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Navigating through Production Sharing, Concession, and Service Agreements

- THE NEW GAS LAW BETWEEN DRAFTING AND IMPLEMENTATION
- COMPLEXITIES OF REGULATORY FRAMEWORK ALTERNATIVES
- ARBITRATION IN EGYPT: MYTH OR REALITY?
- REMEMBERING DR. HAMDI EL BANBI THE FATHER OF EGYPT'S OIL AND GAS INDUSTRY

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EDITOR'S NOTE

In August, the Egyptian oil and gas industry was shattered by the news that Dr. Hamdi El Banbi, a petroleum legend, who led Egypt's Oil Ministry between 1991 and 1999, suddenly passed away at the age of 81. Egypt Oil&Gas is remembering this most influential oil visionary by looking into Dr. El Banbi's achievements and his legacy. As we show, Dr. El Banbi's contributions massively enhanced the capacity and potential of the country's energy domain and they will undoubtedly remain as key guiding principles for the government and industry leaders in many decades to come.
In this issue, EOG has also researched different aspects of oil and gas industry's legal frameworks. The article Complexities of Regulatory Framework Alternatives suggests that there still remain crucial issues the Egyptian energy authorities need to attend to in this respect. Among those is the need to swiftly amend the rules and regulations regarding the exploration and production sharing costs, the cost recovery processes, and energy market competition.
In more details, EOG analyzes how energy companies navigate through Production Sharing, Concession, and Service Agreements. As the author of the article concludes, risk-sharing contracts would be a suitable solution for Egypt and its hydrocarbon sectors, provided that two conditions, related to taxation and fees in-kind, are met.
The New Gas Law has been a buzz word in the energy sector for almost a year. The Egyptian Gas Holding Company (EGAS) is outlining a new legal and regulatory framework for the downstream segment of the gas sector with an intention to contribute to the Oil Ministry's efforts to liberalize the energy market. In this issue we bring you the most recent updates on the law drafting processes to unveil challenges regarding its implementation.
Another key theme of the regulatory framework for the energy industry in Egypt is the arbitration. In two articles we discuss legal and economic complexities of arbitral awards as a tool for the settlement of legal disputes. The article Arbitration in Egypt: Myth or Reality? indicates that the country's judicial system has become increasingly overloaded, timely and notoriously procedurally complex over the past few decades, rendering arbitration a viable channel for resolving disagreements within the energy industry.
Looking into oil and gas agreements, Iran Petroleum Contracts have become a useful case study to research in order to analyze how regulatory framework may contribute to a satisfactory inflow of foreign investments into the country. For Iran, in particular, it is still pending to resolve the uncertainties regarding the ownership of hydrocarbon reservoirs in order to sustain the revival of the country's industry.
We hope that this issue will bring you insights that will be relevant for your future endeavors.
We thank you for your support and readership.

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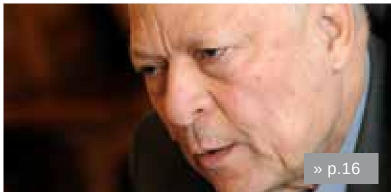
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Egypt Issues Oil and Gas Tenders

The Egyptian Natural Gas Holding Company (EGAS) will issue a tender for the discovery and exploration of oil and gas in 8 to 9 sectors located in deep sea waters off the shore of the Mediterranean. This bid round will bring the total number of concessions up for tenders to 30 within 2016, reported Al Borsa News.

The approvals are currently being collected in regards to the concessions proposed by EGAS, citing the huge discovery of Zohr field as a major drive for international firms to further explore the area.

The Egyptian Minister of Petroleum and Mineral Resources, Tarek El Molla, stated that EGAS's tender will proceed once the previous two tenders issued by Ganoub El Wadi Petroleum Holding Company (GANOPE) and the Egyptian General Petroleum Corporation (EGPC) are concluded, Al Borsa News informed in related news.

The mentioned international bid rounds were issued by Ganoub El-Wadi Holding Company (Ganope) for the exploration of ten areas including five sites within the southern region of the Suez Canal. Ganope's CEO, Sherif Sousa, stated that this new bid round will boost exploration efforts within the regions of Southern Suez Canal and the Western Desert.

The estimated bid price varies according to the concession areas, yet the basic ones range from $58,000 to $268,000, in addition to not less than $2m for each extra tender, informed Al-Mal News.

The tender includes ten sectors, five are located in the south of Gulf of Suez Gulf, west of Gebel El-Zeit, southeast of Ghara, east of Jesom, Taer El Bahr, and five sectors are located in the Western Dessert of Egypt in south of Al Kharga, east and west of Al Messaha.

Furthermore, US companies Apache, and EOS Petro, Greek Aegean, and a Chilean firm announced that they are interested in exploration and production (E&P) bid rounds, as stated by EGPC.

Meanwhile, the EGPC was ready to prolong the period of the bid round upon companies' requests as they had not presented their offers yet and may be waiting for the last moments to avoid any leakage.

El Molla: Egypt to Increase Oil, Gas Production

The Egyptian Minister of Petroleum and Mineral Resources, Tarek El Molla, stated in a press release, that was issued during a general assembly to review Gulf of Suez Petroleum Company's (GUPCO) fiscal results for 2015/2016, that Egypt is focusing on increasing the country's strategic reserves and production in the oil and gas sector. The oil and gas industry players are working on multiple facets to address issues related to the plan including extensive oil and gas exploration projects for both onshore and offshore fields through international tenders.

In addition, Minister El Molla stated in related news that the ministry will request foreign oil and gas investors to increase the number of oil wells in the Nile Delta concessions, with an aim of boosting the output to the level of about 1bcf/d, reported Al Borsa News. The ministry is also planning to increase the concession's production gradually, aiming for the output of 770mcf by September, a 75% increase when compared to concessions' current production of 440mcf. The overall objective is to reach crude output of 1bcm by the first quarter of 2017.

The Ministry aims to diversify supply to the local market by expediting enhancements in the production of existing discoveries and connecting them to domestic distribution hubs, reported Egypt Oil&Gas.

Egypt Pays Off Dues for Imported Oil, Gas

Egyptian Ministry of Petroleum announced that Egypt has paid its due bills for the purchase of imported crude oil and natural gas from foreign companies for the fiscal year 2015-2016. It also paid off $100m of outstanding debt to the Egyptian General Petroleum Corporation (EGPC), Arab Economic News reported. According to the settlement process through which the Oil Ministry pays off installments every three months, due balances to foreign partners currently stand at $3.4b, wrote El Youm 7. The total dues were $3b in the first quarter of 2016, however, the ministry struggled to collect enough hard currency to meet this obligation.

Egypt Gas Company Marks Loses

Egypt Gas Company's losses in the second quarter of 2016 reached EGP 61.9m ($6.96m), in comparison to EGP 31.3m ($3.5m) during the same period in 2015, Al Borsa reported. This represents a 97.8% increase in losses during Q2 of 2016, which brings the company's 2016 year-to-date loss to EGP 47.9m in total, after incurring a net profit of EGP 14m during the first quarter of the year. This is a 1% drop in losses during the first six months of 2016, when compared to a loss of EGP 48.9m for the first two quarters of 2015, informed Misr Journal.

Egypt's Fuel Subsidies Fell 23%

Egypt's spending on petroleum subsidies fell by 23% in 2015/16 to EGP 55b ($6.27b) from a targeted EGP 61b, Head of the Egyptian General Petroleum Corporation (EGPC), Tarek al-Hadidi said, citing a decline in global oil prices as the main drive to absorb the cuts, Reuters informed. The government further intends to curb petroleum subsidy spending by 43% to reach EGP 35b, Ahram Online informed. Egypt thus aims to reduce its deficit for the fiscal year 2016/2017, which started in July, to 9.8% of gross domestic product, from the current 11.5%. During 2014/2015, Egypt paid EGP 71.5b in petroleum product subsidies.

Egypt Approves Five Oil, Gas Exploration Deals

Egyptian Minister of Petroleum, Tarek El Molla, stated that the government has approved five oil and gas drilling and exploration agreements with foreign companies, reported Reuters. Four deals are gas exploration and drilling agreements between the Egyptian Natural Gas Holding Co. (EGAS) and BP, Eni, Total, and Edison, while the fifth agreement is between the Egyptian General Petroleum Corporation (EGPC) and local company Trident Petroleum aimed at oil drilling in the Gulf of Suez, according to Trade Arabia. Egypt is trying to increase its energy output at recent discoveries to achieve balance between domestic supply and demand.

Egypt's FX Reserves Dropped to $15.5b

Egypt's foreign currency reserves dropped by 11% in July and net international reserves reached $15.5b, after authorities repaid about $2b in debt. This is the biggest drop in FX reserves that Egypt has faced in 16 years, Bloomberg reported. The Central Bank of Egypt (CBE) announced it had repaid $1.02b for Qatar's Holding of Egypt's sovereign Eurobonds, $714.4m to Paris Club Creditors as well as the first installment of a Libyan deposit with the regulator. To ease dollar shortage, policy makers weakened the pound by about 13% in March. A similar move may be expected after the government receives part of the IMF funds and assistance from other donors.

Egypt Launches Solar Power Tender

The Egyptian New and Renewable Energy Authority (NREA) prepared a tender to construct a new solar power plant in Hurghada with a capacity of 20 MW. The Japan International Cooperation Agency's (JICA) offered to fund the project, reported Daily News Egypt. The project is part of the Electricity Ministry's power plan for 2012-2017. A source at the ministry told Al Borsa News that the project will be funded through a soft loan of $90m. The JICA verified project's feasibility, based on which it issued a $1.5m allotment to set up equipment needed to measure the solar radiation at the location.

Egypt Evaluates Gas Prices

The Egyptian Minister of Petroleum and Mineral Resources, Tarek El Molla, stated that the Egyptian General Petroleum Corporation (EGPC) is giving priority to reforms within the gas market in order to guarantee that demands are met for all the sectors of the state. The strategy is set for the ministry to reach a state of balance by meeting current oil and gas demand levels, reported Amwal Al Ghad. Aligning with the ministry's efforts to liberalize the gas market, the Egyptian Natural Gas Holding Co. (EGAS) will create a gas regulating body, with the aim of encouraging private investors to come to the market.

Egypt Receives IMF Loan

The International Monetary Fund (IMF) agreed to lend Egypt an amount of $12b to be paid out over three years, the agreement is subject to approval by IMF's Executive Board, according to IMF's website.

The loan that has an expected interest rate to be set at 1.5% will be divided into three tranches, each worth $4b, which will be paid out in two installments worth $2.5b and $1.5b. Egypt is likely to receive the first installment as early as September, once IMF's board approves the loan, Ahram Online reported.

The Head of the IMF mission to Egypt, Chris Jarvis, said in a statement to Reuters that the deal will go to the board for approval only if the Egyptian government secures $5b to 6b in bilateral financing for the first year.

In attempts to receive the necessary co-funding, Egypt has secured pledges from the UAE and Saudi Arabia for about $4.5b, but the money has yet to materialize, reported The New York Times. "The IMF will be working together with the Egyptian authorities in the coming weeks to secure this financing," Jarvis noted.

He also added: "I am pleased to announce that, in support of the government's economic reform program, the Egyptian government, the Central Bank of Egypt (CBE), and the IMF team have reached a staff-level agreement

on a three-year Extended Fund Facility (EFF)."

Moody's sees the IMF loan as supportive of credit because it will reduce some of Egypt's external financing obligations and because it is much needed for the country's reforms, reported Daily News Egypt.

In related news, the Egyptian President, Abdel Fattah El Sisi did not agree to the IMF's loan stipulations to increase fuel prices nor to its preconditioning the complete removal of state backed subsidies for fuel. Nonetheless, Egypt will remain implementing recent reforms, which are to include a systematic decrease of energy subsidies over the course of five years, two of which have already elapsed.

BP Boosts Gas Production in Egypt

UK's British Petroleum (BP) aims to boost its gas production in Egypt through enhancements of several fields within their concessions in the country, reported Al Borsa News.

The company plans to connect production from Taurt field with a capacity of 70mcf/d of gas by the end of August. This infuse of gas will compensate for the maturity of Egyptian gas concessions, with production declining by 1.2bcf annually, the equivalent of 100mcf/m.

During the third quarter of 2017, BP will begin Phase One operations of enhancements of the Northern Alexandria and West Mediterranean deep water gas fields, to reach production levels of 450mcf/d. The remaining $11.3b enhancement efforts are slated to end by the second quarter of 2019. This will push production in the fields to 900mcf/d of gas, to ultimately reach 1.3bcf/d of gas and 17,000b/d of condensate.

The company was also working on connecting production from Ras Al Bar field during August, with a production capacity of 110mcf/d of gas and 400b/d of condensate, at a total investment of $265m.

Eni Increases Nooros Gas Production

Italian Eni aims to increase gas production from three wells in Nooros field by 180mcf/d in September 2016. A source from EGAS said that the $450m production enhancements of Nooros field will push gas outputs to 700mcf/d by the end of 2016. Current production rates stand at over 350mcf/d of gas in addition to 3,000b/d of condensates, reported Al Borsa News.

The increase in Nooros production will balance natural depletion of gas local production due to resource maturity, with annual reductions in gas output reaching 1.2bcf.

Egypt currently produces gas at the level of 4.05bcf/d in total and gas imports amount to 1.3bcf/d.

In his interview with Bloomberg, CEO of Italy's energy giant Eni, Claudio Descalzi said that Egypt is about to be self-sufficient and able to explore on its own, which may mean that Cairo would need to work with Israel, Cyprus, and Libya.

In older news, Eni conducted two exploration expeditions in the Nooros gas field in the shallow waters of the Nile Delta. The company will carry out exploration on several new wells in the area in order to highlight the positive aspects of the research process, reported Daily News Egypt.

RockHopper Buys Egypt's Beach Petroleum

UK's RockHopper Exploration has bought the Egyptian oil company Beach Petroleum Pty Limited for $11.9m. The acquisition was funded by its existing cash resources with Beach Petroleum retaining the majority of the Egyptian General Petroleum Corporation (EGPC) receivables balance of $10.1m. This is expected to boost RockHopper's production by 1,500 to 1,800b/d in 2016, Digital Look reported. RockHopper announced that it had agreed on the terms with Beach Petroleum on the acquisition in August 2015. However, talks stalled due to the exercise of pre-emptive rights on the Abu Sennan concession. RockHopper amended the terms to exclude any share consideration in order for the deal to go through, reported Your Industry News.

Scatec Re-Negotiates PPA with Egypt

A group of developers, including Norway's Scatec Solar, are renegotiating the terms of their power purchase agreements (PPA) with the Egyptian government in an effort to keep them on the existing timetable, as many developers withdrew from Egypt's solar program due to a disagreement with the Egyptian Ministry of Electricity and Renewable Energy, PV-Tech reported. The main objection is the use of local arbitration, which investors want to move overseas. This particular issue has led development banks to hold their investments, including the European Bank for Reconstruction which had set aside $500m for Egypt's 2GW solar project, reported Arab Finance.

Egypt Expects to Receive $7.5b in Foreign Aid

Egypt aims to raise $21b from international financial institutions and bilateral agreements over three years. Egypt's PM, Sherif Ismail, said to Bloomberg that Egypt expects to receive $7.5b in deposits to help restoring investor confidence, ease a crippling foreign-exchange shortage, and finalize the International Monetary Fund (IMF) loan worth $12b. Minister of International Cooperation, Sahar Nasr, said Egypt will receive foreign aid in the form of $2b provided by Saudi Arabia, a combined deposit of $4.5b from The African Development Bank and World Bank, and $1b from China, reported Al Mal News.

Moody's Affirms Egypt's B3 Rating

Moody's Investor service affirmed Egypt's long term and senior unsecured bond rating at a stable B3 in which credit risks face deep structural concerns such as weak government reserves, weak external payment position, and continued security concerns, the Daily News Egypt reported. The stable rating outlook reflects Moody's view that despite slow implementation of fiscal reforms over the past 12-18 months, upward and downward pressures on the rating are balanced. Moody's assesses the IMF $12b loan as credit-supportive, because it will alleviate some of Egypt's external liquidity pressures and also promote the reform agenda, according to Moody's website.

Egypt's PM Talks Expansion Plans with Apache

Egyptian Prime Minister, Sherif Ismail, met with the US oil and gas producer, Apache Corporation, to discuss the company's plans to inject investments in Egypt during the coming period. The investments are aimed at new explorations to cover the necessary requirements for petroleum products from the industrial, service, and population sectors in the local market, as well as at reducing imports and pressure on the country's foreign exchange, the Daily News Egypt reported.

During the meeting with a delegation from Apache, which included the company's chairperson and Minister of Petroleum and Mineral Resources, Tarek El Molla, the possibility of an expansion of Apache's activities in Egypt was reviewed.

Apache's CEO, John Christmann, said that his company has been working in Egypt in the research and exploration fields for 20 years. The company contributes to achieving the optimum exploitation of Egypt's natural wealth, as well as raising the efficiency of the existing wells to increase the quantities extracted from them, according to Amwal Al Ghad.

Prior to the meeting, Egyptian President Abdel Fattah El Sisi issued a decree granting the Petroleum Ministry the permission to amend the agreement on oil exploration in Khalda region in Western Desert, according to Amwal Al Ghad.

Eni Drills Sixth Well in Zohr

An official at the Egyptian General Petroleum Corporation (EGPC) stated that the ministry has reached an agreement with Italy's Eni to start drilling the sixth and last gas well in the Zohr field in the Mediterranean Sea in January 2017, as the drilling of the fifth well has been completed, Egypt Oil&Gas reported.

Eni also invested around $3.5b to $4b in constructing a natural gas processing plant linked to Zohr field with an overall capacity expected to reach to 2.7bcf/d of gas by 2020, reported Al Borsa News.

The plant is expected to connect around 900mcf/d of gas to the national grid by the end of 2017 or during the first quarter of 2018 as Eni is trying to accelerate the implementation phase of the plant connected to Zohr gas production in order to enable gas receiving and processing in Port Said.

Meanwhile, Eni announced that it is planning to sell at least a 20% stake in Zohr field in Egypt to different oil companies including Russian Lukoil, US ExxonMobil, French Total, and UK's British Petroleum in order to raise around $5.5b from asset disposal within two years, as 25% of Zohr field's stakes could fetch up to $2.24b, Reuters reported.

Egyptian Minister of Petroleum and Mineral Resources, Tarek El Molla, stated that the total investments in Zohr are estimated at $12b in order to start production. Additional investments worth $16b will increase over the lifetime of the project, Daily News Egypt informed. A source from the Egyptian General Petroleum Corporation (EGPC) informed Egypt Oil&Gas that Zohr is one of the most important gas fields through which Egypt is expected to achieve self-sufficiency and boost gas production to 5.5bcf/d.

The EGPC official added that the Ministry requested a weekly report from Eni about the status of the huge field to present to the President, as the first phase of the Zohr national project included the drilling of six wells.

In related news, ENPPI and Belayim Petroleum Company contracted Dutch company, Frames, to design and supply eight sour gas filter coalescers and eight shell and tube heat exchangers to be installed at the El-Gamil Plant connected with the Zohr, Offshore Magazine reported.

DRILLING

BAPETCO

BAPETCO, a joint venture between EGPC and Shell, has completed drilling a new exploratory gas well in its concession area in the Western Desert. The oil production rate of GPC in July was 1,546,429 oil barrels.

BED2 C6-B

The well was drilled at a depth of 8,203ft utilizing the EDC-51 rig. Investments surrounding the project are estimated at $2m.

QARUN

QARUN, a joint venture between EGPC and Apache, has completed drilling a new oil development well in its concession area in the Western Desert. The production rate of Qarun in July 2016 was 1,208,881 barrels of oil.

KSW-28

The well was drilled at a depth of 84,30ft utilizing the ST-2 rig. Investments surrounding the project are estimated at $1.069m.

ED-79

The well was drilled at a depth of 6,650ft utilizing the EDC-49 rig. Investments surrounding the project are estimated at $1m.

WON X-7

The well was drilled at a depth of 6,850ft utilizing the EDC-64 rig. Investments surrounding the project are estimated at $1m.

KHALDA

KHALDA, a joint venture between EGPC and Apache, has completed drilling new natural gas well in its concession area in the Western Desert. The production rate of Khalda in July 2016 was 4,529,805 barrels of natural gas.

EG-119X

The well was drilled at a depth of 20,060ft utilizing the EDC-59 rig. Investments surrounding the project are estimated at $12.560m.

GPC

GPC, a public sector company, has completed drilling a new crude oil development well in its concession area in the Western Desert. The production rate of GPC in July 2016 was 1,456,120 barrels of oil.

ZS-61

The well was drilled at a depth of 1.120ft utilizing the Shams-1 rig. Investments surrounding the project are estimated at $1m.

RAHIMI-10

The well was drilled at a depth of 4,741ft utilizing the Shams-1 rig. Investments surrounding the project are estimated at $2m

PETROSINAI

Petrosinai, a joint venture between EGPC and MENA Hydrocarbons, has completed drilling a new crude oil development well in its concession area in the Sinai. The production rate of Petrosinai in July 2016 was 9,588 barrels of crude oil

LAGIA-13

The well was drilled at a depth of 1,421ft utilizing the Shams-1 rig. Investments surrounding the project are estimated at $700,000.

LAGIA-15

The well was drilled at a depth of 1,820ft utilizing the Shams-1 rig. Investments surrounding the project are estimated at $800,000.

LAGIA-16

The well was drilled at a depth of 1,435ft utilizing the Shams-1 rig. Investments surrounding the project are estimated at $600,000.

WASCO

WASCO, a joint venture between EGPC and DANA gas, has completed drilling a new natural gas development well in its concession area in the Nile Delta. The production rate of WASCO in July 2016 was 1,125,413 barrels of natural gas.

S.FARASKOUR-5

The well was drilled at a depth of 9,203ft utilizing the EDC-48 rig. Investments surrounding the project are estimated at $2.572m

BALSEM-4

The well was drilled at a depth of 12,982ft utilizing the EDC-48 rig. Investments surrounding the project are estimated at $4.450m

AGIBA

AGIBA, a joint venture company between EGPC and IEOC, has completed drilling a new crude oil development well in its concession area in the Western Desert. The production rate of AGIBA in July 2016 was 1,657,271 barrels of oil.

MEL-92

The well was drilled at a depth of 6,310ft utilizing the PDI-92 rig. Investments surrounding the project are estimated at $1m

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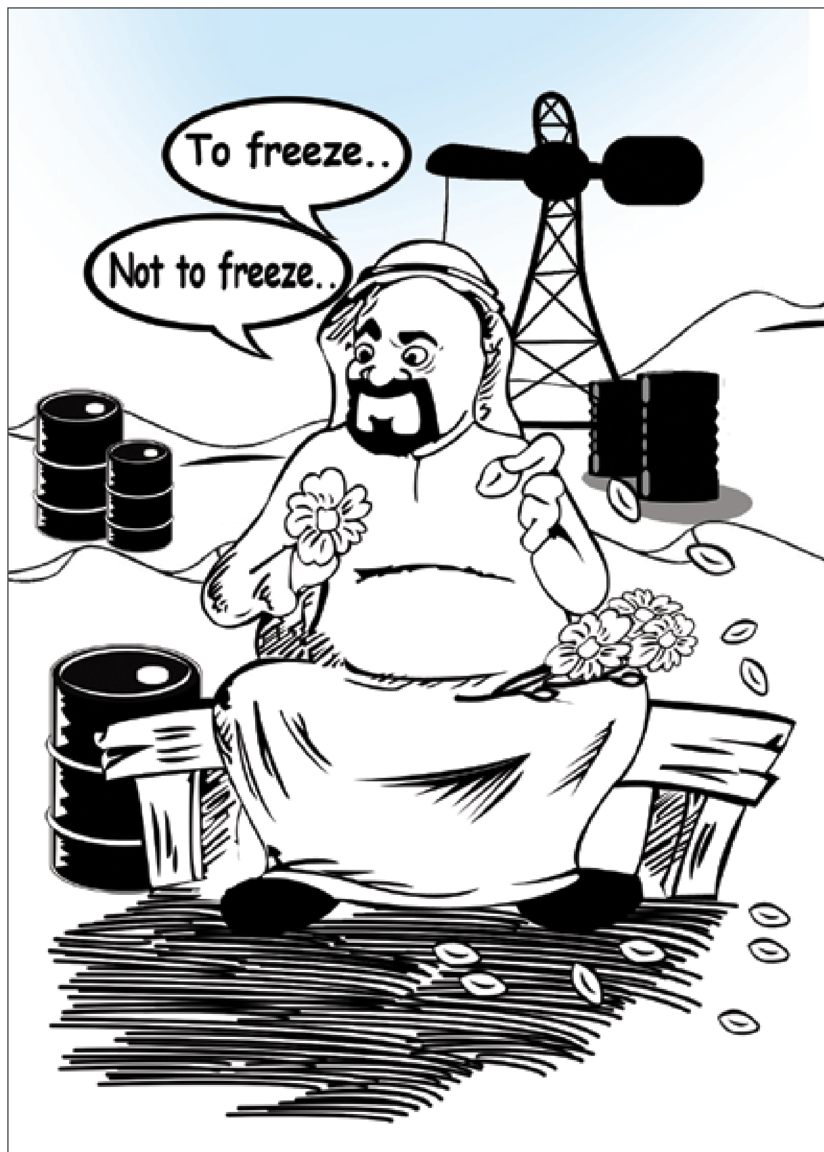
Egypt, China Collaborate on PV Facility

The Egyptian Minister of Military Production, Mohamed Saeed Al Asaar, witnessed the signing of a Memorandum of Understanding (MoU) between the ministry, China Electronics Technology Group Corporation (CETC), and Al Fath Group to construct a solar panel factory, reported Al Masry Al Youm.

The MoU addresses mutual cooperation between Egypt and China on the development of a factory to produce photovoltaic (PV) cells in Egypt, beginning with the extraction of silicon from white sand and producing solar energy units with a capacity of 1 GW annually. The project will boost Egypt's green energy capacity with the aim of supplying 22% of the country's energy with renewable power. This will enable Egypt to possibly export excess power to African and Middle Eastern markets, according to Al Youm 7.

Previously, Egypt's Minister of International Cooperation, Sahar Nasr, and the Minister of Military Production, Mohamed Saeed Al Asaar, also signed a memorandum of understanding (MOU) with Chinese company TBEA to construct a new 1,000 MW solar energy power plant in Egypt, informed Energy Trend. Minister Nasr stated that "the project comes in line with the President's directives to diversify energy sources and aims at making a quantum leap in the local manufacturing of solar power in Egypt."



Investment, Electricity Ministers Discuss FiT

The Egyptian Minister of Investment, Dalia Khorshed, met with the Minister of Electricity and Renewable Energy, Mohamed Shaker, to discuss how to reach a middle ground with investors concerning the disputed terms of the second phase of Feed-in Tariff (FiT) program for renewable energy, reported Al Borsa News.

Ministry of Electricity faced late disagreements with solar energy co-investors over domestic arbitration regarding renewable projects. Minister of Electricity, Dr. Mohamed Shaker, said that the investors were already informed on the first day of signing the contract that the arbitration would be in Egypt, in addition to the fact that payments would be in EGP.

The co-ministerial meeting came as a reaction to the news that up to 35 solar energy firms were considering withdrawing from the first phase of Egypt's Feed-in Tariff (FiT) program due to delays, currency risks, and government's insistence on domestic arbitration, in addition to the ministry's new mandate for funding structures of 85% from foreign banks and 15% from local institutes.

However, Karm Solar Company announced its endorsement of The Egyptian Ministry of Electricity's FiT program and agreed to the Power Purchase Agreement terms in regards to domestic arbitration, Al Borsa News wrote in related news.

According to Al Mal News, the Ministry of Electricity is currently considering international arbitration in the second phase of Feed-in Tariff (FiT) program for renewable energy.

Ismail: Electricity, Gas Reserves Sufficient until 2026

Egyptian PM, Sherif Ismail, stated that the country's strategic reserves of gas and electricity are sufficient to address domestic demand till 2026. The government is currently focusing its efforts on lowering the country's budget deficit to 11%, reported Amwal Al Ghad. PM Ismail added that during talks with the International Monetary Fund's (IMF) delegation to Egypt, in early August, the government agreed to various procedures for the current period, with the aim of addressing Egypt's financing gap of EGP 35b and that Egypt's economic and tax reform programs and the IMF loan will help revive the economy.

Egypt, Russia to Sign Final Dabaa Contract

Egyptian President, Abdel Fattah El Sisi, stated that final contract for the Dabaa Nuclear Plant will be signed with Russia before the end of 2016, explaining that ongoing discussions are focused on the fine print, Al Ahram reported. In a intergovernmental deal, Russia agreed to develop and service the 1,000 MW power station in northern Egypt. In May 2016, the two governments agreed on an engineering, procurement, and construction contract. Discussions moved into the final stage on deals involving nuclear fuel deliveries for the duration of the power plant's operation as well as a back-end pact on its decommissioning and service level agreements, according to Sputnik News.

Egypt Saw 10% Rise in Fossil Fuel Consumption

An official at the Egyptian Ministry of Petroleum stated to Egypt Oil&Gas that the ministry spotted 10% increase in domestic consumption of fossil fuel across all the governorates. He added that the Egyptian General Petroleum Corporation (EGPC) would continue providing the market with 1.1m tube of butane gas, 18,000 tons of gasoline, and 36,500 tons of diesel fuel per day. The 10% consumption rise lowered government's strategic petroleum reserves; however, the ministry has enough reserves of oil and gas to cover Egyptians' needs in local markets. Meanwhile, the Egyptian cabinet confirmed that Egypt's petroleum based products are to be exempted from the value-added tax (VAT).

Egypt Decreased Kuwaiti Crude Imports

The Egyptian Ministry of Petroleum announced that the crude oil import from Kuwait has decreased from 3mb/month to 2mb/month, according to Al Borsa News. The payment for the imported crude stretches over nine month. The exact price is not specified in the contract as Egypt follows global oil price scheme of Brent crude. Egypt's Oil Minister, Tarek El Molla, explained that the average of local monthly usage of petroleum derivatives and natural gas is estimated at 6.5m tons, whereas 4.2m tons are supplied by local production and the remaining 2.3m tons is imported. The Ministry of Petroleum aims at increasing local production of oil and gas from the current 695,000 b/d to 700,000 b/d during the following fiscal year.

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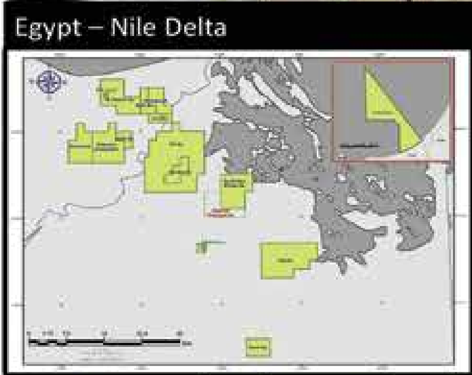

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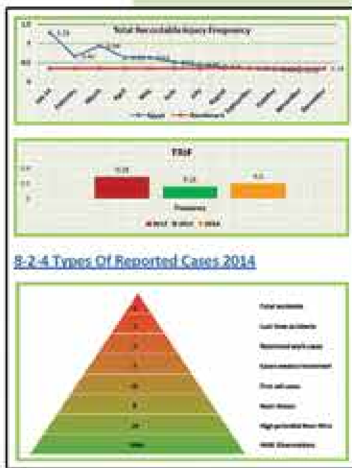

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OPEC Mulls Re-Opening Freeze Talks

Venezuela, Ecuador, Algeria, and Kuwait are among the countries which want to discuss a production freeze among the members of the Organization of Petroleum Exporting Countries (OPEC) in a bid to rein in crude output on the sideline of the upcoming International Energy Forum in Algeria in September, informed The Wall Street Journal.

However, some experts are predicting that this attempt will fail, as OPEC's key members, namely Saudi Arabia, Iraq, and Iran, continue to ramp up their production.

In light of this global initiative, global prices rose slightly by almost 3% in the first half of August.

Some industry insiders estimate that prices will get another boost later in the year. Qatar's Energy Minister, Mohammed Al Sada, said: "Expectation of higher crude oil demand in the third and fourth quarters of 2016, coupled with decrease in availability, is leading the analysts to conclude that the current bear market is only temporary," according to Bloomberg.

Meanwhile, OPEC's crude output has experienced a record high in July, reaching 33.4mb/d, despite disruption in production due to unrest in Nigeria and Libya. The organization was able to keep up production levels with a boost in crude output from its key players.

According to latest reports, Saudi Arabia, the largest OPEC producer, boosted its output to10.67mb/d in July, up from 10.55mb/d in June, Reuters reported. In the same period, Iraq marked a rise in overall crude production levels of 4.632mb/d, up from 4.559mb/d in June. In addition, Iran pumped 3.62mb/d of crude oil, with 2.74mb/d in exports, during July.

On the other hand, Nigeria reported the biggest decline of 70,000b/d. It was followed by Libya with a 20,000b/d decrease, Oil Price informed.

Morocco Discovers Significant Gas Field

Sound Energy PLC, a British upstream company, confirmed a significant gas discovery and a potential single gas column at the company's Tendrara license, onshore the Kingdom of Morocco, Reuters reported. The first Tendrara well, TE-6, was drilled to a measured vertical depth of 2,665 meters, informed World Oil.

The company has achieved a stabilized gas flow rate, post stimulation, of 17mscf/d. This is significantly above initial expectations and represents a highly commercial rate.

Together with Schlumberger, Sound Energy is preparing for the second well at Tendrara, TE-7, drilling was scheduled for August 2016. According to the plans, it was to be located approximately 1.3 km from TE-6. Furthermore, the company is planning a third well drilling later in the year, explained Telegraph.

In related gas news, in the country, a temporary reduction in gas flow rates hit Morocco following a recent earthquake near the town of Kentira, RigZone informed.

The incident resulted in the shutdown of an Office National des Hydrocarbures et des Mines (ONHYM)-owned and operated pipeline spur, which was used to transport natural gas from Kentira's Sebou field. A 30% portion of the company's regional output was affected by the disruption, according to United Press International.

Israel to Tender 24 Offshore Exploration Blocks

Israel is preparing to tender 24 offshore exploration blocks to be offered in an international bidding process by which energy companies will compete for rights to participate in exploration for oil and natural gas in Israel's economic waters, The National Law Review reported. The blocks are up to 400 sq km in size and in waters up to 1,800m deep, with some adjacent to the recently discovered Leviathan and Tamar fields.

The Israeli Energy Minister, Yuval Steinitz, said that while the government has yet to determine the type of tender, the blocks should be available by November.

The minister added that around 2,100bcm of natural gas is waiting to be found in Israeli waters, more than double the amount already discovered, in addition to potential 6.6b barrels of oil, according to Reuters. Steinitz based the estimate on a third-party geological study.

Israel entered hydrocarbon exploration in 2011with some of the largest offshore gas fields found off its coast. But developments got off to a rough start. Yet, Steinitz concluded that "things are now moving forward at an amazing pace."

Energean Buys Israeli Gas Fields

Greece's Energean Oil & Gas signed a $148.5m deal to purchase Israel's natural gas fields Karish and Tanin. They jointly contain about 58.7bcm of gas and 14.3m barrels of condensate, New Europe reported. The fields are located in the north of Israel's economic zone and have the potential to increase country's output by approximately 25.6bcm of gas and 4.3m barrels of condensate, according to The Jerusalem Post. Delek Drilling and Avner, part of Israel's leading integrated energy company, sold 100% of their shares in the fields. This comes as part of the country's Gas Framework to settle disagreements between developers and the Israeli government.

Algeria's Crude Flows at Hassi Bir Rekaiz field

Algeria's National Company for Exploration, Production, Transport and Commercialization of Hydrocarbons, Sonatrach, reported new successful drilling results with partners Thailand's PTT Exploration and Production Plc (PTTEP) and China's CNOOC Ltd. at the Hassi Bir Rekaiz project in the Berkine basin in eastern Algeria. Tests showed a crude oil flow rate of 2,406 b/d, Reuters wrote. PTTEP further indicated that the joint venture plans to submit a development plan to the authorities for approval in early 2017 after successfully completing the drilling campaign, according to Rigzone. Sonatrach, PTTEP and China's CNOOC Ltd. hold 51%, 24.5% and 24.5% interest in the 2,686 km2 block. They started the exploration campaign in 2011 and developed 10 oil and gas wells.

Libyan Authorities Debate Oil Bottleneck

The Libyan National Oil Corporation (NOC), the Tripoli-based Audit Bureau, and Mayors of the southern Libyan region discussed efforts to loosen bottlenecks on oil and power production, Libya Herald reported. Increased oil revenues are needed in order to maintain the oil facilities that have been neglected due to cash flow problems the Libyan state has faced since the 2011 revolution. The Audit Bureau also discussed effective means of cooperation in solving the obstacles to the completion of the Ubari power station and logistical and security support for foreign engineers and workers.

Tunisia Reviving Energy Sector

Tunisia hopes its newly drafted hydrocarbons code will help in reviving its suffering energy sector that has been curbed due to the political unrest across the North African country, Interfax Energy reported. Kamel Rekik, Energy Consultant in Tunis, said: "The draft hydrocarbons code is looking at making our fiscal terms more attractive than the competition's. The government is undertaking a benchmarking exercise and will do what it can to offer unbeatable terms." Tunisia's gas sector also needs better infrastructure to unlock potential new supply sources. As a result, the government introduced the Nawara gas project designed to link the country's southern gas fields to northern demand hubs.

Gulf Petrochem to Distribute IPOL Lubricants in UAE

The Emirate-based Gulf Petrochem Group signed a five-year agreement to distribute Indian IPOL brand of lubricant in the country, with operations slated to commence during the Q3 of 2016, with monthly target of 100m tons of lubricant volumes, Reuters reported. Gulf Petrochem partnered with Malaysian NGC Energy and National Gas Company SAOG, on the project, according to Business Standard. National Gas Company SAOG General Manager, Nalin Chandna, said: "Since we signed the agreement in September 2015, we have been working together to put all the necessary infrastructure in place, in order to meet our expected demand levels when operations begin."

Qatari RasGas Shipped First LNG to Italy

Qatar's second largest LNG producer, RasGas Company, has shipped its first liquefied natural gas (LNG) cargo to the Floating Storage Regasification Unit (FSRU) Toscana, in Italy, reported Peninsula News. The cargo, aboard RasGas' Al Thakhira, is to be received by DufEnergy Trading SA (DufEnergy) located in Lugano, Switzerland. The FSRU Toscana, which is one of Italy's main regasification projects, lies 22 km off the Italian coast between Livorno and Pisa. The terminal is permanently anchored to the seabed through a mooring system, with a single point of rotation at the bow, according to World Oil.

Libyan National Army Takes over Oil Terminal

In mid August, the Libyan National Army (LNA) loyal to the eastern government, established its presence close to Zueitina's oil terminal with an intention to protect and secure oil ports earmarked for crude export by the UN-backed Government of National Accord (GNA) based in Tripoli, Reuters reported. The LNA also announced that it will take over the remaining key oil terminals – Es Sider and Ras Lanuf, and threatened to target oil tankers that do not have permission from eastern authorities to dock in the port.

The act came on the heels of a recently concluded agreement to end blockades of the country's oil terminals. The deal was signed at the end of July between the GNA and the Petroleum Facilities Guard (PFG) that controlled oil ports.

Under the July deal, Libya's GNA is seeking to restart exports from Ras Lanuf and Es Sider oil ports. As per the agreement, Libya is to pay an unspecified amount in salaries to armed forces led by Ibrahim al-Jathran who commands the PFG. NOC Chief in Tripoli, Mustafa Sanalla, told Reuters that he remained uncertain over the July deal. He expressed his concerns about the agreement and warned against the monetary stipulations offered to the PFG.

Bloomberg reported that oil traders who specialize in purchasing cargoes from Mediterranean ports have low confidence in the imminent resumption of shipments from the Libyan terminals. The majority of traders interviewed by Bloomberg stated they did not expect a single cargo to be shipped from the ports by the end of September. Others said they were pessimistic any deals would last long enough to allow a resumption.

According to recent reports, Libya's

National Oil Corporation (NOC) agreed with the rival forces stationed in the area to allow the Greek flag vessel New Hellas tanker to dock in the port and transport the oil to safety, with the Zueitina storage tanks reported to contain about 3.08m barrels of crude oil and 180,000 barrels of condensate.

NOC said that the New Hellas would transport about 620,000 barrels of oil at a time to Zawiya, and that it would charter additional ships to finish the process as soon as possible, according to Marine Link.

Iraq, Global Firms Develop Oilfields

Iraq's Minister of Oil, Jabar Ali al-Luaibi, met with oil companies operating in the country and asked them to increase oil output and exports rates of crude oil and natural gas, Iraq News reported.

Accordingly, Director General of the state-run Missan Oil Company, Adnan Noshi, said that Iraq has approved PetroChina's plans to launch the third phase of development at Halfaya oilfield, to reach its planned maximum production of 400,000b/d in 2018, Iran Daily reported.

Furthermore, Iraq has reached an agreement with British BP, Dutch Shell, and Russian Lukoil to restart stalled investment in the country's oilfields worth an estimated $3.6b, Reuters reported. This agreement will boost Iraq's crude output by 250,000-350,000b/d within 2017. Similarly, Russia's Gazprom Neft brought four new oil wells, with an output of 30,500b/d, into production at Badra Field, pushing the field's total output to 3mt, Sputnik reported.

Iraq's development efforts are expected to yield positive results as the country's Basrah crude oil exports in September are predicted to reach 3.257mb/d, up 13% from August, with both Basrah Light and Basrah Heavy seeing a rise in volumes, S&P Global Platts reported. The September projection includes 2.324mb/d of Basrah Light and over 930,000b/d of Basrah Heavy, according to Platts latest provisional loading schedule.

MENA Diversifies into Nuclear, Renewables

Arabic nations have turned their attention to nuclear power in order to diversify their energy mix. The United Arab Emirates is constructing four nuclear reactors at a plant in Barakah, slated for 2020. Moreover, Saudi Arabia plans to construct up to 16 reactors over the next 20 years, informed Al Bawaba.

In related news, the Jordan Atomic Energy Commission's (JAEC) Chairman, Khaled Toukan, declared that the country's first nuclear power plant, worth $10b, will be operational by 2025, once the remaining $7b in financing is secured. Jordan is partnering with Russia to finance 30% of the project that will have two nuclear reactors, each with a capacity of 1,000 MW, Reuters reported.

Toukan, said: "Jordan is currently in talks with German, Czech, Chinese, and Japanese companies among others to supply turbines and electrical systems for the power plant and things are going well," according to Jordan Times.

On the other hand, Kuwaiti Ministry of Electricity and Water (MEW) has cancelled plans to build a nuclear power plant as feasibility studies proved the project to be uneconomical and capital intensive, reported Kuwait Times.

Kuwait is instead differing investments into alternative projects related to solar and wind energy, with several new power plants coming online between 2020 and 2030, according to Arabian Business.

Thailand's PTTEP to Sell Oman 44 to ARA Petroleum

Thailand's largest oil and gas explorer, PTT Exploration and Production Public Company Limited (PTTEP), will sell 100% stake of Oman 44 onshore natural gas and condensate project to local firm ARA Petroleum LLC. The deal is expected to close in early fourth quarter of 2016, Reuters reported. The sale is a part of PTTEP's efforts to rationalize its portfolio. The company continues to explore further opportunities in Oman. In this respect, PTTEP has signed a memorandum of understanding with Oman Oil Company Exploration and Production LLC seeking co-investment opportunities in areas of mutual interest, according Times of Oman.

Kuwait's Al Ahmadi Leak Contained

Kuwait Oil Company reported it contained an oil leak during drilling at Al-Ahmadi oil field, located in the rich OPEC member state, Reuters reported. The company confirmed there was no fire adding that the specialized team is making attempts to bring the leak under control. According to The Daily Star, there will be an investigation into the cause of the spill. Kuwait's crude production capacity is 2.8mb/d. Oil and gas related revenues accounted for around 70% of government revenues in 2015, down by about 10% due to sharp drop in oil prices, according to Kuwait Times.

Iran Raised Petroleum Output, Exports

The National Iranian Oil Company (NIOC) reported that the Islamic Republic is pumping 3.62mb/d of crude oil, with 2.74mb/d in exports during July. The exports consist of 2.1mb/d of crude and 600,000b/d of gas.

The Director of the International Affairs Department at NIOC, Mohsen Ghamsari, estimated that 25% of the country's crude exports head to Europe and 75% to Asia, Trade Arabia informed.

Foreign supertankers docking at the country's southern Kharg oil terminal, in the Bushehr province, witness a 60% increase in oil export volumes during the first four months of the Iranian calendar year, starting on March 20th, compared to the same period in 2015, informed Mehr News Agency.

Bushehr Province Ports and Maritime Organization's Director, Mohammed Benchari, stated that "a total of 250 super oil tankers have been loaded at Kharg terminal." He added that the augmented number of super oil tankers in the given period were 925 vessels, with more than 35.8m tons of products loaded and shipped.

Iran plans to further boost production to revitalize the country's oil recovery with $645m in investments. Over the next one to two years, an additional $25b is expected from foreign investors once the government starts applying the new contract model for foreign oil companies, Bloomberg reported. NIOC has identified 34 foreign companies as suitable bidders and specified 12 to 13 fields as a priority for the first round of agreements, with major European oil companies such as Italy's Eni SpA and France's Total SA expressing interests in developing Iran's oil and gas fields, according to World Oil.

Under the recently approved new contract model, international oil companies must form a joint venture with an Iranian partner. The government has already approved eight Iranian exploration and production firms as eligible partners to foreign oil companies, with a possibility to increase this number in the future, NIOC's VP of Finance & Investment, Ali Kardor, said.

Iran has thus started recognizing the positive impact of the Joint Comprehensive Plan of Action (JCPOA) implemented in January 2016, under which all nuclear related sanctions imposed on Iran would be lifted.

Saudi Arabia Targeting Asian Markets

In a bid to maintain its hold on the Asian markets among OPEC producers and to ward off competition from Russia, Saudi Aramco cut its official selling price (OSP) for its benchmark Arab Light Grade for September-loading cargoes to Asia by $1.30 a barrel to a discount price of $1.10 to the regional marker Oman-Dubai, Reuters reported.

Meanwhile, Saudi Arabia's crude import to China in H1of 2016 decreased to 14.2%, down from 16.2%, in the same period a year ago. In contrast, Russia's share went up from 11.9% to 14.1%.

In addition, the kingdom's exports to India, the second largest crude importer in Asia, have increased by 8.2%, to reach 828,500b/d during H1 of 2016. Nevertheless, Iraq has overtaken Saudi Arabia as India's top importer with 844,400 b/d of crude.

Furthermore, Saudi Arabia is facing competition from Iran, as the Islamic Republic gains renewed market share in India. Iran's oil exports to India rose to its highest level in five years, to reach 523,000b/d during July, which is a 37% jump from June's volume, and more than double that of the same period in 2015, Reuters reported.

MENA to Expand LNG Import Capacity

Countries in the Middle East and North Africa (MENA) led by Egypt, Kuwait, and Morocco, are seeking to boost their liquefied natural gas (LNG) import capacity, with investments reaching $10.3b. The region is forecasted to become the world's second-largest gas-importing area by 2040, with MENA accounting for around 6.5% of global LNG demand by the end of 2017, The Peninsula reported.

According to Bloomberg, the region plans to add permanent terminals and temporary off-shore units that will increase annual LNG capacity by 58.2bcm in 2021, which was at the level of 39.1bcm at the start of 2016. Annual LNG capacity in the region is thus expected to increase to 97.3bcm in five years.

In line with the region's trends, the UAE plans for a chartered Floating Storage and Regasification Unit (FSRU) at Ruwais, Abu Dhabi. Furthermore, Kuwait is developing a permanent terminal at Mina Al-Ahmadi with a capacity of 15bcm/y, and the possibility of doubling its output. Finally, Bahrain plans for an LNG terminal with a capacity of 4.1bcm/y, expandable to 8.2bcm/y, informed Oil & Gas Journal.

Growing demand of gas, as a more economical energy source, and a lack of cross-border pipelines in the conflict-prone region, are making MENA a growth market for the fuel.

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South Sudan to Boost Oil Production

South Sudan's Petroleum Minister, Ezekiel Lol Gatkuoth, said that the independent state is determined to increase its crude oil production by November 2016 to start exports to neighboring Ethiopia, Oil Prices reported.

Gatkuoth said that country's oil production has slumped to 130,000 b/d as a result of the ongoing struggle for independence. He further cited the pre-war crude production levels, comparing the current output with the previously recorded 500,000 b/d, yet other sources pegged South Sudan's output at 350,000 b/d instead.

The minister further noted that the government has "agreed to resume oil production in unity and other areas in Upper Nile.

According to the Sudan Tribune, he also added: "We have also discussed and agreed to review oil contracts with Chinese companies to do exploration and to continue to operate until 2018. The current contracts will be reviewed and extended."

In related news, South Sudan's Foreign Minister, Deng Alor, stated that the country has requested China to invest about $1.9b to help develop the Sudanese oil fields and to set up energy and infrastructure projects, ABC News reported.

In early August, Alor said that if China agrees on the plan, the South Sudanese government would be using the funds to reopening one of South Sudan's key oil fields in Unity State that has been out of business since the civil war of late 2013.

In addition, Alor also noted that $700m would be used to reconstruct a road

between Juba, the capital, and Wau.

South Sudan's request comes as the country undergoes an economic downfall and is facing difficulties in paying civil servants. By early August 2016, the government declared an inflation rate of about 600% during the past year, according to Business Insider.

In line with the energy investment strategy, the Minister of Investment reviewed development of the economic cooperation relations between Sudan and China, describing China as the country's economic and strategic partner. He stressed that the Chinese investments would serve interests of both countries.

After gaining its independent in 2011, South Sudan controlled about three-fourths of former united Sudan's oil production. As a result, Sudan itself lost roughly 55% of its financial revenues and about two-thirds of its foreign exchange earnings.

Nigerian Crude Production Drops

The Nigerian Minister of State for Petroleum Resources, Emmanuel Ibe Kachikwu, declared that the nation's crude oil production has fallen from an average of 2.2mb/d to as low as 1.3mb/d, Energy Mix informed. The minister said that the accumulative effect of production and price declines is more than a 60% drop in the country's income.

According to a report by the US' Energy International Administration, Nigeria's crude oil production is expected to remain depressed through 2017, as a result of militant attacks, Punch reported.

The Nigerian National Petroleum Corporation's (NNPC) Managing Director, Maikanti Baru, further explained that pipeline vandalism has resulted in a reduction of about 700,000 b/d of oil with production halts concentrated in the Niger Delta region, reported The Guardian. Baru further revealed that natural gas supply to power plants has also been impacted with a drop from 1,400mcf/d of gas to below 700mcf/d.

Oil thieves have lost Nigeria 560,000 barrels of crude to the refineries as feedstock and 109m liters of petroleum products between January and May 2016. Attacks by militants have also impacted Nigeria's exports of multiple crude oil grades, including Bonny Light, Forcados, Brass River, and Qua Iboe.

Moreover, export agreements have been under periods of force majeure since the beginning of 2016, according to Today in Energy.

Kenya to Launch Oil Production in 2017

British oil exploration firm Tullow Oil Plc will drill eight additional exploration wells in Kenya's North Lokichar region with output scheduled for the Q1 of 2017, Bloomberg reported. Tullow Oil will sink more wells to increase country's recoverable resources from the current estimates of 750m barrels to over 1b barrels.

The company's initial production will be 2,000b/d, with exports reaching 4,000b/d of crude oil in June 2017, according to All Africa. Export from the wells is scheduled to commence three months later and extracted crude will be transported by road to the Indian Ocean port city of Mombasa as a stopgap measure until Kenya constructs a pipeline.

Further, Tullow Oil already plans to transport Kenya's first crude oil to Mombasa that will last for 30 days deploying two trucks loaded with crude oil from Amosing and Ngamia fields, according to the company's Early Oil Pilot Scheme (EOPS) cited by The Star.

The Kenyan government has signed an agreement with Tullow, Africa Oil Corp., and Maersk Oil Gas AS to develop the pipeline that will link fields in the northwestern Lokichar region to

a planned port in the coastal town of Lamu.

Kenya had initially planned to partner on a pipeline with Uganda to transport crude from Lokichar region, however, it instead materialized an alternative plan to use road and rail.

In addition, Kenya is set to start the development and commercialization of the oil deposits discovered in Turkana county four years ago as the cabinet approved the transportation of up to 4,000 b/d of oil by road and rail to the port city of Mombasa for refining, Footprint to Africa informed.

Tanzania to Speed up LNG Project

Tanzanian President, John Magufuli, gave orders to speed up long-delayed work on a planned liquefied natural gas (LNG) plant in the Lindi region at estimated to cost $30b, Reuters reported. Final investment decisions have been held up by government delays in order to resolve issues related to the acquisition of land at the site, as well as establishing a legal structure for the nascent hydrocarbon industry. BG Group, which was acquired by Royal Dutch Shell, alongside Norwegian Statoil, Exxon Mobil, and Ophir Energy, plan to build the onshore LNG export terminal in partnership with the state-run Tanzania Petroleum Development Corporation.

Angola Oil Exports to Drop in Sept, Oct

Angola's crude oil exports are expected to decrease during the fall months to under 1.8mb/d across 56 cargoes in September, due to the absence of Dalia crude oil, which was estimated to increase to roughly 222,000 b/d. While October export volumes are projected to fall by 366,000 b/d to reach 1.43m b/d across 46 cargoes, as a key grade enters maintenance, representing a 10-year low in terms of b/d. These volumes have not been witnessed since October 2006, Business Recorder reported. In related news, Brent crude oil price, the benchmark for Angolan exports, for delivery in October, opened high in early August with 0.57% gains on the London market, trading at $47.17 per barrel, according to All Africa.

India, US Reduce Nigerian Crude Imports

Both India and the US have reduced their Nigerian crude oil imports by 43% and 53%, respectively, a call that translated to a loss of $270m for the African country, reported Punch Newspaper. India, as Nigeria's second single largest buyer of crude in 2013, has reduced its crude imports in May 2016 when it purchased 7.74m barrels, compared to 13.51, 12.51, and 12.70m barrels of crude from February to April 2016. The US, whose imports of Nigerian crude increased by 577.8% in early 2016, compared to early 2015, again reduced by 5.77m barrels in May, down from 10.13m barrels in the previous month, reported Energy Mix.

ExxonMobil to Reroute Nigerian Crude

US oil giant ExxonMobil plans to export Nigerian Qua Iboe crude oil through a secondary pipeline, Reuters reported. The crude oil grade has been under force majeure since mid July, yet Exxon has said there was no militant involvement in the Qua Iboe line, according to Yahoo Finance. Nonetheless, the Niger Delta Avengers had claimed an attack on the pipeline. Nigeria's oil production has been disrupted by militant actions since early 2016, with production reduced by almost 700,000 b/d, down from typically above 2mb/d.

Ghana to Maintain Domestic Oil Supply

The Ghana National Petroleum Corporation (GNPC) will sell crude from its new Tweneboa, Enyenra, and Ntomme (TEN) offshore field to the country's undersupplied refinery, instead of shipping it all abroad as it currently does, Reuters reported. This decision came due to the fact that local refineries struggle to bring in enough crude to run at capacity. Instead, the majority of Ghana's oil production was shipped abroad.

In line with the strategy for domestic supply of crude, GNPC CEO, Alex Mould, has declared that the corporation is willing to offload crude oil to the Tema Oil Refinery (TOR) if the company is competent at supplying the sufficient financial guarantees, reported Ghana Web. Ghana's Petroleum laws would otherwise not allow the sale of the product without reliable financial guarantee to pay for the oil, according to Citi Fm Online.

GNPC's CEO, Alex Mould, said that "we are prepared and willing to supply crude to the Tema Oil Refinery and any other eligible bulk consumer in Ghana." He added that the refineries will have overcome their periodic financial troubles to meet GNPC payments' requirements.

TOR had begun showing signs of profitability after seven years in the doldrums. The refinery was able to successfully witness a profit of $800,000 from its operations from February through April 2016, an achievement that is viewed as a possible revival of the company by the oil and gas experts. GNPC CEO affirmed that "the refinery has been neglected for some time. It requires financial instrument as a guarantee before we can give them oil. The law is firm on that."

In light of the commencement of oil production at Ghana's offshore TEN field – that was initially discovered in March 2009 – GNPC has been having disputed claims regarding whether or not the financial agreement, that the project is bound to operate under, is a fraud, reported Ghana Web.

GNPC CEO, Alex Mould, affirmed that the Ghanaian government has been allocated a fair interest rate since the calculation is merely based on economics. Mould has also pointed out that there has been an improvement in the primary interest, which prevents Ghana from acquiring any cost until production, Citi Fm Online wrote.

Oil Companies Owe Ghana over $700,000

Nine oil companies have failed to pay a total of $721,000 in surface rentals to the Ghanaian government in 2015, Ghana News reported. Tullow Ghana together with eight other upstream companies including Saltpond Offshore Producing Company, AGM Petroleum Ghana Limited, and Heritage Exploration and Production Company Limited have been reported to have not provided required payments. The Ghana Revenue Authority (GRA) cannot track an amount of $67,000, owed by Oranto/Stone Energy from 2013. In 2015, licensed upstream companies paid more than $460,000, which is a significant decline when compared to about $907,000 paid out in surface rentals in 2014, Ghana Web informed. As a result, Ghana's revenues from the oil sector are expected to drop by 61%.

Kenya Increased LPG Consumption by 240%

Kenya has increased the consumption of Liquefied Petroleum Gas (LPG) by 240%, compared to 2015; amid low global oil prices and the removal of value added tax (VAT) on the commodity, Xinhua reported. Currently, Kenya is consuming about 17,000t of LPG a month, up from 5,000t in 2015, as households using the fuel cheaper than kerosene, charcoal, or firewood. As a result, in June 2016, Kenya removed a 16% VAT it had imposed on the fuel to boost consumption. The use of LPG in Kenya increased to 15,000t in the early 2016, before swelling further to 16,000t after first six months, China.Org informed.

Uganda to Fund $55m in Oil, Gas Development

In his 2016/2017-budget speech, Uganda's Finance Minister, Matia Kasaija, said that over $55m had been allocated to the implementation of programs for oil and gas development, African Law and Business reported.

The Ugandan government has agreed to establish a local content fund to facilitate the financing of domestic enterprises participating in the oil and gas market. The policy acknowledges that access to finance is one of the biggest bottlenecks hindering local companies and enterprises from fully participating in the oil industry, All Africa reported.

Minister Kasaija noted that the funds will also support institutional and skills development, including operationalizing the National Petroleum Authority and the establishment of the Uganda National Oil Company.

Furthermore, Uganda's Ministry of Energy and Mineral Development announced that Uganda has chosen Nigerian firms WalterSmithPetroman Oil Limited, Oranto Petroleum International, and Niger Delta Petroleum Resources, together with Australia's

Armour Energy Limited to join negotiations on Uganda's production sharing agreements for oil exploration licenses covering a total of 3,000 square km, Reuters reported.

The selected companies will negotiate for five production sharing agreements (PSAs) covering four blocks, reported Pulse Nigeria. Bidding documents were issued to 16 oil firms, but only seven submitted bids.

Nigeria to Import Crude, Petroleum Products

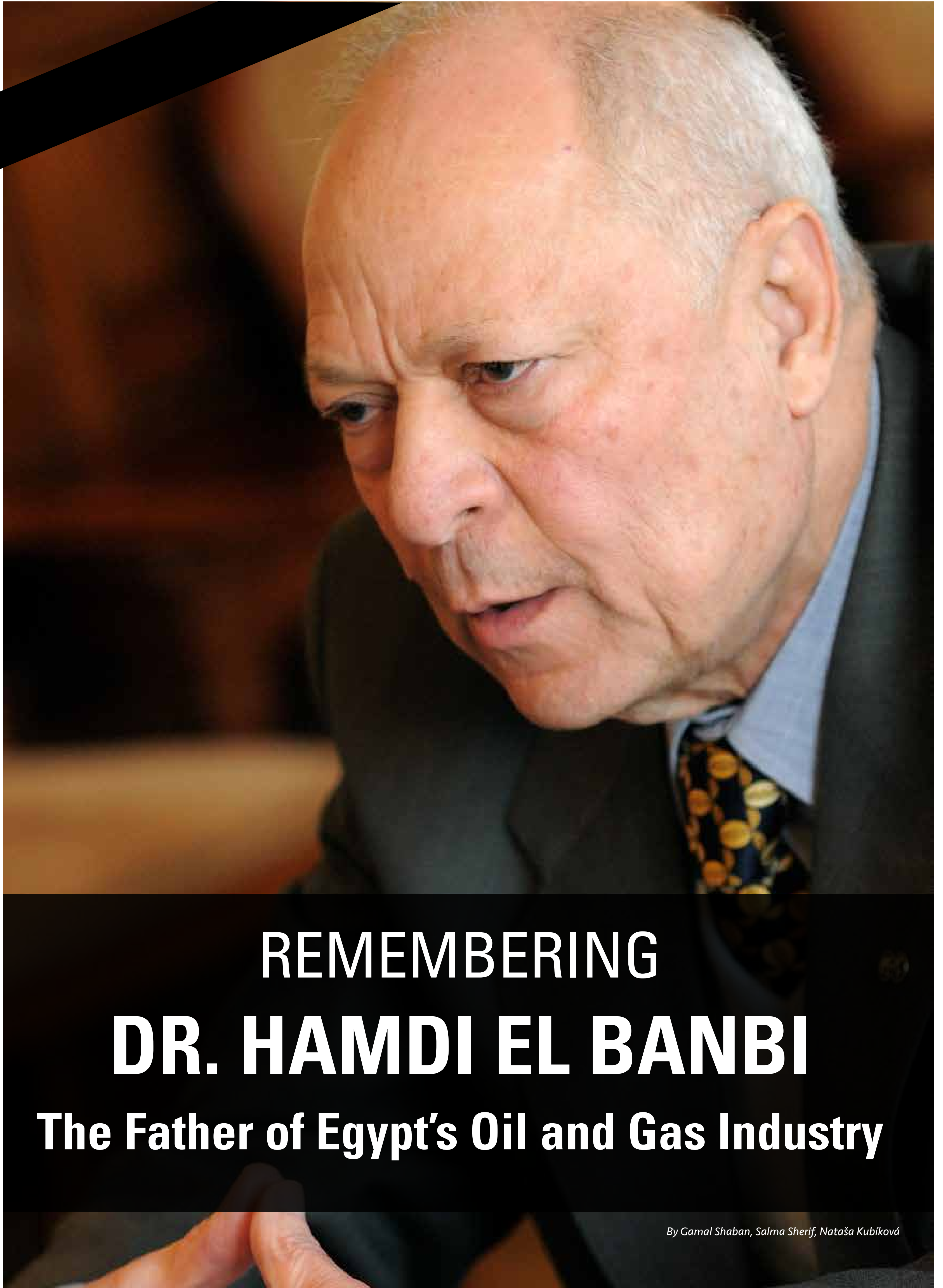
The Independent Petroleum Marketers Association of Nigeria (IPMAN) and an international company, NIMEX Petroleum Group, have plans to import 100,000 metric tons of petroleum products to complement the efforts of the Nigerian government in driving the deregulation policy, Leadership reported.

IPMAN's President, Obasi Lawson, declared that the products will be imported by NIMEX Petroleum Group and would be distributed to marketers across the country to augment supply received from Nigerian National Petroleum Corporation (NNPC) and other sources. NNPC has requested the support of the IPMAN to guarantee efficient distribution of petroleum products nationwide from September till December 2016. The company wants to make sure that petroleum products reach all Nigerians at the approved selling rates, reported This Day Live.

In addition, NNPC plans to import crude oil from Chad and Niger to nourish its Kaduna refinery's boosted capacity, Ripples Nigeria wrote.

In the wake of the country's import strategy, "the plant required some form of refitting so that it can use crude specification from those countries as well. The refitting does not involve complex technology," stated the Kaduna Refinery and Petrochemical Company (KRPC).

The initially designed capacity of the refinery was 60,000 b/d of light crude, which was later increased to 110,000 b/d, is thus set and developed to process paraffinic based crude oil from Venezuela, Kuwait, and Saudi Arabia, wrote This Day Live.



REMEMBERING

DR. HAMDI EL BANBI

The Father of Egypt's Oil and Gas Industry

By Gamal Shaban, Salma Sherif, Nataša Kubíková

Dr. Hamdi El Banbi, a petroleum engineer, who led Egypt's Oil Ministry between 1991 and 1999, suddenly passed away at the age of 81 on August 11th 2016.

Dr. Hamdi El Banbi has left behind a massive legacy that will continuously impact the Egyptian oil and gas industry. His inputs will serve as guiding principles for future visions and missions of the country's different energy sectors, promising to boost its potential and capacity. His achievements range across various segments of the industry.

New Era for Egypt's Oil and Gas Industry

As the country's oil minister, Dr. El Banbi had a different vision and made it come true. In the 1990s, he launched, what became known as a new era of the industry in Egypt. His trust in the capacities and potential of the Egyptian sectors focused on decreasing dependency on foreign production and supply. He was interested in developing the sectors' long-term business strategy that would rely on domestic resources. In doing so, Dr. El Banbi encouraged the establishment of new Egyptian investment and service companies within the oil sector that lowered Egypt's reliance on foreign inputs.

In line with that, especially in the year 1997, many Egyptian oil and gas exploration and production companies (E&P) were founded under El Banbi's leadership. Their role was to inject more investments and thus facilitate further domestic development in the sectors.

As Eng. Shaheen Shaheen, IPR Egypt Vice President told Egypt Oil&Gas, "during his reign, the number of upstream companies jumped from a handful few to more than thirty companies." Unlike in previous practices, when "all the engineering designs and constructions were done by Italian and American companies," he added, Dr. El Banbi opted for a different strategy and "established Enppi and Petrojet at a time when no one thought we could do without foreign help."

In addition, El Banbi has also taken the maintenance companies into consideration and founded the Egyptian Maintenance Company, and Alexandria Petroleum Maintenance Company (PETROMAINT). Furthermore, he recognized the need of adequate fund raising programs to develop other various petroleum service, production, and maintenance companies such as Alexandria Mineral Oils Co. (AMOC), Sidi Kerir Petrochemicals Co. (Sidpec), and Alexandria National Refining & Petrochemicals Co. (ANRPC).

Another significant achievement of Dr. El Banbi's leadership at the Oil Ministry was the establishment of the biggest crude oil refining company in the region. Under his supervision, the Middle East Oil Refinery (MIDOR), the Egyptian shareholding company, was founded in July 1994. It necessitated an investment cost of $1.1 billion and the aim of this project was to refine crude oil in Egypt and produce high-quality petroleum products that would be suitable not only for domestic market, but also to be exported globally.

On this account, Former Vice Chairman of the Petroleum Authority, Eng. Medhat Youssef, noted that "in 1994 Dr. El Banbi also attempted to establish another multimillion dollar company - similar to the MIDOR project - that would take place in the Suez Governorate, but unfortunately the international banks refused financing his project that needed a minimum investment amount of $600 million."

Nonetheless, Dr. El Banbi strongly promoted local production and manufacturing. "Building drilling platforms and surface units of artificial lift pumps saved Egypt billions of dollars," noted Eng. Shaheen. GUPCO's Media General Manager, Ashraf Zein Al Abedeen, remembered El Banbi's role as CEO of Gulf of Suez Petroleum Company (GUPCO). He noted that El Banbi's work resulted in the construction of many offshore platforms, in addition to many inshore facilities, at the company's concessions in the Gulf of Suez and in the Western Desert, and in the expansion of Ras Shokeir field.

This active, locally reliant approach of Dr. El Banbi, won him many supporters. Mahmoud Shawkat, Director Sales & Marketing – Egypt, Libya & South Sudan at Baker Hughes wrote to Egypt Oil&Gas in an email statement that in 2000, Dr. El Banbi was actively raising awareness among the Egyptian industry players to that end. "At an oil & gas event, Dr. El Banbi stopped by Petrojet booth and opened a long discussion about if we design and manufacture locally. After that, he handed me over his business card, asking to meet with Petrojet management to collaborate and finalize an agreement for Made in Egypt Products scheme. This was a surprising moment for me," remembered Mahmoud Shawkat.

In light of this strategy, Dr. El Banbi already in 1970s, then as CEO of GUPCO, ensured that the company itself "granted up to more than 600 BOPD to the country's national grid, which was 60% of the country production by then," said Mahmoud Shawkat, who worked at GUPCO at the end of 1980s. Under El Banbi's chairmanship, GUPCO experienced "a phase of production increase as well as a phase of improvement for the main fields such as Morgan, July, and Ramadan fields," GUPCO's Media General Manager, Ashraf Zein Al Abedeen told Egypt Oil&Gas.

International Cooperation

Dr. El Banbi in his ministerial time also recognized the role that foreign oil investors could play in the Egyptian energy industry, yet merely within the strategic framework of locally-focused development.

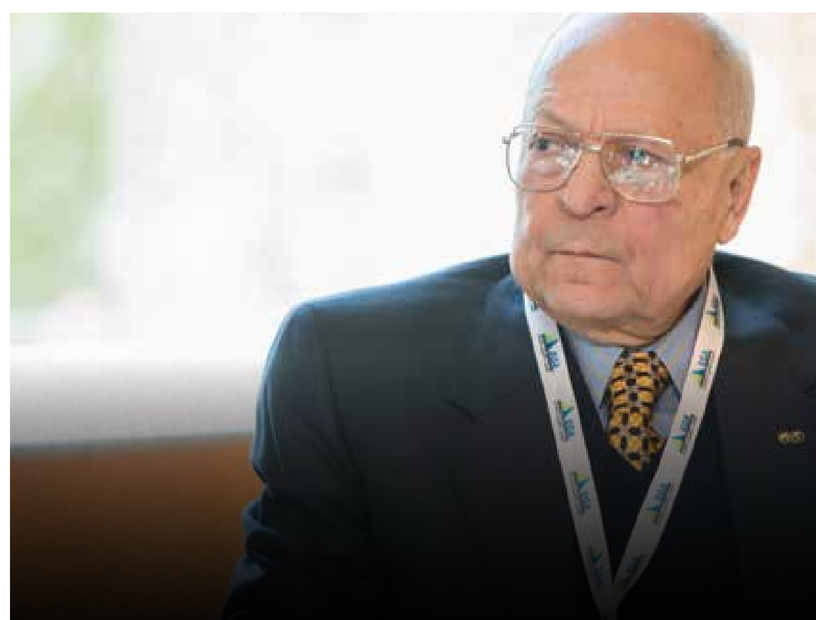
Firstly, Dr. El Banbi introduced a novel price equation for oil and gas. As he linked oil price value with Brent Crude Prices, he has succeeded in gaining attention of international oil companies (IOCs) to invest in developing the fields and undiscovered reserves in the country.

This approach resulted in new discoveries that have rendered oil a vital element of the Egyptian economy in the late 1990s, despite the fact that Egypt had never been among the most dominant players in the international oil scene. Egypt's oil exports were the major source of scarce foreign currency during that period, as oil accounted for an average of 40% of Egypt's export earnings and 10% of the Gross Domestic Product (GDP).

During Dr. El Banbi's era, Egypt thus witnessed numerous, new oil and gas finds that enhanced the country's oil production rates. The opening of the first Egyptian private sector oil field, Burj Al Arab, that is located in the Western Sahara region, in July 1997, and the Beni Suef Petroleum field, launched in October 1997, both came as invaluable evidence of his accomplishments.

At the same time, in the period when Dr. El Banbi was the minister, "Egypt adopted new strategies in oil and gas industry such as exploring excavating in the Mediterranean deep waters that led to the currently discovered concessions in the Mediterranean Sea," affirmed Ashraf Zein Al Abedeen. Further, the signing of the binding agreement between the Egyptian General Petroleum Corporation (EGPC) and Italy's Eni to construct and develop a pipeline to transport natural gas from the offshore fields in the Mediterranean Sea to the North of Sinai through an underground tunnel located underneath the Suez Canal materialized. The project began in August 1998. On top of that, Dr. El Banbi took a courageous move and promoted exploration for hydrocarbon reserves in remote sites.

Dr. Hamdi El Banbi clearly believed that



"Dr. El Banbi was a great leader in our industry who has left a strong imprint that will never be forgotten."

Mahmoud Shawkat, Director Sales & Marketing – Egypt, Libya & South Sudan, Baker Hughes

"He was not just a minister, he was a legend. He was a mentor to our entire generation."

Eng. Shaheen Shaheen, IPR Egypt Vice President

"He was an unconventional minister who made efforts to establish investment companies for the industry."

Eng. Khaled Abu Bakr, Chairman of the Egyptian Gas Association

"[Under his leadership], Egypt adopted new strategies in oil and gas industry such as exploring in the Mediterranean deep waters that led to the currently discovered concessions."

GUPCO's Media General Manager, Ashraf Zein Al Abedeen

a minister's main objective is to efficiently and effectively increase both the production and the resources within the country. There is no doubt that Dr. El Banbi has succeeded in reaching this objective, even though his leadership came in a very challenging period that sent shocks all over the international oil market, even to the most oil-rich countries, due to the arising of the 1991 conflict in Iraq. Dr. El Banbi has clearly converted these challenges into opportunities during this unstable time period.

Natural Gas Network

As for the natural gas sector of the Egyptian industry, Dr. Hamdi El Banbi was the first Egyptian official to address the country's urgent need for expanding the natural gas network throughout the governorates. His gas-to-home delivery scheme marked a significant shift in gas supplies all over the country. He applied this system in operating air conditioning in Egyptian homes, which rendered the country a pioneer in this area across the Middle Eastern region.

Furthermore, he realized the importance of diversifying the country's fuel supply system, which appears to have been enrooted by now as an inevitable element in the Oil Ministry's strategic planning. In his view, natural gas was also to be included as an alternative fuel for vehicles.

Most recently, in February 2016, Dr. El Banbi presented his contribution to the natural gas sector at the executive roundtable - The Future of Natural Gas Industry in Egypt, as EGA's Honorary Chairman. In his remarkable presentation, El Banbi shared his insight in the challenges that the energy sector is facing. He said that while "we try to minimize the costs, we try to increase production, we try to do liberalization from one part or another, we should not wait until everything is established; instead all areas should be worked on simultaneously." He reiterated that "one of the most important things to do at the present time is to concentrate on increasing production at minimal costs." He thus again showed that he has been a vocal advocate of locally branded developments in the natural gas sector.

As Eng. Shaheen Shaheen, IPR Egypt Vice President, remembered in an email statement to Egypt Oil&Gas, he met Dr. El Banbi in June 2016, and on this occasion he held a prolonged discussion with him about his forecast for the future of natural gas in Egypt. "Dr. El Banbi told me that the current shortage of natural gas in the country is temporary and he predicted that Egypt will start exporting the gas already in the next few years," explained Eng. Shaheen. It is still to be seen if the Egyptian gas sector succeeds in this regard and fulfills this aspiration and vision of Dr. El Banbi.

Environmental Concerns

Dr. El Banbi was also a pioneer when it came to meeting the ministry's environmental responsibilities. He was aware of the environmental consequences that the nature of the oil and gas industry is prone to cause and how the exploration and exploitation operations within the industry are infamous for heavily contaminating the environment and causing diseases to the indigenous societies.

In one incident, after conducting various types of research on Egypt's increasing levels of pollution, the Oil Ministry realized that lead-based substances used in refining the petroleum products are carcinogenic substances and can increase the number of lung cancer patients in Egypt. Based on Dr. El Banbi's request, Egypt's oil and gas experts and scientists have teamed up to come up with an alternate substance to replace the lead used in refining. After many phases of experimentation, it was proven that the new discovered substance is more friendly to the environmental and is not hazardous to the individuals' health. The experiment was then transferred to the refining locations in Cairo, Alexandria, and Suez.

Doing Good as Oil Minister

In his interview with El Masry El Yom in 2011, Dr. El Banbi shared his experience when he worked as a minister in a positive tone. He believed he was lucky and ready for the challenge it entailed. El Banbi said: "I was dealing with all the minds of administrators and scientists, but the difference between being a minister and being a chairman of a company is that, in the latter, you work in a specific framework, but being a minister necessitates political leadership and has its own requirements. It has its work style, in addition to the accountability to the parliament. These factors affect performance since that the minister's main concern is to increase production and resources."

In light of this awareness, Dr. El Banbi added: "During my position as a minister I think I managed to do good for the country. I supervised the completion of many agreements, and addressed the issue of natural gas to be used instead of fuel."

On the other hand, El-Banbi criticized the policy, through which people in ministerial positions are rewarded and withdrawn. He said, in the same interview, that "the worst thing at the ministry is that someone gets hired, then he is dismissed from his job replaced by another person without any logical reasons."

Legacy of Dr. El Banbi

Dr. El Banbi's legacy for Egypt's energy industry will continuously shape the steps that the ministry and the government will adopt in the future. Throughout the decades of his public service, he has become an inspirational model for generations to come. His ability to take strategic decisions in critical times made Dr. El Banbi "a scientist in the garb of a knight" as many officials in Egypt's oil and gas industry acknowledged, including Eng. Khaled Abu Bakr, the EGA's Executive Board Chairman in an interview with El Masry El Yom in August 2016.

Dr. El Banbi has been recognized as a true visionary. "In 2008, in a TV interview, Dr. El Banbi mentioned that oil is no longer a weapon to be used against others and we, as a nation, have to look for a different strategy with the West," remembered Mahmoud Shawkat, adding that "this statement has come true as we can see nowadays."

It is thus no exaggeration to note that as a petroleum engineer, Dr. El Banbi presented himself as an exceptional visionary strategist. According to Eng. Khaled Abu Bakr, Chairman of the Egyptian Gas Association (EGA) cited by El Masry El Yom, "Dr. El Banbi was a wise and prudent person in problem solving. He was an unconventional minister who made efforts to establish investment companies for the industry." A range of his achievements thus undoubtedly led many, including Former Vice President of EGPC, Medhat Youssef, to recognize Dr. El Banbi as "the founder of the petroleum and gas industry in Egypt," as El Masry El Yom quoted him saying in August 2016.

"In brief, Dr. El Banbi was a great leader in our industry who has left a strong imprint that will never be forgotten. If someone decides to issue an energy book, Dr. El Banbi's history will take a big part of it," concluded Baker Hughes' Director. "He was not just a minister, he was a legend. He was a mentor to our entire generation as people would seek his advice for career-related decisions, his wisdom. His scope of vision always proved to be the best," said Eng. Shaheen Shaheen.

Hamdi El Banbi was an exceptional engineer, doctor, manager, minister, businessman, and politician. He was a living proof that simplicity, hard work, discipline, and ambition are what shape a petroleum engineer into a legend. The projects, achievements, and milestones that Egypt has reached during his leadership have highly contributed to the whole Egyptian economy and shaped Egypt's current energy sector. He will remain as an inspiration to many current and upcoming officials in Egypt's industries.

Farewell Doctor Hamdi El Banbi, the father of the Egyptian oil and gas industry.

Dr. Hamdi Ali Abdul Wahab El Banbi *was born in Assiut on August 7th, 1935. He was the fifth-oldest son in a family of 12 siblings and always dreamt of becoming a Petroleum Engineer. He earned his Bachelor degree in Petroleum Engineering from Cairo University in 1959 and then conducted his post graduate studies in Economics of Petroleum Engineering at the University of Moscow after receiving a scholarship from the then-President Gamal Abdel Nasser in 1960. He earned his Doctorate degree in the same field from Texas A&M University in 1963. In the same year, he joined the Eastern Petroleum Company as a Production Engineer. He worked there until 1966 when he decided to become a lecturer at the Faculty of Engineering at Al-Azhar University. Two years later, in 1968, Dr. El Banbi started his nine-year career at the Western Desert Petroleum Company (WEPCO), where he kept moving up the ladder until he became the highest authority at the company's General Directorate of Operations. Later on, in 1977 Dr. El Banbi was granted the chairmanship of the Gulf of Suez Petroleum Company (GUPCO) and stayed in this position for 11 years. In 1988, after gaining an extensive experience in the Egyptian energy sector, he started serving as the Chairman of the Egyptian General Petroleum Corporation (EGPC) until 1991. In that year, his acquired knowledge and experience served him well to get him nominated by the Egyptian cabinet, headed by Prime Minister Atef Sedki, to replace Abdel Hadi Qandil and become Egypt's 17th Minister of Petroleum. Dr. El Banbi led the Ministry of Petroleum until October 1999.*

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COMPLEXITIES OF REGULATORY FRAMEWORK ALTERNATIVES

By Gamal Shaban

Investments in Egypt's oil and gas sector have remained fairly weak over the last few years. This reality emerged not only because of the nation's high political risk and unstable economic situation, but also because some legal aspects within Egypt's oil and gas regulatory framework failed to grant both the international oil companies (IOCs) and the privately-owned oil and gas companies the rights that they were seeking.

Egypt has been struggling with maintaining a reputable relationship with its foreign oil and gas investors in the recent years, amidst its increasing domestic energy demand. Even though the Ministry of Petroleum and Mineral Resources has been continuously boosting the nation's energy output and offering various attractive onshore and offshore international concession bid rounds, IOCs have been having their doubts before entering in any of these concession agreements with the Egyptian government.

The Egyptian government has adapted a new legal framework already in 1973. It decided to give up the tax/royalty system in regulating the concession agreements and follow Production Sharing Agreements (PSAs) instead. The production sharing agreements that are widely known as equal sharing agreements were concluded between one of the three official entities - the Egyptian General Petroleum Corporation (EGPC), the Egyptian Gas Holding Company (EGAS), and Ganoub El Wadi Petroleum Holding Company (GANOPE). The government proclaimed that PSAs have thus reduced the pressure on the state budget and promised better outcomes for the foreign investors. Simply, the PSAs were perceived as a win-win scenario.

> *"[The cost recovery process] is one of the main areas that I have seen oil and gas companies struggling in."*
>
> *Ahmed Haggag, Partner at Sharkawy&Sarhan Law Firm, Oil and Gas Legal Expert*

Yet, almost 50 years later, the international oil and gas firms operating within the Egyptian market are struggling under the PSAs provisions. They are unable to collect their payments, acquire better rates of return, earn their production shares, and expand within the sector. International exploration and production (E&P) companies and energy firms may perceive the existing legal system in Egypt as inefficient as it fails to secure their payments.

In light of the current unfavorable development in the market, ongoing debates in the industry advocate for modifications of various aspects within the contemporary oil and gas legal system. Such a move would help Egypt entice the private-owned and international oil and gas companies to expand their investments in the country, hence, enhance Egypt's domestic productivity, generate more revenues, and balance the country's economic situation.

PSAs Grant Government Control

The PSAs are to bring in foreign firms to explore and exploit the reserves, which would balance out countries' lack of relevant expertise or technology needed to execute such operations. All of the current concession agreements in Egypt are issued under the PSA contract scheme.

The PSAs enable the government to have better control over the strategic industry and the state gets to continuously supervise the operations and approve the accounts, thus better regulate the market. Previously, under the tax royalty system, the government had no upper hand over the operations, as it enabled the contractor to work as a private business and only pay taxes over the volumes produced. Representatives from the Egyptian government along with some officials from the privately-owned oil and gas companies believed that the PSA system is a lucrative alternative to the former tax royalty system. In 2015, the Deputy Assistant CEO for Agreements at EGPC, Nasser Wali, told Egypt Oil&Gas that "PSAs are the best model agreement for countries like Egypt, as according to the country's mineral resources law, all the country's mineral resources belong to the state." Yet, the situation might have changed since last year, as Samir Abdelmoaty,

the then-Country Manager of Beach Petroleum, the company that was recently sold to RockHopper, told in an exclusive interview with Egypt Oil&Gas. In his words, while "production sharing agreements is a good working model for deepwater (offshore) projects, tax royalty payments offer a good alternative as well, and so does technical service agreement."

It has become clear that the PSA system poses certain limitations and constraints and may need to be reviewed. Most important aspect of PSAs is that they necessarily place all the financial risk on the investors' shoulders in regards to exploration and production operations, according to Nagy Iskander, an independent oil & gas consultant. Instead, and especially during the period of depressed market, the financial risk should be shared on an equal basis with the state, as he suggested in an article published by Daily News Egypt in April 2016. Therefore, Iskander proposes to shift from Production Sharing to Tax/Royalty regulatory framework, in particular in the gas sector.

Other alternatives, as Abdelmoaty further explained, should also be taken into consideration as "these will mitigate cost recovery mechanism problems and speed the approvals."

Time-Consuming Cost Recovery Process

Egypt's legal system has not successfully secured the foreign investors with their rightful cost recovery. Under the concession agreements as defined by the PSAs system, the contractor is entitled to gradually recover all the costs and expenses that are attributed with the operational activities at the concession area, in terms of earning around 30-40% of the produced oil and gas, Ahmed Haggag and Reham Eissa wrote in The Oil and Gas Law Review, published by Gideon Roberton, the law company.

On the subject related to gas agreements, expert Nagy Iskander further mentioned that "since extraction of deep-water gas under high pressure and high temperatures is capital intensive, accounting for billions of dollars, it is expected that the cost recovery share would be high in the early years of production, reaching 70-80%, in order for the foreign investor to generate an acceptable rate of return." However, he further argued, the percentages offered under Egypt's current legal system are insufficient for the foreign investors.

In addition, the process of earning the cost recovery approval is hectic and time-consuming. Upon entering any agreements "the foreign partner already estimates that 10-15% of the amounts disbursed will not be recovered" as Iskander stated.

In an exclusive interview with Egypt Oil&Gas, Partner at Sharkawy&Sarhan Law Firm and an oil and gas legal expert, Ahmed Haggag, affirmed that earning the cost recovery approval is definitely a lengthy process in Egypt. He noted that "this [cost recovery] is one of the main areas that I have seen oil and gas companies struggling in. Usually the EGPC becomes very conservative when it comes to approving the costs incurred by contractors."

He further explained that the EGPC views some entries or some expenditure that is incurred by the IOCs within the price quota as unnecessary activities, which are not required for production. Based on his own experience, he said: "I have seen lots of disputed entries whereby EGPC states that this entry or this expenditure was not necessary and they [the foreign parties] have already done it - thinking they will recover the cost anyways."

Therefore, EGPC is reluctant to issue cost recovery approvals. In response, the IOCs then tend to apply for a competence hearing with the EGPC in order to discuss how expenses, incurred in the statements, were necessary for either exploring or producing. This type of disputes usually lasts for a longtime beyond the agreed upon timeframe.

In principle, Ahmed Haggag added that he has never witnessed "a smooth cost recovery process in Egypt." He believes that it is more of an accounting related problem. He believes that this requires further efforts from the officials to make it a well-ordered process instead.

"Production sharing agreements is a good working model for deepwater (offshore) projects, tax royalty payments offer a good alternative as well, and so does technical service agreement."

Samir Abdelmoaty, the then-Country Manager of Beach Petroleum

Collecting Dues

Another risk that various IOCs have faced in Egypt is collecting their rightful dues from the government on time. Even though the PSAs in Egypt are considered virtues of law, therefore payments and re-payments are protected and upheld by national law, the arrears to IOCs are not being secured.

In mid 2014, for instance, the total dues that the Egyptian state owed to IOCs reached an all-time high of over $8 billion. They were later reduced to $3.4 billion in the first quarter of this year and in August 2016, the Egyptian Gas Association (EGA) reported that Egypt's oil and gas sector's foreign debt stood at $3.2 billion in total. The attempts by the government to straighten out the bills with IOCs appear critical, as some companies already announced to have paused their operations, over the repayments gaps.

The Germany-based RWE company has frozen its operations and development plans at its respective concession areas until the firm receives back its rightful shares of money and volumes of production in full. The move came in July 2016, when a total balance of late dues to be paid to the company reached $400 million. Furthermore, other companies, like the Norway-based Scatec Solar, have announced their plans to completely withdraw from the Egyptian market.

Limiting Market Growth

This implies a whole new risk for IOCs that is forcing IOCs to reconsider entering the Egyptian market. Legal expert Ahmed Haggag, who previously consulted major energy companies like RWE, Shell, KUFPEC, Merlon International, and IPR Group of Companies, said: "The main hot topic that all the oil and gas companies are worrying about, especially nowadays, that all the companies are aware that Egypt is having a general problem with the USD liquidity, is how to secure their payments. Most of the advice I provide now is on how to secure payments and how to negotiate a better payment mechanism with EGPC."

While the main reason behind not paying the foreign investors is of economic nature, the failure to sooth the case in its entirety is an indicator of a weak risk management strategy within the existing PSAs system.

Therefore, the Ministry of Petroleum has been proactively working on insuring that all the agreements, contracts, and legal provisions are met and insulated from disruption to lessen the weight of risks attributed with investments in the Egyptian energy sector. Nonetheless, further measures and more efforts are to be directed towards introducing alternatives within the legal framework that would preserve the foreign investor's payments rights, even in the absence of foreign currency in the country.

In a general analysis, these prerequisites of Egypt's legal system seem to be limiting the country's potential.

The above outlined legal and economic deficits suggest that new investors are hesitant about entering the Egyptian energy market. The competition and the expansion opportunities within the Egyptian oil and gas market are restrained. As it appears, only the existing exploration and production (E&P) companies, that have former experience from Egypt and maintain relationships with the three governmental bodies, become active players.

Alternatives at Hand

In order to overcome the lack of incentives over the agreement framework, Nagy Iskander, propose that the tax/royalty system may be revisited to potentially replace the PSAs scheme. "If the tax/royalty system is introduced [again], many large- and mid-sized E&P companies will work hard to penetrate the Egyptian market, given their knowledge and experience with this system worldwide. This will result in more competition in the Egyptian market, and will reduce investment risks, which could be balanced against projected revenues," he argued. This is, however, only one of possible solutions.

In attempt to design another alternative, some legal experts reflect on deficiencies that cut across different segments. Ahmed Haggag believes that one of "main challenges that we are having here is bureaucracy; the EGPC, being a governmental authority, sometimes tends to be a bit bureaucratic, one obvious example is with the cost recovery process, and also with handling the operations with the contractor under the joint ventures, and this can create deadlocks." Therefore, minimizing the level of bureaucracy may enhance government's negotiations with IOcs. It will lead to faster decisions and thus grant the IOCs with more flexibility and speeded results.

Other argue that the PSA might be the right system for the government to follow after all, as it gives it more control over its concession areas. Nonetheless, the system would require further modifications from the government's side to minimize the levels of risk that foreign investors consider ahead of entering any new market.

The Egyptian government has been insistently trying to come up with new oil and gas market regulations that appear more enticing in the eyes of the foreign investors thus may help attract further investments. However, the change has not yet materialized even though the feverish discussion in the industry is bursting. As Samir Abdelmoaty noted, "we talked about the pending amendments [to agreement structure] on different occasions, such as at the last roundtable at the Egypt Oil&Gas annual convention. But the change would have to come from the government's side."

To date, there still remain crucial aspects to urgently address with regard to the legal framework. Egypt's lawmakers and government official may, therefore, seek to swiftly amend the rules and regulations regarding the exploration and production sharing costs, the cost recovery processes, and energy market competition. This would need to come in line with economic growth that would minimize foreign currency fluctuations and thus guarantee country's capability to pay off its foreign debts. There is no other way for Egypt to be able to overcome its energy and general economy crises, to regain its previous achievements, and to become an energy exporter once again

Navigating through Production Sharing, Concession, and Service Agreements

By Essam Taha, Attorney at Law, Petroleum Agreements Expert

Production Sharing, Concession, and Service Agreements are the three basic types of the contractual arrangements executed in petroleum exploration and production. These agreements are concluded between the host country (HC), where the exploration and production operations will take place, whether in its onshore or offshore territories, and its national oil company (NOC) and a petroleum company (IOC). IOC may consist of one company or a group of companies (consortium) and might be local or international.

Under the system of production sharing agreement (PSA) and service contract (SC), IOC shall be called a Contractor, and under the concession agreement, it shall be called a Concessionaire. The difference in the name of the IOC refers to the difference in the role of the IOC under each type of these contractual arrangements.

Production Sharing Agreement (PSA)

PSA is widely used in many countries; however, there is no standard or international model and each country may have its own version. Nonetheless, there are some basic features of the PSA model that are generally adopted:

1. IOC is appointed by the HC or its NOC as an exclusive contractor but not as a concessionaire.
2. IOC is conducting petroleum operations at its sole risk, at its own expenses, but under the control of the HC or NOC.
3. HC shall, in the case of commercial production, own the produced petroleum, except for a share that will be allocated to the contractor for the purposes of recovery of its costs and expenses and for the profit share.
4. After deducting the share allocated to the IOC's cost recovery, as specified in the PSA, and might be different from an agreement to another, the remaining portion of the production shall be divided between the HC or its NOC and the contractor. This portion shall constitute the contractor's Profit Share, which shall be subject to the percentage specified in the provisions of the PSA.
5. Contractor's Profit Share is taxable; however, some HCs are exempting contractor from paying taxes and some other countries paid such taxes on behalf of the contractor and to the account of the contractor from its own share of the production.
6. Entitlement to the assets (lands, equipment, tools, and installations) purchased by the contractor for operations under the agreement shall be passed on to the HC or NOC, immediately or overtime, in accordance with the cost recovery regime.
7. In principal, managing the operations under the PSA shall be under the control of the HC or its NOC.

An example of such a control mechanism, under the Egyptian petroleum exploration and exploitation agreement is as follows; during the exploration phases, contractor is obliged to prepare an exploration work program and budget for the area setting out the operations it proposes to carry out during the ensuing year. The work program and budget shall be subject to review by a joint committee (Exploration Advisory Committee), which shall consist of six members; three of them shall be appointed by the Egyptian General Petroleum Corporation (EGPC) and the other three by a contractor, the chairman shall be appointed by the EGPC from among its members.

Upon achieving the commercial discovery, whether for oil or gas, EGPC and the contractor shall form a joint venture company to carry out all development operations of the discovery and exploration operations for the area (Operating Company). Capital share of the Operating Company shall be divided between EGPC and the contractor by 50% each. The board of directors shall consist of eight members, four of whom shall be appointed by EGPC and the other four by the contractor. The chairman of the operating company shall be designated by EGPC and shall be named as the Managing Director.

Concession Agreement

Concession Agreement represents the second type of the basic petroleum exploration and exploitation contracts that organize ad govern the rights and obligations of the HC, NOC and IOC.

Concession Agreement is the first contractual arrangement known all over the world and since the World War II it became the common known type in most of the countries, especially in the industrialization ones.

Under the concession type, IOC shall become the owner of all petroleum produced from the agreement's area, except the share of royalty to be paid by IOC to the HC or NOC. However, HC shall remain the owner of the petroleum up to the wellhead prior to production.

Under the Concession Agreement, the HC's or NOC's revenue from the produced petroleum shall consist of the royalty, which shall be paid either in cash or in kind upon the request of the HC or NOC, and an income tax to be paid by the IOC on its net profit achieved from the production. Other taxes and fees, which might be included in a special petroleum tax, are paid out on excess profit.

Concession Agreement is also referred to as "Tax Royalty Contract" or as "License" and its main features are the following provisions.

1. IOC shall have an exclusive right to explore the agreed area, and after achieving the commercial discovery, it shall have the exclusive right to exploit production. Exploration and exploitation shall be at IOC's own risks and expenses and it is to be granted for a certain specific period of time.
2. IOC shall own the whole production and can freely dispose of it, subject to the obligation of paying royalty and the obligation to fulfill the requirements of the local market, if any.
3. IOC may be subject to the payment of rental fees for the concession's area. Such rental fees may be applied on the exploration period(s), or the exploitation period or on both.
4. IOC shall be obliged to pay royalty to the HC or NOC. It may be agreed that royalty is paid in cash or in kind upon the request of the HC or NOC, unless HC or NOC decided to exempt the IOC from paying such royalty.
5. IOC is obliged to pay Income Tax on its net profit achieved under the concession agreement, as well as any other taxes applied in the HC.
6. The equipment, tools, and installations used by the IOC in the petroleum operations during the term of the concession agreement shall belong to the IOC, and might be transferred to the HC or NOC at the expiration of the concession agreement, at no cost, unless HC or NOC requests IOC to remove

them from the concession agreement's area.

IOCs in between PSA & Concession Agreement

In both types, IOC carries all the financial risks, provides necessary funds, equipment, know-how, and professional personnel. However, there are several differences between the two - Concession Agreement and PSA - that IOCs should take into consideration.

- Under the Concession Agreement, IOC is a concessionaire, whereas under the PSA, IOC is a contractor.
- Under the Concession Agreement, IOC is the holder of petroleum mining rights; whereas under the PSA, IOC only has the exclusive right to perform exploration and production operations.
- Under the Concession Agreement, IOC shall pay the royalty, whether in cash or in kind; whereas under the PSA, royalty might be deducted from the whole production before making any distribution to such production. It may also be paid by the HC or NOC on behalf of the IOC or it may be completely waived.
- Under the Concession Agreement, there is no recovery for IOC's costs and expenses as IOC shall own the whole production, except the royalty share, if any; whereas under the PSA, IOC shall recover all of its costs and expenses from a share of production allocated to the account of the cost recovery, subject to review by the HC or its NOC.
- Under the Concession Agreement, IOC shall pay the applicable Income Tax on its net profit, as well as any other kind of taxes imposed by the HC; whereas under the PSA, IOC might pay its own Income Tax, as well as any other taxes applied in the HC. IOC may also be exempted from paying any kind of the applied taxes, including the Income Tax or, HC or NOC may pay on behalf of the IOC and to its account of the applied taxes.
- Under the Concession Agreement, IOC shall own all the assets purchased during the term of the agreement for the purposes of the operations under the agreement. Such assets may be transferred at the expiration of the agreement, at no cost, to the HC or NOC or at the expiration of the agreement; the HC or NOC may request IOC to remove all of such assets from the agreement's area. On the other hand, under the PSA, the entitlement to the assets shall be transferred to the HC or NOC immediately or overtime based on the cost recovery regime.

Service Contract (SC) / Risk Service Contract (RSC)

Service contract is the third basic form of the petroleum exploration and production agreements/contracts. It was formulated in Latin America in the 1950s and after that in the Middle East in the 1960s.The concept of this type is based on a simple formula, which is that a contractor shall be paid a cash fee for providing the service of producing oil and/or gas, and all production shall be owned by the HC or NOC.

SC for exploration and/or production of petroleum is now known as Risk Service Contract (RSC). In such a type of contracts, the HC or its NOC hires IOC that has technology and financial capability as a contractor to perform the exploration, development and production services in a specific area for a certain period of time.

IOC shall thus bear and pay all costs and expenses required for providing the services and if commercial discovery is achieved, whether for oil or gas, IOC will be reimbursed for its costs and expenses and remunerated for providing the service and for the risks it incurred during the contract term.

Under such type of contract, IOC has no mining or mineral rights and the whole production belongs to the HC or NOC. Operatorship shall be transferred from IOC to NOC at a given date prior to the expiration of the contract, either on the commencement of production (as is the case of Iran) or after that.

RSC is similar to the PSA in the following aspects.

1. IOC bears all the financial risks and it will be reimbursed for its costs and expenses only if commercial discovery is achieved.
2. Instead of receiving a profit share from the produced petroleum under the PSA, IOC shall receive a fee under the RSC.
3. Service fee shall be paid in cash not in kind; however, in several countries contractor receives in kind a quantity of oil equal in price to the due fees, according to the market price of the oil on a due date.
4. IOC, after being reimbursed, may purchase a certain share of production at a discounted price (Buy-back Contract).
5. The fee paid to IOC shall be subject to Income Tax applied in the HC.

The question thus remains for the Egyptian oil and gas industry as to which type of these agreements is more suitable to be applied. Based on the above-mentioned features of the three types of the basic agreements and the fiscal system of each type, it appears that RSC may be the most favorable model for petroleum exploration and exploitation in Egypt.

I thus conclude that RSC would be most suitable for the country and its hydrocarbon sectors, provided that two conditions are met. Firstly, a contractor bears and pays its Income Tax, and, secondly, that a contractor agrees to take its fee in kind.

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The New Gas Law between Drafting and Implementation

By Amira S. Badawey

Egypt is currently facing a gas deficit as a result of a drop in production levels at the same time as domestic energy consumption is rising. Drastic measures were required to return balance to the Egyptian gas market.

In alignment with the ministry's efforts to free the energy market, the Egyptian National Gas Holding Company (EGAS), guided by the Egyptian General Petroleum Corporation (EGPC) directives, set out to develop a competitive and transparent gas market in Egypt, by drafting a new legal and regulatory framework for the downstream segment, in what is being termed the New Gas Law.

Deepening Egypt's Gas Dependency

The country's dependency on natural gas deepened in the past decade, tipping demand to surpass supply, due to economic growth, coupled with urbanization and industrial prosperity. The Ministry of Petroleum thus allowed the import of natural in order to meet the ever increasing local demand of households, energy intensive industries, and power generation. This has put strenuous requirements on the government, with defaults on contract commitments towards international gas companies, with the government footing the bill of price subsidies.

Therefore, the government set forward various reforms to further liberalize the energy sector, including price adjustments, the expansion of production, and strengthening governance and financial viability of national oil companies and authorities.

The Jurisdiction of the New Gas Law

The New Gas Law jurisdiction is gas entry point to the national distribution grid of natural gas and the downstream market, Eng. Amira El-Mazni, Vice Chairman for Gas Regulatory Affairs at EGAS, stated in an exclusive interview to Egypt Oil&Gas. On the other hand, upstream concession agreements will continue to govern locally produced gas, while gas imports remain being governed via permits granted by EGAS and the Egyptian General Petroleum Corporation (EGPC).

By virtue of the New Gas Law, EGAS will be obligated to allow access to its owned distribution grids to licensed shippers. Since 2015, EGAS voluntarily provided access to third parties for the transportation of imported gas. The new law will regulate this access to further expand its usage by contractors and third parties, with the aim of ensuring an increased and diversified supply to the domestic market.

Eng. El-Mazni further added that the New Gas Law will thus facilitate the integration between the upstream and downstream segments of the market by opening up domestic trade for upstream firms. It will allow the Egyptian government to grant local sales rights to those contractors who do have it in their current concession agreements. "Most concession agreements since 2008 give contractors the right to dispose of their gas locally. The new gas law will allow those contractors to exercise these rights," said Mohamed Khafagy, General Manager for Economic Affairs at EGAS, in a statement to Egypt Oil&Gas.

"The new law is an essential part of the gas market downstream liberalization."

Eng. Amira El-Mazni, EGAS' Vice Chairman for Gas Regulatory Affairs

Khafagy added that entry into the downstream market will occur gradually, with the initial phase estimated to start with no more than 17-18% of contractors' equity gas. As he further explained:"This will allow the government to exam the impact of the new gas law on the downstream market and to take corrective actions as needed by adjusting the percentage of equity gas contractors that are allowed to sell locally, and therefore identify the optimal market balance."

"The more players we will have in the downstream market, the more gas we will have in the downstream market."

Eng. Amira El-Mazni, EGAS' Vice Chairman for Gas Regulatory Affairs

Once contractors are granted the right to directly sell to domestic buyers, they enter an agreement with the Egyptian Natural Gas Company (GASCO), which operates the transmission grids and is responsible for the transportation of the gas. The relationship between the contractor, who is a seller in this incident, and the buyer is governed by the agreed upon contract. Similarly, the contractor's relationship with GASCO is governed by the transportation agreement. Under these provisions, the contractor is obligated to pay a tariff to use EGAS-owned network, where these funds are used to reimburse EGAS for its capital expenditures and are paid through GASCO.

While the framework for downstream gas sector is already formulated, some issues still remain unresolved.

GASCO needs to specify how it will achieve a transportation balance, as contractors will provide a continuous supply of gas to the grid, while at the same time consumers may experience disruption in their demand due to maintenance or production outages.

Furthermore, questions surrounding cost recovery fluctuation for contractors, as these volumes change from one quarter to the next, also need to be addressed at a later stage.

Egypt's New Gas Law remains in the drafting phase at present and the government still has a long road ahead reaching further beyond the text of the law.

Implementation Barriers

The process of implementation of the law will be another step towards the gas market liberalization goal. EGAS, together with concerned ministers, will thus have to address expected implementation barriers.

"The new law is an essential part of the gas market downstream liberalization," noted EGAS' Vice Chairman for Gas Regulatory Affairs, and in that accord, she believes that EGAS, together with EGPC, should work on facilitating and streamlining the approval process. As Eng. El-Mazni further added, "the smoother this process is, the easier it becomes. The more players we will have in the downstream market, the more gas we will have in the downstream market." Khafagy agrees, saying that "when the market is saturated with supply, the better it will be at meeting the demand of all sectors. This will lead to market stability."

Another issue pertains to royalties and taxes. Under current concession agreements, contractor's profits from local sales are taxable, yet EGAS pays all relevant taxes on their behalf. According to the new law, once contractors dispose of their share of gas into the local market, they will be required to pay royalties and taxes. Both Eng. El-Mazni and Khafagy agree that the government needs to design stimulus schemes in order to incentivize upstream companies to direct more of their equity gas towards local consumption.

Furthermore, upstream contractors are interested to learn how supply swapping will be avoided. Economic Section's GM at EGAS said that "some firms have inquired about the guarantees provided by the gas regulator or the New Gas Law to ensure that misdirection of supply will not occur. In other words, how to guarantee that what was ordered is delivered." He stated that the only guarantee is ensuring that the market is regulated by forces of supply and demand. "An abundance of supply will guarantee that swap or diversification of gas will not occur. The more suppliers are involved in the market, the better the capacity will be to fully cover domestic demand," concluded Khafagy.

Collaborating with Upstream, Downstream Contractors

Eng. Amira El-Mazni stressed that EGAS should work together with contractors to understand their needs and review all possible actions required to motivate upstreamers to interface with the downstream segment, as well as address any of their concerns about dealing with an unfamiliar downstream market. Otherwise, contractors may lose the trust in dealing with the government and become subjected to the uncertainty of buyers' credit worthiness. She added: "I call out for the decision makers to consider these obstacles that might discourage contractors from entering the domestic trading market. They need to review all it takes to facilitate contractors' disposal of the gas and entrance into the local market."

"When the market is saturated with supply, the better it will be at meeting the demand of all sectors. This will lead to market stability."

Mohamed Khafagy, General Manager for Economic Affairs at EGAS

In line with this sentiment, Shashank Krishna, an Associate with McDermott Will & Emery UK LLP, an international law firm with experience in the energy sector, supports collaborative strategy that the Vice Chairman at EGAS, Eng. El-Mazni, proposed. Krishna emphasized that drafting and implementing the law should come as collaboration between the Egyptian government and industry players in order for both parties to achieve their mutual benefits. He said that "a published roadmap towards the implementation of such reforms and wider consultation with the industry and other stakeholders will also ensure that the industry is in a position to exploit the opportunities that such reforms will present."

Furthermore, Mohamed Khafagy confirmed that the government has considered all possible hurdles to implementing the New Gas Law, with the aim of benefiting from other countries' lessons-learned. "We reviewed global cases, with similar market conditions as Egypt. We studied these cases to understand the pros and cons of each approach in order to learn from their experiences in freeing their gas markets. Furthermore, we are collaborating with international experts in the gas sector, with a focus on market liberalization. EGAS and EGPC conducted studies with consultancy firms to ensure that the drafting of the gas law and the implementation of the government's liberalization efforts proceed with a structured methodology, supported with action plans," he concluded.

Aiming for Open Market

A bird's eye view of the New Gas Law shows signs that Egypt's attempt to liberalize the gas market is having a positive effect on the sector's growth. Law firm Associate Krishna noted that "an independent, stable, predictable, and commercial legal and regulatory architecture is essential to increase investments in the Egyptian downstream sector. While the details remain to be fully fleshed out, the proposed reforms are expected to unlock investments in the domestic gas value chain and create local jobs. The discovery of large gas fields in Egypt in 2015-2016 means that the proposed reforms are timely."

Opening the market to fair competition will increase new investment opportunities to Egypt's gas sector. Mohamed Khafagy affirmed that "this will lead to an eventual decrease in natural gas prices, because the supply will be diversified from imported shipments and also by allowing foreign partners to dispose of their shares in the production. There are a lot of benefits to opening up the gas market in Egypt whether to foreign partners or third parties, new shippers."

Therefore, "the government is proceeding with market liberalization in terms of a free market, a competitive market, with the ultimate goal of having prices set by the dynamics of supply and demand," as Eng. El-Mazni explained. She believes that a liberalized market is in the interest of everyone involved, as it gives investors accelerated opportunities to recovery of their capital costs in concessions. In addition, it alleviates EGPC/EGAS from the burden of providing hard currency necessary to pay for gas purchased from upstreamers.

Therefore, as Vice Chairman for Gas Regulatory Affairs concluded, continual interfacing and collaboration between upstream and downstream firms, together with government authorities, is vital to reaching a fully liberalized gas market in Egypt.

Arbitration in Egypt: Myth or Reality?

By Hadir Helal, Partner at Open Chance and Associates Law Firm

The Egyptian Judicial System has traditionally been regarded as the primary and sometimes exclusive forum for the settlement of legal disputes in Egypt. The country's judicial system has, however, become increasingly overloaded, timely and notoriously procedurally complex over the past few decades, rendering it incapable of keeping up with the swift pace of modern business transactions.

In addition, the judges may not have the experience relevant to the disputed matters, in particular in regards to business transactions disputes, or the time to undertake an in-depth review of any material dispute.

The evolvement of the arbitration as an alternative mechanism for dispute settlement was, therefore, eminent for the stability of businesses, especially when a dispute required an in-depth study and technical expertise.

Commercial arbitration in Egypt is more commonly used in large transactions involving foreign parties. These include major construction contracts, hotel management agreements, oil and gas transactions, and IP contracts.

Arbitration and the Egyptian Legal System

Arbitration is a private means of dispute settlement. Arbitration is defined in Black's Law Dictionary as "a process of dispute resolution in which a neutral third party (arbitrator) renders a decision after a hearing at which both parties have an opportunity to be heard. Where arbitration is voluntary, the disputing parties select the arbitrator who has the power to render a binding decision."

Egypt is a civil law country and most of its laws are influenced by the French codes. The Egyptian legal system is hierarchal, with the constitution at the top of this hierarchy and followed by the laws and codes which are drafted in compliance with the provision of the constitution. Finally there are the executives by laws and ordinances.

The primary source of legal rules is the laws and codes. The three main codes in the Egyptian Legal system are: 1) Civil Code, 2) Penal Code, and 3) Law of Procedure.

Article 2 of the Egyptian Civil Code, promulgated by Law No. 131/1948, sets out the sources of the rules of law. "In absence of a provision of law that is applicable, the judge shall decide according to custom and in absence of custom according to the principles of sharia (Islamic law), in absence of such principles, the principles of natural law and justice shall apply."

Arbitration as an Alternative Dispute Settlement in Egypt

Arbitration has long existed in Egypt, although it has not been greatly welcomed. It existed before codification, and was governed by sharia (Islamic law) rule. Then the Ottoman Decree of 13/11/1883 enacted the first civil procedure code in Egypt, which included a chapter on arbitration. It was the first arbitration law in Egypt and the Arab world at large.

Although Egypt had quite early signed and ratified the New York Convention and the International Convention on the Settlement of Investment Disputes (ICSID), Egypt – as well as many other Middle Eastern countries – were perceived as hostile to arbitration. Due to the need of a neutral and efficient way to settle disputes that occurred between investors and public or private sectors and the adoption of the country of a more liberal economic policy, it was eminent to have an arbitration friendly environment. The parliament enacted the Law No. 27/1994, regulating domestic and international arbitration, in civil and commercial matters.

The Egyptian Arbitration Law (the EAL) – Law No. 27/1994, as amended – is based on the United Nations Commissions on International Trade Law Model (UNCITRAL Model Law). There is also substantial case law dealing with the application of the Arbitration Law.

However, there were differences. First, unlike the UNCITRAL, the new arbitration law governs both national and international arbitrations, second, amendments were introduced to how law operates, particularly in the area of challenging arbitration awards and awards enforcement in the Egyptian courts.

THE EGYPTIAN ARBITRATION LAW

Scope of Application

Unless the respondent waives its right to arbitration, the courts generally enforce arbitration agreements and decline to review cases wherein there is a valid arbitration agreement. The court rules these cases inadmissible.

Pursuant to Article 1 of the EAL, 1) any arbitration that takes place in Egypt including both domestic and international arbitrations, or 2) when parties agree to submit to the provisions of this law when an international commercial arbitration is conducted abroad, shall be governed by the EAL.

Furthermore, and due to the importance of the issue of the arbitrability of administrative contracts, Law No. 9/1997 was passed and provided that the concerned minister, or whoever may replace him, has to approve the arbitration agreement in administrative contracts related to his ministry and no delegation of powers shall be authorized in this respect. Therefore, in administrative contract, the minister's approval on the arbitration agreement is essential to validate the arbitration agreement.

International Arbitration

The arbitration law's Article 3 sets the criteria to determine the international nature of arbitration. It sets two criteria to be met; 1) The subject matter is a dispute related to international commerce, and 2) Any of the listed geographical criteria's are satisfied.

Agreement to Arbitrate

The legal requirements regulating the form and content of a valid arbitration agreement are mostly found in the EAL; 1) a valid arbitration agreement must be in writing, 2) if the parties incorporate within their agreement a model form of contract that includes an arbitration provision, they must expressly confirm that they also incorporate the arbitration provision, 3) an arbitration clause is regarded as an independent agreement from the other underlying provisions in the contract. Thus, an arbitration agreement would be valid regardless of the validity of the other provisions in the contract. In addition, 4)the Arbitration Law allows parties to build their own arbitration agreements choosing their own procedural rules, 5) parties may choose the number and qualifications of arbitrators, and 6) unless agreed in contract, an ad hoc arbitral award should be issued within 12 months, which may be extended by the tribunal for another six months.

Our recommended best practice provisions include:

1) The time limit for rendering awards; the EAL sets an 18-month time limit for rendering awards (unless otherwise agreed by the parties), therefore if the parties foresee the need for a longer period, they should specify such period in their agreement.

2) As discussed hereinabove in Scope of Application, for administrative contracts the signature of the concerned Governmental Minister should be obtained to confirm his or her consent to the arbitration agreement.

3) If the parties wish to grant the tribunal, the power to award interim measures and injunctive relief, this must be expressly provided for in the arbitration agreement.

4) If the parties wish for the proceedings to be conducted in a language other than Arabic, it is recommended that this be expressly stated. The default, absent agreement, or a decision by the tribunal is in Arabic.

PARAMETERS OF ARBITRAL PROCEEDINGS

Duration

Arbitral proceedings commonly take one to two years from the request for arbitration until a final award is rendered. Enforcement may take another 6 to 12 months, which may be extended through various tactics adding a further six months. Nullity actions may take two to three years before a final judgment is rendered. Pursuant to the Arbitration Law a nullity action should not provide grounds for a stay of enforcement of an arbitration award.

Confidentiality

Arbitration is referred to in literature as confidential. Confidentiality is regarded as one of the top reasons disputing parties choose arbitration over.

Flexibility

The parties to the dispute are given flexible methods of dispute resolution wherein they are able to actually argue their case effectively and before a competent tribunal, usually of their own choosing.

Separability

An arbitration clause is deemed to be a distinct agreement from the other provisions of the underlying contract. Therefore, an arbitration agreement would remain valid to regulate disputes about the validity and/or enforceability of the underlying contract including the arbitration agreement.

The Cairo Court of Appeal's Decision on December 31st, 1997 in the Case No. 62 of the 113th Judicial year rendered a judgment which indicated -inter alia- that Article 23 of the Arbitration Law provided that "the Arbitral Clause is deemed to be an agreement that is independent from the other conditions of the contracts and that nullity, rescission, or termination of the contract shall not affect the arbitral clause therein provided such clause is valid per se" and the Court decided therefore in the Case under review that nullity, rescission, or termination of the contract does not have any effect on the Arbitral Clause under consideration.

Arbitration Organizations

The most prominent arbitration organization in Egypt is the Cairo Regional Centre for International Commercial Arbitration (CRCICA / www.crcica.org.eg). CRCICA applies the UNCITRAL rules with some amendments.

The CRCICA provides a competitive and less costly alternative to foreign arbitration and mediation centers for Egyptian and regional disputes. It is an independent non-profit international organization established in 1979.

Pursuant to the headquarters agreement concluded in December 1987 between AALCO and the Egyptian Government, CRCICA's status as an international organization was recognized and the Center and its branches were endowed with all necessary privileges and immunities ensuring their independent functioning.

Challenges to Awards

Arbitration awards are final, binding, and subject to no appeal on the merits. Arbitral awards can be challenged as null and void, based on any of the grounds provided for under Articles 52 and 53 of the EAL. They are challenged mainly on formalistic and procedural errors. With regards to content, breach of principles of public order or morality may also be a reason to nullify an award. A nullity action must be brought within 90 days from the date on which the successful party notifies the other party of the award.

A nullity action does not stop enforcement. However, the enforcement of the arbitration award may be suspended by the court if a nullity action includes a request for suspension, based on prima facie strong grounds.

For international commercial arbitrations, a nullity action is initiated before the Cairo Court of Appeal, and the proceedings usually take between 9 and 18 months for completion.

Recognition and Enforcement of Awards Issued Pursuant to the EAL

Recognition and enforcement of arbitral awards are covered under Articles 55 to 58 of the EAL. The party seeking enforcement must first formally notify the other party with the award. The enforcing party must then wait for 90 days to allow the other party if it wishes to initiate a nullity action, before it lodges the original copy of the award with the secretary of the competent court, as stipulated in the law. Afterwards, the award will then be engrossed with a writ of execution (exequatur) by the competent court execution judge.

Following the issuance of the exequatur, enforcement is executed through attachment actions by court bailiffs. However, there are tactics used to delay execution, such as initiating an 'execution contestation' if there are new events subsequent to the award that may render execution invalid or may delay enforcement for 6 to 12 months, or other tactics relating to moveable assets.

Recognition and Enforcement of Foreign Awards

Egypt has been a party to the New York Convention since 1959. There are also several bilateral and multilateral treaties for reciprocal enforcement of judicial awards; for example between Egypt and France, and the Arab League Treaty. Therefore, if a court writ of execution is obtained, the writ can be enforced abroad under these treaties.

On the other hand, if a foreign arbitral award is final and binding according to its place of issuance, the courts in Egypt will enforce it. Otherwise, they will not be enforced.

The Cairo Court of Appeal rendered a judgment on February 26th, 2003 in the recourse No. 23 of the 119th judgment year, which stated that the Egyptian judiciary has no jurisdiction to view the actions for nullity of foreign arbitral judgments as long as the parties have not agreed to subject the arbitration to the Egyptian Arbitration in Civil and Commercial Matters Law No. 27/1994. In other words, if the parties agree to hold the arbitration outside Egypt – without subjecting it to the Egyptian Arbitration law – then this would result in subjecting the arbitration to the law of another state in accordance to its procedures or to the procedures they agree to apply.

The judgment added that Article 3 of the 1958 New York Convention on the Recognition and Enforcement of Foreign Arbitral Judgments has obliged the adhering states to recognize the arbitral judgments that are rendered outside their territory and to execute them in accordance to the rules of procedures applicable in their territory. Article 5/1/5 of this Convention prohibits the refusal to recognize or to execute the above mentioned arbitral judgments except in certain specific cases.

Also in another case, the Egyptian Court of Cassation rendered an important judgment on March 1st, 1999 in Recourse No. 10350 of the 65th judicial year, which mentioned that the Egyptian law on procedures – in its chapter relating to the execution of foreign judgments, orders, and official documents – provides that foreign treaties between Egypt and foreign states concerning the execution of foreign judgments, orders, and official documents shall have to apply. As Egypt has adhered to the 1958 Convention on the Recognition and Enforcement of Foreign Arbitral Awards, therefore, this Convention legally becomes one of the laws of the state and is applicable even if it contradicts the Egyptian law on Arbitration in Civil and Commercial Matters.

New York Convention and ICSID

Considering the international nature of arbitration as a mechanism for settling legal disputes, the legal framework that governs international arbitration in Egypt is relevant from two main perspectives.

First, the recognition and enforcement of foreign arbitral awards in Egypt, as well as the foreign recognition and enforcement of arbitral awards rendered in Egypt, is, for the most part, governed by the Convention on the Recognition and Enforcement of Foreign Arbitral Awards of 1958; the New York Convention.

Secondly, the ICSID Convention of 1965 provided for the establishment of the International Center for Settlement of Investment Disputes (ICSID) as a member of the World Bank Group, which stands as the primary venue for the settlement of investment disputes between a member state and nationals of other member states.

According to statistics published in 2012, Egypt, with seventeen cases, ranked third among the countries most frequently appearing as respondents before the ICSID, following Argentina and Venezuela.

An ICSID ruling in Egypt's favor issued in April 2014, the ICSID tribunal declined jurisdiction to hear the case "due to [the] lack of foreign control of [the] ICSID claimant [National Gas]."

State Entities and Enforcement

State entities are not immune to enforcement in Egypt. An official who intentionally refuses to implement a court order or judgment may face criminal prosecution.

Challenges

Pursuant to the Ministerial Decree 8310/2008, it made the process of enforcing arbitration awards burdensome in terms of substance and internal procedure. It required the initial deposit of an award for enforcement subject to approval of the Ministry of Justice. It may be withheld in certain cases, including among other things, where it contradicts public policy or dealing with title to property. Such regulations potentially cast serious doubt over enforceability and it has been suggested that these regulations contradict the Arbitration Law and are, therefore, legally invalid.

Arbitration Reality in Egypt

Since the 2011 revolution, the economic difficulties, that Egypt has encountered, have rendered the country more susceptible to international claims before the ICSID. A most recent arbitration proceeding in the Egyptian oil and gas sector is between Gas Natural Fenosa, a Spanish energy company, which filed a case against the Egyptian government, represented by the Egyptian Gas Holding Company (EGAS), for the latter's failure to meet its obligations under the contract. The Egyptian government diverted oil from export to the domestic market in violation of the contracted capacity of the plant. The arbitration was worth $270 million in addition to the interest rate.

Arbitration in Egypt, has received criticisms over the past years, some of which are untrue, especially with contracts concluded with the government. Foreign investors and International Financial Institutions are refusing to accept seat of arbitration to be in Egypt, nor the application of the EAL to any arbitral disputes, while the Egyptian State Council is refusing to accept arbitration outside Egypt.

Therefore, and unless, legislative reform is carried to avoid the problems encountered with nullification, enforcement, and recognition of awards pursuant to the current laws, or other compromise(s) are offered, such entities, shall lose their interests in investing in Egypt.

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Oil and Gas Arbitral Awards in Egypt

By Sarah Samir

The issue discussing domestic versus foreign arbitrations has dominated news in the energy industry in Egypt in the past months. It has become a key conundrum for oil, gas, renewables, and other energy companies that are operating in the country. Foreign energy investors have objected to the requirements by the government to hold all their dispute settlement processes in Egypt. Instead, they requested to have an option to file suits abroad with international arbitration centers, shall there arise any disagreements in the future.

In light of these complicated commercial relationships between investors and the states, it became necessary to ensure unbiased resolution of cases of disagreement. The countries therefore ventured legal frameworks for arbitrations. As a result, almost all companies involved in energy sector and beyond usually conclude arbitration agreements as annexes to their business contracts. As for arbitration in the energy sectors in particular, Managing Partner at El Said Darwish & Partners, Dr. Mohamed Darwish, confirmed in an interview with Egypt Oil&Gas that "almost 100% of oil and gas companies operating in Egypt include arbitration clauses in their agreements."

Individual models of arbitrations differ from country to country, yet a common denominator is the independence of arbitration awards that are issued unassociated with judicial courts.

Egyptian Arbitration Law

Egypt is not an exception in this regard. The country adopted its Arbitration Law No. 27 back in 1994. It facilitates the conduct and enforcement of international arbitral proceedings between the Egyptian state and involved companies, as well as in between different firms operating in the country.

The law stipulates, according to Article 39, that "the arbitral tribunal shall apply

to the substance of the dispute and the rules chosen by the two parties." This indicate a rather flexibility of the drafting of arbitration agreement based on both involved parties' preferences. Articles 15 and 17 of the law specify that "the arbitral tribunal consists, by agreement between the parties, of one or more arbitrators," and that "the two parties to the arbitration may agree on the choice of the arbitrators, and on the method and period of time for affecting their choice." Lastly, the arbitration agreements must be concluded in writing.

As these articles demonstrate, the Egyptian Arbitration Law thus clearly adopts the rules of the United Nations Commissions on International Trade Law Model (UNCITRAL). It embraces the principles in terms of court interventions. Article 5 defines that "in matters governed by this law, no court shall intervene except where so provided in this law." However, Article 22 gives an opportunity for judicial intervention if there are objections claiming the non-existence of an arbitration agreement, its extinction, nullity of disputed agreement, or that the arbitration agreement does not cover the subject matter in dispute.

The Egyptian law shows some nationally-specific modifications to the UNCITRAL model, as authors of the study Arbitration in Egypt and the UAE: Reflections on Law and Practice, Mike McClure and Mohamed Negm, stated. The key aspects are that the law applies both to domestic and international arbitration, which means that suits conducted outside Egypt should abide by the Egyptian law if the parties agreed on such application. Furthermore, the difference lies in the provision that a preliminary arbitral award, issued under the Egyptian law, may not be annulled until a final award is announced. Even though some may believe that an arbitral tribunal has a default power to order interim relief, it cannot do so unless the power is granted by the agreement signed by the two parties.

The Egyptian Arbitration Law also introduces three specific regulations that enforce an arbitral award. First, it should not violate related judgments previously issued by Egyptian courts. Second, it does not breach against the Egyptian state policies. And third, the accused party must always receive a due notice of the award.

Arbitration vs. Litigation

There are several benefits of arbitration, generally speaking, that inspire partners to choose arbitration over litigation. The key elements are financial demand, speed of processes, and confidentiality.

Furthermore, as legal experts noted, the range of advantages of arbitration is broad. Arbitration is "flexible and private, with simplified rules of evidence and procedure," Dr. Mohamed Darwish, from El Saif Darwish & Partners commented on the matter in an interview with Egypt Oil&Gas.

Arbitration is preferred option not only because it "avoids hostility and it is usually cheaper and faster than litigation," as Dr. Darwish said, but also because its outcomes are "binding as it is not a subject to appeal as arbitrator is an expert in the field," stated Associate at Sharkawy & Sarhan Law Firm, Reham Eissa, in an interview with Egypt Oil&Gas.

It is thus more advantageous for oil and gas players to opt for arbitration as a means of settling disputes and disagreements. In general, arbitration's importance lies in the fact that it is time efficient, confidential, and final.

Oil & Gas Investors Favor Arbitration

Oil and gas companies specifically appear to favor arbitration over litigation for several other reasons.

The advantage of the arbitration proceedings relate to the level of expertise of arbitrators that they can themselves choose them from the pool of oil and gas experienced defenders, according to the study conducted by Queen Mary University of London (QMUL) in partnership with the global law firm White & Case and published in 2015. Moreover, arbitration is preferred as arbitral awards are final and enforceable.

Oil and gas companies also prefer arbitration as it is independent and not affected by the politics of the state of the proceedings. This means an arbitration tribunal will not falsely issue an award in favor of the other which helps minimize the risks that oil and gas industry actors may face.

Disputes related to oil and gas industry in Egypt are usually filed in front of an Egyptian tribunal.

The legal experts interviewed by Egypt Oil&Gas noted that "arbitration in the oil and gas context has a separate law." "Under concession agreements and sales agreements, disputes in Egypt should be handled through arbitration in the country. Any contractor in oil and gas in Egypt is to abide by an issued concession contract, of which Article 22 or 23 orders that in case the dispute is against the state, it should be filed in front of the Egyptian judicial courts instead, as it could not be dealt with through arbitration, " explained in details Sharkawy & Sarhan's Associate, Reham Eissa.

On the other hand, "in case the dispute is against the Egyptian General Petroleum Corporation (EGPC) or the Egyptian Natural Gas Holding Co (EGAS), it must be filed in front of the arbitration center located in Egypt like Cairo Regional Center for International Commercial Arbitration (CRCICA)," concluded Eissa.

Arbitral Award Annulment

The Egyptian arbitration framework, however, is not perfect and has its flaws; most relevant appears to be the practice of arbitral award annulment.

As Associate Reham Eissa stated for Egypt Oil&Gas, "the only challenge that might be facing arbitration in Egypt is the annulment of the award. Parties of the agreements are not allowed to challenge a reward through appeal, but they can request annulment that will be presented in front to Egyptian judicial courts [such as the Cairo Court of Appeal.] In that case the proceedings may be repeated through Arbitral Tribunal once more, and if annulment was requested again, the judicial court will handle the dispute."

This section of the law poses some questions. While an appeal is not allowed, which is considered an advantage of the Egyptian law, still the Judicial Court could intervene if any of the parties requested annulment of the arbitration award.

The Egyptian Arbitration Law thus introduces the practice of annulment in Article 53 Paragraph 1, which stipulates that any arbitral proceedings taking place in Egypt under the Egyptian Arbitration Law are not subject to appeal, but an arbitral award may be annulled.

This can occur only if (a) there is no arbitration agreement, it was void, voidable or its duration had elapsed, (b) either party to the arbitration agreement was at the time of the conclusion of the arbitration agreement fully or partially incapacitated according to the law governing its legal capacity, and if (c) either party to the arbitration was unable to present its case as a result of not being given proper notice of the appointment of an arbitrator or of the arbitral proceedings, or for any other reason beyond its control."

Further prerequisites of annulment, as detailed in Article 53, relate to the situations if arbitral award is in noncompliance with the law agreed by the parties, the composition of the arbitral tribunal is in conflict with this law, the arbitral award dealt with matters that are not falling within the scope of the arbitration agreement, and the arbitral award or procedures cause legal violations, which themselves render arbitral award null and void.

Nullity vs. Award Enforcement

"Nullity actions may take two to three years before a final judgment is issued," explained Hadir Helal, Partner at Open Change and Associates Law Firm in a report for Egypt Oil&Gas.

As she further clarified, "a nullity action does not stop the enforcement of the arbitration award, which may be suspended by the court, if a nullity action includes a request for suspension, based on prima facie strong grounds."

Dr. Mohamed Darwish, however, noted that "the main challenge [that the Egyptian arbitration procedure contains] is the enforcement of the arbitral award." The reason is that "it is a lengthy process in Egypt," he added. "Arbitral proceedings commonly take a year or two from the request for arbitration until a final award is rendered and enforcement may take another six to twelve months," elaborated Hadir Helal.

As it appears, arbitration clauses have great importance in any business agreements. They are the way to ensure that an objective independent award is issued, which is not governed by any political or financial interests.

The Egyptian government is currently left with a dilemma how to balance its relations with investors, in particular, foreign energy firms, the backbone of a solution to the country's challenging industry, while trying to avoid situations that will transfer arbitration over disputes with international partners abroad, beyond the Egyptian system.

IRAN PETROLEUM CONTRACTS PAVE WAY TO FOREIGN INVESTMENTS

By Salma Essam

Iran has been taking steps towards boosting its oil dependent economy after finally lifting international sanctions against its energy sector. Announcing the new scheme of the oil and gas contracts, known as Iran Petroleum Contracts (IPCs), has encouraged foreign investors to strike deals with the Islamic Republic. As the new contract model replaced the old buybacks scheme, it has also raised critics and concerns in Tehran, leaving the future of the new oil contract up for debate. These disputes over the new IPCs, nevertheless, proved misplaced and invalid.

Buyback: Inflexible Money Losers

The new era of petroleum contracts in the Persian state kicked off against the backdrop of the Joint Comprehensive Plan of Action, which led to the lifting and termination of several energy and financial sanctions against Tehran. Iran's oil and gas industry requires huge investments and financial resources to reach production targets that come in line with the country's field capacities. Thus, the dependence on international oil companies (IOCs) is deemed essential if not inevitable, yet the buyback system has been less enticing to them.

The buyback system was adopted since the breakout of the Islamic revolution in 1979. At the time, the Iranian oil ministry did not approve any contracts that provided a foreign entity with rights to ownership or co-ownership of the country's hydrocarbon wealth. Even though these contracts were initially aiming to attract foreign investments, the three generations of the buyback contracts did not showcase successful trials.

The first generation of the contracts was a simple buyback agreement between the National Iranian Oil Company (NIOC) and a foreign company. In his research on Iran's New Generation of Oil and Gas Contracts, published in the Journal Political Risk in 2015, Middle East Industry Expert at Corr Analytics, Reza Yeganeh Shakib, wrote that under this agreement, the company, as a contractor, got paid for the services it provided with a fixed price. It was seen as problematic from the IOCs' perspective that if the contractor found a commercial oil field during the exploration phase, it would not necessarily become the field developer. This condition prompted a degree of uncertainty, as Shakib elaborated in his analysis: "This may have caused a low level of interest among international companies since they could not be certain about recovering the operations costs and capital investments during exploration."

The second generation of the oil buyback agreements also covered all phases of oil exploitation, from exploration to production, that were not necessarily assigned to the same contractors. An improvement was introduced when the contractor was able to successfully finish the exploration phase, which, under upgraded legal arrangements, qualified him to move to the development phase of a field directly, and without a new contract. Nonetheless, this shift would have occurred again at a fixed and predetermined price. But because operations costs are of volatile nature, this legal setting has significantly curbed the contractors from investing in the Iranian oil market.

Unlike the first and second generation

contracts, the third contract was different in terms of that the exploration and development phases were already jointly included in a single contract. In addition, the cap on the price of the contract was agreed on in a public tender. The deals over oil operations turned into "an open tender contract, with an open capex or open capital expenditure," according to Shakib's report. The cap on the expenses was determined after the Front End Engineering Design (FEED) and the public tender phases. During different phases of the operation, the cap on expenses was subject to change depending on the operation cost. On the other hand, the contractor still did not have any rights to ownership of oil and gas inside the reservoirs.

According these buyback contracts, the IOCs got their costs covered and an agreed upon profit paid out of the oil and gas gross profit, assuming the field produces the volume as initially agreed upon and the international energy prices are high enough. The foreign investor was, therefore, often reliant on the NIOC to operate the field to a sufficient standard, in order to ensure that there would be adequate production to meet the foreign investor's costs and remuneration requirements. Additionally, the IOCs had no share in the project's profit after being repaid the activities' costs.

"The Iranian oil ministry has not approved any contracts that provide a foreign entity with ownership or co-ownership."

Reza Yeganeh Shakib, Middle East Industry Expert at Corr Analytics

Moreover, the IOCs were not allowed to book oil concessions and this added fuel to fire for foreign investments in the country, as Joanna Addison, Partner in Herbert Smith, and Mark Hatfull, Associate in Herbert Smith Freehills explained in their analysis - New Iranian Petroleum Contract Could Fix Buyback Issues, published by Law360.

The current trends in the global oil markets, especially the relatively higher supply and lower demand of crude, are clear indicators of fluctuations in the value of energy, based on which all the rewards and paybacks are calculated. Therefore, Iran had to bring forward a new contract model that would reflect upon these new developments, as the country is re-entering the global oil market.

Novelties of IPCs

As the Iranian government perceived it had to change its policy, Tehran has introduced the new model of contracts, the IPCs. These are addressing a number of key challenges and concerns with regard to foreign investments in the oil and gas industry. The lack of incentives to foreign capital was a cause of concern to many Iranian entities. Moreover, the country lacks improvements of its obsolete technology, the state is in dire need of developing its huge gas reserves, and the need for development of Iran's riskier or more mature fields is seen as essential for the growth and independence of the country's oil and gas sectors.

IPCs have thus launched a new beginning of the energy contract models for the country. The changes that IPCs bring relate to the ownership dilemma. According to the legalities of the newly devised contractual model, it is established that a national oil company (NOC) or its subsidiaries, along with international investors, will form a joint venture (JV) company to carry out operations in any of the three phases of exploration, development, and production of oil and gas reserves. The joint operating company can also take charge of the enhanced oil recovery phase in collaboration with another company in order to strengthen its technical and financial capacity. The foreign investor is thus able to participate in the production and it will not be subjected to the same level of operation risks as previously imposed by the buyback contract.

Article 2, Section 1 of the IPC states that if a contractor is successful in finding a commercial-scale field or reservoir, the consecutive phases of the operation contracts, including development and production, will be given to the same company. Contractors will be paid based on each barrel of oil produced. Besides the contract price, there will be rewards paid out for each extra barrel of oil, each 1,000 cubic feet of natural gas or each barrel of gas condensates produced in addition to the minimum agreed production amount, as stated in Article 1, Section 20 of IPC.

Another positive change seen in the contract is the longer duration of the deals for international companies. For the exploration and appraisal of greenfield projects, the term is anticipated to be four years. On top of that, IPCs have also introduced a potential two-year extension for exploration and a further two-year addition for appraisal activities. The development and production phases are to last 20 years plus a potential five-year extension for IOR/EOR operations is granted.

In the IPCs, 50% of the income from sales is allocated as "cost oil" for full cost-recovery purposes. In efforts to create incentives to drive down production costs of IOCs, a proportion of the saved cost will be paid to the investor in rebates. This will amount to as much as 5 to 10 barrels of oil for savings that equal to the cost of 1,000 barrels. There is also an incentive mechanism to encourage the investor to stick to the maximum efficient rate of production of the reservoir.

The IPC model also allows the investor to benefit from possible increases in oil prices over the span of the contract. In buyback agreements, the contractor's remuneration fee was set based on the project's rate of return, which is not present in the IPC model anymore. The recent model only indicates remuneration and payment conditions. In other words, instead of a constant figure as payment amount to the contractor, IPCs provide payments appropriated to the geographical conditions of the field or even the fluctuation in the global oil market, which may often add up to higher fees that contractors can receive. This change, in particular, is in the interest of international contractors and encourages them to invest in the Iranian oil and gas fields.

Middle East Industry Expert, Reza Yeganeh Shakib, pointed out another incentive of the IPC model in his analysis - Risks and Benefits for Foreign Investors - published by Trend News Agency in November 2015. According to him, under Article 6, Section 2, Subsection 2, the contractor could be compensated with another exploration block in case the exploration is not successful in finding a commercial-scale field or reservoir.

IPCs have highlighted the need for attracting foreign investments that are essential for ramping up oil and gas production in the country and boost Iran's floundering economy after years of sanctions and disinvestment. In this sense, changing the legal framework is paving the way for the Iranian oil industry to strike several deals with foreign investors.

Dispute over IPCs invalid?

The IPCs have, nonetheless, been exposed to criticism, along with the stricken deals. Oil officials disagree on whether foreign companies are required to develop natural gas and oil in the country or not. Others are in conflict over the way private Iranian companies should be involved in the activities despite little experience in managing exploration and production projects. Another group of critics view these deals as dispensing the country's wealth, according to the Wall Street Journal's analysis - Iran's Political Battles Pose Risks for Oil Contracts - published in February 2015.

Iranian representatives appear to be sensitive about oil field ownership. For many in Iran's predominantly conservative parliament, the IPC scheme effectively means that the state will be transferring partial ownership of the oil fields to foreign operators, which, they argue, is a violation of the national constitution. Internal tensions eventually led to the cancellation of a conference that was to unveil the IPC model to the international audience from among oil companies. The conference, scheduled to take place in London in February 2016, had already been postponed

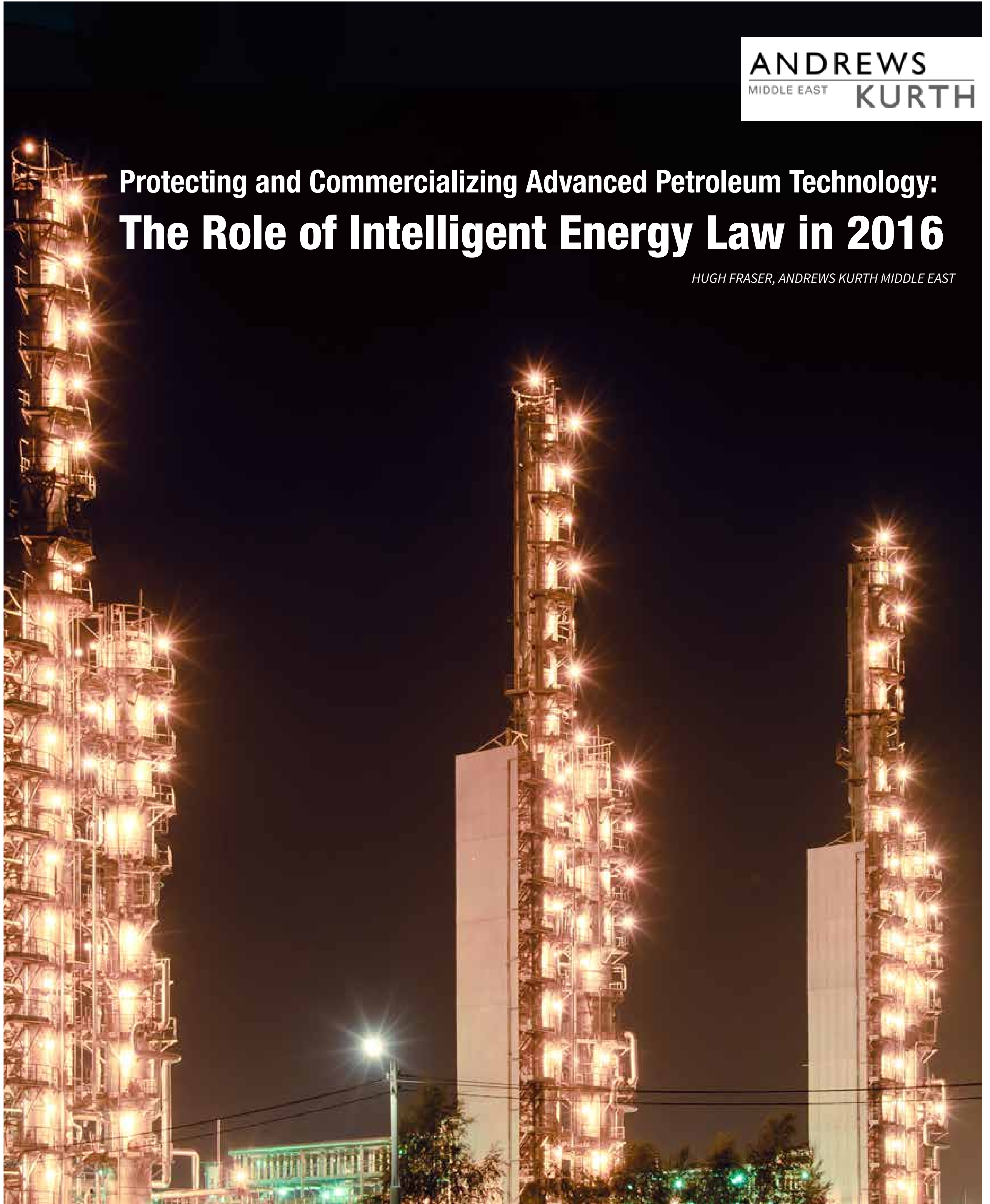
five times before it was eventually cancelled.

The IPC, according to Reza Yeganeh Shakib, does not violate the constitution. The contract simply changes the way foreign oil companies are paid for their work on Iran's fields—in crude extracted from these same fields or in money from the sale of the crude. No right of ownership is pledged in the new contract, as Shakib added in his analysis, "the Iranian oil ministry has not approved any contracts that provide a foreign entity with ownership or co-ownership." Iranian companies are to take 51% in every joint venture agreed under the new contract.

In fact, Yeganeh Shakib further argued, although the new generation of Iran oil and gas contracts is named Iran Petroleum Contracts, they resemble the buyback system, yet provide better legal frameworks for IOCs, with better incentives and more flexibility. The disputes over the new IPCs thus seem rather unsubstantiated, merely a fear for losing a parliamentary dispute or resistance to change.

While the dispute continues, Iran's Oil Minister, Bijan Zanganeh, has explicitly stated that the country is aiming to attract investments that amount at $185 billion in oil and gas production, which will occur even despite any serious opposition from the parliament. Already in late November 2015, the Persian Gulf country pitched 52 oil and gas development projects worth more than $30 billion, including 29 new and currently producing oil fields, as well as 23 gas developments.

In a market where excessive supply of crude oil does not comply with the global demand, foreign investments become essential in revitalizing the industry. Iran is moving forward with a contract model that will secure the country with a huge market share and allow for further market competition against OPEC and non-OPEC states. The country, however, may later need to rethink some other obstacles related to the revival of its hydrocarbon industry, particularly those that forbid ownership of reservoirs, in case foreign investments decide to divert their interests towards other competing states.



Protecting and Commercializing Advanced Petroleum Technology:

The Role of Intelligent Energy Law in 2016

HUGH FRASER, ANDREWS KURTH MIDDLE EAST

Intelligent Energy in 2016 – The Drivers

The world of energy sustained a three-fold shock to the system as the industry rolled into 2016. First, the impact of the COP21 Agreement reached on 12th December 2015 in Paris, which stressed the need to focus on the reduction of carbon emissions, had arrived definitively. This brought sharply into focus the International Energy Agency's proposed "Bridge Scenario" which, it is claimed, could deliver a peak in energy-related emissions by 2020, relying solely on proven technologies and without changing economic development prospects of any region by virtue of five key initiatives: increased energy efficiency; the progressive reduction and phasing out of inefficient coal-fired power plants; phasing out fossil fuel subsidies by 2030; reducing methane emissions in oil and gas production; and increasing investment in renewable energy technologies from $270 million in 2014 to $400 billion in 2030.

Second the declaration, following the confirmation of the International Atomic Energy Authority, on 15th January 2016 that Iran had satisfied the conditions for

the implementation of the Joint Co-operation Plan of Action signaled the return of one of the world's few three million plus barrels per day suppliers of petroleum to the international market. The Iranian supply side impact paralleled with recurring concerns about the health of the Chinese economy and the impact on the demand side as the industry grappled to understand the longer term impact of the 30% downward lurch in the value of listed Chinese shares in July 2015.

Thirdly, no doubt influenced by the above developments, the price of oil slumped to $27 a barrel dispelling hopes of an early recovery in 2016 and raising existential fears for those in the industry focused on higher cost exploration and/or production segments of the industry such as deepwater, shale gas and tar sands/heavy oil. The North Sea, with a cost base in the $50 to $60 dollars a barrel range breathed in and held its breath. Although the OPEC nations committed not to raise production levels, it was clear that the current down turn was no simple repeat of 1986 and 1998 and different dynamics and forces were at large.

This scenario placed, at the onset of 2016, a new and sharper focus on the role of technology and the answers 'Intelligent Energy' could provide in the new energy world. There are a number of very key areas where Intelligent Energy is at work pushing back the technology frontiers: seismic imaging, reservoir characterization, real time drilling systems, smart completion and intervention systems, subsea processing facilities, floating LNG, enhanced oil recovery and carbon capture and storage. The challenges are infinite, but the objectives are definitive and must remain in sharp focus. BP's Technology Outlook 2015 identifies what these objectives will have to be: security of supply to a growing population; reduction of costs including via increased automation; maximization of petroleum recovery rates; protection of the environment in line with COP21 and minimization of safety related risks to those working in the industry.

It was perhaps a convenient coincidence that, concurrent with the COP21 event in Paris, many of the world's leading petroleum technology minds were attending the International Petroleum Technology Conference (IPTC) in Doha in early December. With the larger part of 2016 now behind, and with the onset of the UK's withdrawal from the European Union now adding a further major dynamic, we now have another reference point to at SPE's Annual Technology Conference and Exhibition (ATCE) in Dubai in September 2016 to "push the periscope up" to view the direction and progress of those committed to the role of advanced petroleum technology.

Intelligent Energy Law in 2016

Intelligent Energy Law is a key element of the continuing progression of 'Intelligent Energy' solutions and innovations. It can be defined as the strategic planning and application of international law and contracts to maximize investment returns on advanced technology and know-how through the creation, acquisition, commercialization, and protection of intellectual property (IP) assets.

IP assets may have different definitional nuances in the United States (US), European Union (EU) and other jurisdictions, but in an international energy context they will typically comprise trade secrets; patentable new inventions and improvements (including utility models); copyright (or similar rights) in the likes of engineering drawings, computer software, technical manuals and databases; industrial designs rights; and trade marks in brands and logos. Although it may be difficult if not impossible to put a dollar value on the component parts of a company's IP assets, their combination, integration and deployment with the know-how of high value specialist personnel under strategically-minded leadership and results-driven management teams will comprise the lion's share of a business's corporate value and competitive edge.

Leaders and managers in the energy sector are focused on the maximization of the commercial benefits arising from IP assets while IP lawyers are focused on the successful creation, acquisition, commercialization and protection of IP assets in line with their clients' goals and objectives. IP assets can be created and acquired by common law, statute, contract or registration; they can be commercialized by sale or licensing; and in some cases they need to be protected (or challenged) by litigation.

However, the legal challenges associated with creating, acquiring, commercializing and protecting IP assets constantly evolve. The challenges can range from competition in ownerships claims, willful or unwitting IP infringements, poaching, industrial espionage, hacking (and wider cyber security challenges), reverse engineering and the activities of patent 'trolls' and these can all contribute to a form of corporate warfare where IP assets and their benefits are being fought over. Although one party may, ultimately, have clear line of sight on the valid legal entitlement to the prize in a particular case, the cost/benefit dynamics of enforcing its position may not be commercially justifiable, especially where protracted dispute resolution and uncertain enforcement processes are at play.

The international community is responding to these challenges and this is manifested in a complex inter-play of international organizations and their treaties and agreements and national legal regimes, highly developed in the US and EU and increasingly so in other key economies such as Brazil, China, Russia, India, and the Gulf Co-Operation Council (GCC) states in the Middle East, where much of the world's petroleum reserves are located.

This paper reviews and assesses the impact as to how Intelligent Energy Law has evolved over the last 12 months in track with Intelligent Energy itself, mapping what has been achieved and highlighting what more can be done.

The State of Global Petroleum Innovation – the 2016 Update Report

The Thomson Reuters' State of Innovation 2016 Report records that 27,556 patents were awarded in the global oil and gas sector in 2015, but this represents only 2% of the overall total. Information technology dominates the landscape with 429,806 patents, a full 31% of global awards. The automotive sector took second place with 166,867 patents (12%), closely followed by telecommunications with 166,601 (12%). Medical devices (9%), pharmaceuticals (9%), semiconductors (8%), home appliances (6%), aerospace & defense (5%) and biotechnology (3%) also all outpaced the oil and gas sector.

In geographical terms, China again took the lead with Sinopec recording 1,991 new inventions, closely followed by Petrochina with 1,982. China National Offshore Oil claimed fourth place (455) and University of China Petroleum took eighth place (239). The USA, by virtue of Halliburton (940), Schlumberger (378), Baker Hughes (288), and PRAD Research and Development (272), also took four of the top ten places. Japan's Toyota came in ninth (219) and Russia's Tatneft Stock took the tenth slot (189). Time will tell whether or not we will see a major challenge to the dominance of the US service companies in global oil and gas technology development by China.

In the wider economy, Thomson Reuters' 2015 Top 100 Global Innovators pays testimony to more Japanese than Chinese influence, with 40 Japanese and 35 US companies included, a remarkable 75% of the total. Only three oil and gas sector players, ExxonMobil, Chevron and Idemitsu Kosan, made it into the index.

The World Intellectual Property Report 2015 published by the World Intellectual Property Organization (WIPO) attempts some educated crystal ball gazing and examines the likely progression of 3D printer technology, nanotechnology and robotics on innovation and world growth. These are important technologies which will almost certainly impact materially on oil and gas sector innovation in the next decade, whether directly or by importation and adaptation from peer sectors.

In geographical terms WIPO's statistics for 2015 again identifies the dominance of five countries – China, Japan, the USA, South Korea, and Germany – in patent awards. Europe contributed 20 of the Top 100 with France taking 10 of those places. However, The Global Innovation Index 2015 (GII) produced jointly by Johnson Cornell University, INSEAD, and WIPO has better news for Europe. The GII measures 79 indicators, not merely patent awards, and Switzerland, the United Kingdom, Sweden, and the Netherlands took the first four places, ahead of the USA in fifth place.

However, the sobering conclusion which must be reached from the State of Innovation statistics is that the oil and gas sector is failing to innovate at anything like the rate of some of its industry peers, but on a more positive note the scope for cross fertilization of innovation from other sectors into the petroleum sector is a clear opportunity.

Deploying Intelligent Energy Law in the New Energy World

In the context of these drivers and trends how can a strategic approach to intelligent energy law be deployed effectively as part of a business's competitive edge? There are, perhaps, four key elements:

Firstly, the widening out of the 'internationalization' process means that the creation, acquisition, commercialization and protection of intellectual assets must be planned and implemented with a global perspective and with full awareness of the prevailing laws in all applicable locations, including those emerging territories where future revenue streams can be anticipated – thinking and acting locally or regionally no longer works.

Second, an integrated management information system must be in place to identify, capture and protect new intellectual property assets being created within an organization, to register and map out the business's IP assets in an auditable format, and to monitor third party infringements.

Third, tailored contractual arrangements confirming ownership and commercialization rights must be in place with all key parties with whom the business interfaces: including clients, joint venture partners, suppliers, employees and consultants. These contracts must be fit for purpose, especially where complex international jurisdictional and enforcement challenges will arise in the event of disputes.

Fourth, a market intelligence system must be in place to track the arrivals of new competing or synergetic technologies within the energy sector; and technologies in other sectors which may be capable of migration to the petroleum sector; and special emphasis must be placed on developing or identifying acquirable technologies, which contribute to energy efficiency, emissions reductions and cost reduction/affordable energy.

There is certainly no copyright in the optimum methodology and execution strategy for rolling out any business's Intelligent Energy Law competitive edge positioning but if the above four pillars of strength are in place then the chances of a successful commercial and risk-managed approach will be enhanced significantly.

Hugh Fraser is the Office Managing Partner of Andrews Kurth Middle East and a member of the firm's Intelligent Energy Law team. He will be presenting on "Protecting and Commercializing Advanced Petroleum Technology: The Role of Intelligent Energy in 2016" at the SPE Annual Technical Conference and Exhibition in Dubai on 26-28 September, 2016. *Copyright in this article has been vested in the Society of Petroleum Engineers and may only be reproduced under permission.*

PETROLEUM AGREEMENTS IN EGYPT

MOSTAFA I. EL SHAZLY, Attorney at Law, Petroleum Agreements Department, EGPC & Acting Member, Association of International Petroleum Negotiators (AIPN)

Agreements for petroleum exploration and production (E&P) are considered the principal legal instrument for the exploitation of the Egyptian petroleum resources. It is a tool, through which the legal relationship between IOCs and NOCs is drawn.

The increased number of petroleum agreements reflects the positive investment climate in the Egyptian upstream sector as the Egyptian government desires to attract more investors in this crucial sector in order to increase petroleum production to cover the domestic market tremendous consumption.

Agreements for petroleum exploration and production are not of the same nature. Petroleum agreements in Egypt evolved since the startup of the exploration activities in the country in the light of the changeable economic, political, and geological surrounding circumstances.

Egypt adopted first Concession System in its traditional form as a principal contractual tool for petroleum exploitation, however, it was replaced by Participatory System (Joint venture) to increase the country`s control over the petroleum E&P projects.

The adoption of JV resulted in the creation of the national oil company in Egypt, the Egyptian General Petroleum Corporation (EGPC) in 1954. The creation of EGPC is virtually aimed at putting an end to the IOC`s monopoly over the petroleum operations, increasing governmental takes in return of the exploitation of petroleum resources, strengthening the domestic entities' control over the petroleum operations, in addition to facilitating the transfer of knowledge from IOCs.

Since 1973 Egypt has adopted Production Sharing Model Agreement (PSAs) as the basic contractual instrument for petroleum exploration and exploitation. The aforementioned model paved the way to the Egyptian government to acquire the IOC`s share of petroleum, and to not bear any further funding burdens nor any commercial risks.

In the period from 1973 until September 2015, the Egyptian government signed 458 PSAs, each of them includes a string of work programs and financial commitments. The accumulative minimum number of the drilled wells was 1,826 with a total expenditure of $24.82 million.

The state oil company EGPC signed 420 PSAs in the same period, while the rest of PSAs were signed by the Egyptian Natural Gas Holding company (EGAS) and Ganope El Wadi Holding Company (GANOPE).

In response to the low price environment, EGPC has made a few changes to the PSA model in the latest bid round as compared to the previous round in 2013. The bidding limit on the cost recovery ceiling and government share of excess cost recovery has been relaxed slightly from 35% to 40% and 90% to 85%, respectively. EGPC has taken EGAS and GANOPE's lead for oil profit share and moved to a dual sliding scale, with rates varying according to prevailing Brent price and production rates. In order to increase the recovery factor from potential discoveries and make EOR projects economically viable, EGPC has introduced a new bidding parameter for recovery of capital costs incurred in the late years of the field.

Royalty and income tax are paid by the state on the contractor's behalf, so government revenues come entirely from its share of excess cost recovery and oil/gas profit. The government ensures an effective royalty by imposing a low cost recovery ceiling bidding limit.

The state should give more incentives to the IOCs encouraging them to keep going and pump more investment in E&P projects. Priority shall be given to IOCs operating in deep and ultra-deep areas, which require complicated technology and large investment.

THE IMPORTANCE OF OIL AGREEMENTS

AZIZ EFFAT, International Oil Expert

The increase in the new oil agreements and the intensification of research and exploration operations to raise the local production of fuel is the survival route for the Egyptian oil sector that seeks to ensure an increase in our crude oil and natural gas production, as well as reserves. The aim is to lower the import bill, which costs the state millions of dollars in a time when officials are facing challenges in providing dollars to the consumer sectors to meet the needs of citizens for buying goods and oil products.

The importance of oil agreements lies in that they offer an added value to the national economy, provide local fuel to citizens, and help diversify the sources of new and renewable energy. The government has to increase the number of oil agreements as the oil sector is the only one, which currently brings the hard currency to Egypt, especially with the rise in the oil agreement investments, which the Ministry of Petroleum has concluded in the last two years together with international companies.

As per official reports and data of the Ministry of Petroleum, the oil sector signed 66 oil agreements in May 2016 with minimum investments of $14.3 billion, following a three-year halt. The agreements boost resulted in the execution of two major gas exploration projects in the Mediterranean Sea: Zohr and North Alexandria. This led to an increase in the international companies' trust in the investments climate in Egypt, the intensification of research activities, and adding the exploration of gas and oil to the production map.

Long-term oil agreements are an extremely important factor for the support of the state budget, allowing us to attract foreign investments to Egypt at a time. Egypt relies fully on the Ministry of Petroleum in attracting foreigners to work in Egypt and increase the national income.

The signing of new oil agreements is within the government's plan to ensure supply of oil products to citizens in the local markets, and to amend some oil agreements that will contribute in an increase of investments. Egypt seeks to attract $30 billion in the next three years.

The oil agreements will also close the gap in local production and the natural consumption rates of fuel. Egypt consumes 6 million tons of oil products a month and produces 4 million tons. These volumes are pumped into the local markets to fulfill the needs of citizens.

The agreements will also aid in completely solving the power crises, which the state has been facing with a deficit of 500 million cubic feet a day, making Egypt an importer of gas rather than an exporter.

CRISES TO BOOST OIL AGREEMENTS

IBRAHIM ZAHRAN, International Petroleum Expert

Many obstacles come in the way of oil officials to increase the number of oil agreements in the upcoming years.

One of these obstacles is the crisis of paying off the foreign companies' debts. These debts currently amount to $4.3 billion, forcing foreign companies to hamper their production and exploration in the Egyptian concession areas.

Second obstacle is the increase of drilling costs in the marine concession areas, in which Egyptian companies find it hard to spend billions of dollars to dig out gas from the Mediterranean Sea.

Third obstacle is the amendment of the articles of the oil agreements and gas prices, which the government buys from the foreign partners.

Egypt owns over 122tcf of gas ready for extraction in the concession areas in the Mediterranean Sea and is in need of new oil agreements in order to attract foreign investments to Egypt that will contribute to extracting the gas reserves.

As it appears, the only way to attract foreign investments will be through signing new oil agreements. The government has to amend the oil agreements with the foreign partners.

In addition, the government has to find new methods to pay the late debts, especially after the slump of the global crude oil barrel prices. Decreasing the debts from $6 billion to $3.4 billion was the main reason for the announcement of the largest natural gas producing field in the Mediterranean Sea, Zohr, with reserves of 30tcf of gas.

Due to indebtedness, the foreign partners already started looking for other markets outside Egypt for the exploration of oil and natural gas in light of the increase in taxes and rent costs on each barrel produced in Egypt, in order to follow the 'production splitting' system gradually. The system stipulates that the foreign side alone bears the risks of exploration and spending operations, and when a commercial discovery is established and starts production, part of the production is spared for the recovery of the costs of research and development that the foreign side has borne. The rest of the production share is divided between the entity and the foreign partner as per the tranches agreed upon.

The halt in oil agreements for three years after the 25 January Revolution was a reason for the shift that made Egypt an importer of energy rather than an exporter. Furthermore, in light of the low national buffer stock of gas, which was estimated at roughly 12tcf, Egypt had to adhere to the production splitting as it allows the state to acquire the foreign partner's oil and natural gas share. And if the reserves are of around 7bcm or more, the partner would be compensated for the costs of exploration. The oil and natural gas would be bought as per the prices in the agreements signed.

On the other hand, in case reserves were of less than 7bcm, gas would be conceded to the entity without compensation.

To conclude, the local selling and marketing of gas is what distinguishes the Egyptian agreements signed with the foreign partners. These stipulate that the national side receives a minimum of 75% of the natural gas and liquefied gas products agreed upon in the gas sales agreement, as well as amend the gas price in the oil products to be at a maximum of $2.65/1mBTU.

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CREATIVE MUD LOGGING SYSTEM

By Dr. Abdel Moneim Abu Shady, Logging Director, SinoTharwa

Mud logging is the creation of a detailed record - a well log - of a borehole by examining the cuttings of rock brought to the surface by the circulating drilling medium; most commonly known as drilling mud.

In an oil field drilling operation, mud logging technicians determine positions of hydrocarbons with respect to depth, identify down-hole lithology, monitor natural gas entering the drilling mud stream, and draw well logs for use by oil company geologists. Rock cuttings circulated to the surface in drilling mud are subsequently sampled and analyzed.

Mud logging provides well owners and producers with information about the lithology and fluid content of the borehole while drilling. It is the earliest type of a well log. It may begin on the first day of drilling, known as the 'spud in' date, but it is more frequently deployed at a later stage determined by the oil industry geologist's research.

As it happens, mud logger may also possess logs from wells drilled in the surrounding area. This information, which is known as 'offset data,' can provide valuable clues as to the characteristics of the particular geo-strata that a rig crew is about to drill through.

Mud Logging Processes

Mud loggers connect various sensors to the drilling apparatus and install specialized equipment to monitor or 'log' drill activity.

Mud logging technicians observe and interpret the indicators in the mud returns during the drilling process, and at regular intervals log properties such as drilling rate, mud weight, flowline temperature, oil indicators, pump pressure, pump rate, lithology of the drilled cuttings, and other data. The acquired information is organized in the form of a graphic log.

Another important task of the mud logger is to monitor gas levels and types in order for appropriate steps to be taken to avoid a dangerous well blowout condition.

As there is a lag time between drilling and the point when the mud and cuttings return to the surface, a modern augmentation has come into use - Measurement While Drilling (MWD). The MWD provides the data that is different in source and content thanks to expensive and complex, electronic tools that are installed down-hole at or near the drill bit.

Equipments require precise calibration or alignment by the mud logger to provide accurate readings, and innovations are crucial.

Mud Logging in Egypt

SinoTharwa Drilling Company started the Creative Mud Logging System (CMS) project in 2012 as its integrated services in Egypt, which has marked successful performance.

CMS is a global leading explosion-proof mud logging unit, applicable to onshore and offshore drilling rigs. It integrates advanced computer network technique with the fastest gas chromatographic analysis technique, explosion-proof CAN BUS data transmission technique, accurate and reliable sensor technique, geochemical evaluation of rock samples, Nuclear Magnetic Resonance analysis technique (NMR), and Quantitative Fluorescence analysis Technique (QFT).

A CMS mud logging unit can measure more than 60 parameters directly and derive more than 200 parameters of the analysis.

The main parameters include:

Gas Parameters

Total Gas, C1, C2, C3, iC4, nC4, iC5, nC5, H_2S, and CO_2

Engineering Parameters

HKLD, WOB, SPP, TORQ (Electrical, Mechanical, Top drive), RPM (Top drive), SPM1, and SPM2

Mud Parameters

Pit level, total pit level, gain/loss, mud return flow of mud, mud temperature in/out, mud density in/out, and mud conductivity in/out

Depth Parameters

Well depth, ROP, Bit position, Off bottom, etc.

Geological Parameters

Geochemical anal, quantitative fluorescence, Nuclear Magnetic Resonance, Shale density, and carbonate anal etc.

SinoTharwa's Operations

SinoTharwa applied its first CMS unit and started the operations with PetroSilah in El Fayoum Desert with 100% profitability in May 2013. SinoTharwa has totally drilled 27 exploration and development wells.

The second mud logging unit was launched with El Mansoura Oil Company in Nile Delta in March 2014. While applying the technique, the company drilled 8 directional wells until now. Further, its contract was renewed to last until 2018.

By the end of 2015, SinoTharwa also won a tender of three CMS units with Qarun Petroleum company, and the third mud logging unit started operations by December 2015. SinoTharwa drilled 8 development and exploration wells to the date.

In addition, the company has purchased 3 new Creative Mud Logging Units in order to fulfill its obligations, having won a new contract with Qarun, and Petrobel. SinoTharwa also participated in other mud logging tenders with PetroAmir, PetroShad HBS, Petrodara, and GUPCO, seeking to expand its operations.

SinoTharwa is continually adopting new strategies to sustain the company's prominence and competitiveness in the drilling market.

SinoTharwa Drilling Company was established in 2005 as a joint venture between Tharwa Petroleum Company – a subsidiary of the Egyptian Ministry of Petroleum & Mineral Resources – and China's Sinopec Star Petroleum Company. It is a service company, providing support to oil & gas exploration companies. The company occupies one of the forefront positions with a 14% stake in the Egyptian market, and it has the second largest drilling contractor position in Egypt. SinoTharwa currently owns and operates 18 rigs; 13 land drilling rigs, 4 work over rigs and 1 offshore rig.

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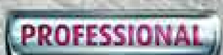
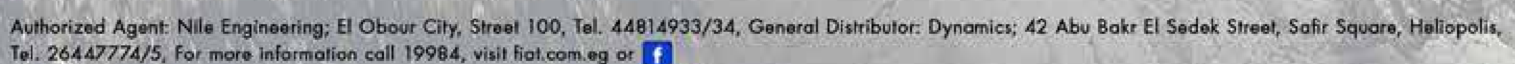
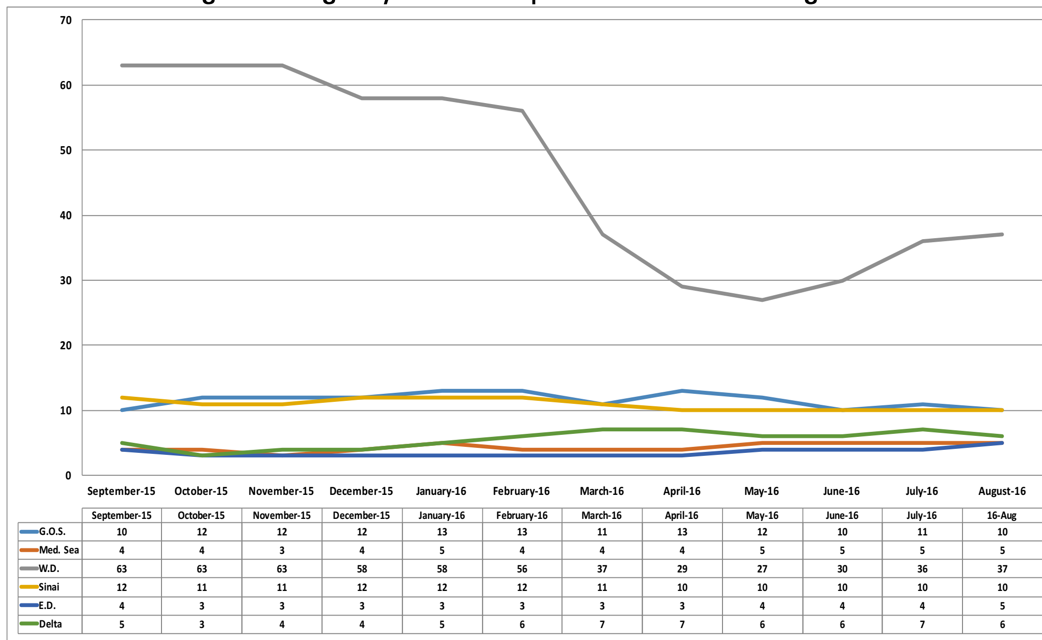


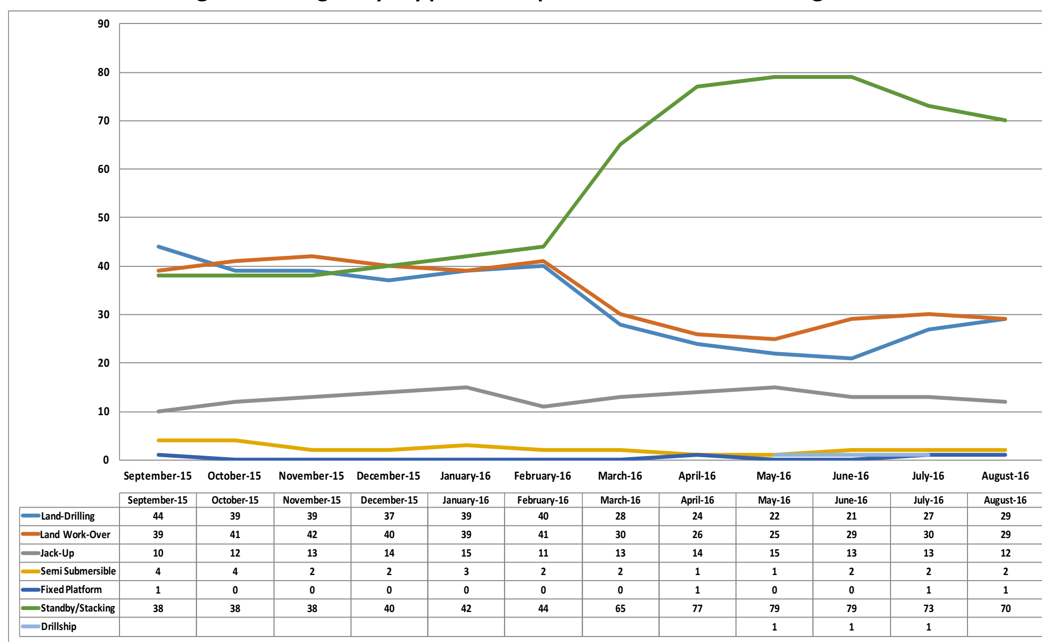


Changes in Rigs by Area- September 2015 to August 2016

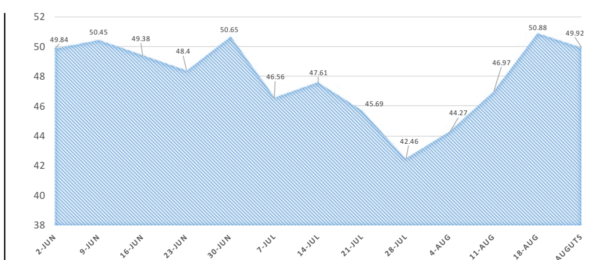


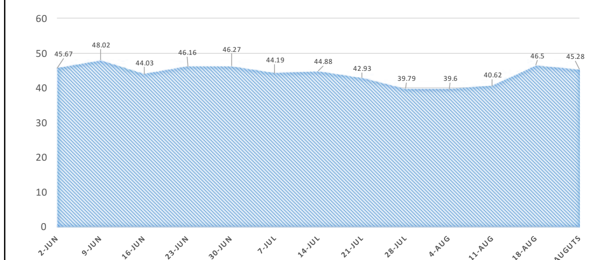
	September-15	October-15	November-15	December-15	January-16	February-16	March-16	April-16	May-16	June-16	July-16	16-Aug
G.O.S.	10	12	12	12	13	13	11	13	12	10	11	10
Med. Sea	4	4	3	4	5	4	4	4	5	5	5	5
W.D.	63	63	63	58	58	56	37	29	27	30	36	37
Sinai	12	11	11	12	12	12	11	10	10	10	10	10
E.D.	4	3	3	3	3	3	3	3	4	4	4	5
Delta	5	3	4	4	5	6	7	7	6	6	7	6

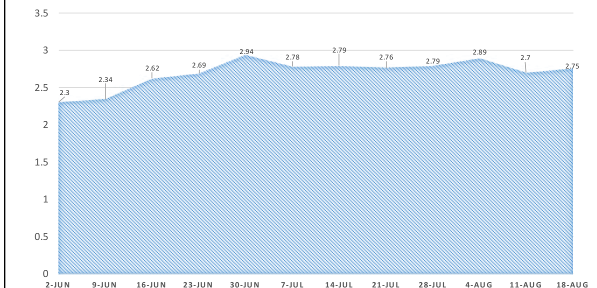
Changes in Rigs by Type - September 2015 to August 2016



	September-15	October-15	November-15	December-15	January-16	February-16	March-16	April-16	May-16	June-16	July-16	August-16
Land-Drilling	44	39	39	37	39	40	28	24	22	21	27	29
Land Work-Over	39	41	42	40	39	41	30	26	25	29	30	29
Jack-Up	10	12	13	14	15	11	13	14	15	13	13	12
Semi Submersible	4	4	2	2	3	2	2	1	1	2	2	2
Fixed Platform	1	0	0	0	0	0	0	1	0	0	1	1
Standby/Stacking	38	38	38	40	42	44	65	77	79	79	73	70
Drillship									1	1	1	





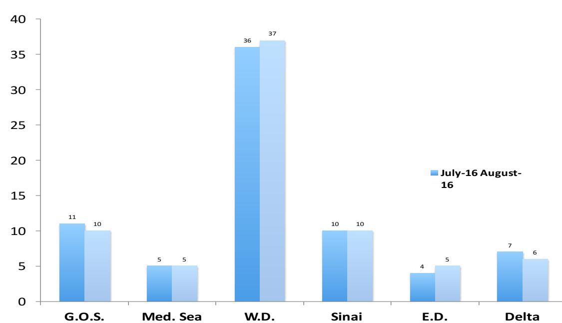


Production - July 2016

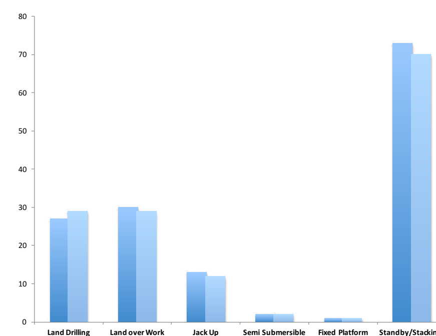
	Crude Oil	Equivalent Gas	Liquified Gas	Condensate
Med. Sea	–	9855179	183178	635953
E.D.	1914375	20000	2741	1318
W.D.	9797493	7611786	744930	1494369
GOS	4401843	671250	254810	70664
Delta	29112	3875000	139952	300128
Sinai	1820938	357	37007	24627
Upper Eg.	8604	-	-	-
Total	17972365	22033572	1362618	2527059

Unit: Barrel

Rigs per Area - July - August 2016



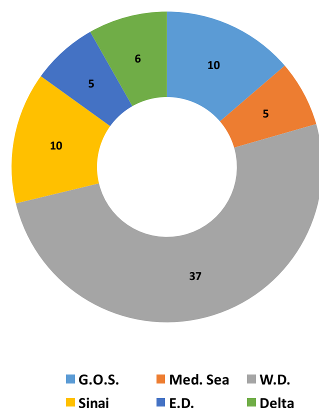
Rigs per Specification - July - August 2016



Rigs per Specification - July - August 2016

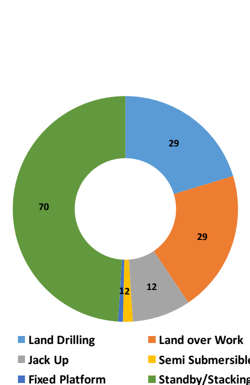
Location	July-16	August-16
Land Drilling	27	29
Land over Work	30	29
Jack Up	13	12
Semi Submersible	2	2
Fixed Platform	1	1
Standby/Stacking	73	70
Drillship	0	0
Total	146	143

Rig Count per Area - August 2016



G.O.S. Med. Sea W.D. Sinai E.D. Delta

Rigs per Specification - August 2016



Land Drilling, Land over Work, Jack Up, Semi Submersible, Fixed Platform, Standby/Stacking

Rigs per Area - July - August 2016

Location	July-16	August-16
G.O.S.	11	10
Med. Sea	5	5
W.D.	36	37
Sinai	10	10
E.D.	4	5
Delta	7	6
Total	73	73

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Applications

- Two-way surveillance and optimization of artificially lifted wells
- Conventional and unconventional wells

Features and Benefits

- Compatible with all Apple iOS, Android, and HTML5 supported devices
  - Enables users to access well data securely
- Real-time data access
  - Displays 7/14 day real-time data trend with ability to add and remove tags
  - Make control changes and perform a demand scan to poll the device for latest data
- Asset navigator feature
  - Lists device in the same fashion as the web interface
  - Allow users to search any production asset they have permission to
- Advanced alarm settings
  - Address various alarms directly within the mobile application
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