



EGYPT

OIL & GAS

NEWSPAPER

EGYPT'S LEADING OIL AND GAS MONTHLY PUBLICATION - November 2014 - 36 PAGES - ISSUE 95

Interview

P. 24

Mr. Maximilian Feller

General Manager of RWE Dea Egypt





Arab Oil Aid and the Path  
to Egypt's Upstream  
Independence

P.26



Opinion

P.22

Government Efforts to Stem the Decline  
in Oil and Gas Production

In Focus

P.28

Stranded Gas: Technology Today and Future  
Challenges

Political Review

P.30

Militant Groups in Egypt: Aims, Threats,  
and the 'War on Terror'

We here at Egypt Oil and Gas are determined to bring our reader's the latest news and facts related to Egypt's petroleum industry. In this month's issue we have a guest column under the "Opinion" heading written by Mr. Tawfik Hanna of Deloitte. I would like to personally thank Mr. Hanna for his valued contribution to our newspaper. Your time and effort are much appreciated.

Also, EOG was delighted to speak with RWE Dea's General Manager Mr. Maximilian Feller and get the latest scoop on Dea's current activities and future plans. I would like to extend my thank you to Mr. Feller for his time, effort, and contribution.

Additionally in this month's issue, EOG was able to be part of the "Investing for Growth in Egypt" conference that DanaGas held earlier

last month that discussed their new ventures in Egypt and what they would like to see happen in order to prosper. The conference hosted Petroleum Minister Eng. Sherif Ismail, UAE Minister of State and other various officials. The coverage of the conference will be found in the "Events" section of the newspaper.

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 [MMareei@egyptoil-gas.com](mailto:MMareei@egyptoil-gas.com)

Editor in Chief **Mai Marei**



Publisher

**Mohamed Fouad**

This publication was founded by Mohamed Fouad and Omar Donia

All rights to editorial matters in the newspaper are reserved by Egypt Oil and Gas and no article may be reproduced or transmitted in whole or in part by any means without prior written permission from the publisher.



Contact Information:

Tel: +202 25164776

+202 25172052

Fax: +202 25172053

E-mail: [info@egyptoil-gas.com](mailto:info@egyptoil-gas.com)

[www.egyptoil-gas.com](http://www.egyptoil-gas.com)

[facebook.com/EgyptOilandGas](https://www.facebook.com/EgyptOilandGas)

[twitter.com/EgyptOilandGas](https://twitter.com/EgyptOilandGas)

Editor in Chief

**Mai Marei**

Managing Editor

**Lily Leach**

Staff Writer

**Virginia Crawford**

Staff Writer

**Curt Champeon**

Chief Reporter

**Wael El-Serag**

Contributors

**Patrick Keddie**

News Editor

**Passante Adel**

Marketing Manager

**Ayman Rady**

Business Development Officers

**Ayman Hussien**

Art Director

**Omar Ghazal**

Cartoonist

**Mai Gamal**

Managing Director Assistant

**Basma Naguib**

IT Specialist

**Sameh Fattouh**

Production Advisor

**Mohamed Tantawy**

Administration & Legal Advisor

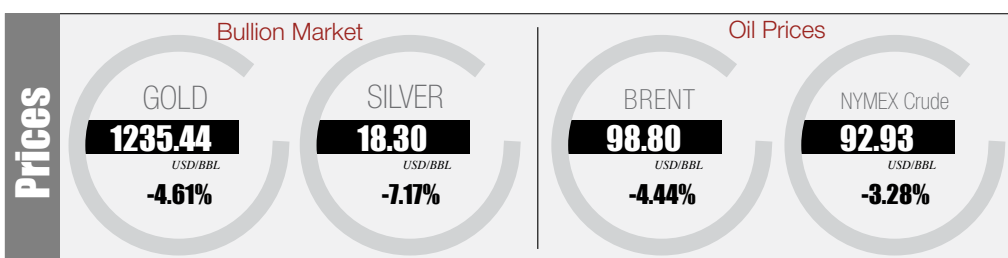
**Mohamed Ibrahim**

Operations & Financial Manager

**Abdallah Elgohary**

Accountant

**Mahmoud Khalil**



## ECG'S OIL & GAS FLAGSHIP ACROSS THE "MENA" REGION



Founded in 1969, ECG Engineering Consultants Group is one of the top five engineering design firms in the MENA region. The company has four offices in Egypt: Cairo office (headquarters), Alexandria, Assiut and Smart Village branch offices. ECG also has twelve (12) regional offices abroad in France (Lanobre), Kuwait (Kuwait City), Kurdistan - Iraq (Erbil), Libya (Tripoli), Qatar (Doha), Saudi Arabia (Riyadh), Sudan (Khartoum), Tanzania (Dar El-Salam), UAE (Abu Dhabi, Dubai and Al-Ain), and Uganda (Kampala).

ECG has delivered over 1800 successful projects with a powerful workforce of over 2000 professionals covering the full spectrum of E/A consultancy services. These services include project identification, design, project management, in addition

to construction management and supervision. Leaving their mark on many of the Middle East developments, ECG projects cover aviation, all types of buildings, infrastructure utilities, industrial, oil & gas, power generation as well as transportation sectors, with a total construction value exceeding US \$ 80 billion.

ECG's flagship "Industrial, Oil & Gas Division" plays a pivotal role in strengthening the firm's niche global market position. The Division, through its longstanding experience and in-depth know-how of its pool of Oil & Gas specialists, has effectively secured a series of milestone projects delivering real-time, cost-effective services covering all processes of engineering disciplines such as pipelines, tanks & vessels, and rotating equipment.

ECG takes pride in its significant contribution to the Oil & Gas Sector in the Middle East through the completion of a wide variety of mega projects. Some of our relevant experience in Egypt include: "Shukeir Gamma Gas/ Oil Separation Plant and associated Oil & Gas Transmission Pipelines", "Alexandria Chemicals Terminal", "Extension of ELAB Storage Tanks" along with "Wastani Nodal Gas Compressor Facilities". In Syria, ECG performed FEED and detailed engineering for the project of the "Sweidieh Massive Development Project". In Sudan, ECG's successful projects are witnessed in the rapidly growing Oil & Gas industry including: "Quality Improvement of Crude Oil Export Pipeline in Heglig Central Processing Facility (CPF)", "South Annajma Early Production Facility" and "South Annajma Export Pipeline System".

El-Sefarat District, Block 10 Building 2,  
Nasr City 11765, Cairo, Egypt.  
P.O. Box 1167, Cairo 11511, Egypt.  
Tel +20 2 2274 4740  
Fax +20 2 2274 4748  
[www.ecgsa.com](http://www.ecgsa.com)

**ECG** **مجموعة الاستشارات الهندسية**  
ENGINEERING CONSULTANTS GROUP S.A.



THE  
CLUBHOUSE  
UPTOWN  
CAIRO

THE CLUBHOUSE AT UPTOWN CAIRO

# Where Business is a Pleasure



## STATE OF THE ART BUSINESS VENUES THAT ARE TEN MINUTES AWAY FROM MAADI

Ideally located in the heart of Cairo, The Uptown Cairo's Clubhouse is easily accessible through the capital's main roads, making it a prime location for business events. Home to a handpicked selection of venues, it offers you the ultimate business experience. The award-winning clubhouse features an extensive outdoor area, a ballroom, board room, VIP room, bar, cigar lounge and a wide array of gourmet restaurants that ensure your corporate events are customized and perfected down to the last detail. Whichever venue you choose, you'll get spectacular views of the mesmerizing Uptown Golf Course, its tranquil lakes and the glimmering lights of Cairo's cityscape.



To book your upcoming business meeting/event:  
Call 16129 or 01283557000 - 2503 2133 or email us at: [guestservice.utcg@emaar.ae](mailto:guestservice.utcg@emaar.ae)

Uptown Cairo (Entidad Ramsis St. exit from the 6th of October bridge or Mokattam Exit from Autostrad Road)

[emaarmisr.com](http://emaarmisr.com) | [facebook.com/emaar.misr.community](https://www.facebook.com/emaar.misr.community)





## Egypt Pays \$1.5 Billion of Debt to Foreign Companies

According to a statement released by the Ministry of Petroleum, the government has paid \$1.5 billion of the \$6.4 billion owed to foreign oil and energy companies, bringing the debt to \$4.9 billion. The debt had reached \$5.9 billion at the end of April; however, it increased by \$500 million in the five months following until October. The payment was facilitated by a EGP 10 million loan to the government by a consortium of banks headed by the National Bank of Egypt, which was announced in September. The previous payment of \$1.5 billion in December 2013 was to several companies, including BG. Foreign companies have been reluctant to pursue exploration contracts due to the increasing debts. Meanwhile the government is arranging for further payments with the Petroleum Minister, Eng. Sherif Ismail, announcing that another payment should be arranged in the coming period.

"The government aims to reduce the debt to encourage the firms to step up research and exploration operations, to boost local production of oil and gas and minimise imports, which in turn will spare the cash to continue paying Egypt's due debts to its foreign partners," said Minister of Petroleum Sherif Ismail in the statement. He also stated earlier in a press conference that the government is aiming to repay \$2-\$3 billion of the debt by the end of the year. Of the recent amount paid by the government, BG received \$350 million of their amounts due. EGPC is to launch a tender for another loan by the end of October. The amount of the loan was not specified; however, speculations are that it would be more than \$1 billion.

## Noubarya-Sadat-Edfu Pipeline Complete

A statement issued by the Ministry of Petroleum announced the completion of the Noubarya-Sadat-Edfu gas pipeline project. The project has an estimated worth of EGP 590 million, it aims to reinforce the pipeline networks' capacity to reach its maximum operation limit to meet power plants needs, industrial and residential gas demand in Edfu and South Valley. A report was presented to Petroleum Minister Eng. Sherif Ismail by GASCO, the main national natural gas pipeline operator. The project was completed in three years.



## BG to Link 500 Million Cubic Feet Per Day

An EGas official told the Daily News Egypt that the company is to complete the connection of 500 mcf/d for the A9 project in the Al-Borolos fields affiliated with British Gas. Five fields have already been connected to stage A9 production, with a production capacity of 60-70 mcf/d each. Upon completion of all well connections, the Burollus field is expected to have a production output of 1.1 bcf/d, compared to the current 880 million. An agreement to link 10 wells from the Alexandria Burollus station has been developed

as Egypt aims to double its gas production. This linkage will produce between 600 - 700 mcf/d by the end of 2015. Mohamed El Masry, President of Rashid Petroleum – the operating company of the gas fields– stated that this project targets the production of about 1 bcf/d of gas and that the development of all its wells will be completed by 2017. BG has allocated \$1.6 billion for the implementation of the A9 production stage which was to enter production at the beginning of the year but was stalled by the amounts owed by the government to the company.

## Rashid Produces 1.5 Billion Cubic Feet Per Day

The official spokesman of the Ministry of Petroleum Hamdy Abdel Aziz stated to the Daily News Egypt that BG is investing about \$400 million in the development of the Rashid and Burollus fields. Al-Ahram reported that the President of Rashid Petroleum, Mohamed El Masry which is operating the gas fields, stated that the

investment will increase production from 400 to 450 million cf/d of gas, although El Masry didn't name the British Company. He added that Rashid's production has increased to 1.5 bcf/d, accounting for a quarter of Egypt's daily production, after new wells were added to the field early in October.

## KFAED to Grant \$100 Million Loan for West Cairo Power Plant

Ministry of International Cooperation spokesperson, Mohamed Hassan, announced that the Kuwait Fund for Arab Economic Development (KFAED) will grant Egypt a \$100 million concessional loan for the West Cairo power station. The agreement was made alongside of the

IMF 2014 meeting in Washington DC between Minister of International Cooperation Naglaa ElAhwani and Director General of the KFAED Abdul Wahab El Bader. The loan is the second power project financed by the KFAED, after a previous loan in April for the Assiut power plant.

## Agiba Produces 67,600 Barrels Per Day

Agiba Petroleum reached a record of 67,600 b/d from their fields in the Western Desert and Suez gulf. The company's President, Moustafa El Bahr, attributed the increase to the Emri field in the Western Desert, which added 10,000 b/d to the production from the recently connected fields EMRI-15 and EMRI-9, according to MENA. He added that Agiba will start exploration in two new areas soon, as part of the plan to increase

production through new exploratory wells. He pointed out that the company achieved the increase in production without increasing spending through a series of processes including well maintenance and development, isolating the oil and water production layer, and hydraulic fracturing to improve production.

## Gulf Capital Invests \$25 Million in Amak Petroleum

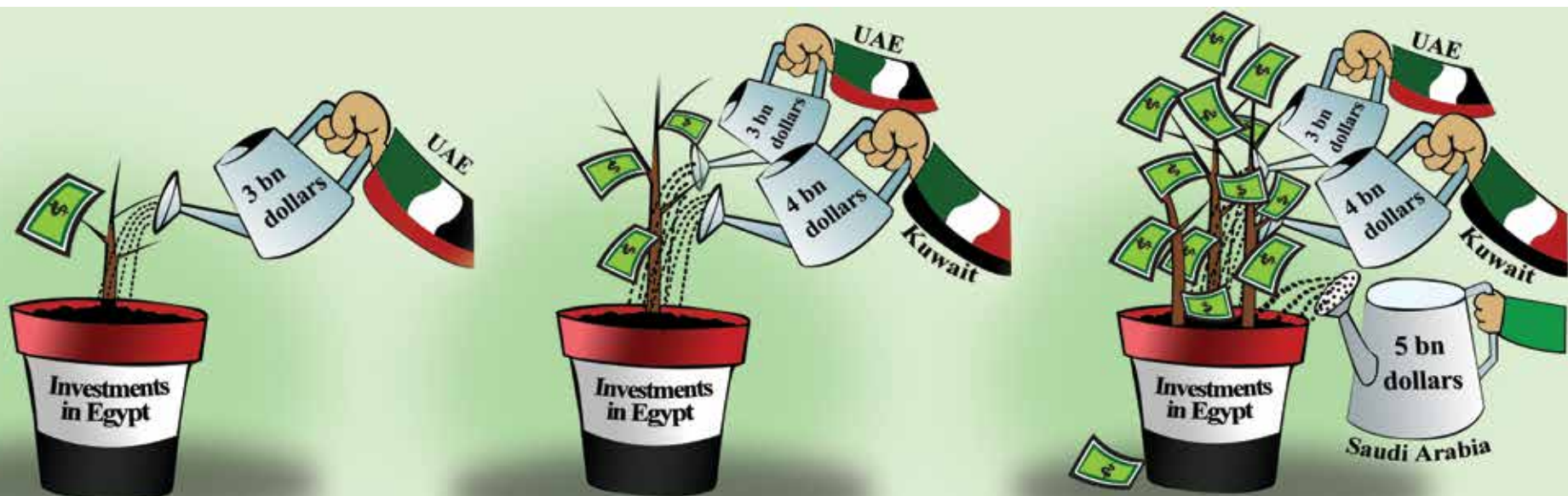
UAE-based private equity company Gulf Capital has announced an investment of \$25 million in Egyptian petroleum services company Amak Petroleum through its regional fund Gulf Credit Partners, according to Hefix-LTR. "Gulf Credit Partners' investment will help Amak continue its strong growth at an exciting time for Egypt's revitalised Oil and Gas sector," said Karim El Solh, CEO of Gulf Capital. "Amak's strong position in the Egyptian oil and gas service sector, as well as its ambitious growth strategy and experienced management team,

are strongly aligned with our fund's investment strategy." Amak's founder Ayman Abbas added, "This institutional investment from Gulf Capital will strengthen Amak's capital structure, allow us to fund the rapid growth of the company, and help improve overall corporate governance, all vital components to the continued success of Amak. We are glad to partner with such a leading alternative asset manager in order to achieve our ambitious growth plans."

## Petroleum Minister: \$14.5 Billion Investments in Refining and Petrochemicals

Petroleum Minister Eng. Sherif Ismail said in an interview with Reuters that Egypt is to invest \$14.5 billion in refining and petrochemicals over the next five years. "Total investments that will be implemented over the next five years will be around \$14.5 billion and include \$12.5 billion in the refining sector and \$1.9 billion in the ETHYDCO project," Ismail said, referring to a new complex that will produce ethylene and other petrochemicals. The Minister added that Egypt is trying to boost refined oil production by 5-10% every year, he said Egypt was hoping to produce 5.4 bcf/d of gas and 695,000 b/d of oil and condensates in the current 2014-15 financial year, and to import about 6.5 million tonnes of gas and petroleum products annually. ETHYDCO is set to produce 460,000 tonnes a year of ethylene

and 400,000 tonnes of polyethylene when it comes online at the end of 2015, saving the government \$500 million a year on imports. Ismail also said Egypt is expanding the Midor refinery, boosting its capacity from 100,000 b/d to 160,000 b/d with the additional output expected to come online at the end of 2017. "The Midor expansion will contribute to providing 20,000 tonnes of gasoline a year and 1.8 million tonnes of diesel in addition to liquefied petroleum gas and jet fuel," Ismail said. He expects that Egypt's diesel production would increase by 4.5 million tonnes a year once the Midor expansion and an upgrade at the Egyptian Refining Company were complete.





## New Oil Discovery for Kuwait Energy in Abu Sennan

Kuwait Energy announced the discovery of a new oil field in Egypt's Abu Sennan, an area near the border with Libya, according to KUNA. "The successful tests in the well ASA-1 st3 on the Abu Sennan license disclosed the flow rates achieved of 1,604 barrels per day (bpd) and 2,164 bpd in Abu Roash "E" and Abu Roash "C" respectively," the company said in a statement. "This is the 7th discovery in Abu Sennan and the 23rd exploration in Egypt for Kuwait Energy since 2008," it added. The company has also successfully completed appreciation of the El Salmiya-6 well. The test results from the primary target, Kharita Sandstone, are 2,750 bpd and 9.7 MMscfd of gas on a daily basis, it pointed out. Sara Akbar, CEO of Kuwait Energy said, "this discovery is expected to increase our reservoirs and daily production levels as Egypt continues to be a flourishing region for us." EGPC is the main

partner of Kuwait Energy in Egypt. Kuwait Energy's reservoirs realize 165.7 million barrels of oil equivalent. Last June it attained more than 150,000 barrels of oil equivalent.



## Eni Wins Three Concessions

Three concessions have been awarded to the Italian Eni. The EGPC awarded Eni full operation of a Western Desert onshore block covering an area of 2,058 square km. Two more deep water blocks were awarded to Eni in the Mediterranean Sea, the first of which is North Leil offshore block covering an area of 5,105 square km at a depth ranging from 2,100 to 2,800 meters. Eni is to fully operate North Leil. Brit-

ish Petroleum will be ENI's partner in the second Mediterranean block, Karawan offshore, covering 4,565 square km at a depth ranging from 2,000 to 2,500 meters. Recently Egypt has signed exploration deals worth \$187 million for areas in the Suez Canal, the Western Desert, the Mediterranean Sea and the Nile Delta.

## Aminex Drills Two Wells in West Esh El Mellaha

Aminex is to start drilling in South Malak-2 well, according to Oil & Gas Technology. The operator of the West Esh El Mellaha production-sharing contract (WEEM-2 PSC), onshore Gulf of Suez, has advised Aminex on the move. The company plans to dig another well -Wadi Kofra-1- by the end of the year. "As a carried interest partner, the imminent spudding of the South Malak 2 well and further drilling of Wadi Kofra

1 are a positive step in moving the WEEM 2 PSC forward," said Jay Bhattacharjee, Aminex CEO. The WEEM 2 PSC, which covers 996km<sup>2</sup> in the onshore Gulf of Suez region, is adjacent to Lukoil's WEEM-1 producing oil field. Aminex has a 10% interest in the wells through its 12.5% stake in its associate Aminex Petroleum Egypt (APEL). APEL owns 80% stake in the WEEM-2 PSC.

## 86% Drop in Natural Gas Exports in August

A report issued by the state-run Information and Decision Support Center (IDSC) stated that Egypt's exports of natural gas dropped by 86% in August compared to the same month last year. The value of gas exports has reached \$26.1 million down from \$192 million in August 2013. Crude oil and other petroleum products exports have increased by 1.5%, reaching \$402 million up from \$396 million in the same month last year. Meanwhile, Egypt's gas production has decreased to 3,040 tonnes in August this year compared to 3,500 tonnes last year. Egypt's production of Brent crude and petroleum condensates such as gas oil and naphtha dipped by 1.8% year-on-year in August to reach 2.9 million tonnes, according

to the IDSC.



## BG Egypt in Talks to Import Cyprus Natural Gas

BG Egypt held talk with Cyprus Hydrocarbons Company (CHC) to discuss the possibility of exporting Cyprus natural gas to BG's facilities in Egypt, reported Cyprus Mail. CHC Head Toula Onoufriou said, "This meeting is a milestone, marking the beginning of a series of initiatives by the CHC aiming at creating better conditions for the disposal of Cyprus gas, so that once conditions are mature enough, which is expected in the coming months, we can have before us the best possible options." BG Egypt's President Arshad Sufi

said, "We operate a lot of the infrastructure related to gas and we are here for an introductory meeting to discuss the possibilities for the gas over here. And we hope to continue the dialogue as we look forward to explore the opportunities." A confab of the heads of state of Cyprus, Greece and Egypt is scheduled to take place in Cairo on November 8, where the leaders will discuss boosting cooperation in areas of mutual benefit, including energy.

## Egyptian Private Customers Negotiate to Buy Israeli Gas

Reuters reported that the Israeli offshore Tamar field partners announced ongoing negotiations to export 5 billion cubic meters over three years to private customers in Egypt. The gas is to be transported via reverse flow in the East Mediterranean Gas company (EMG) underwater pipeline which previously carried exported gas from Egypt to Israel. The Tamar consortium, led by Texas-based Noble Energy and Israel's Delek Group, said in a statement they signed a nonbinding

letter of intent to negotiate with Dolphinus Holdings, a firm that represents non-governmental, industrial and commercial consumers in Egypt. Any deal would be subject to various approvals in Israel, Egypt, and EMG. Ministry of Petroleum's spokesperson Hamdy Abdel Aziz said in a statement that no agreement has been signed yet and no letters have been presented to the Egyptian government for approval.

## Midor to Expand Capacity to 160,000 B/D

Chairman of Midor Refinery Mohamed Abdel Aziz said in an interview with Reuters that the company is hoping the planned expansion of Egypt's biggest refinery, Midor, would allow it to export and not only provide to the domestic market. He stated that the refinery would increase capacity to 160,000 b/d by end-2017 from the current 100,000 b/d. Midor currently provides a quarter of Egypt's needs, so the increase should mitigate the energy crisis the country is facing and may provide for exports as well. The expansion at the refinery owned by Egypt's main state-run oil company, is expected to cost about \$1.2 billion with 40% self-financed and the remaining

financed by banks. "Midor wants to increase production to meet Egypt's energy requirements and have the capacity to be able to refine for others," Abdel Aziz said. "We began negotiating in May with Sudan on refining a million barrels per month at a price of \$8 a barrel." Midor reported a decrease in profits in 2013 as they reached \$98 million, down from \$112 million in the previous year. Abdel Aziz said another decline is expected this year due to the decreasing oil prices.

## CHOICE Words



Our economy will be back on track in three years. The signs are already visible. Inflation is hovering around 8.2% and we have also controlled fuel consumption.

**Osama Kamal**  
Egypt's Former Minister of Petroleum



General Electric (GE) is prepared to work with the Egyptian government on bringing emergency and immediate power to the country.

**John Kerry**  
US Secretary of State



There are now extraordinary opportunities for Israel based on energy policy, both economically and diplomatically... This is a real game-changer of common interests and benefits for many actors in the region.

**Emmanuel Nachshon**  
Israeli Foreign Ministry Spokesman



Israel is making a contribution to the political stability of Jordan by strengthening the country's energy security. Egypt is in a tight squeeze, with a drop in domestic gas production. The opportunity to import gas from Israel is an attractive way to satisfy domestic demand.

**Michael Leigh**  
Senior Adviser to German Marshall Fund, U.S.A



## CARTOON





## BP Starts Drilling Atoll-1

BP announced in a press release the beginning of the drilling of offshore Atoll-1 well in the North Demietta Offshore concession after the Salamat-1 significant discovery announced by BP in 2013. The deepwater exploration well will be drilled using the 6th generation rig "Maersk Discoverer" at water depth of 923 metres and reaching a total depth of around 7400 metres targeting Oligocene Channels. The well spudded on September 12th, 2014 and the drilling is expected to last into next summer. Regional President of BP North Africa Hisham Mekawy said, "The sig-

nificant investment in Atoll-1 is another great example that demonstrates our commitment to meeting Egypt's energy needs by exploring the deep offshore potential of the Nile Delta, which we believe to be a world class gas basin that requires substantial investments to unlock its potentials. We look forward to continuing to play a key role in the development of Egypt's energy sector and maximising the use of our existing resources to help meet the country's growing energy demands for years to come." BP has 100% work interest in Atoll-1.

## Ministry of Petroleum Negotiates Foreign Gas Prices

The Ministry of Petroleum is currently negotiating with foreign companies including Apache and BG to adjust gas prices for new projects linked with production in the near future. A senior official with the Ministry of Petroleum said to the Daily News Egypt that negotiations are underway with British Gas to re-price gas for the B9 stage project, which is set to add about 500 million cubic feet of gas to production throughout the coming year. Thomas Maher, Vice Chairman and General Manager of Apache Operations in Egypt, said in a statement to Reuters that talks are underway with the

government regarding gas price adjustments. These affect some of its concession areas, including a mutual project with Shell. He said that the result of the negotiations shall determine whether Apache would expand its operation in Egypt. Maher added that the price of gas will vary depending on the project and the layer from which it is extracted and whether a treatment centre is constructed or not. He also said he expects capital investment to remain steady over the next few years at about \$1.4 billion annually, with an additional \$450 million in operating expenditures.

## EGAS Aims to Increase production

EGAS is to pump in \$4 billion of investment as part of its effort to increase the production during the fiscal year 2014/2015, said EGAS Chairman Khaled Abdel Badie said in a statement released by the company. He explained that the company has finished four out of ten projects for natural gas which will be developed in this year. According to Oil & Gas Journal estimates as of 1 Janu-

ary 2014, Egypt holds 77 trillion cubic feet of proven natural gas reserves, an increase from the 2010 estimate of almost 59 trillion cubic feet and the fourth-largest amount in Africa, after Nigeria, Algeria, and Mozambique. However, production rates have been declining by an annual average of 3% since 2009 according to the EIA.

## Total Awarded Sector 2 in the Nile Delta

French oil company Total has been awarded a licence to explore for natural gas in the Nile Delta, a source in the state-run EGAS said. "France's Total won the bid to explore in Sector 2 in the Delta region," the source told Reuters on

## BG Egyptian Output Halved in Third Quarter

BG Group reported a worse-than-expected 26% fall in third-quarter operating profit on the back of a continued decline of production in Egypt and a steep drop in oil prices, wrote Reuters. The company's total operating profit came to \$1.3 billion in the third quarter, undershooting a company-provided consensus of \$1.4 billion, as its Egyptian output halved compared with the previous year to 55,000 barrels of oil equivalent per day due to its depleting reservoir. In the third quarter BG sold its oil at an average of \$104 per barrel, down from \$112 the previous year, while its average UK gas price fell 17% to 37 pence per therm. BG is in

condition of anonymity. The licence was awarded as part of last year's December exploration bid by the EGPC. The concessions are for areas in the Suez Canal, Egypt's western desert, the Mediterranean sea, and the Nile Delta.

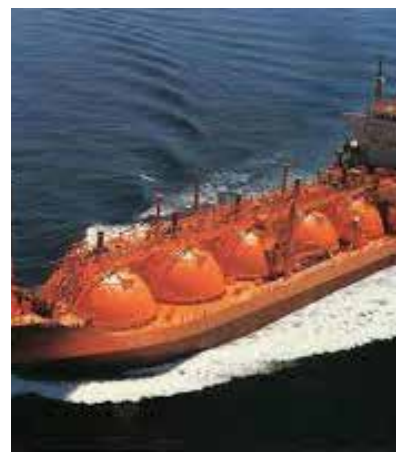
the middle of a radical asset review to weed out projects that have weighed on its performance as its shares have dived 30% since the start of the year.



## Ministry of Finance Refuses to Fund LNG Imports

Egypt's plan to import LNG is threatened by the Ministry of Finance's refusal to fund the imports. EGP 21.5 billion (\$3 billion) is needed to finance the imports of 500 million cubic feet, which are to help the country face the current energy crisis. A meeting is to be held by the end of October between officials from the ministries of Oil, Finance, and Electricity to agree on a solution to the issues facing the imports, according to the Daily News Egypt. An official from EGAS told Al-Borsa that the meeting will aim to analyse methods for managing the funding necessary to import shipments. It is worth mentioning the Ministry of Electricity owes an amount of EGP 50 billion to the Petroleum Ministry. Various government agencies failed to pay debts

owed to the oil sector exceeding EGP 150 billion, which has led to serious liquidity problems for the industry.



## EGPC Signs Exploration Agreement With Tharwa Petroleum

A statement issued by the Ministry of Petroleum announced that Eng. Sherif Ismail signed a new exploration agreement for oil & gas at the eastern Abu Sennan area in the Western Desert. The agreement is between the EGPC and Tharwa Petroleum Company, with a total investment of a minimum of about \$15 million, and signature bonus of about \$5 million for drilling 4 new wells. The agreement, signed by Eng. Tarek Al Mulla, Chief Executive of the EGPC and Eng. Re-faat El Beltagy, comes in the ministry's framework to encourage national companies exploration and upstream contribution to national production.

## Egypt Receives \$5 Billion Offer to Construct Coal Power Plants

Chinese, American and German companies proposed offers to generate electricity from coal with a capacity of 3000 MW and investments worth \$5 billion, Electricity Minister Mohamed Shaker stated according to Al-Masry Al-Youm. The cabinet has approved the use of coal for power generation in April 2014 as part of its efforts to curb the energy crisis which the country is facing. In September 2014, the Egyptian government began to allow coal importation despite concerns about the heavy pollution from coal-fired power stations. Investment Minister Ashraf Salman recently revealed plans to construct coal-fired power stations during the fiscal year 2014/2015 in order to meet the country's growing electricity needs.

# Drilling News

## Khalda Drills New Wells

Khalda, a joint venture company between EGPC and Apache, has completed drilling two new exploratory oil-producing wells in its concession area in the Western Desert. The production rate of Khalda was 4.158 million barrels as of September 2014.

### BUCHIS W-2X

The new exploratory well was drilled at a depth of 14,650 ft. utilizing the EDC-16 rig. Investments surrounding the project are estimated to be \$4.894 million.

### FALAK NW-1X

The new exploratory well was drilled at a depth of 13,800 ft. utilizing the EDC-54 rig. Investments surrounding the project are estimated to be \$2.409 million.

## BAPETCO Drills New Well

BAPETCO, a joint venture between EGPC and Royal Dutch Shell, has recently completed drilling a new gas and oil-producing well in their concession area in the Western Desert. The production rate of BAPETCO was 1.97 million cubic feet of gas as of September 2014.

### OBA D-37

The new gas-producing developmental well was drilled at a depth of 13,659 ft. utilizing the EDC-55 rig. Investments surrounding the project are estimated to be \$6.419 million.



## PETROBEL Drills New Well

PETROBEL, a joint venture between EGPC and Eni S.p.A, has recently completed drilling a new oil-producing well in their concession area in Sinai. The production rate of PETROBEL was 3.44 million barrels as of September 2014.

### 113-190

The new exploratory well was drilled at a depth of 10,669 ft. utilizing the ST-3 rig. Investments surrounding the project are estimated to be \$3.293 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 Western Desert.

### K-25

The new well was drilled at a depth of 4,681 ft. utilizing the EDC-62 rig. Investments surrounding the project are estimated to be \$1.296 million.

## Qarun Drills New Well

Qarun, a joint venture between EGPC and Apache, has recently completed drilling a new oil-producing well in its concession area in the Western Desert. The production rate of Qarun was 1.192 million barrels as of September 2014.

### SWQ-25

The new developmental well was drilled at a depth of 10,000 ft. utilizing the EDC-53 rig. Investments surrounding the project are estimated to be \$2.247 million.

### ZAINA-4

The new developmental well was drilled at a depth of 7,850 ft. utilizing the ST-2 rig. Investments surrounding the project are estimated to be \$1.420 million.

## Agiba Drills New Wells

Agiba, a joint venture between EGPC and IEOC, has recently completed drilling a new developmental oil-producing well in its concession area in the Western Desert. The production rate of Agiba was 1.897 million barrels as of September 2014.

### E.AGHAR 16

The new developmental well was drilled at a depth of 6,500 ft. utilizing the WF-161 rig. Investments surrounding the project are estimated to be \$1.016 million.

## PetroSafwa Drills New Well

PetroSafwa, a joint venture between EGPC and Vegas, has completed drilling a new oil-producing wells in its concession area in the Western Desert.

### SAFWA-3

The new developmental well was drilled at a depth of 4,460 ft. utilizing the SNOS-4 rig. Investments surrounding the project are estimated to be \$674,000.

## PETROSILAH Drills New Well

PETROSILAH, a joint venture between EGPC and Merlon International, has completed drilling a new oil-producing well in its concession area in the Western Desert. The production rate of PETROSILAH was 212,855 barrels as of September 2014.

### SILAH-7-1

The new developmental well was drilled at a depth of 7,900 ft. utilizing the WDC-49 rig. Investments surrounding the project are estimated to be \$2.423 million.



Under the Patronage of H.E. Eng. Sherif Ismail, Minister of Petroleum



Commercializing Stranded Gas through Development Strategies,  
Technological Innovations and Commercial Solutions

NOVEMBER- 2014

UPTOWN CAIRO - CLUB HOUSE

# Egypt's Stranded Gas

## ROUNDTABLE

### Discussion Topics:

- Identifying Egypt's main stranded gas assets.
- The reasons behind why several discovered gas resources are not being developed.
- Identifying the economical and physical challenges to unlock Egypt's stranded gas assets.
- Monetizing stranded gas reserves using leading technology.
- Financing for stranded gas projects.
- The measures needed to be taken to maximise Egypt's domestic gas resources.

Platinum Sponsor



Gold Sponsor



**Moderated By: Geol. Mahfouz El Bony**  
Vice Chairman For Agreements & Exploration - EGAS

Organized by



**Limited Space Available – Register Your Delegate Today**



+202 251 64776 - +202 25172052



+202 251 72053



ayman@egyptoil-gas.com



## Enel and Dragon Oil to Explore for Gas in Algeria

UPI reported that the Emirati Dragon Oil and Italian Enel announced they were awarded two contracts to explore for oil and gas in Algeria. Dragon Oil Chief Executive Officer, Abdul-Jaleel Al-Khalifa said, "This achievement represents a strategic move for Dragon Oil to establish a footprint in another North African country known to be rich in hydrocarbon resources and opportunities." No estimate was given as to the potential amount of reserves the license areas. However, some of Enel's legacy operations in Algeria could be producing

100 billion cf/d of natural gas by early 2018. Statoil, a Norwegian energy company and its partners at Shell said this week they were looking into shale natural gas potential in the North African country. Algeria has the 10th largest natural gas deposits in the world and is the third largest gas supplier to Europe. An increase in this already vital sector of its economy is seen as forthcoming, as Europe is looking to diversify its energy sector to reduce dependence on gas supplies from Russia.

## Greece to Award Exploration Contracts by October 2015

Rigzone has reported that debt-laden Greece will sign contracts for test drilling in its western and southern waters by October 2015. Although the country has tried to find large gas and oil reserves without success, interest has peaked again as the country tries to reduce its large fuel import bill. Oil and gas companies will be invited to compete for 20 offshore blocks located over a 200,000 square km area in the Ionian Sea and south of Crete. The tenders will be published in the EU's official gazette

and then the oil and gas explorers will have 6 months to submit their bids. Athens expects to sign contracts by October of next year. The government spent \$19.6 billion to import fuel last year, which is 8.6% of its Gross Domestic Product. Tax breaks were promised to explorers at a London conference held in July. Greece will offer three onshore areas. It has also approved Italian Eni to do an onshore search. The new projects are hoped to attract 150 billion Euros in investments over the next 30 years.

## Repsol to Drill Two Exploratory Wells Off the Basque Coast

Repsol SA won environmental clearance to drill two exploratory wells for natural gas off the Basque coast of northern Spain, reported Bloomberg. The project, first proposed to the country's environmental regulators in 2008, must adopt a series of safeguards against spills and other potential risks to the ocean and coastline, according to a resolution signed by Deputy Environment Minister Federico Ramos de Armas. The two wells, Fulmar-1 and Pelicano-1, will be drilled in waters about 15 kilometers and 20 kilometers from the coast where the Urdaibai estuary crosses the port of Mundaka, a world-class competitive surfing spot. They are proposed in waters 170 meters and 385 meters deep, respectively. Such shallow-water drilling projects will cost about \$40 million each. The Basque regional government, which lacks direct control over exploration permits,

praised the recent surge of petroleum projects for "generating resources, creating jobs, industrial activity and social well-being."



## Libya Calls for OPEC Output Cut



Libya's OPEC Governor Samir Kamal told Asharq Al Awsat that the organization should cut its oil output, but not to expect Libya to participate in the cut. "I think OPEC should cut output by at least 500,000 barrels per day because all the studies indicated the need for that, even before the decline in oil prices," the governor said, "(However) Libya should be exempted from any OPEC output cut since it has been out of the market for almost a year, is facing a budget deficit and is in need of every drop of its production." In spite of ongoing political unrest and violence in the country, Libya is currently producing 800,000 b/d, compared with 215,000 b/d in April when oil ports were shut by rebels seeking self-rule in the eastern region, according to state-run National Oil Corp (NOC). An agreement with the rebels allowed output to increase while the fighting between Islamist and pro-government militias has been contained to non-oil-producing areas in and around the capital Tripoli and Benghazi, the country's second-biggest city. Most of Libya's oil fields and export terminals for crude are hundreds of miles away from the conflict. The so-called Executive Office for the Barqa region, which seeks self-rule for eastern Libya, pledged to work with Theni's government to defend oil facilities and keep crude flowing to international markets, a Barqa spokesman, Ali Al-Hasy, said earlier.

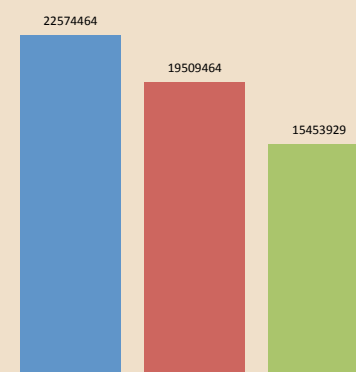
## Tensions Rise in Cypriot Turkish Gas Exploration Row

An escalating row between Cyprus and Turkey emerged in October as Cyprus said a Turkish research vessel had encroached on an area off its southern coast where it is searching for gas, according to Reuters. Cyprus, a member of the European Union, has become particularly keen on developing offshore gas reserves as a potential source of revenue since it was compelled to seek an international financial bailout in early 2013. Nicos Christodoulides, the Cypriot government spokesman described it as the "most serious" escalation of a dispute that has simmered since the declaration of a breakaway Turkish Cypriot state in north Cyprus in 1983. Turkey, which backs the Turkish Cypriot entity, does not recognise the jurisdiction of the Nicosia government in the exploration area off the south-eastern tip of Cyprus. Turkey's move to cancel plans for gas exploration in the exclusive economic zone of the Republic of Cyprus is the only condition to resume peace talks aimed at reuniting the divided island, Christodoulides said in an interview with TASS. The European Union warned Turkey to respect Cyprus' marine sovereignty. The Greek Cypriot administration said in the first week of October it would block Turkey's accession talks in the EU in response to Ankara's hydrocarbon exploration in waters that the administration claims as its territory.

## Mediterranean STATISTICS

### Production (barrel)

Oil		
September-12	September-13	September-14
Equivalent Gas		
September-12	September-13	September-14
22574464	19509464	15453929
Condensate		
September-12	September-13	September-14
1115749	1146947	814751
Liquefied Gas		
September-12	September-13	September-14
339575	360500	312008



■ September-12 ■ September-13 ■ September-14

### Mediterranean Rig Count October 2014

Total	Percentage of Total Rigs
6	5%

## DNO Drills New Well and DualEx Abandones Another in Tunisia

The Norwegian DNO has announced commencement of drilling of the Jawhara-3 well, the first of several exploration and appraisal wells planned in the Sfax Offshore Exploration Permit in the Republic of Tunisia, reported Oil and Gas Technology. The well is to be drilled four kilometers north of the Jawhara-1 discovery well, which flowed 1,500 b/d of oil, and will test the Douleb and Bireno reservoirs in the up dip Jawhara structure. A second exploration well will follow in the first half of 2015. Meanwhile, DualEx Energy International Inc. announce that

re-completion operations of the Abiod chalky limestone in its BHN-1 well on the Bouhajla Permit, onshore Tunisia, have concluded and the well will be plugged and abandoned. DualEx CEO Gary Hides stated "while we are obviously disappointed with this result, all reasonable attempts to determine the hydrocarbon potential of the Bouhajla North structure were undertaken and we must conclude that the fractures encountered at BHN-1 are not effective, which was one of the primary risks associated with the Bouhajla North prospect.







"Seaharvest Oil & Gas Services aims to be the customer first choice for innovative tailored solutions in the oil-field industry. Servicing under the framework of adding value to all its Stakeholders; Employees, Customers, Business Partners, Stock Holders and the community operating in"

## Providing Quality Solutions



Merchandising



Rentals



Field Services

Villa 54, Road 57, 1st District, Zone 7  
Fifth Settlement - Cairo, Egypt  
Tel: +202 231 30751 - 53  
+202 231 30304 - 07  
Fax: +202 231 30750  
Website: [www.seaharvest.org](http://www.seaharvest.org)  
Email: [egypt@seaharvest.org](mailto:egypt@seaharvest.org)



## The UK Blocks Russian Billionaire's RWE Deal

The UK has blocked a \$6.4 billion deal by Russian billionaire Mikhail Fridman to acquire North Sea gas fields, as part of its ongoing sanctions package against Russian businessmen and investors believed to have close ties with President Vladimir Putin, Russia Today reported. Fridman was set to buy RWE Dea, an arm of German utility RWE, which pumps oil and natural gas to the UK, Germany, Denmark and Egypt. Mr. Fridman's group is asking for a so-called comfort letter. The German

government cleared the deal in August; however, RWE said that it was waiting for a "comfort letter" from the UK, to ensure there were no objections. Edward Davey, Britain's Minister of Energy and Climate Change, has so far declined. The company was to be bought by LetterOne, an investment fund set up by Fridman and his business partner, German Khan, created to invest \$14 billion after selling their stakes in the Russian oil producer TNK-BP to Rosneft.

## Russia and Ukraine Reach Gas Deal

During talks held in Milan between Russia, Ukraine and the EU, a deal on Russian natural gas exports to Ukraine was reached. The parties agreed on fixing a price of \$385 per 1,000 cubic meters until 31 March, 2015. The two parties did not agree yet on the supplied amounts however. Russia's Gazprom and Ukraine's Naftogaz have disagreed on the prices and debts payment which resulted in Gazprom halting the Ukrainian supply in mid June. German Chancellor Angela Merkel expressed optimism as the gas deal was reached, even though further details are still to be agreed upon. The parties did not reach any political agreement regarding

the Crimean crisis.



## Oil Price Fall to Benchmark Four Year Low

By the third week in October, Brent crude slipped below \$83 a barrel. Oil prices are down more than 25% since June. The low prices are already below the break-even threshold for a number of oil exporters, including Bahrain, Oman, Saudi Arabia, Nigeria, Russia and Venezuela, according to Deutsche Bank. Energy economists have slashed their forecasts of world oil demand growth for next year as the global economic outlook weakens. OPEC has a

biannual meeting on 27 November, during which the countries might decide to cut output to support prices. However, Saudi Arabia, Kuwait and Iran have all indicated reluctance to change supply policy. Russian President Vladimir Putin said that the current low price of oil was not a tragedy for Russia's budget, which is highly dependent on energy revenues, and that he believed it would see an upward correction.

## BP Restarts North Sea Gas Field

BP will restart the Rhum gas field in the UK North Sea, half-owned by Iran's National Oil Company, four years after the field was shut down due to Western sanctions, a BP spokesman said, according to Reuters. Production from the field, which supplied 4% to 5% of Britain's demand before

its shut-down, is expected to begin this weekend. BP received approval from the British government to resume production after the government put the field under a temporary management scheme whereby all revenue due to Tehran will be held until sanctions are lifted, the spokesman said.

## Total's CEO Dies in Plane Crash in Moscow

French Total SA CEO Christophe de Margerie was killed in an airplane accident at Moscow's Vnukovo airport on 21 October. "The plane crashed when it collided with a snow-clearing machine. Three crew members and a passenger died. I can confirm that the passenger was Total's head de Margerie," said Moscow's Vnukovo airport spokeswoman Elena Krylova. De Margerie was the plane's only passenger. Three crew members died in the crash as well. Russian Pres-

ident Vladimir Putin has expressed his condolences over the Total CEO's death. TASS cited his spokesman as saying that "Vladimir Putin has long known de Margerie and had a close working relationship with him." "I am shocked at the news," the Russian leader conveyed to French President Francois Hollande, "When we lost Christophe de Margerie, we lost a real friend to our nation, and we shall hold his memory very dear."

## Madagascar to Launch Licensing Bid After New Petroleum Law

Madagascar plans to issue licenses for three on-shore and up to 50 off-shore exploration blocks next year once parliament approves a new petroleum law, a senior energy ministry official said according to Reuters. The country has struggled to court oil and mining giants since a coup in 2009, which also prompted international donors to cut off ties. "The new petroleum code will be submitted to parliament at the end of this year, or for its next ordinary session in May 2015," Pascal Velonarivo, Director General of Hy-

drocarbons at the Ministry of Hydrocarbons, Madagascar, said at an east African oil and gas conference in the Kenyan capital, Nairobi. Velonarivo later told reporters the offshore blocks to be offered for licensing will number 30 to 50, with another three onshore blocks to be auctioned. Madagascar has a total 249 exploration blocks, of which 24 have so far been licensed to exploration companies. Among the companies that hold licenses in Madagascar are Exxon Mobil, Tullow Oil, Madagascar Oil and Afren.

## Islamic State Crude Sales Estimated at \$2 Million/Day

U.S. led airstrikes against the Islamic State did not have much of an effect against the group's oil exports in Syria. While the raids by U.S. and Arab forces have targeted some small make-shift oil refineries run by locals in eastern areas controlled by Islamic State, they have avoided the wells the group controls, Reuters reported. "They are in fact still selling the oil and even stepping up exploitation of new wells by tribal allies and taking advantage of the inability of the enemy to hit the oil fields," said Abdullah Al-Jadaan, a tribal elder in Shuhail, a town in

Syria's oil-producing Deir Al-Zor province. Oil experts valued the Islamic State's crude sales at about \$2 million per day. The United States threatened to impose sanctions on anyone buying oil from Islamic State militants in an effort to disrupt the funding source. "Our options are limited unless you hit the wells - but it does not just hit Islamic State, it hits the entire population and that is not something that the U.S. can do very easily," said Andrew Tabler, a Senior Fellow at the U.S. based Washington Institute, who focuses on Syria.

## Fenosa Wins Natural Gas Distribution Contract in Mexico

Spain's Fenosa was awarded a contract to distribute natural gas in an area of north-western Mexico with a potential market of 500,000 customers by Mexico's Energy Regulatory Commission according to the Latin American Herald Tribune. Fenosa said in a statement it plans to invest 11.5 million Euros (\$14.5 million) over the next five years to expand its distribution network to cover seven additional municipalities of the

north-western states of Sonora and Sinaloa. The energy company will build the distribution system and also be responsible for receiving, transporting and delivering natural gas via 500 kilometers of pipelines. The Spanish company is Mexico's leading gas distributor and has been operating in the country for 15 years.

## BP Awards Two Indonesian Consortiums \$12 Billion FEED Contracts

BP announced in a statement that it had awarded two Indonesian consortiums the onshore front-end engineering and design (FEED) contracts for the \$12 billion Tangguh LNG expansion project. The project expansion is expected to add 3.8 million tonnes per year liquefaction capacity to Tangguh, bringing capacity to 11.4 million tonnes per year, BP said. BP and its partners in the project also signed a sales and purchase agreement with Indonesia's state-owned electricity company to supply up to 1.5 million tonnes of LNG per year from 2015 to 2033. A consortium including Tripatra Engineers and constructors, Tripatra Engineering, Chiyoda International Indonesia, Saipem Indonesia, Suluh Ardhi Engineering and Chiyoda Corporation Consortium was one of the two awarded the FEED contracts, while the second is made up of Rekayasa Industri, JGC Corporation, KBR Indonesia and JGC Indonesia Consortium, ac-

cording to the statement. The onshore FEED is planned for 12 months covering the new LNG train, LNG jetty and associated infrastructure.



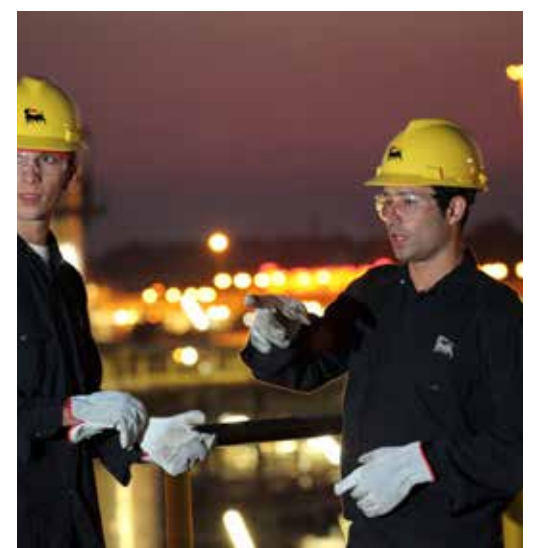
## India to Increase Oil Output

Chairman D.K. Sarraf announced that India's Oil and Gas Corporation wants to take advantage of internationally falling oil prices to increase its output to the equivalent of 400,000 barrels per day by 2018. This would more than double the current output, which was reported to Reuters. In a phone interview, Sarraf was quoted as saying, "For meeting the 2018 short-term target we would like to aggressively go for producing as-

sets because you can't acquire an exploration block and then make it produce in such a short time." The government of India is preparing to float a \$ 3 Billion stake in ONGC and wants state firms to secure assets abroad to reduce the exposure of the economy to supply risks. India is the world's fourth-biggest oil consumer, importing four-fifths of its needs as its own output is shrinking.

## Eni Discovers Gas in Indonesia and ExxonMobil and Petrom Drill New Well in Romania

Eni announced it made a significant gas discovery in the Merakes exploration prospect offshore Indonesia, reported Reuters. The company estimated the Merakes gas reserves at 1.3 trillion cubic feet, with further upside to be assessed via a delineation campaign. Eni was fully awarded the East Sepinggan Block in 2012; Merakes is the first exploration well to be drilled in the block. Meanwhile, Reuters also reported that Romania's Petrom and ExxonMobil have begun drilling a third deepwater well in the Black Sea Romania. The Pelican South-1 well is located 155 kilometres offshore in the Romanian sector of the Black Sea, in the Neptun Block which Petrom and Exxon jointly hold. "The Pelican South-1 well will test a new geological structure on the Neptun Block," Petrom said in a statement.





Need a solution that will take you  
to oil faster? **Accelerate**



**Introducing the DecisionSpace® Desktop unified workspace**

Now your entire asset team can collaborate in real time using one unified workspace.

Accelerate analysis and interpretation by sharing a common subsurface framework.

Reduce cycle time and improve accuracy by examining more scenarios faster.

Improve your returns in the field and in the office with industry-leading science and unmatched usability. Learn more at [Halliburton.com/decisionspacedesktop](http://Halliburton.com/decisionspacedesktop).

Or contact your local representative at 202-759 1000.

High Science Simplified™

**HALLIBURTON** | Landmark Software  
& Services



## Saudi Shuts Down Khafji Over Environmental Concerns

Saudi Arabia halted production at the Saudi-Kuwaiti jointly run Khafji oil field due to environmental concerns, sources said according to Wall Street Journal. The field, located in the neutral zone between the two countries, was producing around 300,000 b/d before it was temporarily shut down. Field operation is expected to resume once it is compliant with emissions standards issued by the Saudi Presidency of Meteorology and Environment. Saudi Arabia and Kuwait are in dispute over expanding the offshore Khafji field after state-owned giant Saudi Aramco expressed concerns

that the expansion could affect the reservoir at the nearby Safaniyah field, which has a production capacity of around 1.5 million b/d. The Safaniyah field is located outside the neutral zone. Diplomatic and industry sources have told Reuters that Kuwait has been placing restrictions on the Saudi unit of U.S. oil major Chevron which operates another jointly run Neutral Zone field, Wafra, as a result of various disputes. A senior Kuwaiti official dismissed any political implications and said the Kuwaiti side was informed of the Khafji shutdown.

## Iran to Receive \$500 Million for Oil From India

Reuters reported that Iran has sought payment of \$500 million from India under an interim deal with six world powers that allows the OPEC nation to recover part of its overseas frozen oil revenues according to sources. "The process for the first installment of \$400 million has been initiated and the second installment of \$500 million will also be cleared next week," a source said to Reuters. The country's revenues are frozen as part of the efforts to curb its nuclear program. Iran and the United States, China, France, Germany, Britain and Russia agreed in July to extend a six-month interim accord until 24 November after they failed to meet a July deadline for reaching a long-term deal to end their nuclear dispute. In return for continuing action to curb its nuclear program, Iran during the four-month extension has been granted access to \$2.8 billion of its funds held in foreign banks, in addition to \$4.2 billion

paid between January and July. Tehran has already received \$1 billion from Japan under the interim deal, state news agency IRNA reported last month. "I think payment to Iran would be cleared by Friday or by Monday as the RBI (Reserve Bank of India) will have to notify the exchange rate and it also has to buy dollars for further payments," said one of the sources to Reuters.



## Iraq to Split Basra Crude Into Two Grades

Iraq's State Oil Marketing Organization (SOMO) has proposed splitting its Basra Light crude supply into two grades and has requested feedback from buyers in Asia, trade sources said to Reuters. Iraq, the second largest OPEC producer, plans to offer two grades of crude - light and heavy - for exports from its southern terminals, the sources said, citing an e-mail from SOMO. The heavier grade with an API gravity of 24-25 degrees will be loaded from its Single Point Mooring (SPM) terminals, while the light grade will have an API gravity of 29 degrees. SOMO will set monthly official selling prices for each grade. Iraq has been exporting heavy crude from its SPMs in southern Iraq, with an API gravity of 26-27 degrees, since the second quarter due to a rise in new

production from fields such as West Qurna operated by Lukoil. The Iraqi heavy crude is to be even heavier than the Saudi which has an API of 27 degrees.



## Iran's Exports Up in the First Half of the Fiscal Year

Iran's Fars News Agency reported that the Pars Special Economic Energy Zone had an increase of 85% in the export of gas condensate for the first half of this fiscal year, as compared to the last year. The country exported 9.233 million tons of gas condensates, an 85% rise in weight and a 80.57% increase in value. The total value of these exports is \$6.5 billion. The Pars field covers an area of 9,700 square km, 3,700 square km of which lie in Iran's territorial waters. The remaining 6,000 square km (the North

Dome) are in Qatar's territorial waters. The field is estimated to contain 14 trillion cubic meters of gas and 18 billion barrels of condensates. Oil Minister Bijam Namdar Zanganeh said that the country's gas exports have not been effected by U.S. penalties on Iranian and foreign companies for violating U.S.-imposed sanctions. The main destinations of the Iranian condensates were China, Iraq, the UAE, Afghanistan, and India.

## Saudi Crude Supply Drops in September

A source disclosed to Reuters that crude supplies from Saudi Arabia fell by some 328,000 barrels per day, to 9.36 million b/d in September, from 9.688 million b/d in August. Supply to the market -- both domestically and for exports -- may differ from production depending on the movement of barrels in and out of storage. The source did not give a reason for the September drop in crude supply; however, the kingdom typically burns less crude for power generation as the weather starts to cool, which may

free up more oil for export in the coming months, analysts say. Saudi oil use for power generation fell to 769,000 b/d in August, from 899,000 in July, according to official figures released in October. Saudi crude exports fell in August to 6.663 million b/d for the fourth month in a row to their lowest levels in three years, as the world's largest oil exporter fights for market share amid weak demand and ample supplies from rival producers.

## Unconventional News

### Russia Should Ease Unconventional Regulations: Natural Resources Minister

Russian Natural Resources Minister Sergei Donskoi said that his country should ease regulation to exploit unconventional oil deposits, including shale as conventional resources dwindle and Western sanctions limit access to foreign technologies and financing, reported Reuters. In a column in newspaper Vedomosti, Donskoi suggested skipping tenders for unconventional oil exploitation, and offering rights to develop such deposits based only on a request from a firm, with a bias towards smaller companies. Those firms should be obliged to start exploration no later than 4-5 years after the offer was accepted, with a possibility that the field would be transferred to another company if the firm failed to find appropriate technology, he said. Russia holds most of the world's shale oil, it extracts less than a million tonnes a year from unconventional sources, including heavy, tight and shale.

### China's Shale Output to Hit 6.5 BCM in 2015

According to Xinhua, China's shale gas output will likely hit 6.5 billion cubic meters next year, up from an estimated output between 1 billion and 1.5 billion cubic meters this year, Vice Director of the National Energy Administration Zhang Yuqing predicted. Shale gas production in the country has seen a major increase since the country started to survey and explore the energy source in 2009. The output surge has come with increasing use of natural gas in China. Government

data showed that domestic natural gas output hit 117.1 billion cubic meters in 2013, up 9.5% year to year. However, the production was short of demand. Total natural gas consumption stood at 167.5 billion cubic meters, up 10% year to year. China is currently importing 30% of its gas consumption. Shale gas is an important unconventional source of natural gas. So far the reserves being invested in for exploration have hit 130 billion cubic meters in the country, Zhang said.

### Study: Hydraulic Fracturing Caused 400 Earthquakes in Ohio

A new study on hydraulic fracturing has found a direct connection to some 400 micro-earthquakes in a town in Ohio. This is the second report on Utica shale this year. The town is one of very few where the quakes took place on a fault. The new study, published in the journal Seismological Research Letters, focuses on the eastern town of Canton, Harrison County, and three particular wells. It has found that the three wells operated in September-October 2013 in the Utica Shale caused 10 quakes of magnitude 1.7-2.2, among others. But the case of Harrison County is one of a very few where, according to seismologist and lead author Paul Friberg, the quakes happened on a fault line. Such incidents have occurred in the United

Kingdom, British Columbia in Canada and Poland Township, Ohio, according to LiveScience. An earlier study led to the shut-down of seven other wells in the Poland Township after fracking there led to two small quakes. Ohio Department of Natural Resources spokeswoman Bethany McCorkle told the AP that over the past year new seismic monitoring equipment has been installed in eastern Ohio in order to monitor for stronger quakes. It was found in another, unrelated study that just four wastewater wells in Oklahoma, where water is stored after fracking, are to blame for a massive number of earthquakes this year all taking place within a 30km radius.

### Argentina Drafts New Energy Bill to Tap Into Shale Reserves

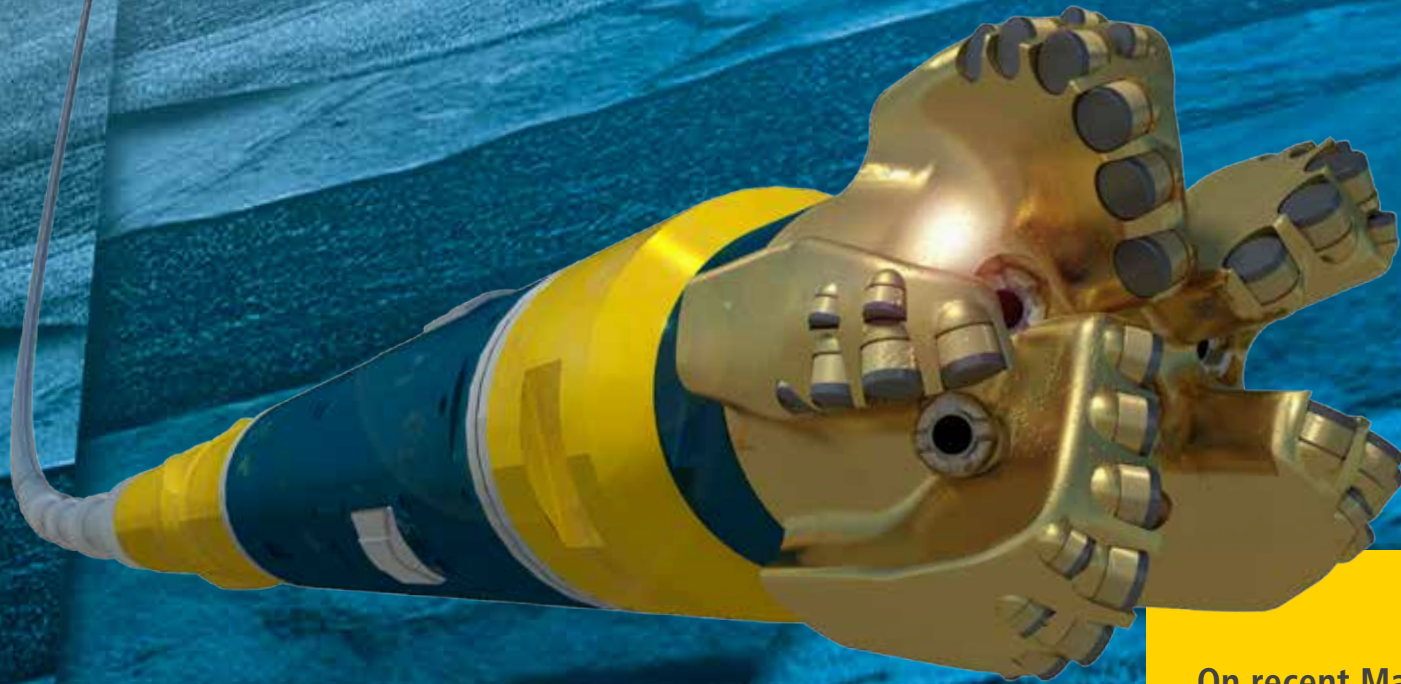


A bill was cleared by Argentina's Congress to lure in investors for the development of its shale potentials. Argentina's federal government said it had reached a deal with provinces on reforms to overhaul energy regulations and improve incentives to lure the foreign investors needed to develop its vast shale oil and gas reserves according to Reuters. Industry experts say it will cost hundreds of billions of dollars to exploit the world's second largest shale gas resources and fourth largest shale oil resources - financing that officials say is beyond the reach of state-controlled energy firm YPF and regional governments. "We have one

of the most important underground reserves in the world and we have to exploit it," said Francisco Perez, governor of oil-producing Mendoza province. "Neither Argentina nor YPF nor the provinces can raise that kind of debt capacity so we have to find strategic partners. A senior energy official said the negotiations, including haggling over royalties, had resulted in a "good draft." The federal government wants the new law in place before 2015 when a number of concessions held by YPF expire, he explained. The bill is expected to be passed into law no later than November.



# \$58,000,000 and 755 days of rig time saved in unconventional plays



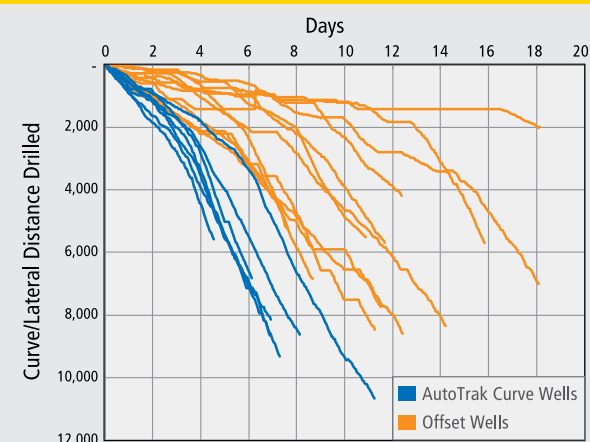
On recent Marcellus shale wells, the AutoTrak Curve system outpaced the field's average drilling time by six days.

## The AutoTrak™ Curve system drills 3 million feet in 22 months... and keeps on drilling.

Save time and money on unconventional wells by safely and efficiently kicking off from vertical and drilling a high buildup curve and the lateral section in one smooth, fast run.

Maximize ultimate reserve recovery by exposing more of the reservoir with a rotary steerable system with a build-rate of 15°/100 ft (30.48 m). Three-pad steering capabilities keep the well in the target payzone and deliver a smooth, high-quality wellbore.

*Advancing Reservoir Performance*



[bakerhughes.com/autotrakcurve](http://bakerhughes.com/autotrakcurve)





## Saudi Contracts SEPCO for Pipeline Extension Project

Reuters reported that the Saudi Aramco has contracted China's Shandong Electric Power Construction Corp (SEPCO) for a project to help expand the capacity of the main gas pipeline across Saudi Arabia, which dates back to the 1970s, in order to improve energy supply to industries in the west of the country. Under the contract, the first phase of an expansion of the master gas system (MGS), China's Shandong Electric Power Construction Corp (SEPCO) will in-

stall two booster gas compressor stations, Aramco's weekly magazine Arabian Sun reported. Aramco did not give the contract's value. Two industry sources estimated it at less than \$1 billion to around \$1.3 billion. The capacity of MGS will rise to 9.6 billion cf/d from 8.4 billion upon completion of the work. Aramco said capacity will further increase to 12.5 billion cf/d by 2018 under a second phase, for which engineering design work is due to be complete next year.

## Exports Resume Through Yemen's Marib Pipeline



Yemen's Marib pipeline was attacked once again by tribesmen on 24 October, halting flows. Exports resumed again through the pipeline one day later, reported Reuters. Yemen's oil and gas pipelines have been repeatedly sabotaged, often by tribesmen who have feuds with the central government, causing fuel shortages and slashing export earnings for the impoverished

country. Tribesmen blew up the pipeline which transports crude from Marib oil fields in central Yemen to Ras Isa on the Red Sea. Yemen has said that oil flows through the Marib pipeline, one of its main petroleum export routes, at a rate of around 70,000 b/d. Before the spate of attacks began three years ago, the 435 km pipeline carried around 110,000 b/d to Ras Isa.

## Sonatrach to Invest \$3.48 Billion in Gas Pipelines

State-owned Algerian energy firm Sonatrach has announced that the company will invest \$3.48 billion for the construction of gas pipelines in Algeria, reported Algerie Presse Service. Saïd Sahnoun, interim CEO of Sonatrach, said in a statement he delivered at the opening of the international conference of gas industry in Algeria that this investment falls as part of the five-year plan 2015-2019, recalling the existence of four main gas pipelines near the deposits: the basins of Berkine, Illizi, Reggane and Timimoun. The gas pipelines have been built to carry about 20 billion cubic meters per year. "Another gas pipeline is under construction and will be brought into service in July 2016," he added. Yousef Al-Yousefi, energy minister of Algeria, said, "With the help of Sonatrach, the country

expects to produce about 40% more natural gas within the next five year." "Some 50 platforms and four et fracturing units are needed on a total of 20 wells," Sahnoun said while adding that overall, 3,960 wells are to be dig.



## TAP Tenders Largest EPC Onshore Contract

Trans Adriatic Pipeline (TAP) has issued the first major tender for the engineering, procurement and construction (EPC) contract of the 760 km onshore section of its 870 km long pipeline, reported Pipelines International. The pipeline is to connect to the Trans Anatolian Pipeline (TANAP) near the Turkish-Greek border through Greece, Albania and the Adriatic Sea, before coming ashore in southern Italy. Construction is expected to begin in 2016 and is to be split into five sections – three spreads in Greece and two spreads in Albania. The pipeline's diameter is 48 inches in Greece and Albania, and its highest elevation will be 1,800 meters in Albania. TAP Procurement Director Knut Steinar Kvindesland said "The contract for the construction of the onshore section of the TAP pipeline is the largest that TAP is planning to award. The selection of the bidders who have

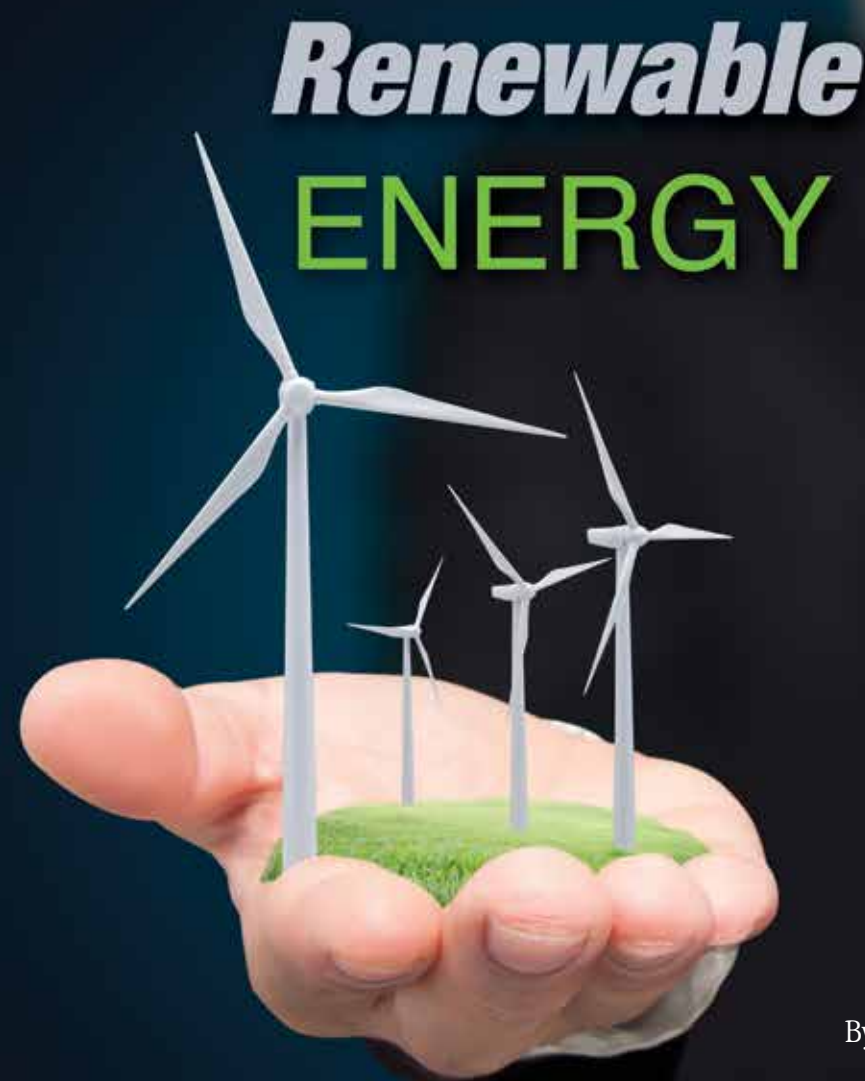
been invited to tender has followed a rigorous pre-qualification process. The bidders' ability to meet TAP's high standards on health, safety and environment, and their ability to demonstrate a 'zero harm policy' have and will be key in selecting bidders."



## Egypt Continues Solar and Renewables Surge

New and renewable energy company Onera Systems has successfully installed solar panels at the Egyptian Petrochemicals Holding Company (EPCHEM) and Middle East Oil and Tankage and Pipelines (MIDTAP) with a total capacity of 51 MW per year according to the Daily News Egypt. The panels have been connected to the national grid. Wael Nashar, Onera Systems chairman, said his company is seeking to proceed with the government's plan to construct 1,000 solar power stations above the roofs of its institutions. He added that the installed products guarantee the stations will function for about 25 years. According to Muharram Hilal - Chairman of the 10th of Ramadan Investors Association, the government will soon announce a solar plant project that will be jointly financed with South Korea and Saudi Arabia. He further told Amwal Al Ghad that the country is still in talks with the Saudi and Korean investors over the possibility of establishing the solar plant in the New Valley governorate. The project needs an area of 2000 feddans, Hilal noted. Furthermore, the official referred that Egypt plans to finalise 20% of the solar plant project within one year and a half, at a

cost of \$1.5 billion. In September, the Ministry of Electricity announced new pricing for electricity generated by new and renewable energy sources for households and private sector companies. The energy tariff has been divided into five categories so the price per kw for households is EGP 0.84, but for 200 kw of usage, the price rises to EGP 0.911. The third category, between 200 and 500 kW, will be charged at EGP 0.973, while the fourth, ranging from 500 kW to 20 MW, will be charged EGP 0.973 per kW per hour. The last category, which stretches between 20-50 MW, will be charged EGP 1.02 per kW per hour. Meanwhile, Egypt's leading investment bank EFG Hermes announced that it has signed \$208 million deal to acquire a 49% stake in wind energy company EDPR France which has a combined gross capacity of 334 MW. "Our first investment beyond the borders of the Middle East and Africa is a natural outgrowth of our emphasis on infrastructure private equity and, moreover, marks the launch of our direct investment strategy," said EFG Hermes Co-Chief Executive Officer Karim Awad.



By EOG





# MOC 2014

7<sup>th</sup> Mediterranean Offshore Conference & Exhibition

## Unlocking the Potentials of Mediterranean Oil & Gas

**Alexandria, Egypt**

BACC - Bibliotheca Alexandrina Conference Center

**9<sup>th</sup> - 11<sup>th</sup> December 2014**

Under the High Patronage of:



**Egyptian Ministry of Petroleum**



Egyptian General  
Petroleum Corporation



Egyptian Natural Gas  
Holding Company



Ganoub El Wadi Petroleum  
Holding Company



Egyptian Holding Company  
for Petrochemicals

Display your products and services  
at the largest oil & gas exhibition of  
the Southern Mediterranean!



**Register now on**  
**[www.moc-egypt.com](http://www.moc-egypt.com)**

CONFERENCE ORGANIZER



EGYPTIAN ORGANIZING COMMITTEE  
[conference@moc-egypt.com](mailto:conference@moc-egypt.com)

EXHIBITION ORGANIZER



IES INTERNATIONAL EXHIBITION SERVICES  
[exhibition@moc-egypt.com](mailto:exhibition@moc-egypt.com)





# Russia, Ukraine, the EU and Gas: Will it Ever End?

Russia and Ukraine have a long history of disputes revolving around natural gas since Ukraine's independence in 1992. In the last ten years the world witnessed three fallouts. The most recent of these came with a political background that proved neither simple, nor easily resolved. The current economic sanctions on Russia, which were imposed as a reaction to the political turmoil in Ukraine, affected the gas industry in numerous ways. While Russia is conquering new markets in China, Europe is feverishly diversifying its energy market.

By Passante Adel

## History of Russian-Ukrainian Gas Tensions: The 2005-2006 Dispute

Gas related problems started reaching new levels of tension between Russia and Ukraine for the first time in 2005. Political tensions started earlier as Ukraine elected pro-western Viktor Yushchenko, who won the presidential elections in 2004 after sparking the Orange Revolution as a result of election fraud allegations against his opponent Viktor Yanukovich.

In the second quarter of 2005, Russia's national gas supplier Gazprom informed the Ukrainian Naftogaz that it was increasing the gas price to market levels of \$230 per 1,000 cubic meters from the earlier \$160 per 1,000 cubic meters, and Naftogaz was not willing to meet the asking price. Long months of negotiations stretched until the last weeks of the year but did not result in any agreement. Gazprom, during the negotiations, was willing to lower the asking price if Ukraine agreed to allow Gazprom equity stakes in the transit pipeline network crossing its territory, according to Oxford Institute of Energy Studies Director of Gas Research, Jonathan Stern. Russia also offered Ukraine a loan to cover the prices hike, an offer the Ukrainian president refused. European Union countries fearing supply cuts were urging for the crisis to be solved.

### Russia Cuts Off Ukraine

After the failure of talks between the two companies, and with Gazprom refusing the Russian president's call for gas prices to be frozen until January 10, 2006, on the first of the year, Gazprom cut its gas supplies to Ukraine. "There is information that Ukraine has begun siphoning off Russian gas that is designated for European users," Gazprom spokesman Sergei Kuprianov was quoted saying a few hours after the Ukrainian supply was cut. The Ukrainian Prime Minister Yulia Tymoshenko, denied Gazprom's allegations of tapping into the EU's gas supply going from Russia through Ukraine, and accused Gazprom of cutting off European supply. Gazprom denied this. At the time, Gazprom was supplying 22 EU countries with gas, 80% going through Ukraine. Russian gas accounted for 40% of all EU gas imports and 28% of the year's demand.

Poland and Hungary were the first EU states to have their supply disrupted. In the first days of 2006 France reported a 25% - 30% drop, while

Italian supplies dropped by 24%. Austria, Romania, and Slovakia reported a drop in Russian gas supplies of about a third according to the BBC, with Hungarian energy ministry spokesman confirming to Reuters that his country had seen a sharp 40% fall in supplies and the Polish PGNiG reported shortfalls too. Gazprom reacted by announcing the pumping of an extra 95 million cubic meters (mcm) a day to cover the EU gas that Ukraine was allegedly tapping. By January 3, EU countries were no longer reporting decreases in supply.

### Crisis Ends

Gazprom and Naftogaz announced the signing of a five-year agreement on January 4. The gas prices were fixed for only six months, leaving the issue unsolved. The so-called "middle-man" RosUkr-Energo, a Swiss registered company half-owned by Gazprom was now responsible for importing Russian gas to Ukraine and levering the gas prices through other imports. The agreement was reached between Russia's Prime Minister Vladimir Putin and his Ukrainian counterpart Yulia Tymoshenko, and Russia started pumping gas to Ukraine once again.

### The European Union's Position

Following the crisis, the EU Energy Commissioner, Andris Piebalgs said Europe needs a more "cohesive policy on security of energy supply." Austrian Energy Minister Martin Bartenstein said, "We have to think about energy supply security in general, gas supply security... and we have to learn the lessons," but he also stated that Russian gas would remain the backbone of the European energy supply mix.

A report issued by the EU Energy Commissioner in 2009 stated that Russia had provided 32.6% of the EU's imports in 2007, which amounted to 82% of the consumption, while Norway provided 14.8%, and Libya and Saudi followed with 9.8% and 6.9% respectively. It also put the EU's imports of natural gas at 61% of the consumption, of which 38.7% was supplied by Russia, followed by Norway at 25.3%, and Algeria, where gas exports were showing promises after the Hydrocarbon Act of 2005, with 16%. After the crisis, the EU remained one of the major importers of Russian gas.

Post 2006 Russian-Ukrainian Gas relationship  
In 2007, Russian gas import prices were set at

\$130 per 1,000 cubic meters for Ukraine and transit tariffs were set at \$1.60 per 1,000 cubic meters per hundred kilometers. In late 2007 however, Ukraine imported Russian gas for \$179.50 per 1,000 cubic meters and the tariff for transfer went up to \$1.70 per 1,000 cubic meters per hundred kilometers. The price agreement was reached with the government of Ukrainian President Viktor Yushchenko. In February 2008, Presidents Putin and Yushchenko agreed that a joint trader owned by Naftogaz and Gazprom would replace RosUkrEnergo as of 2009, Naftogaz would be the sole importer of central Asian gas, and for Gazprom's fully owned wholesaler to be licensed work on the Ukrainian market.

### The 2009 Dispute - Ukraine Cut off Again

As disputes and disagreements regarding gas and transit prices went through 2008, Putin and Ukrainian Prime Minister Tymoshenko agreed on further details regarding the February agreement in a memorandum signed by both in October of the same year. The memorandum stated that Naftogaz is to buy gas directly from Gazprom. The two companies then signed a contract with Naftogaz being the sole Ukrainian importer of Russian gas.

Though the contract did not fix a price for the imports, it was agreed between both parties to fix the 2008 price of \$179.5 per 1,000 cubic meters until the end of the same year.

The dispute between the two parties went on about debts nonetheless. By the last week of December Gazprom threatened to cut off supplies to Ukraine unless Naftogaz paid \$1.67 billion debt for gas supplies and \$450 million in fines.

On the first day of 2009, Gazprom cut off their supply to Ukraine for the second time after the 2006 disruption. Gazprom's Chief Executive Alexei Miller said, "The debt to Gazprom for gas supplied earlier was not paid. Despite verbal statements from Kiev, Gazprom did not see any money in its account."

On January 3, the BBC reported that Romania, Hungary, Poland and Bulgaria reported a drop in their pipeline pressure.

On January 5, after meetings between Putin and Gazprom's Alexei Miller, Gazprom announced the halting of nearly all its exports to Europe. Miller announced the supplies to be cut by 65.3 million

cubic meters (mcm), an amount Ukraine is allegedly "siphoning". Ukraine denied the accusations. Disagreements were then sparked between the two countries regarding technical (fuel) gas.

It became clear that the companies did not only disagree on debts but also on the pricing of gas in 2009 and on transit tariffs and terms for European gas.

### The EU Intervenes

As the gas row entered its next phase and EU supplies halted, talks between Czech Prime Minister Mirek Topolánek, German Chancellor Angela Merkel and Putin resulted in a monitoring agreement. A declaration issued on January 8 by the Czech presidency of the EU urged Russia and Ukraine to fulfill their obligations as supplier and transit country, and called for independent monitoring of the pipelines.

Soon after, an agreement was drafted and signed by Putin, then by Tymoshenko. Although international monitors from European gas companies, EU officials, and experts from Gazprom and Ukraine were deployed on January 12, there was nothing for them to monitor, as gas was not pumped through Ukraine again. The Telegraph reported that Gazprom had indeed started gas pumping, but Naftogaz had blocked the transit as a result of unacceptable transit terms.

### Gas Flow Resumes

On January 18, Putin and Tymoshenko reached an agreement following bilateral talks held after the summit Putin called for in Moscow. The agreement stated that Ukraine would pay 80% of the European gas price in 2009 of about \$360, increasing to a full 100% in 2010. Transit fees were fixed at their 2008 tariff of \$1.70 per 1,000 cubic meters per hundred kilometers for 2009, increasing to \$2.60 per 1,000 cubic meters per hundred kilometers in 2010. The deal also stated that gas sales between Gazprom and Naftogaz would now be done directly, thus eliminating RosUkrEnergo.

On January 20, gas supplies were resumed to Ukraine. In 2011, Tymoshenko was found guilty for profiting from her position during the signing of this agreement and was sentenced to 7 years in jail.

Crisis Effects on EU Countries: The EU Diversification





# STEPPING UP RESERVE GROWTH

Bringing new technology to the exploration and development of petroleum in Egypt, TransGlobe Energy is achieving many successful “first times”. Learn more of our production and reserve growth at [www.trans-globe.com](http://www.trans-globe.com)





During the period of the 20-day crisis, several EU countries reported shortfalls in their supplies during the hard winter. Most European countries however coped with the decreased amounts by increasing imports through other transit lines or by tapping into their own storages. Several countries could not cope with the shortfall in supplies including Bulgaria, Romania, Slovakia, Moldova, and Serbia. European countries resolved to reverse gas flow—flowing the gas in the opposite direction than the usual transit; however, difficulties in transit or the lack of a sufficient storage facility made it a tough task to provide territories with the gas needed.

Supply disruption affected 18 countries; the crisis was referred to by the IEA as the “worst gas crisis in IEA history”.

The need to find alternatives to the Russian gas supply became obvious to Europe during the crisis. “I think it became clear, and there is agreement on this, that of course there must continue to be energy supplies from Russia but that on the other hand, other regions are needed to ensure security of (European) energy supplies,” German EU Minister Guenter Glosier said.

According to a report by the IEA, the gas demand in Europe decreased by 8.2% from 2010 to 2011 to 521 billion cubic meters (bcm), while demand was reduced by a further 1.6% in the 2012 estimates of 513 bcm. The decline was attributed to several reasons: a milder winter, and the stagnant economic condition and gas-pricing environment. With the European gas-to-coal switch and Europe’s increasing reliance on renewables, the gas demand decline did not come as a surprise. EU countries like Belgium, France, Italy, Spain, and Portugal started to rely more on liquefied natural gas (LNG) imports from countries including Algeria, Norway, and Egypt. Several countries in Europe turned to shale gas an alternative to natural gas; Poland started fracking in 2009 and was estimated to hold Europe’s largest recoverable shale reserves of 146 Tcf (trillion cubic feet) according to a report by the Energy Information Administration. In the same year, Ukraine signed with ExxonMobil for exploration of its 128 Tcf recoverable shale resources. The UK followed suit in 2010 and started fracking for its 26 Tcf.

However, in 2013 the EU was still receiving 30% of its gas imports from Russia, half of which were pumped through Ukraine.

## The Recent Gas Dispute: Political Background

By the end of 2013, protesters took to the streets in Kiev as President Viktor Yanukovich postponed the signing of an association agreement with the EU. The Ukrainian president instead signed a cooperation agreement with President Putin in December for the buying of Ukrainian bonds and Russia reducing Ukraine’s gas price by a third. The agreement sparked more anger on the Ukrainian streets with clashes between pro-EU and pro-Russia protesters.

Kiev politicians voted to overthrow Yanukovich, Tymoshenko was freed from jail, and presidential elections were scheduled for May 25. In March, Crimea held a referendum for its separation from Kiev, the UN Security Council members condemned the move. An asset freeze and visa bans were imposed by the US and EU. As Crimea voted 95% in support of the union with Russia, the Kremlin is not affected, as Putin signs a bill formally annexing the peninsula.

Russian troops deployed to the Ukrainian border claiming to protect ethnic Russians, while Ukrainian troops tried to regain control of the eastern cities. Late in March, the UN declared the annexation illegal while the US expanded the sanctions to include several individuals in Putin’s inner circle. A few days later on April 1, NATO announced suspending all practical civilian and military cooperation with Russia.

As EU countries threatened to up the sanctions against Russia, fighting went on in Ukraine’s Eastern cities and the Ukrainian armed forces continued to fight against the separatist rebels. On May 25, Petro Poroshenko won the presidential election in Ukraine. On June 27, he signed the EU association agreement after 8 months of it being abandoned by his precursor.

## Third Time’s a Charm

In April, talks between Gazprom and Naftogaz were ongoing regarding Ukrainian debts. On May 12, Gazprom gave Ukraine until June 9 to pay about \$1.695 billion of the \$4.5 billion in debts owed by Naftogaz.

On June 16, Gazprom announced in a statement the halting of gas supplies to Ukraine. “Today, from 10:00 Moscow time [06:00 GMT], Gazprom, according to the existing contract, moved Naftogaz to prepayment for gas supplies. From today, the Ukrainian company will receive Russian natural gas only in the amounts it has paid for.” Gazprom also raised the price for the Russian gas from \$285.5 to \$485.5 per 1,000 cubic meters.

Gazprom and Naftogaz both filed lawsuits in the International Council Commercial Arbitration in Stockholm on the same day. Gazprom said it wanted to recover \$4.5 billion from Naftogaz, while Naftogaz said it was seeking to recover about \$6 billion in “overpayment” for gas since 2010, the lawsuits were later joined by the court at the end of July. Transit through Ukraine to the EU remained at the same level of 185 mcm per day, 15% of Europe’s gas supply from Russia. Ukraine started receiving gas through reverse flow from several European countries and via Slovakia – which started in September.

The EU Commission kept urging for talks between the two conflicted parties. They supported reverse supplies from EU countries to Ukraine, with the country relying on it to fill up its storage facilities for the winter. As Gazprom and Naftogaz fail to reach any agreements, the EU’s concern for the transit gas grew and both Ukraine and Russia assured stable transit volumes.

In the second half of August, Gazprom made a \$10 million payment to Naftogaz for transit gas, later they offered to decrease the asking price for the gas by \$100 – a price Ukraine did not accept. Meanwhile, Rosneft President Igor Sechin said in an interview with Der Spiegel that his company had estimated damages done to its oil refinery in Lisichansk, Ukraine’s Lugansk region, by the Ukrainian Army’s at \$140 million and said Rosneft planned to launch talks with the Ukrainian government regarding damage reimbursement.

In September, Ukraine’s pipeline operator announces that the country has increased its storage of gas to 16 bcm. EU Energy Commissioner Gunther Oettinger arranged for a talk between the parties, which eventually were scheduled for October 21.

As the crisis continued into October, Ukraine struggled to ensure its gas supply and storage, the EU continued its efforts to resolve the situation, and Russia continued vigorous negotiations.

## The Sanctions

As the crisis in Crimea continued, several countries led by the US and EU imposed sanctions on Russia over three stages. The first came in the first quarter of 2014 with the NATO suspending military and civilian cooperation with Russia. Travel bans and asset freezes were imposed on Russian and pro-Kremlin individuals for undermining Ukrainian sovereignty by the EU. Russia reacted by banning 10 US officials visas, including House of Representatives Speaker John Boehner and Senator John McCain.

By late April, the US imposed new sanctions against seven Russian politicians and businessmen, including Putin’s long-time ally Igor Sechin, and 17 companies. The EU implemented sanc-

tions imposed by the UN and imposed an arms embargo, travel bans and asset freezes on further individuals and businesses.

The sanctions escalated with more imposed by Australia, Japan, and Canada, and further sanctions imposed by the EU and US including barring American companies from using certain technologies to exploit oil in shale, deep sea, and arctic fields. On August 4, Russia imposed bans on agricultural produce, foods and raw materials from countries that have earlier sanctioned Russia.

On September 12, the EU announced sanctions targeting Russia’s state finances, energy and arms sectors. Rosneft, Transneft and Gazprom Neft, the oil unit of Gazprom were targeted. Gas, space technology, and nuclear energy were excluded nevertheless.

As the threat of the sanctions loomed over Russia’s privately owned companies, Lukoil sold several gas station networks in Slovakia, Hungary and Czech Republic in August. Earlier the same month, the company sold 240 stations in Western Ukraine. Analysts saw the move as a preemptive measure against the EU and US sanctions. Lukoil President Vagit Alekperov said, “The sanctions are related to the country, we are a Russian company. This will impact us, just like everyone else.”

The Russian government reacted by commencing a long-awaited deal with China, opening an alternative (prospective) gas market in Asia. The deal was initially signed between Gazprom and CNPC in May – after years of negotiations – to supply China with 38 bcm of natural gas per year over a period of 30 years through the “Power of Siberia” pipeline.

## Pipeline Alternatives

Russia and Europe both pushed for pipeline projects in the light of the 2006 and 2009 disputes with Ukraine, and the disruptions of European gas. Nord Stream pipeline, which was proposed years earlier to transfer gas from Vyborg in Russia to Greifswald in Germany under the Baltic sea, was welcomed by Germany as it would save transit fees and eliminate the security concerns rising from the Ukraine transit route. “The Nord Stream project must be an important part of that diversification of energy sources,” said German Europe Minister Guenter Glosier. Nord Stream’s first line was inaugurated in November 2011, while its second line was inaugurated in October 2012.

To connect Nord Stream to the existing grid in Central and Western Europe, two pipeline extensions were constructed, OPAL and NEL pipelines in Germany. OPAL was completed in 2011 and connected to Nord Stream the same year, while NEL started complete commercial operations in November 2013.

In 2011, The EU commission approved the North-South Gas Corridor project connecting the LNG terminal in Poland’s northwest city of Swinoujscie with the Baltic Pipe, through central Poland, the Czech Republic, Slovakia, and Hungary with the proposed Adria LNG terminal in Croatia. It is seen as an effort to create a gas hub in Poland to ease the dependence of Central and Eastern Europe on Russian gas and to enhance security of supply to the EU. “The north-south corridor, currently under construction, could be an interesting alternative, particularly for the southern countries, as it will make it easier for them to access non-Russian gas,” Tomasz Chmal, an analyst at Poland’s Sobieski Institute, said. “We will build parts of the north-south gas corridor in such a way to make it ready in the years 2018-2019,” Jan Chadam, CEO of pipeline operator Gaz-system said. “They will allow for high flexibility, adjusting the direction of flows to the geopolitical conditions and prices.”

Meanwhile, Germany’s RWE urged for the need of the Nabucco pipeline, carrying gas from Turkey to Austria through Bulgaria, Romania and Hungary. RWE’s CEO Ulrich Jobs said to Reuters, “The current incident shows all [Nabucco] partners and

transit countries how important the project is for Europe’s gas supply.” Nabucco was intended to diversify the EU’s supply of gas and decrease its reliance on Russia. Pipeline construction has not begun to date and the project is thought to be abandoned.

Another Euro-Russian pipeline project is the South Stream pipeline, proposed to carry Russian gas through the Black Sea to Bulgaria through Hungary, Serbia, and Slovenia further to Austria. Construction of Russian onshore facilities started in December 2012. The pipeline was seen to rival Nabucco, allegations which were dismissed by Gazprom officials and the EU. “In the worst case scenario, the two pipelines will be complementary,” Ferran Tarradellas, the European Commission spokesman on energy issues told the BBC. However, the EU has opposed the project, as it does not comply with the Third Energy Package. Russia did not see any basis to the claim, as the bilateral inter-governmental agreements with participant EU countries were signed before the energy legislation came into force. This October, the EU Energy Commissioner Gunther Oettinger stated that the EU no longer opposes the project but still does not see it as a priority. The pipeline was expected to start operation in 2016, now its fate remains unknown as the political and gas disputes between Russia and Europe intensify.

The newest addition to the pipeline saga is the “Power of Siberia” pipeline. The 4,000 kilometers pipeline is to carry natural gas from Eastern Siberia to the country’s Far East and buyers in China. Gazprom expects the pipeline to go on-stream in late 2017. The project was made possible when Russia signed a 30-year contract with China for natural gas supplies. Some analysis suggest that the project is a daring move by the Russian government towards opening a new gas market in Asia, especially considering the sanction and political turmoil with Europe.

The gas pipelines are playing a major role not only in Europe’s diversification efforts but also in Russia’s quest for new gas markets.

## Where Are We Now?

On October 15, the Russian and the Ukrainian presidents met in Milan to discuss the current situation in Crimea and the gas crisis. They announced a potential deal only two day after the beginning of the talks on October 17. “[We] reached an agreement,” Poroshenko said in an interview with Ukrainian TV channels. “Until March 31 we will fix the price at \$385.” Mr. Putin said they agreed on the Terms of the Russian gas supply until “at least the winter,” according to Reuters. However, he urged European countries to help Ukraine meet a debt for gas, which he said stood at \$4.5 billion.

The political side of the talks didn’t seem as productive though. Arguments about Ukraine’s sovereignty and Crimea remain heated and might be making way for more gas disputes. Although signing this deal (which EU officials expected during the last week of October in Brussels) would ensure the EU stable gas supplies during the winter, the likelihood of another disruption lingers, leaving the EU vulnerable.

Efforts are put into diversifying the EU supply and reducing reliance on Russia, Europe is eyeing LNG and gas imports from Mediterranean countries, US gas – which is considered to be effective only as a long-term solution– as well as coal, shale and renewables. Still, the IEA expects the EU to rely mostly on Russia for gas supplies until 2030. The coming period would prove crucial not only politically, but also for the gas supply and demand dynamics, shifting the current market in a new direction.



## WHEN SPECIALITY COUNTS ...



Fugro collects, processes and interprets data related to the earth's surface and the soils and rocks beneath and provides advice based on the results to clients in Local and Regional Oil & Gas market. Our range of services are:

- Drilling Hazard Site Surveys including 2D HR/ UHR Seismic Surveys
- Pre engineering Geophysical Pipeline Route Surveys (Also with ROV)
- Positioning and Rig Moves
- Geotechnical Surveys and Lab Testing
- Environmental Surveys and Lab Analysis
- LBL and Metrology Services
- AUV Surveys
- MetOcean Services (Weather Forecasting and Tide Measurements)

Visit us in Stand C-17



## ... COUNT ON FUGRO

Fugro SAE

Telephone : +20 (0) 2 2758 0299

Fax: +20 (0) 2 2758 0599

Email : [enquiries@fugro-egypt.net](mailto:enquiries@fugro-egypt.net)

[www.fugro.com](http://www.fugro.com)





# The Latest on Fracking

Hydraulic Fracturing, more commonly referred to as fracking, has now gone international. The USA has been fracking for decades, but now Egypt, South Africa, the United Kingdom, China and Mexico are exploring the previously difficult to recover gas and oil reserves.

By Virginia Crawford



Fracking can be neatly defined as “the process of drilling down into the earth before a high-pressure water mixture is directed at the rock to release the gas inside. Water, sand and chemicals are injected into the rock at high pressure which allows the gas to flow out to the head of the well.”

There are two aspects to the fracking debate, namely the political and the environmental. The Stanford News has reported how the debate is skewed as both need to be taken into account, but are often conflated.

## Geopolitics

The USA has long pursued a policy of energy independence because after the oil crisis of the early 70's, dependence on oil from the Middle East was seen to present certain risks. A discussion in Davos at the World Economic Forum in 2013 titled “Unconventional Gas and Oil – Changing the World's Energy Map” on the policy implications of the shale boom for the USA, underlines the importance of this issue.

Bill Richardson, former US Secretary of Energy compiled a report on Fracking and Oil Policy, which raised the following issues: if USA increased gas exports to Europe it would increase its political leverage. Energy exports from the USA to Asia, especially to Japan and South Korea would be seen as supporting allies. It costs the USA around \$200 billion protecting Middle Eastern and Persian sea-lanes. Reducing dependence on Middle East oil wouldn't mean withdrawal of support, but less dependence. The International Energy Agency in Paris reported that the USA exported more fuel than it imported for the first time in 25 years.

The turmoil in Ukraine as the TransAtlantic Trade and Investment negotiations take place in Europe, underlines the dangers of dependence on Russian gas. As much as fracked gas might not be ideal, dependence on Russian gas presents different risks.

## Environmental

France has banned fracking on environmental grounds, but relies on nuclear power, which raises other environmental issues. The most important factor is water use, both quantity and the threat of contamination of ground water and aquifers.

Michael Brune, the Executive Director of the Sierra Club, emphasizes that because reducing American dependence on Middle East oil and Russian gas are prime benefits of shale gas, other hazards of fracking are ignored. For example, “fracking enjoys exemptions from at least seven major national statutes, including the Clean Air Act, Clean Water Act and Safe Drinking Water Act. If fracking is so safe, why can't it be held to the same standards as everyone else?” Brune quoted figures of 17,000 violations nationally between 2007 and 2010. Downplaying the dangers means fracking will expand with little oversight. Evidence of groundwater contamination is accumulating, as are accounts of tap

water catching fire as shown in the documentary, Gasland, in 2010.

Despite this, Dr. Elizabeth Whelan from the American Council of Science and Health believes that there have been “zero confirmed” cases of groundwater contamination in 50 years. The importance of this controversy becomes clear when one considers the recent Stockholm International of Water Institute survey that shows that nearly half of shale gas reserves are in areas that are arid, and that 1.7 billion people live in areas where groundwater is under threat.

The perils of ignoring the risk are illustrated in California where in the past month a huge scandal has erupted after eleven wastewater injections sites were suspended in July, and subsequent tests showed extensive contamination of the aquifers that sustain Californian agriculture. This is at a time when the state is experiencing a serious drought.

Since most shale oil is in arid regions, World Resource Institute (WRI) estimates that 40% of technically recoverable gas reserves are in water short areas.

However, Paul Reig, lead author of the latest World Resources Institute report and the Stockholm International Water Institute (SIWI), do not advocate a ban on fracking, but rather a call to alert people that water management policy is crucial. Fracking might not be perfect, but “may provide a stepping-stone to cleaner energy.”

Ben Ratner of the Environmental Defense Fund, a USA-based non-profit organization, believes that establishing policy and using science to manage fracking natural gas are better options than out-right opposition. “We think natural gas can be an exit ramp from coal, but we have to do it right,” he told National Geographic.

Avner Vengosh, Professor of Geochemistry at Duke University, shares this view. The recent Stanford study Vengosh co-authored emphasizes “the importance of government policy on waste water management.”

## Innovations and Technology

National Geographic ran an article in March about the amazing new technologies that are being developed to make fracking more environmentally sound; waterless fracking, recycling water, and cameras that spot gas leaks and redesigned vents that reduce methane emissions. James Hill, Chief Executive of FracGas says, “using hydrocarbons to produce hydrocarbons is a cycle that is sustainable.” GasFrac, an Alberta based company is exploring waterless fracking. The technology replaces water with a gel made from propane – a naturally present hydrocarbon.

In Egypt, Shell and BAPETCO used foam instead of water for the first time to frack in the Western Desert.

In the USA, Apache and Shell have both made significant efforts to recycle water and to buy effluent water to use in the fracking process.

The other big move is to replace diesel powered drilling equipment with natural gas drilling equipment. Apache is the first company to have powered an entire fracking job with natural gas powered engines. Texas University's Professor Dave Burnett runs the Environmentally Friendly Drilling Systems Program and says, “Switching to natural gas is the innovation that is catching on most rapidly, because it provides a clear economic benefit.”

Halliburton has introduced Sand Castle silos to store the sand used for fracking which is a vertical storage unit powered by solar panels. The company is also using natural-gas-powered pump trucks which Stephen Ingram, Halliburton's North America Technology Manager says, “will result in a sizeable reduction in both cost and emissions.”

The other great technological innovation to reduce methane emissions is replacing pressure -monitoring pneumatic controllers with lower-bleed designs, which could dramatically reduce emissions. Methane gas is a major contributor to greenhouse gas.

The main environmental benefit is replacing coal which would cut carbon emissions and reduce overall pollution. Although fracking does require more water than conventional drilling, coal power uses twice as much water from mining to generation. Remarkably, the “green” corn –derived ethanol uses 100 times more water per unit of energy.

## Conclusion

Short-term gains might cause long-term problems. Professor Ted Patzek, Chairman of Petroleum Engineering at Texas University, raises two further issues relevant to Egypt. Firstly, that supply has outstripped demand and lower prices mean less profit. Secondly, that fracked wells have a short life and then suffer a steep decline. He warns that fracking will provide, but not at the expected rate. Trey Scott of Trinity Mineral Development, seems to echo this by predicting that “things look good for the next five or ten years.”

The debate has clearly shifted from a for-or-against stance, which is good. The Economist hosted an online debate in October 2014, with Amy Myers Jaffe, the Executive Director for Energy at University of California for fracking, and Micheal Brune opposing, which attracted a huge response. Simon Wright, the moderator, reminded the audience that all extraction has consequences and it is a question of risks and benefits. Jaffe, an energy expert, provided an equation that with the world having used 113,900 terawatt hours of fossil fuel energy to fuel economic activity over the past decade, replacing that would require over 6,000 nuclear power stations. Also, renewables will take time to get established and could lead to issues around land use and waste. The bottom line is “we are going to use fuel and that fuel is going to have environmental impacts.”

Fracking will increasingly become the method for extracting that fuel.

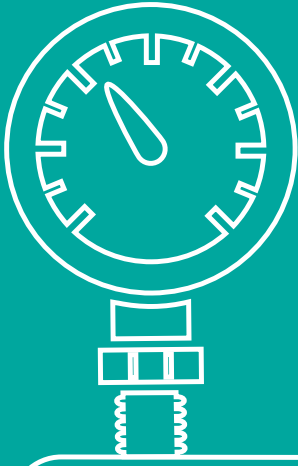




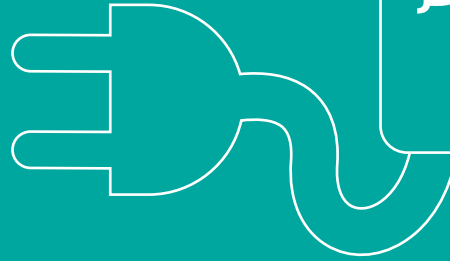
وفر في الكهرباء وماتسبش  
النور شغال في أوضة فاضية



وفر في الكهرباء و إفضل  
الكمبيوتر والتليفزيون والريسيفر  
من الفيشة مش بالريموت



وفر في الكهرباء وشغل  
السخان قبل ما تستخدمه  
بـ ٣٠ دقيقة بس

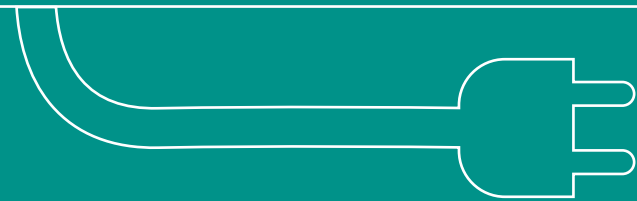


وفر في الكهرباء  
و إظبط التكييف على درجة  
ماتقلش عن ٢٥°م



وفر في الكهرباء و إستبدل  
اللمبات العادية باللمبات الموفرة

وفر في الكهرباء و أجل إستخدام الأجهزة المنزلية في  
أوقات الذروة من ٦:٠٠ حتى ١١:٠٠ مساءً



f /belma32ol





# Government Efforts to Stem the Decline in Oil and Gas Production

By Wafik Hanna, Deloitte



In an attempt to overcome severe energy shortage and to stem the decline in oil and gas production, the government has recently awarded twelve new exploration blocks to international oil companies (IOCs):

**Eni** - Italy: one block in the Western Desert and two offshore blocks in deep water in the Mediterranean, along the maritime border with Cyprus, one of the blocks is in partnership with BP - UK;

**Apache** - US: two blocks in the Western Desert, including one in partnership with Tharwa Petroleum – Egypt.

**RWE Dea** - Germany: two blocks in the Gulf of Suez; and

**Edison International** - Italy with Petroceltic - UK, HBSI - Tunisia and Transglobe – Canada secured five blocks between them.

This is in addition to the start-up of a new natural gas project by BG Group - UK.

These awards are mainly a result of a bid round held, in connection with the announcement in December 2013 by Egypt's General Petroleum Corporation (EGPC) and Natural Gas Holding Company (EGAS) of an international auction for oil and gas exploration concessions in accordance with production sharing agreements in the Suez Canal, Egypt's Western Desert, the Mediterranean sea and the Nile Delta area.

These new explorations are a great opportunity for Egypt to build up its oil and gas reserves and increase production.

Over the last few years, Egypt has turned from a net energy exporter into a net importer. Its soaring energy bills were caused by the high subsidies the government provides on fuel.

The natural gas sector in particular has suffered from a slowdown in investment, which has been reflected in a steep decline in production over the past few years. The operations of the existing liquefaction of natural gas projects were almost put on hold, as a result of the shortage of gas.

Exploration companies have been hesitant to develop untapped gas finds in Egyptian waters partly because the amount they are paid barely covers their investment costs. The IOCs working in Egypt have significantly suffered in the past three years from the slowdown in collection of their dues, and they believe that further investment to increase production is subject to the government making significant progress in clearing a backlog of payments. The total amount owed to IOCs working in Egypt is estimated at around \$7 billion.

Recently the Ministry of Petroleum has announced that it has paid \$1.5 billion to IOCs as part of an effort to bring down the debt that it owes for purchases of natural gas and oil from these companies to an acceptable level. This will reduce the total balance of receivables owed to IOCs to \$4.9 billion. A similar payment of \$1.5 billion was made at the end of 2013.

This has followed the signing of a loan with a consortium of local banks: National Bank of Egypt, Commercial International Bank

(Egypt), Arab African International Bank, Banque Misr and QNB Al Ahli by two affiliates of the state owned Egyptian General Petroleum Corporation. The loan is for EGP 10 billion (\$1.4 billion) and comprises a \$ 550 million tranche and a EGP 6.04 billion tranche in local currency. The dollar component is for four years and the Egyptian pound loan is for five years; both facilities have a one-year grace period. The borrowers are Misr Petroleum and Co-operative Petroleum, which purchase natural gas and petroleum products from upstream operating companies for domestic distribution. The payment was part of a wider effort to provide incentives to IOCs to increase their investments in Egypt.

The ministry has also adjusted some of its commercial terms in order to attract IOC interest. This has included a gas production enhancement agreement with UAE-based Dana Gas entitling the company to retain all the incremental petroleum liquids produced alongside its natural gas output. The company will invest \$27 million in drilling 37 wells in existing producing blocks and in developing a block in which it struck gas in 2012. Dana Gas is owed \$280 million, of which \$155 million is in arrears. The partial settlement of arrears, in addition to the adjustment of contractual terms, the government will seek to improve the investment environment in the hydrocarbons sector, leading to a gradual recovery in oil and gas production.

However, there have recently been signs of a modest recovery. The full start-up of BG's Busrullus West Delta Deep Marine 9a project in November will bring Egypt's total production

back over 5 billion cubic feet per day, from about 4.7 billion cubic feet per day at present. This compares with production of around 5.6 billion cubic feet per day in

mid-2013.

BG Group of the UK, a world leader in exploration and LNG and the largest foreign producer of natural gas in Egypt, has received \$350 million in payment of part of the debt it is owed by Egyptian state owned oil and gas companies. The payment has brought down the company's domestic receivables (money it is owed for gas purchases) in Egypt to about \$1.2 billion. BG's receivables balance stood at \$1.5 billion at end-June 2014, of which \$1.2 billion was in arrears.

The previously approved BG project, involving the development of Phase 9a in its West Delta Deep Marine block, will enter full production in November 2014. BG's pending projects include Phase 9b in the same block and two fields discovered in a nearby block, in which BP of the UK has a 40% stake. BG's liquefied natural gas (LNG) plant in Egypt exported only one cargo in the first half of 2014, as almost all the gas the company produces is supplied to the domestic market.

IOCs are observing the development in the oil and gas market in Egypt for securing their existing investments and are eager for future investments and interests in blocks and other exploration and development services, pipelines and liquefaction of natural gas projects. This is contingent on the commitment of the government to the continuous development and support of the oil and gas sector in the country.





**VROON provides a diverse range of services and solutions for key offshore-support needs, including platform supply, emergency response and rescue, anchore handling and subsea support.**

Our versatile fleet of more than 100 vessels follows a rigorous maintenance programme, which together with ongoing orders for new builds, ensures our continued commitment to providing services that are safe, reliable and cost effective.

We have the fleet to **meet** your needs, the people to **deliver** and the determination to **succeed**.

For more information visit [www.vroonoffshore.com](http://www.vroonoffshore.com)



Leaders in Safety

ABERDEEN • DEN HELDER • GENOVA • SINGAPORE  
[WWW.VROONOFFSHORE.COM](http://WWW.VROONOFFSHORE.COM)



- Meet
- Deliver
- Succeed

## "TOGETHER, YOUR PARTNERS IN EGYPT"



**WE SERVE YOU WHEREVER YOU ARE**

**Pan Marine Group** a one stop service provider for Oil & Gas sector in Egypt , our group consists of:-

- Pan Marine Petroleum Services FZ
- Pan Marine Shipping Services
- Pan Marine Logistics Services.

Our customers are our great asset that we aim to provide them with first class services in the most economical & efficient way understanding their needs, solving their problems and being a supportive consultant. We do our best to meet and exceed our clients expectations.

We are proud of past successes and will continue to strive into the future.

For more information visit:  
[www.pan-marine.net](http://www.pan-marine.net)

### Head Office

50 Omar Lotfy St., Camp Cesar  
Alexandria - 21321- Egypt.  
Tel.: +203 59 01 605 (10 Lines)  
Fax: +203 59 01 542

### Warehouse

Free Zone - Al-Ameryia - Alexandria - Egypt.

### Cairo Branch

8 Al Adeeb Ali Adham St., Sheraton Bldgs. Heliopolis  
Cairo - 11361 - Egypt.  
Tel.: +202 226 75 226 (5Lines)  
Fax: +202 226 75 227

### Other Branches

Damietta, Port Said, Suez, Red Sea Ports.





## Interview With Mr. Maximilian Feller, General Manager of RWE Dea, Egypt

### Could you briefly tell us a bit about yourself and your journey in the oil and gas industry before becoming the General Manager of RWE Dea Egypt?

By profession I am a Petroleum engineer. I have been engaged in various positions in companies operating in the oil and gas industry, including countries like Kazakhstan, Romania, Pakistan, and Libya. In 2008 I have been appointed as General Manager for the Suez Oil Company (SUOC), the joint venture of RWE Dea and the Egyptian General Petroleum Company (EGPC).

In November 2012 I became RWE Dea General Manager. At the time our main goal was to produce Gas from our Disouq Project.

### What countries/regions does RWE Dea operate in?

RWE Dea AG is an international exploration and production company for oil and gas with headquarters in Hamburg, Germany. Dea is active in the core regions Europe, North Africa, the Caspian Region, the Southern Caribbean and the Equatorial Region of South America and obtains concessions, facilities and offices in 17 countries around the world.

### Could you tell us about RWE Dea's activities in Egypt?

This year, we completed 30 years of successful oil production operations as an operator in the Gulf of Suez. We are pleased to look back upon a very fruitful production phase together with SUOC, our long-term reliable joint venture company with EGPC.

We have produced over 640 million barrels of crude during these three decades.

Recently, we completed activities in the Zeit Bay field to optimize the gas lift system to increase oil production.

At the Ras Fanar field, RWE Dea plans to drill two additional wells and add these to production by 2015. In the Ras Budran field, we currently are conducting a test of shallow reservoirs which so far has been very encouraging.

In addition to oil production we commenced with first gas from the Central Production Plant (CTP) of the Disouq Development project in the Nile Delta August 2014. For this own operated project we again rely on our well established joint venture SUOC (DISOUOC) with our partner EGAS.

Furthermore, we have plans for additional exploration in the Gulf of Suez. RWE Dea was granted a 100% share and the operation of the East Ras Budran Offshore concession last year, which is situated adjacent to our oil producing field Ras Budran. RWE Dea plans to commence 3D seismic acquisition early 2015, which would take about 4 weeks. However, this is still subject to tender evaluation. Currently, one exploration well is planned to be spudded early 2016. Potential follow-up drilling will depend on the results of the first well.

Furthermore RWE Dea is partner in gas projects in the Nile Delta as well as in an oil project in the Western Desert.

### Where does Egypt rank within RWE Dea's worldwide activities?

North Africa is one of Dea's core regions and we are active in Egypt for more than four decades. Dea's Oil and gas production currently

comes from four countries, namely Germany, Norway, the UK and Egypt. Recently, we have concluded the first phase of the Disouq gas development project, which has enabled us to more than double our production in Egypt from last year. Let me conclude, Egypt plays an important role for Dea.

### What is RWE Dea's biggest discovery in Egypt?

We are partners in a capital intensive project in the offshore Nile Delta (North Alex & West Med) that might contribute to increasing Egypt's gas production by more than 20%. We have plans for significant investments in our Onshore Nile Delta license to increase production.

### What challenges has RWE Dea faced throughout its operations in Egypt?

In 2011, we started the development of the Disouq project and we had to build up the whole infrastructure for the project. We found ourselves in a country, where the political as well as the security situation was marked by challenges over months and even years.

We managed to build-up complex operations, with one drilling rig permanently on mission, the construction of a gas treatment plant and the installation of about 90 km onshore pipeline.

### What is RWE Dea's share in oil and gas production in Egypt?

Currently, we achieved a production level of approximately 45000 BOED from operated and non-operated concessions. This is the production we have from our Gulf of Suez and Nile Delta areas, and we are discussing with our partner EGAS an aggressive plan to increase it in the near future through our Disouq production.

### How is the Disouq Development Project coming along, and what have been the outcomes of it thus far?

The Disouq project was implemented during a critical time for Egypt, but we were successful to achieve first gas production from the Rented Treatment Plant (RTP) in September 2013 and from the Central Treatment Plant (CTP) in August 2014. Both facilities are now operated by our Joint Venture SUOC.

To date we have drilled 18 successful wells which have matured prospects into gas discoveries. We still have an ambitious drilling program ahead and are quite confident that we will make further discoveries.

### Do you see potential for unconventional resources in Egypt? If so, will we see RWE Dea investing more in Egypt?

Initial evaluation of Dea and reports of organizations such as the US Energy Information Administration (EIA) indicate the potential for unconventional oil and gas resources in Egypt, mainly in the Western Desert. Currently Dea is focusing on near field exploration of oil and gas resources in the Nile Delta and Gulf of Suez and is not pursuing specific projects for unconventional exploration for the time being.

### Since the Petroleum Ministry is in the process of paying its debt to foreign investors, what do you foresee for Egypt? Do you believe Egypt will see more investors now that their confidence is being restored?



### What would your personal message be to incoming investors in order to succeed in Egypt?

We believe that Egypt has high potential in the oil & gas sector. The country has highly qualified and skilled staff working in the petroleum sector and the infrastructure in Egypt is well developed.

On the whole, what are the main difficulties the petroleum sector faces in Egypt?

The deferred payment topic is one of the main challenges. The ramp-up of overdues is a significant problem in Egypt, which we share with the other operators of the Oil & Gas industry in the country. This is a serious issue for us and threatens our investments in Egypt.

We are working on a solution how to mitigate this negative effect, together with the Egyptian authorities.

Again, this is necessary in order to lift the full potential that we see in our concessions.

Of course paying the overdue receivables owed to the IOC's is one of the most important aspects of our business in Egypt. Investors are willing to invest in a country subject to knowing as when they will be able to be repaid. We believe that the gap between supply and demand of gas that Egypt had faced lately was due to the debts incurred over time; which forced the investors to reduce investment in exploration and development projects and hence did not allow to increase the production to meet such increasing demand. Having said that, the Ministry of Petroleum and the Egyptian government are currently trying to overcome such problems by introducing scheduled repayments that if continued successfully, will have a great positive impact on the oil and gas industry and will help in narrowing the gap between the supply and demand of gas and will therefore increase the confidence of the investors to invest in the Egyptian market.





# PROPER MOVE



EXPLORE YOUR REAL ESTATE OPPORTUNITIES

REPRESENTING



PALM HILLS  
DEVELOPMENTS



MOUNTAIN VIEW



166 , Choueifat St., 5<sup>th</sup> Settlement, New Cairo 11771

Tel.: 012 22 40 1111 - 012 22 50 1111 - [info@proper-move.com](mailto:info@proper-move.com) - [www.proper-move.com](http://www.proper-move.com)



# Arab Oil Aid and the Path to Egypt's Upstream Independence

The 2013/2014 fiscal year has ushered in many significant changes for Egypt's economy and energy sector. Renewed efforts to pay off foreign debts and fuel subsidy cuts were the major features of president Sisi's initial economic reform measures, and an upsurge in aid from Arab countries – much of it in the form of oil assistance – has contributed to meeting the country's significant energy demands. While Mohamed Morsi's year as president was in some ways defined by the near \$7.5 billion in financial aid from Qatar, which is now in the process of being returned, Egypt was flooded with billions of dollars from the United Arab Emirates, Saudi Arabia, and Kuwait, following Morsi's ouster in support of the new regime. Regardless of the political implications, this new roster of foreign donors is proving essential to Egypt's economic future.

By Lily Leach

In September, the Egyptian government approved a deal with the UAE that Egypt would buy 65% of its oil import products for the next year from the emirates, to cover the country's gasoline, diesel, heavy fuel, and liquefied petroleum gas needs. According to Ahram Online, an oil ministry official said in August that "Egypt was seeking to buy about \$9 billion of oil products from the UAE and that some of the products would come as grants and the remainder under a credit agreement that would be repaid in installments."

Up until September 2014, Egypt has received \$5 billion worth of refined oil products from Saudi Arabia since July 2013. Kuwait said it would give Egyptian buyers priority when it announced a shipment of 2 million barrels of crude oil, as a part of a long-term deal.

According to Egypt's Planning Ministry, the country has received a total of \$13.8 billion in grants from Arab countries during the 2013/14 fiscal year, compared with only \$729 million the previous year. The aid comes at a time of crippling power cuts, the country readjusting to the increase in fuel prices, and Egypt's foreign debt rising to \$46.1 billion.

Oxford University energy expert Justin Dargin told Egypt Oil and Gas, "This aid is essential for Egypt to meet some of its critical shortfalls that it had been experiencing in allocating sufficient energy resources domestically to meet its demand requirements."

## Political Ties Deepen and Threats of Dependence

While Arab petroleum aid fundamental significance is to alleviate economic pressure for Egypt, the underlying subtext is its political implications. Saudi Arabia declared the Muslim Brotherhood a terrorist organization in March this year. When Mohamed Morsi significantly paid his first official visit to Saudi Arabia during his presidency, the Saudi regime maintained its distrust and strengthened its role in removing Morsi from power. The three Gulf nations all consider the Muslim Brotherhood an existential threat, and the billions of dollars in aid is an investment in keeping a political ally in power.

"The reason why the Gulf countries are granting such massive aid to Egypt is because they have a vested interest in seeing the Egyptian government survive. This is particularly important as Saudi Arabia, Kuwait and the UAE have undertaken coordinated action against the Muslim Brotherhood and affiliated groups and Egypt plays a very important geopolitical role in the suppression of these organizations," says Dargin.

While the Sisi regime in Egypt shares political interests with the oil-rich nations, losing political and economic independence still poses a threat for the country as it struggles to maintain stability. "If Egypt would like to undertake a significant geopolitical step that may not be agreed upon by the Gulf countries, then friction could potentially develop," says Dargin. "Additionally, Egyptians are quite nationalistic, if they perceive that the Gulf countries are obtaining too much power and influence over and above Egypt's sovereignty, this could turn into a popular backlash against the government and the Gulf countries," he added.

According to Dargin, when it comes to holding Egypt accountable

for paying of its petroleum aid and other budgetary support to the UAE, Saudi Arabia, and Kuwait, political pressure is the main incentive. "This political pressure is quite significant as Egypt has had worsening relations with the West (principally, the U.S.), that has increased its political and economic dependence on its Gulf patrons. Egypt is nearly entirely reliant on its Gulf benefactors for at least the mid-term, and this reliance will ensure that Egypt will repay its debts."

Still, Dargin is optimistic that foreign dependence is at present only a distant possibility. "One reason is that Egypt has already taken steps to comprehensively reform its energy sector to phase out subsidies, reduce its growing demand and stimulate upstream investment. Furthermore, the Gulf countries have indicated to Egypt that its aid is not going to last forever and is predicated upon Egypt undertaking significant economic reform to reduce the structural weakness in its energy sector and overall economy."

Amr Adly, a non-resident scholar at the Carnegie Middle East agrees that the recent signs of economic recovery indicate that Egypt could wean itself off Gulf aid in the near future – especially as foreign reserves are building up. "However, the Egyptian economy will be even more dependent on Gulf capital flowing into investment rather than budget support for economic recovery and fiscal restructuring in the coming years," Adly told Gulf Business.

## Encouraging New Investment Culture

In an effort to make this transition from an economy dependant on aid, Egypt is holding a conference in February 2015 for investors, in hopes that the recent economic developments will inspire more long-term investment. A recent bid round has already proved successful in winning contracts from Gulf investors, including for the Gulf of Suez expansion project. "Egypt's latest licensing round was quite successful, in that it drew forth an enthusiastic response from international energy companies," said Dargin.

In October, Moody's investor service, the international credit agency, announced Egypt's investor outlook was upgraded from negative to stable, citing support from external donors' as a factor for upgrading the country's outlook. "External financial support, predominantly from Gulf Cooperation Council member states, continues to bolster external liquidity, supporting Egypt's budget and lowering the government's financing costs," said the Moody's website.

Operators in Egypt have long-expressed dissatisfaction with the investment terms for oil and gas exploration, crippling bureaucracy, and legal disputes, and according the Planning Ministry, change is on the way. Ashraf Al Arabi, Egypt's planning minister told Reuters that a new investment law, currently in draft form, would tackle issues including land use, the energy sector and infrastructure. "I believe we will have a very advanced law that tackles all the problems we are facing nowadays in Egypt," Arabi added that he aimed to finalize the new law in time for the economic summit in February.

## A Brighter Future For the Upstream

However, the heavy amounts of Arab oil imports itself won't have a significant effect on investors and operators in domestic oil pro-

duction in Egypt, Dargin believes. "What the petroleum aid does for Egypt is to allow it to cover the shortfall in oil until it is able to ramp up its own domestic production."

Egypt's time as an oil exporter now seems a distant memory, and when overconsumption began to outpace production in 2010, the country became dependent on imports. With the medium-term assistance from the Gulf nations along with Sisi's economic reform plan and the recent success, Egypt has had difficulties attracting foreign investment, this trend could be reversed once again.

"Egypt seems well placed to increase upstream investment," Dargin believes. "Therefore, the likely result of Sisi's energy reforms will be the stimulation of upstream investment and a reduction in oil demand. So, if Egypt stays the course with its sectoral restructuring, it is entirely possible that it could return to oil exportation by ten years or so."

Another positive development for Egypt's oil economy is the decrease in Brent crude, which has dropped below \$90 a barrel for the first time in two years, nearly \$20 from its June peak. According to Reuters, "rebalancing growth towards countries struggling to recover from the Arab Spring uprisings without doing major damage to the oil exporters of the Gulf."

Jason Tuvey, Middle East economist at Capital Economics in London told Reuters there could be a \$4 billion annual reduction in the combined import bills of Egypt, Morocco, Tunisia, Jordan and Lebanon, for every \$10 fall in the oil price on a sustained basis.

The current Brent price is still a comfortable distance from the breakeven point for Saudi Arabia, the UAE, and Kuwait – \$90.70, \$73.30, and \$53.30, respectively. However, Paul Gamble, Director of the Sovereign Group at Fitch Ratings, warned that the low oil prices, while they will help ease Egypt and North Africa's oil import debt, continued subsidy reform in the region is still vital the aid the budget deficit.

Because the country depends on natural gas for the majority of its power production, the billions of dollars worth of oil arriving at Egypt's ports won't have a direct influence on the power cuts that afflict the country. That the aid enables Egypt to alleviate its domestic petroleum demand so it can focus on natural gas is an indirect way the petroleum aid mitigates pressure on Energy demand, Dargin informs. "However, it is more the energy/power pricing reformation that has placed significant downward pressure on power demand, while creating incentives for natural gas production that has a more comprehensive impact," he adds.

Dargin believes the main alternative to meeting Egypt's energy and petroleum demand is the energy price reform package already initiated by Sisi last July. "This has had nearly an immediate effect of attracting investment in the upstream sector, as shown by the recent bidding round, and by reducing energy/power demand in the various sectors. Yet, the results will begin to show in the mid to long-term as it will take a little while for Egypt to begin producing from its new blocks and having the gas reach the domestic market."





7<sup>th</sup> Mediterranean Offshore Conference & Exhibition

[www.moc-egypt.com](http://www.moc-egypt.com)

# MOC 2014

9<sup>th</sup> - 11<sup>th</sup> December 2014

Bibliotheca Alexandrina Conference Center

Alexandria, Egypt



## SHOW DAILY

Egypt Oil & Gas is proud to announce The Show Daily supplement for the 2014 Mediterranean Offshore Conference (MOC). The Show Daily consists of three issues designed to provide comprehensive coverage of each day of the MOC, including the major forums and discussion rounds taking place, interviews with VIP attendees as well as a daily review of highlights of the conference.

Published by

**EGYPT  
OIL&GAS**  
NEWSPAPER

## Book Your Space Now



+202 251 64776 - +202 25172052



+202 251 72053



[info@egyptoil-gas.com](mailto:info@egyptoil-gas.com)



# Stranded Gas: Technology Today and Future Challenges

Natural Gas is the world's fastest-growing type of energy. Its use, according to many sources such as the Wall Street Journal, is predicted to at least double between 2000 and 2020. Many factors contribute to this surge in demand. First of all, population growth is a factor – more people equal the need for more energy. Oil, although still plentiful, is getting harder to recover. With environmental concerns rising all over the world, clean-burning natural gas is seen in a more positive light than coal, oil, or nuclear power. Many countries that previously had little or no modern infrastructure are now developing it. All of these factors add up to a vastly increased demand for natural gas, and the unfortunate possibility of an equivalent price rise. Current natural gas reserves for the entire planet are estimated at 6,100 trillion cubic feet (tcf), according to EIA estimates. Of these reserves, at least half are considered stranded.

By Curt Champeon



## Stranded Gas – What is it?

A reserve of stranded gas is a pocket of natural gas that has been discovered but cannot be retrieved. This can be for reasons of accessibility or simple economics. This should not be confused with natural gas that is found in an oil well. This type of natural gas is referred to as “associated gas.”

The first kind of stranded gas is “physically stranded” gas. This could be a field that is located too deep in the earth to drill for, beneath the ocean or ice cap, beneath an obstruction, or is under a populated area. Economic considerations can also cause gas to be considered stranded. The economics of recovering gas might leave it stranded. A field may be too far away from a market. In this case, a pipeline could be too expensive to construct in order to move the gas. Another reason is that the gas might be in an area where supply is saturated, making the cost of moving the gas far enough away to sell too high, although it might be possible to sell it at a later date.

## Stranded Gas – Where is it?

There are many places on Earth that have large reserves of stranded gas. The largest is in Russia. It has the largest gas reserves in the world, however its great size works against it because much of its land mass is located far away from any major population center, (i.e. market). Siberia, where most of this gas is located is a prime example of this. One way to exploit this gas would be to send it by pipeline across the Bering Strait to Alaska's gas delivery system. It could also be shipped to China or to Europe. Changing diplomatic relationships with all of its neighbors make it difficult to make a commitment to any one of these options.

Alaska has a large reserve of stranded gas near its Prudhoe Bay Oil Field. It also has a large amount on its North Slope. To market the gas it needs to await completion of its Alaska Gas Pipeline to carry it to the American states located to the south of Canada. This project has been delayed due to the availability of cheap Canadian gas, environmental concerns, and the development of non-conventional gas in the United States.

Canada has a large amount of stranded gas in its Arctic Islands, Beaufort Sea, and MacKenzie Delta regions. To sell the gas would require the building of a pipeline to bring it south along the MacKenzie River. Some corporations would like to combine it with Alaska gas by creating an offshore pipeline in the Arctic

Ocean. The Alaska government is resisting this because it would like to first bring the gas to the southern part of the state and then transport it across the Yukon.

Other locations worldwide that have proven reserves of stranded gas are northern Australia, Vietnam, and Indonesia.

The traditional ways of getting natural gas to market are pipelines, liquefied natural gas (LNG), and onshore gas-to-liquids (GTL). These are all very capital-intensive and are only used with projects that contain very large reserves. If the size of the field is small (production volume of less than 3 million tons per year), or if the market is more than 1,000 miles away, these methods begin to lose their cost-effectiveness. There are a number of new alternative methods to harvest smaller fields. None of these have been proven on a commercial scale, however they have been shown to be technically feasible, as stated by the U.S. Energy Information Administration.

## New Technology to the Rescue

Advances can be divided into two main areas – finding new deposits of oil and gas that were previously unknown, and harvesting oil and gas from more difficult locations in more effective economic ways.

Concerning the former – technology advancements for harvesting oil from more difficult locations – one application is Compressed Natural Gas (CNG). Transport of CNG by truck is well established. The reason is simple: transporting natural gas in its natural gaseous form – not by pipeline – is not economically feasible, so it needs to be compressed before it can be shipped. There have been significant developments to increase the volume of CNG transported by ships over long distances.

Maritime applications of CNG are very useful when gas reserves are small and located far from infrastructure, making pipeline or LNG terminal development an unfeasible economic decision. With CNG, gas can be offloaded through an offshore mooring buoy, avoiding the need for expensive land-based liquefaction facilities.

Transportation costs for CNG, exclusive of field development costs are in the range of \$1.00 to \$2.50/MMbtu, depending on the volume of reserves, distance from market, and environmental considerations. Capital costs for a CNG delivery chain range from \$500 million to \$1.5 billion, 90% of which is vessel

construction. The other costs are compressing, loading, and unloading facilities. This is favorable in comparison with LNG and GTL, as is the time frame for the construction for CNG. CNG, however, cannot be transported in large volumes. LNG vessels are able to transport more than three times the gas as the largest envisioned CNG vessel, according to ALS Environmental.

CNG can deliver gas more cheaply than LNG for distances of up to 2,500 nautical miles. Another advantage is that with CNG, the bulk of the investment is in movable assets, while with LNG, a large part of the investment is in fixed assets. In terms of monetary risk, CNG is a better bet than LNG. Statoil, Transcanada, and Exxon/Mobil are at the forefront of support for this technology.

New technologies are also being developed for floating LNG (FLNG). This is a combination of LNG processing and storage technology with deepwater offshore production. Ships with an LNG facilitator can be sent to harvest one field after another without having to build a facility for each. Because of the remoteness of location, property and human loss would be minimized in case of an accident. Royal Dutch Shell has been at the head of a number of companies pioneering this method.

FLNG can be divided into two main areas. First, there are LNG FSRUs (Floating Storage and Re-Gasification Units) and LNG FPSOs (Liquefied Natural Gas Floating Production Storage and Offloading Vessels).

Floating Re-Gasification Vessels have been operational since 2005. They allow for flexible transportation of LNG. Excelerate Energy, Golar LNG, and Hoegh LNG are the current global leaders in the field, although several other corporations are considering entering this market. There are currently fifteen units operating globally. These vessels will be very useful in countries with major shortfalls of gas, such as Egypt, India, and Pakistan.

There are offshore production facilities that contain both processing equipment and storage for the produced hydrocarbons. The design of these ships includes what are called “topsides,” which are located on the deck and used to process the oil or gas. The processed material is then stored in a double-walled system below decks. The hydrocarbons are then offloaded to special “shuttles” which are small tankers or introduced into the pipeline systems, according to Offshore Engineer.

While kept in place by different mooring systems, the FPSO is



adept at deep and ultra-deep water harvesting. Spread-mooring systems anchor the vessel to several locations on the sea floor, while a central mooring system allows it to move with the tides on the surface. These mooring systems are able to disconnect quickly, which makes them ideal for areas that tend to experience severe weather, such as hurricanes and typhoons.

A series of in-field pipelines allows the FPSO to gather oil and gas from multiple wells. It is then transmitted to risers through flowlines. The risers then take the oil and gas from the seafloor to the ship's turret and then to the FPSO on the surface.

On a FPSO, the processing equipment is very much like that found on a production platform, except that it is constructed in modules. Among others it can have water separation, gas treatment, oil processing, water injection, and gas compression. Gas may be either transferred to shore via pipeline or re-injected into a field to boost production.

FPSOs have a number of advantages that make them a good bet for future development. They can be un-moored in case of bad weather. They can be re-deployed once a marginal field is depleted. They are good for areas where there already is an existing pipeline infrastructure. Existing tankers can be converted into FPSOs. Lastly, their design makes them very safe.

There are also a number of floating systems that are similar, due to the fact that these inexpensive units can be tailored to any company's situation or need. There are FSOs (Floating Storage and Offloading), FPSs (Floating Production Systems), FSUs (Floating Storage Units), and a FDP SO (Floating Drilling Production Storage and Offloading).

As of 2014, there are no actual FLNG plants in operation, however, this is about to change. Exmar and Pacific Rubiales have a vessel that will commence operations off the northern coast of Columbia in late 2015. Petronas' first vessel will also become activated in late 2015 off the coast of Malaysia. Even though it will not be operational until 2017, the project that is getting the most attention is Shell's Prelude. This plant will initially begin to harvest gas off the western coast of Australia.

These three projects are interesting for the different capabilities that can be used in this method. The Shell vessel is the largest, producing over 3 million tonnes per annum (mmtpa). Petronas has built a medium-sized vessel, producing 1-2 mmtpa, where-

as the Exmar/Pacific Rubiales vessel is small, with an estimated 0.5 mmtpa.

GTL-FPSO (Gas-to-Liquid/ Floating Production Storage and Offloading) is the same basic concept as Floating LNG. GTL is based on the Fischer-Tropsch (FT) process, which was developed in the 1920's. It did not obtain commercial success or financial backing until the recent interest in diverse energy options. Syntroleum Corp., which was involved in the development of GTL technology in partnership with Bluewater Energy Services. BU recently completed a feasibility study of a FPSO with GTL capabilities. The vessel will have a daily production capacity of 17,000 barrels of FT products, 40,000 barrels of oil and 10,000 barrels of distillates and will have a storage capacity of 2.3 million barrels. The estimates for the construction of such a project vessel are a cost of 1.3 billion and 5 years to build, as estimated by the Journal of Petroleum Technology.

Natural Gas Hydrates (NGH) is natural gas in a solid, crystallized form. If the ability to solidify natural gas is developed and introduced on a large scale, it would create a substantial savings in the transport of natural gas over liquefied or compressed gas. A number of companies, including Mitsui, Mitsubishi, the BG Group, and Marathon Oil, among others, have been developing gas-to-solids technology for both production and shipping natural gas hydrates. NGHs are stable at 20 degrees below Celsius compared with 162 degrees below Celsius for LNG, which reduces the transportation and storage costs. One cubic meter of NGH contains roughly 160 cubic meters of natural gas, while one cubic meter of LNG contains 600 cubic meters of natural gas, limiting the amount of gas that can be transported with NGH technology, as reported in the MIT Technology Review.

#### The Overview

Natural Gas production and technology is growing and will continue to grow. Many different technologies are being developed to obtain this product. A number of different factors have to be taken into account in this process such as population centers and their shifting demand for different kinds of power, location of the gas and obstacles in its extraction, size of the gas find as well as the continual advance of technology as this process continues. The benefits of these advances are not only for the nations with stranded gas finds, but countries with a need to purchase. It is something all energy corporations need to keep their eyes

open for in order to take advantage of the numerous possibilities.

#### Ice Gas; The New Elephant in the Room

Ice Gas is another word for Methane Hydrate, a supply of natural gas located in a combination of sediment and ice. Although scientists have known about hydrates in general for the past 200 years, it has only been recently that naturally occurring natural gas hydrates has come to the forefront of energy industry study.

Methane Hydrates are ice-like structures with natural gas molecules in them. They are the remains of plankton that sank to the ocean floor and became part of the sediment there. They can be found on land and in the ocean, including Arctic permafrost and ocean sediment. The sea floor is the ideal place for their formation, due to the low temperature and high pressure. The methane is formed deep in the sediment where the temperature is slightly higher and then rises to the higher levels nearer the sediment surface. These hydrates appear as white ice, however when they are melted or exposed to pressure and temperature conditions outside, those where methane hydrates are stable, its solid crystalline structure turns to water and the enclosed methane molecules are released as a gas, according to World Ocean Review.

In 2012, the U.S. Department of Energy and its Japanese counterparts announced a successful field trial of methane hydrate production technologies on Alaska's North Slope. Due to this success, the DOE is testing additional technologies that could lead to large-scale harvesting in the Gulf of Mexico. In March of this year, Japan Oil, Gas, and Metals National Corporation (JOG-MEC) extracted natural gas from methane hydrates deposits from 1000 ft. under the seabed in the waters off Japan's coast.

Although a very under-reported technology, this is something that could not just change natural gas as an industry, but change how we think of energy as a whole. As the industry stands now, stranded gas makes up 55-60% of market reserves. Ice gas changes this to at least 95%. The locations are also different – from the North Pole to Antarctica and all points in between, this product can be harvested many places. With technology advancing at breakneck speed, this product can only increase its market share and the only real question is how fast this will happen.

## Fiber Optics Cables

*Dominant know how, technology, quality and solutions for everyday challenges...*

#### Our product can provide you with:

- Lower cost of installation, initial investment and maintenance.
- Adaptability to upgrade and replace the cables on demand.
- Higher Capacity to vastly increase the existed fiber channels.
- Optimum installation properties to easily handle and transport cables with best environmental performance.
- Maximizing installation lengths and minimizing cable jointing.

**ELSEWEDY  
TELECOM**

Subsidiary of ELSEWEDY ELECTRIC

Plot No. 27, 1<sup>st</sup> District, 5<sup>th</sup> Solihorm, New Cairo - Egypt  
Tel.: (+202) 275547100 / 7103 - Fax: (+202) 275501755  
Email: info@elsewedytelecom.com

www.elsewedy.com

19159



# Militant Groups in Egypt: Aims, Threats, and the 'War on Terror'

Eid Al-Adha was a time of heightened security in Cairo, after Ansar Beit Al-Maqdis (ABM) – Egypt's most prolific recent militant group - had threatened to make the start of the festival a "black day" for the security forces.

Eid passed peacefully, but militants have killed scores of security personnel since the military ousted the Muslim Brotherhood-affiliated president Mohamed Morsi in July 2013. ABM is just one of several active militant groups in Egypt; with a variety of aims, characteristics, and operative tactics.

However – for political expediency - the authorities and the media frequently lump these various groups together and conflate terrorism with the Muslim Brotherhood. Accordingly, the aims of Egyptian militant groups, and the threats they pose, are seldom clear.

By Patrick Keddie

## Ansar Beit Al-Maqdis (ABM): Sinai-Based Militants With Links to ISIS

ABM emerged in Sinai in the turmoil that followed the toppling of former president Hosni Mubarak in 2011. According to a report in Time magazine, ABM's earliest operations targeted Israel – including an attack in August 2011 that killed eight Israeli soldiers and three Egyptian soldiers. They claimed credit for 14 attacks disabling a natural gas pipeline to Israel.

Following Morsi's ousting in July 2013, ABM turned their focus to Egypt. ABM has adopted Al-Qaeda's takfiri rhetoric and operative tactics, viewing the Egyptian security forces as infidels that should be violently targeted, although ABM has no formal organizational ties with Al-Qaeda.

Most of ABM's attacks have taken place in the Sinai Peninsula, where the group has killed scores of police officers and soldiers in rocket, bomb, and gun attacks. They brought down a military helicopter in January 2014 using advanced surface-to-air missiles. In February 2014 ABM bombed a tourist bus near the Taba crossing in Sinai - killing at least three people - and warned tourists to leave the country. They have also claimed responsibility for bombings outside of Sinai, including a failed assassination attempt in Cairo on Egypt's Interior Minister in September 2013 and a bombing on the police headquarters in January 2014.

According to a report in the Christian Science Monitor, "Ansar's core group of fighters is estimated to be in the low hundreds, drawing most of its manpower from the local Bedouin community. Local residents say other fighters hail from the Egyptian mainland and, in some cases, Gaza and Sudan."

Khalil Al-Anani, writing for the Middle East Institute, suggested that ABM may have close to 1,000 fighters. "The social and ideological composition of ABM seems to be Salafi jihadis, disillusioned Bedouins, and former jihadis who did not abandon violence," wrote Al-Anani.

A report by Reuters in September claimed that ABM has forged on-line communication links with the extremist group ISIS (Islamic State of Iraq and Sham). A senior ABM commander told Reuters that ISIS "is teaching us how to attack security forces, the element of surprise". Recently released footage showed ABM militants beheading four Egyptians it had accused of providing the Israeli authorities with intelligence, echoing footage released in recent weeks of decapitations of foreign hostages held in Syria by ISIS. The security forces have also estimated that thousands of Egyptians may have joined jihadist groups in Syria and Iraq.

With accomplished fighters, advanced weaponry, and links to foreign groups, ABM continues to worry the authorities and has been Egypt's most active militant group in recent times. However, there are other militant groups that arguably pose a greater threat outside of the peninsula - including the first significant jihadist group that has been based in Cairo for the past decade.

## Ajnad Misr (Soldiers of Egypt)

Mid-morning of the 21st of September, a bomb exploded at the back gate of the Ministry of Foreign Affairs in Cairo, killing three police officers. The blast was the most significant in Cairo for several months. Militant group Ajnad Misr claimed responsibility. The group first announced itself on Twitter in January 2014, claiming credit for at least three previous attacks in Cairo in November 2013 and January 2014. They have subsequently claimed responsibility for more than 15 attacks in the greater Cairo area.

Mokhtar Awad, a research associate at the Center for American Progress, writing for the Tahrir Institute for Middle East Policy, argues that the group "has a simple stated immediate objective: retribution for those killed and assaulted by security forces." Awad writes that Ajnad Misr is seeking to exploit the current of Islamist anger against

the ousting of Morsi, using calculated violence against the security forces through improvised explosive devices and generally trying to avoid killing civilians.

Awad argues that the group's rhetoric "offers strong evidence of a Salafist influence." Unlike other militant groups, Ajnad Misr defines itself specifically as Egyptian and has focused its attacks on Cairo.

The group relies on social media to spread its message and hopes to attract young, disaffected Egyptians to its ranks. Beyond retribution, the group claims in its founding statement to be fighting for the establishment of a religious state in Egypt, as opposed to the rhetoric of other groups who seek to establish cross-border caliphates.

Awad says there are groups operating in Egypt who, like Ajnad Misr, target the police in attacks, which are justified as retaliation for perceived abuses – including Execution Movement, Walaa (Set Fire), or Molotov.

"However, unlike Ajnad Misr, these other groups have thus far remained non-jihadi in their rhetoric, referencing their desire to enact revenge without evoking specifically religious objectives," argues Awad. "Ajnad Misr's track record relative to these other groups threatens to make their method and ideology an attractive alternative to the non-violent jihadi path and, of course, the largely non-violent Islamist protest movement."

## Other Groups and Threats

Beyond ABM and Ajnad Misr there are many other active militant groups in Egypt. The Tahrir Institute for Middle East Policy has outlined profiles of notable terrorist groups in Egypt, demonstrating the existence of multi-faceted threats.

Ansar Al-Jihad considers itself the military wing of Al-Qaeda in the Sinai Peninsula. According to local terror experts, the group possesses advanced weaponry including mortars and surface-to-air missiles. The group claimed responsibility for a series of gas pipeline attacks, and has been linked to the August 2013 execution of 25 soldiers traveling between Al-Arish and Rafah in Sinai.

Tawhid Wal-Jihad, based in Sinai and Gaza, is thought to number around 300. The group shares a similar ideology to Al-Qaeda, regarding state actors as infidels that prevent the implementation of Sharia law. They are thought to be responsible for the deaths of over 100 tourists in Sinai between 2004 and 2006. Recent evidence suggests that following a state crackdown, they have merged with the leadership of ABM, according to the Tahrir Institute.

Kitaa'ib Al-Furqun is based throughout Egypt, allegedly with operational centers in Cairo and Ismailia. The group regards the government as illegitimate as it does not apply Sharia law. The group released videos in late 2013 of rocket-propelled grenade attacks earlier that year on merchant ships in the Suez Canal and on a satellite station in Maadi.

Jund Al-Islam carried out an attack on a Rafah intelligence building that killed at least six people in September 2013. Their only official proclamation denounced the Egyptian military as traitors to Islam.

The Tahrir Institute's profiles include groups which operate on a relatively small scale from Sinai, including Jaysh Al-Islam and Takfir Wal-Hijra. The frequency of attacks on security forces in Sinai means that it is often difficult to determine who is behind many of the attacks. "Most of the near-daily roadside bombs and targeted shooting of security service vehicles go unclaimed; it is usually only the spectacular mass-casualty events for which terrorists seek recognition," writes analyst Zack Gold, in the Carnegie Endowment's Sada Journal. Militant attacks have also spread to the west of the country, amid reports that instability is facilitating the flow of fighters and weapons between Egypt and Libya. In July 2014, 22 armed forces personnel were killed in an attack on a military checkpoint near Farafra Oasis and the Libyan border.

## The 'War on Terror' and the Crackdown on Dissent

The authorities have responded with force to the militant threat, in a struggle often billed by the media as Egypt's 'War on Terror'. They have launched a series of land and air attacks to kill or detain suspected jihadists. Roadblocks and checkpoints have been deployed in greater number.

The ABM commander talking to Reuters suggested that the security crackdown was making it harder for militants to operate in Sinai but that the movement of fighters to bases off the peninsula could make it more difficult for the authorities to track them.

The Egyptian military's response has been criticized by some as indiscriminate, with many documented instances where civilians have been killed. Mada Masr reported earlier this month that a recent military operation, which killed 16 alleged militants in Sinai, also killed a 12 year-old child.

The ABM commander claimed that the security crackdown fuels militant recruitment. "Every time one of us is killed, two or three others join. Usually relatives of those who killed."

Yet, despite their Eid Al-Adha threats, ABM has not been able to carry out a major terrorist attack outside of Sinai in several months. "As the armed forces and police focus on Sinai's terror threat, more so than at any other time since the 2011 uprising, the peninsula has quieted down significantly, at least for the moment," writes Zack Gold.

However, Gold points out that there has been an increase in smaller attacks on the security forces in Egypt's urban centers, claimed by groups as retaliation for perceived police abuses.

The dominant state and media narrative in Egypt's 'war on terror' is that the Muslim Brotherhood is behind the militancy. Yet, the US State Department recently noted that the Egyptian government "did not provide any substantiating evidence that the MB [Muslim Brotherhood] was directly involved in the terrorist attacks that followed President Mohamed Morsi's removal."

Militant groups in Egypt tend to be jihadist or Salafist, unlike the more moderate Islamism of the Muslim Brotherhood. The Egyptian government has repeatedly equated ABM with the Muslim Brotherhood, yet there is no evidence that links the two groups. David Barnett, writing in the Long War Journal, noted that a member of ABM had left the Brotherhood because it had proved to be too moderate in power.

The crackdown on overwhelmingly peaceful dissent and brutal human rights abuses since the ousting of Morsi – notably the bloody dispersal of the pro-Morsi Rabaa sit-in in August 2013, the subsequent arrests of thousands of demonstrators on the grounds of combating terrorism, and a resurgent security apparatus which uses torture and disappearance with impunity - may act a recruitment tool for some militant organizations.

## Conclusion

Egypt faces a sustained, varied and complex militant threat but the authorities appear to give minimal effort to understanding and tackling the underlying social, political and economic causes of disaffection. Using the 'war on terror' as a cover to quash peaceful political dissent and abuse human rights, in addition to deploying indiscriminate military and police action, may perpetuate violence in the longer-term. Some analysts - including Mokhtar Awad - believe that, although groups like Ajnad Misr do not pose an existential threat to the Egyptian state, the prospect of retaliation may encourage many more Egyptian Islamists towards violence.

Awad writes that: "Ajnad's experience in carrying out such large-scale publicized attacks, even if the authorities ultimately eliminate it, may help galvanize a homegrown jihadi current that, due to its connection to the Egyptian heartland and tapping into the shared grievances of the broader Islamist current, could prove far deadlier in the future than groups like ABM ever dreamed to be."



CT Techniques is your  
confident tool to outstanding  
accomplishments



**ACSPT**

CT & STIMULATION TECHNOLOGY

**ACSPT** CT & Simulation Technology – Provides a variety of Coiled Tubing, Stimulation and Pumping Technologies. Coiled tubing is available in 1 ¼", 1 ½" and 1 ¾" sizes for low pressure and high pressure reservoirs, as well as standard and H<sub>2</sub>S reservoir conditions.

24 Wadi El Nile Street Maadi, Cairo - Egypt - Tel : +202 7688100 - Fax: +202 27688130

[www.picoenergy.com](http://www.picoenergy.com)



# Dana Gas: Investing for Growth in Egypt

**UAE's Dana Gas held a conference on 30 September 2014 in JW Marriot Cairo**



By Passante Adel

Dr. Mark Fenton, Dana Gas Egypt's General Manager, opened the event with a word to the gathering crowd –including the UAE Ambassador in Egypt His Excellency Mohamed Bin Nakheira Al-Zahiri, the UAE Minister of State His Excellency Dr. Sultan Ahmed Al Gaber, EGAS Chairman Khaled Badie and Eng. Tarek El Mulla Chairman of the EGPC– announcing Dana Gas' forthcoming investment plans in the country.

Dr. Patrick Allmann, CEO of Dana Gas, took the microphone providing further details on the matter. He described the event as a momentous day for Dana Gas Egypt, the country's sixth largest gas producer with a total investment of \$1.8 billion in upstream and mid-stream investments. He explained that the company's –impressive– track record includes 25 gas discoveries with a 50% success rate in the exploration in the onshore Nile Delta Basin. The company has managed to add 140 million barrels of oil equivalent to Egypt's reserves, thus doubling Dana Gas' reserves acquired in 2007. Allman also added that Dana Gas' total production in Egypt has exceeded 100 million barrels of oil equivalent, a number the company is proud to announce.

Given the company's successful experience in exploration and their comprehensive understanding for the Nile Delta area, Allman expressed their excitement to announce that Dana Gas has been awarded two exploration blocks in the onshore Nile Delta Basin, Block 1 and Block 3. The blocks, which are adjacent to the company's current concessions in the area, were awarded as part of the EGAS bidding round for 2014. He also announced that BP is partnering up with Dana Gas on Block 3 with a 50% share, which might prove a challenging mission due to the depth of the Oligocene layer of about 6,000 meters and the high pressure. In the case of this exploration proving commercially viable, BP's exploration can be extended to cover other Dana gas exploration leases.

Dr. Allman also announced that the strong coordination and cooperation between Dana Gas, EGPC and EGAS has resulted in the signing of a "General Production Enhancement Agreement" (GPEA). According to the agreement, the Emirati company is to drill 37 new wells and complete an equal number of work overs in its existing licenses in the Nile Delta. The investments surrounding the agreed development program are estimated to reach \$270 million over seven years, of which \$200 million would be invested in the first two years. The capital investment is to be provided for through Dana Gas' operations and project financing in Egypt. The project is aiming

to enhance production by increasing 270 billion cubic feet of natural gas, 8-9 million barrels of condensate and 450,000 tons of petroleum and Liquefied Natural Gas.

Dr. Allman added that the agreement also states "the financial proceeds from all sales at international market prices would be retained by Dana Gas and be used to reduce the company's outstanding receivable balance until it is fully recovered, which we anticipate in the second half of 2018."

Dana Gas' CEO explained that the win-win agreement and innovative project is a testament to the partnership Dana Gas is pursuing between the private and public sector in order to contribute positively to Egypt's growing energy needs.

The Emirati based company contributes to the development of the local economy by pumping 80% of the company's investments in Egypt to local suppliers and construction companies. The company also employs 900 Egyptians directly and indirectly in the company's operations, supporting its success in Egypt, according to Allman.

His Excellency the Minister of Petroleum was the keynote speaker for the event. He expressed that energy is the main engine of growth to achieve Egypt's economical aspirations. He stressed the importance of secure energy sources, which prevailed in the last few years. Mr. Ismail added that the petroleum sector has succeeded in the last period in maintaining production levels of petroleum products and natural gas, despite the many challenges Egypt has undergone recently. The Minister took the chance to praise and thank neighboring Arab countries for their continued support, singling out the UAE for the unstinting backing. He also expressed his appreciation for the positive cooperation the ministry is seeing from foreign and local private companies, while recognizing Dana Gas for their pronounced contribution. Ismail added that Egypt has plentiful untapped gas potentials in the Mediterranean and the Nile Delta area. He also expressed his optimism in Dana Gas' recently obtained concessions and the GPEA agreement, as it would add a much-needed amount to the country's gas production, contributing positively to the country's economic growth and towards providing for the increasing energy needs.

He also announced that tight formation gas exploration is currently underway in the Western Desert. He explained that the government has agreed with Apache and Shell for the explorations. The first well is currently being tested, he said, for shale gas production in coop-

eration with Apache and Khaldia. Ismail added that offshore exploration, taking place in the Mediterranean, is expected to "pay off" soon, adding to the country's production. He also explained that the Ministry of Petroleum needs to assure investors that they will receive the return on their investments, in a clear hint to the foreign debts and the government's efforts to settle them. He added that encouraging more production from foreign companies should work towards the settlement of the government's debts.

Regarding the prices for the gas from the newly awarded concessions, Ismail stated that negotiations should be held with the foreign partners and an agreement on the prices shall be reached before the start of the production phase. Dr. Patrick Allman stated to Egypt Oil and Gas that Dana Gas is optimistic regarding the potentials of Block 6 in the Mediterranean as well, explaining that the company might need to partner with other major players in the field to tap into the deep water potential in case of successful exploration in the block.







The ***Middle East's*** first  
regional and private-sector  
NATURAL GAS COMPANY

Clean Energy for a Better Tomorrow

Plot No:188, City Center, Fifth Settlement, New Cairo, Egypt  
Te.: (+202) 25033333 Fax: (+202) 2503331/2

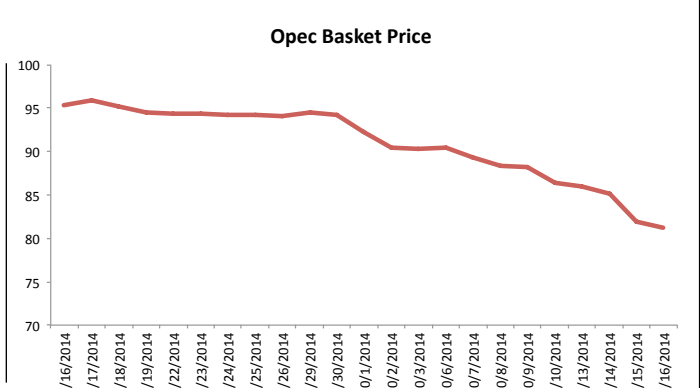
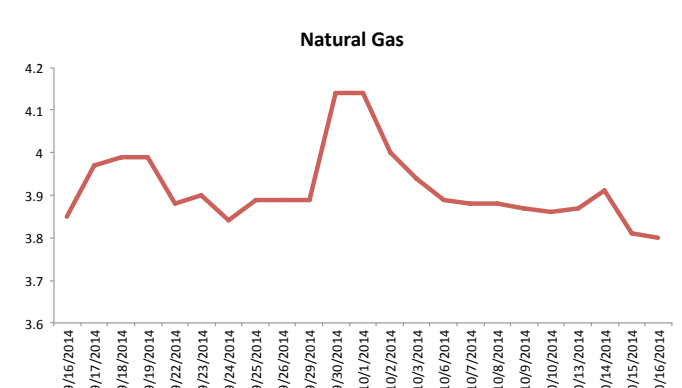
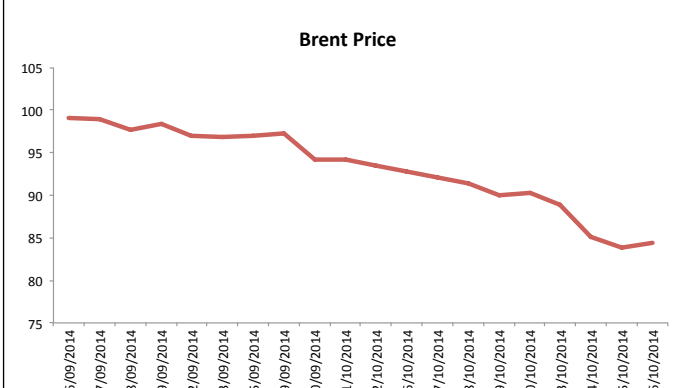
[www.danagas.ae](http://www.danagas.ae)



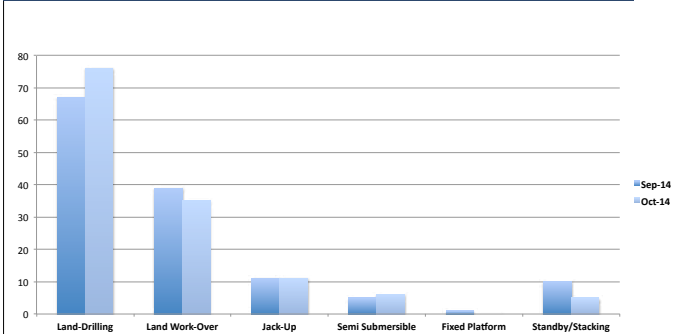


Egypt Rig Count per Area – October 2014		
Area	Total	Percentage of Total Rigs
Gulf of Suez	11	9 %
Mediterranean Sea	6	5 %
Western Desert	85	66 %
Sinai	13	10 %
Eastern Desert	11	9 %
Delta	2	1 %
Ganoub El Wadi	0	0 %
Total	128	100%

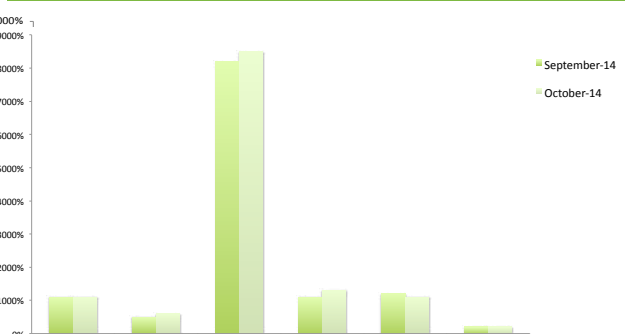
	Oil			Equivalent Gas			Condensate			Liquefied Gas		
	Barrel			Barrel			Barrel			Barrel		
	September-12	September-13	September-14	September-12	September-13	September-14	September-12	September-13	September-14	September-12	September-13	September-14
Med. Sea				22574464	19509464	15453929	1115749	1146947	814751	339575	360500	312008
E.D.	2193004	2527618	2110996		59821	43214		3295	3123		9439	7829
W.D.	8533977	9055637	9214904	6808214	6935179	6879643	1495613	1311602	1326412	612988	684056	505461
GOS	4371153	4237517	4292766	249821	412143	474107	62886	70522	68237	176797	207904	238435
Delta	82387	62846	35602	1668036	1927143	2309107	133158	167808	175834	93840	117106	109206
Sinai	2124823	2045814	2165543	893	15536	5357	34143	31821	29465	81698	87116	71441
Upper Egypt	14987	11513	9815									
Total	17320331	17940945	17829626	31301428	28859286	25165357	2841549	2731995	2417822	1304898	1466121	1244380



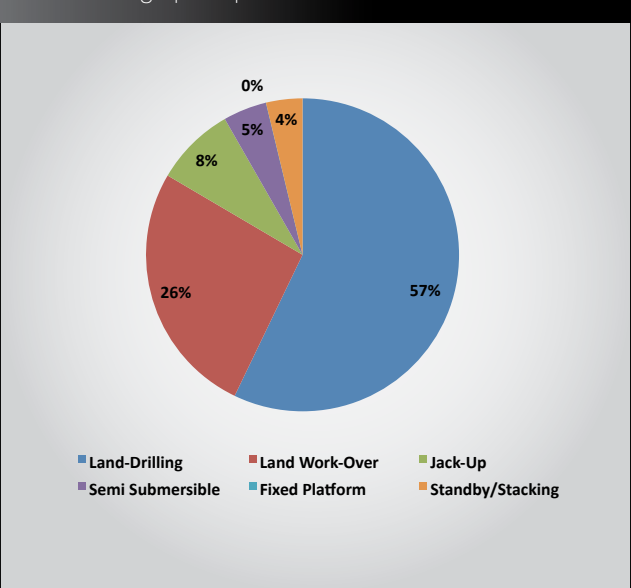
Rigs per Specification September - October 2014



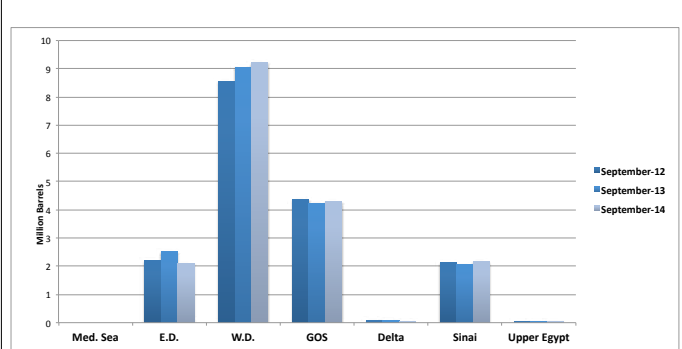
Rigs per Area September - October 2014



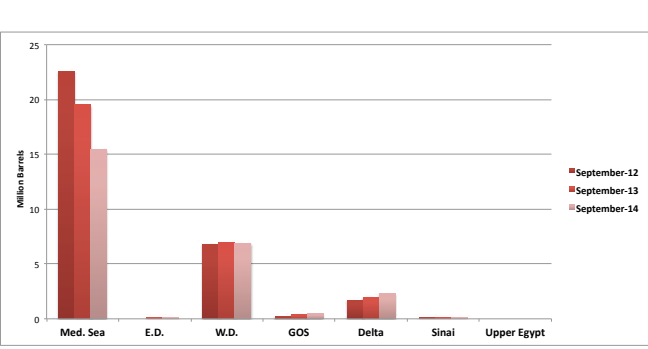
Rigs per Specification October 2014



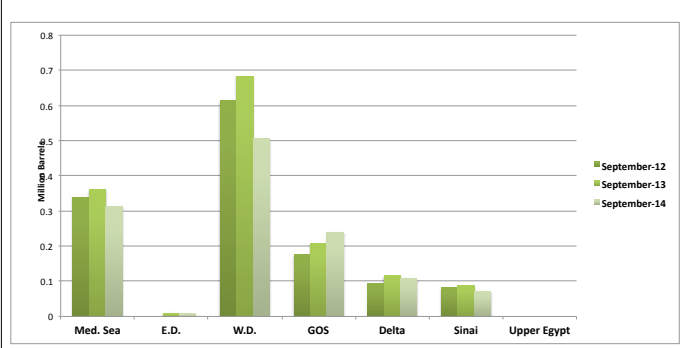
Oil Production September 2014 - 2012



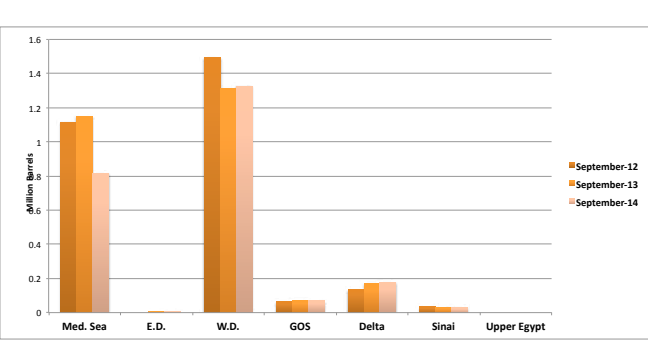
Equivalent Gas Production September 2014 - 2012



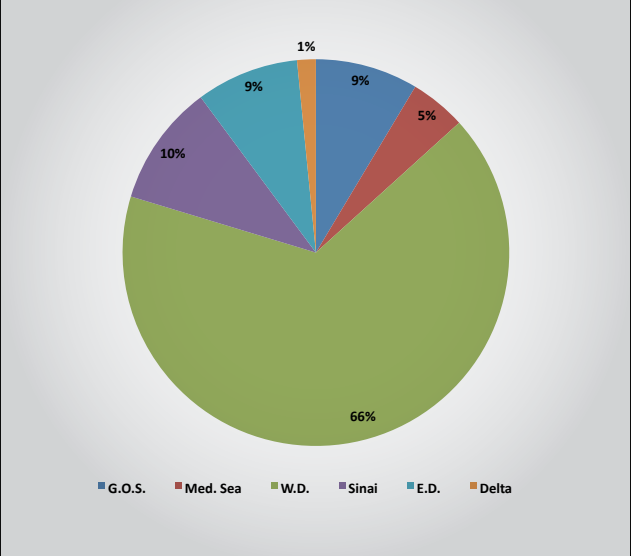
Liquefied Gas Production September 2014 - 2012



Condensates Production September 2014 - 2012



Rigs per Area October 2014 (Total of 128 Working Rigs)







# 3<sup>rd</sup> PETROLEUM

## WINTER SOCCER CUP

December 2014

Register Your Team Now  
[info@egyptoil-gas.com](mailto:info@egyptoil-gas.com)





# POWERING UP EGYPT



TAQA Arabia is the largest private sector energy distribution company in Egypt with over 16 years of experience, investing and operating energy infrastructure including gas-transmission and distribution, power generation and distribution and marketing of petroleum products.



*A World*  
**OF ENERGY**

2 Simon Bolivar Sq., Garden City, Cairo, Egypt.  
Tel: (202) 2796 1494 - (202) 2795 4671  
Fax: (202) 2796 2821  
[www.taqa.com.eg](http://www.taqa.com.eg)

## **TAQA Gas**

develops and operates natural gas distribution networks through 4 concessions in 11 Egyptian governorates.

## **TAQA E.P.C.**

provides quality construction and engineering services, designs gas engineering networks and operates and maintains PRSs through EGUSCO in Egypt and its regional subsidiaries in their locations.

## **TAQA Power**

has positioned itself in the market of power generation and distribution as a pioneering licensed developer and operator.

## **TAQA Oil Marketing**

is the first privately owned Egyptian company licensed to market petroleum products including fuels and lubricants and is the sole distributor of Castrol products in Egypt.