



Energy Consulting & Project Management استشارة وإدارة مشاريغ إلطاقة



Above: the first successful oil well in Iran, Masjed Soleiman-1

December 2013

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Iraq's oil quandary awaits solution

By Robin Mills

As Tolstoy said, the two most powerful warriors are patience and time. After years of negotiation, a deal between Turkey and Iraq's autonomous Kurdish region – now close to signature, according to Iraq Oil Report – opens cracks, not only in the edifice of the Iraqi state, but also its relations with OPEC.

RGY CONSULTING & PROJECT MANAA

There have been numerous false dawns over the Zagros Mountains. Oil companies have repeatedly been assured that an accord on exports would be concluded Short-lived soon. agreements with Baghdad have come and gone. But now, with the Kurdish president Masoud Barzani's meeting with the Turkish prime minister Recep Tayyip Erdoğan in Turkey's largely Kurdish south-east, patience and time appear to have proven Kurdish Peshmerga stronger than fighters, Turkish nationalists or hectoring Baghdad politicians.

The broad outline of a Turkey-Kurdish deal has gradually emerged over more than a year of official comments, leaks and rumours. The Kurdistan Regional Government (KRG) would export oil, optimistically up to 1 million barrels per day (bpd), and gas to Turkey. Some proceeds would be used to pay companies operating in the Kurdish region, while the rest would be held in escrow pending a revenue-sharing law between Baghdad and Erbil. And a Turkish state company would take shares in a number of exploration blocks.

The device of an escrow account in a Turkish bank would seem a remarkable intrusion on Iraqi sovereignty, with Baghdad already calling the Kurdish

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region's contracts with international oil companies illegal. The central government could counter by holding back the KRG's approximately 11 per cent share of the national budget, which provides most of its income. Then would the Turks, or the KRG itself, decide whether its own oil sales would make up the losses?

Further uncertainty comes from continuing fighting in Syria, the newfound autonomy of the Syrian Kurds in the oil-producing north-east, who are aligned neither with Mr Erdoğan nor Mr Barzani, and Turkish domestic politics. The planned Iraqi parliamentary elections next April may throw up a new governing coalition in Baghdad or replace the prime minister Nouri Al Maliki. The Kurds may emerge as kingmakers, with a revenuesharing deal part of the price for their support - preferable to the region becoming entirely dependent on Turkey.

Kurdish oil – with grand themes of geopolitics, nationalism, fierce wars of words and swashbuckling entrepreneurs – has attracted more media attention than the big companies' steady, unglamorous work around Basra. But with far greater oil resources, and the prospect of producing 6 million to 7 million bpd by 2020, it is southern Iraq that really matters for global oil markets.

The stand-off over the Kurdish region's oil does not directly affect developments in the south. But other regions in Iraq, including Basra, have become increasingly impatient to see some of the same kind of development that their oil money has created in the KRG.

And an independent KRG oil policy opens up a crack in the country's OPEC policy. Already with a shrinking pie and the prospect of a return of Iranian crude, Iraq's large production build-up poses a question for Saudi Arabia and its Gulf allies: How should they engage with Baghdad, when would it accept a production quota and at what level?

Now that issue could become much more complicated. A million bpd of Kurdish oil would have some impact on OPEC itself, with the group's overall ceiling at 30 million bpd. But needing to pay oil companies and probably its own bills, the KRG would be unlikely to accept a share of a national quota. Federal Iraq would be loath to cut back production to accommodate Kurdish exports it terms illegal. Amid the rumours, there seems no answer to a simple question: how can one country maintain two conflicting oil policies?

A version of this article appeared in The National newspaper on December 1, 2013





Energy economics compel Iran and GCC's mutual engagement

By Robin Mills

"An enemy to whom you show kindness becomes your friend," as the Persian poet Saadi wrote. Kindness between Iran and the GCC may be too much to expect, but advances on the nuclear negotiations have made constructive engagement more realistic

Of course, a final accord between Iran and the P5+1 group on the nuclear issue – removing sanctions on Iran's oil industry and financial system – may prove impossible to negotiate. A deal would still leave deep disagreements between Iran and its GCC neighbours regarding support for the contending factions in Syria's civil war, Iranian influence in Iraq and disputed territories.

But in energy, Iran and its Arab neighbours are compelled by the logic of resources and economics to engage. They have both conflicting and complementary interests: competing for foreign investment. either cooperating or OPEC. clashing in but potentially collaborating to great mutual benefit in joint energy projects.

Iran's oil minister Bijan Zanganeh has given examples of the oil companies he hopes to attract to Iran – naming European and American super-majors such as Shell, BP, ExxonMobil and Chevron. He recently met the chief executives of Italy's Eni and Austria's OMV, of which Abu Dhabi's International Petroleum Investment Company owns 24.9 per cent. Pointedly, he did not mention Asian companies, which have disappointed the Iranians by failing to deliver on projects.

This means that two major OPEC members – Iran and Iraq – could be seeking tens of billions of dollars of international investment. That potentially creates more competition for Abu Dhabi, whose industry is in transition because of the expiry of its major concessions. Rising production means more pressure on OPEC.

At last week's meeting in Vienna, OPEC reaffirmed its 30 million barrels per day production ceiling. Mr Zanganeh emphatically stated that Iran would regain its pre-sanctions exports, even if, in his words, that caused prices to fall to US\$20 per barrel.

The media made much of his comments and a threatened "price war". But what else was he to say – that Iran would passively surrender the markets and revenues it lost to Saudi Arabia over the past two years?

The Saudis can probably accommodate a returning Iran by cutting back on their own production, which remains at nearrecord levels. But a complicated threeway game is now emerging within OPEC. Saudi Arabia and its Gulf allies must plan how to cope not only with an Iran boldly courting foreign oil companies, but also a rising Iraq. 5

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Two sides may ally against the third – but which two? Saudi Arabia has engaged with Iraq on the issue, while Iran and Iraq are usually pictured as allies. But Iran has also expressed its unhappiness with growing Iraqi output – "Not friendly at all", as Mr Zanganeh described it.

With a prospective relaxation of sanctions, joint GCC-Iran energy projects would allow a little kindness on both sides to create if not friendship, at least shared interests.

Iran has long talked of exporting its huge gas resources to its Gulf neighbours. But deals with Kuwait, Bahrain, the UAE and Oman all foundered on politics and unrealistic commercial expectations on both sides. Iran needs gas in the winter for its cold northern provinces; the GCC needs it in the summer for air conditioning. Iran and the UAE could also trade electricity. Such projects would improve leverage in negotiating for new gas from Qatar.

president Hassan Rouhani's Iranian government is probably the most competent and western-friendly the Islamic republic has ever had. Without being naïve about the power of the supreme leader Ali Khamenei and the hardliners, it is in the GCC's interest to empower the axis of moderation. And as with Iraq, so with Qatar - Iran's Arab neighbours have differing interests, and energy is not a simple matter of friends and enemies.

A version of this article appeared in The National newspaper on December 8, 2013

Prospective GCC deal for Occidental assets a step towards regional gas market

By Robin Mills

Major Middle East oil assets don't come up for sale very often. So it's not surprising that, as Reuters reports, Abu Dhabi's Mubadala, Qatar Petroleum and Oman Oil might team up to buy a 40 per cent stake in Occidental's Middle East and North Africa unit. But it would also be a major step for cross-border energy investment in the region.

Outside the supermajor oil firms such as Shell and ExxonMobil, Occidental has the largest Mena portfolio. It holds a quarter of the Dolphin pipeline, which delivers gas from Qatar to the UAE and Oman; it operates the large Mukhaizna heavy-oil field in Oman and Bahrain's only oil and gasfield. In all these ventures, it partners with Mubadala, Abu Dhabi's state-owned strategic investment company. It also has stakes in the demanding Shah sour gas project in Abu Dhabi, fields in Iraq, Yemen and Libya, and has operated successfully for many years in Oman near the Al Ain border.

Recently, Occidental has come under pressure from activist shareholders in the United States who believe its Middle East assets offer mediocre returns, expose it to

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political risk and consume capital that could better be deployed in booming North American shale plays. Selling a minority stake eases these concerns while keeping Occidental in the region. Other North American companies – Apache in Egypt, Talisman Energy in the North Sea – have recently done similar deals.

A joint bid makes excellent sense for the three prospective consortium members. The likely US\$8 billion to \$10bn price tag would be a lot for any of them alone. Keeping a majority stake leaves Occidental as the operator of these challenging projects.

All its GCC projects are highly strategic for the countries concerned. And it might have been politically difficult for one of these state-owned enterprises to dominate a crown jewel project in a Gulf neighbour. Interestingly, for the first time, Mubadala would be investing in oil and gas production within Abu Dhabi itself.

If the consortium did indeed negotiate an acceptable price with Occidental, it seems unlikely that any rival suitor would emerge – who would want to bid against Qatar Petroleum for assets in Qatar? But, tempting as the assets are, these state giants also have to ensure they don't close the door on new international investors in other projects.

The package is not without problems. Insecurity and disruptions make the Libyan and Yemeni assets hard to value. And a consortium could experience conflicts of interest: Qatar Petroleum, in particular, would sit on both sides of the table in the negotiations over an expansion of the Dolphin pipeline.

more fundamentally, Perhaps any consortium members should think what comes next. Would the deal be a consolidation of existing assets in their neighbourhood, ensuring no undesirable interloper snaps them up? Would it be a step in building a wider Middle East portfolio, particularly if other western companies scale back, and building bonds with Arab states beyond the GCC? Or should they next diversify into other geographies, as Mubadala has done in South East Asia and Qatar Petroleum in the US?

Such partnership could be а an opportunity to revitalise GCC energy integration. Since the start-up of Dolphin in 2007, progress on an Arabian Gulf gas grid has stalled, leaving five gas-short neighbours surrounding Qatar, which holds the world's third-largest reserves. Cross-border energy investment particularly between the leading oil producers – is a rarity.

Of course, the GCC's largest member remains conspicuously absent both from the prospective Occidental deal, and from gas trade. But something closer to a true regional gas market would meet the region's needs more quickly and economically than the current division into "energy islands". And tangible economic links, rather than political talk, may forge a more solid Gulf unity.

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A version of this article appeared in The National newspaper on December 15, 2013

Oil dividends still elude South Sudan amid new civil conflict

By Robin Mills

Twice before, oil has fuelled conflict in South Sudan. It was a vital prize during the long war waged for independence from Sudan between 1983 and 2005. It triggered disputes between North and South Sudan after separation that brought both countries' economies near collapse. Now it is already a target in the confused crisis that has enveloped the new country in the past week.

Fighting broke out in mid-December between supporters of president Salva Kiir and the former vice-president Riek Machar in the capital Juba, with at least 500 people killed.

Though apparently a power struggle, the conflict has taken on ethnic dimensions, with complaints of the monopolisation of government by Mr Kiir and his Dinka tribe. On 18th December, 16 people were killed in fighting between the Dinka and Mr Machar's Nuer community at the important Unity and Thar Jath oilfields. The oil in Unity State, on the border with Sudan, is largely in Nuer areas.

On the 20th, James Koang, the commander of the army in Unity State, declared himself governor and renounced his loyalty to Juba, potentially cutting off the central government's revenues. And Jonglei state, one of the most promising new oil exploration areas, has fallen to General Peter Gadet, a Machar supporter.

The country already faced a difficult birth. South Sudan holds some three-quarters of the former Sudan's oil, but it relies on pipelines through the north to export it. The independence agreement did not conclude the terms for using these pipelines, nor the status of the disputed oil-producing Abyei region. And despite much talk, South Sudan was not able to start construction of an alternative southern pipeline – most likely through Kenya, and connecting to new fields both there and from Uganda.

Khartoum began confiscating oil sent through the pipeline in lieu of the transit fees it claimed. Sudan wanted an exorbitant US\$36 per barrel; South Sudan offered less than \$1. In March last year, fighting started in Abyei and around the important oil-producing area of Heglig.

Throughout 2012 and the first quarter of this year, South Sudanese production was almost entirely halted, taking some 300,000 barrels per day off world markets. This was one of five largely unrelated but coincident crises – with Iran, Libya, Syria and Yemen – that disrupted at times 2.7 million barrels per day of production, supporting oil prices



and allowing the Arabian Gulf countries to produce at record levels.

With South Sudan relying on oil for 98 per cent of government revenues, Juba had little choice but to concede finally to fees of \$24 to \$26 per barrel, close to Khartoum's original demand. Oil exports finally resumed in April, possibly giving Mr Kiir the political confidence to remove his rival, Mr Machar, who had become increasingly critical of him, from his vicepresidential post in July. But the country was still struggling under some \$5 billion of debt incurred during the shutdown.

What are the possible outcomes of the latest crisis? International pressure may bring a shaky reconciliation between the factions. Widespread fighting with some areas slipping out of Juba's control is possible – as in the 1991 "civil war within a civil war", when Mr Machar split from John Garang's Sudan People's Liberation Army, then fighting Khartoum.

And indeed Sudan may intervene again, backing either government or rebel factions, and seeking to secure the oilproducing border regions in Abyei and Unity and Upper Nile states to guaranteeing its continuing revenues.

An important non-OPEC producer may again fall out of the market, facilities may be damaged and workers evacuated. Even a resolution to the crisis will not encourage investors, already deterred by the pipeline shutdown and the fighting last year. So the long-suffering South Sudanese will have to wait yet longer for stability and the rewards of their oil resources.

A version of this article appeared in The National newspaper on December 22, 2013

Benchmark Oman crude ends the year on firm footing

Oman crude oil trading on the **Dubai Mercantile Exchange (DME)** averaged \$105.51/b during 2013, a fall of nearly \$4/b against the previous year's record average annual price, but still the third highest Oman value on record, after the 2012 price of \$109.30 and \$106.65 in 2011.

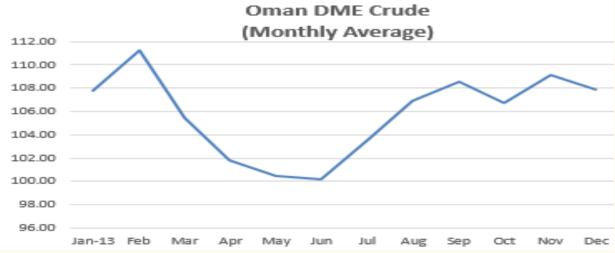
Oman prices ended the year on a firm footing with the December monthly average on the DME -- which is used by Oman and Dubai to set their official selling price (OSP) -- at \$107.88, compared to \$105.97/b average price for November. Oman crude for February loading closed at \$107.58/b on December 31, only a few cents away from the first price of the year back in early January.

Prices in 2013 were generally supported by supply disruptions around the world – particularly Libya – and geopolitical concerns over Syria. More recently, the deteriorating situation in South Sudan underpinned prices, but sporadic falls in production from the likes of Nigeria, Iraq and the North Sea provided strong underlying support.





On the consumption side, the International Energy Agency (IEA) put the global 2013 figure at 91.2 million barrels per day (b/d), up 1.2 million b/d on the year, as improving economic conditions underpinned the demand side. the main demand driver. While that may be good news for Middle East producers looking to maintain revenues and the impressive economic growth targets, the boom in US oil production coupled with ongoing debt problems in the US and Europe means any upside is likely to be



Looking ahead to next year, the US shale oil boom and Iraq's plans to further increase output is likely to keep the market well supplied and put a cap on prices, according to a recent Reuters survey.

The survey of industry experts forecast North Sea Brent prices at \$103.50 for 2014, which would give an implied Oman value of \$101.00, based on a differential of \$2.50/b. In addition, the winding down of US economic stimulus in the form of quantitative easing could also have a negative impact on oil prices, according to the survey.

The IEA forecasts that global consumption will grow another 1.2 million b/d in 2014, with Asia once again

About DME

capped.

DME is the premier international energy futures and commodities exchange in the Middle East. It aims to provide oil producers, traders and consumers engaged in the East of Suez markets with transparent pricing of crude oil.

Launched in 2007, DME has rapidly grown into a globally relevant exchange. Its flagship Oman Crude Oil Futures Contract (DME Oman) contract is now firmly established as the most credible crude oil benchmark relevant to the rapidly growing East of Suez market. Reflecting the economics of the Asian region like no other contract, and the largest physically delivered crude oil futures contract in the world, DME Oman is the world's third crude oil benchmark and the sole benchmark for Oman and Dubai exported crude oil.

Manaar appreciates the assistance of the Dubai Mercantile Exchange in providing this market commentary



Key MENA Energy Issues Scorecard

MENA energy price reform	•	€	Bahrain to raise diesel prices but subject to parliamentary debate; Oman to raise gas prices		
MENA unconventional oil & gas	•	←	BP takes investment decision on Khazzan tight gas field in Oman; Egypt to offer shale oil bid round		
MENA alternative energy	•	1	Jordan to build 117 MW wind farm and 1 MW solar PV plant; Kuwait to build 10 MW of wind, 50 MW of solar CSP and 10 MW of solar PV		
MENA nuclear power	•	¢	Jordan chooses Russian consortium for its first nuclear power plant; Egypt reaffirms nuclear power plans but progress seems unlikely;		
Energy infrastructure security	•	→	Continuing protests shut down terminals and potentially gas pipeline in Libya; both major Yemen export pipelines shut down by attacks (Masila due to reopen); oil workers evacuated from South Sudan following fighting		
OPEC production	•	→	OPEC target unchanged; Iran aggressively seeks to regain market share; OPEC production down slightly in November and below 30 Mbpd target		
East Mediterranean gas commercialisation	•	+	Doubts on Israel gas exports due to domestic and external political obstacles; development of Leviathan set back to 2017; Woodside stil not concluded Leviathan deal; possibility of small-scale Israeli gas exports to Jordan; Russia's Soyuzneftegaz signs offshore exploration agreement in Syria		
Kuwait energy projects progress	•	¢	Technip wins deal on Kuwaiti oil infrastructure; Kuwait not to participate in Khafji joint development with Saudi Arabia		
Abu Dhabi concessions renewal	•	Û	Partex still says it's optimistic about being included in the ADCO renewal		
Baghdad-Erbil oil agreement	•	¢	More details of KRG-Turkey oil/gas export agreement emerge but functioning still unclear; pipeline complete and some commissioning oil flowing; Turkish response constrained by domestic political crisis		
Iraq oil production build-up	•	←	Oil exports rise from 2.253 Mbpd in October to 2.381 Mbpd in		
Egypt subsidy reform	•	¢	Smart cards being trialled for fuel rationing		
Iran oil sanctions	•	Ŷ	Technical talks on nuclear deal continue; some doubts on good faith of both sides with work on Arak reactor and US Congress moves for additional sanctions; some signs of better GCC-Iran relations; political crisis in Turkey over corruption scandal connected to Iran sanctions payments		

Source: Manaar research

٠	Very positive	1	Improvement in last month
•	Positive	ţ	No change
•	Negative	÷	Deterioration in last month
•	Very negative		



Energy Prices and Generation Costs in the Middle East

The following table represents December 2013 gasoline, diesel and electricity prices (top rate for residential consumers) in selected MENA countries, with the US for comparison, and the direction of change since last month.

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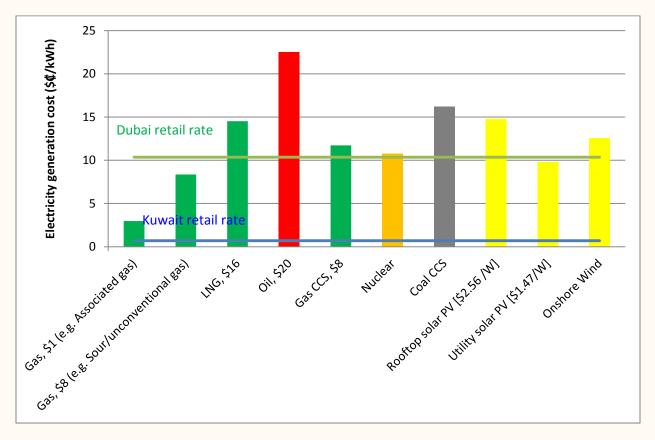
		Gasoline	Diesel	Electricity	
		(\$/Litre)	(\$/Litre)	(\$₡/kWh)	
Saudi		0.21	0.09	6.9	
Qatar		0.25	0.25	2.7	
Bahra	in	0.27	0.26 🛧	4.2	
Kuwait		0.32	0.27	0.7	
Iraq		0.34	0.72	6.7	
Yemen		0.35	0.47	7.9	
Oman		0.40	0.48	7.8	
	Dubai	0.48	1.01	10.35	
UAE Abu		0.48	0.88	4.0	
UAL	Dhabi				
	Sharjah	0.48	0.90	8.0	

	Gasoline	Diesel	Electricity	
	(\$/Litre)	(\$/Litre)	(\$₡/kWh)	
Egypt	0.59	0.46	6.8	
Iran*	0.687**	0.348**	1.64**	
US	0.94	1.024	12.61	
Lebanon	1.17	0.88	13.3	
Jordan	1.26	1.24	33.2	

* Non-subsidized allocation, at current (volatile) ** Values changed mainly due to changes in the exchange rate

Open-market exchange rate (US\$1:IR 24942) Source: Gulf Oil Review; Manaar research

Note: The figures of the gasoline and diesel in the table above represent the pump prices. Only the US, Lebanon and Jordan prices can be considered non-subsidised.



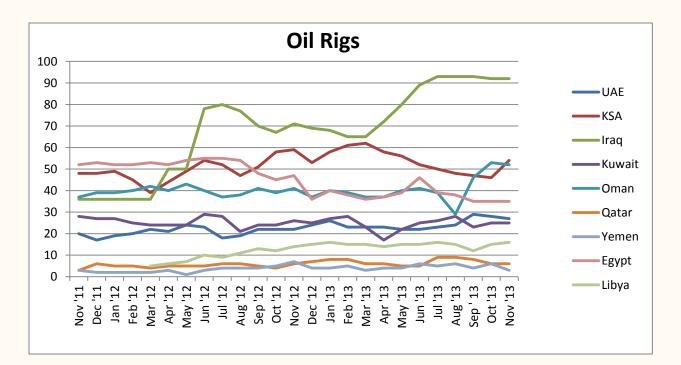


Main changes: increased capital cost of nuclear in line with UAE programme; reduced uranium price; included nuclear decommissioning costs; included onshore wind in UAE conditions; differentiation of utility-scale and rooftop solar; inclusion of 1 c/kWh transmission & distribution credit for rooftop solar; slight increase to assumed LNG price; significant increase to capital & operating costs of coal CCS based on latest EIA assessment; minor changes to costs & heat rates for other plants based on latest EIA assessment.

- Utility-scale solar PV is now clearly a more economic option than LNG- or oil-fired power generation, even allowing for the cost of back-up plants
- Gas CCS, though higher cost than solar and nuclear, could still be a viable low-carbon option, particularly if combined with use of CO₂ for enhanced oil recovery
- Coal CCS is much less attractive now, due to the significant increase in its capital and operating costs
- Unconventional gas remains economically attractive, still with a 15-25% cost advantage over nuclear and solar PV
- Onshore wind (based on UAE conditions), even with gas backup, appears competitive with LNG-fired power, but may be limited to suitable sites. Areas with good wind resources, such as the Red Sea coast of Saudi Arabia and Egypt, may offer lower costs
- In the GCC, only Dubai has top-rate tariffs that are representative of the new era of generation costs



Regional Energy Statistics

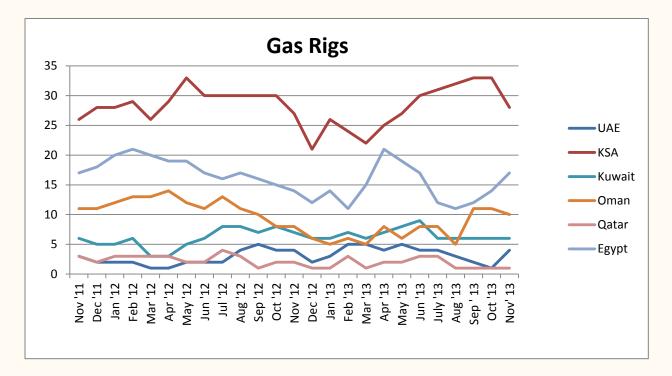


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Source: Baker Hughes, Iraq: Baker Hughes and OPEC Monthly Oil Market Report

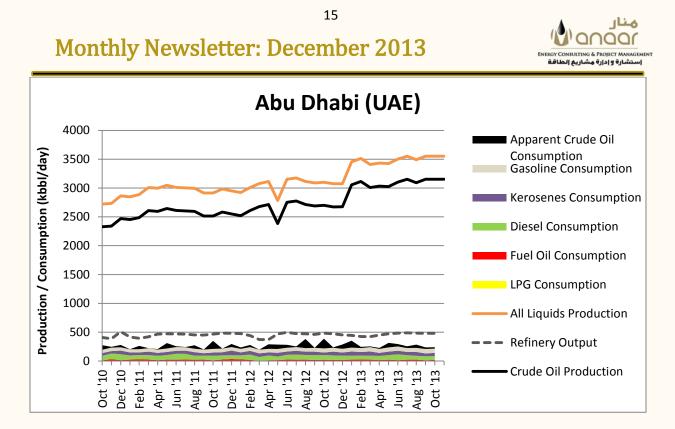
- Saudi Arabia drilling rebounds after continuous decrease for seven months as the Kingdom is expected to increase to a record 170 rigs (oil + gas) by the end of 2014 due to Khurais and Shaybah expansions
- Iraq rig count remained relatively constant over the summer months after five months of continuous growth
- Abu Dhabi, which is increasing its oil output by 35 percent in 2018, has plans to more than double its rig count
- Oman rig count reached a two-year high of 52 as continuing field development takes place
- All other countries' rig counts remained quite stable over the month





Source: Baker Hughes

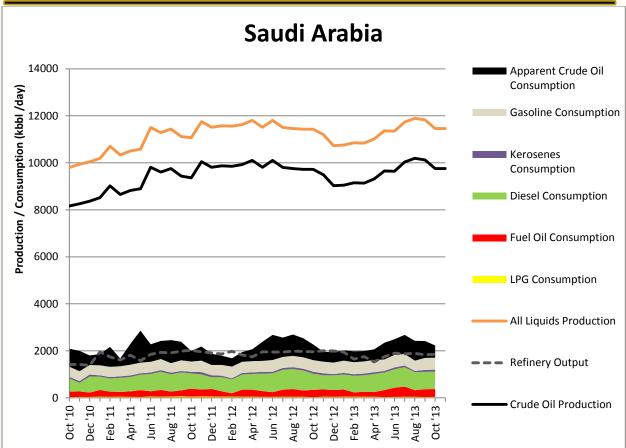
- Saudi Arabia's gas drilling decreased to 28 in November
- The number of rigs in Abu Dhabi rebounded to 6 in October; Dubai has no rigs
- Oman November rig count decreased slightly to 10, but is expected to ramp up when work commences on BP's Khazzan tight gas project
- Qatar rig count dropped in September and remained at only one rig through November with the completion of drilling on the Barzan gas project (which had been using three jack-ups)



- The UAE's production trend remained at an elevated level
- The UAE's Abu Dhabi National Oil Company re-started crude shipments from the port of Fujairah, using the pipeline from Habshan
- ADNOC is pushing forth with plans to boost production at the Upper Zakum field by 28 percent to 750 000 barrels per day from 585 000 barrels per day by 2017
- Abu Dhabi is to introduce a new blend, Das, to improve shipping flexibility as the UAE seeks to boost production. Das will replace Abu Dhabi's Umm Shaif and Lower Zakum grades. Das crude will go on sale in July at about the same price as Lower Zakum.





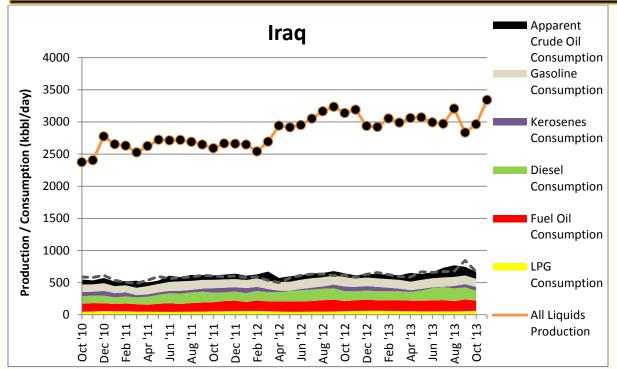


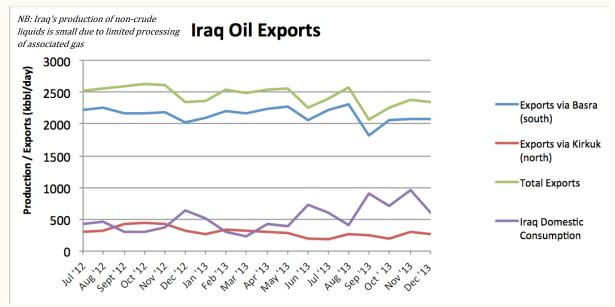
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- Saudi production dipped due to seasonal factors late in the year and direct crude burning reduced into the autumn and winter
- An average 2014 oil price of \$81/b for Saudi export crude, or about \$85/b for Brent, is likely to be needed for Saudi Arabia to balance state revenues with government spending in the coming year as oil production is scaled back to 9.3 million b/d
- In a report on the kingdom's 2014 budget, the Saudi investment bank Jadwa forecast a budget surplus of Saudi riyal 140.8 billion (\$37.45 billion), equivalent to 4.8% of expected GDP.



Monthly Newsletter: December 2013





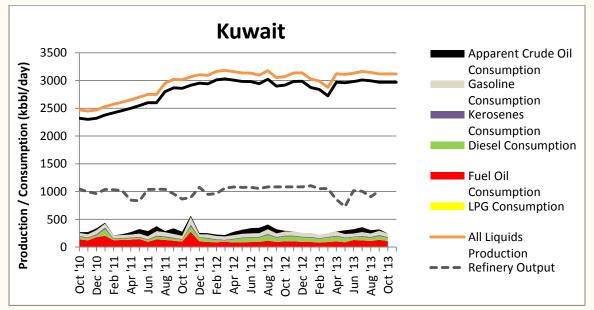
Source: Iraq Oil Ministry, Bloomberg

- In November, Iraq exported 2.1 million bpd from its southern terminals and about 300 000 bpd of Kirkuk crude from the north, up 150 000 bpd from October
- Basra exports were constrained by bad weather at the loading terminals, with only a small increase over October

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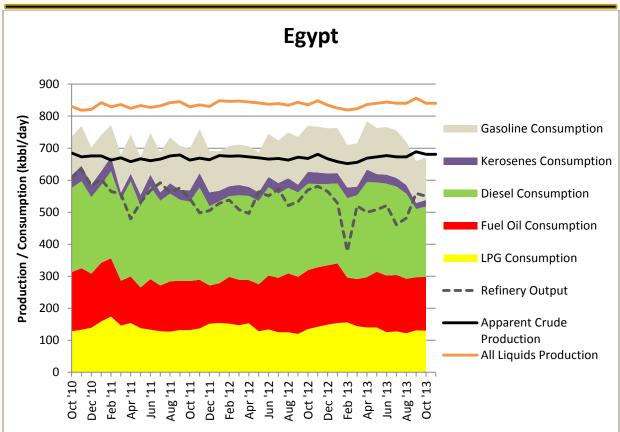
- As usual, direct crude and diesel burn dropped into the winter months while use of kerosene for heating increased
- Royal Dutch Shell's Majnoon oil field has quickly increased to more than 200,000 barrels per day (bpd) over the past three months, following nearly a year-long shut-down, as other key Basra fields also increase production.
- Rumaila, operated by BP, is on track to hit 1.5 million bpd next year and 2.1 million bpd in 2017 reflecting the unofficial reduction of the production plateau target from the 2.85 million bpd in the 2009 contract.



- Kuwait is currently producing 2.9 Mbpd and has the capacity to produce 3.2 Mbpd. Production was steady in October
- Direct crude burn dipped into the cooler winter months
- France's Technip announced a \$400 million contract with Kuwait Oil Company (KOC) to support the renovation and development of its oil and gas infrastructure.
- National targets for Kuwait aim to achieve oil production capacity of 4 Mbpd by 2020 (however this continues to face significant political challenges).







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- Diesel consumption dropped sharply in October and refinery output rebounded somewhat as GCC aid helped the country's financial and fuel situation
- Egypt seeks to develop three oilfields that it says were mishandled by Israel when the latter occupied the Sinai Peninsula between 1967 and 1979. The Sedr, Assal and Matarmah oilfields – now operated by Egypt's state-owned General Petroleum Company – currently produce only dozens of barrels of oil per day out of the company's total daily output of some 45 kbpd.
- EGPC is expected to issue international tenders in early 2014 to search for shale oil

Source: JODI, OPEC, Middle East Economic Survey & EIA

NOTE: All crude oil consumption values are apparent due to unreported / misreported stock change values and refining gains/losses.



Country	Round	Launch Date	Blocks on Offer	km ² offered	Blocks Awarded	Closing Date
Egypt	EGAS	Jun – 12	15	57,300	9	Feb – 13
Egypt	Ganope	Dec – 12	20	125,577	1*	
Egypt	EGAS	Dec – 13	22	NA	-	May - 14
Iraq	Nassiriyah refinery / field development	Dec - 13	1			
Iraq	5 th Licensing Round	NA	10	NA	-	NA
Lebanon	1 st Licensing Round	May - 13*	10	17,901	-	Jan - 14
Oman	MOG	Jan – 12	4	26,837	2	Aug – 12
Oman	MOG	Nov – 12	7	103,422	-	Jan – 13
Yemen	6 th Licensing Round	Sep – 12	5	20,132	-	NA
Yemen	March 2013 Licensing Round	March – 13	20	222,812	-	May - 13

Recent & Forthcoming MENA Licensing Rounds

Updates since last issue in red

Source: Deloitte; Manaar Research

* Participating in the Ganope International 2012 Bid Round #1, Dragon Oil awarded 100% interest in shallow-water block 19 in the Gulf of Suez.

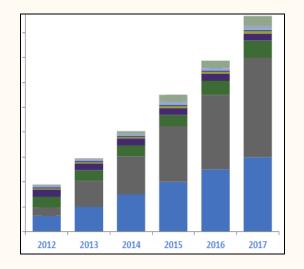
Current studies

Hydraulic fracturing

Manaar has recently completed a study of the market for hydraulic fracturing in the MENA region, with PacWest Consulting. The report is available in MENA-only (29 pages) and worldwide versions (45 pages including the MENA section). The report addresses historical and forecasted frac demand, supply, utilization, constraints and trends. Market coverage also includes current hydraulic fracturing projects, unconventional potential assessments and detailed basin and play maps. The majority of the information gathered in the reports relies on primary intelligence: in-depth surveys and conversations with industry leading experts and technical specialists.

Dimension	Score	Description
Geology		 Excellent geology that underlies the most prolific petroleum system in the world; Rub' Al Khali results disappointing thus far
Pricing regime	\bigcirc	 State-set at very low \$0.70 per mcf; unlikely to change soon; very problematic for foreign operators seeking JVs; less of an issue for Aramco, which wants to displace oil
E&P diversity		 Aramco dominates; JVs with three IOCs in the Rub' Al Khali have been disappointing; fiscal terms are difficult
OFS capacity	J	 SLB and HAL already serve the country, and BHI and others should enter the market in the next few years
Regulatory landscape		 Aramco is able to operate with little government interference, but challenges exist for foreign operators, if allowed to operate in unconventional development at all
Infrastructure		 Very well-developed infrastructure from existing petroleum output in Ghawar and northwest, but Rub' Al Khali is isolated
Development constraints		 Public very supportive of increased output
Weighted Score	2.6	

Figure 1. Country attractiveness matrix for Saudi Arabia



تشارة و إدارة مشاريع الطاقة

Figure 2. Forecast frac capacity, per MENA country

Please contact Roa Ibrahim <u>r.ibrahim@manaarco.com</u>, +971 4-3266-300 for further information and purchases.

MENA petrochemicals

Manaar is preparing a potential study of MENA petrochemicals and gas feedstock. The study will focus on

- the current gas situation in MENA,
- implications for petrochemicals in the region
- the downstream / speciality petrochemical value chain
- competitiveness of MENA petrochemical companies versus the US, EU and Asia

This study will be of key interest to Gulfbased and international petrochemical producers and gas suppliers.





MENA Shale Study

Manaar has prepared a study on the impact of global shale resources on MENA. The study will focus on:

- The strengths, weaknesses, threats and opportunities of unconventional gas in the MENA region.
- Differences in the development of unconventional gas between North America and MENA.
- Identifying MENA's unconventional gas potential; understanding current and planned activity levels per country, company and basin.
- The impact of the shale boom on future demand for MENA oil & gas, oil and gas prices, possible new pricing hubs, and oil and gas exports.

Recent & Forthcoming Events

Robin Mills spoke on:

- Middle East energy subsidies at the Arab Fund for Environment and Development in Sharjah on 28th November
- Key geopolitical issues and their implications for energy at the CGES November Retreat on 20th November
- MENA energy security issues at the 9th Middle East Energy Security Forum in Dubai on 25th November

Robin spoke at MENA Shale in Abu Dhabi on 10th December

Please visit the links below to view some of the presentations by Manaar:

<u>Arabian Water & Power Forum Dubai –</u> <u>September 2013</u>

<u>Power & Water Middle East Leaders</u> Forum Abu Dhabi – September 2013

EAGE Jordan Middle East shale gas – September 2013

<u>INSS East Mediterranean gas – September</u> 2013

<u>MEED UAE Oil & Gas Projects Abu Dhabi –</u> <u>September 2013</u>



Key Manaar people



Jaafar Altaie,

Managing Director

Jaafar founded Manaar in 2009 in response to growing international interest in Iraq. With a background in economics and engineering, Jaafar has worked for BP, Nomura, Petrobras and the Iraq Ministry of Oil.



Robin Mills, Head of Consulting

Robin is an expert on Middle East energy strategy and economics. He is the author of two books and a prolific writer on energy and environmental issues. He worked for 15 years in geology and economics for Shell and the Dubai government.



Mohammed Jambaz,

Head Representative in Kurdistan Region, Iraq

Mohammed represents Manaar in the Kurdistan Region of Iraq from our office in Erbil. He leads our support of companies in seismic, geoscience, exploration & production, logistics, laboratory services, energy market analysis, and other sectors of the oil industry.



Roa Ibrahim

Consultant

Roa Ibrahim received her Bachelor's degree in Finance from the American University in Dubai and her Master's degree in Applied Finance and Banking from the University of Wollongong in Dubai. Roa has produced expert analysis of petroleum fiscal systems, hydraulic fracturing and shale gas.





Nour Halabi Industry Analyst

Nour specializes in petrochemical studies and recently joined Manaar Energy with a successful track record developing strategic assessments for chemical plays and feedstock forecasting. He graduated from Bentley University in Waltham, MA with dual (Hons.) Bachelor's degrees in Finance and Economics.

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