

Israel's Energy
Future:
A CHANGE IN THE GAME

EGYPT'S LEADING OIL AND GAS MONTHLY PUBLICATION - August 2014 - 32 PAGES - ISSUE 92



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Editor's **Note**

determined to bring our reader's ment in our upcoming issue. the latest news and facts related to Egypt's petroleum industry. In this month's issue, it was our pleasure to sit down and speak with Mr. Jeroen Regtien, Country Chairman and Managing Director of Shell Egypt N.V., during an interview that discusses Shell Egypt's current views and expectations. We also have a guest column under "Opinion" written by Professor Paul Sullivan, Georgetown University, who sates his views on Egypt's, current, energy dilemma. I would like to personally thank both Mr. Regtien, and Mr. Sullivan both for their valued contribution to our newspaper. Your time and effort is much appreciated.

Also, we would like to thank all those who participated in our 8th Annual Ramadan Petroleum Soccer Tournament. It was a great success thanks to you. We will be highlight-

We here at Egypt Oil and Gas are ing the events of the soccer tourna-

We would very much appreciate any feedback or insight into the planning of future events or editorial content.

Please don't hesitate to contact our team at MMarei@egvptoil-gas.com

Editor in Chief Mai Marei





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Algeria Supply Egypt with LNG

Egypt's state run newspaper Al-Ahram reported that President Abdel Fattah El-Sisi visited Algiers on June 25, his first trip abroad since taking office. Algeria agreed to deliver to Egypt five liquefied natural gas (LNG) cargoes of 145,000 cubic meters each before the end of the year, stated a source at Algerian state energy company, Sonatrach, however there is yet no agreement about pricing. Egypt's Oil Minister, Sherif Ismail said in March, that negotiations with Algeria's Sonatrach were over "around 400 million cubic meters" of LNG. Algeria has the tenth-largest natural gas deposits in the world and is the third-largest gas supplier to Europe. Its exports have been in decline, however, because of lagging foreign investments. The Algerian LNG imports are part of the government's efforts to solve Egypt's current energy crisis, which is considered the country's worst in decades. Power generation for homes and industries in Egypt relies mostly on gas. A delegation from Sonatrach is expected to conclude the agreement in July. EGAS needs about \$1 billion to import gas to power stations throughout the three summer months. The amount is needed to import 17 shipment of LNG, rent a regasification vessel and dock at Ain Sokhna, and sign letters of guarantee, according to EGAS Chairman, Khaled Abdel Badie. He explained that an agreement has already been reached with the Russian company Gazprom to provide seven shipments of LNG, while the French company EDF will provide five shipments. Each shipment will contain about 170,000 cubic meters of gas.



Egypt's Efforts to End Gas Shortage Hindered

Hoegh's LNG terminal, which Egypt is to use, will suffer a delay in delivery. The plan is expected to help Egypt combat the worst energy crisis in years, stated a source at EGAS. Last May, Egypt's Petroleum Ministry and Norway's Hoegh LNG had agreed on Egypt using one of Hoegh's Floating Storage and Regasification Units (FSRU) for five years and that the terminal would be in place by September. Egypt's LNG imports are currently dependent on the terminal's installation. "We haven't vet reached a final agreement with Hoegh. The terminal will not arrive in September as had been announced before. It will arrive in October or November," said a source to Reuters news agency. He also added that the "obstacles" remaining to the final agreement are expected to be overcome during a visit from a delegation of the Norwegian company. Petroleum Minister, Sherif Ismail, has previously mentioned that more work needed to be done before the terminal could start operating.

EGAS Temporarily Stops Pumping Gas to Fertilizer Companies and Methanol Factory

EGAS announced halting the pumping of natural gas to several fertiliser companies including Misr Fertilizers Production Company (MOPCO), Alexandria Fertilizers Company (AlexFert), and the Egypt Basic Industries Corporation (EBIC). A senior official at EGAS said the stoppage, due to the increased gas consumption by power plants, started on 27 June and will continue until 2 July. The official also said that low gas production rates compounded the stoppage. The total amount pumped daily to the three factories is 157 million cubic feet of gas, of which AlexFert receives 47 million cubic feet. 45 million cubic feet are going to MOPCO and EBIC is pumped 65 million cubic feet. EGAS has also cut daily

gas supply to all cement and fertilizer factories by 567 million cubic feet; 340 million cubic feet of gas supply were cut from cement factories, whose consumption of gas can reach 430 million cf/d. Also, 227 million cubic feet were cut from fertiliser factories, which consumes an estimated 510 million cf/d. EGAS also stopped pumping gas to the Methanex plant in Damietta -which consumes 120 million cf/d for methanol production- in June. Methanex owns 60% of the units of methanol, while the Egyptian Petrochemicals Holding 12%, EGAS another 12%, the Egyptian Companv for Natural Gas (GASCO) 9%, and the Arab Petroleum Investment Corporation (APICORP) owns the remaining 7%.

Leviathan Partners Sign Preliminary Deal to Export Gas to Egypt

According to the Israeli news agency Haartetz, Israel's giant Leviathan natural gas field partners said they have signed a preliminary agreement with BG Group to negotiate a deal to export gas to BG's liquefied natural gas plant in Idku, Egypt. Delek Drilling, Avner Oil Exploration, Noble Energy and Ratio Oil Exploration would supply 7 billion cubic meters annually for 15 years, the partners said in a statement in early July. This makes up 20% of the field's gas production. The Leviathan natural gas field, off the Mediterranean coast, is the world's largest natural gas discovery of the decade. An energy source in Tel Aviv said such a deal would be worth about \$30 billion - providing a windfall to Israel's coffers from royalties, adding that a final agreement was expected by the end of 2014. The gas would be sent to liquefaction facilities in Idku directly via an underwater pipeline, which would be built by BG, much like the underwater pipe that currently brings gas ashore from Israel's Tamar natural gas reserve. The deal would be the largest in Israel's fledgling energy sector and would help the partners develop Leviathan. which holds an estimated 19 trillion cubic feet of gas and is expected to go online in 2017. BG said the Leviathan talks were one of several options it was considering to increase the supply of gas to its Egyptian plant. The company's liquefaction facilities in Egypt have been dormant since January 2011, when the Egyptian government decided that locally produced gas would be used only by local industry, and not exported. Texas-based Noble Energy is the field's operator with a 39.66% stake. Avner Oil

and Delek Drilling, subsidiaries of Delek Group. hold a combined 45.34%, and Ratio Oil has the remaining 15%. Delek and Avner last month raised \$2 billion in an international bond offering to help fund Leviathan's development. Eng. Sherif Ismail, Minister of Petroleum, said in a statement to Daily News Egypt, "As the Minister of Petroleum, I remain of the opinion that there is no problem in letting BG Group import Israeli gas to protect Egypt from international fines and arbitration." He noted the company has yet to ask for government approval to start importing gas. "There is no embarrassment in Egypt using the gas the BG Group imports from Israel given our economic issues," the Minister stressed, noting that working indirectly with Israel "is no longer taboo" for the Egyptian government. "Whatever is in Egypt's interest must be implemented immediately as we are dealing with an energy crisis," the Daily News quoted the Minister as saying.



Explorers See Promise in Egypt Oil and Gas as Subsidies are Eased

Citadel Capital SAE, Circle Oil Plc (COP) and Petroceltic International Plc (PCI) welcomed President Abdel-Fattah El-Sisi's decision to reduce subsidies and alleviate strains that producers sell fuel on the domestic market well below international prices, they said at a conference in London. Mohamed Shoeib, Managing Director of Citadel Capital, said that the changes would allow the government to cut the budget deficit and pay suppliers money owed for fuel. It's a necessary first step if Egypt wants to lure back investors driven from the country by recent turmoil as it tries to both increase exports and meet surging domestic energy demand. Petroleum Minister Sherif Ismail stated in June that \$1.5 billion would be paid by the end of

the year to energy suppliers. The government reduced petroleum-product subsidies by EGP 43 billion in the new budget in July. "EGPC is doing the best it can" to pay off the debt, said Chris Green, CEO at Circle Oil. According to Bloomberg "The key thing is reducing subsidy." Sea Dragon Energy Inc. (SDX) plans to acquire additional assets in the country, said CEO Paul Welch. "The time is great now to get involved in Egypt." Randy Neely, chief financial officer at Transglobe Energy Corp. (TGL) said, "We would like to spend more" in Egypt, but until there are further payments for fuel supplies, "we will be probably spending more outside of Egypt". International oil companies have welcomed the decision as well, including BG and BP.







Government Cuts Fuel Subsidies by EGP 43 Billion

Egypt's government had factored in a cut of 43 billion pounds in fuel subsidies in a recently approved budget for the current fiscal year 2014/2015, bringing spending on fuel to EGP 100 billion. The state currently spends more than 30% of its budget on fuel and food subsidies. The cabinet amended the government's budget to reduce a staggering deficit early in July. President Abdel Fattah El-Sisi, elected to office last month, said he would need to tackle the tough issue and asked every Egyptian to be ready to sacrifice to help the country's battered economy after three years of turmoil. The amended budget featured a \$6 billion reduction in the energy subsidy bill, government officials said. Prime Minister Ibrahim Mahlab said the cuts would help those in need, rather than wasting state money on the well off. He added that the state would inject EGP 51 billion in services – almost half on health and education - and to cushion a minimum wage. The Cabinet is to reduce the state budget deficit by EGP 240 billion, which is 10% of the gross domestic product, compared to

EGP 243 billion deficit during the previous year, representing 12% of the gross domestic product. The cabinet also plans to remove the energy subsidy within a period of three to five years.



Egyptian Petroleum Products Prices Increase Sparking Outrage

The government raised the price of petroleum products amid anger from drivers and general Egyptian public. The prices of 95-octane petrol increased to EGP 6.25, while 92 octane gasoline went up from EGP 1.85 a liter to EGP 2.60, and 80 octane gas from EGP 0.90 to EGP 1.6 a liter. Diesel prices were raised from EGP 1.1 to EGP 1.8. The decision to raise prices on petroleum products will be applied to a value of EGP 1,400 per ton of fuel oil in the food industries, EGP 2,300 to electricity companies, EGP 2,250 to cement factories, and EGP 1,950 pounds to brick factories and the rest of

the sectors. The price of natural gas for cement factories will rise from \$6 to about \$8 per million BTU, \$7 for iron, steel, aluminum, copper, ceramics, porcelain and flat glass plants, and \$5 for the textile, medicine, engineering, and brick sectors, amongst others. According to Tarek El-Mulla, Chairman of the EGPC, the prices of petroleum products will be progressively increased each year over the next five years, until prices are liberalized enough to equal the actual (international) price of the product.

Cabinet Reduces Allocations of Butane Gas Subsidy by EGP 3.7 Billion in Next Fiscal Year

Allocations of butane gas subsidy were reduced by the Egyptian cabinet by EGP 3.8 billion to reach EGP 19.1 billion within the state budget of the new fiscal year 2014-2015, compared to EGP 22.9 billion within last year's state budget. Published on the Ministry of Finance's website, a statement of the 2014-2015 fiscal year's budget said that the amounts of butane gas planned to be offered in the market declined

by 40 million tons, compared to 2013-2014 budget. Earlier, Planning Minister Ashraf El-Araby stated that the cabinet will add a butane gas cylinder for each ration card within three months. Meanwhile, the cabinet increased the price of the butane gas cylinder of 12.5 kilograms from EGP 4 to EGP 8 and the price of the cylinder of 25 kilograms for trade sector reached EGP 16.

Rise in Fuel Prices Will Bring in EGP 24 Billion in Additional Revenue for EGPC

Tarek El-Mulla, Chairman of EGPC, said that EGPC expects an additional EGP 24 billion in revenue in the current fiscal year as a result of the price increases on petroleum products. The increase in fuel prices will provide an estimated EGP 43 billion in subsidies for petroleum products in the current fiscal year. Egypt's president, Abdel Fattah El-Sisi, defended the prices hike. EGPC is currently supplying approximately 37,000 tons of diesel and 19,000 tons of petrol daily to the domestic market to provide for normal needs, according to official spokesperson for the Ministry of Petroleum, Hamdy Abdel Aziz. He said EGPC pumped 40,000 tons of diesel and 20,000 tons of petrol into the market as a result of increased consumption rates the day before the prices increase. Consumers stored quantities of petrol and diesel during the last five hours that the old price was effective in order to sell the products on the

black market, but fuel consumption rates stabilized shortly afterwards according to the Minister of Petroleum.



EGAS: Desouk Project to Add 100 Million cf/d to Gas Production by End of July

EGAS is to increase gas production rates in Egypt from 4.6 billion to 4.7 billion cf/d by the end of July, 100 million cf/d would be added to the output as part of the Desouk project being undertaken with the German partner RWE, and the Italian Eni, said an official in the company. Production rates will not exceed 4.9 billion cubic feet of gas until the end of this year, reflecting the continuing decline in the wells productivity and small projects connected to the production line. Egypt's gas production is declining at an average of 100 million cubic feet of gas per month. EGAS is currently pumping approximately 104 million cubic meters of gas and equivalent per

day, while the daily demand is about 115 million cubic meters. In an effort to reduce power cuts, the Ministry of Electricity and EGAS have agreed to increase the amount of gas that is pumped to power plants to a maximum of approximately 80 million cubic meters per day through the month of Ramadan instead of 75 million. The official said that EGAS cannot increase gas pumping rates because the company accounts for 70% of Egypt's gas production in this period, and that the industrial sector would be negatively affected if gas supply was diverted towards home consumers.

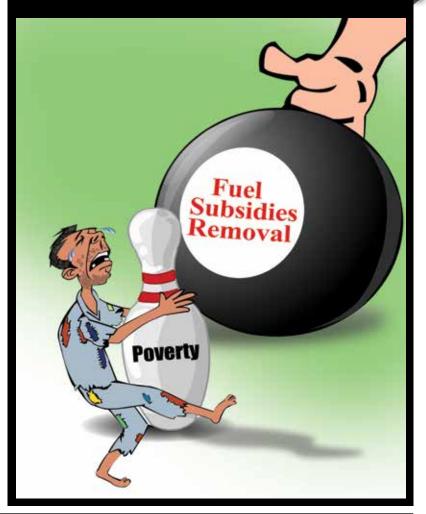
EGPC: 2.5 Million Smart Cards for Petroleum Products

The government has already distributed 2.5 million smart cards for petroleum products, out of the 4.5 million cards which it aims to distribute, stated chairman of EGPC Tarek El-Mulla. About 11,000 smart card machines, at the cost of EGP 3,000 each, have been placed in gas stations to allow smart card using customers to access fuel at a subsidized price, reports Daily News Egypt. EGPC has automated 15 petroleum product companies operating in Egypt, in addition to 102 fuel depots. It linked 2,646 gas stations within Egypt to the smart card system, automated 748 direct clients at 1,666 discharge points, as well as 662 transport agents with

6,968 trucks, tractors, and trailers for transporting petroleum products. El-Mulla explained that the use of smart cards at gas stations is not restricted to any amounts for citizens and the current prices remain the same, he also added that the main objective of the application of the smart card electronic system is to tighten control of the transfer, handling and distribution of petroleum products to eliminate smuggling, black market practices, and ensure that subsidised fuel is going to the right places.



CARTOON



EGPC Issues a Tender to Swap Qarun Crude Oil for Iraqi Basra Light

A tender document stated that the EGPC issued a tender to swap a 435,000-450,000 barrel cargo of Qarun crude oil for an equivalent Iraqi Basra Light cargo for August delivery. The tender closes on July 14 with offers remaining valid until July 21. It specifies that the delivery is to take place through storage-tank transfer at the Sidi Kerir oil hub on August 16. A trade source specified to Reuters that of Qarun, while BP took Western Light delivered to Egypt.

Desert. Socar sold at least one of the Iraqi Basra Light cargoes to EGPC. "They started doing it (swap tender) for July a few weeks ago and will practically do it every month ... They have better refining values with Basra," one trader said. The trading arm of Azeri Socar and oil major BP were the winners of the last tender, traders said, which involved two cargoes of Qarun, one cargo of Western Desert and Socar and BP each took a cargo at least two cargoes of Iraqi Basra

48 New Petroleum Discoveries in 2013/2014



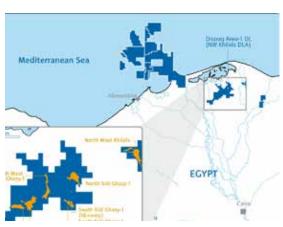
According to the Ministry of Petroleum, during the fiscal year 2013/2014 48 new petroleum discovery were made, of which 37 discoveries of crude oil and condensate and 11 discoveries of natural gas adding about 2.53 million barrels of crude oil and condensates, and about 4.392 billion cubic feet of natural gas to reserves. In addition to two new discoveries (Notts and Salamat) in the deep waters of the Mediterranean Sea with an initial estimated reserves

of about 6.2 trillion cubic feet of gas and about 70 million barrels of condensate. The Ministry of Petroleum is currently trying to implement an ambitious program in order to increase the production to meet the local energy demand. The program is to contribute into increasing the declining production rates which accompanied and increase in consumption rates and the hindering of wells development due to the increasing debts owed to foreign oil Companies.

RWE Dea Completes Successful Appraisal Wells in Egyptian Fields

RWE Dea completed three appraisal wells in the Egyptian Sidi Salem South East-1 and Sidi Salem South East-2 gas fields from March to May 2014 with the aim of de-risking reserves and reducing uncertainties of the Late Miocene Abu Madi reservoir prior to production. The two Sidi Salem South East fields lie approximately 20 km south-west from the Disoug Central Treatment Plant (CTP) at

North Sidi Ghazy field. The first appraisal well Sidi Salem South East-2-3 (SSSE), was drilled to test the north-eastern extension of field in a down-dip location 2 km south-southwest of the SSSE-2x discovery well. The well encountered a gas-down-to at -2647 m, some 33 m deeper than the gas-down-to seen in the SSSE-2x well. The second appraisal well SSSE-2-2, targeted the northern field extension and again encountered a gasdown-to at -2632 m. The occurrence of gas-down-to levels in progressively down-dip well locations is suggestive that a field-wide intraformational bottom seal is part of the trapping mechanism in the SSSE-2 field, commented Richard Vaughan, Disouq Subsurface Project Head. The third well SSSE-1-2, was drilled successfully as an appraisal of the separate SSSE-1 structure 1.5 km east of the discovery. "All SSSE wells have been completed and temporarily suspended as aas producers. Perforations will be added as part of a rig-less campaign later in 2014/15," added Vaughan. The Weatherford 94 Rig is now drilling



the final Phase B Disoug Development well namely, Disouq-1-3. The well targets multiple reservoirs levels of Pliocene and Late Miocene age in an adjacent structural compartment to the east of the main Disouq Field some 30 km from the Disoug CTP. Results from the near-field exploration well Disouq-1-3 are expected in July 2014. Meanwhile, RWE Dea Egypt received internal approval to drill a further three near-field exploitation wells in the Disoug Development Lease. "The addition of these wells shows RWE Dea's continuing commitment to add reserves to its Disouq Development Project," explained Maximilian Fellner, RWE Dea Egypt's General Manager. He added that "through our partnership with the EGAS we want to boost the gas production beyond the currently planned production target of 100 MMSCFD to meet the ever-growing energy demands of Egypt." This next phase of drilling, which targets again the Late Miocene Abu Madi Formation, will follow on immediately after the completion of the Disouq-1-3 well.

Petroleum Minister Sherif Ismail: UAE Willing to **Invest in Oil Sector**

In a surprise visit to the United Arab Emirates (UAE) in mid July, the ministers of oil, finance, and investment held meetings with Emirati officials to discuss new mechanisms through which Gulf countries could support the Egyptian economy. The Daily News Egypt reported that the visit included a discussion of bilateral cooperation between the UAE and Egypt in the areas of research, exploration and development of the crude oil, gas, petrochemical and mineral fields. The discussion also reviewed new joint investment projects' current position and different avenues of investment that had been taken previously, declared the Minister of Petroleum. He said in his statement to the Daily News Egypt that the UAE has expressed its willingness to invest in the petroleum sector and is currently choosing between projects that can be initiated in the coming period. He added that there are ongoing discussions regarding the possibilities for the Arab Petroleum Pipelines Company (SUMED) to construct new pipelines and depots. Ismail also added that until an agreement on the joint projects between the UAE and Egypt is reached, the officials would continue to meet regularly.

Drilling **News**

SUCO Drills New Well

SUCO, a joint venture company between EGPC and RWE, has completed drilling a new developmental well in its concession area in the Nile Delta. SUCO's production rate was 477,169 as of June 2014.

New developmental gas-producing well, drilled at a depth of 9,000 ft. utilizing the PDI-94 rig. Investments surrounding the project are estimated to be \$1.798 million.

Qarun Drills New Wells

Qarun, a joint venture between EGPC and Apache, has recently completed drilling two new developmental oil-producing wells in its concession area in the Western Desert. The production rate of Qarun was 1,234,266 as of June 2014.

HNE-35

The new developmental well was drilled at a depth of 6,000 ft. utilizing the PD-1 rig. Inve: ments surrounding the project are estimated to be \$628,000.

HNE-37

The new developmental well was drilled at a depth of 6,000 ft. utilizing the PD-1 rig. Investments surrounding the project are estimated to be \$720,000.



Agiba Drills New Well

The joint venture between EGPC and IEOC, Agiba, has recently completed drilling a new developmental oil-producing well in its concession areas in the Western Desert. The production rate of Agiba was 1,665,400 as of June 2014.

E. AGHAR-31

The new development well was drilled at a depth of 6,500 ft. utilizing the WF-161 rig. Investments surrounding the project are estimated to be \$700,000.

Kuwait Energy Drills New Well

Kuwait Energy, has completed drilling a new oil-producing well in its concession area in the Western Desert.

SHNW-10 ST

The new developmental well was drilled at a depth of 3,346 ft. utilizing the ECDC-1. Investments surrounding the project are estimated to be \$2.5 million.

West Bakr Drills New Well

West Bakr, a joint venture company between EGPC and TransGlobe, has completed drilling a new developmental oil-producing well in its concession area in the Eastern Desert.

H-25

The new well was drilled at a depth of 5,980 ft. utilizing the EDC-62 rig. Investments surrounding the project are estimated to be \$701,000...



PETROBEL Drills New Well

PETROBEL, a joint venture between EGPC and Eni S.p.A, has recently completed drilling a new gas-producing well in their concession area in the Mediterranean. The production rate of PETROBEL was 5,805,479 as of June 2014.

TNW 2-12 ST3

The new developmental well was drilled at a depth of 10,185 ft. utilizing the AL QAHER 2 rig. Investments surrounding the project are estimated to be

PETROSHAHD Drills New Wells

PETROSHAHD, a joint venture between EGPC, Sipetrol and Kuwait Energy, has completed drilling two new oil-producing wells in its concession area in the Eastern Desert. The production rate of PETROSHAHD was 699,237 as of June 2014.

AL ZAHRAA - 4

The new exploratory well was drilled at a depth of 10,480 ft. utilizing the ECDC-7. Investments surrounding the project are estimated to be \$4 million.

DIAA-2 ST

The new exploratory well was drilled at a depth of 14.314 ft, utilizing the ECDC-

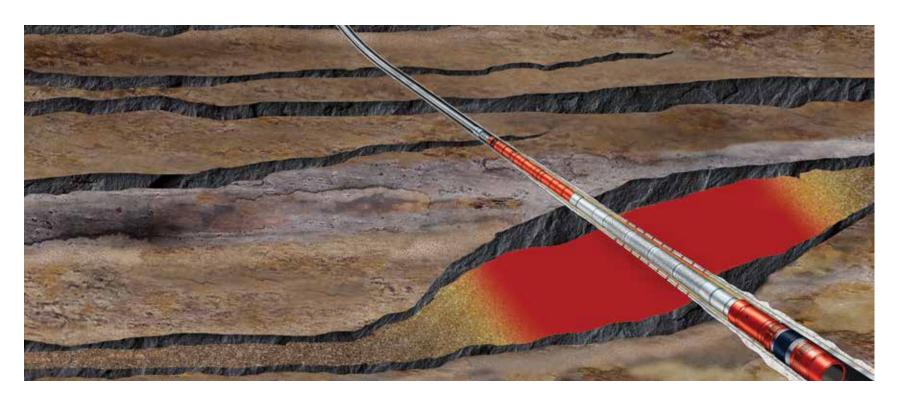
PETRODARA Drills New Well

PETRODARA, a joint venture company between EGPC and TransGlobe, has completed drilling a new developmental oil-producing well in its concession area in the Eastern Desert. The production rate of PETRODARA was 290,106 as of June 2014.

HANA -27

The new well was drilled at a depth of 6,570 ft. utilizing the ST-7 rig. Investments surrounding the project are estimated to be \$1.084 million.

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Completion Tools

Greece Promises Tax Cut to Attract Oil and Gas Maiors

Reuters News Agency reported that Greece is planning to cut tax rates for oil and gas companies in order to attract them to help exploit its untapped offshore hydrocarbon resources, its energy minister said in July. Under the plan, oil and gas explorers will pay 25% tax, down from 40% currently, 5% of the tax going to local communities. "We have done this in order to incentivize our investors to invest in the future of Greece," loannis Maniatis, Greece's Energy Minister, said at a conference in London. He did not say when the new tax rates would come into effect. Debt-laden Greece, which spent 15.6 billion euros (\$21.2 billion) to import fuel last year, or about 8.6% of its gross domestic product, has launched an ambitious program to discover big hydrocarbon reserves. It has been inspired by large gas finds offshore from nearby Israel and Cy-

prus. Maniatis also announced the tender of Greece's first large-scale oil and gas exploration licenses after several fruitless attempts over the past decades to make big oil discoveries. A group of Greek govemment oil and gas experts was meeting representatives from BP. Shell, Total and ExxonMobil and other oil companies in London second week of July, a Greek government source said. Once the tender is officially published in the coming weeks, oil and gas producers will be able to bid for licenses covering 20 blocks located south of Crete and in the Ionian Sea. "We will evaluate all the available data regarding the 20 offshore blocks which will be included in Greece's new concession round," said Mathios Rigas, Chief Executive of Energean Oil & Gas, currently Greece's sole oil producer.

Algeria, Tanzania Eye Future Energy Work

Youcef Yousfi, the Algerian Energy Minister has announced that Algeria and Tanzania are in the advanced stages of discussion concerning three separate energy issues. He met with his Tanzanian counterpart to discuss bilateral energy issues that concern both their countries. Yousfi stated that the three projects would be carried out within the coming months. He said that there would be a joint venture between both country's electricity and natural gas companies. The other two other projects deal with petroleum product distribution and

oil exploration and production. Algeria has the 10th largest natural gas deposits in the world and is the third largest supplier of gas to Europe. Its exports have been declining lately due to a lagging investment of foreign capital. A report issued by Wood MacKenzie, an energy consultant group has said that Tanzania is part of a growing number of energy producers in East Africa. The report also stated that output from Tanzania could help regional production increase from 500,000 b/d of oil to up to 1.5 million b/d.

Spain's Repsol to Develop New Oil Field in Ecuador

Repsol, the Spanish oil company, has announced plans to develop an oil field in Ecuador, reported Trading Charts.com. The expected yield will be between 5-6 million barrels of crude oil. The initial investment in the Wati field will be \$75 million with drilling to begin in 2015, according to Luis Garcia Sanchez, the head of Repsol operations in Ecuador. Last year, Repsol drilled five wells and completed six others at a cost of \$37 million, paid \$48 million to suppliers and overall put \$262 million into the economy. The company, which has

the largest stake (35%) in two service contracts to develop Block 16 and the Tivacuno Block, spent \$11.7 million in Ecuadoran projects related to the protection of the environment. Repsol attained a pipeline integrity management index of 78.9% and managed to significantly reduce the level of pipeline risk. The company also put \$1.9 million in investments projects benefiting the local communities. Ecuador is the smallest member of OPEC and according to the EIA, had more than 8 billion barrels of proven crude oil reserves.

Italian Eni Interested in Strengthening Its Position in Turkmen Market

Claudio Descalzi, the Head of Eni, an Italian oil and gas company, paid a visit to Turkmen President, Gurbanguly Berdimuhamedov the objective of strengthening the company's investment position in the country. Eni "sees the potential of vast untapped energy resources and a favorable climate for business and investment." EIN reports that Turkmenistan is conducting a modernization of its fuel and energy sector, including physical plant to increase the volume of hydrocarbon production and creating routes of export to bring this new found energy wealth to the world market. President Berdimuhamedov said, "This requires not only investments, but also the work experience of leading world compa-

nies specialized in this sphere." Descalzi is enthusiastic about his company reaching all of the concluded agreements. Eni began its association with Turkmenistan in 2008, when it purchased the shares of UK Burren Energy Plc. The Italian company is also interested in bringing Turkmen energy products to the Indian market. There is also interest in trade with Europe. The Trans-Caspian Pipeline has already begun to be built, which will bring Turkmen oil to Azerbaijan and into Europe. Foreign companies have an open invitation to propose projects in the Turkmen part of the Caspian Sea, which, according to forecasts, (minus contracted blocks) has 11 billion tons of oil and 5.5 trillion cubic tons of gas.

Tunisia: African Development Bank gives \$75million to State Owned ETAP

The African Development Bank made a \$75 million corporate loan to Tunisia's state-owned oil and gas exploration company, the Enterprise Tunisienne d'Activites Petrolieres (ETAP), as reported by African Manager. The loan, approved by the Bank's board of directors in June, will be directed to the funding of the Nawara project as part of the South Tunisian Gas Project, (STGP). The 7 year loan has a non-sovereign guarantee. Tunisia is expected to reduce its gas imports and increase its hydrocarbon exports upon completion of the Nawara project. Currently, the country generates more than 90% of its energy from gas-fired power generation; however, more than 50% of the gas used is imported. ETAP and OMV Tunisia GmbH, the Tunisian subsidiary of the OMV Austria the largest listed industrial company in Austria and the leading energy group in Central and Southeastern Europe are equally funding the Nawara project. Since Tunisia has reached its production limits despite rising demands, there is a rising energy demand and Nawara is seen as the answer. Tunisia will be the major shareholder in the project which will comprise of a Central Processing Facility to compress the gas while a Gas Treatment Plant in the Coastal Ghannouch industrial area will produce marketable products such as natural gas, propane and butane.



Eni Oil Workers Block Greenstream Gas Pipeline from

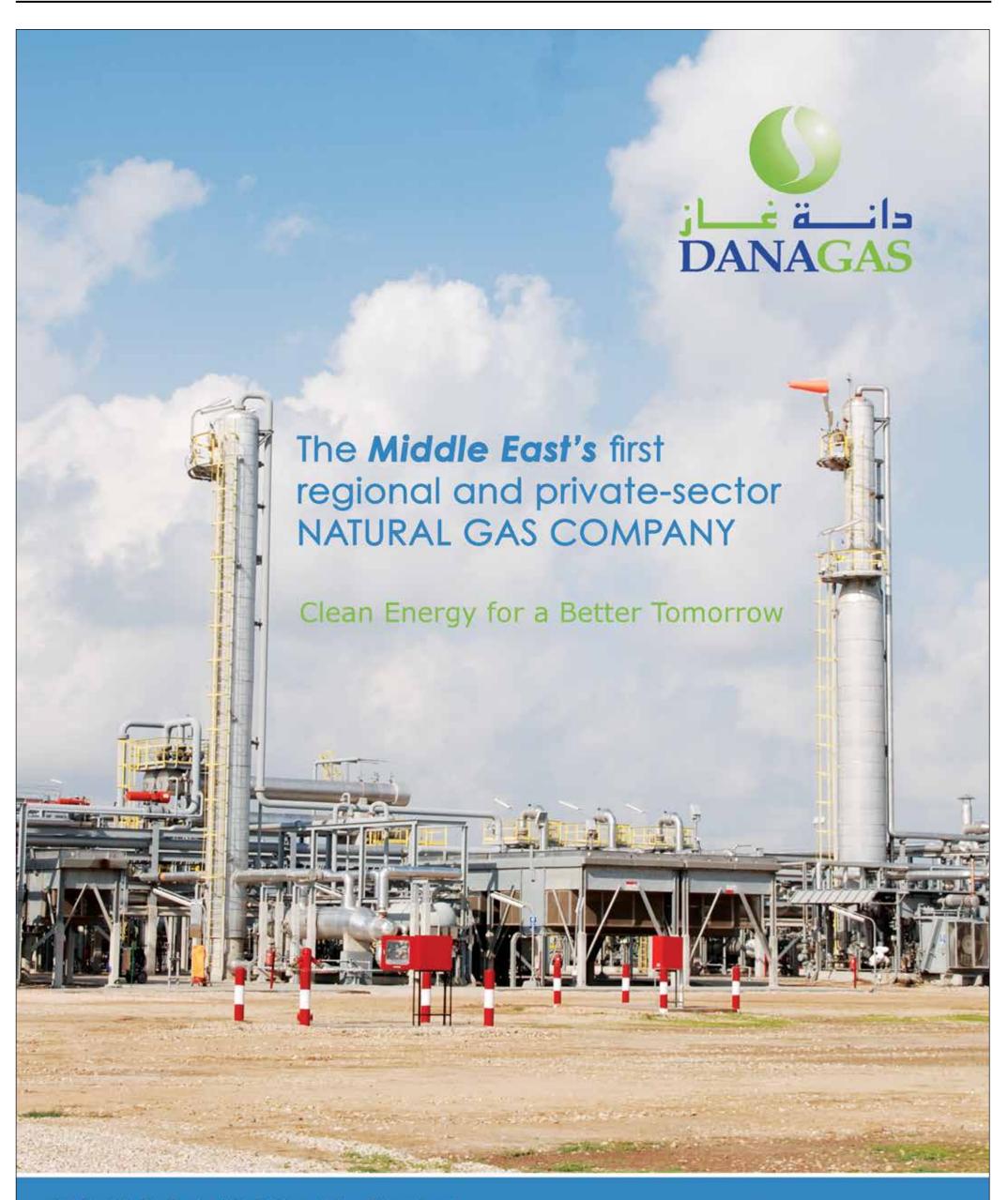
Workers of the Italian oil company, Eni, took termined to block the terminal and any mainover a refinery in the Sicilian port city of Gela in mid July. The refinery takes in gas from the Green Stream pipeline from Libya. They were protesting Eni's going back on a promise to invest 700 million Euros in the refinery, effectively shutting it down. Talks between the unions and Eni broke down causing the workers to increase their protests and the unions to call for government intervention. Green Stream runs from Mellitah on Libya's western coast for 540 km to Gela. It carries 10 billion cubic meters of gas from Libya to Sicily and on into southern Europe. The workers claim that Eni is backing out of a deal made last year to redevelop the refinery. They are de-

tenance work, preventing natural gas from entering the national grid. Michele Pagliaro, the leader of the Sicily section of the country's largest labor federation (CGIL), called on Governor Rosario Crocetta to intervene. "Eni's strategy could cripple the refinery sector. The government must step in because we risk de-industrializing the country and creating mass unemployment in the name of debatable notions of efficiency," said UGL Chemical Workers Secretary General Luigi Ulgiati. ENI is currently Italy's largest industrial company. The government currently owns a 30.303% golden share in the company.



5%

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Gazprom: Considerably Boosting Gas Supply to Croatia

Gazprom's Chairman of the Management Committee, Alexy Miller, has paid a visit to Croatia, meeting with Ivo Josipovic and Zoran Milanovic, the President and Prime Minister respectively, as reported by 4Traders. The South Stream pipeline was discussed, particularly its branch to Croatia, as well as other projects of joint co-operation in the oil and gas sector. They touched upon the resumption by Gazprom of the gas supply to Croatia. Also they looked into the issue of implementing joint NGV projects. The most important issue, however, was the possibility of Gazprom participating in the bidding for

subsurface blocks in Croatia to conduct geological exploration and to develop future hydrocarbon fields.



OPEC Market Share to Drop in 2015 Forecast Despite **Growing Demand**



OPEC expects its share of the world oil market to decrease in 2015 for a third year running, due in part to the U.S. shale oil boom, allowing the exporter group little comfort from an acceleration in alobal demand. In a monthly report, OPEC made its first 2015 forecast saying that demand for its oil next year would average 29.37 million b/d, 310,000 b/d less than in 2014. The report points to ample supplies next year, given that further progress is achieved in resolving outages in OPEC countries Libya, Iraq and Iran. The report is also a further illustration that technology for extracting oil and gas from shale is, for now, reducing dependence on OPEC according to Reuters. OPEC also expects a recovery in demand next year due to economic growth, predicting that world oil use will expand by 1.21 million b/d, up from this year's 1.13 million b/d increase, while non-OPEC supply - the source of

two in every three barrels - is expected to increase next year by 1.31 million b/d, more than demand, with the U.S. on top of the producing countries with an expected production increase of 880,000 b/d up to 13.12 million b/d in 2015. OPEC's report also indicates that the demand for its crude next year will fall further below its output target of 30 million b/d. At a meeting in June, OPEC agreed to retain the 30 million b/d target for the second half of 2014. OPEC pumped 29.70 million b/d in June, down 79,000 b/d from May, according to secondary sources cited by the report. In addition, OPEC also said its own members would increase supply of LNG and non-conventional oil by 200,000 b/d in 2015. OPEC's forecast of next year's growth in world oil demand is lower than that of the U.S. government's EIA, which predicted consumption would increase by 1.46 million b/d.

India Pays Iran \$550 Million in Oil Dues

In the second week of July, India paid a second installment of \$550 million in oil dues to Iran as part a payment schedule. The interim nuclear deal with Iran last November has allowed Tehran access to \$4.2 billion in blocked funds globally, two industry sources reported to Reuters. Asian buyers including Japan and South Korea have already cleared some of the amounts they owe for Iranian oil imports. Iran wanted the last three payments under the joint plan of action (JPA) totaling \$1.65 billion from India, but New Delhi could not clear the May and June installments on time, as the banking mechanism to remit the funds was not in place. India made the first payment to Iran under the interim deal in as of May 31.

June. The current payment system involving the central bank of the United Arab Emirates allows Tehran access to funds in Dirhams as a reward for cooperating in talks with world powers over its nuclear program. The settlement of the final installment of \$550 million to Iran due on July 20 depends on Iran fulfilling all of its commitments under the joint action plan. The respective payments by the five refiners were the same as in the previous installment, said a second source. Mangalore Refinery and Petrochemicals Ltd, Essar Oil, Indian Oil Corp., Hindustan Petroleum Corp and HPCL-Mittal Energy Ltd. together owed about \$4.6 billion to National Iranian Oil Co

Russian Hackers Target US and EU Oil and Gas Companies

Symantec Corp. reported that a group of Russian hackers - known as "Energetic Bear." as well as "Dragonfly" - is attacking energy companies in the United States and Europe. The group is reportedly capable of disrupting power supplies, the cyber-security researchers warned. The motive behind the attacks appears to be industrial espionage - a natural conclusion given the importance of Russia's oil and gas industry. "The attackers, known to Symantec as Dragonfly, managed to compromise a number of strategically important organizations

for spying purposes and, if they had used the sabotage capabilities open to them, could have caused damage or disruption to energy supplies in affected countries," Symantec said in a post on its official Security Response blog. The attacks were first documented in August 2012 by researchers from California security company CrowdStrike. when they discovered a very advanced and aggressive group from Russia that is targeting the energy industry, along with health care, defense contractors and governments.

BP Faces Deepwater Horizon Lawsuit by Investors Including London Councils

Pension funds from London Borough Councils and even Shell are among a new group of shareholders suing BP in Texas over the Deepwater Horizon accident, reported the Guardian early in July. The lawsuit follows recent US court rulings opening the way to challenges from those who bought financial stakes in BP outside the UK. The US courts are famously generous in their financial awards compared with their British counterparts. In the past, only investors who bought their BP stakes on the New York stock exchange or other US markets could file for compensation payments. Pomerantz Law, a class action specialist, has rounded up 32 major investors seeking financial compensation for the losses they incurred on their shares. The New York-based law firm is taking the case on a no-win, no-fee basis, and is hoping that other European investors will join the suit. BP group has made payouts of over \$30 billion already. BP is still waiting to hear a ruling on whether it has been guilty of gross negligence over the well blowout in which 11 oil workers died. The Department of Justice has claimed that the company acted irresponsibly. A gross negligence ruling would open potentially BP up to \$20 billion worth of new fines under the Clean Water Act. The Deepwater Horizon offshore rig blew up and sank while it was drilling for oil in the Gulf of Mexico in April 2010. Miles of beaches on the southern coast of the US were coated in oil, causing widespread damage to tourism and fisheries. The US government estimated that nearly 5 million barrels of oil were spilled in the five months it took to get the well under

Mitsui Aims to Tap Mexico's Oil and Gas

Mitsui, one of Japan's largest energy companies, is looking to tap into Mexico's oil and gas according to the Wall Street Journal. Mitsui's General Manager





of Oil and Gas Development Yasuhiro Uchida said, "Mexico has good energy prospects, large energy reserves, easy access to almost anywhere in the world, and free trade agreements with major economies. It also has a young population which will boost growth in the future." Mitsui is looking at reserves in the Gulf of Mexico as well as shale deposits on the Texas/Mexico border. After a 10-year decline in energy output, Mexico has opened the door to foreign investment in its energy sector for the first time in 75 years. Mitsui has signaled a willingness to engage in joint ventures with state-owned Petroleos Mexicanos or Pemex. Mitsui has also signed a memorandum of understanding with Pemex in May to discuss future oil and gas development opportunities including exploration, production, and marketing. Mitsui plans a \$14.75 billion investment in the next three years with 60% directed at the energy sector. Its target is a 40% increase in energy production to 330,000 b/d of oil as well as doubling gas liquefaction to 9.4 metric tons by March 2021.

North Korea Takes First Steps Towards Oil Exploration

The Mongolian oil company with ties to North Korea, HBOil JSC (HBO), is planning to entice foreign investors to the country's energy sector by showing them geological data which could indicate the presence of oil and gas resources, reported the Guardian in July. The move could mark the first step towards opening up the DPRK to onshore oil exploration as its relations with China, its main fuel supplier decline. Very little information is available about the DPRK's geology and potential oil and gas reserves although attempts to explore North Korea's onshore potential

have been made in the past. In order to address this, HBO is planning on opening what is known in the industry as a data room - a place where interested parties can inspect geological information on underground structures that could indicate the presence of oil and gas fields. With the DPRK government and military entirely dependent on Chinese and Russian fuel imports, domestic oil and gas production could afford Pyongyang a greater measure of independence from Beijing and Moscow.

Australia's Woodside to Buy U.S. LNG to Gain Price Flexibility

In a move to maintain competitive standing in the North Asian markets, Woodside Petroleum Ltd. has signed an agreement to buy LNG from the Cheniere Energy Inc. export plant in Texas, reported Reuters. Asian buyers have been pressing for changes in gas pricing from oil-linked terms to the U.S. gas benchmark at the Henry Hub delivery point in Louisiana. JP Morgan analyst Ben Wilson said, "This deal is a portent of the future of the LNG market. Woodside is responding to market forces." The deal to buy 850,000 tons a year of LNG from Cheniere's proposed Corpus Christi LNG plant, over twenty years starting in 2019, is Woodside's strategy to diversify its sources of gas and build its trading capability. The gas from Cheniere will be priced at 115% of the Henry Hub price plus \$3.50 per million BTUs, which is in line with other buyers from the project. Woodside is in the process of deciding on whether to build a floating LNG plant for its Browse Project

off Western Australia, the deal would enable Woodside to offer different pricing systems to its customers. This will help Woodside's ability to compete with companies like BP Plc, BG, and Royal Dutch Shell.



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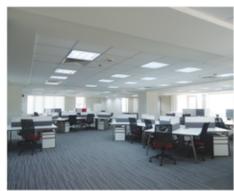
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- Availability of administrative and other professional services
- Access to shared facilities such as a cafeteria, parking, mosque, video conference and more













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KSA: Shell Ends Gas Development Investment in **Kidan Proiect**



Royal Dutch Shell is ending investments in a gas development project in Saudi Arabia, complicating the top country's efforts to exploit its huge gas reserves. The search for gas has been a priority for Saudi Arabia as it struggles to keep pace with rapidly rising domestic demand. However, the emergence of the shale gas industry has opened up better investment opportunities for companies elsewhere. "Shell has decided to end further investment in the Kidan development," the company announced in a statement. "This was a difficult decision but Shell remains committed to the Kingdom and we are keen to grow our investments, both in upstream and downstream." Shell didn't justify the decision to shelve the joint venture in the Kidan area of the Empty Quarter, the sea of sand dunes that cover south-east Saudi Arabia. Last year, industry

sources said the company was set to end investments in the venture due to disagreements with the government over terms. At least three foreign firms - Italy's ENI, Spain's Repsol and France's Total - have already abandoned the search for commercially viable gas deposits in that part of Saudi Arabia. Shell continued operations longer in its South Rub El-Khali Co (SRAK) project with Saudi Aramco after finding small quantities of gas. Kidan is rich in sour gas and is near the 750,000 b/d Shaybah oilfield, one of the biggest in the country. Sour gas has high levels of potentially deadly hydrogen sulphide and therefore is tougher to produce than conventional gas reserves. Saudi wants natural gas to help it cover demand for subsidized domestic power so it can save its oil for more lucrative

Saudi Aramco to Pump Tight Natural Gas at Equal Cost to U.S.

Saudi Aramco plans to put itself on an equal cost footing with the U.S. when it comes to natural gas derived from shale oil taken from "tight rock" formations, reported EIN. It is now targeting a cost of \$2-3 per thousand cubic feet of tight gas, according to Adnan Kannan, manager of the company's Gas Reservoir Management Department. "We do have shale, but shale will take a little longer because we need to go with low-risk, high rewards projects to

get our revenue." Saudi Arabia is attempting to free up more oil for export by developing shale and tight gas deposits to reduce the use of crude oil and other liquid fuels at its power plants. The lack of water for fracking has slowed down its plans, however. The kingdom may hold as much as 645 trillion cubic feet of technically recoverable shale gas, the world's fifth largest reserves and double its conventional reserves, which stand at 288 trillion square feet.

Iran's Plan to Generate Electricity from Gas Fails

Iran's ISNA news agency reported that Iran's plan to generate electricity from produced gas has apparently failed. The gulf nation was supposed to produce 3,000 megawatts of electricity a year and sell up to \$2 billion a year to Oman, Qatar, and the UAE. The project, however, has not made any progress since 2011. The gas was to come from the Forouz B field, located in the Persian Gulf. Abbas Aliabadi, the managing director of Iran Power Plant Projects Management Company stated last month that the development of Forouz B has been halted. "Drilling

operations in the gas field stopped three months ago. There is no problem in the development of the gas field, but the Oil Ministry has placed the priority on the development of joint oil and gas fields. The field, after the termination of its first development phase, is projected to produce one billion feet of natural gas for generating power. In addition, it will produce 10,000 barrels of condensate and 466 tons of sulfur. Forouz B is also expected to produce 1.49 million tons of gas-related liquids per year.

UAE's Shah Gas Project to Go Online Early 2015

The United Arab Emirates Shah Gas Project is behind schedule and will not be operational until 2015. As reported by Reuters, the multi-billion dollar project which is partnered with U.S. based Occidental Petroleum is to produce usable gas from Shah's high-sulphur reserves. It was slated to come online this year. ADNOC Chief Executive Abdullah Nasser Al Suwaidi said, "This is normal progress, the startup and coming online time for such a plant takes time." The plan is a very technically challenging one. It is to process one billion cf/d of sour gas into 0.5 bcf/d of usable gas. It is vital for both keeping the UAE supplied with oil and helping reduce petroleum imports. Shah will also produce significant volumes of condensate, as well as gas for industry and pow-

er generation. ADNOC holds 60% and Occidental 40% of the Shah gas development venture El-Hosn Gas. Italy's Saipem was awarded the engineering, procurement and construction contracts for the gas processing plant, sulphur recovery unit, and related pipelines. Other contracts were awarded to Spain's Tecnicas Reunidas and India's Punj Lloyd.



Unconventional News

China to Develop Shale Gas Industry

In a move that will see the first shale gas operation in Denmark, the town of Fredrickshavn in Jutland approved test-drilling for shale gas in Dybvad by a Danish unit of Total SA, according to EIN News. The decision follows a study which began in 2012 including hundreds of man hours and the commissioning of an environmental study. Only four of the thirty-one town council members voted against it. Total will only be permitted to drill conventional wells for their tests, without the use of hydraulic fracturing. In 2012, Total E&P Denmark and state-owned Nordsofonden committed 27 million Euros (\$36,757,800) to the search for shale gas in the northern Jutland peninsula. According to a source in France Total E&P Denmark, there might be as much as five times the amount of shale gas as has been recovered in the North Sea so far. In case of testing success, the operation would begin in 2020. The U.S. Geological Survey, in December 2013, estimated that the Alum Shale in Denmark contained 6.9 trillion c/f of undiscovered, technically recoverable shale gas.

Halliburton in Fracking Joint Venture in China

American oil and gas services conglomerate, Halliburton, announced its first-ever joint venture for fracturing services in China teaming up with SPT Group, a private Chinese energy firm. Halliburton concluded an agreement with Petratech Engineering, a SPT subsidiary to create Xinjang HDTD Oilfield Services. This joint venture company will focus on fracture stimulation services including design and analysis, data acquisition, and pumping and

chemical services in the Xinjiang Uighur Autonomous Region. SPT Energy Group has a 20-year history of providing technical services in Xinjang's Tarim oilfield and has the largest market share of any private energy business. Between 2025 and 2050, Tarim is expected to grow from 50 million to 100 million barrels of oil equivalent (BOE) and to account for one-third of China's unconventionals.

ExxonMobil in Talks With Turkey Over Shale Gas Exploration

The state-run Turkish Petroleum Corporation is negotiating with Exxon-Moregions, announced Selami Incedalci, the Head of the Energy Ministry's General Directorate of Petroleum Affairs, as reported by UPI. He said that the U.S. oil firm was interested in onshore opportunities in the southeast and in Thrace, in the northwestern part of the country. Turkey is developing domestic energy resources including coal, solar, and wind energy in order to reduce its \$60 billion energy bill. Large reserves of any kind could be a game changer for the national economy, due to the increased gas consumption and its well-placed location to supply international markets. Royal Dutch Shell and Canadian Trans-Atlantic Petroleum are

also active in the region. Estimates of Turkey's shale gas reserves vary a great bil over a venture to explore for shale deal, from 6-7 billion cubic meters all gas in the southeast and northwest the way up to a staggering 20 trillion cubic meters.



Report: Chile to Import U.S. Shale Gas as of Late 2015

ENAP, Chile's state-owned oil company, has finalized a long term agreement with BG to import shale gas from the United States beginning at the end of next year, reported local Chilean media, La Tercera, quoting the Chilean Energy Minister Maximo Pacheco. The volumes and prices agreed upon were not revealed. A press official at the ministry confirmed the existence of a deal but did not give more details. A surge in shale gas production in the U.S. is rapidly changing the international energy market. While once a LNG importer, America is now poised to

export large amounts of LNG all over the world by 2020. The deal is very important to Chile, a large copper exporter and is seen by the South American country as a way of alleviating a coming energy crisis. "Today, without a doubt, the most important revolution happening in the United States is the Energy Revolution", Pacheco told the El Mercurio newspaper. The gas will be arriving in the Mejilones terminal in the mining area to the north, as well as Quintero in the Central

Sinopec's Fuling: China's First Large Shale Reserve

ernment has verified Sinopec Corp's Fuling field shale gas reserves in Chongguin municipality as the largest in the country, with reserves of about 107 billion cubic meters. As of June 30, daily output in 29 test wells in Fuling totaled 3.2 million cubic meters. Accumulated shale gas output from those wells reached 611 million cubic meters, Sinopec said. The company

has previously stated

that it was targeting an annual shale and no hydrogen sulphide. Sinopec high quality marine shale gas with 98%

Reuters reported that the Chinese gov- methane, low levels of carbon dioxide



gas production of 5 billion cubic me-stated it applied new drilling technoloters from Fuling by 2015 and to double gies in the Fuling shale field, and manthat amount by 2017. Fuling reserve is ufactured all the production equipment and tools domestically.

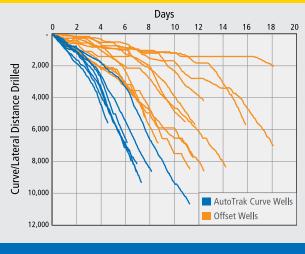


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American Midstream Expands Gulf of Mexico Presence With \$115 Million Pipeline Deal

American Midstream Partners announced on July 15 the execution of a Purchase and Sale Agreement with an affiliate of DCP Midstream, LLC to acquire entities holding onshore natural gas processing and offshore natural gas gathering and transportation and oil gathering assets for consideration of approximately \$115 million. The deal boosts the company's oil and gas pipeline network in the Gulf of Mexico as drilling activity ramps up offshore. According to the Wall Street Journal, American Midstream has agreed to buy the assets from DCP Midstream, an energy company with pipeline and other infrastructure projects along the Gulf Coast. The deal includes DCP's gas processing plant in Mobile Bay, Ala. as well

as the company's Dauphine Island oil and gas pipeline network. American Midstream also has agreed to purchase DCP's interest in the Main Pass Gathering System, a crude oil pipeline system located on the Outer Continental Shelf in the Gulf of Mexico. The company's CEO Steve Bergstrom stated that the deal makes the company more competitive in the Gulf of Mexico. American Midstream owns several oil and gas pipeline and processing systems in southeast Louisiana, including the 110-mile Gloria oil and gas gathering system stretching through Lafourche, Jefferson, Plaguemines, St. Charles and St. Bernard parishes. The deal is expected to close in August after regulatory review.

Centrgaz to Construct South Stream in Serbia

South Stream has contracted with Centraaz for the construction of the Serbian section of the South Stream gas pipeline as reported by Pipeline International. Centrgaz is to focus on design, procurement, construction and installation activities, personnel training and commissioning of South Stream in Serbia. The contract stipulates involving Serbian subcontractors in carrying out certain operations. South Stream is Gazprom's global infrastructure project aiming to construct a gas pipeline with a capacity of 63 billion cubic meters across

the Black Sea to Southern and Central Europe in order to diversify the natural gas export routes and eliminate transit risks. The first gas will be supplied via South Stream in late 2015. The gas pipeline will reach its full capacity in 2018. South Stream D.O.O. joint project company (Gazprom and Srbijagas holding 51% and 49% respectively) will construct and operate the South Stream gas pipeline in Serbia. The South Stream project was awarded the special status by the resolution of the Serbian Parliament.

Asian Development Bank to Charge \$30 Million 'Success Fee' for TAPI Pipeline

Asian Development Bank (ADB) will charge a 'success fee' of \$30 million along with a retainer fee of \$50,000 per month for helping build the \$7.6 billion Turkmenistan-Afghanistan-Pakistan-India (TAPI) gas pipeline project, reported the Economic Times. ADB was selected 'Transaction Advisor' by the four nations constructing the pipeline project in December last vear. Its main task in the 1,735 km TAPI is helping set up an international consortium, including a leader with experience of constructing and operating transnational pipelines. ADB had initially asked for 1% of the cost as a 'success fee', revealed sources, the four nations who are to pay for the pipeline refused to pay and instead came to the current deal of \$30 million. Billed as a 'Peace Pipeline' for the troubled South-Asia region, the U.S.-backed TAPI gas pipeline has not yet taken off as no international pipeline company is willing to implement it unless Turkmenistan gives a share in the gas fields. Although the four countries have been looking for a reputed, experienced company to lead the pipeline con-

struction, no pipeline company has tried to take on the project. Nonetheless, several financial institutions have expressed interest in financing the project. The TAPI pipeline is to begin in Turkmenistan, passing through Afghanistan and Pakistan before entering India. It will have a capacity to carry 90 million standard cubic meters a day gas for a 30-year period and will be operational in 2018. India and Pakistan would get 38 million standard cubic meters per day each, while the remaining 14 will be supplied to Afghanistan. The pipeline is to carry the gas from Galkynysh field in Turkmenistan, which holds a gas reserve of 16 trillion cubic feet.



OAT Consortium to Complete Ramones II-North Pipeline



Latin American Herald Tribune reported that Mexican State-Owned Pemex Gas has contracted the OAT consortium of companies, which consists of Odebrecht, Techint and Arendal Mexican, to complete engineering, procurement and construction works on the Ramones II-North natural gas pipeline project. The project includes the construction of a 42-inch diameter. 450 km pipeline transporting gas from Nuevo Leon in northern Mexico to San Luis Potosi in central Mexico. The project is part of the \$1.2 billion System of Natural Gas Transportation project, which will include four pipeline projects, over 1,000 km. The project will have a capacity of 2.1 Billion cf/d, and aims to increase power generation and improve the distribution of natural gas to residential and commercial sectors.

El-Sewedy Wins State Tender for Wind Farms in Egypt

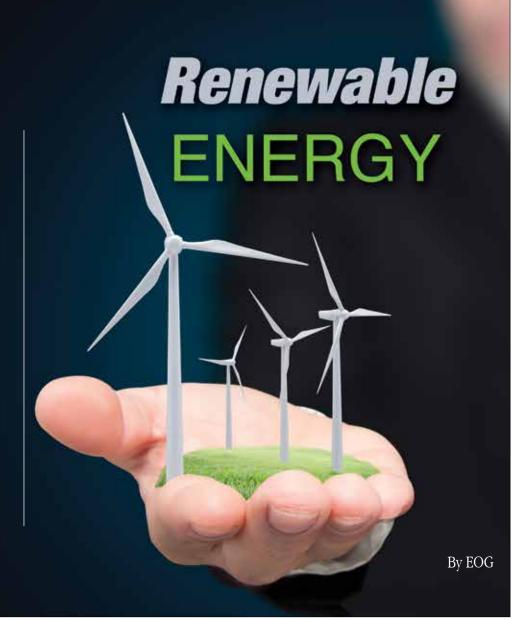
Reuters reported early in July that El-Sewedy Electric, the Arab world's biggest listed cables manufacturer, has won a tender issued by the Egyptian government to build six wind power stations. Elsewedy said the tender for the wind power stations on the Red Sea coast with a capacity of around 100 megawatts (MW) each would involve it building, owning and operating them, as well as selling the power they produce for 25 years. A final agreement has not been reached yet. No information has been made available yet regarding the project's budget. Egypt's new President, Abdel Fattah El-Sisi, said in the run-up to his election in May that

Egypt can currently produce around 30,000 MW and the electricity ministry has said peak consumption stands at 28,000 mw, but some experts have disputed these figures, saying the grid is weaker. One expert, Justin Dargin at the University of Oxford, has said he expects the shortfall to reach 4,000 to 5,000 MW in July and August, when Egyptians have air conditioners running day and night, leaving a huge gap in the grid to cover even with an additional 600 MW, reported Reuters. Elsewedy states on its website it has a wind turbines assembly factory with 240 MW production capacity, which it expects to double within five years.

The Blue Circle, Annex Power to Develop Wind Energy in Thailand

Singapore-based wind and solar energy developer The Blue Circle, and Bangkok-based renewable energy group Annex Power will form a partnership to invest in Thailand's wind energy, reported Reuters. The companies stated that the partnership is expected to channel \$200 million investments in Thailand's wind project. They also added that they expect wind power to witness growth in Thailand within the coming years. "The

current situation is similar to France in 2002, just prior to the wind market taking off from installation of 100 MW a year to 1,000 MW," said Olivier Duguet, Chief Executive Officer for The Blue Circle. The Blue Circle is a developer of wind and solar energy projects in Thailand, Vietnam and Cambodia, while Annex Power is a renewable energy group focused on Southeast Asia.





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With the establishment of the new El-Sisi government there is some hope for a more secure and more stable Egypt, but this is not guaranteed. The good general likely knows very well of the threats to energy, water, food and economic infrastructure that may lurk in Egypt. To have economic security a country needs secure energy supplies to fit the needs of the country. In order to have energy security a country needs secure water supplies. Refineries, electricity generating stations and more need a lot of water to work. Any risk to that water will put those energy supplies at risk. Food production needs water, as we all know. It also needs a lot of energy in Egypt, from the sowing, growing, and harvesting of the crops to the production of fertilizer to the transport, processing and more of the food and other agricultural goods.

Energy systems are really systems within systems, nested in other systems that are connected with other systems. Turning on the electricity in a house in Damanhour involves the production or import of the fuels needed to make the steam that turns the turbines. It also involves investment and maintenance of generating capacity. The transmission and distribution systems need to be working well. The movement of the electricity has to be perfectly balanced across all generating, transmission and distribution areas. This involves rather complex mathematics, and very good, precise management systems. The Egyptian electricity network may seem simple compared with many other countries, but it is quite complex and needs constant balancing. When it goes out of balance the lights dim or go out. That balance includes more than just balancing electricity demand and supply. It involves balancing natural gas, oil, coal, and other sources of electricity supply - and demand.

When the electricity system is not in balance bad things can happen. Electricity goes out. That is an obvious result. However, petrol stations cannot work. ATMs do not work. Freezers and refrigerators in homes and businesses do not work. Factory machines do not work. Children have a harder time studying. Apartments get very hot in the summer months. Cell phones and other electronics cannot be recharged. Computer and other systems will not work if they do not have battery or other storage backup. A lot is connected to energy. Egypt is run on energy. Energy is made up of complex engineering systems from getting the gas and oil out of the ground or from the

port to the generator to the transmission lines to the petrol stations, for just one example of thousands. One cannot just look at one energy type, one energy system, or one energy demand in order to figure out how to make the systems within systems work properly. A more holistic and wide-ranging view is needed. Energy policy needs to be integrated with water, economic, food, transport, communications and many other policies. This is hard, but it is needed.

Egypt needs more energy supply at many levels. That is clear. This will require massive investments that look into not only catching up with the supply gaps that exist now, but also keep up with the needs of the future. Investments in energy are often long term and bulky. They need to be set up to first create excess capacity for peak times, but also excess capacity to allow investments that happen afterward to fill in the inevitable gaps that will occur. If Egypt's economy moves forward quickly, it will need lots of energy. It will need massive new amounts of petrol, diesel, butugaz, natural piped-in gas, oil, and likely a lot more solar power, wind power, tidal power from the Nile, waste-to-energy systems, and other renewable or alternative energy systems. These investments may need outside insurance and guarantee assistance from places like the US OPIC, The World Bank, The International Finance Corporation, Gulf States supporting Egypt and others.

Egypt will also need to put great efforts into energy efficiency improvements. President El-Sisi seems to be fascinated with efficient light bulbs, but that is just a small start to what really needs to be done. I am sure he knows that. Transport vehicles, transport systems and transport networks need to be set up in more energy efficient, but in people-friendly and environment-friendly ways. Buildings need to be refitted with energy efficient devices, better insulation and more. Lighting, heating, and cooling are large users of energy in Egypt. Maybe the energy use, building efficiency and transport improvement could be started in the military, the government and other larger organizations and then move into the realm of the average Egyptians over time. Cheaper wavs of doing this need to be developed by Egyptians and others given that most Egyptians will likely not be able to afford many efficiency improvements due to initial capital costs even if there are potentially great returns over time. Maybe some of the energy subsidies could be redirected toward energy efficiency subsidies or investment aid for energy efficiency changes. Energy subsidies in Egypt are a big issue.

President El-Sisi made a brave decision to cut the subsidies to various energy sources quickly. Normally, taking them off too quickly or taking away these supports from the wrong groups could cause problems in the street. However, it seems so far that the people of Egypt are willing to pay this price for the stability that they so much want. Some complained and some went on strike, but the reaction was a lot less than many had thought it might be. This could be a marker for some sense of political change in the streets of Egypt that shows there may be more resilience than expected. However, it could be as the prices of many things increase the people could become more and more upset with the costs of their energy bills. The most vulnerable will need the most help. That is clear. Also, taking some of the electricity subsidies, such as for natural gas, electricity, oil, etc. away from industries will increase their costs and may make them less competitive. This may be a source of employment loss, and Egypt needs to be very careful with that.

Energy price increases can run through an economy and cause inflation, unemployment and increases in interest rates. They can also cause significant economic disruption on many levels. Prices for food can go up. Prices for clothing can go up. Most of the budgets of most Egyptians go to food, clothing, and the basic necessities. Care must be taken to not have energy price shocks cause other economic and social shocks through the transmission of energy inflation to other parts of the economy and society.

Egypt is connected to the world with energy. It used to be an oil and gas exporter. It may be able to get back to that with the right investments, energy policies and other policies. For some time it will need to import a lot of oil, gas and refined products. Huge investments in refineries are needed, and not ones that take 20 years to complete like the last major ones. These need to be up to speed quickly.

Electricity generation investments need to grow at about 5-7% per year over the next 10-15 years at least, with little delay. These investments include new generation stations, but also transmission, distribution and other networks. Natural gas and oil investments in exploration, discovery, production, transmission and distribution also need to grow at 5-7% per year for the next many years. Subsidiary and connected investments to energy need to also grow at 5 to even 10% per year for many years to come depending on what is being developed. These are huge investment needs, but that is why they are called

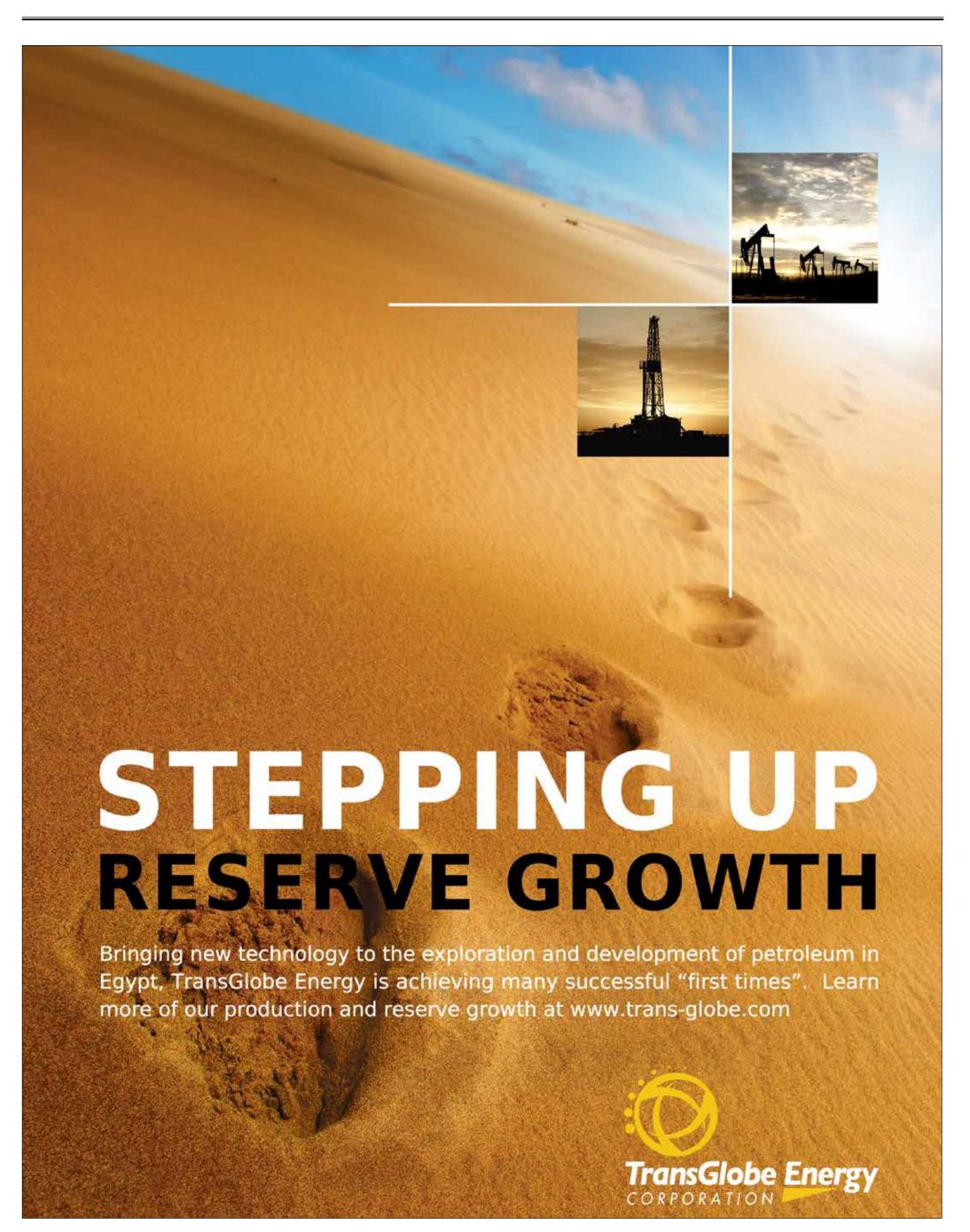
needs. Coal is limited in Egypt. The plan to rely on coal for electricity generation may end up meaning more coal imports and more foreign exchange stress. It may be better to focus on internal sources of energy such as shale oil, oil shale, shale gas, geothermal, wind, solar, power towers, tidal, waste-to-energy and the largest potential source of energy in Egypt – energy efficiency improvements. Yes, that is correct; the biggest potential source of energy in Egypt is energy efficiency.

Natural gas and electricity may require temporarily floating production units in harbors for some time, but this cannot be a long-term solution. It is much costlier than having on the ground investments for the longer run. However, there may be increasing needs for back up generation for homes, businesses, farms and factories if these new fuel and electricity investments do not work out properly. Backup generation is a sign of risk. It can also be very expensive per kilowatt hour.

Along with the hard infrastructure investments that seem so obvious, such as more generating plants, transmission and distribution capacity, more refinery capacity, more natural gas and oil production, etc. there are great needs for soft infrastructure investment. By this I mean completely revamping many ministries connected with energy, water, and the economy. Improving the education and training of the people in these institutions, and giving better incentives for creative thinking for those in these institutions can make a huge difference if this is done right. Giving proper incentives and education to the people and businesses of Egypt to think creatively and inventively on energy issues can also help the country move forward.

Energy education should be a requirement for everyone in the world, Egyptians included. Egyptians can be some of the energy inventors of the future. They could be some of the champions of change, real change, in energy in the future. Give them the right chances and incentives and Egyptians can do amazing things. Give them the wrong ones – or, worse, none—and things will stay the same or get worse.

Egypt has been through some tough times lately. It has been through political revolutions. Now is the time for a positive energy revolution to help the people of Egypt move forward with energy. The time is now. The potential is there. The problems to solve are vast, but so can be the practical creativity of the Egyptian people. Could this century be a century of energy change? It will be. Will Egypt be a part of it? It can be, and really needs to be.





From militant bombings to organized crime and isolated events of theft, oil and gas infrastructure in the remote areas of Sinai and the Western Desert have always been vulnerable to gaps in security. In the midst of severe energy shortages and national and regional political tension—industry experts and officials express concern over the growing threat.

In a recent interview, Shell Egypt Chairman, Jeroen Regtien told Egypt Oil and Gas that security issues pose one of the main challenges to the petroleum sector in Egypt. "There have been a number of incidents, and they are slowly on the increase," he said. Citing organized theft of oil from Western Desert pipelines as an example, Regtien added, "We would want to see an improved cooperation between the authorities, the Minister of Interior, the military, and the Ministry of Petroleum to make sure those incidents disappear."

Shell's media relations office declined to disclose further details, due to ongoing security discussions with the government.

Acknowledging the fact that the Sinai has always suffered from varying degrees of unrest, University of Oxford energy expert Justin Dargin attests that, "the chaos following Mubarak's ouster has caused terror attacks aimed at the energy sector—especially of the natural gas sector—to increase dramatically."

Oliver Coleman, Senior MENA Analyst at Maplecroft, a global risk analytics, research, and strategic forecasting company informs, "Militants have largely focused their attack so far on urban centers and security forces in the Nile Delta and Sinai rather than oil and gas installations." However, he notes that attacks on pipeline infrastructure in the Sinai are the exception.

According to a commercial report published in June 2014 by Maplecroft, "With terrorist operations in Egypt becoming increasingly sophisticated, energy infrastructure is likely to be targeted more frequently by militant groups in the short to medium term," adding that since 2011, "More than 20 attacks against gas pipelines have been carried out . . . with at least five pipeline attacks taking place during the first five weeks of 2014 alone." In other terms, attacks to natural gas pipelines occur on approximately a monthly basis, according to Dargin.

"The Sinai Peninsula is the hub for terrorist groups in Egypt and also the location of Egypt's main pipeline infrastructure. Bomb attacks on isolated parts of the North Sinai pipeline around Al Arish have become common after the ousting of the Mubarak regime in 2011. This has had a deleterious impact on Egypt's gas exports—which have already taken a hit due to the increasing demands of the domestic market," informs Coleman. The country, suffering from daily power cuts as a result of declining gas production, is struggling to attract

investment to develop remaining reserves, and has grown dependent on aid from Gulf countries to meet its energy needs.

The most recent bombing occurred May 19th 2014, when militants attacked a section of a gas pipeline south of Al-Arish in North Sinai, which was followed by a "fierce campaign against armed militants in the restive Sinai," wrote Daily News Egypt. "Airstrikes are frequently reported alongside the destruction of cars, houses, and equipment belonging to suspected militants. A vast majority of the smuggling tunnels that are used to transport goods and weapons between the Sinai and the Gaza strip have also been destroyed," said the article, adding that "The frequency of bombings targeting natural gas pipelines that run to industrial areas in both Sinai and Jordan increased significantly since the beginning of the year," referring to the larger explosions that occurred near Al-Arish on February 11 and 12th.

The pipeline currently serves to export gas to Jordan, though was previously exporting natural gas to Israel at below-market subsidized prices, until former president Mohamed Morsi suspended gas exports to Israel. Now, a controversial new proposal to begin importing gas from Israel at international prices is raising security and political concerns. "Analysts say the structure of the deal, in which a foreign company uses Egypt only as a transit point for exports, could offer Cairo a way to minimize domestic political backlash," reported Al Jazeera in May, adding that it is unclear whether any gas would be kept for domestic use.

Regardless, some analysts believe that the pipeline would be a target for militants in Sinai. "Residual anger over this earlier contract is likely to help generate opposition to any new Egyptian gas project involving Israel. However, if the deal goes through, militants will have much greater difficulty interrupting the submarine pipeline than the exposed pipeline running through the Sinai Peninsula," wrote international security expert Andrew McGregor for the journal Terrorism Monitor.

According to Coleman, "The likelihood of attacks on pipelines—as with terrorism more generally in Sinai— is compounded by disaffection among the Bedouin of the peninsula, who feel they receive little economic benefit from the oil and gas sector. Heavy-handed tactics by the military in Sinai during their ongoing operation against militant groups in Sinai will continue to drive

attacks on pipelines.'

Ahmed Farid Moaaz, Country Manager at Sea Dragon Energy, agrees a good relationship with local tribes is vital to security in Sinai, noting the direct link between disenfranchisement of Bedouins in Sinai and probability of attacks to infrastructure.

When Bedouin gunmen briefly kidnapped and ultimately released the Chairman and Managing Director of Exxon Egypt and his wife in March 2013, Reuters reported the attack highlighted "increasing risks oil firms face across North Africa and the Middle East," though it was not confirmed the gunmen were aware of their captive's identity. The gunmen were holding Andy Wills and his wife, demanding the release of four prisoners held in Alexandria on charges of arms smuggling, according to Egyptian security forces.

Moaaz also notes the threat of organized crime in the Western Desert and group smuggling—theft of gasoline or occasionally trucks full of chemicals for trade in local markets, and securing roots for smuggling arms and hashish. "Due to instability across North Africa, such as in Algeria, Tunisia and Libya, there is a small threat of cross border terrorism and transnational terror operations," informs Dargin. In fact, Egyptian President Abdel Fattah El-Sisi traveled to Algeria in June to secure a shipment of five cargoes of liquefied natural gas to Egypt, seeking support from Algeria to counter militancy spillover from Libya.

Still, geographically and politically, incidents in Sinai pose the largest threat to the sector. "It mostly has to do with its strategic value," says Dargin, "seeing that [Sinai] is close to Jordan, Israel, and Palestine, and the fact that much of Egypt's exported oriented pipeline infrastructure is in the area. Moreover, the region offers many areas that can be used as hideouts. And, as many of the local Bedouin tribes feel disenfranchised, they are likely to offer refuge and assistance to anti-government militants."

In the face of threats, Moaaz contests that in the last three years Egypt has not lost a single day of work or experienced any losses in production in the sector due to terrorism or theft—the only shut down has occurred due to the lack of gasoline to fuel electricity. "The army's control is much more stringent than before in the Western Desert," he added.

"The military operation in Sinai has made some progress in terms of reducing the

heavy-weapon capabilities of militants," agrees Coleman. "But attacks on the pipelines require relatively unsophisticated devices to cause disruption. Additionally, remote locations make it difficult to ensure a good level of security along the length of the pipelines."

Furthermore, despite relatively unsubstantial direct economic losses as a result of attacks to oil and gas infrastructure—such as costs related to increased security and repairs—Dargin points out, "there are the more indirect costs that affect Egypt's reputation as a stable natural gas exporter, and whether oil and gas companies would desire to increase investment in such a climate. For instance, Jordan, due to the numerous disruptions, is looking to import LNG to ease its dependence on Egyptian natural gas exports."

Abduction of tourists similar to the Andy Wills kidnapping have occurred in Sinai, whereupon victims were released unharmed after a few hours of negotiations with authorities. "Bedouin have attacked police stations, blocked access to towns and taken hostages to show their discontent with what they see as their poor treatment by Cairo and to press for the release of jailed kinsmen," said Al Jazeera, concerning incidents near Red Sea resorts in Sinai

While some threats to oil and gas sector infrastructure are indeed politically motivated and related to gas deals with Israel, particularly that of pipeline bombings in the Al-Arish region of Sinai, many incidents of theft are simply acts of smuggling, or used as leverage by the local groups to assert power and maintain influence.

To prevent attacks, in addition to superficial measures such as beefing up security near infrastructure, Dargin believes "there should be various campaigns to address some of the underlying causes that could stimulate attacks on infrastructure, [such as] investment in local infrastructure and schools, as well as providing good job opportunities for the locals. If these steps are undertaken, then many of the locals would feel that they have a stake in the safety of these facilities and would seek to defend it as it is in their best interests."

According to Moaaz "[Oil and gas] companies have a social responsibility to the community. We have to give them prosperity, jobs, and opportunities, or the situation will turn against us."

Mr. Jeroen Regtien

Shell Egypt Country Chairman, VP & Managing Director



Tell us a bit about your experience in the petroleum sector.

I joined Shell after graduating with a M.Sc. in Physics in 1985. I started in upstream research and scientific computing, focusing on reservoir engineering, and from there I moved into joint venture operations in Brunei, Australia and Oman. In between these assignments, I had strategic and business planning roles in the head office in Netherlands. These jobs gave me a strong background in operational petroleum engineering and development whilst at the same time spending sufficient time in the head office to cover the important strategic and business planning aspects from our business. I believe that the combination of practical operational experience and head office experience is very good background for my current role as an allround country manager.

Where does Egypt rank within Shell's worldwide operations?

Our operations in Egypt are relatively small, about 1% of Shell's global upstream production. But small is often beautiful. We have a proud history of over 100 years in the country, a good asset base in the Western Desert, operated by Bapetco, a well run Joint Venture with EGPC, and a flourishing lubricants business that ranks in the top of the European sales cluster.

Tell us about Shell's activities in Egypt.

We essentially have reviewed our strategy in the last few years. We had large concessions in the Mediterranean but we did not get the kind of discoveries and anticipated economic returns that we were expecting, so we have relinquished that acreage. We are now mainly focusing on the Western Desert, which we think is a rich basin with still a lot of good opportunities to develop oil and gas fields, close to existing infrastructure, that despite the exploration risk can create a profitable return on investment.

Shell has a 100-year history in Egypt and has invested significantly in the country. We look forward to playing a continued role in meeting the country's energy needs and will continue building on our partnership with the Government of Egypt. This will be mainly through our Bapetco joint venture with EGPC, which is an indispensable element of our success.

To give some details, we are one of the major operators in the hydrocarbon-rich Western Desert. Our business portfolio includes stakes in 20 oil and gas producing development leases in the Badr El Din (BED), Northeast Abu El Gharadig (NEAG), Sitra, Obaiyed and Alam El Shawish West (AESW) areas and produce around 110,000 barrels of oil equivalent per day.

If the government makes any amendments in the agreement model to encourage investments in offshore operations, would Shell then be interested in investing in offshore again?

We always look at all opportunities, but they would have to be of sufficient interest to attract us—and that is not just within Egypt, but applicable on a global basis. Exploration budgets are constrained. Exploration wells are expensive, you really have to be selective. Any opportunity, anywhere in the world, has to be compared to others, and ranked. If it makes business sense we would be interested, however in the current climate, we are focusing our operations on the Western Desert.

How do you see the current situation in Egypt, and how do you see Shell's presence here in 2015?

It has been a difficult three years in Egypt—for the Egyptian people, for the investors, and for the oil and gas sector. What we currently see is stabilization, but we have also seen a reduction in investment in the sector during the last three years. What we need to see are positive steps by the government to restore investor confidence, so that investments can return and the sector can flourish. Egypt needs foreign investment in order to increase oil and gas production.

There are some people who think that Egypt can do without the IOCs (International Oil Companies). I don't believe this is possible at the moment. The amount of risk, the expertise and the large amounts of capital involved, is something that IOCs bring.

But there needs to be a attractive investment climate for IOCs, and the current climate is not as positive as we would like to see it. We have unfortunately seen a reduction in investment over the last few years, and that needs to be turned around.

Can you elaborate more about positive investment planning policies?

An example in the Western Desert is the gas price. The gas price has been constant for fourteen years, yet the cost has gone up. Since the revolution, the costs have gone up by 10% or more per year. What we now see is that the investor margin is being squeezed, and there are some gas fields and opportunities in our portfolio at this point in time that we can no longer afford to develop. A change in gas price for the Western Desert is very important. The Mediterranean has its own issues in deepwater with expensive wells, so there you might have to look at a different fiscal regime—tax royalty versus PSC (production sharing contract).

In the Western Desert, the PSC system can work fine, as long as it's applied intelligently, and as long as it changes with the time. I would say that the PSC system has worked well for the last 30 years, but without changes won't for the next thirty years. It needs big revisions in license terms, cost oil and gas prices, because the easy and cheap oil and gas is gone and what you're left with is more difficult and more expensive to extract. That's what your [Egypt Oil & Gas] Brownfield roundtable was all about, so it's an issue that NOCs, IOCs, and I'm sure the government, recognizes. The question now is: what are the next steps to take?

Have you talked to the government about the gas price issue?

Yes, we have, and constructively I must add: with regards to this issue, it's very simple in my view; it has to happen. If the costs continue increasing, the IOCs will not be able to invest, which would put the JV (joint venture) budgets under tremendous pressure.

How is Shell's debt settlement progressing with the government?

As you know, this is a big issue in Egypt, and we manage our position carefully. We have a good balance between oil and gas, and we have agreements with the government to manage our payments. We're managing it fairly well, and so far it's under control.

What is Shell's biggest discovery or other achievement in Egypt?

In our history, that would be the Obaiyed field, which contained about 3 Tcf of gas that we discovered in the 80's. Half of our gas production is still coming from the Obaiyed field.

What is the size of Shell's booked reserves in Egypt?

Generally we don't give out these hard numbers, but I can tell you, efforts over the last five years have replaced more into our reserves base that we produce.

How is your production?

Our production is stable at the moment. Shell's production optimization and well intervention activities have helped our joint venture BAPETCO to maintain an average daily production of around 110,000 barrels of oil equivalent per day, offsetting the rapid decline in most of the oil and gas reservoirs.

Currently, we have one large project, the Assil and Karam project. In 2012, our partners and Shell took a final investment decision to develop the Assil and Karam gas project, set to reach 150 mmscf/d of production capacity, and we expect this to become on-stream in 2014

What other challenges does Shell face in Egypt besides gas prices?

It's important to repeat the significance of the gas price issues. Gas prices have been constant since 2000, and due to the rising cost since then, there is an increasing number of gas fields

that can no longer be developed at that price and if we want to stop the decline in Egypt's gas production, the gas price for producers will have to go up.

As the case with any operating international company, there are some other challenges, such as:

- Certainty on license renewals
- Lack of suitable license terms for tight and shale and more complex oil and gas exploration and development, such as license duration, cost oil percentage
- Cost recovery bureaucracy
- Timely permits for operational activities

However, on the upside there are also a number of positive points worth mentioning:

- Egypt is blessed with a rich hydrocarbon resource base that in principle can support domestic supplies as well as generate revenues to the state through export with the right investment climate.
- Egypt will see an increase in energy demand as the population grows, the economy stabilizes and grows and the country develops.
- There are sufficient foreign investors interested in Egypt that can assist Egypt in growing its oil and gas supply to meet the increasing demand and the government is keen to attract this foreign investment.

Do you see the current model agreements—concerning your operations in the Western Desert specifically—to be the best option? Or would you like to see tax/royalties applied there?

We work across the world. We work in tax/royalties, we work in PSCs—they can all be made to work. I would at this point say, for the Western Desert, the PSC is not broken, but some changes need to be made. I can see that for deepwater, unconventionals, or tight oil and gas, you will need a different model. The investments there are large, and the risks for the IOCs are a lot higher too.

Does Shell have plans to invest in Egypt in the coming years?

Yes, as I mentioned before, we have been in Egypt for over 100 years. Our operating company is Bapetco; it has an annual budget around \$500 million and produces around 400 mmscf/d of gas which is just under 10% of Egypt's daily gas production as well as 40,000 barrels of oil and condensate per day. Bapetco operates 10 rigs for drilling and well workovers and we expect to maintain this level of investment for the next few years.

In short, our strategy in the coming few years is to maximize the production of our current assets in the WD and rapid exploration of the three new exploration permits that Shell has acquired by starting seismic acquisition this year and drilling in 2016 and 2017.

Is Shell looking into unconventional oil and gas potentials in Egypt?

The word unconventionals means different things to different people—you have shale oil, shale gas, tight gas, so it's often better to talk more specifically. We explored shale oil and found some presence of oil in those wells, which was not commercial. We will not pursue it at this point in time, but we've obtained some important data sets for the government and ourselves to utilize in the future.

We are also working on tight gas. For example the Apollonia field. We've drilled a number of wells and are producing them, but that is not a long-term commercial proposition. In order to develop that commercially you would need a much higher gas price. Shell and its partner Apache—we share the same permit there—are currently negotiating with the government for a better gas price for this particular tight gas resource. This negotiation is making good progress.



Interview

The government understands that for difficult oil and gas, the old terms and prices don't work. They understand if there's not a positive movement in terms, the gas will stay stuck in the ground. Then what is left? Importing coal, importing LNG, and power cuts? So the government understands this very well, and I am very appreciative of the way EGAS and EGPC, and in particular the Minister of Petroleum are approaching this. In order to develop the resources Egypt has in the ground, a different investment climate has to be developed, in this case, higher gas prices. To date we're having very positive discussions and have a good communication flow going. As you can imagine, it is not just a single decision on a gas price, it depends on many other factors as well. Where it ends—I don't know, but I am positive.

Do you see potential for unconventional oil and gas in Egypt? Will the country see investments in unconventional in the next 2-3 years?

We've learned from the US, we've learned from China, we are working in the Ukraine, in Russia—these shale plays are long-term plays. You don't do it overnight. The US is unique, in terms of its service industry, in terms of rent ownership, in terms of the resource, so all the things in the US work for a very rapid resource development. It's very difficult to duplicate this in other places.

In a place like Egypt, it will take much longer. So I think the efforts by the government to develop shale oil and gas regulatory framework is fairly important. Without that framework it's very difficult to get people interested in shale oil/gas plays in Egypt.

If we see that, will we see Shell investing in unconventionals?

If we see that, we will look at it as any other opportunity, and see if we can make it work. Given our presence in the Western Desert, I think we have a few advantages compared to new entrants, but we still need to look at all the details and opportunities to see whether it makes commercial sense for us.

In your opinion, what are the main difficulties that the petroleum sector, as a whole, faces in Egypt?

I think there are a number of challenges. One main issue is security. Second is the payment and receivables issue. Third is the

terms and gas price for more difficult and expensive oil and gas.

We need improved security in the Western Desert. There are a number of incidents, and the number of incidents is slowly on the increase. It's manageable, but they are there. We would want to see an improved cooperation between the authorities, the Minister of Interior, the military, and the Ministry of Petroleum to make sure those incidents disappear.

The other issue is the payment issue. Although the Shell situation is currently manageable, it is still a very serious issue for the industry. We all know companies who are severely affected, so the sooner it is resolved the better.

And the third issue is, indeed, that a number of oil and gas fields are no longer being developed because the economic return is shrinking. Something really needs to happen there. So those, I believe are the three major issues that I would see affecting the

Congratulations on your new campaign for energy conservation. Would you like to elaborate more and tell us what the initiative is, and what Shell's role is?

Yes we're very proud of this—it is very important. We work on the supply side of oil and gas to the Egyptian economy, and supply and demand is out of balance at the moment. Now, we have a shortage of energy and we all face power cuts. For the reasons we know, it's difficult to increase supply, because a number of investments are being delayed and the supply decreases.

On the demand side, it keeps increasing and frankly speaking, we see so much waste of energy. When I met my colleagues from BG and Apache at the end of last year, we concluded that we should play a more active role, because it just doesn't feel good if you produce a lot of energy and it's not used right.

So with BG and Apache we founded an initiative—the Egyptian Initiative for Energy Conservation (EIEC). Our communications teams got together to develop the brand campaign for it, Belma32ol, and when we had landed on a concept and a plan, we broadened it and went to the Minister of Electricity and the Minister of Petroleum, and they embraced our idea. They wanted to add to it and make it a joint campaign, which we did andit has now been launched. There are TV/radio commercials, outdoor

ads (billboards), social media, PR activities, and on ground activations. —It's been progressing, and it's for the long haul. It's really about changing behavior and making Egyptians aware of where the energy is coming from and how it should be spent to avoid suffering power cuts.

To practice what we preach, we took some very simple measures in this office. We increased the air temperature a bit, turned the lights out when nobody's in the room, etc. In the year 2013, compared to 2012, we saved 17% of our [Shell] offices electricity bill. We even managed to save 25% of our electricity bill of Q1/2014 compared to the Q1/2013. I hope we give a positive incentive to the Egyptian people to use less energy.

We can learn from Japan, because after the tsunami, Japan really had to take drastic measures to save energy. We still have a long way to go, but I think we're on the right track. We are very proud to be founding members of this initiative and campaign. It is not branded as Shell or BG or Apache; it has its own branding: Belma32ol. Now other IOCs are joining as well; I am very pleased with the additional support by GDF, Dana Gas, IPR, and Taga Arabia. It is something we all think is so important for Egypt.

Closing Remarks

There are lots of challenges. But I think the government we currently have, the leaders in EGAS and EGPC, the MOP; they all understand the issue, and what needs to be done. It's just a matter of how. I'm therefore positive about the future and I think that Egypt has a great future in terms of the resource, the markets, with very capable people. It's now a matter of organizing ourselves.

There are still opportunities in Egypt. We focus on the Western Desert. Then there is the Mediterranean. There's also the Gulf of Suez, you have the Nile Delta, and then you have the Red Sea and Upper Egypt. So there's a whole suite of basins and opportunities.

With the right technology, with deviated and horizontal drilling, with more advanced seismic and better geological models, you can find and develop smaller accumulations in the right investment climate.



WHEN VERSATILITY COUNTS...





MV FUGRO NAVIGATOR

The Fugro Navigator is the only specialist geoscience survey vessel dedicated to the Egyptian market. The Navigator's multi-role capability allows her to undertake a wide range of survey activities, such as geophysical and geotechnical surveys for drill sites and pipelines, ROV surveys and inspections, and high resolution seismic surveys and environmental surveys.

As a specialist survey vessel, the Navigator offers significant advantages over vessels of opportunity by offering:

- Greater versatility
- Improved safety performance
- Reduced weather standby costs
- The ability to respond quicker to requests for projects
- Hull-mounted sensors produce that higher quality data
- Reduced turnaround time for reporting

The Navigator is permanently equipped with a wide range of geophysical equipment for deep and shallow-water operations while ROV systems and geotechnical and environmental equipment are mobilized to the vessel on a project-by-project basis. She has carried out an average of 15 survey projects each year since her introduction in early 2008, in water depths from as shallow as 10m to over 1300m.









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It was early morning and Mahdi Abdisalem, 17, was waiting in line at a state-subsidized bakery in the NazIt El Smam neighborhood of Giza, a short walk from the pyramids. "It's an Egyptian routine" he said, "I wake up at 6am, my mother sends me out, and I wait for hours."

There was a large crowd massed around the counter of the bakery as people clamored to buy cheap baladi bread – the staple diet of Egypt's poor. At private bakeries the bread costs five times as much. There are frequently shortages and fights break out. Abdisalem says that one man comes to his bakery on a daily basis and takes much more than his allocation. "I can't bear to see him anymore," sighed Abdisalem.

The Egyptian government recently announced plans to introduce a smartcard to ration subsidized bread in Egypt; they hope that the scheme will help fight corruption and save waste, allowing the government to reduce bread subsidies which account for \$3.15 billion a year of Egypt's chastened budget, according to the Wall Street Journal. The smart-card system was piloted in Ismailia, Port Said, and Suez in January 2013. Mada Masr reported that the Egyptian government recently announced that it would be extended to some areas of Cairo in July and across all governorates in Egypt "during the next few months."

Tackling Waste and Corruption

Khaled Hanafi, Minister of Supply and Internal Trade, has praised the scheme and claimed that the pilots succeeded in reducing consumption by 30%, said Al Ahram newspaper, which in turn has reduced subsidies.

The government's previous policy over several decades was to provide bakeries with subsidized flour, which bakers used to make 5 piaster loaves. The scope for corruption was wide as the sales were largely unmonitored and there was no effective rationing system in place to allocate resources fairly. The new scheme will subsidize the bread itself, rather than the flour, and will track the sales electronically – which the government hopes will reduce theft and the black market sales.

People who are eligible for the subsi-

dized bread will receive an allocation of 150 loaves a month. The government hopes that this will address waste and prevent people from buying huge quantities of bread. If someone doesn't use all their allocation of bread, they receive 10 piasters credit per loaf, which can used to purchase other goods provided by the government such as oil and sugar

Some analysts have also claimed that the new system will encourage competition amongst bakeries, which will drive up the quality of the produce, reported Al Ahram in June.

Criticism

Although the scheme is ambitious and tackles some longstanding flaws with the bread subsidies system, some analysts have misgivings and concerns about some aspects of the system.

The pilot system was small in scale and may not present an accurate indication of how effective it will be in a widespread system introduced across Egypt.

The new scheme may also provide new opportunities for corruption. Writing in Mada Masr, Isabel Esterman argues that the pilot project seems to show that the system can result in a better service, but that it also proves the need for institutional change. "The weakness of the program lies in the fact that it is administered by the same bakers, inspectors and officials that often profited handsomely from corrupt practices under the old system, and who will doubtless be looking for ways to maintain their flows of illicit funds," writes Esterman.

Karima Korayem, Professor of Economics at Al Azhar University and consultant to the UN's World Food Program, worries that those who most need subsidized bread could be excluded by the smart-cards by bureaucracy.

The new smart-card system requires consumers to register for ration cards and collect smart-cards using national identity cards for adults and birth certificates for children. Korayem says that some members of the "ultra-poor" have previously been unable to get ration cards because they don't have the necessary papers; until now, those un-

able to get ration cards have been able to receive bread because of the informality of the system, but have been unable to claim other subsidized products such as cooking oil, sugar, and rice.

"If you are going to make the smart-card system for the baladi bread, first try to reach those [who need it]," says Korayem.

Korayem argues that wider reform of the rationing system is necessary because many wealthier people receive ration cards for subsidized products that they don't need. Research by Korayem found that around 19% of bread in urban areas and 36% in rural areas are misallocated and wasted. "They must make this differentiation," says Korayem, referring to the need to identify those who are genuinely in need. "They must allocate [resources] to the ultra-poor."

According to a report in Al Ahram, the weight of the allocated bread will be reduced from 130 grams to 90 grams. As the price of the bread remains the same, it amounts to a cut in allocation in real terms. This could have a detrimental effect on some poorer, larger families.

Boosting Wheat Production

In the short-term the subsidies allocated to bread have actually increased, according to a report in Daily News Egypt. The state's budget for subsidized bread has risen to EGP 24 billion in the new fiscal year, up from EGP 22 billion in the previous budget.

Fakhry El-Fekky, quoted in an article by Daily News Egypt, says that the budget allocation for bread subsidies has increased to provide funds to import wheat and address the issue of smuggling flour. Some analysts have suggested that Egypt needs to raise the levels of its own wheat production in order to comprehensively tackle the issue of bread.

Egypt is currently the world's largest importer of wheat - much of which is used to make baladi bread to feed Egypt's poor - using up a significant amount of the country's foreign reserves as much of the wheat is bought on the international market in US dollars. Egypt currently produces around 55% of its own

wheat consumption and many analysts believe that Egypt can raise wheat production to 70%.

"In the last two years production of wheat has increased because the government raised the price it pays to the producers and the farmer is superb at responding," says Adel Beshai, Professor of Economics at the American University in Cairo. "We also produce a huge amount of corn in the summer and this year the output will be big so the production side is good. People who talk about self-sufficiency are ignoramuses - to produce 70% is more than OK."

"Economically, you cannot ask for self-sufficiency in wheat," concurs Karima Korayem. "If we could raise it to around 70% we could reach food security. And it shouldn't be by increasing the area of wheat; I hope it will be by increasing the productivity of wheat by more research and more experience."

Beshai says that the government has to be careful not to overtax farmers and that the "government needs to make sure that it announces prices for com and wheat in good time and offer good prices...next, the whole marketing system of agriculture needs to be looked into because although you have massive number of producers, the wholesale buyers are few and are oligopolistic."

If the smart-card system is able to reduce waste and activity on the black-market by tracking the sales of flour and bread, then the impact of any increase in wheat productivity could potentially be further enhanced.

Balancing Act: Bread as a Political Issue

Bread is a political issue in Egypt and any attempts to reform the allocation the stomach-filler of the poor is fraught with pitfalls, as previous rulers have discovered. President Anwar Sadat faced major riots when he attempted to cut bread subsidies in 1977. Under Mubarak, the rising price of wheat created shortages in 2008 and provoked unrest. The widespread slogan used by protesters who ousted Mubarak in 2011 was 'bread, freedom, and social justice'.

Jim Krane, Wallace S. Wilson Fellow for Energy Studies at Rice University's Baker Institute for Public Policy, says that there may be a link between bread riots and democratic concessions. "The idea being that democracy and patronage are substitutes, and when patronage spending is unavailable, regimes respond with democratic openings (otherwise they increase repression)... Bread riots tend to be viewed as 'taxpayer revolts' in the culture of the Middle East, since income taxes are generally nonexistent, and a decrease in government subsidy thus has the same effect on personal incomes."

Egypt is experiencing a continuing economic crisis characterized by corruption, a widening budget deficit, sluggish growth, soaring prices, energy shortages, high unemployment and entrenched poverty. If the smart-card worsens the well-being of many poor Egyptians, unrest is likely to follow.

Recently-elected President Abdel Fattah El-Sisi will also have to balance the unpredictable impact of reforming bread allocation, alongside the impact of reducing costly energy subsidies. In discussing bread subsidies, many analysts have agreed that they need to be reduced but argue that it is energy subsidies that seriously undermine Egypt's economy. "I am not worried about subsidizing the Egyptians when it comes to bread" says Beshai, "I am worried about the energy subsidy on which a lot must be done and can be done and it is long overdue."

Energy subsidies will account for as much as \$19 billion in the next fiscal year reported the Guardian. A surprise 78% rise in fuel prices earlier this month prompted protests by taxi and micro-bus drivers. A wider austerity program is also likely to increase the pressure on impoverished and struggling Egyptians. According to Mada Masr, with inflation at 9.1%, many ordinary Egyptians are struggling and the average Egyptian family now spends 40% of their income on food.

Given these pressures, the reform of bread subsidies carries substantial risks. It will require a deft touch from a bureaucratic system that is notorious for being heavy-handed.



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Israel's Energy Future:

A CHANGE IN THE GAME



Oil in Israel

Here at the beginning of the 21st Century, energy exploration has the look of a science fiction movie. A man on a ship in the ocean sends a signal to a satellite in space, where it is sent to a robot on the ocean floor, thousands of meters under the water. Sound waves can be sent kilometers under the ground and a map can be drawn of the mineral make-up of the rock layers. One use of this technology is to improve the output of current projects, like the idea of extending the life of current wells and drilling sites. Another by-product of these advances is the creation of new players in the global energy market. Twenty years ago, no one would have thought of the eastern coast of Brazil, the Kuril Islands in the South China Sea, or the Sudan as producers of large amounts of oil and/ or gas. Now Israel.

To say the least, oil and gas have never been a part of Israel's national identity. In 1986, Israel officially abandoned its state-spon-

sored petroleum search. Between 1948 and 1986, it sunk 440 wells into the deserts of Israel, all of them dry. Now, all of that has changed. "We think that within a decade we can get 50,000 to 100,000 barrels a day," says Relik Shafir, Chief Officer of the Israeli

Making matters even stranger, Israel also seems poised to become a force in not only oil, but also natural gas. In 1999, the tiny Noa field was discovered, however 2010-2014 has seen an explosion of gas field discoveries. This leaves Israel with an embarrassment of riches that no one expected, and it must now decide a number of questions. Which to exploit first? Use the energy for themselves or sell on the international market? Who to sell to? Everyone is watching and waiting for answers. "If we are successful, it will be a strong push to the economy, and to the strategic objective to become energy independent," said Gabi Ashkenazi, Shemen Oil and Gas Chairman, "oil will be an important factor in this."

Natural Gas, The Better Option for Today

As the oil was being discovered in Shefla, Israel's energy prospects seemed to get even better. After a small natural gas find in the Noa field, and a slightly larger one, (Mari B), in 2000, there was an explosion in natural gas discovery in the eastern Mediterranean Sea between 2009 and 2013. Specifically, the two fields that we will be discussed are called Tamar and Leviathan.

By Curt Champeon

Tamar was discovered in 2009, 80 km off the city of Haifa, and came online in March 2013. By itself, it can meet Israel's natural gas needs for the next 25 years. It will serve as the nation's "safety net," leaving all the rest of their discoveries for export. When at full capacity, this find can put out 300 million c/f per day.

Leviathan is the second natural gas find, which is 50 km off the coast, in water, shared by Israel and Cyprus. This is the find that expected to turn Israel into an energy exporter. It could also provide the initial fuel to heat the Kerogen oil fields. Noble Energy, along with Delek Drilling LP, and Avner Oil Exploration (AVNRL), believes that a layer of rock below the gas field may contain the equivalent of 210 million to 1.5 billion barrels of oil. Leviathan will be drilled in 1,600 meters of water and then probe a further 6,500 meters through the rocks below. Advanced technology is absolutely imperative for Israel to realize its energy goals. It needs the know-how that has been used to drill in the U.S. Gulf of Mexico and off the coast of Brazil in deep ocean water. "Thanks to advances in drilling technology, Israeli companies and their international partners can now reach greater depths that will enable exploration at lower geological levels than ever before," Yossi Abu, chief executive officer of Delek Drilling, said in a phone interview.

"What Israel also needs to consider is that natural gas is a better option for today," states Dr. Gordon Hughes, University of Edinburgh. In a world that is concerned about global warming and carbon footprints, natural gas is a growing market. For example, Turkey, over the last 20 years has gone from having natural gas providing 6% of its total energy needs to almost 30%. This is a trend all over the world. "Solar and wind simply are not cost-effective enough to make a serious contribution to the world's energy problems," states Nicolas Loras, The Daily Signal. Natural gas can. There is also a lot of it. According to the U.S. Geological Survey, recoverable natural gas in the Levant Basin located in Israeli and Cypriot waters, amounts to 18.9 trillion c/f.

What the Future May or May Not Hold

Israel faces many challenges in exploiting its new energy wealth. According to Joshua Beagleman, Chief Operating Officer of Universal Oil and Gas, It has to get the gas and oil harvested, it has to find buyers willing to purchase it, and last of all, it has to find ways of delivering it. Due to its very controversial history in the region, many geo-political factors have to be taken into account. Its new supply will exceed the demand of the entire nation for the next 50 years. This means that it is inevitable that Israel will become a player on the international market. The amount that they possess does not make it a powerhouse, however it can be used as leverage far beyond its actual monetary worth by choosing carefully where it is sold in Europe and Asia. "Natural resources in the region, especially in energy, are providing an opportunity to co-operate with some of our neighbors, maybe with Jordan, maybe with Turkey and other places," said Ashkenazi, "Energy is important, like water."

Natural gas neither flows to spot markets nor is it sold en route to the consumer, like oil. There is no Global Market Price, like Brent Sweet Crude, for example. Gas is priced unique to each deal. The infrastructure to transmit gas, whether from pipelines or liquefaction is complex, demanding, and expensive. Marketing agreements and supply patterns are locked in for the long term. Even LNG is locked in this way. Countries supplying and receiving the gas link their central energy policies to the expectation of a particular supply chain and a particular diplomatic relationship. Thus, severing a given source is something that is not easily replaced by oversupply from somewhere else. All of a nation's gas supplies are important, even when a supply is relatively small. Even small amounts of Israeli gas can carry significant leverage.

Overview of Israel's Neighbors

The world, and arguably the Middle East, is a rapidly changing place. The list below gives a brief outlook of the countries that are Israel's potential customers (or rivals), and how things stand in the present.

JORDAN - Jordan holds a lot of promise as an energy business associate of Israel. They have just signed a deal that will deliver 500 million c/f of gas over the next 15 years. This comes from the Tamar field. According to John Reed of Oil and Gas Magazine, There are also some in the Israeli government that favor basing an export system on building a liquefaction terminal at Agaba on the Red Sea. This would also foster a close business relationship between the two and would advance the cause of peace. It also would be an ideal shipping point for an emerging Kurdish state. This brings about a lot of opposition in the Knesset. Even though it did not get as much negative press as some other countries, there were serious demonstrations against the government. The problems in Egypt at the time of the fall of Mubarak could make Israel wary of getting into a similar situation. The IDF, (Israeli Defense Force), was asked to guarantee the safety of a station at Aqaba from sabotage. The IDF replied that the only way to do this would be if they could actually occupy the site, making the controversy more than the site would be worth.

LEBANON – Lebanon has a dispute with Israel over what constitutes their territorial waters. They have asked the U.S. to arbitrate the matter. Sharon Usdain, National Geographic News, states that, even if granted a favorable ruling, the government does not have the strength or the longevity to negotiate a long-term deal with a multi-national company. Also, spillover from the war in Syria makes investment problematic.

SYRIA - Syria has territorial water disputes with both Israel and Cyprus. A country plagued by civil war that seems unceasing. It will

be a long time before Syria can do anything but scare off business in the region.

PALESTINE - Recently, Israel signed a \$1.2 Billion deal for a 20-year supply of natural gas with the Palestinian Authority. Also, early this year, Israel agreed to supply a power station in Jenin with gas from their field.

EGYPT – There is still a certain degree of bitterness from both sides of Egyptian/Israeli energy dealing. Israel saw all of the gas coming from Egypt threatened by Bedouin attacks and sabotage, and finally their supply was cut off altogether. Lingering acrimony in Egypt over corrupt members of the government selling gas to Israel at below-market prices could hamper future plans. Still, there is a lot of potential to be exploited. British diplomats have been pushing the idea of linking the Noble fields off the coast of Israel to LNG plants run by BG and BP in the Egyptian city of Damietta. Egypt itself might be another potential customer. The pipeline to Israel could be reversed, if security could be guaranteed. Another option might be an undersea pipeline to the Nile Delta, reported Calev Ben-David, Bloomberg.

Recently, the owners of the Tamar gas field plan to sign a 15-year deal to export 2.5 trillion cubic feet of gas to a Spanish-owned liquefaction facility in Egypt. Partners in the Tamar gas reserve—which include Houston's Noble Energy, Israel's Delek Drilling, and Avner Oil and Gas—signed a non-binding letter of intent in May to supply gas to the Union Fenosa Gas LNG plant, which is underused because of the energy crisis in Egypt. According to a report by Reuters, the deal is to be completed in 6 months, and is considered very sensitive. Egypt struggles with a surge in demand for natural gas, leaving Union Fenosa and BG Group with unused capacity at their LNG facilities in the country. Egypt's Petroleum Ministry officials are seeking details on the deal with Union Fenosa. Any deal would have to have government approval and be "in the best interests of the country."

CYPRUS – Israel, initially, was very enthusiastic about doing energy business with the Cypriots. After the discovery of the Leviathan field, they signed an agreement with the island nation sharing the fields. By 2020, Cyprus hopes to have Vasilikos—a processing and shipping center—up and running, shipping LNG to Europe, and possibly Asia. The early thought of running a pipeline to Cyprus, and then to Greece has cooled due to the following three reasons.

- 1. The role of Russia and Gazprom in the area;
- 2. Corruption in the government of Cyprus itself; and
- 3. Trouble with Turkey over the islands.

TURKEY - Turkey initially would seem like an ideal candidate for a gas deal with Israel. Over the last quarter century, the country has experienced a surge of natural gas consumption as an overall percentage of national energy use, up from 6% to 30%. In 2013, Israel's Director General of the Ministry of Energy and Water Resources, Saul Tzemach said, "Turkey could be an anchor customer. There are quite a few geopolitical barriers, but if we know how to create the right conditions, it is possible. Gas could be used as a stabilizing factor that leads to cooperation between countries and includes multi-nationals and international parties with an interest in stability." Officials in Turkey were not that eager. According to the Energy Ministry, Israel would have to first re-work any deals with Cyprus over Leviathan and a pipeline in Turkey's favor, (the agreements were signed with the Greek-controlled half of the island). As reported in the Daily Sabah, from a national point of view, Israel would also have to:

- 1. Apologize openly for the Mavi Marmara incident
- 2. Compensate the victims and their families
- 3. End the blockade of Gaza

None of these things seem likely to happen. Even if they did, such a pipeline would be subject to political blackmail from Ankara as well as sabotage. We must remember that the instability of the Turkish pipeline system is the reason that they are interested in Israeli gas in the first place.

EUROPE - Europe has a sufficient supply of natural gas without Israel, but their supplies are not certain in any way. According to the U.S. Global Energy Survey, there are five existing pipelines, or proposed pipelines, supplying gas to Europe from North Africa.

- 1. Trans-med Pipeline- carrying 30.2 bcm/year via Tunisia and Sicily.
- 2. Maghreb-Europe Gas Pipeline- carrying 12 bcm/year via Gibralter.
- 3. Medgaz Pipeline (from Algeria to Almeria Spain)-carrying 8 bcm/year, but only now about to come online.
- Greenstream(through Western Libya to Sicily)- carried 11bcm/ year, but is now cut off.
- 5. GALSI pipeline-which is still being planned and will run under

the Mediterranean from far Eastern Algeria.

All of these originate in the Hassi-Al-Rimi field in Algeria. In short, three pipelines carrying almost 50 bcm/year all originate in one point. However, the Europeans tried to diversify with the Trans-Saharan Pipeline to carry Nigerian gas north, and even this passes through Hassi-al-Rimi, where it joins the other three operating pipelines. This makes 18% of Europe's gas vulnerable on this front, as reported in the U.S. Global Energy Survey.

On top of all this there is the crises in Ukraine. Not only does over half Europe's gas flow through Ukraine—Russia and Europe have been on opposite sides of trying to bring Ukraine itself to a more Euro-centric economic policy. This has driven Russia to threaten an embargo of energy, or even the more drastic option of selling elsewhere. Israel could use this to nail down long-term agreements, and re-start Europe/Israel relations on a much brighter note.

RUSSIA – Russia is the major supplier of gas to Turkey and Europe. According to the Economist, Israeli gas trade with Europe would impact Russian domination of Europe's gas supply. Israeli gas could stop Russia's implied blackmail threat to cut off supply. Israeli supply, even marginal, could cause prices to drop. Unless Russia gets a controlling interest in Israel's gas sector, Russia will feel that its' vested interests are threatened-something neither Europe nor Israel wants.

EAST ASIA – The Economist also states that Eastern Asian nations have no vested interests in politics or religion of the area. They need gas. They will pay more. They are beginning to have gaps in supply. Europe might have problems with getting enough gas in the future, for Asia that time is now. Leviathan partners have signed an agreement with Woodside to acquire the rights to about a third of the field. They did this for liquefaction experience, marketing structure, and capital. Woodside, an Australian company, is primarily set up to market in Asia, as is CNOC, which are the only two groups that have successfully bought into the Leviathan field. The Asian countries are very concerned about shipping that goes through the Suez Canal and will want security assurances. They are also very hopeful about new source development in the U.S. and may hold off on signing large, long-term deals until they see what comes of American efforts.

In conclusion, while the destination of Israeli gas is strategically important, the context and geostrategic circumstances of how gas might be transmitted to Europe or Asia must first be examined. When examining the overall effect of the new Israeli energy wealth on the world market, there doesn't seem to be an immediate cause for alarm for large producing countries. There are a lot of things standing in the way of huge immediate profits—environmental challenges at home as well as geopolitical issues abroad will cause Israel to go slow.

The Man Behind the Plan

In Israel's energy endeavors Dr. Harold Vinegar is widely credited as being responsible for its successes.

According to Time Magazine, Harold Vinegar's background in the petroleum industry was in geology, but his specialty is unconventional oil resources. Starting in 1976, he rose through the ranks of Shell Oil to become their Chief Scientist.

In 2008, he met with a man from Israel's Petroleum Authority. He and others had been sent to Texas to try to persuade Shell to come and set up exploration and extracting of oil from the shale rock deep under Israel. However, due to the fact that Shell does business internationally, for the most part in the Middle East and North Africa, doing business with Israel was considered a risk. The company would not risk the damage to their already existing projects for something with no guaranteed return.

As a result of his negotiations with IPA, Dr. Harold Vinegar retired from Shell Oil on Oct.31st, 2008 and moved to Israel on Dec. 7, 2008 and began working for the newly established Israeli Energy Initiatives. Its parent company, Genie Energy, is chaired by Howard Jonas and has investors such as former U.S. Vice-President Dick Cheney, Michael Steinhardt, Jacob Rothschild, and Rupert Murdock.

The company discovered oil in August 2009. When asked recently how he felt about the progress of IEI, he said that he was disappointed that things were not going faster. Vinegar sees beyond the hard currency or immediate security that having locally produced energy would bring. He envisions Israel, with existing refineries, infrastructure, and seaports as a natural nexus for an "integrated energy zone."

DCS System

for Petreco Plant

By Wael El-Sera

Project Description

This Petrobel project includes upgrading of an existing obsolete control system at Petreco control room from single loop to control to DCS system, and also including field instruments replacement to cope with DCS.

Upgrading the following: 1-Extension of control room; 2- HAVC system upgrading; 3- Fuel gas system upgrading and install BMS for 6 heaters

Phase I: Basic and detailed engineering

Phase II: Procurement and construction works

Project Status

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	Curre	Current Approved Budget Accrued Costs						
Description	Total	EFC	Diff.	Previous Years	13/14 Up to Mar., 14	Total		
DCS System Petreco Plant	28,600	28,600	0	9,335	9,683	19,018		
Total	28,600	28,600	0	9,335	9,683	19,018		

Professional Services:

Phase I: Basic and detailed engineering activities were completed.

As built drawings for the existing plant & HAZOP works done by ENI in participation with Petrobel.

Phase II: Fax of awarding issued to Enppi on 04.02.2013 to execute the project in EPC basis, except procurement of heaters upgrading awarded to VERGA through Petrobel.

Procurement:

All P.O.'s were issued by Enppi as per schedule plus two P.O. issued by PTB related VERGA heaters and electrical cable.

All P.O.'s received at site.

Construction:

Civil works for control room extension and burner management system (BMS) building are in progress.

Construction actual progress achieved 73%.

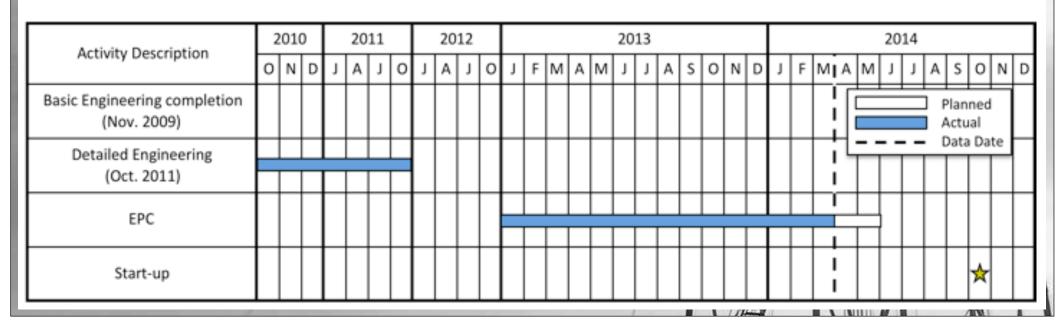
Project Schedule:

Expected mechanically completion for phase-II May-2014.

Commissioning and start-up expected in October 2014.

Project's actual progress achieved 67% versus 68% planned.

Project Milestones





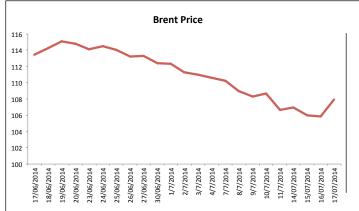
Industry **Statistics**

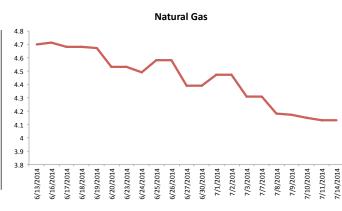
Egypt Statistics

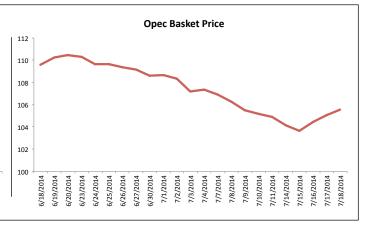


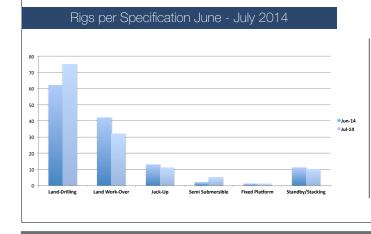
Egypt Rig Count per Area –July 2014									
Area	Total	Percentage of Total Rigs							
Gulf of Suez	11	9 %							
Mediterranean Sea	5	4 %							
Western Desert	82	67 %							
Sinai	11	9 %							
Eastern Desert	11	9 %							
Delta	2	1 %							
Ganoub El Wadi	1	1 %							
Total	123	100%							

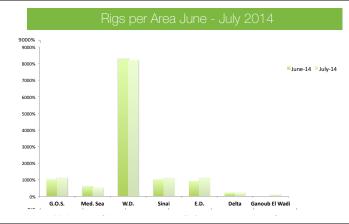
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	Barrel				Barrel			Barrel				
	June-12	June-13	June-14	June-12	June-13	June-14	June-12	June-13	June-14	June-12	June-13	June-14
Med. Sea				22262143	20739286	15159286	1155228	1369767	810888	388952	393756	327292
E.D.	2249288	2470486	2135727		62679	42321		3311	2699		7778	7786
W.D.	7974360	8661378	8961622	6810714	6867500	6912143	1628776	1341087	1453007	587726	653736	473276
gos	4797720	4166636	4318750	202321	291786	461071	59170	58938	62628	166915	184232	241176
Delta	50291	59049	48860	1712679	1570357	2171786	138614	148982	186996	92701	104217	110753
Sinai	2111138	2062142	2124191	1786	1250	2679	34602	32398	29772	88344	85921	74743
Upper Egypt	14272	16559	10272									
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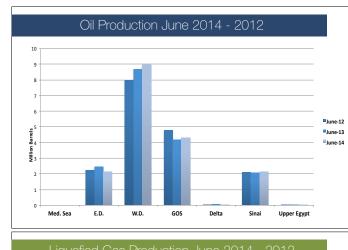


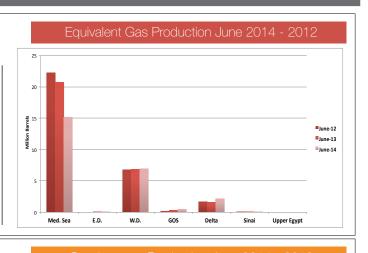


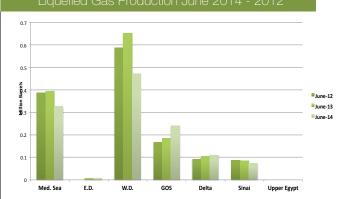


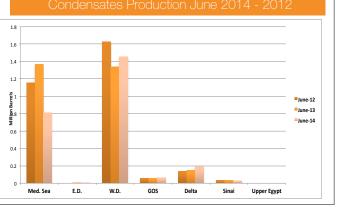


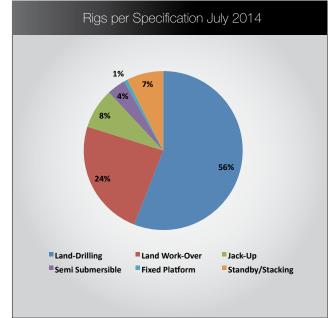


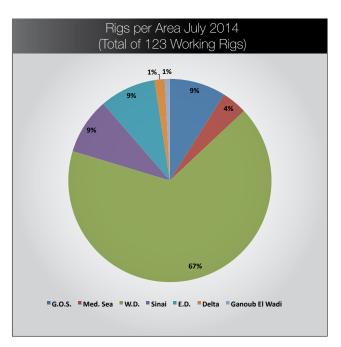














وفر في الكهرباء وماتسبش النور شغال في أوضة فاضية



الكُمبيوتر والتليفزيون والريسيڤر







وفر في الكهرباء وشغل السخان قبل ما تستخدمه ب۳۰ دقیقة بس

> وفر في الكهرباء و إستبدل اللمبات العادية باللمبات الموفرة



وفر في الكهرباء و أجل إستخدام الأجهزة المنزلية في أوقات الذروة من ١:٠٠ حتى ١:١٠ مساءً





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