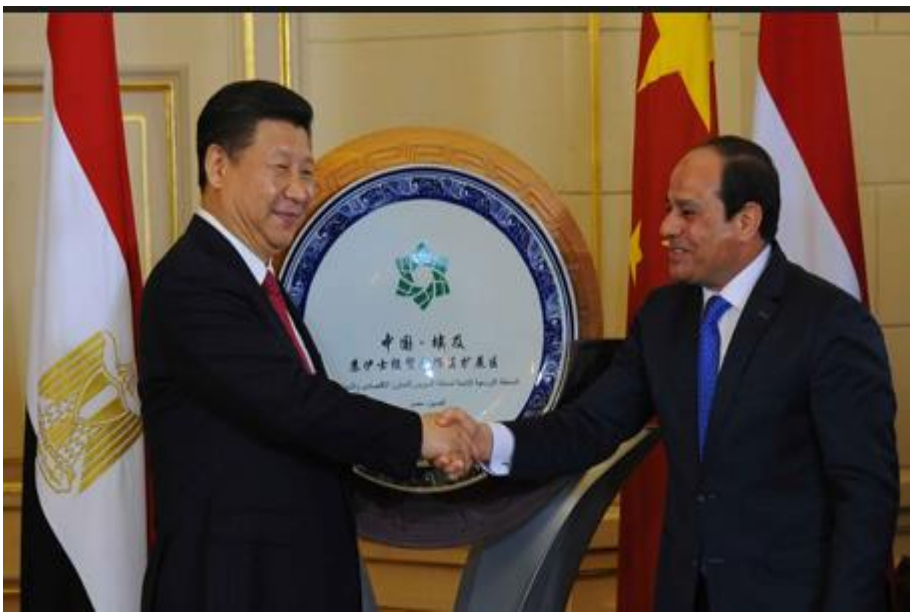


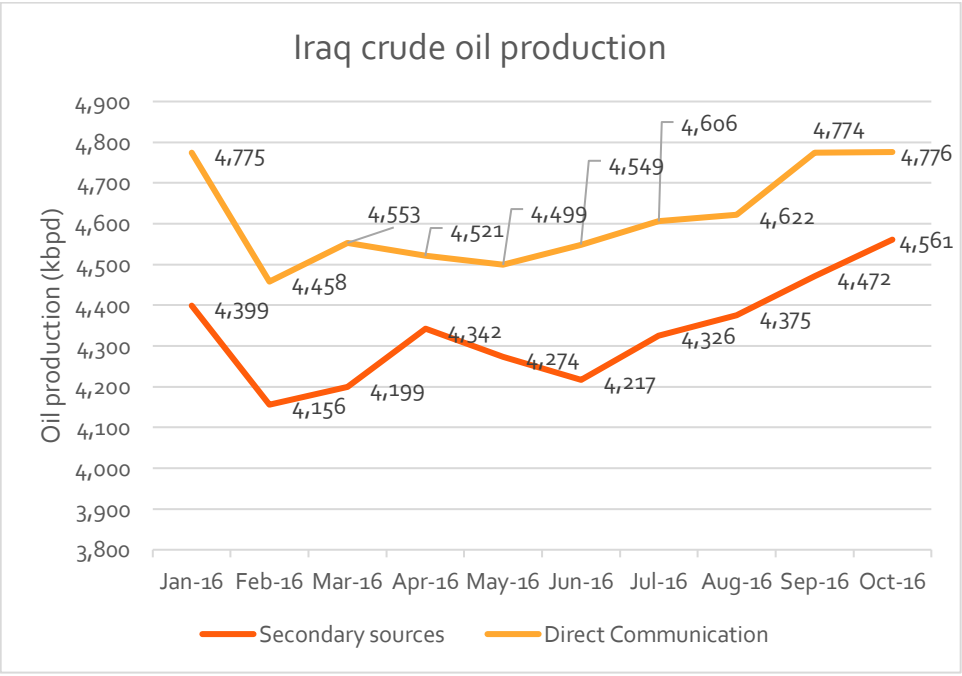
Photo courtesy of Ahram Online. Egypt negotiates $4 bln loan from China for its renewable energy strategy:

NEW MIDDLE EAST REFORMS: TRANSPARENCY, NEW ENERGY STRATEGIES AND INCREASED GAS IMPORTS

Qamar Energy

November 2016

IN THIS ISSUE



Source: OPEC Monthly Report

- The Oil Ministry in Iraq invited representatives from secondary sources to brief journalists on its claimed higher production levels so that their reports align with their official ministry data.
- The graph on the left shows the large discrepancy between secondary and direct communication of oil production in Iraq for 2016.
- Figures include KRG production.

How OPEC's leaders can smash the Texas upstarts

By Robin Mills

A *version of this article appeared in The National newspaper on November 20, 2016*

The Permian period, which ended 250 million years ago, was a good time for the global oil industry. The rocks of that time now hold much of the Middle East's gas, including the world's largest field, between Qatar and Iran. But Permian rocks on the other side of the world are now a threat to OPEC, and an alluring but dangerous prize for international oil companies.

The Permian Basin of west Texas and Mexico has emerged as the most resilient play in the US oil sector. Proximity to pipelines, low drilling cost and a layer cake of geology that offers multiple drilling targets have kept activity high. A well that cost up to US$11 million in 2014 can now be drilled for about $7m.

This month, the United States Geological Survey published its estimate that just one rock formation – the Wolfcamp Shale – in this area contains another 20 billion barrels of oil and 16 trillion cubic feet of gas yet to be found. In September, the oil corporation Apache estimated it had found 75 trillion cubic feet of gas and 3 billion barrels of oil in part of the basin it called the Alpine High area.

While the number of rigs in other leading US shale areas has plummeted, the Permian rig count has been rising since May. Its production is forecast to reach 2.065 million barrels per day by next month, twice the total of Oman.

The Permian Basin has become this season's must-have accessory. Even companies with strong assets in the Middle East, such as Occidental, or in Africa, such as Anadarko and Apache, spend most of their time on investor calls talking about their US prospects. Apache gets 28 per cent of its output from Egypt but spent just $52m out of a total $415m of capital in the third quarter of this year in the country. Almost half of spending went to the Permian Basin.

Rising output and falling costs in west Texas have slowed the drop in overall US production, frustrating the strategy of major OPEC producers such as Saudi Arabia to squeeze out shale oil producers. As prices have risen modestly amid chatter of an OPEC deal, rigs have gone back to work in the Permian.

OPEC itself expects oil prices to reach $65 per barrel by 2021, from just below $47 on Friday. In the current mindset, honed by a few years above $100 per barrel, this seems low. But the inflation-corrected average since the first oil shock of 1973, the era in which the exporters' organisation has exerted market power, is $57 per barrel. In the age of shale, with Russian output also remaining strong, it's a bold bet that a fractured OPEC could hold prices above historic norms.

Instead of comforting the market with talk of a production cut, which would anyway be modest, leading OPEC countries could pursue the opposite strategy. With reservoirs still far larger and better quality than any in the US, they could continue boosting output, gaining market share and driving out high-cost competitors. They can adapt US tight-oil production technologies, make their national oil companies nimbler and more cost-effective and open up more difficult fields to international investors.

The weak, such as Venezuela, Nigeria and Libya, would be left to the wolves. Other high-cost oil around the world – in mature fields, China, the North Sea and deepwater – would be forced into decline. Investors' confidence in shale, outside the very best plays and companies, would be broken.

The Permian period ended in the greatest ever mass extinction, when about 90 per cent of all species died out. In today's ruthless struggle for oil market survival, OPEC's best option may be to make some of its Texan competitors extinct.

Iraq reveals rare detailed breakdown of oil production figures

By Robin Mills

A *version of this article appeared in The National newspaper on October 30, 2016*

Iraq has published data showing a rare level of detail for its oil production and exports.

The country's state oil marketing agency released a statement on Sunday showing September production figures for each of the 26 fields it controls, plus a single output figure for the semi-autonomous Kurdish region, which manages its crude independently. Previous monthly statements showed just two figures: total production and total exports. The Oil Marketing Company, known as SOMO, also provided detailed data on exports and domestic consumption.

OPEC's second-largest producer says it pumped more than 4.7 million barrels a day last month, several hundred thousand barrels a day more than oil-industry watchers recognise. OPEC assesses output for its 14 members based on such secondary sources. Iraq wants the group to accept the ministry's figures before a November 30 meeting at which OPEC could limit production for its members.

The Iraq oil minister Jabbar Al Luaibi complained about OPEC data at a meeting in September in Algiers. He adopted a milder approach last week, inviting reporters to Baghdad for a tour of the national museum and a detailed discussion of production figures. "We want you to see for yourselves what our production is," he said last week.

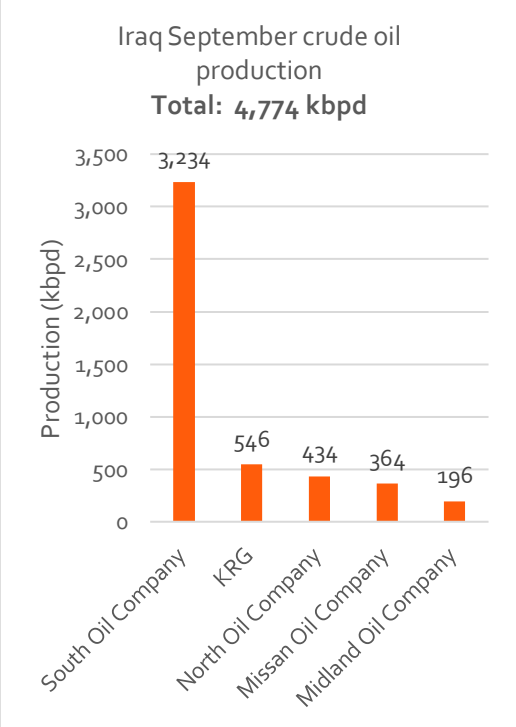
The field-specific data for September sheds light on how SOMO calculates Iraqi production. However, it does not provide a breakdown of Kurdish production, which accounts for much of the difference between the data cited by SOMO and secondary sources.

"It's an effort of transparency and backing up their numbers, but I'm not quite sure how effective it's going to be," Robin Mills, the chief executive of the consultant Qamar Energy and a columnist for The National, said in Dubai. "The biggest discrepancy is likely to be in the Kurdish fields."

Production from the Kurdish enclave in northern Iraq averaged 546,000 barrels a day last month, according to SOMO. That figure is an estimate because the central government has not received the latest production data from Kurdish authorities, the SOMO director general Falah Al Amri said last week. SOMO bases its estimate on what Kurdish production was in 2013 and 2014, he said.

In the north of the country, the Kirkuk and Baba Gurgur fields produced 93,000 barrels a day for the federal North Oil Company (NOC), SOMO said. The nearby Bai Hasan and Avana fields pumped 275,000 barrels a day for the NOC.

The BP-operated Rumaila oilfield, Iraq's largest, pumped an average of 1.4 million barrels a day in September, SOMO said. The two fields at West Qurna produced a combined 870,000 barrels a day, while output from Zubair was 390,000; Majnoon, 214,000; and Halfaya, 204,000.



OPEC's secondary sources put Iraqi production at 4472 kbpd in September

Source: Iraq Ministry of Oil

The Egyptian economy is running on empty as it awaits a recharge of energy strategy

By Robin Mills

A *version of this article appeared in The National newspaper on November 6, 2016*

Long queues stretched around Cairo petrol stations on Thursday evening as motorists rushed to beat rising fuel prices. In tandem with the sharp devaluation of the Egyptian pound, the government has cut subsidies again. But with the country's indicators blinking on zero, Egypt badly needs to recharge its energy strategy.

The Egyptian pound fell by almost a third as the central bank said on Thursday that it was letting the currency float. Devaluation had become inevitable as a requirement for securing an essential IMF loan and easing a drought of foreign currency that had led to shortages of sugar.

Problems with energy have been an important part of undermining Egypt's budget and trade balance. Even after cuts earlier this year, subsidies account for nearly half the forecast budget deficit of 9.8 per cent for the 2016-17 fiscal year. The drop in subsidies was mostly because of falling global oil and gas prices, not internal reforms. The price of gas has gone up, but electricity tariffs have not been raised proportionately, shifting the subsidy burden rather than removing it.

Overdue payments to oil companies, which were meant to be cleared by the end of this year, have been rising again, reaching US$3.58 billion. The companies cannot invest in new production without being paid, so drilling has slumped to half the level of two years ago. Oil production, which had been quite stable since 2008, has declined sharply this year, further cutting revenues. Refining output has also dropped, requiring more imports of oil products, at a time when Saudi shipments have been cut.

Egypt was a significant LNG exporter until 2013, but rising domestic demand and a collapse in production have abruptly turned it into a major importer of gas. While the government has allowed Shell to export a few cargoes recently to meet contractual commitments, the country imported some $1.1bn of LNG at current prices this year up to August.

Gas production has improved this year on the back of new field developments, but underlying output remains in steep decline. Shell is holding off on the important next phase of its West Nile Delta project until it receives some of what it is owed.

The country, of course, is looking to ENI's giant Zohr offshore field, meant to start production by the end of next year. But given likely delays and sharply rising domestic demand as new power plants are commissioned, it is doubtful whether even Zohr will be enough to close the supply-demand deficit. Although a great, and lucky, success, its discovery seemed to encourage irrational exuberance and complacency in the government.

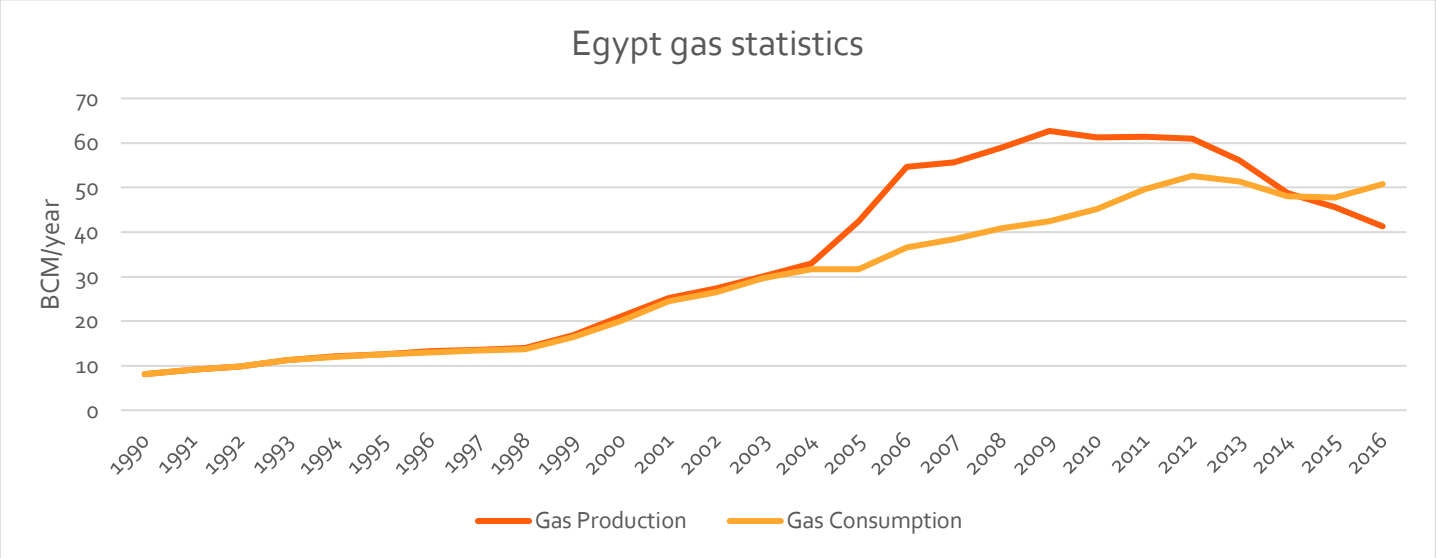
Gas to factories continues to be cut off unpredictably, undermining important export industries. Meanwhile the electricity supply has improved, but renewable energy plans have been mired in bureaucratic disputes.

The latest fuel price rises will boost already high inflation, but they barely cover for the devaluation. Local currency prices are up from 30-47 per cent, so the subsidy burden in dollars has at best narrowed slightly.

The government now needs to build quickly on the loan and the large, politically risky devaluation. It needs to move swiftly to abolish most remaining subsidies to protect its budget and control demand. High inflation requires compensation to low-income Egyptians, but this is hard for the bureaucracy to manage without waste and corruption.

The greater availability of foreign currency should allow the government to pay down debts to oil companies and stabilise production levels. Raising gas prices uniformly to a market level – the equivalent price for LNG imports – would encourage investment in offshore and tight gasfields.

The Egyptian energy economy has been running on empty for too long. It should now get a short-term boost, but only major maintenance will keep the whole show on the road.



Source: BP (1990-2015); 2016 figures from JODI (Annualized average production to Sept 2016)

The main objective of Egypt's new energy strategy:

1. **Security** by boosting and diversifying and improving energy efficiency
2. **Sustainability** by addressing debt build-up and the phasing out of subsidies in a socially responsible manner
3. **Governance** by improving and modernizing the oil and gas sector's governance and encouraging private sector investments

On the **security** level, the new strategy entails:

- Acceleration of existing gas field development (e.g. North Alexandria);
- Encouraging new exploration (56 concessions and agreements being concluded in 2014 and Q1 2015 for investments of $12.2 billion);
- Awarding concessions for unconventional oil and gas;
- Awarding contracts for refineries and petrochemical projects
- Securing LNG import contracts until 2020 through negotiations that are expected to continue this year.
- Implementing energy efficiency measures with the new electricity law

For **sustainability**, the main objectives are:

- Paying down arrears to international oil and gas companies
- Restructuring energy subsidies
- Rolling out smart cards for gasoline and gas oil, and the establishment of a database on the consumption rates of different energy products;
- Mitigating the impact of subsidy removals through a range of measures, including the acceleration of residential connections to natural gas and allocating savings to boost social spending.

On the **Governance** level the key objectives comprise:

- Development of a national energy strategy;
- Further opening of the sector to private investment;
- Enhancing the governance of the gas sector. The government is planning to carry out certain sectoral reforms and to eventually limit its role to simply regulating the sector, and eliminate the dual role currently played by some government bodies as both producer and regulator

Source: Egypt's energy sector by Karim Hegazy; Qamar Research

Arabian Gulf's fragmented gas market needs a regional hub

By Robin Mills

A *version of this article appeared in The National newspaper on November 14, 2016*

Gas hubs are in fashion. The US and UK have long had them, continental European markets are now increasingly integrated and Turkey, Singapore, China and Japan, in different ways, want to be gas nexuses. But could the Middle East develop a hub of its own and what advantages would it bring?

It is strange that the Middle East's gas markets are so fragmented. The region holds more than 40 per cent of the world's reserves, 17 per cent of its production and 14 per cent of its consumption. And from being primarily an exporting region, it is now also a growing importer and consumer.

But there are almost no intra-regional pipelines and for those that exist, most capacity is tied up under long-term contracts at fixed rates. Large gas markets – Saudi Arabia is the world's sixth biggest – are completely isolated. Only two Gulf countries can import liquefied natural gas (LNG). Countries short of gas, such as Kuwait, Bahrain, the UAE and Oman, lie next to the world's largest gasfield in Qatar and Iran.

Gas prices are shrouded in fog. State-regulated rates are public in Saudi Arabia, Oman, Bahrain and other regional countries. But these are just an administrative fiction, not "prices" in the normal sense. Since gas is in short supply, it is not possible to turn up at the headquarters of Saudi Aramco or Oman Gas Company and offer to buy at these prices. Instead, gas supplies have to be allocated by bureaucrats. A business that fails to obtain a ration of gas cannot go out and buy at world market prices from another supplier.

Compare this situation to North America or north-west Europe. A dense network of pipelines connects producers and importers with consumers and exporters. Gas is freely traded and prices publicly available, by the millisecond, at hubs. These can be physical locations where pipelines intersect, such as the US's Henry Hub in Louisiana, or they can be virtual, as for the UK's National Balancing Point.

The EU has made a determined effort to create a common market between key hubs in Belgium, the Netherlands, Austria and Italy and to expand it east, by building pipelines and passing the necessary legislation. Connectivity and transparency are a great tool against dominant suppliers, such as Russia's Gazprom, which seek to squeeze higher prices from isolated or ill-informed buyers.

Asian markets, traditionally isolated and mostly reliant on domestic production or LNG imports, are also developing pricing hubs. Singapore has launched an LNG index, by which traders or consumers could hedge their future purchases. China is becoming increasingly connected by gas pipelines to central Asia and Russia, and LNG terminals to the world market.

Powerful forces are against such an endeavour in the Arabian Gulf region. Major suppliers do not want to lose their control over price. The GCC and its neighbours lack sufficient pipeline connections, with politics an obstacle.

But in the next few years, the building blocks of an integrated market could be laid. Abu Dhabi has started LNG imports and Sharjah plans to start a terminal by 2018 (Dubai has had one since 2010). Iran is likely to begin exports by pipeline to Iraq soon and, in a few years, to Oman. Oman and Abu Dhabi already export LNG.

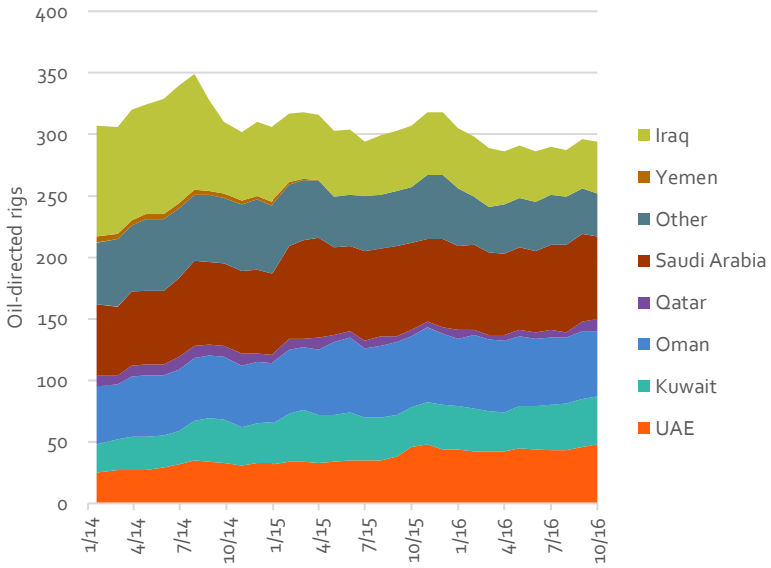
Dolphin Energy recently signed new contracts to expand supplies of Qatari gas to Sharjah and Ras Al Khaimah. Prices are undisclosed but are probably comparable to the current cost of LNG.

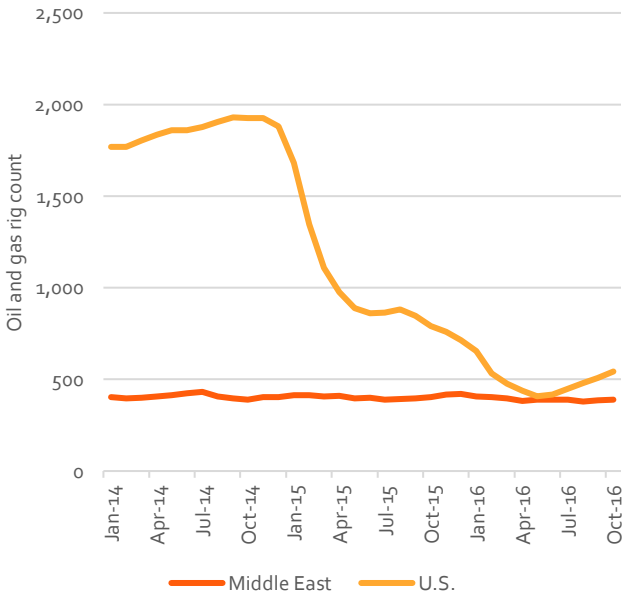
These advances make the UAE-Oman area the natural site for a Gulf hub – where gas can be freely traded with transparent prices. Such a hub will not appear from nothing – local gas players and governments can encourage it. By energising industrial investment, this would be the next step in the region's gas evolution.

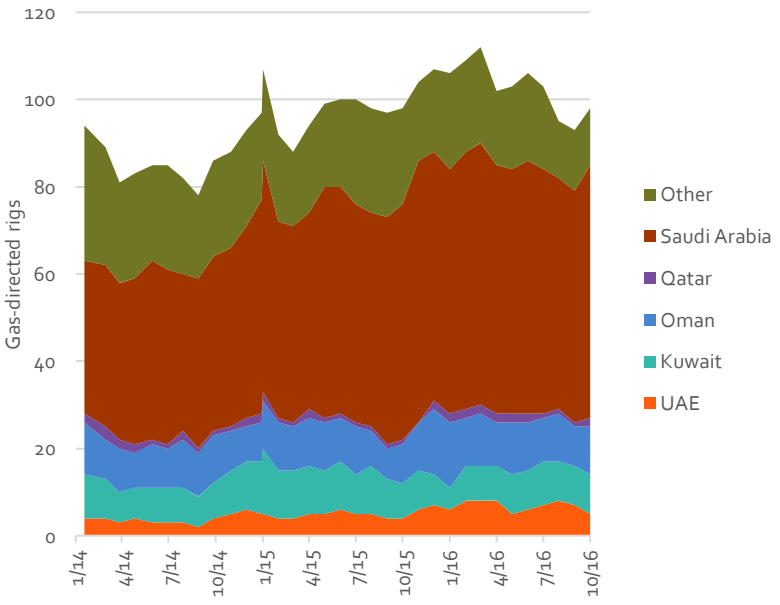
Rig count snapshot

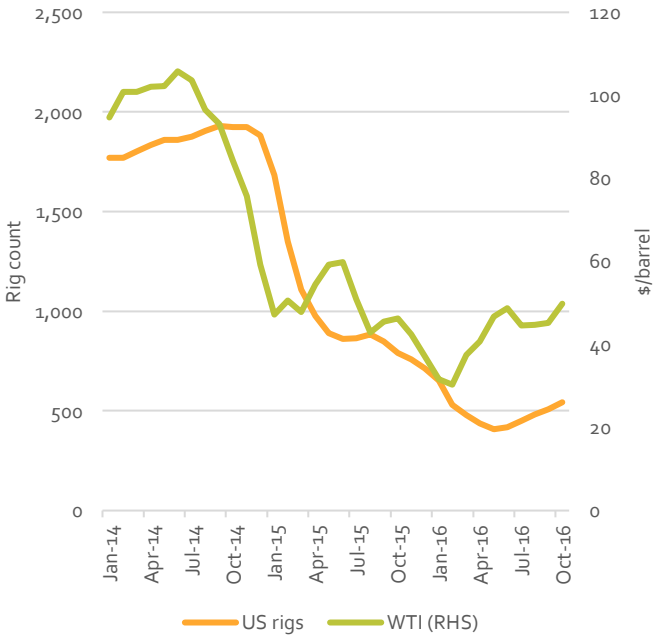
- Middle East oil-directed drilling remains strong, with the exception of Iraq
- Iran is the most active driller - 57 active rigs in October 2016 (OPEC October monthly report)
- UAE, Qatar and Iraq added 2 oil rigs each this month
- Saudi oil rigs fell by 4

- US oil-directed rig count closely tracks oil price (with a 3-month lag)
- 544 total rigs in October for the US (35 new rigs from November) vs 391 in the Middle East (5 new rigs from November)









Rig Count data: Baker Hughes; Oil price data: EIA

Fuel prices and subsidy reform

The UAE was the first GCC country to remove fuel subsidies in August 2015. The other GCC countries, Saudi Arabia, Oman, Bahrain, Qatar and Kuwait have reduced subsidies.

The following table represents November 2016 gasoline and diesel pump prices ($/litre) in the GCC countries.

	Old ($/litre)		New ($/litre)	
	Gasoline 95	**Diesel**	**Gasoline 95**	**Diesel**
Saudi Arabia	0.16	0.07	**0.24**	**0.12**
UAE	0.45*	0.47*	**0.49**	**0.52**
Qatar	0.37*	0.37*	**0.40**	**0.38**
Bahrain	0.27	0.42	**0.42**	**0.31**
Kuwait	0.21	0.36	**0.35**	**0.31**
Oman	0.46	0.39	**0.47**	**0.48**
US (Pre-tax)	0.57	0.54	**0.59**	**0.50**

**Previous month prices; Source: EIA; News Sources*

OPEC Watch

Strategy	Comments
Organization changes	• The group appoints new secretary general, Nigeria's Muhammed Barkindo, effective 1st August 2016 • Confirmed the re-entry of Gabon in June 2016 since it left in 1995; current production at 202 kbpd in Oct. 2016 • Re-entry of Indonesia in January 2016 – current production at 722 kbpd in Oct. 2016
Support from non-OPEC	• OPEC proposing a 600 kbpd output cut by non-OPEC members • President of Russia, Putin Vladimir, said his country is ready to join OPEC countries with a cap on oil production • OPEC cancels meeting with non-OPEC members- Saudi Arabia pulled out of the meeting first because it wants to secure an OPEC deal first
Production limit	• OPEC agreed to limit production to 32.5-33 Mb/d • Implementation of the ceiling to be decided in Vienna on the 30th of November • Iran reluctant to cut production in the near term to return to pre-sanctions levels. May receive potential waiver • Saudi Arabia to take leadership in production output • Iraq said it wants to continue to raise output to 2017 - Iraq's oil minister, Jabar Ali al-Luaibi, urged oil and natural gas producers to continue increasing output for the rest of the year and in 2017 • Potential waiver for Libya and Nigeria

Robin Mills talks on OPEC:

1. Money Talks: Crunch time for OPEC, interview with Robin Mills
2. Analysis of the OPEC cuts - when they'll kick in, and which countries will reduce production
3. OPEC-Russia Roadshow Heads to Vienna
4. Iran Optimistic About OPEC Output Cut

Key MENA Energy Scorecard

MENA energy price reform	●	⇔	Abu Dhabi to raise electricity/water prices in 2017; Egypt to raise electricity prices in 2017; Kuwait govt. will subsidise 75 litres of fuel a month for its citizens, which was about 30% of the original price increase that became effective in September; government dismissal in Kuwait over fuel subsidy debate
MENA unconventional oil & gas	●	⇔	BP assessing expansion of Khazzan to 1.5 Bcf/d; Aramco planning to invest $334 billion by 2025 on its shale gas programme and other oil and gas projects; much of additional gas supply in Saudi from 2020 onwards likely from unconventional gas resources; Phase 1 BP Oman's Khazzan project 80% complete and on track to deliver first gas near the end of 2017 with 38 of the initial 50 wells drilled
MENA alternative energy	●	↑	World Bank and Moroccan sovereign wealth fund, Ithmar Capital, signed MoU to set up green fund for Africa; Morocco invited 11 groups to participate in tender for 3 PV solar projects with total capacity 120 MW; Alcazar Energy reaches financial close on 86 MW Al-Rajef wind project in Jordan; 10 solar developers signed power purchase agreements in Egypt under first round of feed-in tariff scheme; Saudi Electric Company issued request for proposals to prequalified companies for two 50 MW PV projects; Dubai's 200 MW solar plant reaches 50% completion
MENA nuclear power	●	↑	Abu Dhabi's $24.4 bn nuclear project (Baraka nuclear power plant) reaches financial close; KEPCO takes 18% stake in Baraka; Jordan's $10bn 2 GW atomic power plant still in feasibility stage, to be completed in 2017; Egypt plans to sign the final contract of the 4.8GW El-Dabaa nuclear facility by end of 2016
Energy infrastructure security	●	⇔	Niger Delta Avengers blew up three Nembe Creek trunk lines carrying 300 kbpd to Bonny export terminal for Shell and bombed country's second-largest pipeline system just two days after it resumed operations following attack in July; before IS were driven out of Qayarah, town in southern Ninewa Governorate, they attacked refinery that powered the province
OPEC production	●	↑	October produced record 33.64 million b/d as Nigeria, Libya, and Iraq all reported increases up from 33.41 Mb/d in September; Libya plans to almost double crude production in 2017 to 1.1 Mb/d and targeting 900 kbpd by end-2016 up from current 600 kbpd;
East Mediterranean gas commercialisation	●	↑	Dana Gas to review investments in Egypt for next year for the country has struggled to maintain payments; Turkey and Israel discussing natural gas pipeline from Leviathan to Turkey through the Cyprus Exclusive Economic Zone (EEZ) but Cyprus reunion talks remain in trouble
Egypt energy reform	●	⇔	Oil and electricity subsidies reached peak of EG£139.5 billion in the 2013-14 fiscal year, and have fallen to EG£62.4 billion in the 2016-17 budget, ~2% of GDP, partly due to subsidy cuts but mostly because of falling oil prices
Kuwait developments	●	↑	After Egypt secured $12 bn loan from the IMF, it entered into a crude export contract with Kuwait for 2 million barrels a month from January 2017 at crude oil international prices; Kuwait Oil Tanker Company opened the pre-qualification process for design, construction and delivery of three very large gas carriers, one very large crude carrier and four medium range tanks for dirty and clean petroleum products; Kuwait Oil Company received bids for upgrading its existing export facilities in an effort to increase production to 4 Mb/d in 2020
Abu Dhabi developments	●	↑	ADNOC and Occidental plan to expand Al Hosn facility which will increase the plant's sour gas processing by 50%; ADNOC plans to merge two offshore oil companies: ZADCO and ADMA; ADNOC to merge three shipping service companies
Iraqi Kurdistan (KRG) developments	●	⇔	The KRG exported $636.4 million worth of oil, up from $611.8 million in September; export rate fell from 564,808 bpd in September to 522,046 bpd in October due to two-day pipeline outage
Federal Iraq developments	●	↑	Federal Iraq October production from direct sources at 4.643 Mb/d and 4.561 Mb/d from secondary sources; crude oil exports for October at 3.28 Mb/d compared to 3.822 Mb/d in September; Kuwait Energy has signed a farm-out agreement to give a share of its Siba gas field contract in Iraq to Egyptian General Petroleum Corporation; Kuwait Energy receives first oil cargo allocation for its Block 9 share of production; Iraq's Oil Ministry has prequalified 19 companies to bid for development of 12 small and medium-sized oil fields in centre and south of the country
Iran developments	●	↑	Iran increased production to 3.665 Mb/d from 3.643 Mb/d; DNO signed MoU with NIOC to study Changuleh oilfield; development of South Azadegan oil field, which it shares with Iraq, to be internationally tendered; BP reportedly created a new committee to explore potential business opportunities in Iran; Total and CNPC sign the first major (preliminary) agreement with Iran Phase 11 of South Pars gas field; National Iranian Oil Refining and Distribution Company said Iran set to become self-sufficient in gasoline by end of the year

●	Very positive	↑	Improvement in last month
●	Positive	⇔	No change
●	Negative	↓	Deterioration in last month
●	Very negative		

b/d = barrels per day
Bcf/d = billion cubic feet per day
Tcf = trillion cubic feet
mcf/d = million cubic feet per day
Mb/d = million barrels per day
kbpd = thousand barrels per day

About Qamar Energy

Robin Mills

CEO

Robin established Qamar Energy to meet the need for regionally-based Middle East energy insight and project delivery. He is an expert on energy strategy and economics, described by Foreign Policy magazine as **"one of the energy world's great minds".** Robin is the recipient of the 2016 'Energy of Word' Global prize at the St. Petersburg International Economic Forum.

Prior to this, he led major consulting assignments for the EU in Iraq, and for a variety of international oil companies on Middle East business development, integrated gas and power generation and renewable energy.

Robin worked for a decade for Shell, concentrating on new business development in the UAE, Qatar, Iraq, Iran and other Middle Eastern countries, when he was described as the "Shell expert on Iran".

He subsequently worked for six years with Dubai Holding and the Emirates National Oil Company (ENOC), where he advanced business development efforts in the Middle East energy sector, including major gas import schemes for Dubai and upstream developments in Iraq, Qatar, Yemen, Pakistan, Turkmenistan, Algeria and elsewhere.

He is the author of two books, *The Myth of the Oil Crisis*, which evaluates global long-term oil supply, and *Capturing Carbon*, the first comprehensive overview of carbon capture and storage for the non-specialist. He is the columnist on energy and environmental issues at The National newspaper (Abu Dhabi), and comments widely on energy issues in the media, including Foreign Policy, the Financial Times, The Atlantic, CNN, CNBC Arabiya, BBC, Al Jazeera, Bloomberg, Sky News and others.

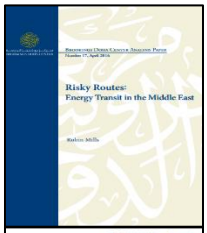
Robin also authored a ground-breaking study, *Sunrise in the Desert: Solar becomes commercially viable in MENA*, of solar power competitiveness in the Gulf (with PWC/Emirates Solar Industry Association) as well as the study *Under the Mountains: Kurdish Oil and Regional Politics* for the Oxford Institute for Energy Studies and *Risky Routes: Energy Transit in the Middle East* for Brookings Doha Center.

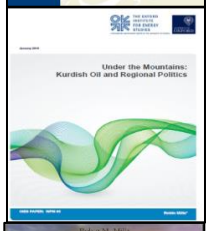
He is Non-Resident Fellow for Energy at the Brookings Doha Center. He holds a first-class degree in Geology from the University of Cambridge, and speaks Arabic, Farsi, Dutch and Norwegian.

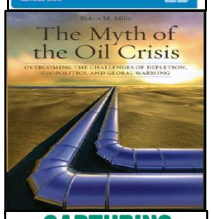
Robin Mills to speak at conference ***"How Energy Markets and Geopolitics are Impacting the Middle East"*** organized by The Lebanese Center for Policy Studies, in collaboration with the Natural Resource Governance Institute

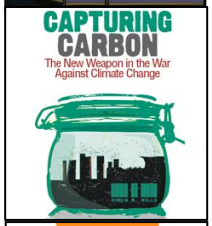
As oil and gas prices have decreased in recent years, the Middle East has also been mired with conflict and poor economic performance. The conference aims to reflect on these recent developments in order to examine policy options. The conference will also highlight the current energy situations in Iran, Iraq, Lebanon, Libya, and Saudi Arabia.

Click on publication for more information









Robin Mills receives the 2016 'Energy of Words' at the Global Energy Prize in St. Petersburg, Russia.

For prize announcement click here