

Still controlling the ups and downs of the gas industry

Although everything is usually subjected to alternating periods of good and bad fortune or even high and low spirits as well as smart and failure management, here in Egypt we tend to pause or suspend life temporarily for each mood. When we admire, we extremely praise while for objecting to something we totally turn off the light. That's a quick summary for the Egyptian gas sector

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Will the British giant collapse?

Last July, the U.S. House of Representatives voted to end the federal moratorium on deepwater drilling for oil companies, imposing new federal safety requirements. The proposal to end the moratorium was an amendment to a pending energy bill. The moratorium will not end unless the Senate also votes to terminate it and President Barack Obama signs the legislation into law.

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More Egyptian expansion on the way

Expanding the Egyptian activities abroad has been on the top of the Ministry of Petroleum agenda, which its fruitful results were reflected in the number of contracts signed lately for local service companies to conduct activities abroad. But, should not the Ministry expand its exploration activities as well?

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Fading gas behind blackouts!

"First they claimed they would deliver gas to every households, now we still do not have gas and they took our electricity too," said a local citizen wondering who is responsible for this problem, the Ministry of Electricity or Ministry of Petroleum

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Apache invests more in the Western Desert

Apache Corporation won the endorsement of the Egyptian General Petroleum Corporation (EGPC) to originate a pipeline with the capacity of 24 inch, from Abu Al Gharadiq to Dahshur 220 km along and \$550 million total cost.

The rationale of this pipeline is to accommodate the volumes of gas extracted from the company's concessions, which are located in the Matruh and Western Desert Gas Complex in Al Amreya.

The company's current capability of gas extracted reached 100 million cubic feet. Apache is aiming to add the same amount to be transferred through that pipeline, which ends at the gas processing unit in Dahshur.

Enppi, Petrojet, and Petrofac are among the companies applying to establish the new pipeline, which is considered the extension of the original line that starts from Apache's acquisition area, from Matruh to Abu Al Gharadiq in the Western Desert, with a capacity of 40 million cubic feet.

The gas processing unit at Dahshur accommodates 135 million cubic feet of gas, which requires the establishment of another station close to the old one. The gas from this station is being transferred to the gas cylinders companies in Giza. It is rumored that Dana Gas is aiming to invest into founding this new station given to its revenue, but yet it is expected that Apache will build it on its own expenses.

Edison International to buy EGPC Abu Qir share

Italian Edison entered negotiations with the Egyptian authorities to sell its share of the gas produced from the North Abu Qir field, which Edison won with a Signature Bonus of \$1.4 billion.

Edison plans to sell its share to Edison International under the form of "Netback Pricing", as both Edison and the Egyptian General Petroleum Corporation (EGPC) contract allows Edison to sell its share after paying the fees of liquification and transportation. Hence, if the Egyptian authorities aim to buy it, they will have to pay the international price of \$6 for the one million BTU, which is remotely more than the original price that is worth \$2.65 for the one million BTU. Edison will process the natural gas in Damietta and Edeko.

It is expected that EGPC's share will be sold with the company's split to Edison International.

Lately, Edison was met with disappointment after hitting a dry well in the shallow water, but the company is proceeding to drill in the deep water to extract gas from it, which promoted the company to undertake the mentioned negotiations with the Egyptian authorities to offset a portion of its loss in the dry well.

Interview

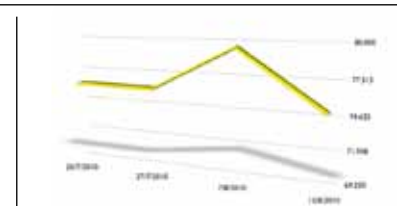
Flexibility's value in escalating investments



"In fact, it is not a burden as working without a cost recovery is not risky for us since it has the shape of the usual investment projects in other countries," Dr. Hans-Hermann Ecke, General Manager of RWE Egypt, told Egypt oil & gas in an interview describing the agreement of the West Nile Delta Project

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ICE Brent Price



Conflict, rumors, unsolved problem!

Sudden blackouts that dominated several areas of Egypt last month, specifically at the beginning of the holy month of Ramadan, raised a wave of anger and disappointment among Egyptian citizens, which by its turn has led to an internal conflict between the Ministry of Electricity from one side and the Ministry of Petroleum on the other side. The first attributed the reasons behind the blackouts to the shortage of supplied gas needed in the electricity stations, while the latter accused the citizens' over usage of electricity.

Mohamed Awad, Head of the Electricity Holding Company, confirmed that recent power cuts were a result of the Ministry of Petroleum not providing electricity plants with enough natural gas.

In the middle of this ministerial conflict, many national and international newspapers published reports affirming the re-purchase of approximately 1.5 billion cubic meters of Egyptian natural gas sold to Israel to solve what they called "gas crisis". They even added that the natural gas originally sold for \$2 million, would be bought for three times as much costing \$6 million and others said seven times as much, costing \$14 million.

No official statement was made to answer back this report, until the newspaper went to print.

I believe that there are several factors that encouraged this speculation. First, the Egyptian- Israeli gas deal has been widely opposed by many activists and experts, not only due to their anti-Israeli stand, but also for selling gas at a very low price. The deal led to a common belief that it left sectors in Egypt with a shortage of gas for local consumption. Second, at the beginning of this year, official reports revealed that Egypt would need to import natural gas to cover huge shortfalls in domestic-use gas and industrial diesel.

Both factors have raised concerns about the real amount of oil and gas reserves and for how long the country's reserves would satisfy the local demand. Moreover, going through a period of serious power outages and water shortages throughout the Egyptian cities reflected a status of pessimism among citizens.

Whether or not I trust this re-purchase news, I would seize the opportunity to support voices calling for protecting our oil and gas resources, even if it is on the expenses of cancelling exporting deals that would bring us fortunes.

Yomna Bassiouni
Editor-in-Chief

Events

Another success story

For the Fourth successive year, Egypt Oil and Gas organized the Ramadan petroleum Soccer Tournament. The tournament is widely grown every year and it comes this year with a new motto "Let's Meet & Compete". It is held in the Hayah International Sports Academy, in New Cairo, for twelve days from the 10th of Ramadan to the 22nd of the holy month.

In the current edition of the tournament, 42 petroleum companies from the public and private sector participated in the soccer tournament. In fact, it proves the trust of the companies in the tournament and its challengeable atmosphere.

The twelve-day tournament was supported by the Egyptian Petroleum Corporation with the supervision of Mr. Hady Fahmy, Head of the High Committee for the sports activities in the Petroleum Sector.

At the moment of publishing the newspaper, 16 teams qualified from the first round which witnessed the elimination of good team. The teams which qualified to the round of 16 are: Petroleum Arrows, SUCO, GAS-CO, PMS, Petrographics, EDC, EGAS, Mansoura, Agiba, Misr Petroleum, Apache, Smith, Siemens, Dana Gas and Baker Hughes as well as PICO International.

After the high level of style, performance and challenge which were witnessed during the first round, all the viewers and fans believe that the round of 16 and the higher rounds will witness a fierce competition for qualifications. Besides, the fans and supporters of each team escalate the rivalry and antagonism during the matches. For instance, Baker Hughes' supporters and spectators became one of the unique traditions of the tournament for their extraordinary clothes and folklore style in supporting their team. In addition, PICO's fans are also famous for their vivid flags. Hence, it's a fact that the spectators play an important role for adding enthusiasm to the tournament's atmosphere.

Earlier, the draw event was held in Katameya Heights Resort in New Cairo with the attendance of Egyptian captain Ahmed Hassan and Mr. Hady Fahmy.

The sponsors of the tournament this year are DANA GAS as a Platinum Sponsor while Pico Energy and DSD Ferrometalco are the God Sponsors. Besides, Schlumberger is the Silver Sponsor and the Outfit Sponsor is Enap Sipetrol. In addition, the Official Beverage Sponsor is Coca-Cola as well as Lufthansa which was the Official Carrier Sponsor.

by Ahmed Morsy



Egypt Oil & Gas

Editor-in-Chief

Yomna Bassiouni
ybassiouni@egyptoil-gas.com

Managing Editor

Tamer Abd El-aziz
tabdelaziz@egyptoil-gas.com

Senior Staff Writer

Ahmed Morsy
amorsy@egyptoil-gas.com

Reporters

Sama Ezz El-Din
Shady Ahmed

Freelance Editor

Olivia Quinn
Clarissa Pharr

Media & Statistics Monitoring

Webmaster
Ayman Rady

Photographer

Ahmed Hamad

Business Development Manager

Laila Solaiman

Business Development Officer

Nourallah Khaled

Customer Service Coordinator

Passant Fadl

Designers

Ahmed Marzouk

Cartoonist

Ramy Ameen

Administrative Assistant

Basma Naguib

IT Specialist

Sameh Fattouh

Production Advisor

Mohamed Tantawy

Accountant

Abdallah Elgohary

Legal Advisor

Mohamed Ibrahim

Publisher Mohamed Fouad

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Omar Donia, Mohamed Sabbour
and Mohamed Fouad

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Contact Information:

Tel: +202 25164776

+202 25192108

Fax: +202 25191487

E-mail: info@egyptoil-gas.com

www.egyptoil-gas.com

STAT

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HEAD OFFICE: Tel. : + (202) 276 88 100 Fax : + (202) 276 88 130
KATAMYIA OFFICE: Tel. : + (202) 275 93 445 + (202) 275 93 446

RWE hits dry

RWE Dea drilled two new wells in its acquisition area in North Edko, which showed low economical gas reserves and poor quality, as the gas contains more than 8% of CO₂.

The to-be extracted gas will require processing in the units that follows RWE, which processes highly economical gas but it would be difficult to mix between the two gases.

RWE previously signed a contract with the Egyptian General



Petroleum Corporation (EGPC) to exploit the spare capacity of Abu Qir facilities, which was expected to reach 120 million cubic feet of gas in North Edko. But, after the low results, it will be obligated to reconsider the development plan to drill more in the deep water. It will depend on Edison's new facilities; a new marine pipeline for Edison's marine platform.

... and invests \$3.6 Billion in gas and development field



Rwe Dea will be investing \$3.6 billion in the field development in the North Alexandria and West Mediterranean Deep Water concessions – the biggest single investment for the company to date. Jointly the Egyptian Petroleum Minister Eng. Sameh Fahmy, the Egyptian state owned company EGPC and the operator BP, RWE Dea signed the agreement which had been approved by the Egyptian Cabinet and the Egyptian parliament.

Approximately 50 billion cubic meters plus in reserves of natural gas, the fields in the North Alexandria and West Mediterranean deep Water concessions are among the largest in RWE Dea's portfolio.

Thomas Rappuhn, Chief Executive Officer of RWE Dea AG stated, "Our aim is to proceed with this field at a rapid pace, so that we can go into production by 2014. Amongst other field development projects of RWE Dea, such as Breagh in the United Kingdom and Gjøa in Norway, North Alexandria will make a substantial contribution to the company's growth target, which is to double production over the next five years."

The North Alexandria and West Mediterranean Deep Water con-

cessions are located in the offshore region of the West Nile Delta, about 40 kilometers off the coast of Egypt. Included are the Raven natural gas fields in the high temperature and high-pressure depth domain which extends into the West Mediterranean Deep Water concession. This project demands for high level of investment and deployment of leading edge technologies in developing these fields under highest safety and environmental standards. Splitting the total investment, which is to be US\$9 billion, BP (the operator stakes 60%) and RWE Dea (40% stake), which is most of the total investment to be spent on the North Alexandria concession. For RWE Dea, its share will represent the company's biggest single investment, to be spent over the course of the project.

In the plateau phase to commence in 2015, over 3 billion cubic meters of gas (RWE Dea share) will be produced annually. Production is expected to be 20 years in the first phase. Development of further natural gas potential including already discovered gas volumes within the concession areas would take place in the second phase.

NOSPCO to hit new layers

North Sinai Co. For Petroleum – NOSPCO is preparing to open new layers in the producing fields in the company's acquisition areas. The move is considered as a step to increase the amount of natural gas produced from the Tao field to reach 60 billion cubic feet per year near the end of 2011.

Egypt Oil & Gas newspaper learned that the company started to apply the new technical study on Tao, located in its concession area in North Sinai, to keep the current production rate at a steady point after finalizing the procedures of installing the new Gas Compressor with a capacity of 200 million cubic feet per day. The current production rates reached 180 million cubic feet per day.

It is worth mentioning that North Sinai Co. For Petroleum – Nospco is a joint venture between EGPC and the French Preenco.



... And expects more from its Mediterranean field

North Sinai Petroleum Company (NOSPCO) concluded its installation operations and geological studies, according to the company's schedule for the month of July 2010. NOSPCO is implementing its plan for installation and operations, expected to end in mid 2011. The company aims to locate the

drilling areas and the number of exploratory and development wells.

Egypt Oil & Gas Newspaper learned that, as soon as the excavations process ends, the company will initiate a bid round to rent a new rig during the coming year of 2011 after completing the 3D seismic

studies, which will resolve the number of new expletory wells in the field of City Blue in the company's acquisition area in the Mediterranean Sea.

The whole operations serve NOSPCO main goal of boosting its production and reserves of natural gas from the Mediterranean.

NORPETCO heads for 2nd water injection phase

North Bahariya Petroleum Company (NORPETCO) is preparing for the second stage of the Water Injection project in the Bahariya layer, to convert two producing fields to work on the Water Injection operation.

Based on the study conducted by Cairo University, more than 90% of the first phase was fully completed and currently, preparing the Ferdaus 13 and Ferdaus 8 for the water injection conversion, through the utilization of ECDC-1 rig.

NORPETCO is to purchase two water storage tanks and lift water pumps to reach the maximum use of the new Water Injection project. The project is expected to start during this August.

It is worth mentioning that NORPETCO is joint venture company between EGPC and the Chilean firm Sipetrol.

Moreover, NORPETCO started carrying out its agreement with Qarun Petroleum Company, which necessitates working on the facilities of refining the crude oil by receiving and refining 2500 barrels of oil each day. Meanwhile, the refining ship-

ment processed has already begun since last April.

On the other hand, Egypt Oil & Gas learnt that NORPETCO is preparing to perform technical studies to determine the volume of crude oil in some layers by executing the 3D Seismic surveys on its acquisition area in the Western Desert. Officials within the company ensured that the company has successfully entered the "West Qarun 1-4/ 56" and also completing it in the middle and bottom layers of Abu Roash sands, in the beginning of the current fiscal year and it produces average production of 400 barrels of oil per day.

In addition, in the last period, the company has firmed up a fire control project in the delivering oil for Qarun. NORPETCO accomplished 50% of the fire control project in company's fields in the area of Ferdaus as wells as the accomplishment of workshop for repairing oil sucking pumps, expelling frequency.

NORPETCO finalized the drilling operation of "Ferdaus 12" well in the middle and bottom layers of Abu Roash sands, located in the com-

pany's acquisition area in Western Desert.

The well is considered a development one which is a step in the company's schedule to increase its production level of crude oil that expected to reach 2270 barrels per day. The total amount of investment of the well is \$6 million, as it was stated in the past fiscal year of 2009 – 2010.

NORPETCO is also seeking to conduct maintenance operations for ten of its wells in order to enhance their production by using the hydraulic hammering. The production of the initial well reached 800 barrels of oil per day in last May.

It is worth mentioning that the company's current proved reserves reached 11.469 million barrels of oil, compared to 9.404 million barrels of oil in the previous fiscal year of 2009 – 2010. The rise in the reserves rate was as a result of adding 1.603 million barrels of oil after the re-entering of the "West Qarun 1-4/ 56" well, specially that the total company's production counted last June 4,832 barrels of oil.

Abu Qir renovates North Delta fields

Abu Qir Petroleum Company prepares for the treatment of some its exploratory and development wells, located in its acquisition area in the Mediterranean during the current fiscal year of 2010 - 2011. The total budget of the project will be declared soon.

The company aims to boost its current production rate through adding more wells to these fields. Moreover, Abu Qir is targeting a 400 billion cubic feet of gas from the North Delta fields.

The current production rate of Abu Qir, the EGPC and Italian Edison joint venture company, is 175 billion cubic feet of gas. Edison signed the highest Signature Bonus that reached \$1 billion and \$400 million last year.

Petrogulf to rise in Gebel El Zeit

Petrogulf is awaiting the Egyptian General Petroleum Corporation (EGPC) approval on the drilling plan for the year 2010-2011. The company is planning to drill an exploratory well in its acquisition area in Gebel El Zeit with investments of \$9 million.

The company is in the process of conducting maintenance over the three development wells of C-1, 5, 8. The total cost of the development plan is \$1.4 million.

Petrogulf conducted as well some development work in the same area last year with a cost of \$2.6 million.

Following the authorization of the EGPC, Petrogulf will be looking into renting a new rig, after carrying out the necessary seismic studies.

Sea Dragon boosts production

Sea Dragon provided the following update on its operations in Egypt. The Al Baraka #7 well drilled, logged, cased and completed in 12 days showing a significant improvement in rig performance. Log analysis showed a net pay thickness in the Abu Ballas Formation of 28 feet. The well was perforated in the Abu Ballas interval 3634-3662 feet and is

now undergoing testing operations.

Testing results should be made available shortly. This well appears to be a candidate for a fracture treatment. The drilling rig will now move to drill the Al Baraka #9 well, expected to spud this week.

Of the seven wells drilled in the Al Baraka field to date, four have been selected for fracturing treatments. Once these stimulation operations are completed and Al Baraka #9 and #11 are drilled, production is expected to reach 2000 bopd, over two fold increase from current levels.

A completion/work-over rig has now been selected. Contract negotiations are currently underway and the rig is expected to be mobilized along with the fracturing units to the Al Baraka field by the end of August.

The 477 km 2D seismic program to delineate and firm up eight prospects and leads was completed on July 23rd. Processing has already commenced with the view of potentially drilling an exploratory well before year-end.

Sea Dragon has a 50% working interest in Jointly Operated Kom Ombo Block with Dana Gas Egypt owning the remaining 50%.

On the other side, in the NW Gemsa Concession, the original heavy oil discovery well, the Al Amir-1X was re-entered, com-

pleted and tested at 300 bopd. The well is producing from the South Gharib Formation at a depth of 4750 feet. Produced oil is relatively heavy 18 degree API. Geological interpretation of this field is ongoing in view of the heavy oil shows seen in the Al Amir SE#6 well some three kilometers distance from the Al Amir-1X.

The Al Ola X-1 well spudded on July 15th and is currently drilling at 8000 feet. This well is expected to reach a depth of 13,700 feet. This well is being drilled as an exploratory well outside the southern boundary of the Al Amir SE development lease. It is intended to capture a southern extension to the Al Amir SE oil field. The primary objectives are the Rahmi and Shagar Kareem sands currently producing in the Amir SE oil field. The well will also test a secondary objective in the Lower Rudeis Formation where gas and condensates were tested in the Al Amir SE #6 well. Should the Lower Rudeis Formation be productive, consideration will then be given to deepen the well to 15,000 feet to test the Nubia Formation.

Production from the Al Amir, Al Amir SE and Geyad fields in the NW Gemsa Concession is holding steady at 9500 bopd.

Sea Dragon has a 10% working interest in the NW Gemsa Concession with Vegas Oil at 50% as operator and Circle Oil Plc with 40%.



Sea Dragon Energy Inc.

Melrose opens mind for takeover

The Chief Executive of Melrose Resources said its majority shareholder would be open minded about a bid for the firm, and noted that assets in places like Egypt, where the company operates, are in demand.

Asked if Edinburgh-based Melrose might get swept up in the round of takeovers that is sweeping the oil and gas industry, David Thomas admitted it was "always possible" that it could attract bid interest.

"We are aware that certain of our core assets such as Egypt are potentially attractive to other companies," said Thomas, who highlighted the progress that Melrose had made in the North African state in the first half.

Melrose is one of a band of western exploration and production firms that have built big positions in Egypt. The list includes Dana Petroleum, which recently rebuffed a £1.7 billion takeover approach from Korea National Oil Corporation.

There has been a surge in mergers and acquisitions activity in the oil and gas industry since the global economy started to recover from the recession.

Research by PricewaterhouseCoopers showed that the total value of global oil and gas deals increased in the first half of 2010 to \$147bn (£94bn) from \$118m in the same period of 2009. The number of deals increased to 394, from 350.

Thomas indicated that the financier who controls a 51% stake in Melrose Resources, Robert Adair, was not wedded to maintaining the company's independence for the sake of it.

"Robert has always been very clear that he is open to considering any possibility for the company that would be value accretive for shareholders – he is open minded," said Thomas.

However, he said Melrose could achieve significant growth as an independent.

In the six months to June, Melrose's working interest production averaged 40,100 barrels oil equivalent daily, up 13% on the same period last year, helped by the start of production from the South Damas discovery, made in Egypt in February.

Melrose produced from 13 fields in the country.

Thomas said the company's financial performance should be transformed by the start of production from the Kavarna and Kaliakra gas fields offshore Bulgaria later this year. These should allow the compa-



ny to generate significant amounts of extra cash that it could use to step up exploration on its acreage in countries like Turkey and France.

Melrose was recently awarded two blocks off Romania. Directors are still waiting for official clearance for the acquisition of interests in two other offshore blocks from Sterling Resources, agreed in December 2008.

Thomas said Melrose had received a number of approaches for the onshore fields that it put up for sale in the U.S.

He believes the problems that BP has experienced in deep water in the Gulf of Mexico have led to increased interest in onshore assets.

Quotes

"Our aim is to proceed with this field at a rapid pace, so that we can go into production by 2014. Amongst other field development projects of RWE Dea, North Alexandria will make a substantial contribution to the company's growth target, which is to double production over the next five years."

Thomas Rappuhn, CEO of RWE Dea AG, comments on the company's \$3.6-billion investments in gas and Development field in Egypt

"I am encouraged by the way drilling operations are being accelerated. The pace of our development activities should be further enhanced by the deployment of the service rig. I am also confident that once stimulation work is completed on Al Baraka wells, significant production increases will materialize."

Said Arrata, Sea Dragon Chairman and CEO, on Sea Dragon boosts production in Egypt

"We are aware that certain of our core assets such as Egypt are potentially attractive to other companies."

David Thomas, Chief Executive of Melrose Resources, on the progress that Melrose had made in the North African state

"The most important thing about the agreement is that it makes an obligation for the foreign partner to start output at a specific date and produce a certain amount."

Abdel Alim Taha, a senior Petroleum Ministry official, after BP and RWE amended two gas contracts

"This year, we will focus on developing our existing assets Egypt."

Jim Dewar, Dana Gas Chief Financial Officer, on Dana's Egypt operations produced 3.8 million barrels of oil equivalent (boe) in the second quarter

Baker Hughes, SOC revamp wireline technologies in Iraq

Baker Hughes signed a three-year strategic alliance with Iraq's South Oil Company (SOC) to provide technical services to SOC's wireline logging department in Burj Esya, Basra south Iraq.

Under the terms of the technical services agreement (TSA), Baker Hughes will supply wireline technologies to SOC and other Iraqi oil and gas producers as well as help develop local Iraqi wireline logging capabilities. The TSA covers the provision of operations and technical support, HSE management, and training programs, processes and procedures for SOC's Iraqi engineers and technicians.

Commenting on the agreement, Dheyaa Jaaffar, SOC General Director, said, "South Oil Company has always been a leader in the development of national skills and knowledge. Existing facilities and local knowledge in wireline services is outdated and will not allow us to reach the accelerated knowledge and development needed for our wireline workforce. Our agreement with a world-class service provider such as Baker Hughes to provide the technical assistance needed, along

with state-of-the-art technologies and training programs, will allow our Iraqi workforce to reach international competency levels in the shortest possible time and, therefore, will ensure that the South Oil Company's service arm is geared to perform wireline services by our Iraqi employees to all operators in Iraq without jeopardizing data quality or service delivery standards."

Khaled Nough, President of the Middle East for Baker Hughes said, "We are eager to take the first steps toward developing Iraq's national workforce jointly with the South Oil Company. This technical services agreement is expected to allow SOC to fast track personnel development as well as technology deployment in wireline data acquisition and logging — one of the most fundamental and essential oilfield services in Iraq. This is expected to allow all operators to better assess petrophysical and reservoir data to fast track production. We are excited about this opportunity to contribute positively to the ambitious plans of Iraq and look forward to becoming active members of SOC's staff."

BP delays Libya deep water drilling

BP pushed back the start of its exploration for oil in deep water offshore Libya for an unspecified period of time to ensure all its plans are in order, but the company and the Libyan authorities insist the drilling will be safe.

BP said it will proceed with its first deep water well offshore Libya some time later this year. However, amid fears in Europe that an accident similar to the oil leak in the Gulf of Mexico could trigger an ecological disaster in the Mediterranean, the company said it was prepared to mount a quick response to a large oil spill, should one occur.

BP and the Libyan authorities have the resources to deal with a medium-sized spill and should a larger incident occur BP has a contract with the world's biggest oil spill response center, based in Southampton, in the U.K, said company spokesman Robert Wine. "We would call them if they were needed in Libya," he said.

BP has pulled back from plans to drill the first Libyan well "within weeks," a time frame that was still in place as recently as July. "We were saying a few weeks ago we would start earlier, but making checks and preparations and carrying out tests on

the drilling plan and equipment has delayed it," said Wine. "We are being thorough and making sure everything is in order before we start."

BP did not directly link the delay to the disaster in the Gulf of Mexico, but the company plans to publish preliminary findings of its internal investigation into the blowout on the Macondo well in late August. Any lessons from that inquiry will be applied to all international operations, said BP spokesman David Nicholas.

The chairman of Libya's National Oil Company, Shokri Ghanem, said BP's operations would have strong oversight. "We continually follow-up with companies and we are certain before allowing any companies to start drilling onshore or offshore the environmental procedures are followed exactly so that damage to the environment is avoided. Libya has well defined rules and regulations and there are severe consequences for international oil companies that do not follow them."

Despite these assurances, BP's plans to drill at least five wells in the Libya's Gulf of Sirte at depths greater than

Macondo have some people worried.

Stefania Prestigiacomo, Italy's Environment Minister, told the Financial Times that plans for deep water drilling in the Mediterranean, "give rise to serious concern."

"A moratorium could be a right approach for potentially dangerous drilling...to give Europe time to define a new and specific strategy for the Mediterranean especially in light of the risk exposed by the Deepwater Horizon spill," Prestigiacomo told the paper.

Libya is already a major oil producer, but the bulk of that comes from onshore or shallow water facilities. It has little experience supervising the risks of deep water drilling. Despite the looming deadline for drilling to commence, Libya is the only Mediterranean country aside from Croatia not to have a contingency plan in place for handling an oil spill in its waters.



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Head Office:
17 Al Ahram st., Heliopolis, Cairo, Egypt.
Tel: + (202) 22 90 6371
Fax: + (202) 22 90 4900
E-mail: icc@intlcables.com

RAK Petroleum to farm-out Oman block



Maersk Oil has completed the \$6-billion al-Shaheen oil field expansion project in Qatar on time and within budget with the field producing around 300,000 barrels per day (bpd), one third of the OPEC oil producing state's total crude oil production, said Qatari Oil Minister Abdullah al-Attiyah.

Maersk has been working on a major expansion of the offshore al-Shaheen field aimed at boosting its production from an average of 331,000 bpd in 2008 to around 525,000 bpd on completion.

Attiyah said at the inauguration ceremony that al-Shaheen is considered now as the biggest oil producing field in Qatar, accounting for a third of Qatar's total crude oil production. Previously the 335,000 bpd Dukhan field was the emirate's largest producing field.

Qatar Petroleum had been targeting higher production from al-Shaheen by end of 2009, but it has been constrained by OPEC production cuts totaling 4.2 million bpd, which came into effect in January 2009.

Last May, Maersk said that al-Shaheen production was constrained by OPEC output cuts and production from al-Shaheen was slightly lower than the 2009 level.

Lebanon's new gas law paves way for exploration

Lebanon's Parliament unanimously ratified a long-awaited energy law, paving the way for exploration of major natural gas reserves the country says it has off its Mediterranean coast with Israel.

The law had been discussed for many years but Israeli plans to drill for gas in the Mediterranean alarmed Lebanon, which fears Israel may be encroaching on its own reserves, sending Lebanese politicians scrambling to approve the law.

"The law organizes the process of surveying, exploration and production of energy," said the Lebanese lawmaker who presented the draft law, Ali Hassan Khalil, an aide to Shi'ite parliamentary speaker Nabih Berri.

Lebanon has said it would "use all means" to defend its rights if Israel was found to be drilling within its borders, after a U.S.-Israeli consortium announced in June a potential find that could turn the Jewish state into a gas exporter.

The U.S.-Israeli consortium involved in the discoveries said the Leviathan prospect may have deposits of 16 trillion cubic feet (tcf) and is said to be twice the size of the Tamar field,

which was the largest global gas find of 2009.

Khalil said the law calls for setting up an entity under the auspices of the energy minister in which a sovereign wealth fund would be created to manage and invest potential energy revenues.

Lebanon has said it has identified reserves that have promising quantities of natural gas, according to seismic surveys in 2006-2007.

Lebanon has stopped short of accusing Israel of violating its territory, but the mistrust between the two -- which were embroiled in a deadly border clash last week -- has exacerbated Lebanese fears.

Even though Lebanon has passed the law, it still has a long way to catch up with the Israelis. It has to identify blocs, supply data to interested investors, select bidders and have companies start exploration work, while the Israelis already have firms drilling for gas.



McDermott wins work for Abu Dhabi Marine Operating Company

McDermott International, Inc. announced one of its subsidiaries was awarded a contract to upgrade and enhance a water injection system for Abu Dhabi Marine Operating Company (ADMA-OPCO) in the Zakum field. The contract value is expected to be approximately \$350 million and is included in McDermott's second-quarter 2010 bookings.

Located approximately 48 nautical miles north-west of Abu Dhabi in the United Arab Emirates, the field includes five water injection platform modules at Zakum West Super Complex and two modules at Zakum Central Super Complex which are used to maintain pressure in the surrounding wells.

"This is a significant award for McDermott and we are delighted to have this opportunity to work with ADMA-OPCO again, who is a key player in the Abu Dhabi market," said Steve Johnson, President and Chief Executive Officer of McDermott. "Our ability to provide a sound technical solution, backed by our regional capabilities in providing fabrication, marine and manpower resources

has helped us secure this prestigious award. We look forward to building a long lasting working relationship with ADMA-OPCO."

The project falls into two parts: pressure upgrade and capacity upgrade.

The pressure upgrade involves installation of new pumps, piping and transformers, the modification of existing instrumentation and equipment and structural reinforcement work of the existing water injection modules at both the Zakum Central Complex and the Zakum West Super Complex.

The capacity upgrade will take place on Zakum Central Super Complex and involves the engineering, procurement and construction of a new 3,250-tonne deck that will house the new water treatment and injection system, power generation equipment and six-legged jacket.

Engineering will commence immediately with the pressure and capacity upgrades planned for completion within the second quarter 2012. Installation will be carried out using vessels from McDermott's regional fleet.

Scotland outlines national renewables infrastructure plan

More than 5,000 green jobs could be created through the development of three regional offshore energy-manufacturing sites built around key port locations, First Minister Alex Salmond said. Speaking at a Scottish Government public discussion event in Dornoch, the First Minister welcomed Stage 2 of the National Renewables Infrastructure Plan (N-RIP), which was published today by Scottish Enterprise and Highlands & Islands Enterprise.

The plan outlines the investment required to deliver Scotland's ambition to become a premier location for the manufacturing and deployment of wind turbine and marine energy devices. The report states that a total private and public investment of £223 million would assist the creation of 11 offshore wind manufacturing sites in three regional clusters. Taken together these sites could support the creation of up to 5,180 jobs and an annual economic impact of up to £294.5 million each year. It also underlines the case for the £185 million Fossil Fuel Levy to be released by the Treasury to accelerate the promotion and development of renewable energy in Scotland.

This latest report recommends that the sites are developed into three regional manufacturing clusters that would support the fabrication of offshore wind components and tap into the wealth of subsea expertise that already exists in Scotland.

First Minister Alex Salmond said, "Scotland has the natural resources, expertise and ambition to become a global powerhouse for clean, green energy. The National Renewables Infrastructure Plan outlines the steps required to realize our ambition and to establish Scotland as a premier destination for the manufacture and installation of offshore renewable energy devices. "This plan focuses on the sites that could provide investors with the high-quality infrastructure required for success in the rapidly growing green energy industry."

The report states that a total investment of up to £223 million is required to realize the potential of these sites, which could create more than 5,000 manufacturing jobs and generate around £300 million each year for Scotland's economy.

"Scotland has established itself as a leader in green energy. Our seas have unrivalled potential to generate clean energy and bring jobs and investment to our communities. Scotland's waters are estimated to have as much as a quarter of Europe's potential offshore wind and tidal energy resource and a tenth of the wave power capacity, and in the current economic climate it is important that we capitalize on these natural assets to secure new opportunities that support economic recovery and growth."

Sandy Brady, Acting Chief Executive of Highlands & Islands Enterprise (HIE) said, "This report comes at a very exciting time for the offshore renewables sector in Scotland. At HIE we see the huge long-term economic benefits for the coastal communities across our region, from Shetland to Kintyre and the Outer Hebrides to Moray. Port infrastructure, which includes deep water, suitable quayside, craneage, and sizeable lay down areas is seen as key to unlocking the potential to the offshore renewables sector, and acting as the catalyst for developing Scotland's renewable energy supply chain."

"In partnership with the other public sector organizations, HIE is looking forward to working with industry and port owners to ensure we are ready to support the offshore renewables sector as it develops." Andrew Jamieson of Director of Scottish Renewables said, "As co-chair of the National Renewables Infrastructure Plan's delivery group I know Scotland is very close to making a breakthrough in becoming a major force in the manufacturing of offshore renewables equipment, not just for Scotland's needs but also the export market. This plan sets a platform for quick action. Investment will be led by the private sector but with early public sector commitment to co-invest Scotland can make these highly prized jobs real, building on what has already been done at Machrihanish with Skykon and Energy Park Fife with Burntisland Fabrications Ltd. (BiFAB)."

Wind Prospect sets up in South Africa

Wind energy company Wind Prospect intends to open an office in South Africa, hoping to become the number one service provider to the African wind market by 2012.

The African office will be part of Wind Prospect's Developer Services division and will open in Cape Town by October 2010. Its target is to serve the whole African continent providing wind resource assessment, due diligence and development support services to developers, banks and financial institutions.

Wind Prospect is currently working on 11 contracts across Kenya and South Africa, representing 1.3 GW of potential energy. At the moment, the continent has 770 MW of wind capacity installed, according to the World Wind energy Report 2009.

Renewable Energy

Egyptian Refining Co receives \$2.6 billion loan

The Egyptian Refining Company (ERC) signed a debt package of \$2.6 billion to finance construction of its state-of-the-art \$3.7 billion second-stage oil refinery in the Greater Cairo Area, the company said in statement.

The refinery will produce over 4 million tones of refined products per annum when completed, including 2.3 million tones of EURO V diesel, the cleanest fuel of its type in the world, the company claimed.

"We are delighted to announce the debt package for what we believe stands as one of the largest project finance deals ever assembled in Africa," said Citadel Capital Managing Director Marwan Elaraby. "ERC has won outstanding backing from leading global institutions because it will have a notable effect on both Egypt's economy and on the environment, particularly in the Greater Cairo Area. It has similarly enjoyed the full backing and support of the Government of Egypt and, in particular, of the Ministry of Petroleum."

"That this project remained on track through the deepest financial crisis in living memory is a testament to ERC's solid economic fundamentals," added Citadel Capital Managing Director Ahmed El-Houssieny. "Iron-clad fundamentals and strong support from both legislators and regulators are exactly what financial institutions look for when considering which projects to back."

The debt package includes \$2.35 billion of senior debt and \$225 million of subordinated debt. Institutions participating in the senior debt package include the Japan Bank for International Cooperation (JBIC), Nippon Export and Investment Insurance (NEXI), the Export-Import Bank of Korea (KEXIM), the European Investment Bank (EIB) and the African Development Bank (AfDB). First drawdown under the senior debt facilities is expected in the coming two months.

Mitsui & Co., which is part of the consortium of contractors building the refinery, is providing \$200 million of subordinated debt financing. The African Development Bank is providing an additional \$25 million of subordinated debt financing.

News of the debt package came just weeks after the International Finance Corporation (IFC) announced it would invest equity of \$100 million in the project.

The refinery, to be located in the Greater Cairo district of Mostorod, will sell its production to the state-owned Egyptian General Petroleum Corporation (EGPC) under a 25-year off-take agreement at international prices. ERC is a partnership between Citadel Capital - a private equity firm with \$8.3 billion worth of investments across the Middle East and Africa under its control, its co-investors and the state-owned Egyptian General Petroleum

Corporation (EGPC). EGPC owns 15% of the project; its Cairo Oil Refinery Company (CORC), the nation's largest refinery with 20% of Egypt's current refining capacity, will provide ERC with fuel oil as feedstock.

"Considering the operational, financial and regulatory complexity of building a refinery today, the signing of ERC's debt package has come together remarkably quickly," said Tom Thomason, Chief Executive Officer of ERC. "ERC will improve the environment of Greater Cairo by preventing on an annual basis approximately 93,000 tones of sulfur from being released into the atmosphere. It will also invest in improvements to CORC's environmental performance, particularly the emission of greenhouse gases."

ERC has obtained all regulatory and environmental approvals and signed a lump-sum turnkey contract with GS Engineering & Construction / Mitsui & Co. The project's builders expect to complete construction and operational testing of ERC in the second half of 2014 in time for operations to begin in 2015.

Citadel Capital owns approximately 10% of the Opportunity-Specific Fund (OSF) that controls ERC. Citadel Capital has management control of ERC through shareholder agreements with the limited partners who have been invited to invest in the OSF.

RasGas makes its first LNG delivery

RasGas has delivered its first supply of liquefied natural gas (LNG) into Portugal.

The spot sale cargo was delivered to an affiliate of Galp Energia SPGS, S.A, at the Sines LNG Terminal in Portugal, from the LNG tanker Al Deebel, the Qatar News Agency reported.

"As of today, RasGas has supplied LNG to 14 different countries and we continue to look for opportunities to deepen existing relationships and further diversify our portfolio of customers," said RasGas Marketing Executive Khalid Sultan Al Kuwari.

Earlier in the year, RasGas started LNG output from its massive train 7-production facility. The facility has capacity to chill enough natural gas to produce 7.8 million tones per year (tpy) of LNG for export. Qatar started three equally large facilities last year. The trains are the largest in the world.

"RasGas currently connects the reservoirs of Qatar's North Field to customers around the world via seven LNG trains, 27 long-term chartered ships including Q-Flex and Q-Max LNG carriers and access to regas terminals in Europe and the United States," Al Kuwari said.

"Today's historic cargo delivery further demonstrates our credentials as a globally trusted supplier of LNG, and builds on our reputation for operational excellence and contract flexibility," he concluded.



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Responding to API RP 545 to improve petroleum tank lightning safety

By Wesley Minor, Power PR

New options make satisfying API RP 545 fast, economical, and safe for floating roof tank lightning protection



When lightning struck on or near a petroleum tank at the Magellan Midstream Partners distribution terminal in Kansas City, Kansas, in 2008, the tank, containing approximately 1.2 million gallons of unleaded gasoline, caught fire, sending a large plume of smoke across portions of the greater Kansas City metro area.

About one-third of all petroleum tank fires are due to lightning strikes. Floating roof tanks (FRTs), like the one that caught fire due to lightning in Kansas City, can be especially vulnerable. The costs can be catastrophic: from loss of product, equipment, and production; to loss of life, business, and goodwill; to lawsuits and increased regulatory scrutiny. In fast developing, lightning-prone areas such as Florida, China, Malaysia, and Singapore, the risks are highest.

To reduce the risk of tank fires, the American Petroleum Institute (API) recently issued API RP 545, Recommended Practice for Lightning Protection of Above Ground Storage Tanks for Flammable or Combustible Liquids.

There are some new options to make satisfying API RP 545 fast, economical, and safe. Forward thinking,

proactive companies in the petroleum industry are heeding the RP, which is expected to become a standard in the near future. Those who don't can only hope that lightning doesn't strike once, let alone twice.

Key Findings

Two key findings resulted from the API technical committee's research and testing. First, when lightning current passes through shunts at the roof-shell interface, it will result in arcing under all conditions. Second, it is the slow component of the lightning stroke which ignites flammable vapors. Therefore, when the slow component of a lightning stroke passes through any existing roof-shell interface, if flammable vapors are present, they will likely be ignited.

API RP 545 recommends three modifications to FRTs:

- 1) Install submerged shunts between the roof and shell every three meters around the roof perimeter, and remove any existing above-seal shunts.

- 2) Electrically insulate all seal assembly components (including springs, scissor assemblies, seal membranes, etc.) and all gauge and guide poles, from the tank roof.

- 3) Install bypass conductors between the roof and shell no more than every 30 meters around the tank circumference. These bypass conductors should be as short as possible and evenly spaced around the roof perimeter.

Since modifications #1 and #2 require the overhaul of new and existing tank designs and can cost up to \$1 million per tank, implementing these is less than ideal. To implement submerged shunts, for instance, each tank has to be emptied and personnel must go inside both above and below the roof to make modifications. Because the shunts are submerged, they would be



hard to inspect and maintain. Insulating seal components and poles would also require substantial design changes and field modifications, with inspection and maintenance issues.

Because modification #3, the installation of bypass conductors, can be implemented immediately and costs less than \$10,000 per tank, it's a readily viable option for petroleum companies. Existing tanks can be retrofitted with bypass conductors while still in service regardless of roof level; and since bypass conductors are external, they are easy to inspect and maintain.

To meet the bypass conductor requirements, tank owners can choose between a traditional fixed-length conductor and an innovative retractable conductor, wound on a spring-tensioned reel.

Fixed-length conductors such as loose cable have the drawback, however, of high impedance and poor conductivity when the FRT roof is high. An FRT is most at-risk from lightning when the roof is high since when the tank is full or near full, lightning current flows are concentrated in the shunts directly below the strike location. When the tank roof is low, lightning current disperses and is more evenly distributed among the available roof-shell bonds.

Moreover, during high-roof conditions when the tank is most at risk, conventional fixed-length cable will coil and randomly bunch up on the tank roof. If the loose cable conductor is not insulated, accidental sparking may occur where it contacts itself and other parts of the roof.

In contrast, retractable bypass conductors will always be as short as possible, and offer substantially less impedance when the FRT roof is high. For instance, the Retractable Grounding Assembly (RGA) by Boulder, Colorado-based Lightning Eliminators & Consultants (LEC), can offer just one-sixth the impedance of traditional fixed-length cable

on a 50-foot tall tank.

The Benefits of Retractable Cable Roof-Shell Bonding

The ideal bond between the FRT roof and shell would have low impedance across a wide range of frequencies; be easy to install on new tanks and retrofit onto existing tanks; and be easy to inspect, test, and replace if necessary.

To satisfy these requirements, LEC developed the RGA which provides a very low impedance, direct connection between the tank roof and shell, using a wide thick-braided wire cable, spring-loaded on a heavy stainless steel reel. It is easy to install on new and existing tanks, as well as easy to inspect, test, and maintain.

With impedance of one ohm or less – compared to shunts or walkway ladders with impedance as high as 500 ohms – the RGA offers a reliable, full-time grounding connection that can help prevent lightning or static discharge-related petroleum fires.

The RGA's path of impedance is kept to a practical minimum by a combination of the shortest path, wide braid, and constant spring tension. Its spring-loaded reel extends cable as the roof descends, and retracts it as the roof rises – so the line remains taut at the mini-

mal distance needed for grounding, assuring minimal impedance and faster, more reliable grounding.

Unlike traditional roof-shell bonding methods, the RGA's wide braid maximizes surface area and therefore conductivity, since high frequency electrical charges (electrons) actually travel most effectively along the surfaces of wire conductors. The RGA cable, constructed from 864 strands of #30 AWG copper wire, is braided together to form a strap 1.625" wide by 0.11" thick, and is tinned for extra corrosion protection. With over twice the surface area of typical 0.5" diameter or 250 MCM roof-shell bonding cable, for instance, the RGA offers significantly better conductivity.

Since the RGA functions independently of the condition of the tank shell, it can eliminate the need for more traditional roof-shell bonding methods like shunts, or serve as a more effective primary safety system for preventing lightning or static discharge-related fire hazard.

Unlike a walkway ladder or single roof-shell bonding cable, multiple RGAs can be used to ensure multiple positive bonds between the tank shell and roof, and the lowest likelihood of arcing at a seal.

Because of the numerous advantages of RGAs, they are being used worldwide by companies such as ExxonMobil, ChevronTexaco, Shell, B.P, SINOPEC, Saudi Aramco, Petroleos de Venezuela (PDVSA), and Bahamas Oil Refining, often alongside other lightning protection equipment such as LEC's Dissipation Array System (DAS®).





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Still controlling the ups and downs of the gas industry

Although everything is usually subjected to alternating periods of good and bad fortune or even high and low spirits as well as smart and failure management, here in Egypt we tend to pause or suspend life temporarily for each mood. When we admire, we extremely praise while for objecting to something we totally turn off the light. That's a quick summery for the Egyptian gas sector

**By Ahmed Morsy
Tamer Abd Elaziz**

Since the end of the sixties of the last century, specifically when the first Egyptian natural gas field was discovered which was called Abu Madi field in the Delta, the Egyptian government represented by the Egyptian Petroleum Ministry has been working on how to exploit the wealth of gas that God has blessed us by.

From year to year, the domestic production of natural gas increases in addition to the existence of multipliable reserves that prepared the strategy of distributing that gas. The equation was: one third of the gas production heads for domestic consumption and the other one third is devoted for exporting, while the last one is committed for the future generations to come.

In the past ten years, Egypt witnessed a steady growth in the gas industry at the local level as well as on the Arab and international levels. Hence, its status bolstered as one of the gas producers and exporters in the world, as confirmed by studies of the global institutions.

Moreover, most of the these institu-

tions confirm that Egypt has become one of the most attractive countries for investments in exploration activities in the light of high percentage of the existence of gas in the areas of the Mediterranean Sea and the Delta, which contains more than 81% of the total reserves of Egypt. Besides, the Mediterranean region is considered one of the world top ten basin areas in terms of volume of reserves added and the discoveries made by of the new fields.

The role of Egypt became obvious after the formation of an independent entity for natural gas exporting and producing countries. A charter was also there to play the role of an organizer of the new entity's work to develop and support the integrated coordination among its members in addition to the exchange of information in the various fields of research, exploration and development of natural gas fields. In fact, Egypt was one of the first countries that called for establishing that mechanism for producing and exporting natural gas countries

in the Ministerial Conference of the Organization of Petroleum Exporting Countries "OPEC" at the end of 2000 in Cairo.

Meanwhile, the Egyptian Ministry of Petroleum's plan aims to increase the number of natural gas discoveries to cope up with the increased demand of both domestic consumption as well as the commitment of exporting contracts, which Egypt signed with a number of foreign and Arab countries. Indeed, the Ministry has successfully managed to sign new investment deals and contracts; one of them was for Edison last year that witnessed the biggest signing bonus agreement, as reached to 1.4 billion dollars.

The Ministry wasn't satisfied by the extent which it reached by the number of it has reached and as a result it has recently amended the two petroleum contracts between the Egyptian General Petroleum Corporation (EGPC) and BP from one hand in addition to RWE on the other hand, in the North Alexandria and West Mediterranean Deep Water concessions to develop the reserves which estimated by 5 trillion cubic feet of gas and 55 million barrels of condensate to contribute in securing supplies of natural gas daily production for the domestic market by October 2014. While the daily production of the two amended deals are estimated by an average of 900 million cubic feet of gas per day and 10 thousand barrels of condensate per day.

The two modified agreements include unique conditions and terms to ensure for Egypt major advantages, especially as the concession area is in the deep water of the Mediterranean Sea and it's difficult to develop within high pressure and heat. Besides, the

foreign partners will be responsible for all the investments needed for development which is approximately 9 billion dollars without any cost recovery. Most of the critics and viewers praised the ability of the negotiating of the Egyptian petroleum sector to reach balanced terms in the agreements, especially for the new economic model which was applied for the first time the oil sector in those two modified agreements with BP and RWE.

"First of all, this agreement is considered a unique one up till now in Egypt. It is deviating from the traditional PSA which in words means that we do not have cost any recovery scheme within the project," Dr. Hans-Hermann Ecke, General Manager of RWE Egypt, exclusively told Egypt oil & gas.

Commenting on the newly-modified mechanism, Ecke said: "this agreement is a very balanced agreement which is between us and the Egyptian authority represented by EGPC."

"We took our time in negotiating to reach this balanced agreement. I can easily answer that it is better than the production-share agreement as it was the case before. The former agreements were not able to cover this kind of challenging project to be realized.

"We have the offshore gas which is quite in a distance from shore and the project is technically very challenging. It was not possible to be realized in an economical frame to develop such reserves under the previous terms."

Regarding the management and that there is no cost recovery, he said: "the governance of the project is mostly with the operator which has to do with the fact that there is no cost recovery. Hence, the project has to be realized in

a certain time frame."

"Conversely, we have a single buyer which is the Egyptian General Petroleum Corporation (EGPC). They buy the gas, the whole amount of gas produced," Ecke explained.

"This project is one of the biggest in our local and international portfolio. Exactly in figures, within the next five years, we are going to spend \$3 billion and later additional investments during the lifetime of the project which is covering a minimum of twenty years of production and it has the potential to be extended."

On the other hand, BP former Chief Executive Tony Hayward said: "This agreement unlocks a new phase in realizing the huge potential of the Nile Delta basin, which will play an important role in meeting regional energy security needs in the coming decades."

"BP and EGPC have a long-standing and successful partnership, and the agreement we signed today takes that to a new level in developing these deepwater resources, as well as creating an important source of future growth for BP," Hayward added.

Hesham Mekawi, President of BP Egypt, commented: "This is a very important project that is set to unlock a strategic gas resource in the West Nile Delta area, which is significant for Egypt's energy supply today and the future. The investment in this project, estimated to be \$9 billion gross, will reinforce Egypt's importance as a major source of future oil and gas production."

Whilst, the Egyptian gas industry faces many challenges both in terms of the cost of huge investments which is reflected in the investments pumped



by companies interested in exploring for gas in Egypt. Besides, it also faces other obstacles in terms of the risks faced by these companies to operate in deep water which is predicted by indicators of natural gas at high rates.

Perhaps the problem of oil spill of BP in the Gulf of Mexico has put a heavy burden on companies' shoulders which operate in deepwater in the Mediterranean Sea and the Delta to ensure the risks that could occur in the future.

Moreover, from the other challenges which also face the gas industry are the fluctuations in the price of gas since it is not linked to the rise in the price of crude oil. Thus, the current decline is of great concern to producing and exporting countries in sales to the oversupply in the market.

Frankly speaking, gas industry requires advanced technologies that would reduce the total cost of expenses as well as increased production volumes which offset the companies operating in the field of gas investments when sold production volumes extracted.

Ministry of Petroleum was able to step down obstacles facing the gas industry aside after linking production facilities for companies to each other, which would increase the quantities extracted and placed on the production map in the fastest time. Not only at this point but also the terms and conditions altered by the Ministry in the agreements would encourage investment and increase appetite for foreign investors to increase investments in the gas industry.

For its part, the joint-venture companies became ready to develop of natural gas wells located in the areas of gas and mobilized its forces to boost the production, especially in the Mediterranean and the Western Desert.

For instance, North Sinai Company (Nospco) announced that it prepares itself to implement the second phase of the new drilling plan in the middle of this year and to finalize it by the end of 2016.

Egypt Oil & Gas newspaper (EOG) learned that the company's plan include drilling six new wells in its acquisition area in the Mediterranean. EOG also learned that the volume of the investments of the six exploratory wells reached up to \$200 million. Nospco will be drilling two exploratory

wells in Tao block, and the other four in Kamose and Wastany blocks.

Nospco seeks to maintain the current production rate at 180 million cubic feet, applying the latest technologies in drilling operations, represented in the 3D seismic survey for the detected wells.

Additionally, Abu Qir Petroleum Company is aiming to boost its current production rate through adding more wells to these fields. Moreover, Abu Qir is targeting a 400 billion cubic feet of gas from the North Delta fields.

The current production rate of Abu Qir, the EGPC and Italian Edison joint-venture company is 175 billion cubic feet of gas. Edison which signed the highest bounce signature that reached \$1 billion and \$400 million last year. Besides, it initiated its first steps towards the drilling of two new wells, exploratory and development wells in North Abu Qir-10 and Center of Abu Qir respectively.

EOG learned that the total value of the current wells drilling counts for \$41 million. The company targets a production boost from the North Abu Qir field by raising its current production from 175 billion cubic feet of gas per day to reach up to 300 billion cubic feet from the new marine platforms. As well, the company intends to conduct well's treatment over its exploratory wells, in order to be able to accommodate more new wells, whether exploratory or development ones, especially after the successful 3D seismic surveys that help boosting the North Abu Qir field reserve.

The drilling in the Mediterranean Sea is one of the very expensive since the drilling in deep water and shallow need special types and techniques of drilling rigs in the depths and thus it requires huge investments. Hence, the extra-high costs of drilling in the Mediterranean region is a major impediment to oil companies interested in working in production facilities as a result of the high cost of extracting oil and gas.

Some of the companies called the competent authorities for facilitating the procedures for the entry of foreign partner in the new bidding of the Mediterranean Sea to play a key role in the local market needs for the production of oil and natural gas and to increase the surplus for export abroad.



In addition, they also asked for compensation of the foreign partner for the high costs which are disbursed in the exploration and extraction of oil and gas to increase the percentage profit contracts for drilling operations in deep waters.

For them, the price formula is regarded as the only way for joint-venture companies in order to get their material rights from the foreign partner in addition to setting the price, which is sold under the terms of the contract between the Egyptian company and a foreign partner.

They believe that the government should support the oil companies hoping to extract oil from the Mediterranean Sea to ensure the escalating of creating new joint-venture companies with the foreign partner side by side with the increase in production of oil and natural gas in Egypt.

They further explained that this support will increase employment opportunities on the extraction of gas from the Mediterranean Sea and the conversion from operating "onshore" to the deep water through the provision of good information base for deep water.

As a result, that should grab the attention to the areas of new concession located in the Mediterranean because of its important role in increasing the production of gas and oil, especially after the vital technological developments occurred in the Egyptian gas industry in Egypt. It consequently made Egypt in the ranks of the first countries in the production of gas in the world in addition to meeting the needs of Egypt's commitments for foreign joint-agreements, for example, the Arab gas pipeline, as well as the needs of matching domestic demand for energy, which has grown in the last period due to increased growth rates.

All of a sudden, however, this comes at a time upon which the crisis of cutting electricity from the Egyptian citizens and residential apartments as well as factories. The chaos of the need for electricity had caused

wide controversy over the past couple months as there were mutual accusations for the crisis between the Electricity and Petroleum Ministries.

The Ministry of Petroleum strived to provide the quantities of gas needed by the power plants, at a time which is committed to the ministry's export contracts and the delivery of natural gas to households as well as meet the needs of manufacturers of gas in implementation of the electoral program of President Mubarak.

Some news and rumours said that the Egyptian government is seeking to re-buy approximately 1.5 billion cubic meters of natural gas it sold to Israel as the country faces a gas crisis. Also, unnamed sources told the Egyptian daily Ash-Sha'b that the Ministry of Petroleum and Mineral Resources said at least half of the natural gas sold to Israel would have to be repurchased for \$14 billion, although it was originally sold for \$2 billion. However, the Ministry of Petroleum later cancelled the information and totally declined it.

The independent daily Shorouk reported Saturday that the power outages and recriminations between the oil and electricity ministries over who is responsible for them have embarrassed the ruling party, AFP reported.

In January, the petroleum minister announced that Egypt would need to import natural gas to cover huge shortfalls in domestic-use gas and industrial diesel. He retracted his statement shortly after over concerns of a backlash from those opposed to exporting natural gas to Israel.

There is also renewed protest against a gas deal that supplies Israel with an estimated third of its natural gas consumption, with some linking the power cuts to gas shortages, the newspaper reported.

Despite concerns, the electricity minister said Egyptians would need to lower the electricity load during Ramadan, which began in the second of week of August.

However, Mohammad Awad, head of the Electricity Holding Com-

pany, said lowering loads was a normal procedure during the summer period, given the increased consumption of electricity from air conditioners and refrigerators.

Nevertheless, perhaps what happened in the editing and altering the price of the old and current agreements of exporting natural gas the is one of the most important steps taken by the Ministry of Petroleum for the advancement of the gas industry. It managed to provide approximately 20 billion dollars by the modified agreements with foreign partners. The move has come while the Ministry of Petroleum is facing criticism because of high number of exporting deals concluded during the past years.

The Ministry of Petroleum has been able to open a large market for exporting gas. It started first when it initially inaugurated giant complexes to export liquefied natural gas in the city of EDCO with a total investment of 4.6 billion dollars. It consists of two manufacturers around 7.2 million tons annually. Its exports accounted for 60% of Egypt's exports of liquefied natural gas; it also produces 40% of the total Egypt's production of natural gas. The complex plant includes two warehouses for storage can each 140 thousand cubic meters, also boasts the largest port dedicated to export liquefied natural gas loading dock length of 2.4 km.

The process of exporting is performed through the gas liquefaction complex for natural in Damietta city, which is the largest production unit for the liquefaction of gas in the world.

It has a capacity of 7.5 billion cubic meters of natural gas and produces 4.8 million tons of liquefied gas, which ensures Egypt's membership in the club of countries exporting gas. Damietta's plant is supplied by gas from fields in the Mediterranean Sea. Besides, it was established by joint investments with companies of Spain and Italy up to 1.3 billion dollars and Egypt contributes in it by 20%.





Flexibility's value in escalating investments

"In fact, it is not a burden as working without a cost recovery is not risky for us since it has the shape of the usual investment projects in other countries," Dr. Hans-Hermann Ecke, General Manager of RWE Egypt, told Egypt oil & gas in an interview describing the agreement of the West Nile Delta Project

By Ahmed Morsy

Having the charge of RWE DEA Egypt since last year, can you explain the difference between that moment and meantime?

First of all, it's the second time for me to be here in Egypt. I have been in here from 2001 to 2005 as an exploration manager and now observing some of the growing fruits which we planted in the previous years.

The current situation is significantly different than before and I think the most highlighted is the West Nile Delta Project as it plays an important role in the overall company's international portfolio. It is one of the projects which we follow with high expectations here in Egypt and which also explains the fact why Egypt is a very important market for us.

What are RWE's current projects in the Egyptian market?

All in all, we have 15 onshore and offshore concessions in Egypt, across a concession net area of about 15,500 square kilometers. Core regions of RWE Dea's E&P activities are situated in the Nile Delta, Gulf of Suez and also in the Western Desert.

By investing 3.6 billion US-Dollars and with 50 billion cubic meters of natural gas which represents RWE Dea share in the fields in the North Alexandria and West Mediterranean Deep Water concessions, what are those two fields symbolize for RWE?

This project is one of the biggest in our local and international portfolio. Exactly in figures, within the next five years,

This project is one of the biggest in our local and international portfolio

we are going to spend \$3 billion and later additional investments during the lifetime of the project which is covering a minimum of twenty years of production and it has the potential to be extended.

What are the most significant features of that amended agreement between RWE, BP, and EGPC?

First of all, this agreement is

considered a unique one up till now in Egypt. It is deviating from the traditional PSA which in words means that we do not have cost any recovery scheme within the project.

The governance of the project is mostly with the operator which has to do with the fact that there is no cost recovery. Hence, the project has to be realized in a certain time frame.

Do you consider it risky to work without cost recovery or even as a heavy burden on your shoulders?

In fact, it is not a burden. Working without a cost recovery scheme is not risky for us since it has the shape of usual investment projects in other countries, for example. Moreover, we are used to deal with such kind of projects.

On the other hand, we have a single buyer which is the Egyptian General Petroleum Corporation (EGPC). They buy the gas, the whole amount of gas produced.

What's RWE most preferred system for agreements to work within Egypt?

In general, I would like to give a statement that this agreement is a very balanced agreement

which is between us and the Egyptian authority represented by EGPC. We took our time in negotiating to reach this balanced agreement. I can easily answer that it is better than the production-share agreement as it was the case before. The former agreements were not able to cover this kind of challenging project to be realized.

We have the offshore gas which is quite in a distance from shore and the project is technically very challenging. It was not possible to be realized in an economical frame to develop such reserves under the previous terms.

What's RWE Dea Egypt current production rate compared to last year?

The production rate, from our three joint-ventures in the Gulf of Suez together with partners' production, is approximately 20.000 bpd.

Tell us about your plan for the next stage to increase your production rates from your concessions in Egypt?

Let me say that the big step will be to produce 3 billion

cubic meters annually which represents our share within the plateau production phase from 2015. It will be considered as a huge jump in our company's production rates.

In the time between, we are following up the project of the West Nile Delta onshore Disouq area where we are currently negotiating with the government about the development leases.

Let me say that the big step will be to produce 3 billion cubic meters which represents our share, in the beginning of 2014

Is RWE planning to enter any new bids in the coming stage?

As usual, we will screen the offers in the new areas and we will then decide if enter with a bid or not. This decision will be opportunity driven.

What's the total amount of investments of RWE in the current year? Was it decreased according to the global economic crisis?

Up till now, on the investments side, we have no major impact due to the global economic crisis but of course the fall in the prices affected revenues. Nevertheless, it hasn't affected our investments last year or even this year.

The major discoveries in North Alexandria and West Mediterranean Deep Water concessions were achieved in 2004 and earlier. Now we are just starting the development project.

Regarding RWE, what did you do to avoid being affected by that global credit crunch?

We kept our eyes on the investment side and tried to avoid having an effect on the most important investments for the future. However, in the Oil and Gas business we always face all kinds of ups and downs like when the price of oil declined to be less than \$14pb in the past. So, we had always to be very flexible.

To what extent do you think the Egyptian Petroleum sector was

affected by the global economic crisis?

I wouldn't like to talk about the Egyptian Government here. So, I can't judge if the sector was affected or not. Regarding the other companies, it depends on the status of the company and the individuals and officials working in it. Thus, I have no idea whether they were affected or not.

How would you rank Egypt between the countries that RWE operates in? Why?

I would like say that Egypt is very important for us. We have a very long tradition here. In 1989, RWE Dea took over assets from Deminex in Egypt, which have been operating since 1974. Thus, the company can look back on more than three decades of oil production in the Gulf of Suez. It shows that we are quite confident of the country and its potential.

How can you see the future of the Egyptian petroleum sector in Egypt?



EOG interview's Dr. Hans-Hermann Ecke, General Manager of RWE Egypt

What I can say is that the Egyptian petroleum authority is very flexible in solving problems. And I'm sure that this flexibility will help us to invest more in Egypt.

What is your opinion about the government's intention of canceling the subsidy system over the petroleum products?

It is a political question but

from my economical point of view, I think they are going to follow the right path. It has to be taken into consideration that the petroleum products, hydro carbons, are always within international competition and the ups and downs of the prices. So, there would be somehow some problems on the long run if they are attached to a subsidy system.

In your opinion, what can be done in order to

develop the Egyptian Petroleum sector?

I think if Egyptian authority stay within that flexibility in negotiating contracts for the benefit of the governmental parties as well as the foreign investing partners, than they are on the right track.

In addition, our agreement reflects such ability of the government and investors to come to economical and sustainable results for all parties involved.

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Will the British giant collapse?

Last July, the U.S. House of Representatives voted to end the federal moratorium on deepwater drilling for oil companies, imposing new federal safety requirements. The proposal to end the moratorium was an amendment to a pending energy bill. The moratorium will not end unless the Senate also votes to terminate it and President Barack Obama signs the legislation into law. The fate of the proposal in the Senate is uncertain. The Obama administration imposed the six-month moratorium on exploratory drilling in waters more than 500 feet deep in response to the BP oil spill. The moratorium runs through the end of November

By Mostafa Mabrouk, Vice Chairman Assistant for Economic Affairs, Ganope

Democratic Majority Leader Harry Reid is expected to try, and fall short of having the necessary votes to bring an energy proposal to the floor of the Senate. Failure to pass this legislation before lawmakers leave Washington for their summer break will not only represent a win for the oil industry generally, but it will also diminish the likelihood of the Senate picking up on a controversial measure passed by the House of Representatives late July that would have serious consequences for BP.

The so-called Miller Amendment, passed late on July 30, 2010, as part of an energy bill, would not provide BP any future drilling permits in the U.S. due to the company's poor safety record over the past seven years. The proposal caused considerable terror within BP and has prompted a lobbying effort against the measure by the British embassy in Washington, which has argued that the measure is protectionist.

The Senate has not formally considered any measure that matches the Miller amendment, making it unlikely to become law. But once proposed legislation is open for debate on the floor of the Senate, any single lawmaker can put forward an amendment that could get included in the final hour. The legislation under consideration would remove the \$75 million oil spill liability cap. It would also create new incentives for electronic cars and promoting natural gas production.

For now, says one prominent energy lobbyist who asked not to be named, BP is trying to ensure that lawmakers steer clear of any proposal that resembles the measure passed in the House. They are relying on an argument that has gained resonance with many Senate Democrats: namely that the British oil company must remain a going concern if it is to pay off billions of dollars in liabilities, potential legal claims and a possible government settlement.

Lawmakers return to Washington in mid-September and could raise the issue again, especially if they believe they can gain points with an electorate that wants to see BP punished for the huge oil spill in the Gulf. For veteran Washington lobbyists and lawmakers, it is more than difficult to predict what might unfold between now and the autumn, when Congress will be gearing up for the midterm election season. Democrats are not unified on the issue and there are doubts that any single Republican would support Mr. Reid's efforts to pass an energy proposal. Republicans in the Senate have been accused by their Democratic counterparts of blocking en-

ergy legislation to protect BP.

They could seek to free themselves from the "pro-BP" label and propose a tough measure to please voters.

BP's world's worst oil spill

The BP oil spill in the Gulf of Mexico is the world's biggest accidental oil leak, with government scientists estimating that 4.9 million barrels of oil gushed from the Macondo well before it was capped in July 2010. The amount is far higher than the estimated 3.3 million barrels spilled into the Bay of Campeche by the Mexican Rig in 1979, which had previously been estimated to be the world's biggest leak. Federal science and engineering teams estimated that 53,000 barrels of oil a day were flowing out of the well before BP capped it in mid July.

The latest estimates could be used to determine the size of the penalties BP faces under the Clean Water Act, which calls for fines of \$1,100 a barrel or \$4,300 a barrel if the government finds that gross negligence led to the spill. At 4.9 million barrels that means the total fine could be as high as \$5.4 billion, or if gross negligence led to the spill, \$21 billion.

The tests that took place in August involved pumping heavy drilling mud into the well at low speed and pressure, as an attempt finally seal the leak. BP said it expected to pump about 2,000 barrels of mud. It will then decide whether to cement the well immediately, from the top, or to wait until after the relief well is drilled and then cement it from the bottom. BP was also confident that the well had "integrity" and was no longer throwing oil into the waters of the Gulf.

Generally, work continues to identify and collect oil on the surface of the sea and to collect and clean up oil that has reached shore. Since July 15, no new oil has flowed into the Gulf of Mexico from the MC252 well. As a result, BP, as part of Unified Command, has conducted over flights and other reconnaissance and has found less swimmable quantities of oil over the last several days. To date, skimming operations have recovered a total of over 826,000 barrels of oily liquid and a total of 411 controlled burns have been carried out.

Gradual Flow of Oil Spill Bills

Senate Majority Leader Harry Reid has introduced a bill that tightens restrictions on offshore drilling and promotes energy efficiency, electric cars and the use of natural gas in trucks.

The House bill includes a provision that would modify a six-month moratorium on deepwater drilling, so that some drilling permits could be approved on a rig-by-rig basis if the Interior Department determines a rig meets new safety requirements. The drilling moratorium imposed by Interior Secretary Ken Salazar would remain in effect, and he would retain power over whether to approve a permit. The bill also would remove the current \$75 million cap on economic damages to be paid by oil companies after major spills and increases to \$300 million the financial responsibility offshore operators must demonstrate in most cases. And it would create new "conservation" fees on oil and natural gas extracted from land or water controlled by the federal government. At this point, the only good news for BP is that it has more than \$250 billion in total assets to help pay for its spill bill.

BP sells its assets

The unlucky BP was compelled to get rid of some assets to confront the forthcoming headache of compensations which may be unrealistic, at the same time will break its backbone, BP started by selling some properties that cope with the current financial position, but no one can predict the next steps:

- Apache known for purchasing mature oil and gas properties seized BP properties in Alberta and British Columbia, as well as the Permian Basin of West Texas and New Mexico and Egypt's Western Desert. All told, the Houston oil and gas company will add estimated proved reserves of 385 million barrels of oil equivalent to its portfolio. Shares of Apache fell 2.6% to \$86 in after-market trades. BP shares rose 1.3% to \$35.65. BP will get \$7 billion in cash for its cleanup effort in the Gulf of Mexico. The U.K. oil giant laid out plans in July to raise cash as it set up a \$20 billion victim fund for the worst spill in U.S. history. Apache seizes rare opportunity to acquire legacy positions from a major oil company, with oil and gas production in place as well as prospects for new exploration. Apache would add value to the properties "for decades to come." It was a good game from government expected regulations to pounce upon BP. The deal expects to close in the third quarter.
- BP has also agreed to sell its oil and gas exploration, production and transportation business in Colombia to a consortium of Ecopetrol, Colombia's national oil company (51%), and Talisman of Canada (49%). The two companies will pay BP a total of \$1.9 billion in cash; the sale is expected to be completed by the end of the year. The sale of the Colombian business is part of



BP's plan, announced on 27 July, to liquidate up to \$30 billion of assets over the next 18 months, and the company has also recently informed governments in Pakistan and Vietnam that it intends to divest its upstream interests in those countries. Under the terms of the agreement, Ecopetrol and Talisman are due to pay BP cash deposit of \$1.25 billion with the balance of payment due on completion of the sale. BPXC has assets including interests in five producing fields in four association contracts, four separate pipeline interests and two offshore exploration blocks. Net proved reserves total 60 million barrels of oil equivalent and BPXC's net production is approx 25,000 barrels of oil equivalent a day.

- Upstream, BPXC has interests in, and operates, the Tauramena (BP interest 31 %), Rio Chitamera (31 %), Recetor (50%) and Piedemonte (5. %) association contracts, which are due to expire between 2016 and 2020. Producing fields on the licensees include the Cusiana oil and gas field, and the Pauto and Florena fields. BPXC also has a 40.56% interest and operator of the RC4 and RC5 exploration blocks offshore Cartagena, awarded in 2007. This agreement does not affect BP's Castrol lubricants business and other

downstream oil activities in Colombia.

BP faces more pressure

In another sign of pressure in the wake of the oil-well blowout that has become the largest disaster in the U.S. history, the British company said it will implement a "significant reduction" in its 2010 capital spending budget of \$20 billion and increase planned liquidation to approx. \$10 Billion over the next 12 months. BP said the "Independent Claims Facility" would be managed by Kenneth Feinberg, who ran the fund for the Sept. 11 terror attack victims. BP will initially make payments of \$3 billion in the third quarter and \$2 billion in the fourth quarter. After that a payment of \$1.25 billion will be made per quarter until a total of \$20 billion is being paid in, reported by the Company. The fund does not represent a cap on BP liabilities, but will be available to satisfy legitimate claims, in my personal opinion; BP will pay more after spill stop and many parties. Civilian Societies will open fire to claim for damages that will make BP suffer for many years. BP also reiterated recent statements that the bulk of its business continues to perform well, with cash flows from operations expected to exceed \$30 billion in 2010 at current prices.

More Egyptian expansion on the way

Expanding the Egyptian activities abroad has been on the top of the Ministry of Petroleum agenda, which its fruitful results were reflected in the number of contracts signed lately for local service companies to conduct activities abroad. But, should not the Ministry expand its exploration activities as well?

By Shady Ahmed

The reasons behind this expansion strategy lies not only on the economic profits and expertise exchange, but also it strengthens the value of local companies and provide more job opportunities. According to experts, Egyptian companies get exposed to latest technologies and gain more experience due to the ties they establish with major foreign companies while implementing projects abroad. Among the recently signed contracts, the Ministry sealed a deal to develop the Zubair Field in Iraq in association with the Italian Eni. More agreements are on the way, especially after the successful operations held by Enppi and Petrojet abroad.

"One of the main factors of development for any company is attained through securing deals and projects abroad. Expanding the company's operations base in other companies is an added value for the whole entity. The successful examples of Enppi and Petrojet have drawn a good image of the Egyptian capabilities, mainly in the Arab countries where both companies held several projects," said Hamdy Abu El-Naga, petroleum expert.

Abu El-Naga added that the Egyptian petroleum sector needs to exchange expertise and modernize its current technologies through extending its fleet in other countries and sending Egyptian engineers and geologist abroad through the cooperation with multi-national companies, who would bring in to the country the latest techniques and needed knowledge. "Such type of cooperation's would create a new generation of young skilled Egyptian employees who would develop the local exploration and production activities in the national industry."

Currently, Egyptian companies are conducting several projects abroad, such as developing and renovating refining labs, electric stations, and pipelines in addition to the research, exploration and production projects.

Commenting on the recent deal sealed to establish an Egyptian-Yemeni Company, he expects that this association will help exchanging expertise and latest technologies; moreover it would boost the national economic revenue, provide more job opportunities and offer better work environment for engineers and geologists working in the company. It is worth mentioning that the Egyptian side in this association is represented by Enppi and Petrojet, while the General Yemeni General Association of Oil & Gas represents the other side.

"The model of Enppi and Petrojet should be imitated by other national companies. The two companies have expanded their activities in more than 14 countries, with investments exceeding \$5 million during the past five years."

Similarly, Eng. Abdel Moneim Gaber, petroleum experts, believes that strengthening business ties and sealing agreements to expand activities abroad are of great values to the sector. Giving the example of Egyptian-Malaysian relationships, Gaber highlighted that the Egyptian calibers have an important opportunity to learn from the Malaysian counterparts as they are well known for their outstanding experience in the LNG (Liquefied Natural Gas). "The Malaysian Petronas is one of the largest companies worldwide distinguished by its expertise in liquefying natural gas. Presently, it invests in two main domains in Egypt, gas exploration and liquefaction projects," he added. "We should seize all benefits from this relationship, specially that Malaysia will turn into a net oil importer next year."

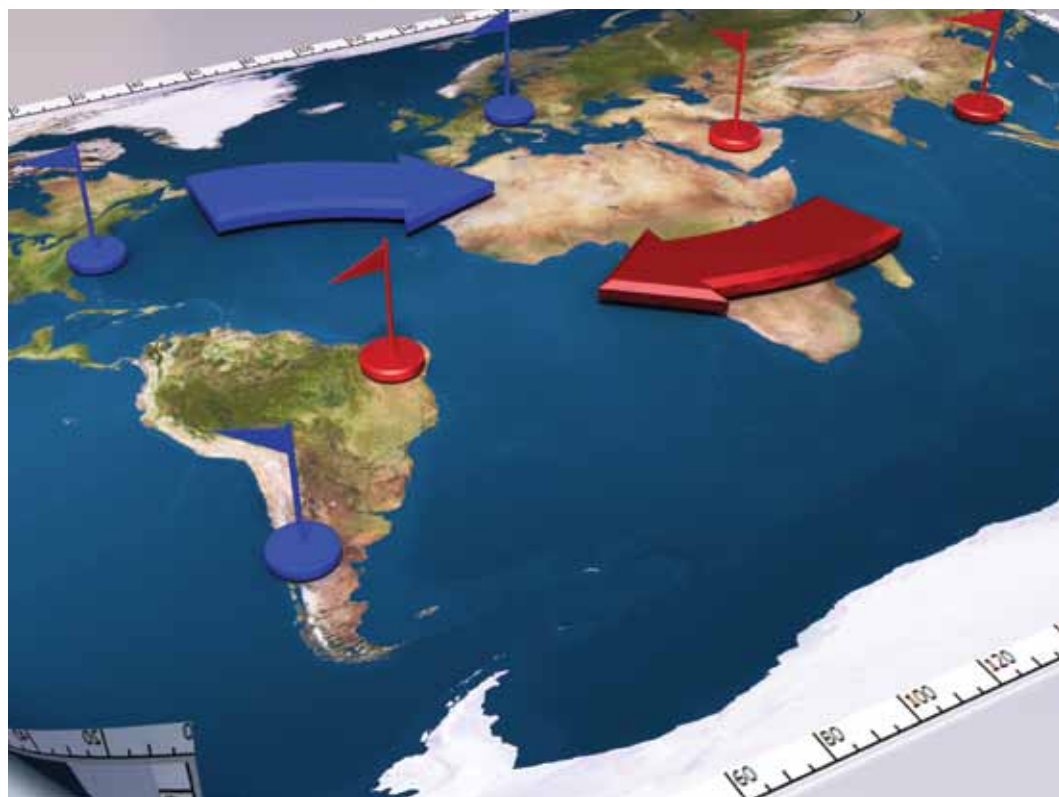
Since 2005, Malaysia has been adopted special educational scholarships granted its Petronas University for Egyptian students and five classes specialized in petroleum engineering were graduated so far.

Gaber expects more agreements to be signed between the two countries to cooperate in more exploration and production activities in addition to the present LNG projects and Petronas scholarships.

"The strategy of expansion is also supported by the petroleum marine service companies, such as PMS, and Maridive, which implemented more than 15 projects outside the Egyptian geographical boundaries." Yet, he warned, this strategy should not distract the main Ministry responsibility of maintaining high rates of oil and gas exploration and production activities in the country. "We should sustain a firm policy to keep the oil and gas production standards growing in the country and increase our reserves, taking into consideration the considerable lack of crude oil we are facing now."

In fact, many Arab countries are requesting the cooperation of Egyptian professionals, geologists and engineers to develop their countries' petroleum sectors, said Al-Shenawy Badr, Vice General Manager of Drilling and Wells Repair at PetroGulf Company. "Contractors play a pivotal role in expanding the Egyptian activities abroad as they provide a wide range of services to the Arab countries, concerning design, construction, engineering consultancy in addition to the maintenance operations for electric cables and pipelines installations."

"Many Egyptian contractors, such as Enppi, Petrojet, Sahary and many more brought massive economic revenues to the country attained by their works abroad, such as construction and installation of marine platforms. Last year, Petrojet solely delivered natural gas infrastructure projects in many countries, among which Yemen, Iraq,



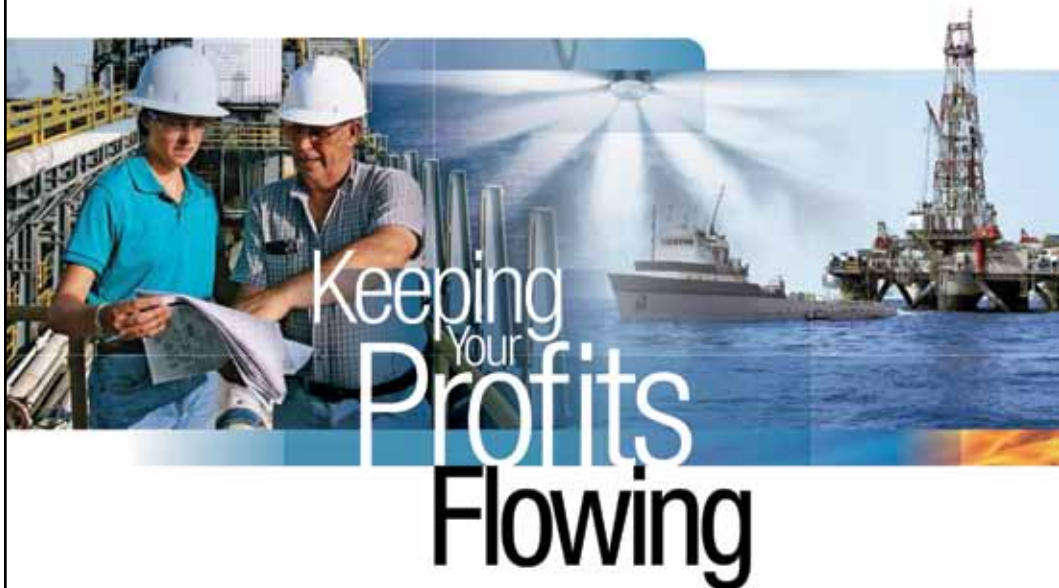
Qatar, Lebanon and the Kingdom of Saudi Arabia," stated Aziz Effat, petroleum expert, who highlighted Petrojet example to prove the fruitful results of the Ministry expansion strategy.

"Presently, Petrojet has been awarded six new projects to execute drilling and renovation operations in the Gulf area in associa-

tion with major petroleum companies."

Effat affirmed that there is an increasing demand for marine services in the areas of Arabian Gulf, India, Mexico and West Africa, which are allocating large investments for exploration and production operations in the deep waters and seeking the contribution of Egyptian petroleum marine services

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Fading gas behind blackouts!

"First they claimed they would deliver gas to every households, now we still do not have gas and they took our electricity too," said a local citizen wondering who is responsible for this problem, the Ministry of Electricity or Ministry of Petroleum

By Sama Ezz Eldin

"With 18.3 billion barrels of oil, Egypt has achieved its highest-ever proven oil reserves during the 2009-2010 fiscal year ending last June," the state's official Middle East News Agency (MENA) announced.

The Minister of Petroleum Eng. Sameh Fahmy announced that the current figures are the utmost in Egypt's history, expecting that the proven reserves are to reach 20 billion barrels over the next couple of years.

Crossing the 18 billion barrels margin, despite increasing local consumption, is an impressive national milestone after the nation's reserves stood as low as 11.8 billion barrels in fiscal year 1999-2000, according to the report issued by the Egyptian Petroleum Authority and quoted by MENA. In 2009, gas was the dominant fuel for Egypt, accounting for an estimated 50% of primary energy demand, followed by oil at 43.1%.

Conversely, "The electricity cuts affected Egyptians from the Nile Delta in the north to the ancient temple city of Luxor in the south."

Both reports came out in the same week, and during a sacred time of the year, the holy month of Ramadan, throughout which the government should have been well prepared for it. "The electricity cuts began in early August as temperatures top 38 Celsius."

The government alleged it was not to be blamed, accusing the people of excessive electricity use. Osama Heikal from Al-Masry Al-Youm answered that back by "The government rhetoric lacked an apology to the people who are paying high electricity bills every month. It also lacked any recognition of the ministry failure to provide a basic service to the citizens."

"It is not the people's fault neither the holy month. The information we know that some of the companies were late with their development plan and it affected the amount of gas produced," a chairman to one of the major companies, who asked to be anonymous, told Egypt Oil & Gas newspaper.

"Whether it is for economical or security reasons, those companies were late with their plans and it is the people whom will suffer in return."

"The petroleum sector stressed on providing the needed amount of gas to meet the local demand ahead of anything else, but falling behind with the schedule and not conducting the needed maintenance to the

wells were the two main reasons behind the shortage of gas and causing the major power cuts," he added

The source said that we cannot deny that the local demand have rose, but the government should know better about this holy month to be primed enough for it, with long promises of meeting the local demand is a priority.

According to reports, "The power outages and recriminations between the oil and electricity ministries over who is responsible for them have embarrassed the ruling party".

Mohamed Awad, Head of the Electricity Holding Company, confirmed that recent power cuts were a result of the Ministry of Petroleum not providing electricity plants with enough natural gas.

The reports also added that the renewed protest against a gas deal that supplies Israel with an estimated third of its natural gas consumption has some linking to the power cuts because of gas shortages.

These protests are close in time with the article published in the New York Times, "Natural Gas Deposits Improve Israel's Energy Outlook", that stated, "For the past few years, Israel has bought gas piped from Egypt."

Official sources from the Ministry of Petroleum answered back by promising that the ministry will reduce gas exports over the next few weeks so that there is more available gas to satisfy local needs, according to Al-Masry Al-Youm. "A reduction in gas exports is the logical solution to satisfying the needs of the major gas-consuming sectors in Egypt."

Gas exports to Jordan have also decreased by 30 percent since the beginning of the year, which has caused complaints from Jordanian officials at meetings between the two countries.

Mahmoud Lateef, Head of the

Egyptian Natural Gas Holding Company, had earlier told Al-Masry Al-Youm that the Petroleum Ministry gives priority to fulfilling local needs for gas, particularly those of the electricity and industrial sectors.

This controversial situation raises several questions about the announcements made earlier this year about numerous gas discoveries in the country, starting early with GDF and Dana Petroleum's new Gas discovery. Melrose also announced gas discovery with reserves of 30 Billion cubic feet of gas onshore Egypt, in the Sidi Salim formation in the South East Mansoura concession, in which Melrose holds a 100 percent working interest. Besides, Dana Gas announced two gas discoveries in the Nile Delta. Both discoveries had estimated reserves of 8-13 billion cubic feet (bcf) and 27-57 bcf of gas with associated condensate. Moreover, the late agreement signed with BP Plc and RWE AG that changed the terms of two natural-gas production contracts in Egypt of the North Alexandria and West Mediterranean Deepwater concessions.

On the other hand, Hamdy Abu Al Naga, the petroleum expert finds that we need to make the most of our gas produced by turning to the new technology of Gas to liquids (GTL), which is a refinery process to convert natural gas or other gaseous hydrocarbons into longer-chain hydrocarbons such as gasoline or diesel fuel. Using gas-to-liquids processes, refineries can convert some of their gaseous waste products (gas flare) into valuable fuel oils, which can be sold as is or blended only with diesel fuel. It may also be used for the economic extraction of gas deposits in locations where it is not economical to build a pipeline. This process will be increasingly significant as crude oil resources are depleted. Royal

Dutch Shell produces a diesel from natural gas in a factory in Bintulu, Malaysia. Another Shell GTL facility is the Pearl GTL plant in Qatar, the world's largest GTL facility. A Qatar Airways Airbus A340-600 conducted the world's first commercial passenger flight using a mixture of kerosene and synthetic Gas-to-Liquid fuel in its flight from London's Gatwick Airport to Doha. Qatar is considered one of the leading countries to carry out such technology.

The chairman also added in the matter of finding solutions to deal with this crisis, that we need to attract more investments into the country. "It can only be done by being clear with our information. Also to provide up to date records and data to the investors."

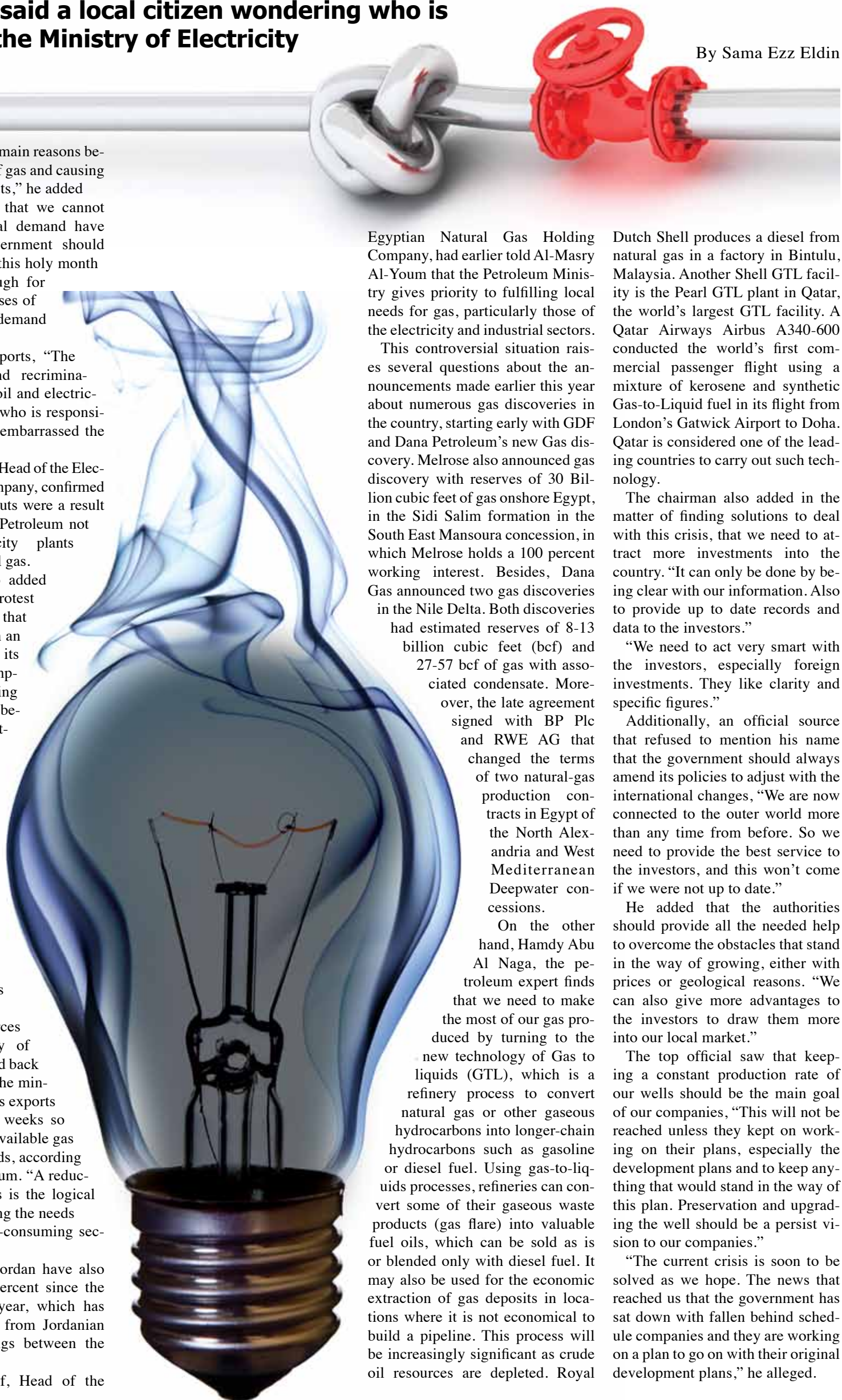
"We need to act very smart with the investors, especially foreign investments. They like clarity and specific figures."

Additionally, an official source that refused to mention his name that the government should always amend its policies to adjust with the international changes, "We are now connected to the outer world more than any time from before. So we need to provide the best service to the investors, and this won't come if we were not up to date."

He added that the authorities should provide all the needed help to overcome the obstacles that stand in the way of growing, either with prices or geological reasons. "We can also give more advantages to the investors to draw them more into our local market."

The top official saw that keeping a constant production rate of our wells should be the main goal of our companies, "This will not be reached unless they kept on working on their plans, especially the development plans and to keep anything that would stand in the way of this plan. Preservation and upgrading the well should be a persist vision to our companies."

"The current crisis is soon to be solved as we hope. The news that reached us that the government has sat down with fallen behind schedule companies and they are working on a plan to go on with their original development plans," he alleged.





Application & Coating Defects

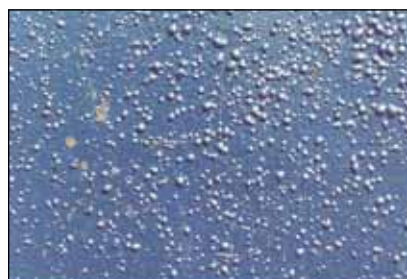
ADHESION FAILURE

- Description:** Paints fails to adhere to substrate or underlying coats of paint.
- Probable Causes:** Surface contamination or condensation.
- Prevention:** Ensure that the surface is clean, dry and free from any Contamination and that the surface has been suitably Prepared. Use the correct coating specification.
- Repair:** Depends Upon the extent of adhesion failure. Removal of Defective areas will be necessary prior to adequate Preparation and application of correct coating system to Manufacturer's recommendations.



BLISTERING

- Description:** Dome shaped projections or blisters in the dry paints film Through local loss of adhesion from the underlying surface. Blisters may contain liquid, gas or crystals.
- Probable Causes:** Localised loss of adhesion caused by contamination with Grease, oil, salts, rust, trapped moisture, retained solvent, Hydrogen vapour pressure (on coatings used with cathodic Protection), soluble pigments etc. Osmotic blistering can Also occur in immersed conditions.
- Prevention:** Ensure Correct Surface preparation and application. Apply A suitable coating system.
- Repair:** Depending upon size and type of blistering, remove Blistered areas or entire coating system and repair or fully recoat.



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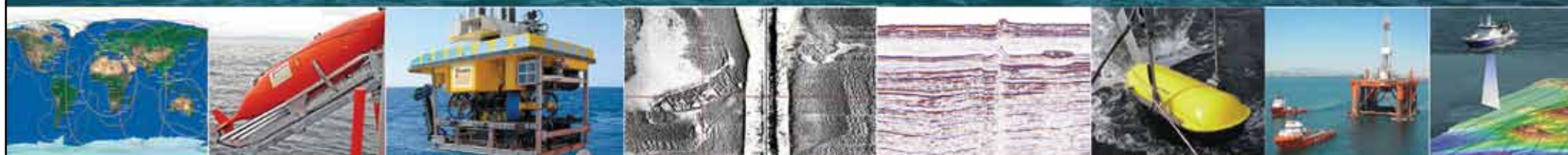
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Driving with Dual Fuel engine

Diesel engines have been used for cogeneration power systems, locomotives, marine applications, and other engine markets. However, as tougher environmental standards are being enacted throughout industry, users of diesel engines are looking for ways to lower emissions without reducing engine power. Dual fuel systems, engines that operate on more than one fuel source, are gaining popularity because they reduce the amount of diesel fuel used

Eng. Ezz El-Din Allam Technical Support Service Gen.Mgr (EGPC)

Until recently, adding a dual fuel system was impractical due to the cost of replacing the original engine and the loss of power traditionally associated with these replacement systems. It is easily to convert diesel engines into diesel-natural gas engines, eliminating the need for companies to replace their diesel engines with natural gas engines. The system reduces emissions by allowing engines to operate cleanly on domestically produced natural gas, while still maintaining the potential to operate on traditional diesel fuel as well. The system is particularly effective in power stations for offshore drilling rigs because the gas is frequently flared.

Benefits

The Dual fuel engines are characterized by their ability to:

- Replace nearly 95% of the imported diesel fuel normally required for engine operation with clean-operating, domestically produced natural gas
- Maintain original engine power while reducing emissions, such as particulates and nitrogen oxides (NOx)
- Reduce maintenance costs by using cleaner fuels that leave less carbon build-up

Huge amounts of diesel fuel are used every year. Despite the small consumption per unit, the huge number of engines creates a significant share of the total consumption. About one million ton of diesel consumption can be related to small diesel engines in the applications mentioned above. High fuel price and the question of energy security require using natural gas or flare gases with high methane content which can reduce the diesel requirements, improve the energy consumption and reduce environmental pollution. Egypt has made significant development in using natural gas in internal combustion engines, especially in the transportation sector. The country has CNG supply stations and natural gas run vehicles in operation.

Diesel engines could be run with natural gas in two ways; dedicated gas-only operation and interchangeable dual fuel operation. The engine can be converted to a spark ignition engine, requiring major engine hardware modification. This is more practical for large buses and trucks, but often leads to the termination of the diesel manufacturer's warranty and lags further performance certification. The dual fuel operation does not involve any major change of the engine hardware; only a gas mixing facility is added at the air inlet. In dual fuel operation, both diesel and natural gas get into the engine. A small amount of diesel is injected as a pilot fuel, which ignites as usual and initiates the combustion of natural gas, which is the main fuel.

The gas flow can be made using the intake manifold suction or installing a gas injector in the intake manifold. The injection timing for diesel could be kept unchanged. This would have the advantage of instant interchangeability to diesel-only operation. The degree of diesel replacement depends on the engine operating conditions and the engine design to some extent, typically varying from 30% to 90%.

The dual fuel technology has been

Gas Replacement options near full load	Opt-1 : 90% Gas replacement at 75% load 9.61 hp	Opt-2 : 88% Gas replacement at 90% load 11.54 hp	Opt-3 : 70% Gas replacement at 100% load 12.77 hp
Gas Consumption rate Nm ³ /h (g/h)	2.6 (1742)	2.77 (1861)	2.36 (1584)
Diesel Consumption rate l/h (g/h)	0.238 (200)	0.354 (298)	0.995 (836)
% Saving w.r.t. Diesel	51.2	51.1	42

used more successfully in engines with slow variation of load, where the engine speed varies in a small range. Some studies showed that Dual-fuel engines generally suffer from the problem of lower peak brake power and lower peak engine cylinder pressure due to lower volumetric efficiency; although an improvement in brake specific energy consumption is observed compared to pure diesel mode. The results testing a simple dual fuel system showed that the performance of the engine with dual fuel system could almost match that of standard diesel engine. The dual fuel engines investigated at part loads. Better performance with dual fuel engines was achieved at a relatively high load. To improve performance and exhaust emissions of a converted dual-fuel engine, the effects of basic parameters were experimentally investigated and the results show that a small amount of pilot fuel with a moderate injection rate is effective for suppressing knock at high loads. Adequate control of pilot fuel amount, injection timing gives diesel-equivalent thermal efficiency with very low smoke emission over a wide range of loads. The

following figure shows engine with dynamometer.

Dual Fuel Conversion kits enable diesel engines to run on a mixture of natural gas and diesel fuel. This enables cheaper power generation, a cleaner environment and longer generator life because natural gas is a much cleaner fuel compared to diesel. Practical tests have revealed that the internal condition of an engine operating on dual fuel remains much better than when it is being operated only on diesel fuel. Engine life is prolonged and the time between overhauls can be increased. Dual Fuel operation also minimizes problems associated with cartage, storage and handling of large volumes of diesel fuel. Equally importantly, the many advantages of diesel engines are retained in their entirety

• Feasibility Of Dual Fuel Operation

Table-1 shows the gas and diesel consumption rate on the basis of engine performance and the savings that can be achieved by using bi-fuel technique:

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0.238 (200) 0.354 (298)
0.995 (836)
% Saving w.r.t. Diesel 51.2
51.1 42

Conclusion

The dual fuel operation widely used single-cylinder diesel engine applications, with natural gas were investigated at rated speeds. Gas fumigation into intake manifold was used for running the engines with dual fuel, requiring minimal engine modification. All the diesel settings were kept unchanged to retain instant interchangeability to diesel-only operation. According to findings, the maximum achievable diesel replacement by natural gas varies due to engine loads, and the trend was influenced by cylinder size as well. For dual fuel, the loads thermal efficiency was lower compared to diesel-only operation. However, the engines showed very similar performance compared to diesel-only operation close to the rated load with up to 85% satisfactory replacement of diesel by natural gas.

Running the engine near rated load was found to be almost equally efficient with much less fuel cost for both cases. The feasibility of running such diesel engines in dual fuel mode in remote locations appears to be promising.

Reference

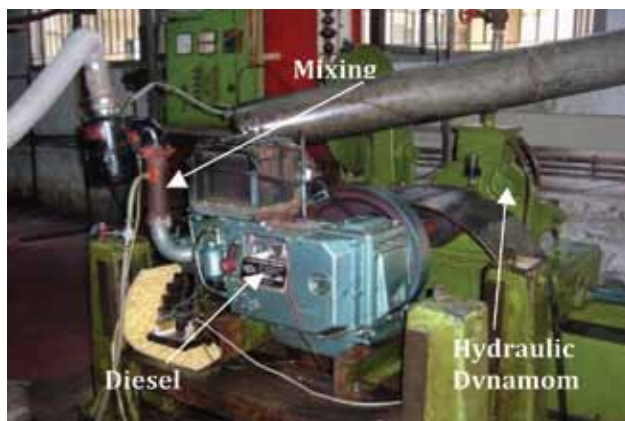
“Diesel Power Generation” by M. Ehsan, S. Barman, S. Bhuiyan
Department of Mechanical Engineering, Bangladesh University of Eng. and Tech., Dhaka, Bangladesh



Applications

Small diesel engines, typically less than 25 hp, are widely used all over Egypt. They are now used in a number of sectors and play an important role in the overall economy.

Power generation in petroleum sector has one of the most important uses. Many engines are used near the areas that already have flare gas, as we know the diesel costs too much, in addition to the transportation problem.



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LIBYA - Tripoli
164 Nasr Street,
Tel : +218 21 333 1902
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libya@petrographics-eg.com

ALGERIA - Alger
70 Lotissement La Bruyera,
Villa No. 11, Bouzareah
Tel : +213 21 925285
Fax : +213 21 925285
algeria@petrographics-eg.com

SYRIA - Damascus
10 Taha Hussein st,
El Mazza, Villat Gharbia
Tel : +963 11 613 1414
Fax : +963 11 613 5383
syria@petrographics-eg.com

KUWAIT - Al Ahmadi
Al Ahmadi Governorate
Mangaf, Block 1 No 33
Tel : +965 9721 7564
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Egypt Statistics

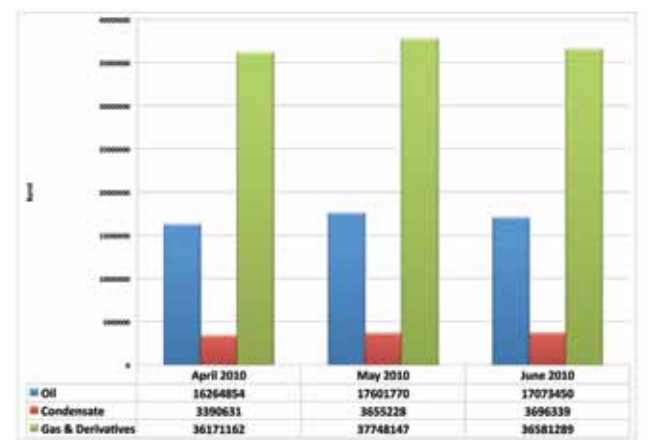
Table 1 Egypt Rig Count per Area -July 2010

RIG COUNT			
Area		Total	Percentage of Total Area
Gulf of Suez		12	11%
Offshore	12		
Land			
Mediterranean sea		11	10%
Offshore	11		
Land			
Western Desert		63	57%
Offshore			
Land	63		
Sinai		11	10%
Offshore	11		
Land			
Eastern Desert		10	9%
Offshore			
Land	10		
Delta		4	3%
Offshore			
Land	4		
Total		111	100%

Production - June 2010

	Sold Million cubic feet	Planned Million cubic feet	%	Oil Barrel	Equivalent Gas Barrel	Condensate Barrel	Liquefied Gas Barrel	Ton	Total Gas & Derivatives Barrel
Upper Egypt				18330					18330
E.D.	126647	156270	81.04		25329400	1516874	368441	32750	27214715
Med. Sea	35247	36810	95.75	7304517	7049400	1864679	536341	47675	16754937
W.D.	13644	8160	167.21	131735	2728800	201735	110390	9812	3172660
Delta	765	3090	24.76	5235014	153000	63985	159838	14208	5611837
GOS	320	450	71.11	2048530	64000	49066	81679	7260	2243275
Sinai				2335324					2335324
Total	176623	204780	86.25	17073450	35324600	3696339	1256689	111706	57351078

	Actual	Planned	%
Oil	17073450	17301840	98.68
Condensate	3696339	3454530	107.00
Gas & Derivatives	36581289	42242640	86.60
Total	57351078	62999010	91.03



Source: Egypt Oil & Gas

Average Currency Exchange Rate against the Egyptian Pound
(July 2010/ August 2010)

US Dollar	Euro	Sterling	Yen (100)
5.690	7.341	8.772	6.511

Stock Market Prices
(July 2010/ August 2010)

Company	High	Low
Alexandria Mineral Oils [AMOC.CA]	44.43	39.83
Sidi Kerin Petrochemicals [SKPC.CA]	12.12	11.15

Table 1 World Crude Oil Production (Including Lease Condensate)
(Thousand Barrels per Day)

	Libya	Sudan	Other	World	OPEC ¹	Persian Gulf ²	North Sea ³
2009 October	1,650	500	2,380	72,079	30,993	20,577	3,595
Novemer	1,650	495	2,409	73,128	30,940	20,542	3,753
December	1,650	495	2,464	72,878	30,834	20,464	3,644
2009 Average	1,650	483	2,411	72,302	30,639	20,402	3,673
2010 January	1,650	500	2,414	73,113	31,068	20,571	3,689
February	1,650	510	2,435	73,509	31,163	20,650	3,600
March	1,650	515	2,451	73,498	31,074	20,581	3,682
April	1,650	521	2,413	73,442	31,048	20,607	3,621
May	1,650	525	2,424	73,339	31,108	20,725	3,485
2010 5-Month Average	1,650	514	2,428	73,377	31,091	20,626	3,615

¹ OPEC: Organization of the Petroleum Exporting Countries: Algeria, Angola, Ecuador, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, the United Arab Emirates, and Venezuela.

² The Persian Gulf countries are Bahrain, Iran, Iraq, Kuwait, Qatar, Saudi Arabia, and the United Arab Emirates. Production from the Kuwait-Saudi Arabia Neutral Zone is included in Persian Gulf production.

³ North Sea includes the United Kingdom Offshore, Norway, Denmark, Netherlands Offshore, and Germany Offshore. Revised data are in **bold italic font**.

Source: EIA

Table 2 World Oil Supply¹ (Thousand Barrels per Day)

		United States ²	Persian Gulf ³	OAPEC ⁴	OPEC ⁵	World
2009 October	E	9,396	23,167	24,061	34,343	85,382
November	E	9,362	23,136	24,022	34,286	85,517
December	E	9,439	23,083	23,950	34,199	85,331
2009 Average	E	9,156	22,890	23,805	33,873	84,365
2010 January	E	9,275	23,208	24,076	34,457	85,463
February	E	9,540	23,290	24,148	34,560	86,129
March	E	9,587	23,261	24,102	34,507	86,175
April	E	9,542	23,311	24,148	34,508	86,093
May	PE	9,639	23,488	24,308	34,629	86,156
2010 5-Month Average	PE	9,516	23,312	24,157	34,532	86,000

¹ «Oil Supply» is defined as the production of crude oil (including lease condensate), natural gas plant liquids, and other liquids, and refinery processing gain (loss).

² U.S. geographic coverage is the 50 States and the District of Columbia. Beginning in 1993, includes fuel ethanol blended into finished motor gasoline and oxygenate production from merchant MTBE plants. For definitions of fuel ethanol, oxygenates, and merchant MTBE plants

³ The Persian Gulf countries are Bahrain, Iran, Iraq, Kuwait, Qatar, Saudi Arabia, and the United Arab Emirates. Production from the Kuwait-Saudi Arabia Neutral Zone is included in Persian Gulf production.

⁴ OAPEC: Organization of Arab Petroleum Exporting Countries: Algeria, Iraq, Kuwait, Libya, Qatar, Saudi Arabia, and the United Arab Emirates.

⁵ OPEC: Organization of the Petroleum Exporting Countries: Algeria, Angola, Ecuador, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, the United Arab Emirates, and Venezuela.

E=Estimated data. RE=Revised estimated data. PE=Preliminary estimated data. Revised data are in **bold italic font**.

Source: EIA

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