THE QAMAR NEWSLETTER

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Ramadi residents after voting in the 2010 Iraqi Elections. Cover story on the 2018 elections' impact on Iraq's energy sector by Robin Mills.

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Qamar Energy is a leading consultancy based in Dubai, which expedites understanding the energy dynamics of the Middle East and North Africa.

The QAMAR NEWSLETTER is a monthly publication that provides critical appraisal and focussed assessments of the month's energy developments across the MENA region.

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QAMAR ENERGY

IRAQ'S ENERGY SECTOR AT A CROSSROADS AS LEADERSHIP CHANGE LOOMS

Robin Mills • *A version of this article appeared in The National, May 21, '18* • **COVER STORY**

Iraqi elections are not decisive, but just a basis for further negotiation. The latest instalment, voted on last Saturday, has turned up surprises, some grounds for hope and some disillusionment. Convoluted coalition-building is expected, but Muqtada Al Sadr's strong showing complicates the prospects for economic reform and, above all, the vital energy sector.

The main results are now clear, though a few seats could change with recounts and legal challenges. Mr Al Sadr's "On the Move" (Sairoun) alliance, with the Communists, won 54 seats in the 329-member parliament. He campaigned on a populist, anti-corruption platform and benefited as his support held up while turnout for others slumped.

Current prime minister Haider Al Abadi's Nasr bloc won 42 seats; the militia-dominated, Iran-aligned Fatah list of Hadi Al Ameri, 47; former prime minister Nouri Al Maliki's State of Law 25; and various Kurdish, cross-sectarian, minority and other parties the remainder.

The disappointing turnout reflected voter apathy, as well as intimidation and vote-rigging particularly in the Kurdish areas. Mr Abadi, who defeated ISIL and retook Kirkuk from the Kurds, was undone by a lack of economic results. But more encouraging was the success of some parties in picking up seats across the sectarian divide, and the stronger focus on achievements rather than identity politics.

It is mandatory for western media to refer to Mr Al Sadr as a "firebrand", but his politics have undergone considerable evolution. His movement is less vocally anti-American, he now calls for a technocratic, non-sectarian government not beholden to Iran, and met Saudi crown prince Mohammed bin Salman in Riyadh last year.

He has ruled out joining with Fatah or with Mr Maliki, although such declarations are never final. That still leaves room for Mr Abadi to return as prime minister, though more beholden to the Sadrists this time.

The new government will have more financial room for manoeuvre because of the rise in oil prices and winding-down of the war. That also means more scope for corruption and populist hand-outs. Mr Al Sadr's campaign promised stronger, technocratic governance, but unwieldy and ineffective coalitions, graft and patronage are ingrained in the modern Iraqi political system.

A government containing a heavy populist element is likely to suspect foreign investment and prefer heavy state employment, high current spending and budget deficits.

This would be contrary to Iraq's clear needs. Energy subsidies and overstuffed state employment should be phased out in favour of direct cash payments to the needy, paying down debt, accumulating sovereign wealth to buffer the economy, and investing heavily in infrastructure and education. Improving the country's dismal electricity and water situation should be a goal that technocrats and populists alike can get behind.

Bureaucracy, which invites inefficiency and corruption, should be simplified – particularly the absurd visa system. The Iraqi private sector needs to be strengthened, including big potential employers such as tourism, agriculture and industry. Sectors which are attractive for foreign investment should be enabled to use it, instead of sucking up scarce state funds. The key one of these is petroleum. After prime minister, oil minister is one of the five key positions alongside foreign affairs, defence, finance and interior. The current incumbent, Abdul Jabbar Al Luaibi, running for MP, came in first on Mr Abadi's list in Basra.

But this time the choice is complicated by the law passed in March, but not yet implemented, re-establishing the Iraq National Oil Company (INOC). This was promoted by Ibrahim Bahr Uloum, former oil minister and parliamentary candidate on the Fatah list. It would give enormous powers to the chairman, who would hold ministerial rank, and would be able to decide how 10 percent or more of oil revenues would be distributed.

Re-establishing a dedicated national oil company, and moving operational responsibility to it from the ministry of oil, is a good idea. But as currently worded, the law is a recipe for turf battles between INOC and the ministry. The relative political strength of the next minister and chairman, and the party machines behind them, is therefore very important. Sadrists have often refused to meet foreign oil companies, but the aphrodisiac qualities of power may change that, and in any case there are ways round their objections.

The upstream oil and gas sector needs the go-ahead on major supporting projects of water injection and export facilities. To diversify the fiscal and export base, and create employment and technical skills, gas processing, world-scale oil refineries and petrochemicals are key next steps. The shape of a deal with the Kurds will depend on the eventual coalition, but would stabilise the autonomous region's economy and unlock oil exports from the Kirkuk area.

Iraqi relations with Saudi Arabia have improved under Mr Abadi, and Mr Al Sadr's rapprochement with Riyadh, too, suggests that under their leadership, the country would remain in its admittedly imperfect compliance with the OPEC deal on production cuts.

In the current heightened regional tensions with Iran, Baghdad will aim as usual to play off its big neighbour, the US and other Arab countries. In contrast, a government featuring Mr Maliki and Mr Al Ameri would tilt much more to Tehran. Iraq might benefit to some extent from sanctions on Iran, which raise oil prices and create smuggling opportunities. But it would quickly be sucked into the maelstrom of any regional conflict.

Iraqi voters have at last the luxury of deciding on bread-and-butter issues, but whatever new government they get needs to heed their message.

WILL TESLA'S FATE DETERMINE FUTURE OF THE ELECTRIC VEHICLE DREAM?

Robin Mills • *A version of this article appeared in The National, May 28, '18*

Elon Musk, chief executive of Tesla and SpaceX, is known for defying gravity. But despite rapid market growth, the electric car company faces major challenges and toughening competition. If Tesla crashes to earth, does this mark a dead end for the battery vehicle dream?

Tesla's achievement has been to move electric cars from the joke stage of milk floats and the Sinclair C5, and to make them cool. Founded in 2003, the company targeted high-end early adopters able to pay a premium for acceleration and green, high-tech credentials, assisted by lavish subsidies in areas such as California and Norway.

From the Roadster and then the Model S, a nod to Henry Ford's iconic Model T, and Model X, it then built up the critical mass to reduce manufacturing and battery costs. Last July, it launched the upper mid-market Model 3. It has introduced autopilot features with the hope of fully autonomous driving within a few years. In July, it opened its first Middle East showroom, facing the Burj Khalifa on Sheikh Zayed Road.

Solar City, which installs residential solar panels, merged with Tesla in 2016, and has combined with Tesla's lithium-ion Powerwall battery to extend the time the sun can power a home. Since then, Mr Musk has moved into transport of all kinds: underground (The Boring Company), on land (the Hyperloop (a pod travelling at 1200 kilometres per hour in a vacuum tube), in the air (a supersonic electric plane), and SpaceX, which launches and lands reusable rockets.

Like Tesla, these promise to make travel faster, easier and – most importantly – much cleaner. Mr Musk's ventures have certainly taken flight, with Tesla raising $38 billion of equity and debt over its lifetime, and attracting a legion of devoted fans willing to pay deposits for vehicles delivered years later.

But the firm has come under increasing pressure in recent months. Meant to be building 5000 Model 3s weekly last year, it reached 2000 per week in April but had to shut down its production line after automation problems and what Mr Musk called "manufacturing hell". Consumer agencies have rated the Model X's reliability poorly, and several crashes of vehicles using the Autopilot function raise safety concerns. Solar City contributes very little to earnings while Tesla's electric lorry, unveiled with great fanfare in November, has gone quiet.

For now, Tesla sells about 60 per cent of US pure electric vehicles. Yet as batteries approach the mass market, it finally faces real competition. Almost all established carmakers have launched their own vehicles, such as the Chevy Bolt and Nissan Leaf, as well as plug-in hybrids which have a petrol engine for longer range – the plug-in version of the Toyota Prius, and the Chevy Volt.

In response to such concerns, the shares are down 27 per cent since their high a little over a year ago, badly underperforming tech, automakers and the wider market. Mr Musk has responded tetchily to criticisms of the company's finances and the safety of both its workers and drivers.

Tesla needs to raise about $2 billion (Dh7.3bn) by mid-year to raise the lagging production of the Model 3. If it manages to make that profitable, it will sink cash into the planned Model Y crossover next year. Equity investors have been very patient but may balk at being diluted again, while Moody's rates its bonds at B3, a junk grade.

The big question over the company is how to justify its valuation. With a bigger market capitalisation than Ford's, Tesla sold about 100,000 cars in 2017 compared to Ford's 6.6 million last year. Margins on luxury vehicles are higher, but those alone will not give it millions of sales. It will have to match the manufacturing size and prowess of Toyota, the quality of BMW, the experience in artificial intelligence and self-driving of Google, and the mass-market low costs of China's BYD.

To keep going, Tesla must keep its fans happy, raise cash, address the safety concerns, ramp up output and stay ahead of its competitors until self-driving battery vehicles dominate the mass market. If it runs into trouble, it could find a deep-pocketed benefactor with an enthusiasm for new technologies and the environment; an alliance with a major legacy carmaker that is lagging in battery vehicles; or a strategic, perhaps Chinese, buyer, if they could overcome likely US hostility. Otherwise, its cash will dry up fast.

Some, such as the conservative columnist Bret Stephens, writing in the New York Times, have taken the impending failure of Tesla as both the inevitable result and harbinger of the failure of electric cars.

Even if Tesla does implode, the flaw in such an argument is to think of Tesla as the only maker of electric vehicles. Various projections suggest that electric vehicles will be cost-competitive with conventional ones by the mid-2020s and overtake them in sales by the 2030s. Chinese are already by far the leading buyers of electric cars; Tesla is the largest foreign seller there but has only 2 per cent of the market as domestic brands dominate. Cities such as Paris and London may ban petrol and diesel cars by 2030 or 2040.

Mr Musk's financial engineering may not keep his company aloft. But his blend of vehicle design and salesmanship has moved battery vehicles close to the mainstream. His greatest achievement may be that the success of electric vehicles no longer depends on Tesla alone.

CLEAR THINKING NEED OF THE HOUR AS SANCTIONS LOOM FOR IRAN

Robin Mills • *A version of this article appeared in The National, May 14, '18*

The high oil price predictions have started re-emerging in response to the US's abandonment of the Iran nuclear deal.

Saudi Arabia has quietly sounded out $80 or $100 per barrel, Bank of America has put forward $100 for 2019, and hedge fund manager Pierre Andurand suggested $300. OPEC needs a strategy to prevent the market running away.

Iran exports about 2.5 million barrels per day (bpd) of crude oil and condensate (derived from natural gas), although April sales were higher as it sought to drain storage ahead of the sanctions announcement. The Obama-era sanctions, which did not include condensate, reduced its exports by about 1 million bpd. The current unilateral measures, not supported by the EU, China or Russia, should have less impact.

The market has already been going through a supply shock more consequential, so far, than the constraints on Iran. Venezuela, producing 2.1 million bpd in January 2017, was down to 1.5 million bpd in April and is now pegged at 1.41 million bpd as its economy collapses and oil workers go hungry or walk off the job. In pursuit of a $2 billion arbitration award, ConocoPhillips has begun seizing Venezuelan oil storage and terminals in the Caribbean, further hampering its exports.

The combination of Venezuela's travails with a so-far strong global economy, Saudi Arabia's voluntarily under-producing its allocation and Angola's falling below target as its fields mature has pushed up prices sharply.

Now, the American abandonment of the Joint Comprehensive Plan of Action nuclear deal clouds the current accord between the "Vienna Group" of OPEC, Russia and some other leading non-Opec producers. Political opinion in the amalgamation is divided between Tehran allies, notably Russia; those without a dog in the fight, such as Nigeria; those that have sought to steer a middle course, including Iraq, Oman and Kuwait; and those, led by Saudi Arabia and the UAE, that have been pushing the US for tougher action against Tehran. Iran will probably consider itself no longer bound by the deal if sanctions begin to bite, although that doesn't matter practically if its exports are hampered below its allocated level of production.

To avoid collapsing the OPEC pact, Riyadh has suggested that any increase in production would be coordinated with the other adherents. But that would mean a difficult re-allocation of the burden, since the Arabian Gulf members and Russia would benefit at the expense of most of the others.

Saudi Arabia and its political allies will wish to maintain pressure on Tehran. And that requires lower, not higher prices. High oil prices mean that Iran will not lose in revenues even if exports are curbed. Customers for Iranian crude will have an incentive to find ways round the measures. Political pressure on the US Trump administration, both at home and around the world, will mount if its actions are seen to have led to soaring petrol prices.

Quite apart from political factors, all leading oil exporters ought to be concerned by a leap in oil prices. This is often a harbinger of a recession and subsequent slump in demand. Even if not, it will further encourage electric vehicles and other non-oil competitors.

The US' agenda of "energy dominance" ought to be able to meet shortfalls. But in such a situation, the giant has three weaknesses. Firstly, the US does not maintain spare capacity nor does the government direct production and export levels.

Secondly, US production growth is constrained, mainly by a lack of pipeline capacity, which will likely only be alleviated late in 2019.

Thirdly, shale oil is mostly very light, good for making petrol and petrochemicals, not good for the diesel and kerosene that heavy goods transport, ships, aeroplanes and industry depend on. Venezuela, Russia, Iran and the rest of Middle East Opec produce medium and heavy grades that yield more of these vital "middle distillates".

Spare capacity in OPEC and allies to meet a possible Iranian shortfall is available, but not infinite. Saudi Arabia, as usual, is the keystone, with about 2 million bpd available. The UAE and Iraq have about 300,000 bpd spare each, Kuwait 240,000 bpd, and Russia perhaps 100,000 to 150,000 bpd. Iraq's extra capacity is around Kirkuk, locked in until there is agreement between Baghdad and the Kurdish authorities to use their pipeline. Kuwait's and some of Saudi Arabia's spare is in the Neutral Zone, closed down by an environmental dispute, although that could probably be resolved in an emergency.

If Iran's production is severely restricted over a longer period, as it was during 2012-15 and as Iraq's was in the 1990s, the other OPEC members will have to increase their overall production capacity to make up. Iraq and the UAE are doing this, Kuwait wishes to if it can overcome domestic politics, but the most important producer, Saudi Arabia, has been studiedly ambiguous on its future plans.

The reimposition of sanctions on Iran and the implosion of Venezuela are hardly unforeseen events. So the key OPEC players and their allies need to give clear guidance to the market: how will they react to a production shortfall or too-steep rise in prices?

ANGOLA AT CROSSROADS AS NEW BROOM SWEEPS ECONOMY

Robin Mills • *A version of this article appeared in The National, May 06, '18*

One of the most difficult places in the world to get a visa for is Angola. As collapsing oil production worsens the price slump, a new president is trying to sweep the country clean and open up a bureaucratic, state-run economy. In March, Luanda announced that it would offer visas on arrival for 61 countries including the UAE, one small sign of progress.

The south-west African country gets little attention, but it is the continent's leading oil producer after Nigeria, and usually China's second or third-largest oil supplier. It was badly hit by the 2014 collapse in oil prices, when its currency devalued sharply by about 40 per cent against the dollar, and has lost another 28 per cent since the start of this year. Inflation is high at over 20 per cent, and the budget deficit sizeable.

The country is budgeting on the basis of 1.7 million barrels per day (bpd) oil output this year, which it is unlikely to achieve. Higher prices will bail it out for now, but the outlook is gloomy. Following the price collapse, drilling almost dried up and has not revived since. Oil output, at its peak in 2008 at about 1.9 million barrels per day, slumped to 1.53 million bpd in April, 140,000 bpd below its OPEC allocation.

That means after Venezuela, Angola is the largest contributor to OPEC's exceeding its target for cuts. Most of its production comes from deepwater fields developed in the early 2000s, which are now mature. Its high-cost oil has been one of the biggest victims of a combined onslaught from US shale and Saudi Arabia's flirtation with a price war in 2014-16. Luanda's OPEC colleagues will be privately glad that its falling output eases their task. The country, of course, benefits from the pact when it cannot produce above its allocation anyway.

Little relief is in sight: French major Total's ultra-deepwater Kaombo field will start up in the middle of this year, and keep output flat into next year, but decline will resume after that. Angola's first liquefied natural gas exports began in 2013 but the plant was shut down repeatedly during 2014-16 due to technical problems. Onshore exploration was off-limits during the 1975-2002 civil war and hampered thereafter by remaining land-mines. A plan to offer areas on-land was cancelled last year and has not resurfaced.

With most production from the north, the country had hoped for major finds from the Kwanza basin, off the central part of the country. This might be the geological twin of Brazil's famous Santos basin with its giant pre-salt oilfields, separated from the Kwanza by the opening of the Atlantic Ocean. But results so far have been disappointing.

Only Cobalt, a US firm, enjoyed success, finding seven fields in the Kwanza. But it then ran into trouble as state oil company Sonangol backed out of a deal to buy the assets in 2015. Cobalt declared bankruptcy in December over the dispute, before finally reaching a settlement. Now Sonangol, lacking the finance to develop the fields itself, is trying to sell them.

Amid these financial struggles, Angola has also negotiated a transfer of power. João Lourenço took over as president in September from incumbent José Eduardo dos Santos, who had held the post for 38 years. Although an insider from Mr. Dos Santos' party, Mr Lourenço has set about cleaning up corruption. He dismissed Isabel dos Santos, the former president's daughter and, coincidentally, Africa's richest woman as head of Sonangol, and his son, Jose Filomeno dos Santos, as chief of the sovereign wealth fund. Jose dos Santos has been charged with a $1.5 billion fraud.

The crackdown has gone further than most Angolans expected. Still, it is early days; the new president could still run into opposition from other members of the elite, may halt at merely cosmetic changes, or may seek to redirect the wealth to his own circle. Alongside graft, the economy suffers from currency controls, bureaucracy and capricious taxation.

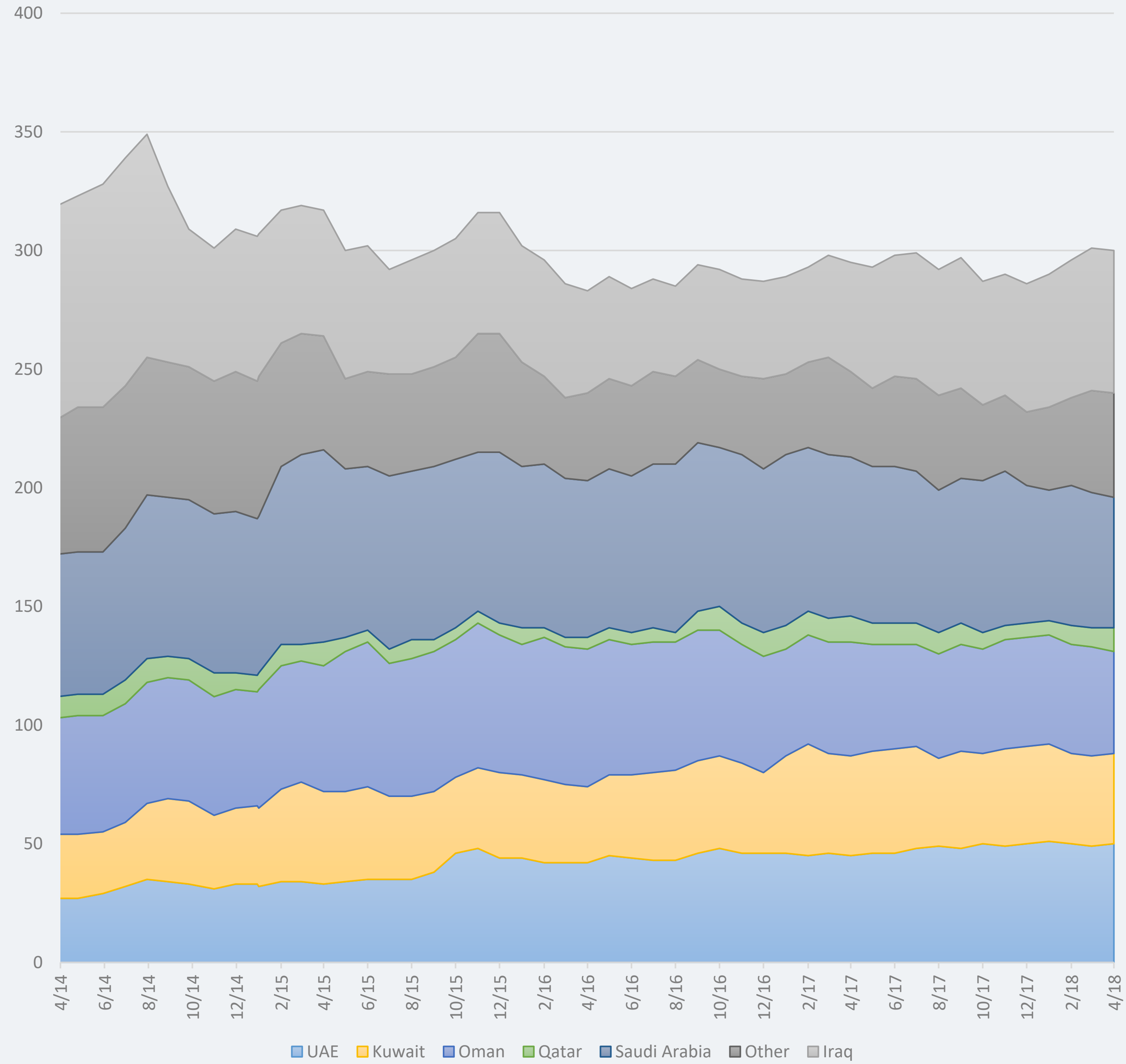
With no signs of a rebound in the oil business, Luanda needs to kick-start other sectors. The country is a leading diamond producer, has previously mined iron ore and has many other resources including agricultural land, hydroelectric power potential and untapped tourist attractions.

Angola's experience may be relevant for other resource-dependent countries across Africa. Its Portuguese-speaking peer on the other side of the continent, Mozambique, also endured a lengthy post-colonial civil war. After making large gas discoveries, it took on undisclosed debts, then defaulted. It is yet to start production.

Nigeria, the continental powerhouse, has come through a painful recession and a halving in value of its currency. Unlike Angola, it has been able to increase oil production and has scope for more, as well as the potential of its huge gas resources, but the non-oil economy is still struggling. However, it is far more diversified than Angola. Conversely, Gabon, Equatorial Guinea and the Republic of Congo, all ruled by long-time leaders or dynasties, are even more dependent on oil than Angola.

Mr Lourenço faces a tough task: reviving investment in the energy sector; continuing the anti-corruption drive; and transforming the rest of the economy. At least his challenge is clearer than for other countries whose oil industries are still growing. For Luanda, diversification is an imperative, not a choice.

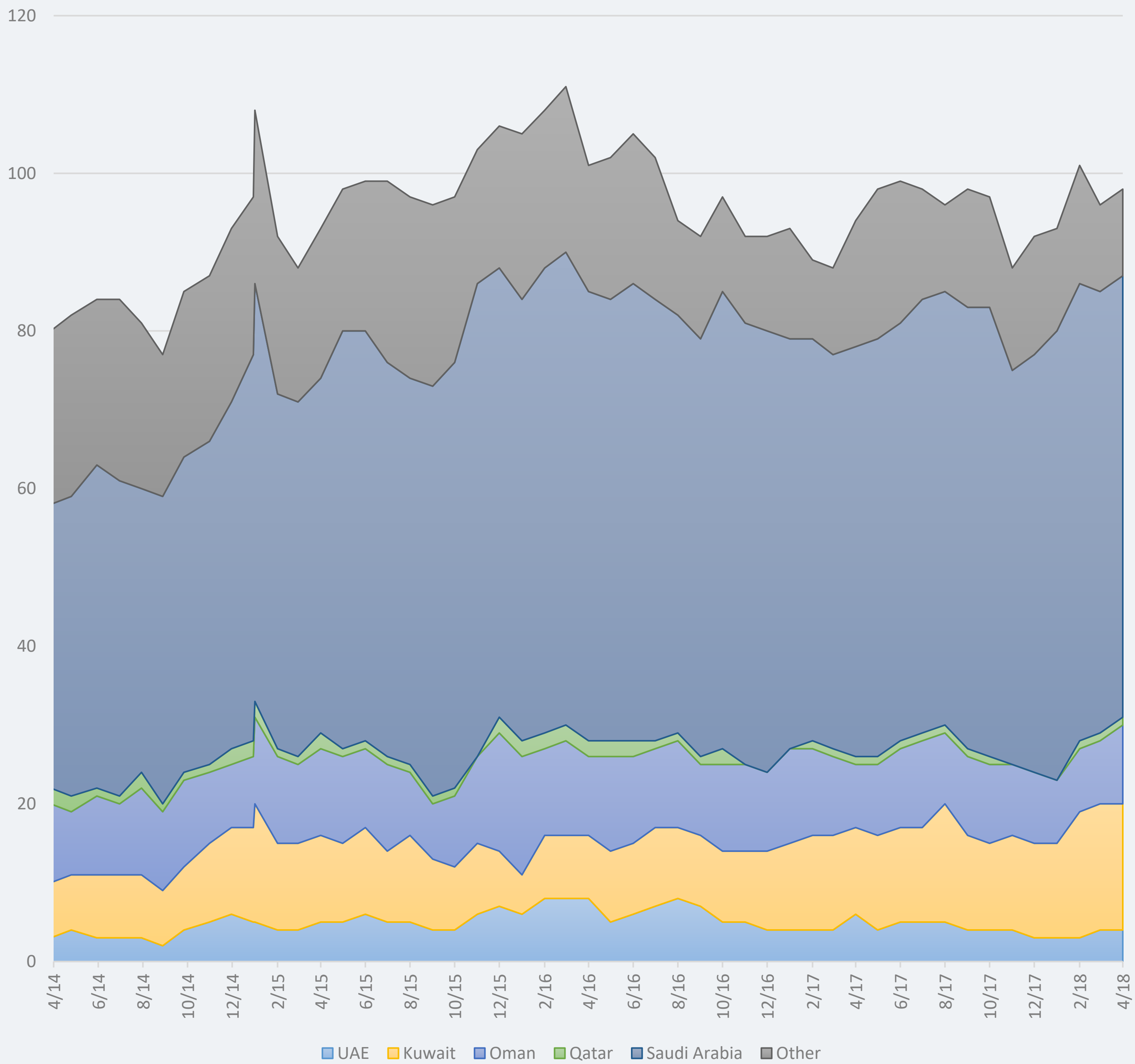
RIG COUNT SNAPSHOT: **OIL**



- The Middle East's oil rig count in April decreased by -1, excluding Iran.
- Iran's rig count is not included in Baker Hughes; however, OPEC reports total (oil and gas) rig count in Iran has remained steady at 61 throughout 2017, till March 2018. Iran's production has consistently averaged ~3.813 Mbpd since January.
- The GCC's rig count fell by -2 in April, even as drilling remained steady at near-record levels.
- Iraq stayed steady in April at 60 rigs as operations continue at Avana Dome in Kirkuk. The field is currently producing between 38 and 55 kbpd. In the south, Zubair's production has also increased by 40 kbpd to reach 475 kbpd.
- Kuwait's rig count fell back to its October 2017 levels (38) once again, after having stayed steady at 41 since November 2017.
- Saudi Arabia's rig count and production fell by a further -2 in April, even as domestic crude demand for power generation increased by 45 kbpd y-o-y. The country's overall production for April witnessed a rise of 46 kbpd.
- The Middle East's oil rig count averaged 293 in 2017, and has averaged 316 the last four years. The region's count has however stayed consistently under 300 over the last 24 months.

Source: Baker Hughes

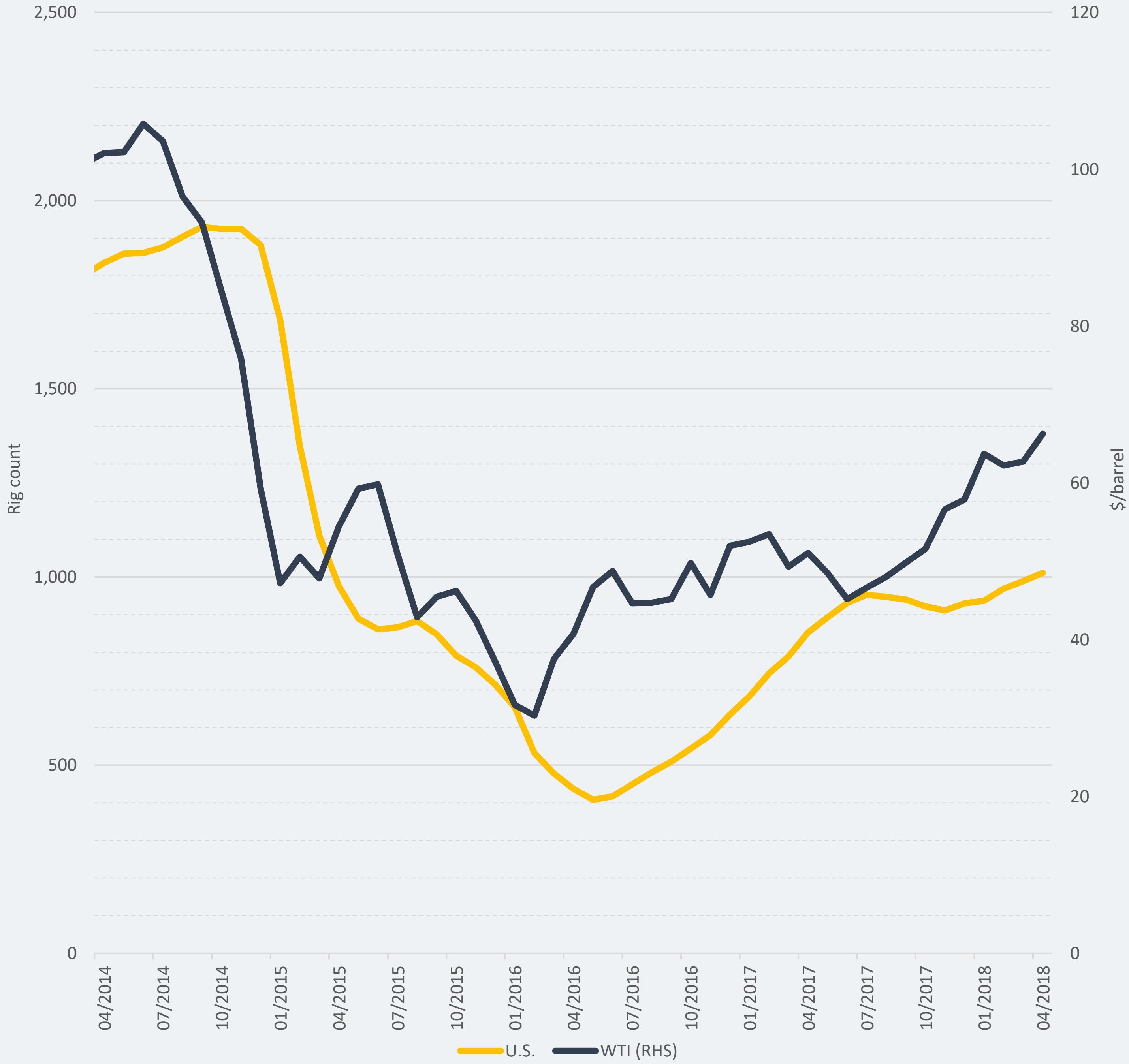
RIG COUNT SNAPSHOT: **GAS**



- The Middle East's gas rig count averaged 94 in 2017. Its highest level reached was in January 2014 at 123 gas rigs. While March saw a decline of -4, April saw a gain of +2.
- Last month Qatar finally gained 1 in its gas rig count that had been at zero since November 2017, down from 1 rig in October with the North Field expansion ongoing.
- The UAE witnessed a rise of +1 in its rig count from December; the country has earmarked $109 B for acquiring downstream assets and sour gas development, indicating a future increase in rig counts.
- Kuwait gained by +4 in gas rigs from January, after having stayed steady since November 2017 with 12 gas rigs, beating its previous year-high count of 15 in August 2017. The Kuwait Oil Company plans to increase Jurassic gas production from 170 MMcf/d to 520 MMcf/d in 2018.
- Saudi Arabia saw a gain of +4 in Q1 2018 due to higher production from Wasit, and plans to increase production from Midyan, Fadhil, and Turaif. The Kingdom also reached a deal with Halliburton on May 27 to boost its shale gas production plans.

Source: Baker Hughes

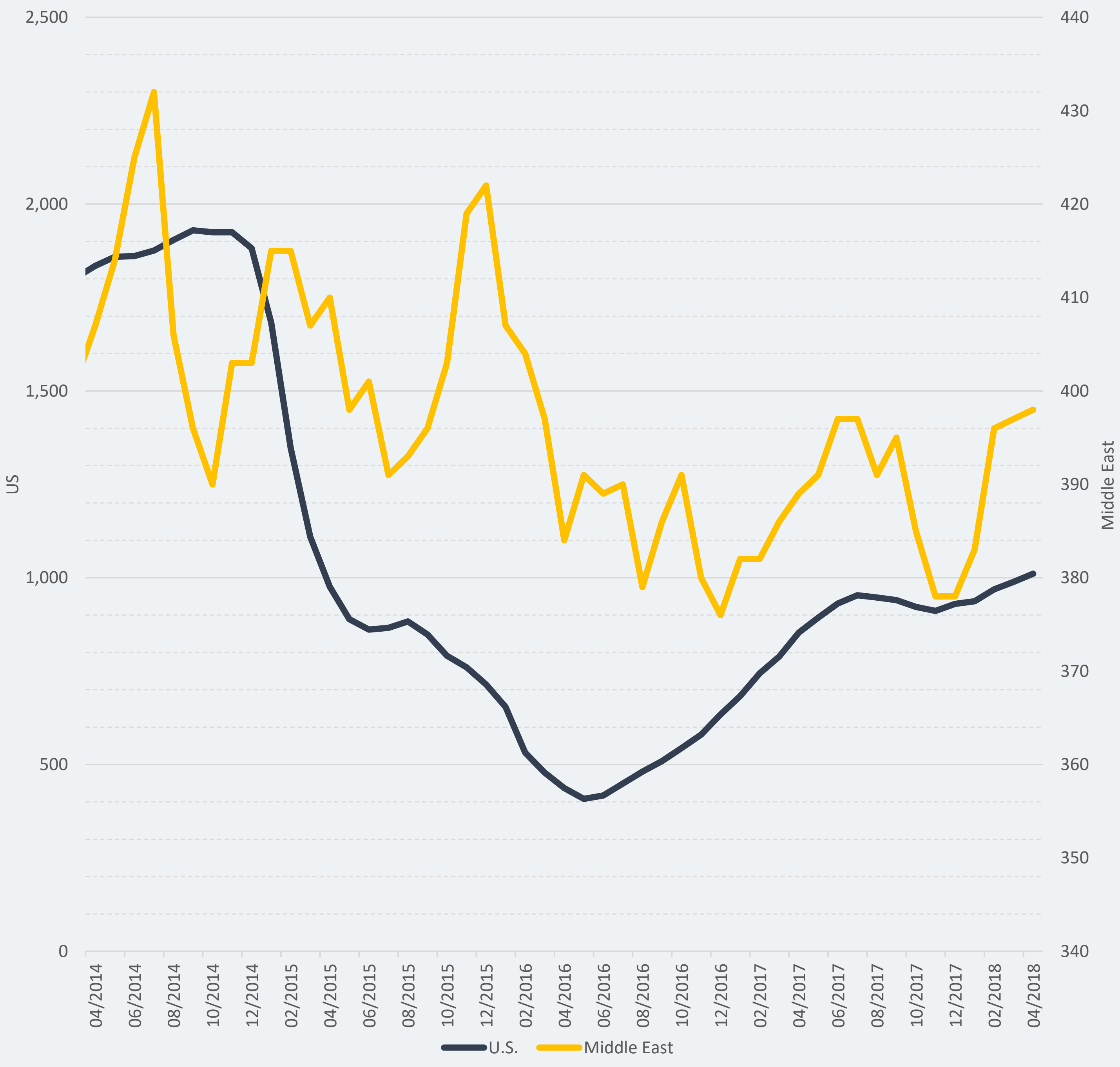
RIGS VERSUS OIL PRICES: US RIGS & WTI



- US rig count jumped by ~19% in April y-o-y, a rise of 158 rigs. The US has overtaken Saudi Arabia in production, averaging ~10.57 Mbpd in April, about 612 kbpd higher than the kingdom's output for the same month.
- Total US rig count has been in decline since August of last year due to producers trimming spending plans citing softer oil prices; however, at 1011 for April, an increase of +22 from March, the country has made a rapid recovery, passing 2017's high of 953 rigs and nearing 2015's >1000 levels.

Source: Baker Hughes, EIA

RIG COUNT: US & MIDDLE EAST



- While the US witnessed a fall of -5 in its offshore count in 2017 owing mainly to Hurricane Harvey and other natural disasters, the country is making a recovery, having gained by +27 in its offshore rigs y-o-y.
- Total Middle East's rig count stayed steady in April (a +1 rise from March), as OPEC members continue to maintain relatively positive compliance rates; for example, UAE has been averaging compliance of ~114% in Q1 2018, and Saudi Arabia ~122%.
- The region's rig count has averaged 392 for the last two years.

Source: Baker Hughes, EIA

FUEL PRICES & SUBSIDY REFORMS

MAY 2018

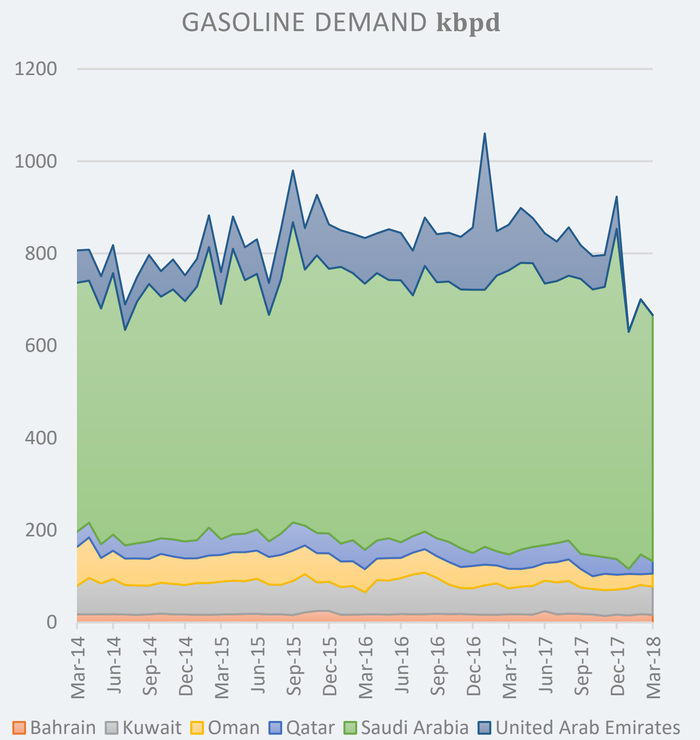
- The UAE was the first GCC country to remove fuel subsidies in August 2015; gasoline prices are to rise by ~5.8% combined in June from May. Fuel prices were announced to be revised upwards on April 30 in line with increasing world prices.
- In Qatar, diesel prices for May increased by ~9.9%, the highest ever since Qatar started pegging its fuel prices to the international market. In Saudi Arabia, gasoline prices have increased by 126% since 2018, and diesel by 14%.
- Meanwhile in Kuwait, the Parliament's Financial and Economic committee has approved the cancellation of the decision enforced in September 2016 to raise fuel prices to 'reduce financial burdens on citizens'. Similarly in Bahrain the Council of Representatives urged the government to rethink its fuel price hike merely a day after it was approved, finding the change 'too sudden', but on May 27, the High Administrative Appeals Court dismissed the complaint, allowing the Ministry of Oil & Gas to raise fuel prices from September 2018.
- In Oman, the prices of Gasoline 91, 95, and diesel for May rose by ~3.42%, 2.80%, and ~3% respectively from April's fuel prices; while demand for M-95 and diesel declined, after having gained by ~21% and ~22% in April.

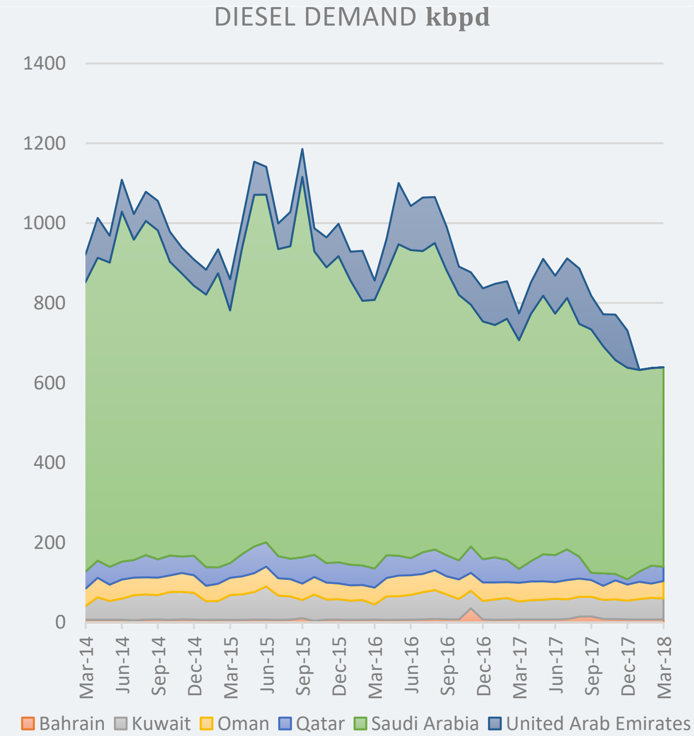
The following table represents the prices of gasoline 95 and diesel ($/litre) for May 2018 in the GCC countries.

GCC Country	PAST US $ PER LITRE		CURRENT US $ PER LITRE	
	Gasoline 95	Diesel	Gasoline 95	Diesel
Saudi Arabia	0.16	0.07	0.54	0.13
UAE	0.46	0.63	0.65	0.70
Qatar	0.27	0.27	0.55	0.55
Bahrain	0.27	0.42	0.53	0.42
Kuwait	0.21	0.36	0.35	0.38
Oman	0.46	0.39	0.58	0.64
US - PRE TAX	0.52	0.57	0.63*	0.67

**US Gasoline 95 values are calculated for Premium Grade.*

Source: EIA, Qamar Energy





***Note:** UAE figures for 2018 are not available.*

Source: EIA, Qamar Energy

ARABIA MONITOR ENERGY:

A Collaboration Between Arabia Monitor & Qamar Energy

ARABIA MONITOR ENERGY

Oil and gas tensions in the Middle East continue to influence the volatility of the world's energy markets. The Arabia Monitor Energy, a novel collaborative effort by Qamar Energy and Arabia Monitor, combines macroeconomics, geopolitics and energy intelligence to explain what the region's energy geo-economics mean for business.

WHAT SETS IT APART?

1. INSIDE OPEC

Focussed assessment of the month's OPEC developments, policy advancements and strategies.

2. NOC & IOC ANALYSES

Examination of factors affecting NOC and IOC policies, and their impact on regional diversification schemes.

3. SPOTLIGHT THIS MONTH

Targeted reading of the geopolitical, macroeconomic and energy landscape of a MENA country utilising our specialised energy intel.

4. SCENARIOS TO WATCH

Detailed forecast of global oil developments and their impact on the risks and opportunities for MENA's oil production.

5. STRATEGIC IMPLICATIONS

Concise summary of major oil trends and their effect on investment strategies under bearish, bullish, and wobble scenarios.

6. OUTLOOK FOR THE YEAR

Cohesive outlook of the oil production, gas production, renewable energy projects, and geopolitics of key MENA countries.

WHO BENEFITS?

ENERGY TRADERS

- What factors will contribute to oil and gas price fluctuations?
- What is the outlook for oil and gas pricing?
- What is the outlook for OPEC's production and export strategy?
- How are NOCs adapting their oil marketing strategies?

INVESTMENT AND RISK ANALYSIS

- What are the operational risks and investment opportunities in MENA?
- How do economics, politics, government policy changes, production and export bottlenecks contribute to risk mitigation?

UPSTREAM FIRMS

- What are the chief economic, political and fiscal regime factors driving/limiting upstream investment decisions and progress?
- What are the oil supply outlooks for the countries by project?

DOWNSTREAM FIRMS

- What are the demand challenges, patterns, and trends for oil and oil products?

NATIONAL OIL COMPANIES

- What are future oil and gas pricing trends?
- What developments will intensify or weaken demand?
- What are IOCs' incentives and drawbacks in operating in the country?

ALTERNATIVE / RENEWABLE ENERGY ORGANISATIONS

- What are the challenges to renewable energy targets?
- What is the progress of major renewable energy projects?
- Are there opportunities for more entrants?

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- MENA Energy Investments
- MENA Energy Fiscal System
- MENA Energy Upstream Bidding map
- MENA Economic Outlook
- Probability Scorecard for Bearish & Bullish Oil Supply/Demand
- Investor Implication Scenarios (Under 3 Oil Price Dynamics)

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TURKEY SHOULD BE CAUTIOUS OF A STANDOFF WITH THE US OVER CYPRIOT GAS

Maryam Salman • **Editorial & Research Analyst, Qamar Energy**

Turkey's modus operandi to deal with international exploration in Cypriot waters lately has been to dispatch a military warship every time a drilling vessel enters northern Cyprus. In February, when Italian supermajor Eni advanced its drill ship Saipem 12000 to enter Block 6, which it operates in partnership with French energy giant Total, Erdogan ordered Turkish warships to deter the vessel, saying that the block was a part of the Turkish Republic of Northern Cyprus' (TRNC) economic exclusive zone (EEZ) (where incidentally Eni has two other wells). Each time the Italian vessel would try to change course, a mysterious warship would emerge, complaining of "engine failure" and effectively blocking Eni's advancement into the block. While the European Commission had denounced Turkey for its blocking of Eni's drill vessel in February as an illegal use of force, Turkey maintains that it never "explicitly" threatened to use force.

Now with US energy major ExxonMobil announcing that it shall begin drilling in its Block 10 concession offshore southeast Cyprus in October, Turkey has once again warned foreign companies to not "overstep the mark" in the Mediterranean. Conceivably Turkey would send another batch of warships in Exxon's direction, but this time it might be forced to reconsider a standoff against the US oil company, especially in the face of already strained relations with Washington. The U.S.S. Iwo Jima aircraft carrier called at Limassol, regarded by many as a warning from the US Navy to its Turkish counterpart to not harass Exxon's vessel later in the year. For Cyprus, a maritime standoff between the Turkish navy and the US would not be ideal, especially if Exxon's vessel were to be accompanied by US warships. The political risk premium for its natural gas ventures would rocket, but if US warships were to not accompany Exxon's vessel, the energy giant would be forced to turn around in response to Turkish naval vessels as had ENI, delaying its exploration programme. However its partnership with Qatar Petroleum in the block could play to its advantage, as Turkey would think twice before upsetting its close relations with the Qataris, who recently signed a $5.2 B deal in a 50-50 JV for the development of a new integrated petrochemicals complex in the Thrace Basin.

In any case, talks of forming a joint commission with the TRNC to manage hydrocarbon activities offshore the island are unlikely to materialise in the near-term, even if they could defuse some of the tension between Turkey and Cyprus. Cyprus would not want to give up on its unilateral stance and from capitalising on Turkey's poorly managed foreign policy with the US (and some EU states), by signing on more contracts with global energy firms.

The US position differs significantly from Turkey's, who maintains that it will never approve a unilateral move by Cyprus for hydrocarbon exploration which results in the "violation of the rights of Turkey and Turkish Cyprus stemming from international law". For the US, the engagement of (international) companies in the exploration of Cypriot waters is a reasonable ask, given that eventual economic benefits are shared equitably by all the people of the island.

But for Turkey, that is too hefty a price.

Erdogan and his energy minister Berat Albayrak should be reasonably cautious of engaging in a naval standoff. A repetition of February's actions would only serve to further deteriorate Turkey's already fragile bonds with the Western world, particularly now that the US has warned Ankara of withdrawing from the sales of its F-35 fighter jets, after Turkey purchased the Russian S-400 missile system in April. For Cyprus however, the gains seem many if Turkey is isolated from its NATO partners.

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OPEC WATCH

AVERAGE CRUDE PRODUCTION FOR APRIL 2018

31.93 Mbpd

+ 12.0 kbpd

From March 2018

Non-OPEC Oil Supply

59.49 Mbpd

+ 0.09 Mbpd

from March. '18*

Non-OPEC Crude Output

United States

FSU

Canada

*Figures for March were revised by OPEC to 59.4 Mbpd, instead of 59.74 Mbpd

LATEST ORGANISATIONAL CHANGES

- UAE Minister of Energy Suhail Al Mazrouei has been elected as president of the OPEC Conference for one year, with effect from January 1 2018.
- Major General Manuel Quevedo, the Minister of Petroleum and Energy of Venezuela, has been elected as alternate president for the same period.

OPEC & Non-OPEC COMPLIANCE

- OPEC compliance reached 166% in April, down by a mere 1% from March, due to higher compliance from the UAE and large cuts in production from Venezuela due to its political crisis.
- Angola is currently leading in OPEC compliance (second to Venezuela) with 303% compliance for April, but this is mainly due to lack of investments, even as Total reached an FID for developing Zinia 2 in Block 17.
- Non-OPEC compliance fell to 73%, mostly due to a production ramp-up from Russia, whose compliance was 88% in April.
- Among the FSU countries, Kazakhstan is expected to lead output growth in 2018. OPEC and IEA forecast the country's production to increase 80 kbpd in 2018. Oman's compliance for April fell to 93% after having maintained 100% compliance since January, as it tries to maintain its 1 Mbpd production target (967 kbpd in April).

OPEC PRODUCTION

- While exempt from the original OPEC deal, Nigeria and Libya received production quotas to cap output from their 2017 high of 2.8 Mbpd combined: Libya at 1 Mbpd, and Nigeria at 1.8 Mbpd.
- Libya's output rose marginally by 7% after production levels stabilised following maintenance at its giant Sharara field. Nigeria's production stayed just below its 1.8 Mbpd cap (~1.791 Mbpd), while Libya's stayed struggling to cross 1 Mbpd, at 982 kbpd.
- Iraq's production witnessed a small decline of 0.07 kbpd, and reached 4.42 Mbpd as repairs at the Basrah Oil Terminal got delayed and a SPM buoy suffered a leak.
- Saudi Arabia's production gained by ~47 kbpd as it takes charge against its main competitors, Russia, and the US.
- Algeria's production grew by 18 kbpd in April, bringing its compliance down to 184% from March's record levels of 220%. The country's production is in decline since 2007 due to geological complexities at its maturing fields.

NEXT OPEC MEETING: 22.06.2018

174th (Ordinary) OPEC Meeting in Vienna, Austria

KEY MENA ENERGY SCORECARD

APRIL 2018

QATAR CRISIS

Riyadh announced it plans to construct a 60 km ocean channel through its land border with Qatar to accommodate a nuclear waste dump and military base, signalling continuing discord between both countries; Qatar Petroleum is the majority owner of the Golden Pass LNG terminal in Texas, with ExxonMobil and ConocoPhillips holding smaller stakes, and expects an FID by end-2018; Qatar may also invest in Exxon's Mozambique venture to jointly market LNG; Qatar is seeking proposals for the development of a 1.6 Mtpa Petrochemicals Complex at Ras Laffan Industrial City, which will include the region's largest ethane cracker; Qatargas delivered its first LNG shipment to Singapore on April 09 as it seeks to strengthen its Asian market share.

FEDERAL IRAQ DEVELOPMENTS

The Ministry of Oil awarded 6 out of the 11 blocks it had put up for auction in Bid Round 5 with Chinese firms and Crescent Petroleum bagging the awards; Eni lifted production at Zubair by 40 kbpd to reach 475 kbpd and plans to increase production by ~60% to 700 kbpd by 2022, the biggest planned gain among all Iraqi oil fields; the Iraqi cabinet approved China's Zhenhua Oil's contract with the Midland Oil Company to develop the 8 billion bbl East Baghdad field; production has started at Iraq's first commercial gas field Siba and will output 50 Mscf/d in three months, up to 100 Mscf/d by end-2018; Sharjah-based Ducorr has completed the design and deployment of its Cathodic Protection System (CPS) for new and existing flowlines at Majnoon.

MENA ENERGY PRICE REFORM

UAE will gradually scrap subsidies on electricity and gas sold to power generators to reflect 'real' prices by 2030; Kuwait Parliament's Financial and Economic Committee has approved the proposal of MP Waleed Al-Tabtabaie to cancel the decision to increase fuel prices (enforced in September 2016); Egypt is planning to slash fuel subsidies by 26% in FY 2018/2019 and electricity subsidies by 47%, and approved a $285 M sovereign fund to further reduce its budget deficit which fell by 4.4% in H1 FY 2017/2018; Saudi Arabia introduced the Citizen's Account Program, a cash handout scheme for low-income Saudi citizens impacted by rising fuel prices, electricity tariffs, and VAT.

MENA NUCLEAR POWER

Saudi Arabia assessing two potential sites – Umm Huwayd and Khor Duweihin – for its first nuclear power plant project near UAE and Qatari borders: tendering to start by end-2018 - delays likely due to technical plans, and commercially due to negotiating nuclear agreement with the US; Egypt and Rosatom signed contract to develop $21B Dabba nuclear plant, raising rhetoric in Israel that Sisi is resorting to former President Gamal Nasser's Pan-Arab policy to overtake Israel's nuclear superiority; UAE's Barakah Nuclear will begin loading fuel in 2019 (delayed from May 2018), and the plant will now generate electricity only by 2020 due to unsatisfactory operational readiness.

No Change ⇔ Very Positive
Deterioration in the last month ⇩ Positive
Negative
Improvement in the last month ⇧ Very Negative

KEY MENA ENERGY SCORECARD

APRIL 2018

ENERGY INFRASTRUCTURE SECURITY

Israel's IDF has warned Hezbollah that it risks starting another war if it fires rockets at its offshore natural gas platforms in Mediterranean which Lebanon claims fall within its own economic zone; On April 21, the pipeline from Waha to the Es Sider terminal in Libya was sabotaged – an explosion and fire occurred at an isolation valve 21 kilometres from North West Marada, cutting off 80 kbpd of production but operations resumed on April 25; the 70 kbpd El Feel oil field remains shut-in after the National Oil Company declared a force majeure following the withdrawal of field guards due to wage disputes.

KUWAIT DEVELOPMENTS

Kuwait will invest $22.4 B each year for the next five years to increase the country's output from 3.2 Mbpd to 4 Mbpd by 2020 and will expand its oil tanker fleet twofold over the next 20 years to 60 vessels; KOC has announced launch of operations at Al-Sabriya and the West Al Raudhatain early production facility (EPF) to produce Jurassic oil and gas to help meet domestic demand and limit imports, and is planning to launch an Integrated Drilling Services tender for 29 Jurassic wells; Kuwait is also expanding refinery capacity with a 615 kbpd facility under construction at al-Zour, with two new refinery ventures underway in Vietnam (which was said to have begun operations end-February) and Duqm (to be launched mid-2018).

No Change — Very Positive
Deterioration in the last month — Positive
Improvement in the last month — Negative
Very Negative

IRAN DEVELOPMENTS

Trump announced the reimposition of sanctions on Iran which will come into effect by November 04; EU refiners have stated that they will continue taking in Iranian crude till July; NIOC signed an IPC with Dana Energy and Zarubezhneft for the Aban and West Paydar fields, an IPC with Pasargad for the Sepehr and Jufair fields, and an IPC with Pertamina for the Mansouri which is yet to be signed; Iran's Azar oilfield, shared with Iraq's Badra oilfield (operated by Gazprom Neft) is planning to raise production from 30 kbpd to 65 kbpd; Italy's Carlo Maresca signed a $100 M contract with the Iran's Industrial Development and Renovation Organization (IDRO) to construct a 100 MW solar power plant and recently launched Phase-1 of a 10 MW solar power plant in Hormuzgan; Iran has agreed to take the gas produced from the ONGC Videsh-discovered Farzad-B field, which had cause tensions with India over the $11 B development cost.

ABU DHABI DEVELOPMENTS

In updates from its first competitive licensing round, ADNOC awarded OMV a 20% stake in the offshore fields of Satah Al Razboot, along with satellite fields Bin Nasher and Al Bateel, and Umm Lulu after it awarded Total a 20% interest in the Umm Shaif and Nasr concession and a 5% interest in the Lower Zakum concession on a 40-year term last month; ADNOC has appointed Japan's Inpex as the asset leader for Lower Zakum for which it won a 10% interest in February; ADNOC is setting up a new crude oil and refined products trading unit to deviate from its FOB-selling model and is expanding its downstream sector.

KEY MENA ENERGY SCORECARD

APRIL 2018

MENA RENEWABLE ENERGY

ACWA Power has signed a contract with Shanghai Electric for the 700MW Phase-4 of the Mohammed bin Rashid Al Maktoum Solar Park in Dubai which entered Phase-3 on May 1 and began generating 200MW of clean energy; Oman has received 28 bids for its 500 MW Ibri solar PV plant including Lightsource BP, ACWA Power, NTPC, and Marubeni Corporation; Lightsource BP is also bidding for an EPC for the 100 MW solar project of Petroleum Development Oman; Oman is also planning 6 new solar and wind projects that will deliver 2650 MW by 2024; Morocco closed bidding RFPs for MASEN's Noor Midelt Solar Hybrid Complex; Vestas, Siemens, Enercon and Ray Power prequalified for 250MW Gulf of Suez Wind Farm; Morocco also expects the Noor III Solar Tower to deliver power to Morocco's electricity grid by October 2018; Masdar has signed an MoU with Costa Rica's Instituto Costarricense de Electricidad (ICE) for the development of off-grid power generation and floating solar photovoltaic technology.

No Change
Very Positive
Positive
Deterioration in the last month
Negative
Improvement in the last month
Very Negative

MENA GAS COMMERCIALISATION

ENI has come up dry at its Rabat Deep 1 (RD-1) well offshore Morocco, having encountered tight, fractured carbonates at a depth of 3180m; the company agreed to develop a gas pipeline in southern Algeria, to link Eni's two producing oilfields in the Berkine basin, Lajmat Bir Roud and Menzel Lejmat, and enable a surplus of 7 Mcm/d of production; ExxonMobil is planning at least two wells in H2 2018 on Block 10 offshore southwest Cyprus with Qatar Petroleum; Egypt will hold an international bid round for 27 concession areas by October 2018, including 16 concessions by EGAS and 11 EGPC; Egypt may sign an agreement with Cyprus to connect the Aphrodite gas field; Turkey is planning to send a drilling ship to offshore Cyprus to deter ExxonMobil from surveying the area, after it sent warships to deter Eni from drilling in February; Tarek el-Molla has announced that the Zohr concession will produce up to 700 Mcf/d of gas by May 2018, up from the current 350 Mcf/d, and will reach 2.9 Bcf/d by mid-2019.

ABOUT US

Qamar Energy provides leading-edge strategy, commercial and economic consulting across the energy spectrum to governments, international oil companies (IOCs), national oil companies (NOCs), investors, and oil traders.

ROBIN MILLS • CEO

Robin is an expert on Middle East energy strategy and economics, described by Foreign Policy as "one of the energy world's great minds". He is the author of two books, *The Myth of the Oil Crisis* and *Capturing Carbon*, columnist on energy and environmental issues for Bloomberg and The National, and comments widely on energy issues in the media, including the Financial Times, Foreign Policy, Atlantic, CNN, BBC, Sky News and others. He is a Senior Fellow with the Iraq Energy Institute, and a non-resident fellow at the Columbia Center for Global Energy Policy. He holds a first-class degree in Geology from the University of Cambridge, and speaks five languages including Farsi and Arabic.

RECENT APPEARANCES & TALKS

ADNOC Downstream Investment Forum 2018, Abu Dhabi • *Site visit to Ruwais Petrochemical Complex*

Iraq Energy Forum 2018, Baghdad • *Presentation on* ***Iraq's Solar Energy Potential***

Platts 5th Annual Middle East Crude Oil Summit, Dubai • *Presentation on* **Special Session: Iraq – Production, Compliance, & Political Status**

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