ARABIA MONITOR ENERGY

Arabia Monitor in collaboration with Qamar Energy

MAY 2019



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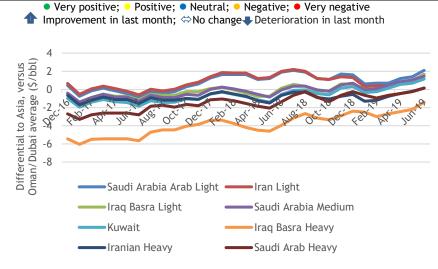
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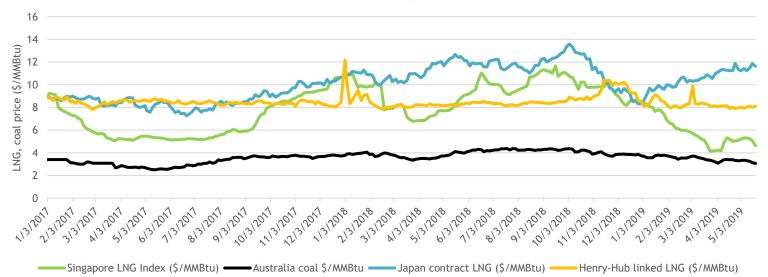
- Under US sanctions law, the US should be able to provide a "grace" or "implementation" period of up to 120 days to importers of **Iranian** oil to wind down their purchases to 0, but the US has remained silent about this. We expect China will reduce imports by up to 40% to remain acquiescent during a crucial time of US-China trade talks and tariffs imposition, but for now there have been no official sales.
- Little was heard from **OPEC** in the JMMC meeting in May as to the prognosis for the cuts, but it is likely we see some sort of extension to be decided in July. The **Iraqis**, however, seem to regard Washington's refusal to extend the sanctions waivers on Iran as a signal that they can increase production to replace the Iranian oil.
- ExxonMobil's withdrawal of its key personnel on WQ1 oilfield, due to security concerns, will not cut its production according to Iraq state officials, but will delay progress on the SIIP project.
- The baseline scenario for **Algeria** is that it is increasing likely the transitional government will extend its tenure to well after the planned July 4 presidential election, which street protestors are demanding be delayed.
- Although recent history does not suggest that **Lebanon** will receive all of the CEDRE funds, this time the consequences could be different. At the previous CEDRE -- Paris III in 2007 -- disbursements by end 2009 amounted to less than 50% of what was pledged as only less than a quarter of the measures were fully enacted. The question is how many new rabbits Lebanon can pull out of its hat.

OIL PRICE SCORI	OIL PRICE SCORING (Rated Based on Impact on Oil Price)				
OPEC Agreement	•	÷	OPEC will keep cuts in place at least to July 2019 (the OPEC meeting delayed to July from June); Gulf producers are hesitant on increasing production despite outages in Venezuela, Nigeria and Libya and cuts in Iran because US inventories are increasing; producers will likely call for an extension of some sort for the deal.		
OPEC supply outlook	•	*	Venezuela's production to fluctuate between 600-700 kb/d; overall OPEC production down 3 kb/d in April but compliance still high at 150%; Iraq still facing technical issues on Majnoon from flooding incident; Libya's production shaky; Nigeria facing protests and fire outages near key oil infrastructure and likely to decrease in May; ENI made discovery offshore Angola, indicating production capacity of over 10 kb/d.		
Non-OPEC supply outlook	•	*	Russia's crude oil contamination issue raised compliance to 80% in April from 50% in March; OPEC revised down its 2019 supply forecast only slightly by 30 kb/d and expects US production to slow lowering outlook by 22 kb/d to 1.85 Mb/d.		,
Global demand	•	¢	OPEC kept demand forecasts unchanged in its May report compared to April's, growing by 1.21 b/d reaching 99.94 Mb/d.		
Progress of non- oil technologies	•	€	Saudi increased solar targets to 20 GW by 2023 and 40 GW by 2030; First Middle East utility-scale solar-plus- storage plant comes online in Jordan (23 MW); ACWA wins Bahrain's 100 MW PV tender; ACWA wins 500 MW Oman tender (Ibri II).		



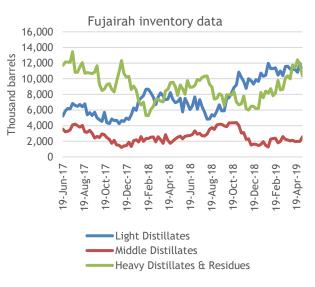
Source: News sources; NIOC; SOMO; Qamar Energy Research

Coal and LNG prices



Section Snapshot

- As of May 20, total oil product stocks in Fujairah stood at 23.923 million barrels. Turnarounds in middle distillates for Middle East producers was seen in recent weeks amid the Russian crude contamination incident.
- Saudi Aramco raised OSPs to Asia supported by strong gasoline demand and robust refining margins. Also, the widening Brent/Dubai spread favoured Dubai-linked Arabian Gulf crudes over Brent-linked crudes.
- The anticipated surge in US LNG exports drove government efforts to speed up permitting, but sustainability of exports is threatened by Chinese tariffs. China raised tariffs on US LNG imports to 25% from 10%, effective June 1.



Source: FEDCom/S&P Global Platts Fujairah Inventory Data

Headline Developments

Established Producers Supply: ADNOC (60%), Exxon Mobil (28%) and JODCO (12%), joint stakeholders in the offshore Upper Zakum, are looking to spend up to USD 8B to raise production capacity in the field to 1 Mb/d by 2024 in the second phase of expansions from the current 650 kb/d. The field is currently undergoing the first phase of expansions to 750 kb/d, to be completed this year. The increases will help meet ADNOC's production capacity target of 4 Mb/d by 2020 and 5 Mb/d by 2030; capacity was 3.3 Mb/d in 2018 and currently stands at 3.5 Mb/d according to ADNOC, probably a slight overestimate. The second phase of Upper Zakum expansion therefore accounts for half the increment t 4 Mb/d. The UAE has likewise expressed an intention to increase gas production significantly by 2030 and become self-sufficient. In this regard, on May 9, ADNOC and Total have awarded a frontend engineering design (FEED) services contract for Phase 1 of the offshore Umm Shaif Gas Cap Condensate Development Project to McDermott. Moreover, ADNOC launched its second competitive bid round for 5 blocks (3 offshore and 2 onshore), offering unconventional reserves for the first time as it seeks to boost gas production. Awards are expected in early 2020. The planned rise in oil production capacity by 2030 would, if utilised, increase associated gas output, though possibly also requiring more gas injection for improved recovery.

Saudi Aramco inked a 20-year LNG purchase deal with Sempra Energy which is developing the Port Arthur LNG export project in Texas. The contract is for 5 million tons per annum (Mtpa) and includes the planned negotiation and finalization of a 25% equity investment in the 11 Mtpa Phase 1 of the project. The Saudi state oil giant plans to become a major global LNG player and it chimes with moves by global oil majors like Shell, BP and ExxonMobil. Statements by both companies did not reveal if the gas will be consumed domestically in the kingdom or will be sold to international buyers. Saudi Arabia has expressed a desire to replace oil entirely in its power sector with a combination of gas and renewables, and even to become a gas exporter of 30 BCM before 2030. If the plant is completed by 2025, our projections have Saudi Arabia experiencing a gas deficit of around 8 BCM or 6 Mtpa in that year. That would mean the LNG volumes would probably be consumed domestically. As a simple illustration, replacing existing use of crude and fuel oil¹, as targeted, ignoring efficiency gains and demand growth, would require about 55 BCM per year of additional gas supplies. However, according to the Aramco bond prospectus, if the state company does meet its target of doubling raw gas production to 238 BCM in 2026 (sales gas would be lower after removing NGLs) with gas demand at 151 BCM, then the company would in fact be a major international gas player. In addition to the US deal, Saudi Arabia is in discussions with Russia's Novatek for a stake in the new Arctic LNG 2 project which is scheduled for commissioning in 2023 and will deliver 19.8 Mtpa and the Saudi Energy Minister Khalid al-Falih also said they are looking at LNG projects in Australia and Africa. This would allow it to import some cargoes as well as to the international market. Aramco's trading arm has, for the first time, sold its first LNG from Singapore on the spot market in April to an Indian buyer, edging it closer to its vision to become a global LNG player.

Qatar Petroleum (QP), planning to increase LNG production from 77 Mtpa to 110 Mtpa by 2024, issued an engineering, procurement and construction (EPC) tender package for expanding its LNG storage, and the loading and export facilities for its North Field Expansion (NFE) project which will be awarded in 2020. This follows the EPC invitation to tender package, which will also be awarded in 2020, for four LNG mega-trains issued to three EPC JVs: Chiyoda Corp. and Technip France SA; JGC Corp. and Hyundai Engineering & Construction Co. Ltd.; and Saipem SPA, McDermott Middle East Inc., and CTCI Corp. This further follows the April contract let for the fabrication and installation of eight offshore jackets to McDermott Middle East and the contract let for early site works for the onshore project to the JV of Consolidated Contractors Co. and Teyseer Trading & Contracting Co. Additionally, in April, QP launched an invitation to tender for an initial delivery of 60 LNG carrier fleets in support of the planned production expansion, with a potential to exceed 100 over the next decade. In addition to addressing shipping requirements for the North NFE project, the tender covers shipping requirements for the LNG volumes that will be purchased and offtaken by Ocean LNG, a 70%/30% JV between QP and ExxonMobil, from the Golden Pass LNG export project in the US, which is currently under construction and is planned to start by 2024. In the MENA region, some regional countries could expand LNG exports, but apart from those that are restarting or debottlenecking existing plants (Egypt, Oman and potentially Yemen), only Qatar appears to have the abundance of low-cost resources required to build new plants. Iran will likely continue to be prevented by internal bureaucracy and sanctions. Cyprus's recent finds might give it an opportunity for LNG exports, perhaps in combination with Israel, if it can overcome the hurdles of costs and regional politics, and if pipeline projects do not materialise.

Emerging Producers Supply: ExxonMobil evacuated staff from its 440 kb/d West Qurna 1 project in southern **Iraq**, following the US decision to withdraw embassy personnel from Baghdad and Erbil. The warning came after the drone attacks on a key Saudi oil pipeline that Iran-linked Houthi militia took credit for. WQ1, according to government officials, has not seen production affected. Shell, BP and others are operating as

consumption averaged 410 kbbl/day of crude and 502 kbbl/day of fuel oil

¹ Assuming all fuel oil is used in power generation (some is used in industry), but ignoring diesel consumption for power. 2018

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usual, but are monitoring the security situation closely. The withdrawal also comes after ExxonMobil and PetroChina were given Cabinet approval on May 8 for their involvement in the South Iraq Infrastructure Project, or SIIP. The project involves raising export capacity through the Basra Gulf; facilities to treat associated gas; and a project to provide water to several oil fields around Basra. To pay for the infrastructure, the consortium would get development rights for Ratawi and Nahr Bin Omar, currently operated by Basra Oil Company (BOC), and increase output to 500 kb/d from a combined 125 kb/d. The removal of US staff by the oil major could delay the already long-delayed project which was supposed to have been awarded in the start of the year but faced setbacks from Parliament. Iraqi officials were angered with the withdrawal of Exxon oil workers and called it unwarranted and temporary and assured that there is no elevated threat to oil companies or foreigners in Basra. On a brighter note, Hyundai E&C has signed a letter of intent (LoI) with BOC to construct the USD 2.45B Common Seawater Supply Project (CSSP). It involves the construction of a facility to treat 5 Mb/d of seawater for injection into Basra's oil fields to boost production.

Two months in, fighting on the outskirts of Tripoli, Libya continues as General Haftar's Libyan National Army (LNA) presses its attack to take the capital. The General is gaining support from Russia, the US, France, Saudi Arabia, Egypt and the UAE. Neither side of the fight is able to secure gains, killing almost 400 people and displacing 50,000. As the fighting in Libya settles into a protracted stalemate, the situation does not look good for the country's oil production. Although Libya's oil production increased in April by 71 kb/d to 1.176 Mb/d, it seems doubtful that this success can continue. The chief of Libya's National Oil Corporation (NOC), Mustafa Sanallah, said on Saturday continued instability in Libya could make it lose 95% of its oil production. Haftar's forces even kidnapped the head of the oil workers' labour union last month, Saad Dinar, who has not yet been released. Sanallah confirmed an attack in mid-May on a south-eastern Libyan field, Zella, which resulted in fatalities and kidnapped workers. The Islamic State claimed responsibility for the attack. The Zella field is operated by the Zueitina Oil Company which pumped 19 kb/d average in 4Q 2018 across all its fields (29C, Zella, Sabah, Fidda/Hakim). To add to the uncertainty and difficult business environment for oil companies, the economy minister of the UN-recognized Government of National Accord (GNA), based in Tripoli, announced that they will be suspending the operations of 40 companies across many industries. In the oil industry it targeted Total and Petrofac because their business licenses had expired and not been renewed. ENI was not on the list as Italy is one of the strongest supporters for the GNA. The GNA however, did not garner the support it expected from France.



Figure 1 Libya's Oil Infrastructure and Control Map²

Demand: Saudi Aramco is in talks with Indian conglomerate, Reliance Industries, for a stake in its refining and petrochemical businesses, deepening the ties with the fastestgrowing oil consumer. Reliance is willing to sell 10-20% of the stake to Aramco and is valuing their business at USD 80B, but sources say the Saudi state company is seeking a higher stake, more like 25%, valued at about USD 10-15B, implying a total for the company's refining and petrochemicals businesses of USD 60B. So far, sources have indicated some disagreements on the valuation and stake between the two and that Reliance also initiated discussions recently with ADNOC for the same purpose. Aramco has also signed a USD 1.2B deal with Hyundai Heavy Industries Holdings' subsidiary to purchase a 17% stake in South Korea's Hyundai Oilbank, a private oil refining company. The refining unit's assets are capable of processing 650 kb/d of crude oil. Aramco has an option to buy an additional 2.9% of the refining unit. The sale's proceeds will help the Hyundai shipbuilding unit fund its USD 2B acquisition of rival Daewoo Shipbuilding & Marine Engineering Co.

Table 1 Reliance Refining & Marketing Performance Highlights³

(USD B)	FY19	FY18
Revenue	56.8	44.1
Gross Refining Margin (\$/bbl)	9.2	11.6
EBITDA	3.3	4.18
EBITDA Margin (%)	5.8	9.5
Crude Throughput (million barrels)	501	512

Saudi energy minister Khalid Al-Falih said the future of electric vehicles (EVs) will not jeopardise the kingdom's oil demand,

² Petroleum Economist, March 2019

though they are still studying the requirement to invest in charging stations, modify the grid to accommodate the cars, and the use of hydrogen as fuel for vehicles. The energy minister believes that EVs will not dent oil demand significantly because they are only going to be economic in the light transport sectors while trucks, ships, and planes will continue to rely almost exclusively on petroleum-based fuels. The first order of electric trucks in the region came from Sharjah-based Bee'ah in 2018 for 50 Tesla Semi heavy duty electric trucks - the first and largest fleet of that model in the Middle East. Since then, there has been no similar large order of electric trucks in the region. The minister further pointed out that the current policies and type of energy available in the Kingdom does not support the wide use of EVs from a pure economical consumer standpoint, and from a government perspective. In contrast, Norway has plenty of cheap hydro energy which supports the use of EVs at a large scale. Saudi Arabia will need to reassess this conclusion in the mediumterm as the key take-off point for EVs is seen between 2025-30, when they become competitive without subsidies, driven by plunging Li-ion battery costs.

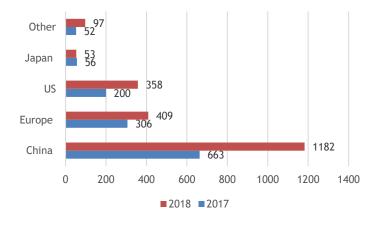


Figure 2 Plug-in EVs Sales by Region ('000 cars)

Eni inaugurated the construction site in Tataouine, in the south of Tunisia, for a 10 MW solar PV plant. The project, which was awarded to the Tunisian National Oil Company (Etap)-Eni consortium following a public tender, will supply electricity to the state-owned Tunisian Company of Electricity and Gas (STEG). Eni is also working on the construction of the Adam photovoltaic field in Tataouine, expected to be completed this year, which will have an installed capacity of 5 MW. In 2018, solar capacity was around 37 MW, wind 245 MW, and hydro 62 MW, a total of 344 MW. The country hopes to attract USD 2B of investment to fund 1,900 MW of renewable capacity by 2022. By 2030, it aims to have 1,700 MW of installed wind capacity and a further 1,500 MW of solar PV capacity. In general, foreign companies have been particularly distant when it comes to investing in Tunisia's renewable opportunities. There is a perception that the STEG is a monopolist institution and companies will have to compete with the STEG on land use. Moreover, IPPs are limited to 30 MW for wind and 10 MW for PV.

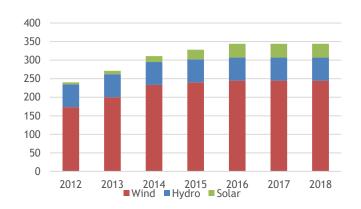


Figure 3 Tunisia's Renewable Energy Capacity (MW)⁴

Bee'ah, the Sharjah-based waste management company founded in 2007, is aiming to expand operations into Saudi Arabia, and targets zero waste headed to landfills in the emirate by 2021. Its JV with Masdar and Emirates Waste to-Energy Company in 2017 for generating power from waste will become operational by 2020. The plant will generate around 30 MW of energy by burning 37.5 tonnes of waste/hr, generating steam to power generators, providing electricity to the Sharjah Electricity and Water Authority (SEWA).By 2021, Bee'ah aims to have zero waste going to Sharjah's landfill and increase production to 100 MW of power through waste and even solar energy. However, its plan for its first 20 MW solar power project on a landfill site has seen many delays and was initially talked about in 2015, but now it is back in play, as it will be used to power the facilities at the Waste Management Centre, with potential storage capacity to power the facilities during non-daylight hours.

Shell is exiting Saudi Arabia's refining scene. Aramco will acquire Shell Saudi Arabia Refining Limited's 50% share of the SASREF JV refinery in Jubail Industrial City, on the east coast of Saudi Arabia, for USD 631M. The refinery has a gross capacity of 305 kb/d with the main products being LPG, naphtha, kerosene, diesel, fuel oil and sulphur. The purchase will increase Aramco's domestic refining capacity from 1,905 kb/d to 2,058 kb/d. For Shell, the sale is part of an ongoing effort to focus its refining portfolio, integrating with Shell trading hubs and chemicals, both areas where Shell is not present in in the kingdom. SABIC and Shell Chemicals Arabia LLC were partners in Saudi Petrochemical Company (Sadaf), but Shell sold its entire share to SABIC in 2017, thereby increasing SABIC's ownership interest in Sadaf from 50% to 100%. Outside Saudi Arabia, Shell also sold its interest in the US Motiva

⁴ INS; IRENA; Qamar Energy

refinery to Aramco, leaving Aramco with full ownership of Motiva. Shell is however, still present in Saudi Arabia's lubricant sales and marketing business for motorists and industries.

Exports: On May 12 the UAE confirmed a mine attack on an Emirati oil tanker and one day later, Saudi Arabia confirmed the same occurrence on two Saudi Arabian vessels, and one Norwegian on that day. No group claimed the attack, but there have been plenty of subtle accusations levelled at the Iran Revolutionary Guard. The US conducted an investigation after which John Bolton, US National Security Adviser, said that the naval mines were "almost certainly from Iran." This comes after it was reported that the US government is sending an additional 1,500 troops to the Middle East due to rising tensions with Iran. All vessels appeared to have been targeted at their rear, an area that is the most vulnerable part of a vessel as it is the hardest area to cover by radar and is considered the blind spot. The damage created holes big enough to take on water but not large enough to sink the ships: in other words, a momentarily painful message, but not a declaration of war. The recent attack could possibly increase the cost of insurance and security (and ultimately oil prices) for that area as it took place close to the Strait of Hormuz, through which flows a third of the world's LNG and almost 20% of total global oil production. There has also been a recent drone attack, claimed by the Houthi rebels, on two pumping stations on the east-west crude pipeline in Saudi Arabia that enables the kingdom to export from the Red Sea instead of relying on the Eastern province and the Strait of Hormuz. Post-attack, Saudi Arabia reportedly held meetings to speed up a plan to expand the 5 Mb/d East-West pipeline to 6.5 Mb/d, which was intended to be completed by 2023. The attack on the pipeline was a message that even if the country diversifies exports outside the Strait, it would still be exposed to attacks on alternative infrastructure.

The Baghdad-KRG oil dispute has started to pick up, raising questions for Finance Minister Fuad Hussein and Oil Minister Thamir Ghadhban. Both were called in by Parliament to answer as to why budget allocation payments were being made by Baghdad to the KRG over the past three months despite not receiving the full 250 kb/d from the KRG to be exported through SOMO. The 2019 budget law seems to be unclear regarding the oil deal. The 2019 law is vague in interpretation but unlike prior budgets, it appears to guarantee certain financial transfers regardless of the KRG's adherence to its oil obligations. So far, the KRG did transfer some amounts to Baghdad, but not the full contractual 250 kb/d. In April for example, the KRG transferred 107 kb/d to SOMO. That was the largest monthly transfer in 2019. After the meeting, MPs were quite content with Ghadhban's answers to the questions by angered MPs, as he stood against the KRG's actions, but Hussein, who is Kurdish and former Chief of Staff to expresident of the Kurdistan region Massoud Barzani, was in a tougher spot and sources say he did not provide satisfactory answers to Parliament.

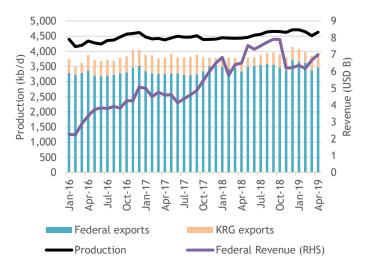


Figure 4 Iraq Production and Exports⁵

An Iranian delegation was expected to visit Pakistan in June to discuss the long-delayed Iran-Pakistan (IP) gas pipeline project. However, Pakistan told the Iranians that it would not go through with the pipeline as long as Tehran was subject to US sanctions. The IP pipeline was long stalled before current sanctions on Iran due to financing and security reasons. The Iranian section of the pipeline is already built but Pakistan is yet to start on its 781 km section. Under the signed bilateral agreement, Pakistan should have started importing 8 BCM/y of Iranian gas in January 2015 and a gas sales purchase agreement was signed in 2009. In February Iran sent a notice to Pakistan that it plans to take it before the International Court of Justice for failing to build its section of the IP Pipeline within the timeframe specified in the agreement. Pakistan has until August to respond to Iran's legal notice and settle the issue through negotiations. Iran is desperately seeking to ink energy export deals with its neighbours, particularly that the US is now targeting suspension of its gas exports to Iraq. Pakistan will continue declining to take the deal forward as its does not want to defy its US and Saudi allies. To take advantage of the situation, Qatar will lobby for more volumes of LNG exports to Pakistan by offering more lenient terms to beat its competitors Russia, Azerbaijan, Malaysia, and Oman who are also seeking to ink an LNG deal with Pakistan on a government-togovernment basis.

<u>New Oil Supplies/Discoveries:</u> Jordan expects to reach financial closure soon on its oil shale programme and start producing 25 kb/d from oil shale in 2022. Oil shale should be distinguished from shale oil. Shale oil and gas are essentially

⁵ OPEC; Iraq Oil Report; SOMO

hydrocarbons trapped in shale formations. The rock has to be fractured to take out the oil and/or gas. Oil shale, on the other hand, is sedimentary rock containing kerogen, a petroleum like solid precursor of petroleum that needs to be heated to extract the oil. The Jordanian government is also pressing onward with plans for a 1 Mb/d capacity pipeline from Iraq as well as plans for a new refinery in the Red Sea port of Aqaba, but the pipeline is not on the Iraqi government priority list and is instead focusing on the SIIP project, signing the contracts for the fifth licensing round and meeting electricity needs.

OPEC: Crude oil production from the cartel fell by only 3 kb/d in April despite deep cuts by Saudi Arabia and continued decline in output from Iran. Venezuela's oil production increased slightly that month and it seems that production will fluctuate around 600-700 kb/d. Iraq loosened its OPEC cut compliance in April, raising production by 113 kb/d. Nigeria's output rose by 92 kb/d in April, but we will likely see a decline in May due to the fire outbreak near the 240 kb/d Trans Forcados pipeline, declaring it under force majeure.

OPEC trimmed its estimate of oil supply growth slightly by 30 kb/d from outside the group in 2019 and said the rapid rise in production of US shale oil is slowing as drilling activity is decelerating and shale companies are facing lower capital allocations. OPEC is keeping its forecast of global growth in oil use during 2019 steady at 1.21 Mb/d indicating that demand for its oil will be higher later in the year. The IEA also downgraded its demand estimate for 2019 by 90 kb/d to 1.3 Mb/d as a result of an unexpectedly oversupplied first quarter. But supply outages in the OPEC wildcards, Canada and maintenance on Brent pipeline will take production offline.

We expect OPEC output to increase after May as the remaining few Iranian cargoes complete deliveries, but at a more cautious pace than last November when OPEC members rushed to fill in for reduced Iranian barrels. OPEC+ is more likely to watch and wait till losses of Iranian crude are "physically" felt in the market, before deciding to adjust for higher production and will decide on the way forward in the July meeting (was initially schedule for June, but reports are now confirming it has been delayed to July). In the JMMC meeting in May, held in Jeddah (which Iran did not attend), OPEC+ discussed two options for increasing production in the second half of the year. The group weighed a plan that would end overcompliance with the cuts, which could add 0.8 Mb/d of supply back onto the market, therefore, keeping the cuts in place. In April, OPEC+ cut 1.79 Mb/d from the market. The second alternative is agreeing to trim the cuts from 1.2 to 0.9 Mb/d. The second option was supported by Russia as they walked into the meeting hoping to decide on a production increase, at least by 300 kb/d. Moscow wants more change in the numbers this time around rather than simply extending the agreement.

OPEC will try and match demand for Iranian crude with increased output, while achieving compliance closer to 100% with the decided cuts. OPEC compliance remained high at 150% in April. However, Saudi Arabia has hinted that its May output will still remain "significantly less" than 10 Mb/d, which means, a) it expects the US to come out with some sort of "grace" period for Iranian waivers or policy reversal, and b) oil prices stay in the range of USD 75-80/bbl, eroding the US's aims of bringing down prices immediately. Saudi Arabia cut production by 891 kb/d in April from its reference output of 10.633 Mb/d in October 2018 and 846 kb/d in March, producing around 9.7 Mb/d, much lower than its allowed 10.311 Mb/d.

Table 2: OPEC Compliance to the New Production Cuts⁶

Country	Mar 2019 Compliance (%)	Apr 2019 Compliance (%)
Algeria	119	138 🛉
Angola	157	245 🛉
Congo	-190	-100 🛉
Ecuador	-25	-25 🔸
Equatorial Guinea	175	425
Gabon	-400	17 🛉
Iraq	96	16 🖕
Kuwait	120	132
Nigeria	19	-153 🖕
Saudi Arabia	263	277
UAE	116	113
OPEC	157	150 🖕

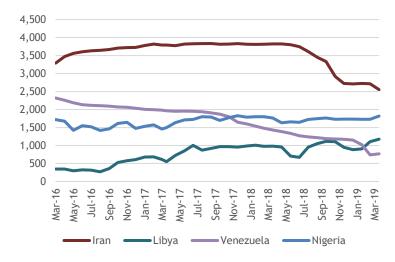


Figure 5: Monthly Crude Production for OPEC Wildcards (kb/d)⁷

⁷ OPEC Secondary Sources; Qamar Energy

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Spotlight this Month: Iran: Who Will Continue Importing its Oil?

Iran's May 08 announcement (incidentally, exactly a year after the US Administration made public its decision to exit the JCPOA) to suspend cooperation with parts of the nuclear deal, will not significantly impact its near-term exports and production outlook. There is a possibility that the Top-3 (China, India, and Turkey) feel emboldened to take advantage of the tensions brewing between the US, Iran, and the EU, and place orders for more Iranian oil. However, actual volumes, if placed, will remain small, as all three countries are involved in crucial political dealings of their own with the US, and would avoid upsetting it. Other than the oil waivers, the US extended most of the waivers related to Iran's civilian nuclear program, but it did not extend two serious ones: one that allowed Iran to export heavy water surpluses to Oman and one that allowed Iran to swap low-enriched uranium that exceeded 300 kg for vellowcake uranium.

Under US sanctions law, the US is able to provide all importers of Iranian oil that were granted Special Reduction Exemptions (SREs), an "implementation period" of up to 120 days to wind down their purchases to 0. This is especially necessary for importers like China and India, who have remained Iran's largest customers to date. The end of the "grace" or "implementation" period can then be facilitated by a shortterm waiver for countries that have still not managed to line up alternate sources of crude. It is interesting to note that the US Administration, however, omitted this part from its April 22 announcement. This illustrates reasonable confidence in the White House that most importers, such as India, Japan, and South Korea, have been able to, in the last 6 months, find readily available alternates to Iranian crude. Another possible reason is that Iran has not buckled as easily under US pressure as Trump had hoped, which created a strong incentive on the part of the White House to escalate matters with Iran in 2019. Therefore, even if it may not admit to it now, the US will maintain silence on a short-term waiver, after the possible "grace" period concludes. However, it is not a given that the US will indeed commit to one.

China has adopted a stance of defiance to the rejection of an extension of the waivers, but will avoid escalatory tactics while a potential trade with the US is still on the table. For now there are no official sales to China by Iran, however, there might be around 200 kb/d of disguised sales of crude. Even though it shares close trade links with Iran, relations between the two countries are more trilateral than bilateral. The US's intervention between both has placed China in somewhat of a catch-22, as oil imports from Iran are one bargaining point in its much larger negotiations for a trade deal. China is aware that Iran has nowhere else to go, but would not want to see its closest Middle Eastern partner bow to US pressure either.

Therefore, Beijing will put on a temporary show of "flexibility", wherein it might reduce imports by about 30-40% from current levels, but not fully, to also continue maintaining its leverage over Tehran. Depending on the direction trade talks between the two countries take, the US might decide that sanctioning smaller, less interconnected Chinese financial institutions and some individuals might be enough. This should work well in China's favour: it could justify receiving a few hundred thousand barrels of Iranian crude each day as "debt" repayments against Chinese goods, food, and medicine purchased by Iran. Crude imported as debt repayment would technically not be rejection of the sanctions, as Iran wouldn't earn any revenue against them. However, it is not implausible that China would try to buy actual barrels disguised as debt repayments, or from illicit STS transfers at Malacca or storage at Dalian.

India will still reduce its imports from Iran, choosing to play along as the "best" ally of the US among the Top-3 as current tensions reach a head, before feeling comfortable enough to increase imports, albeit marginally, by the end of the year. India's recent spate of differences with Pakistan regarding Kashmir and airstrikes against terrorist bases in the latter's territory are telling of its atypical compliance with the US. For most of last year, New Delhi had maintained a neutral stance, and had gone as far as to say that it did not recognise unilateral sanctions of any sort, but only those imposed by the UNSC. India's publicly aligning with the US would feed Pakistani paranoia about its enemy's ambitions in Afghanistan. Indian officials on April 23 thus announced that they would "stop importing oil from Iran" till such time that waivers are restored. Of note here is that Indian refiners, state-run and private, have not yet placed orders to lift Iranian oil in May, and are reported to be stepping up imports from other suppliers such as Mexico, Brazil, and Iraq to meet lost Iranian barrels. Nevertheless, deliveries are expected to continue into the year, albeit at much lower levels. Indian state companies have some cover from their US-aligned aims in Iran's Chabahar port, which supplies Afghanistan, to quietly bypass US directives and continue taking in Iran's crude. But by publicly announcing that it shall not import Iranian oil, India may have hurt chances for a short-term waiver after the "grace" period concludes.

Turkey on the other hand had long stopped importing Iranian oil, not placing any orders in April, and will likely prefer to watch how the US-Iran drama unfolds. Turkey's own ties with the US have long been strained over American support for the Syrian Kurds, and its commitment to purchase the Russian S-400 air defence system. Ankara needs to continue purchasing Iranian gas to serve its south-eastern regions and avoid overdependence on Russia. Its economy is shaky and it might require support at some point, so any chance for an outright rejection of US policy on Iran would be little less than foolhardy. Iran has now risked the support of the EU, which, even if slowmoving and tedious, was crucial in maintaining a buffer against US unilateralism. By "warning" the EU that it had up to 60 days to put into action the INSTEX agreement (or else it would quit the JCPOA), Tehran has, by its own hand, opened an opportunity for the EU to align with US thinking. Iran continues to produce heavy water and low-enriched uranium, but it needs outlets to move them outside the country so it can remain under JCPOA-mandated stockpile levels. By announcing that it is suspending these two obligations, Iran is directly trying to connect the issue to the waivers that the US chose not to extend.

Iran is betting that the EU will see this as a crisis of US making (as European capitals mostly do) and will have little sympathy for the Trump administration. If the EU's support for Iran begins faltering, other major allies, including China, India, and Turkey, would begin feeling more isolated in maintaining support for Iran. Their problem is that private, and even state, companies struggle practically with dealing with Iran because of lack of access to banking, insurance and the threat of US secondary sanctions that would prevent them from doing business in the US or even dealing with US counterparties. The prospect of UN sanctions on Iran is contingent on Iran actually making a move to exit the JCPOA, which it hasn't yet. The EU was quick to reject Iran's "ultimatum", but went on to say that it was still very much committed in its stance of "sanctionlifting for the Iranian people", and that it had plans to push ahead the operationalisation of INSTEX. Iran, who has often resorted to warring with words, is aware of the very limited leverage it has over the EU, and will therefore not act upon the threats it proposes.

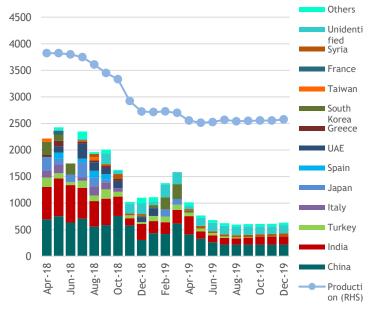


Figure 6 Iran's Production & Exports Outlook (kb/d)

For the above reasons, we analyse Iranian crude exports fall to 632 kb/d by December 2019 and production to reach 2.5 Mb/d, an overall drop of 1.3 Mb/d in production from 2018's peak of 3.8 Mb/d. Therefore, Iran's announcement of exiting parts of the JCPOA, in our opinion, is not sufficient to have an impact on the country's oil production and exports outlook till the end of the year.

The impact on the oil market from reduced Iranian supplies would be more significant in the second half of the year. Oil prices do not look likely to go down, even with OPEC+ releasing more supplies. This is because with the cartel maximising supplies, spare capacity shall diminish, limiting OPEC's ability to offset other unexpected supply shocks - such as in Venezuela, Libya, and potentially Nigeria or others - adding a premium to prices. The US's production is expected to grow by 1.1 Mb/d in 2019, but may not be the best suited to meet the demands of Iran's key customers, mainly Asian, who rely on medium and heavy sour grades typical to the Middle East. For instance, the US could offer its WTI, Mars and Southern Green Canyon grades as replacements for the Indian and Chinese markets, but these are still viewed with some caution. Asian refiners prefer to mix US grades with Iraqi, Azeri, and Mexican blends to improve their quality as feedstock for local refineries, rather than use them just as-is. Also, by intensifying pressure on Venezuela, another key supplier to prominent Iranian markets like India, the US will be further unable to guarantee heavy sour grades supply for Asian demand. The US also needs medium/heavy grades to mix with light for its own refineries.

As discussed in the OPEC section of this report, we expect the cartel's output to increase after May. OPEC will try and match demand for Iranian crude with increased output, while achieving compliance closer to 100%. Russian and Iraqi compliance will remain in the 40-50% range, but shall not majorly impact global supplies. In following months, tightening spare capacities, rising summer demand, and continued disruptions in Venezuela and Libya will keep oil prices high, further increasing the premiums of suitable Middle Eastern alternate grades to Asia. This might necessitate a sanctions' review by the US (likely at the end of the grace period), where a re-introduction of waivers to balance the oil market may be considered.

9

Scenarios to watch

IRAN DEFIES JCPOA DEAL LEADING TO UN SANCTIONS

<u>Timing</u>: 2019

Event: The JCPOA signatories are unable to launch INSTEX in time and many private companies are unwilling to deal with Iran afraid of secondary US sanctions. Iran therefore follows through with its threat of no longer limiting low-enriched uranium stockpiles to 300 kilograms or limiting heavy water stockpiles to 130 metric tonnes. Iran started to announce in media news outlets of its actions against the deal's mandates in July 2019. Tensions rise drastically as the US continues to expand and maintain the position of its military force in the Middle East. As there is a clear divide in the region between US and Iranian allies, the mediator in the region is a difficult one to ascertain. Baghdad, worried of a proxy war in its country, steps up. Having no experience in mediating between the two countries on such a sensitive topic, and given Iran's determination not to give in to US demands, Iraq is unsuccessful and Iran continues its nuclear activity. In retaliation, Washington casts a wider net of secondary sanctions on Iran's exports and imports, its allies (Hezbollah) and ramps up enforcement of existing sanctions. With no clear path in sight, the EU countries exit the JCPOA and the UN sanctions Iran once again.

Opportunity: Iranian oil exports fall even lower than our base case of 707 kb/d to 500 kb/d. The US and UN sanctions are not successful in eliminating Iranian exports as some countries continue to import Iranian oil, like China. Since OPEC+ decide to ease compliance and extend the deal in July, Saudi Arabia and other OPEC countries that have the spare capacity to raise production do so under the OPEC deal. OPEC Gulf producers increase production by 600 kb/d from April levels, led by Saudi Arabia. The kingdom raises production to 10.3 Mb/d from 9.7 Mb/d produces in March and April.

<u>Impact</u>: Oil prices rise to USD 80/bbl in Q4 2019. Oil prices are capped from thinning spare oil capacity and weakening economic conditions, particularly that the US and China are still going back and forth on the trade war.

Scenario Probability: 25%

Alternate Futures:

<u>45%:</u> Tehran continues complying with the deal, exercising restraint on its nuclear activity and pushing back down its heavy water and uranium stockpiles. This option is encouraged

as candidates in the 2020 US presidential election start announcing they would re-join the deal if elected.

<u>20%</u>: The US will try to delay Iran's nuclear program's development using other means such as cyber activity.

<u>10%</u>: US military strike on Iran's nuclear facilities.

ARAMCO BUYS PIONEER'S SHALE OIL BUSINESS

Timing: 2020

Event: Aramco sees the opportunity of investing in US shale oil assets to learn and profit from the business which the GCC OPEC members once disregarded as a real threat to oil prices. In the GCC, Saudi Arabia and Abu Dhabi both have unconventional resources which they have not yet developed significantly, due to low oil and gas domestic prices, particularly in Saudi Arabia, and lack of expertise.

Opportunity: Aramco enters the international oil upstream portfolio for the first time to prop up its value before the 2021 IPO. The investment in US shale oil helps the state-company gain a better understanding of the shale industry, its breakeven oil prices and logistics. Shale companies usually do not invest in long-term projects that produce for decades like we see in the kingdom, but rather produce quickly and production can be easily adjusted up/down when prices fall/rise. Aramco profits greatly from the Pioneer investment by hedging prices on future shale output.

Impact: Aramco buys out the US shale producer as it is struggling to meet CAPEX requirements and as the US is debottlenecking shale output capacity from 3 to 9 Mb/d by 2021. Aramco's trading unit sells the oil in international markets, notably for Asia and also utilises the oil in the Motiva refinery. Aramco maintains the investment for at least 5-10 years before the asset start depleting, then sells it off to another player.

Scenario Probability: 15%

Alternative Futures

<u>15%:</u> Aramco makes the investment in partnership with another GCC state (probably ADNOC) or with a supermajor that has experience in Permian or Eagle Ford shale production.

50%: Aramco does not make the investment.

<u>20%</u>: The investment is badly managed and is proved a failure, so Aramco decides to sell it off before its 10-year period

Top Projects in the News

	Project	Summary	Client	Contractor	Implications
1	Solar PV Project, Oman	The ACWA Power consortium was awarded the contract to develop the largest PV independent project in Oman.	Oman Power & Water Procurment Company (OPWP)	ACWA Power, Kuwait's Gulf Investment Corporation, Alternative Energy Projects Company.	The project will be located around 300k west of Muscat and will contribute towards increasing power supplies in the sultanate. This will be the first utility-scale power project in Oman that will aim to yield 500 MW of power. At peak generation, the plant output ill be wnough to supply an estimated 33,000 homes with electricity.
2	Drilling Contracts in North Field Project, Qatar	Qatar Petroleum awarded eight drilling contracts for its North Field gas expansion project.	Qatar Petroleum	Gulf Drilling International (GDI) & Northern Offshore Drilling Operations (NODO).	The drilling rigs are expected to be mobilised and ready for drilling starting January 2020. Six rigs were awarded to GDI and the rest to NODO.
3	Solar power plant project, Morocco	The project involves tender for the design, financing, construction, operation and maintenance of the Noor Midelt Phase 1 multi-technologies solar power plant.Construction of the Noor Midelt Phase 1 plant, located 20km north of the town of Midelt in central Morocco, is expected to start towards the end of 2019, while delivery of the first electricity to the grid is planned from 2022.	The Moroccan Agency for Sustainable Energy (MASEN)	Masdar	The project, which will have a total installed capacity of 800 MW, is the world's first advanced hybridisation of concentrated solar power and PV technologies. This project marks a key step in the transition of renewable energy from its traditional peak-shaving role in meeting power demand to becoming a baseload electricity provider.
4	Supply of grid- connected singlephase solar inverters, Dubai	ABB is supplying 5,000 (UNO-DM-PLUS) grid-connected singlephase solar inverters, which will help the house owners in Dubai to reduce energy bills.5,000 houses across the emirate of Dubai in the United Arab Emirates will benefit from clean energy harnessed with ABB's solar inverter technology.	Dubai Electricity and Water Authority (DEWA)	ABB	Earlier this year, Dubai's utility provider, DEWA launched a project to install PV solar panels in UAE nationals' homes in Dubai and connect to the grid. This project is in line with the emirate's clean energy strategy, which aims to produce 75% of its energy requirements from clean sources by the year 2050.

Macro Dashboard⁸

MENA Oil Exporters						
	Real GDP G	irowth (%)	Fiscal Balance (% of GDP)			
	2018	2019f	2018	2019f		
Algeria	2.1	2.3	-6.0	-11.5		
Bahrain	1.8	1.8	-11.7	-8.4		
Iran	-3.9	-6.0	-4.1	-4.1		
Iraq	0.6	2.8	6.2	-5.2		
KSA	2.2	1.8	-4.6	-7.9		
Kuwait	1.7	2.5	11.3	9.5		
Libya	17.9	4.3	-7.4	-10.9		
Oman	2.1	1.1	-7.7	-9.9		
Qatar	2.2	2.6	5.3	6.1		
UAE	1.7	2.8	-1.8	-0.8		
Yemen	-2.7	2.1	-4.4	-5.1		
Average						
Ex-Libya &						
Yemen	1.2	1.3	-2.3	-4.4		

MENA Oil Importers						
	Real GDP G	irowth (%)	Fiscal Balance	Fiscal Balance (% of GDP)		
	2018	2019f	2018	2019f		
Djibouti	6.7	6.7	-4.4	-2.1		
Egypt	5.3	5.5	-9.6	-8.6		
Jordan	2.0	2.2	-4.6	-4.0		
Lebanon	0.2	1.3	-11.0	-11.7		
Mauritania	3.0	6.4	1.6	0.6		
Morocco	3.1	3.2	-3.7	-3.7		
Palestine	5.2	2.9	-8.3	-10.4		
Somalia	3.1	3.5	0.0	0.0		
Sudan	-2.1	-2.3	-3.1	-2.9		
Syria						
Tunisia	2.5	2.7	-4.6	-3.7		

⁸ Arabia Monitor.

*Ministry of Finance, Saudi Arabia.

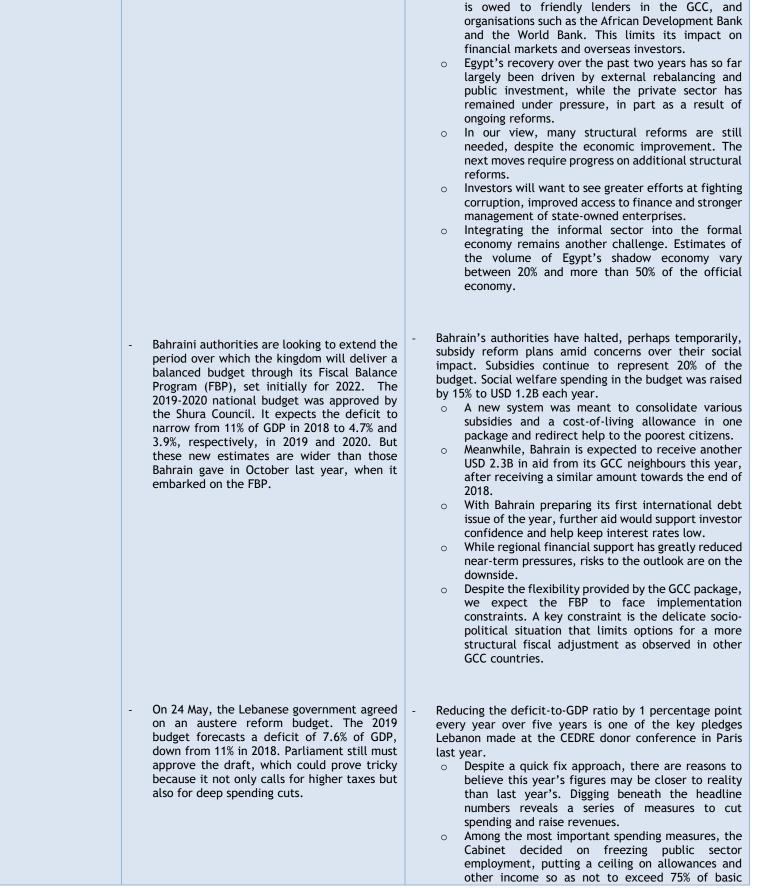
Macro Dashboard

	Economic Update	Comment
Inflation	- Egypt's annual urban consumer price inflation eased to 13% in April from 14.2% in March. But while headline inflation is still in double digits, core inflation which strips out volatile factors such as food and energy slowed to 8.1% in April from 8.9% in March. This compares favourably with its peak of 35.3% in July 2017 before the IMF programme.	 Annual core inflation is expected to drop to 10.7% by the end of 2019/20, compared with the expected 14.5% by the end of the current fiscal year. With subsidy cuts planned by the beginning of the 2019/2020 fiscal year (starting in July), we could see the Central Bank of Egypt holding back on its easing cycle as the inflation rate is expected to pick up slightly following the recent cuts.
	- Saudi Arabia's General Authority for Statistics inflation release for April showed deflation continuing, with prices declining by 1.9% YoY but unchanged month-on-month.	 In the year-to-April, prices in Saudi Arabia have declined by a yearly average of 2.1%. Food and beverage prices rose by 1.1% year-to- April. Looking ahead, we expect local food prices to follow an upward trend, as prices inch up in the short term due to Ramadan and Eid festivities, as has been the case in most recent years. Housing and utilities prices declined by 8% in the year-to-April (mainly due to housing rentals), declining by an average of 9.1% year-to-April. Transportation prices were down by 0.5% during the same period, despite a rise in April by 0.3% YoY. Inflation averaged 2.6% in 2018, up from -0.8% in 2017, and lower than the IMF projection of 3%. The government forecasts inflation at 2.3% in 2019 with YoY pressures waning.
PMI	- Saudi Arabia's non-oil private sector growth remained steady though unchanged in April, but strong demand and increased business confidence did not translate into job creation.	 Saudi Arabia's Emirates NBD PMI remained unchanged at 56.8 in April. Output and new-orders growth remained firm but there has been no meaningful growth in private sector employment over the last three months. The Saudi private sector struggled last year because of fuel price hikes, VAT introduction and higher fees for hiring foreign workers. However, private sector growth picked up pace this year. It rose to a 13-month high in January and continued to gain momentum though only marginally through February and March. Looking ahead, confidence was at its highest in over five years, boosted by a number of initiatives to drive investment and expansion, as well as higher government spending for this year and a recovery in oil prices.
	- The UAE PMI rose for the second month running in April, hitting 57.6 from 55.7 in March.	 The reading signalled a sharp monthly improvement in UAE business conditions and one that was the greatest since December 2017. On average, the PMI score reached 55.5 during 2018, down from 56.1 in 2017.

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		 The improvement in new order growth is encouraging. However, with firms still competing on price, there is still a reluctance to boost hiring and the hiring component of the index does not point to a meaningful improvement in job growth. Household consumption is likely to remain constrained in the absence of job and or wage growth.
	- Egypt's PMI, measured by the Emirates NBD, rose to 50.8 in April 2019 from 49.9 in March, the first time since August last year that the index has been above the 50.0 mark indicating growth. The index had remained stubbornly sub-50.0 contractionary territory until now.	 Egypt's recovery over the past two years has so far largely been driven by external rebalancing and public investment, while the private sector has remained under pressure, in part as a result of ongoing reforms. The annual average PMI score has, however, improved from 46.0 in 2016 (when Egypt secured the IMF-sponsored programme, in November) to 47.5 in 2017 and 49.5 in 2018. We expect that this improvement will continue in 2019.
Policy & Geopolitics	- The current US-Iran tensions will continue to cause volatility, particularly in the oil market, but are unlikely to lead to direct conflict unless one is triggered by an unplanned event. The chances of a settlement through talks, however, is very low.	 With no solution to the US-Iran standoff relations in sight, the situation is a recipe for volatility, with all the global spill-overs this implies. But we estimate the chance of a direct conflict between the two sides at only 5%. We expect the result will be volatility in oil prices and more economic collapse in Iran as the government in Tehran rides out what it hopes will be the end of US President Donald Trump's term next year. Were Trump to be re-elected, there would be a reassessment. In general, the oil market has not panicked over the developments, largely due to Saudi Arabia's commitment to add supply. The danger would be if a protracted civil war in Libya, the continuing crisis in Venezuela and the failure of OPEC+ to reach a new production agreement were to combine to reduce world supply to a level that is beyond Saudi Arabia's capacity to offset. As far as direct conflict is concerned, however, the major caveat is that one could be triggered by accident. Potential flashpoints include the war in Yemen, sectarian tensions in Bahrain, Israeli involvement and actions by Hezbollah. There are also reported splits within the White House that could muddy the waters. As a result of all this, we, like the IMF, see the Iranian economy contracting by 6% this year, but we expect an average oil price of USD 65 per barrel versus the USD 59 estimated by the IMF.
	- The IMF has agreed at staff level to disburse the final USD 2B tranche of the Fund's USD 12B loan to Egypt. Economic fundamentals have improved. There is stronger growth, smaller current and fiscal account deficits and higher FX reserves.	 At the same time, the IMF highlighted that other metrics including government debt and private sector surveys of business activity, highlight areas of ongoing concern. Gross government debt is expected to decline to 86% of GDP in FY 2018/19 from 92.6% of GDP in 2017/18, while external debt is expected at 34.4% of GDP during the same period from 37.4% in the previous fiscal year.

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Note, though, that the bulk of Egypt's external debt



The baseline scenario for Algeria is that it is increasing likely the transitional government will extend its tenure to well after the planned July 4 presidential election, which street protestors are demanding be delayed. salary, putting a ceiling on the number of months of salaries for public servants (14 months), and a ceiling on public sector salaries so as not to exceed the president's salary.

- Some of the key revenue-generating measures include raising withholding tax on interest from 7% to 10%, making income taxes more progressive with a 25% ceiling versus 20%, putting a 2% tax on imports (except for pharmaceuticals), new taxes on hotel rooms and raising passport fees and work license fees for foreigners.
- To bolster the state's coffers, the Cabinet also endorsed the second tax hike in two years on the interest earned on deposits and government-issued treasury bills and bonds. At the start of 2018, the tax rate was increased from 5% to 7% before being hiked to 10% in the 2019 budget
- There was no increase to VAT or fuel tariffs -measures that would have hit both rich and poor.
- Key structural reforms that could have generated serious revenue were not part of the budget. These include reforming the wage bill and restructuring the utility company Electricité du Liban.
- In our view, while these measures will help trigger some proportion of the CEDRE funds, they will not be enough to encourage donors to rapidly disburse the bulk of funds, leaving markets uncertain about the future for what we estimate to be about a 12month period from now.
- Although recent history does not suggest that all of the financial assistance will necessarily arrive, this time the consequences could be different. At the previous CEDRE -- Paris III in 2007 -- disbursements by end 2009 amounted to less than 50% of what was pledged as only less than a quarter of the measures were fully enacted. The question is how many new rabbits Lebanon can pull out of its hat.
- On 24 May, the Constitutional Council announced that only two candidates had registered -- Abdelhakim Hamadi and Hamid Touahri, both unknown figures. No major party has nominated a candidate.
 - Meanwhile, the resignation of 20-year President Abdulaziz Bouteflika has done little to ease popular demand for Algeria's elite to give up power.
 - Protests have continued on a regular basis calling for the election, seen as prolonging the current governmental system, to be postponed.
 - On May 20, three prominent but long-retired political figures with ties to Algeria's Islamists called for the army leadership to negotiate directly with the protest movement.
 - Three months of protests, however, have not produced a coherent opposition leadership and it is not clear who the army would negotiate with. Nor has the army leadership shown willingness to compromise.
 - Another obstacle to a 4 July election is that some mayors have said they would not take part in organising the polls.
 - A postponement would extend the influence of General Gaid Salah, the army chief of staff, who

 appears to have taken over in effect from caretaker President Abdelkader Bensalah and Prime Minister Noureddine Bedoui. A delay would also prolong the economic stagnation. In its April 2019 World Economic
Outlook, the IMF revised its Algerian economic growth forecast down to 2.3% this year from 2.7% predicted in October 2018 and 2.1% in 2018. However, a prolonged power struggle could cause this figure to decline further. Slowing growth alongside rising inflation add to growing concerns of
a "double-whammy" of downside risks to the economy, coupled by high youth unemployment (around 30%). To reduce this unemployment the kind that can lead to instability Algeria's economy needs to grow by more than 6% annually over the next few years, not currently in the cards.
 The best-case scenario will see protestors' calls for a national dialogue accepted. Giving protesters the occasion to come to the table could potentially provide them with some say in steering the direction of what happens next. The longer the vacuum remains, the higher the observe that protectors will begin to divide with the
chance that protesters will begin to divide, with the discord resulting in violence, an element that would only work toward legitimising the power of the current government.

Outlook for 2019

Changes to the outlook from the previous issue are highlighted in *bold italic font*.

	Oil	Gas	Alternative energy	Politics / Geopolitics
Algeria	 The long-awaited new fiscal regime to be delayed as Algeria forms a new government; probably late 2019 or 2020. Oil production to remain around 1.06 Mb/d as the country struggles to increase oil capacity from maturing fields. Algeria has threatened not to approve Total's acquisition of the important oil-producing Anadarko assets from Occidental 	 Touat gas project (Neptune, Sonatrach and Engie) started commissioning and is slated to produce 1.7 kb/d of condensates and 4.5 BCM/y of gas. ENI renewed its gas import agreement with Sonatrach and extended it to 2027. Exploitation of the country's enormous shale gas resources to continue to be held up by local protests and unattractive investment conditions. 	- Algeria opens its 150 MW solar tender to be developed on a build- own-operate basis and will award 20-year power purchase agreements and is also planning tenders to produce 2,000 MW before the end of 2020.	 The Algerian army chief invokes a constitution to remove Bouteflika from power to install an interim government. The president of the upper house or Senate, Abdelkader Bensalah, is the interim president until elections are held on July 4. Two candidates were announced for President Abdelhakim Hamadi and Hamid Touahri, both not high profile in the country's political system. No party leader was among candidates. Demonstrators hit the streets again calling for comprehensive reforms to the country's political system calling an authentic democratic transition. Elections likely to be delayed. Energy Minister was replaced with Mohamed Arkab, a 53-yr-old mechanical engineer. His first act was to quieten discontent within Sonatrach employees over the political situation and discourage protests by Sonatrach employees.
Egypt	 Arrears owed to foreign partners to be fully repaid by end 2020; Total arrears owed to producers had fallen to their lowest levels, coming in at USD 1.2B at the end of FY2017-18. EGPC and EGAS awarded 12 concessions for its largest oil and gas exploration and production auction to Shell, ExxonMobil, BP, Petronas, Neptune Energy and others as the country looks to become a hub for gas production and trading in the Eastern Mediterranean. 	 Dana Gas started drilling a new well at the North El Arish concession (Block 6). Prospective natural gas resources to be added from this well in the case of exploration success could reach 4 TCF according to the company. ENI makes a new gas discovery in the Nour North Sinai Concession to be appraised. 	 The Gulf of Suez wind project will come online by 2019 (250 MW). The TSK Group Kom Ombo (26 MW) and Zaafarana (50 MW) solar PV projects will come online in 2019. Benban solar park in the Sahara Desert is set to produce between 1.6 and 2.0 GW of solar power by mid-2019. 	 The Egyptian parliament has approved amending the country's constitution to extend presidential terms from four to six years which will allow Sisi to stay in power to 2034 (from 2022). This shows his strong support in parliament; however, the vote is facing opposition from a coalition of leftist and secular parties.

		 Gas production at Shell's Burullus and Rashid fields declined by 37.5%, reaching 250 MMscf/d compared to 400 MMscf/d last year due to natural decline of the wells, but the IOC is planning to boost production by 100 MMscf/d by connecting it to Phase 1 of the project by H1 2019. BP has started production from the second stage of its offshore West Nile Delta development which produces gas from Giza and Fayoum fields. It is producing 400 MMscf/d and is expected to ramp up to a maximum rate of some 700 MMscf/d. Possible delay in the Damietta LNG facility restart (80% owned by UFG) due to ongoing arbitration tussle between the company and the Egyptian 		
Kuwait	 Launched drilling services tender for 29 Jurassic wells in West Kuwait. Capacity in the area is planned to increase from 0.52 Mb/d to 0.54 Mb/d by 2019 and 0.55 Mb/d in 2020. No official award has been made yet. The US is pushing for the agreement between Kuwait and Saudi Arabia on the restart of the Neutral Zone. If an agreement is reached in 2019, production could recommence by end 2020. 	 government. The 300 MMscf/d second phase of the Jurassic Gas Project is now fully online, boosting non-associated gas production to 500 MMscf/d. Associated gas production adds around 1,500 MMscf/d. Korea Export-Import Bank and Korea Trade Insurance Corporation will each provide USD 1.15B to Kuwait for construction of the 30 BCM/y LNG terminal to be completed by December 2020, with a commissioning period of seven months. Kuwait currently imports 5.2 BCM/y. 	 Operations of the Clean Fuels Project moving to start up in September 2019. Bids submission for the 1500 MW KNPC construction tender for PV Dabdaba project delayed. It will be constructed within the Al-Shagaya Renewable Energy Park. 	 Stronger partnerships with the Chinese for funding and investments in the country. It is planning a USD 10B fund with China mostly related in infrastructure. To push Iraq to cut dependency on Iran energy imports, Saudi Arabia and Kuwait offer free electricity to Iraq. Disagreements over government spending priorities between the executive and legislature will continue.

Iran	 Oil storage to increase as Iran fights to keep its oil flowing amidst tightening US sanctions. Onshore storage reached 46.1 million barrels – over half of its total capacity – as it looks for buyers. Iran is realising it cannot depend on China, Turkey and India on strong oil imports, as seen in the 2012 sanctions, as each has its own endeavour and heavy risk with the US. 	 Exports to Turkey (9.6 BCM/y) to continue despite sanctions. Trying to push the Iran-Pakistan gas pipeline but could prove difficult amid sanctions and rising tensions in the region, even with the EU. Current sales gas production at South Pars is 21.5 bcf/d and planned to reach 26.5 bcf/d by the end of 2019 and 33.5 bcf/d by the end of 2020 from Phases 13 and 22-24. Phase 14 likely delayed to the end of the year. 	 Renewable energy capacity is now 650 MW (253 MW in solar) and the government plans for it to go above 1 GW by end-2019 (445 MW under construction-mostly wind and solar). Iran is planning to build a 1 GW solar park in the central province of Markaz by 2022 but delays likely due to access to finance. 	 The economy will enter a sharp recession in 2019, but Tehran will manage any political fallout that may follow. Iran Supreme Leader criticized President Rouhani and Foreign Minister Javad Zarif over the failure of the JCPOA to benefit the country as a way of distancing himself from the failure of the deal and its implications on the economy. It could also encourage the conservatives to take an even harder line on moderates like Rouhani and Zarif. Iran gave the JCPOA signatories (excluding US) a 60-day window to fulfill their commitments to the oil and banking sector cooperation or it will no longer meet its restrictions on the nuclear program as outlined in the deal. The US could study a 120 day grace period to the exempted importers of Iranian oil to buy itself more time to come up with
Iraq	 Production to go over 5 Mb/d in H2 2019, despite OPEC cuts. The Oil Minister reports that the country has enough capacity to increase production to 6 Mb/d if needed, which is an overstatement. SOMO's DG says current capacity is comparable to current production of 4.7 Mb/d and will reach 6.5 Mb/d between 2024-29, close to IEA's views that Iraq will reach 6 Mb/d by 2030. Deal with ExxonMobil and PetroChina on the Southern Iraq Integrated Project (SIIP) to be delayed after the withdrawal of Exxon staff. Production at the state-run fields - Majnoon, Luhais, Ratawi, Nahr bin Omar, and 	 The US extended Iraq's waiver for gas (1.5 bcf/d to Baghdad and Basra) and electricity imports (1.4 GW) by 90 days. However, it is not clear if the next waiver will be granted which will be up for renewal in mid-June. Basra Gas Company (BGC) achieved a new production level of over 1 bcf/d this year and announced a FID on the Basrah NGL project; a 400 MMscf/d greenfield gas processing plant at Ar Ratawi, equipped with two trains, each with a gas processing capacity of 200 	- The Ministry of Electricity kicks off a 755 MW solar tender mapped across the provinces of Wasit, Karbala, Al-Muthanna, Babel and Diwaniyah. They are expected to be completed by the end of 2020 but delays likely.	 a plan. The new government is increasing ties with China with a bilateral agreement that would give investors access to roughly USD 10B worth of financing (most likely only for Chinese companies), mostly in the energy sector. Adel Abdul-Mahdi is sending delegations to the US and Iran to address ongoing tensions between the two countries as it tries to maintain a close economic and political relationship with both sides. While Iraq will be unable to defuse tensions, it can work to shield itself from any proxy wars.

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	Tuba - were just 112 kb/d in April from peak levels of ~500 kb/d in 2018. Majnoon's production is still impacted by the flooding producing just 70 kb/d in April from 175 kb/d in March. Iraq will use	MMscf/d. There is a plan to increase production to 1.3 bcf/d.		
	 lower output here to show some participation in the OPEC quota. The MoO has declined to renew two JVs between SOMO and the marketing arms of Russia's Lukoil and China's Zhenhua as some MPs accuse SOMO of financial impropriety. 			
	- The signing of fifth licensing round contracts with winning IOCs are being delayed by the Parliament Oil and Energy Committee as they want to scrutinise how the bidding round was conducted first.			
Iraqi Kurdistan	 Output to rebound in 2019 with new production from Rosneft, DNO, Genel Energy and Gulf Keystone. Production currently at 473 kb/d. First production at the Sarta block (Genel Energy and Chevron) is expected in 2020. Drilling for new wells to start this year. MNR resumed fuel oil exports to Iran after a short halt from US pressure and likely to remain active. 	- Domestic gas sales deal reached between Pearl Petroleum consortium and MNR. Consortium produces 400 MMscf/d and expects to reach 900 MMscf/d by 2022 (possibility of exports to Iraq or Turkey if Rosneft's pipeline is ready by then). Dana gas announced it will raise funds for the project through a mix of bank debt, a bond, Exim bank financing as well as contractor and vendor financing.	 No investment in renewables (priority would be given to thermal power stations). 	 Baghdad-KRG oil disputes flare up in Parliament as misinterpretations of the 2019 budget arises over budget allocations. The Oil Minister and the Finance Minister are in a tough spot with Parliament so they could go tougher on approving any payments to Kurdistan. KRG's Parliament elected Nechirvan Barzani as the next president and Masrour Barzani as PM, suggesting the return of the political dominance by the Kurdistan Democratic Party (KDP).
Lebanon	 To begin offshore oil and gas exploration by Total, Eni and Novatek. Planning second oil and gas bid round in 2019. Bidding would probably run from May to October. Preliminary results show that offshore Lebanon could be oil-prospective. 	 To continue to use power ships for electricity supplies to at least 2021/22 until the three planned FSRUs are ready. The new government is planning the award of the gas import deals this year. Planned LNG import terminal to ease the crisis but corruption in the government keeps 	- More progress in solar, though would be slow; Progress by the government was limited for three 100 MW solar PV plus storage projects therefore the ERBD will engage a consultant to provide assistance for the successful implementation of auctions	 Hezbollah is feeling the pressure of Western sanctions and is calling on supporters for donations, and even asked the Houthis to broadcast on a Yemeni radio station, but the group's influence is still growing. Hezbollah and political allies won more than 70 of Parliament's 128 seats in last year's election. Israel called on the US to mediate the disputed

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		creating delays to profit from the diesel generation sales.		maritime border with Israel regarding oil and gas exploration. Lebanon's term is that the discussions be held under supervision of the UN which Israel agreed to.
Libya	 With Libya looking at elections, and Haftar's move on Tripoli, militant factions will continue using oil infrastructure to gain leverage and power; Oil production around Mellitah and Zawiya could be cut off. Zella oil field taken over by ISIS from Haftar's LNA, causing fear around the south-eastern oil operations. Total could continue operations in Libya, after the GNA announced suspending its operations, through working under the NOC's mandate. If the NOC does continue working with Total, greater discord can be anticipated between it and the GNA, which tried to seize the NOC's regulatory functions in 2017. 	- Eni's final seven Phase-2 wells offshore Bahr Essalam gas/condensate field will increase the field's current production capacity from 700 MMscf/d by 400 MMscf/d.	 Libya's Misurata Free Zone (MFZ) has signed a MoU with consultancy iQ Power to develop integrated CSP and PV projects with up to 300 MW total capacity, but highly subsidised energy prices and insecurity will steer investment away. 	 UN planned elections schedule to happen in April 2019 are delayed, as expected, due to General Haftar's move to take over the capital. The country's factions are unlikely to resolve its divisions and foster unity this year.
Oman	 Rex International Holding (Singapore) aims to start oil production at 5 kb/d from block 50 offshore Oman in H2 2019. The Rabab Harweel integrated project for PDO in the southern Omani desert is expected to be completed in 2019, adding 6 MMscf/d of sweet gas, and another 60 kb/d of oil. Oxy to kick off exploration of 3 oil blocks this year (Block 65 and 51, Block 72). 	 Mabrouk gas field 4.5 TCF gas find to increase future exploration investments and gas output. ENI and BP signed a gas deal for the acquisition of the onshore exploration Block 77 onshore, east of the BP-operated Khazzan Field, which could offer synergies. State-owned Oman Trading International (OTI) has started supplying LNG to Bangladesh in January. The agreement is to supply 1 Mtpa of LNG over 10 years. 	 PDO awarded 105 MW solar PV project (Amin Solar PV IPP) to a consortium led by Japan's Marubeni Corp. The Oman Power and Water Procurement Company (OPWP) awarded the consortium led by ACWA Power the development rights for the 500 MW Ibri II Solar IPP. OPWP plans to launch RFP for the second large scale solar energy project (Solar IPP 2022) with 500 MW and 1,000 MW capacity in 2019. OPWP launched RFP for a wind resource assessment study in multiple locations in the country. 	- Potential for change of leadership due to the Sultan's health.

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Qatar Saudi Arabia	 Oil production decline continues resulting in continued investments by QP in international oil upstream investments. QP's Mexico asset with Eni is expected to start initial production this year before reaching plateau of 91 kb/d in 2021. NGL capacity is expected to rise from Qatar's Barzan project adding some 80 kb/d of condensate and NGLs by 2019. Production to average 10.2 Mb/d in 2019. The Aramco IPO is hinted to be back in the pipeline but for 2021. Saudi Aramco has reopened Safaniyah offshore oilfield after finishing all the needed repairs in the field, allowing full output to resume. The field produces 1 Mb/d. Saudi Aramco has agreed the purchase price for its acquisition of 70% of state petrochemical firm SABIC from the Public Investment Fund, at USD 69.1B, around the current market price on the Tadawul. Saudi Arabia is pressing with the expansion of the East-West pipeline from 5 Mb/d to 6.5 Mb/d which was initially intended for 2023. 	 QP and Qatar Gas are moving ahead with tenders for the North Expansion Project with most awards planned for 2020. Qatar will press negotiations with Pakistan as an alternative to the Iran-Pakistan pipeline given the arbitration threat by Iran. Progress on smaller gas projects after Wasit, and Fadhili, insufficient to prevent rising oil burn for power. Halliburton to work on unconventional gas development. Saudi Arabia finally inked an LNG deal with US Sempra that will enable it to build up its gas assets after months of rumours over which project it will invest in. There is still no confirmation if the LNG will be used for Saudi's domestic needs or will be sold to international buyers which underscores the uncertainty of its gas outlook. 		 Qatar's increased lobbying efforts in the US is paying off. The two countries' economic ties are increasing. Qatar has reportedly restricted trade with Iran to only include food and medicine to comply with US sanctions. Qatar confirmed being invited (and will attend) by a Saudi-hosted meeting on May 30 to discuss the ongoing security situation with Iran showing Saudi's increased concern over security threats. The country is increasing ties which China as it tries to diversify its sellers of military equipment after a debate whether to set an improved human rights record as a precondition for further arms sales to the kingdom. The country is still feeling pressure over the killing of reporter Jamal Khashoggi. Pharo Management (hedge fund) has returned USD 300M in investment funds to the Saudi Arabian Monetary Authority (SAMA) and cited the assassination as the reason it is withdrawing. Increased tensions are rising between Saudi Arabia and Iran and its oil assets are vulnerable by strikes from Houthi rebels or cyber-attacks by Iran. The US government has notified Congress of its intention to use national security waivers to increase military sales to Saudi Arabia without requiring congressional approval amid increased
Syria	 To continue to receive clandestine oil imports from Iran as Assad regime control returns. The country is suffering a 	- Palmyra gas fields under government control.	 Homs Solar Power Plant (CSP) and wind power project cancelled and unlikely to be revived. 	 tensions between the US and Iran. The GCC countries are warming up to the Syrian government now instead of working against it to try and lessen Iran's and increase Turkish influence in the

	government introducing rationing for gasoline and cooking gas. In May two oil tankers were delivered to ease the crisis, one by Iran and one by an unnamed businessman. Washington warned of significant US sanctions risks for parties involved in petroleum shipments to the Syrian government.		- Concerns over damage to Tabqa Dam near Raqqa.	 the US planned withdrawal from Syria. US-backed, Kurdish-led forces (SDF) declared victory over the Islamic State in Syria after liberating the last area of territory held by the militants (Baghuz) which will set the stage for the withdrawal of US troops from Syria; however, questions arise over the whereabouts of ISIS leader Abu Bakr al-Baghdadi and whether Turkey will launch more operations against the SDF.
UAE	 Umm Lulu to increase production to 60 kb/d by the end of the year and plans to upgrade Bu Hasa field from 550 kb/d to 650 kb/d in 2020. RAK awarded Block 5 to PGNIG of Poland and an offshore Block A to ENI. Sharjah awarded three onshore blocks to Eni. ADNOC closed first round of license awards and second round of licensing to be awarded in 2020. Dana Gas expects production from its Zora gas field offshore in the Sharjah Western Offshore Concession block to cease by yearend, due to disappointing reservoir quality. Earlier in 2018 it supplied -8 MMscf/d to the Sharjah power station, with 76 b/d of associated condensate. 	 ADNOC awards 40% stake to Total in Diyab Formation and shale gas could start production in late 2019. Sharjah LNG imports delayed to end-2019. JERA signs LNG purchase deal with ADNOC for 8 cargoes of LNG per annum for a period of three years starting in April 2019, to replace a preexisting 25-year long-term LNG contract with Abu Dhabi expiring in March 2019, under which it buys 4.3 Mtpa. GE and Sumitomo signed a 25-year PPA with the SEWA to develop, build and operate a 1.8 GW CCGT plant located in Hamriyah. Commissioning date expected in 2021. 	 Continuing launch of large solar PV projects with Abu Dhabi's Sweihan expanded to 1177 MW (2019). The Emirates Water and Electricity Company (EWEC) launched a 2 GW PV solar tender for Abu Dhabi. Dubai Solar Park III second unit to be completed by 2019 and the third unit by 2020. Utico won project to develop a 16 MW hybrid power plant combining landfill gas and solar energy to supply a desalination plant. FEWA re-announced a 2016 plan for a 200 MW solar PV plant in Umm Al Quwain. The start of the first unit of the Barakah plan to be delayed to the end of 2021 at least, thus creating an overall delay in the UAE's 27% clean energy target by 2021. DEWA and the consortium led by ACWA Power and Silk Road Fund reached financial closing of the 950 MW fourth phase of the Mohammed bin Rashid Al Maktoum Solar Park. It is due to be 	

			 commissioned in Q2 2021. DEWA launched a tender process for the fifth phase of the 5 GW solar park. The tender is for 900 MW planned to be commissioned in Q2 of 2021. 	
Yemen	 OMV is resuming production at 13 kb/d and could increase to 20 kb/d (the level it was producing before the unrest). Calvalley was the operator of Malik Block 9 (but the company is now defunct). Hood Oil, its local partner, to restart production around 1.2-1.5 kb/d. 	 Possible restart of LNG exports from Yemen LNG at low levels, under UAE control/influence. 	 Yemen Ministry of Electricity 60 MW solar power plant on hold. Unlikely to be revived in the short-term. However, local installation of distributed solar, estimated 400 MW, has been a success to mitigate wartime power shortages. 	 Morocco withdraws From Saudi-Led Coalition in Yemen showing Saudi's difficulty in retaining support in the war. The US Senate passed a resolution to end US support for the Saudi-led coalition in the Yemeni civil conflict, but the bill still requires the approval of the House of Representatives before going to the White House. Trump has already suggested that he would veto such a resolution.

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