPC) refinery in Suez. A part of these expansions is a new condensate distillation unit, which transforms condensates into valuable products like diesel and naphtha.

Surge in the Refinery's Capacity (mmt/y)

6.5	7.7
From	To

PETROJET	EPROM
General Contractor	Operator & Technical Supporter

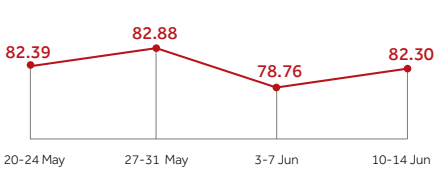
Trial Operations of the Condensate Distillation Project

Aim	Investment cost	Capacity
Maximize High-value Petroleum Products	> EGP 2 billion	> 1 mmt

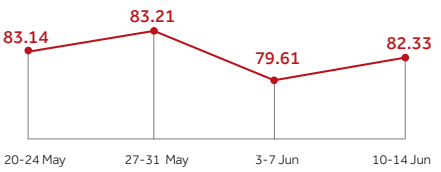
PRICING HIGHLIGHTS

Average International Prices

BRENT ($/BBL)

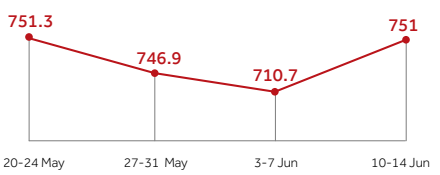


OPEC BASKET ($/BBL)

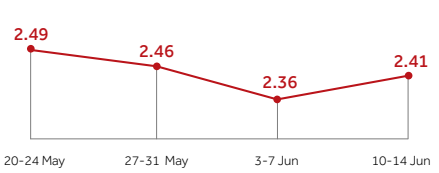


NATURAL GAS ($/MMBTU)

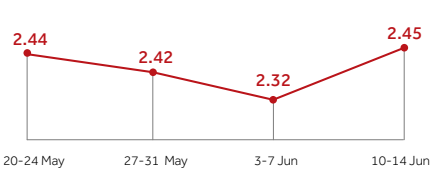
GAS OIL (Nymex) ($/MT)



RBOB GASOLINE (Nymex) ($/GAL)



HEATING OIL (Nymex) ($/GAL)



We take energy forward

We're committed to making energy safer, cleaner, and more efficient for people and the planet. By combining industry-leading technologies and services with operations in over 120 countries, we're collaborating with customers to transform the future of energy – everywhere.

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