ARABIA MONITOR ENERGY

May 2021

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Arabia Monitor
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QAMAR ENERGY

TABLE OF CONTENTS

HIGHLIGHTS

- **Aramco** is planning to divest a 1% stake over the next two years to a 'major energy company'. The potential stake sale could rake in about US$ 19 B based on the current market value of the company. Aramco has recently sought more innovative ways to bring in external capital following the effects of the pandemic and 2020 oil price crash.

- Further extending its interests in developing a hydrogen-based infrastructure in the country, **ADNOC** will build a big-scale 'blue' ammonia plant in Ruwais at the new Ta'ziz industrial and chemicals hub. This follows the commissioning of the UAE's first green hydrogen plant in Dubai last week which will supply buses and cars used during the Expo 2020 from October.

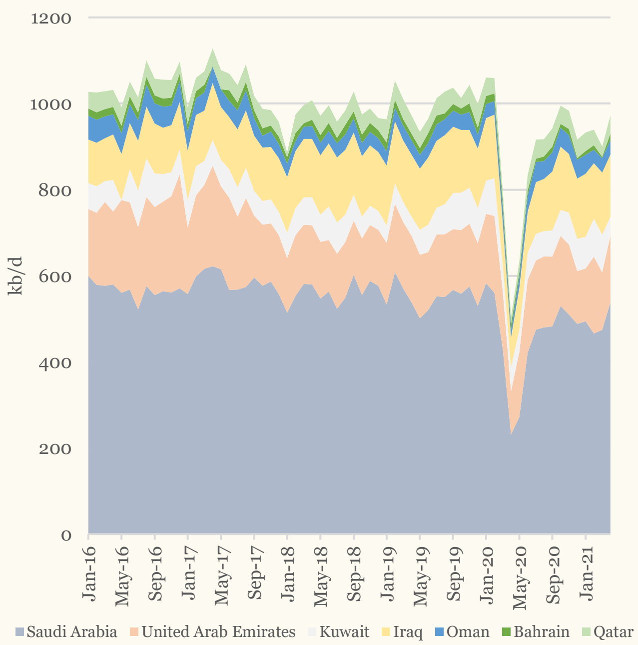
- Traders in Europe are banking on the removal of US sanctions on **Iran**'s oil sector to resume purchases of Iranian crude for the first time since 2018. However Iran largely regards Europe as a second priority market to Asia, led mainly by China, for its oil sales.

- A unilateral decision by the **Kurdistan Regional Government** to change the schedule and terms for payments to IOCs without prior warning or consultation has now cast new uncertainty on the region's oil sector, putting a question mark over the realisation of planned expansion projects for 2021 and future investment to boost output

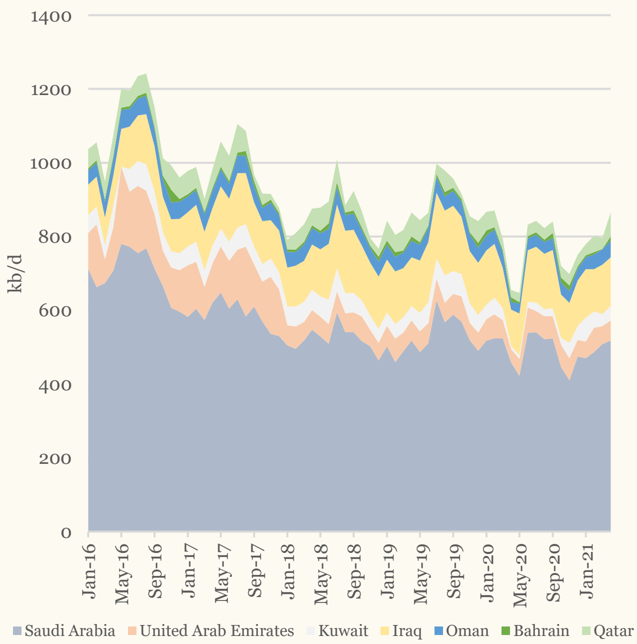
CORONAVIRUS (COVID-19) UPDATE SCORECARD

IMPACT OF COVID-19 ON DEMAND & TRANSPORT
(Qamar Energy Analysis, based on lockdown restrictions lifted in May/June 2020)

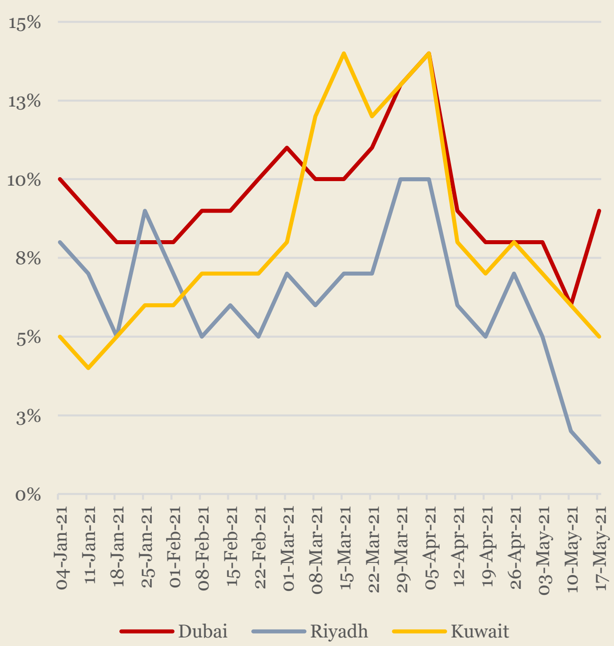
MOTOR & AVIATION GASOLINE



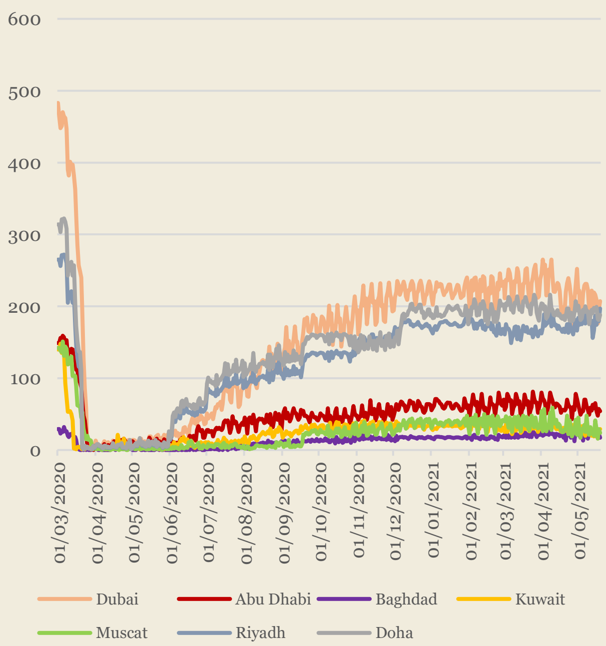
DIESEL



2021 TRAFFIC CONGESTION



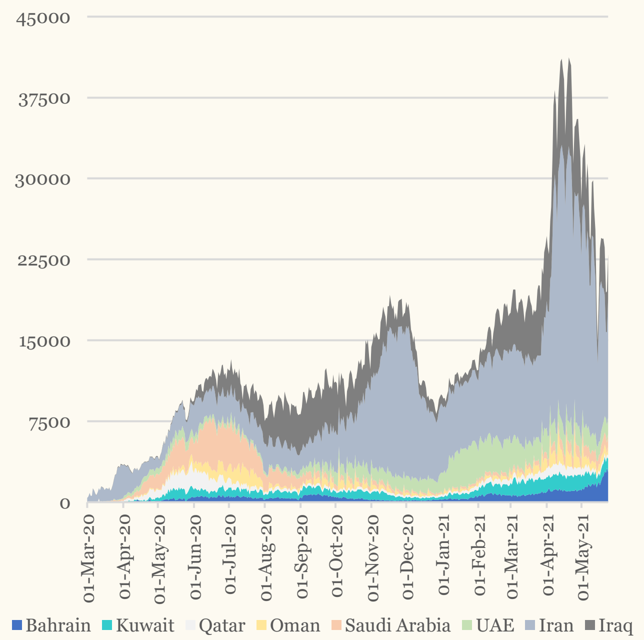
DAILY FLIGHTS



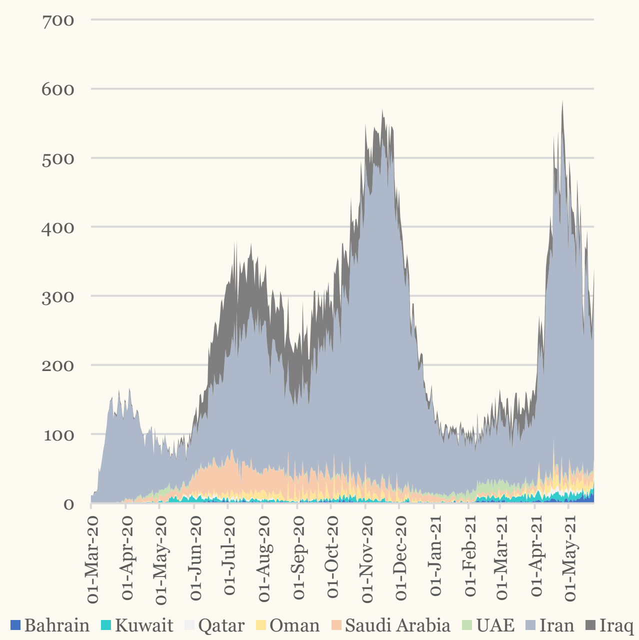
CORONAVIRUS (COVID-19) UPDATE SCORECARD

DAILY REPORTED CASES & DEATHS IN MENA[1]
(World Health Organisation Statistics)

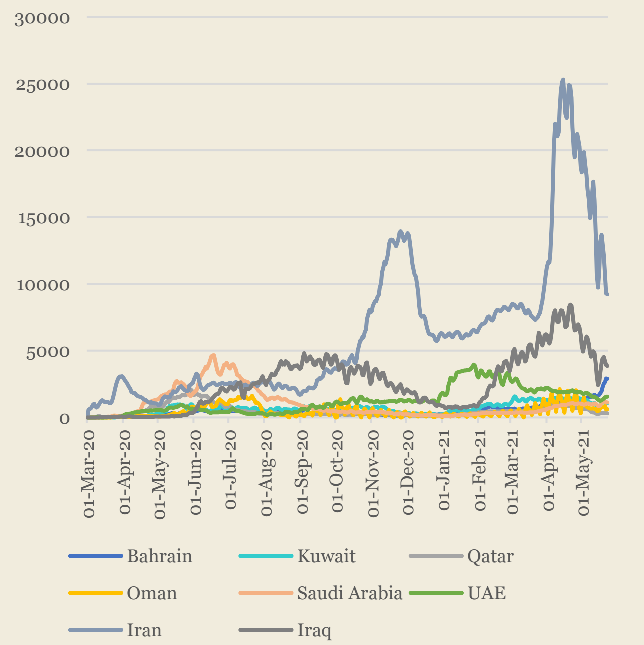
DAILY CASES



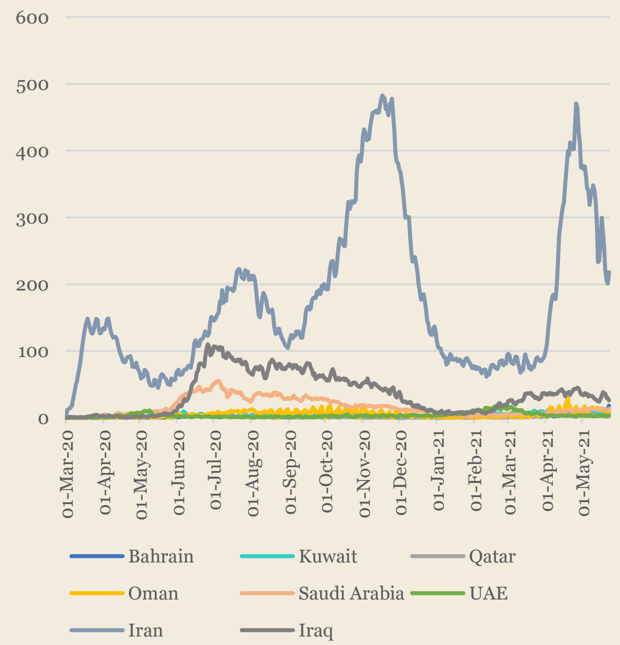
DAILY DEATHS



3-point Moving Average, Cases



3-point Moving Average, Deaths

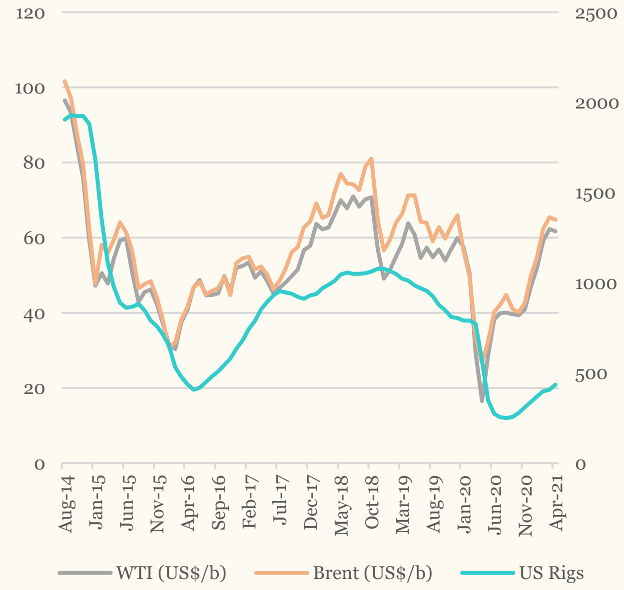


[1] Although lockdowns have been eased in almost all major Middle East countries, a second, and in some cases, third, wave of infections has hit all major economies. The UAE is leading the region's vaccination campaign, with near 75% of its eligible population inoculated against the virus.

CORONAVIRUS (COVID-19) UPDATE SCORECARD

US RIGS REACH THEIR HIGHEST LEVEL IN 11 MONTHS ON THE BACK OF IMPROVED PRICES

US RIGS VS OIL PRICE



US oil rigs have begun recording a modest incline in recent weeks, increasing by 28 in March to reach a 12-month high of 436.

Brent futures for May have increased 5% from April's prices of US$ ~68/b, reaching a more than 2-year high, while WTI is currently at ~US$ 65/b, recording strong growth for 4-months running.

Both WTI and Brent have strengthened in recent weeks even as tanker rates remain tepid, due to positive momentum from news of vaccine rollouts and the success of the OPEC+ cuts so far.

Drilling activity has begun picking up in earnest in the US, including Texas producers who are reviving shut-in facilities, closed due to the unprecedented impact of a particularly cold winter spell.

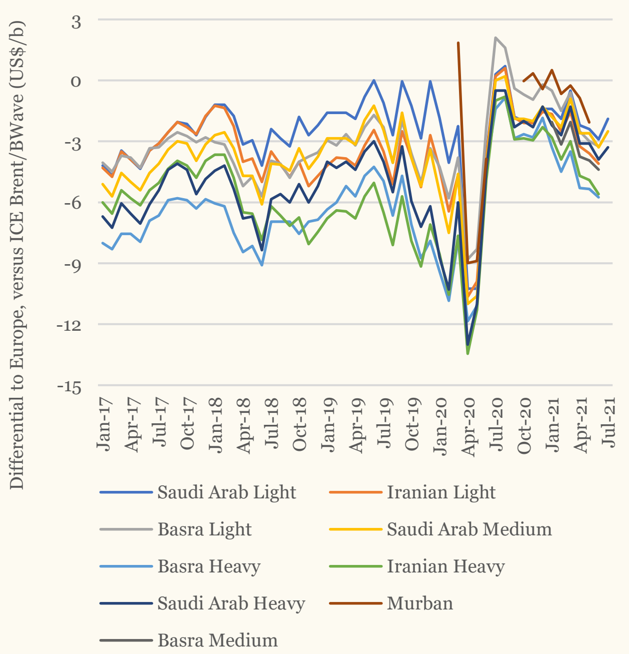
While drilling activity is expected to trend higher in coming weeks, industry experts expect the recent rapid pace of growth to temper out somewhat, evidenced by slightly stagnating horizontal drilling

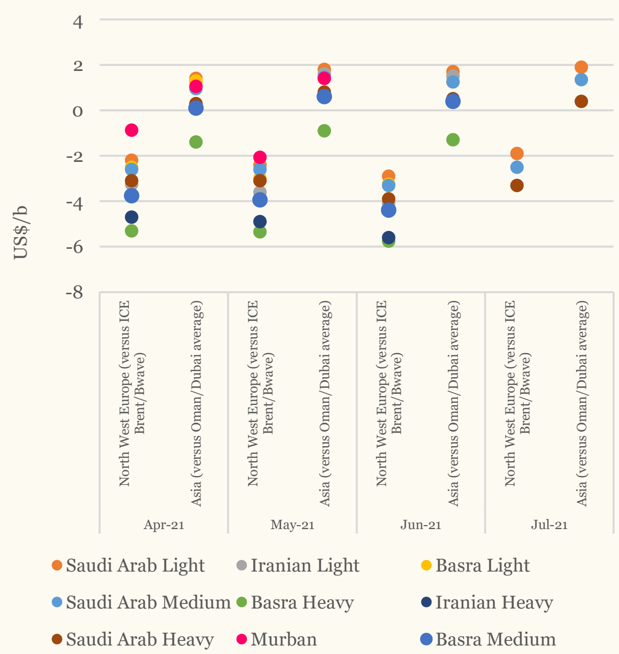
Further upside in prices will be modest due even though stocks are lower, particularly due to uncertainty surrounding the aviation sector. Demand for road transportation fuels is expected to rise as the summer driving season approaches.

US crude output in April decreased slightly from March (-35 kb/d) but has been averaging just over 11 Mb/d throughout May. Output is expected to grow following recent drawdowns in inventories.

Expenditures in 2021 are expected to rise strongly from 2020. The index for CAPEX for E&P firms has increased from 18.5 in Q4 2020 to 53.6 in Q1, indicating an acceleration in capital spending[2].

MENA OSPs HIGHLIGHT IMPROVING LIGHT DISTILLATES' DEMAND



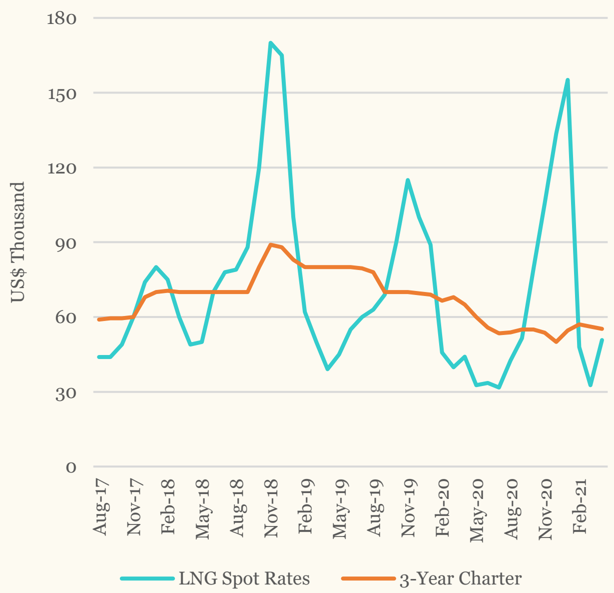


[2] Federal Reserve Bank of Dallas Energy Survey

VLCC & LNG TANKER PRICES: SPOT VS 3-YEAR CHARTER[3]

LNG FREIGHT SPOT RATES WITNESS STEEP DECLINE DUE TO SEASONAL DEMAND PATTERNS

LNG TANKER RATES



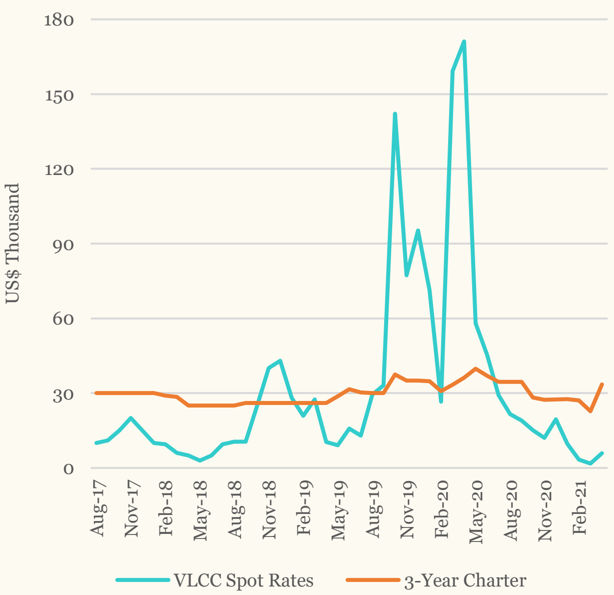
LNG Rates, US$	Spot Rates	1-Year Charter	3-Year Charter
April 2021	50,800	63,800	55,300
March 2021	32,625	51,375	56,125
Monthly Change %	-31.9%	2.2%	-1.5%
2021 Average	71,600	53,706	55,756
2020 Average	59,527	55,323	58,765
2019 Average	69,498	80,674	76,446

LNG carrier spot rates rebounded in April, earlier than the usual seasonal pick up ahead of the winter seen in previous years.

This is likely due to charterers securing vessels early to provide coverage for the expected restocking of natural gas for the coming winter.

VLCC TANKER RATES CONTINUE FALLING DUE TO EXCESS TONNAGE FOR STORAGE

VLCC TANKER RATES



VLCC Rates, US$	Spot Rates	1-Year Charter	3-Year Charter
April 2021	5,929	22,500	27,125
March 2021	1,758	22,750	27,125
Monthly Change %	-47.1%	-2.4%	0%
2021 Average	5,171	23,222	27,250
2020 Average	53,995	39,607	33,220
2019 Average	41,827	36,388	30,094

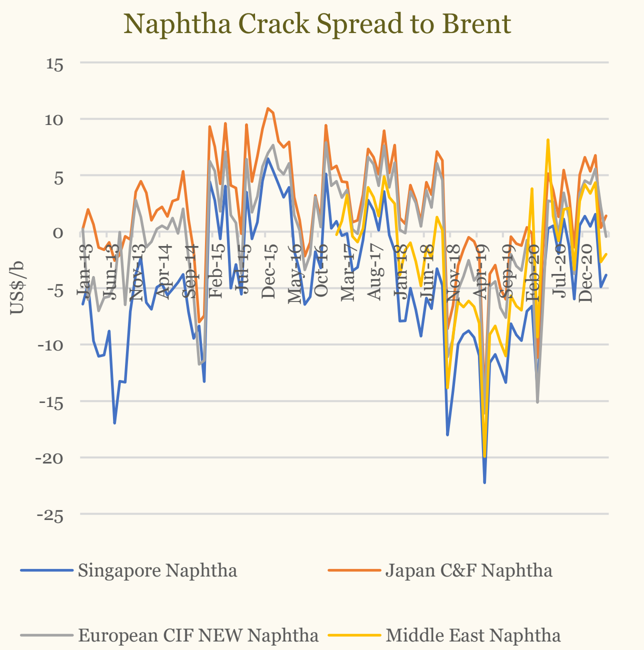
Improvements in VLCC rates were recorded due to higher activity in the Middle East and fresh demand in the US Gulf of Mexico.

However rates remain low. Middle East volumes and demand have increased as CoVid-19 related lockdowns in the EU start to ease.

[3] MISC Monthly

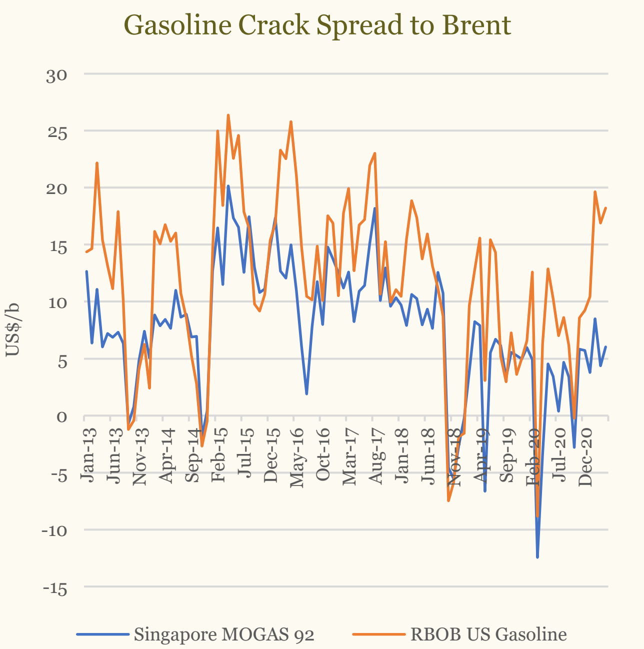
GASOLINE & NAPHTHA CRACK SPREADS TO BRENT

NAPHTHA MARKET CONTINUES CLIMBING ON CONSISTENT DEMAND



- Asian naphtha markets continue climbing on consistent petrochemicals demand and expectations for tighter supplies in the coming months
- Demand and supply dynamics are still relatively balanced, with consistent demand for petrochemical output lending market support
- Light naphtha demand for downstream olefins production is expected to stay positive, coinciding with reduced arbitrage flows
- Healthy downstream ethylene margins offered greater feedstock buying incentive for northeast Asia producers
- The main contributors to tight supply have been firm freight costs and the return of petrochemical producers from recent outages
- Lower arbitrage naphtha arrivals from Europe (due to Russia retaining domestically large amounts of naphtha blend-stocks to build gasoline stocks) could also keep supply in check
- Asian firms might float tenders in coming months to buy spot naphtha for heavy full-range naphtha as light naphtha supply tightens
- However, uncertainty in crude markets and lingering demand concerns over the pandemic could temper the upbeat sentiment

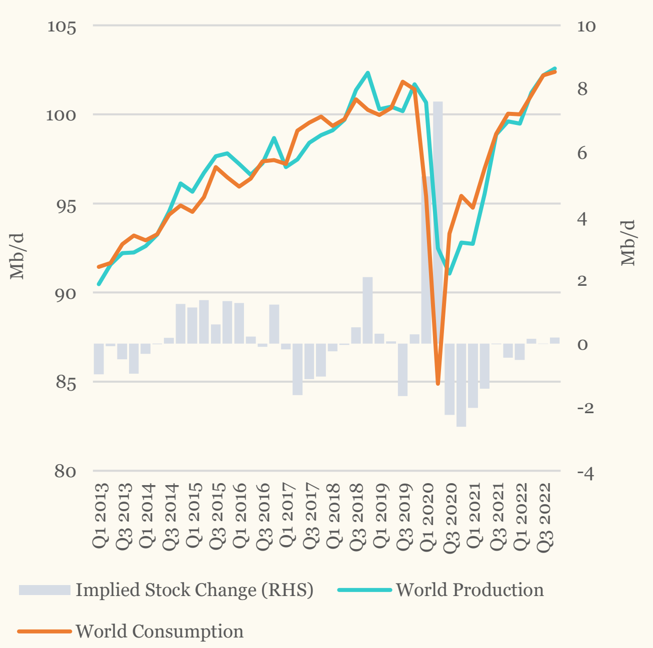
GASOLINE CRACKS REMAIN VOLATILE DUE TO DEMAND-SUPPLY UNCERTAINTIES



- Asia's gasoline crack has risen to its highest since October, supported by expectations of tighter supplies and firm demand
- Gasoline supplies may tighten in the lead-up to spring/summer maintenance season in most of north Asia, which starts in April
- The Philippines, Australia and Malaysia are importing more gasoline as some of their domestic refineries are due to shut, while Indonesian and Chinese demand continues to strengthen
- Narrowing of the east-west spread may lead to lower arbitrage supplies in coming weeks
- Taiwan and South Korea have issued tenders seeking lighter naphtha, due to expected tightness in the market
- Meanwhile, summer-specification gasoline is currently in strong demand (since end-March), supporting positive cracks
- However, markets like China might reduce imports as arbitrage windows narrow and earlier purchases result in a supply overhang
- Asian markets remain fragile and increased outflows concluded earlier in 2020 could keep Eastern arbitrage discouraging

GLOBAL OIL INVENTORIES & STORAGE UPDATE

WORLD OIL SUPPLY & DEMAND BALANCE, AND IMPLIED STOCK CHANGE[4]



The EIA estimates global oil consumption at 96.2 Mb/d in April, an increase of 15.8 Mb/d from April 2020, but 4 Mb/d less than April 2019 levels.

Global consumption will average 97.7 Mb/d for 2021, a 5.4 Mb/d increase from 2020. 2022 consumption is expected to average 101.4 Mb/d, a 3.7 Mb/d increase over 2021 levels (see figure).

Global oil stocks/inventories are expected to tighten by mid-2021 as refineries increase crude processing sharply post-June to stabilise stocks of fuels such as gasoline and diesel.

The prospective rise in processing and consequent drawdown in crude inventories is boosting futures prices and causing calendar spreads to tighten.

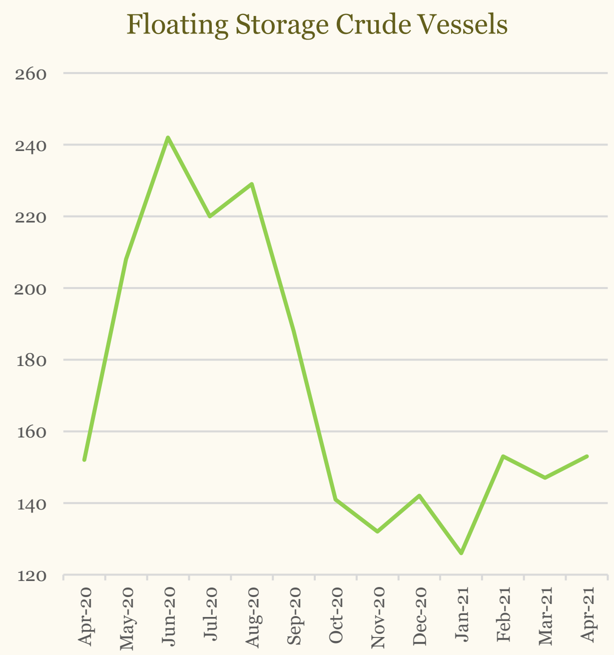
For example US crude inventories reported a decline of 2.5 Mbbl in early May pushing crude oil futures higher.

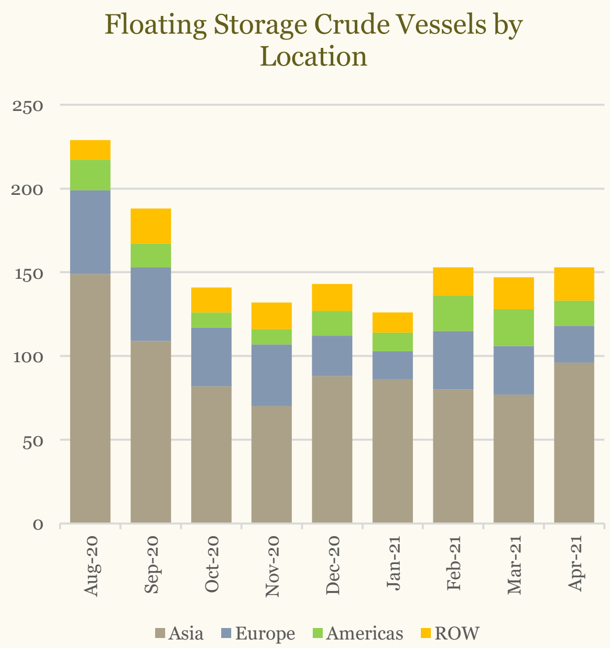
Total stocks of crude and products have fallen by 168 Mbbl since July 2020, largely reversing the near-200 Mbbl build between March and June last year, associated with the epidemic.

Oil prices are up, and backwardation has widened in expectation of a tighter crude market

Hopes for positive transportation fuel data from OECD Europe and North America and acceleration in vaccination programmes will provide further optimism in H2 2021.

FLOATING CRUDE STORAGE[5] GRADUALLY RETURNING TO PRE-PANDEMIC PATTERNS



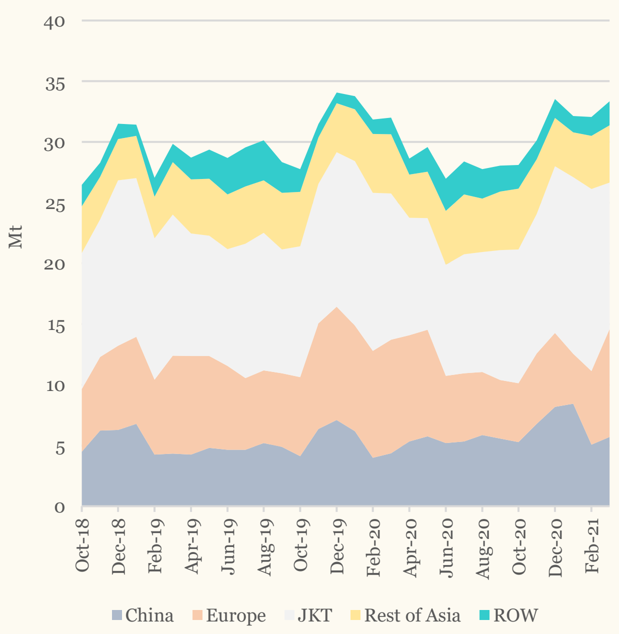


[4] EIA
[5] Data from TankerTrackers; floating crude storage is defined as oil aboard idle tankers that are sitting anchored off ports. Data is based on three vessels sizes: Aframax, Suezmax, and VLCC, and includes *only* fully laden vessels, not partially laden ones.

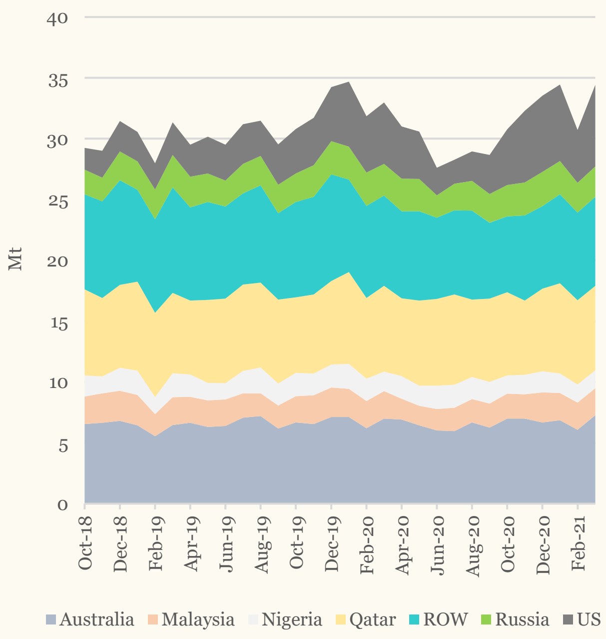
LIQUIFIED NATURAL GAS MARKETS REMAIN VOLATILE

GLOBAL LNG DEMAND-SUPPLY DYNAMICS
(Qamar Energy analysis, based on data from McKinsey, ClipperData, and ICE/CME)

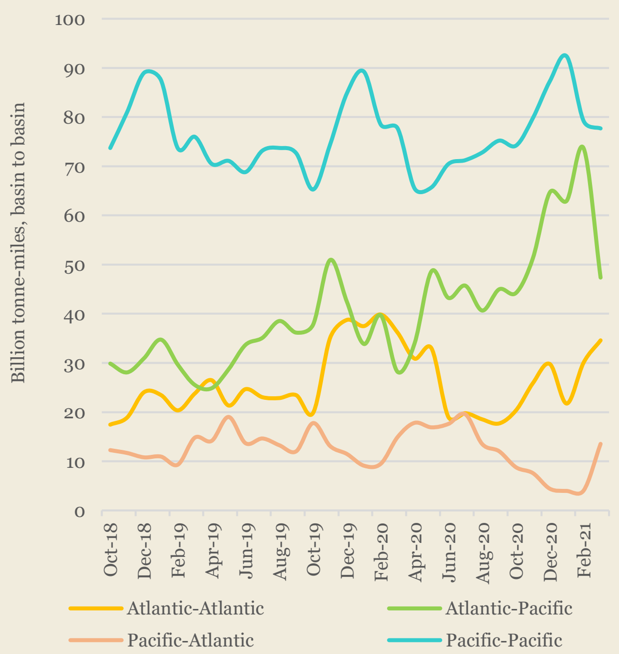
GLOBAL LNG DEMAND



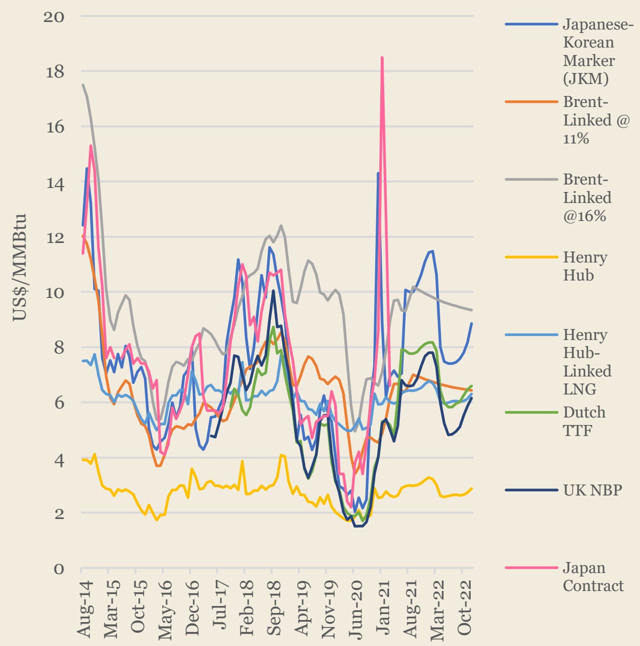
GLOBAL LNG SUPPLY



LNG SHIPPING INTENSITY



GLOBAL LNG PRICES



OIL PRICE SCORING

OIL PRICE SCORING (Rated Based on Impact on Oil Price)			
OPEC+ agreement	●	↓	On June 01, OPEC+ reached a swift consensus to stick with its plan to increase production to 2.1 Mb/d by July due to bullish sentiment on demand following successful vaccination rollout in most major geographies. The cartel will increase production by another 350 kb/d in June (having increased it by 350 kb/d in May already), and 441 kb/d in July. The 2.1 Mb/d phased increase includes the reversal of Saudi Arabia's additional voluntary cut of 1 Mb/d. Ministers will meet again to review the alliance's production policy on July 01. The possibility of a supply glut due to increasing Iran exports in the event of a nuclear deal with the US was not discussed during the June 01 meeting, and member countries remain confident that the Islamic Republic's return to markets will be gradual and orderly, rather than aggressively accelerated. Under-compliers meanwhile will still have to make up for their shortfalls, although scrutiny on their transgressions is lower.
OPEC supply outlook	●	↔	Saudi Arabia increased output by 340 kb/d in May as it tapers out its voluntary 1 Mb/d additional cut over its OPEC+ quota. Russian compliance in April has been lower but the easing of cuts should reduce technical undercompliance. Iran increased its production to 2.393 in April, 26 kb/d higher than Kuwait's production, making it the third largest OPEC producer. Libyan production fell slightly in April due lack of funds for infrastructure repairs at the Marsa al-Hariga port, but has bounced back in May after the force majeure on the port was lifted. Iraq remains a wildcard, and increased production by 70 kb/d in May, once again breaching its OPEC+ quota.
Non-OPEC supply outlook	●	↔	Non-OPEC supply is forecast to grow by 0.7 Mb/d to average 63.6 Mb/d in 2021. Upstream capital spending in 2021, while significantly better than 2020, is expected to remain well below 2019 levels, mainly due to lower projected investment in US shale. US liquids will decline by 0.1 Mb/d, with the supply forecast in Norway and Canada to also be revised down due to extensive seasonal maintenance. Non-OPEC supply growth is anticipated to be driven by Canada, Brazil, China, and Norway. Brazil will lead Latin America's production growth with startup of the Sepia and Mero I fields (each 180 kb/d capacity) in H2 2021. Equinor-operated Bacalhau field has taken FID to produce 220 kb/d from 2024, and Karoon will start 10 kb/d from Patola in 2023.
Global Demand	●	↑	OPEC forecasts 2021 demand to increase by 6 Mb/d, reflecting the positive economic impact during H2 2021, up 0.2 Mb/d from the previous forecast. Oil demand growth is expected to be strongest in non-OECD countries, reflecting re-openings of the US and European economies, petrochemical demand recovery and uptick in gasoline needs in China and India. Successful vaccination rollouts in the GCC, US, and UK have returned economic momentum, and are a key determinant in OPEC+'s decision to ease cuts from May.
Progress of non-oil technologies	●	↔	Saudi Arabia signed PPAs of ~3 GW of solar capacity from 7 projects, the country's first utility-scale renewable energy complex owned by a consortium led by ACWA Power; construction started at a 300 MW solar park developed by Masdar, EDF Renewables and Saudi Arabia's Nesma; Siemens Energy commissioned the UAE's first green hydrogen plant to provide transport fuel during EXPO 2020; Masdar, in collaboration with Mubadala and ADQ, plans to complete a hydrogen demonstration project's design by end-2021 to provide transport fuel at the carbon-neutral Masdar City and for Etihad and Lufthansa's aviation fuel; Saudi Arabia's Neom Helios is eyeing expansion from the current 20 MW Thyssenkrupp electrolyser; Ireland's Fusion Fuel Green and CCC Group will establish green hydrogen demonstrator plants in Oman, Kuwait, and Qatar, to support local refining and petrochemical firms; Turkey has awarded 1 GW of solar PV and will auction another 2 GW of solar and 2 GW of wind by the end of 2021.

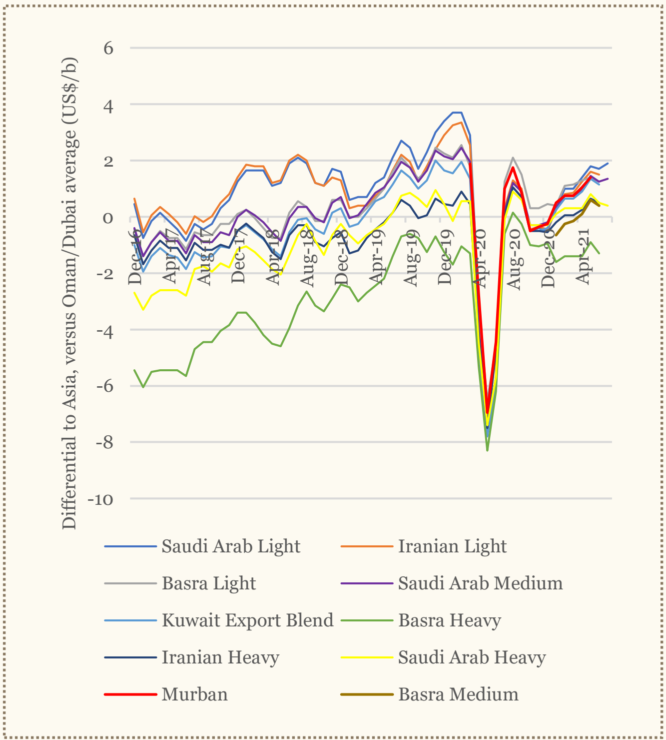
● Very positive ● Positive ● Neutral ● Negative ● Very negative ↑ Improvement in last month ↔ No change ↓ Deterioration in last month

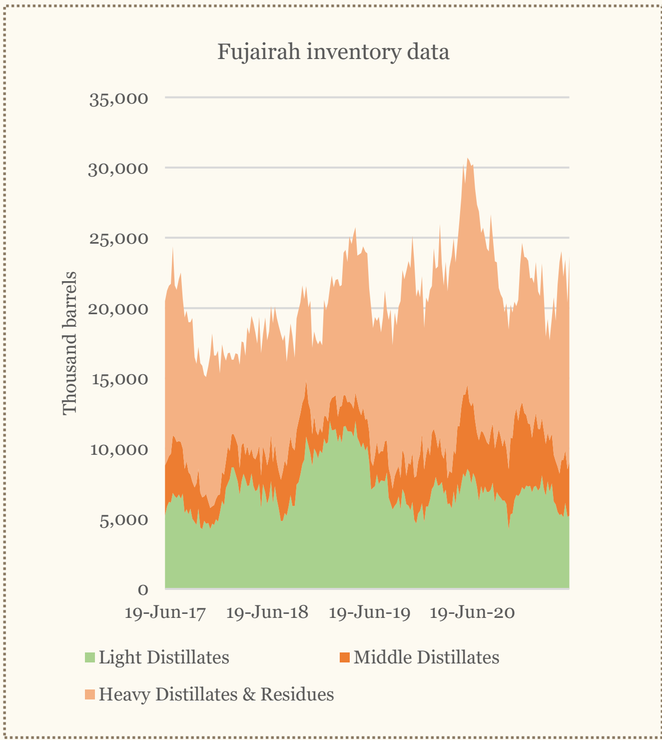
SECTION SNAPSHOT

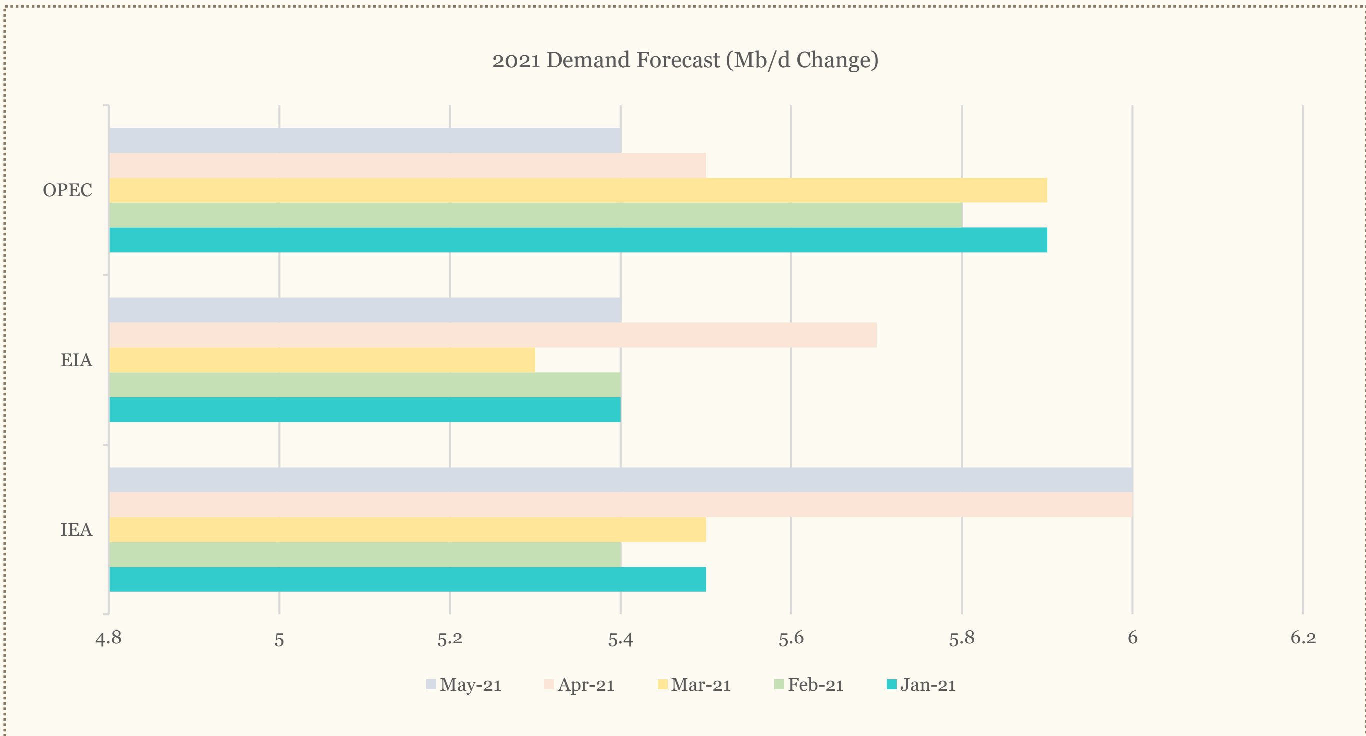
- Even though June will see OPEC+ continue with its phase-out of cuts, Saudi Aramco has hiked its July OSPs for all grades to Asian and European customers, with prices to the US left unchanged. For Asia-bound crude, the July differential against Dubai/Oman for Saudi light was raised by US$ 0.20/b versus June, while for Medium was raised by US$ 0.10/b. July OSPs for European customers saw the largest rise by US$ 1/b for Light crude and US$ 0.60/b for Heavy. Industry analysts had largely expected the OSPs to be raised, given signs of a strengthening sour crude complex in Asia and Europe in recent weeks. ADNOC, meanwhile, who launched its Murban Futures Contract on March 29, set its the June OSP at US$ 63.35/b.

- Fujairah oil stocks climbed by 3.3 Mbbl from a week earlier to stand at 23.7 Mbbl (as of May 31), highest since December 14, 2020. Heavy distillates, including marine bunkers and fuel used in electricity generation, rose the most, by 2.8 Mbbl, while middle distillates increased by 0.4 Mbbl.

- OPEC forecasts 2021 demand to increase by 6 Mb/d, the IEA by 5.4 Mb/d (270 kb/d lower than previous estimate), and the EIA by 5.4 Mb/d. OPEC's forecast is an increase of 0.2 Mb/d from its previous forecast due to improved global oil demand forecasted in H2 2021 as CoVid-19 restrictions are easing in the US and Europe, encouraged by an acceleration in vaccination programmes in many regions leading to transportation fuel demand recovery. However, European and US progress against CoVid-19 will still be hampered by the continued restrictions in Asia and a possible rebound in cases in the UK.







Sources:

1. Figure 1: News sources; MEES; NIOC; SOMO; Qamar Energy Research
2. Figure 2: FEDCom/S&P Global Platts Fujairah Inventory Data
3. Figure 3: IEA, OPEC and EIA monthly oil reports

WORLD OIL DEMAND OUTLOOK

SOLID ECONOMIC RECOVERY AND VACCINATION ROLLOUTS SUPPORT POSITIVE DEMAND GROWTH	
OPEC, IEA, EIA Forecasts	• OPEC forecasts 2021 demand to increase by 6 Mb/d, reflecting the positive economic impact on oil demand during H2 2021 encouraged by accelerated vaccination campaigns boosting transportation fuels' outlook. However, slower-than-expected demand in OECD Americas combined with CoVid-19 resurgence in India and Brazil could put a lid on growth. • The IEA has lowered its forecast for demand growth to 5.4 Mb/d, down 0.1 Mb/d from its previous estimate, mainly due to India's CoVid-19 crisis. • The EIA shares the same outlook, and expects demand to grow by 5.4 Mb/d in 2021, still citing higher vaccination rates, an increase in economic activity and the return of employment in OECD North America.
Key Demand Change Factors	• Even though some bearishness surrounds the return of road and transportation fuel demand in OECD Europe in H1 2021, a stronger economy and vaccine deployment will support the brunt of demand growth in H2 2021. Oil demand might still be impacted by India's recent surge in CoVid-19 through May and June, placing Q2 2021 oil demand performance in question. • Non-OECD demand will witness a healthy recovery in demand patterns due to encouraging trends in the industrial sector and improving transportation fuel requirements.
Chinese Demand	• China's economic momentum will continue rebounding in H1 2021, due to a combination of factors, including successful containment measures, and the encouraging outcome of fiscal and monetary stimulus programmes. • All economic sectors are anticipated to pick up pace, with the transportation sector leading the charge from recovering mobility and increasing vehicle sales, while improving economic activity is estimated to underpin industrial fuels.
Other Asia Demand	• India's demand is forecast to rise by 480 kb/d in 2021, even though macroeconomic indicators look weak for the coming quarter. The aviation sector will remain under pressure, which will be a major source of uncertainty. However, demand could pick up in Q4 2021, largely on the back of anticipated positive developments in the transportation and industrial sectors. • In other Asia, oil demand growth is expected to be balanced due to a rise in economic activity, but delayed herd immunity. Growth will be led by Indonesia, Malaysia, Thailand, and Singapore.
Qamar Energy Outlook	• Our outlook estimates global demand to increase by 5.25 Mb/d in 2021 from 2020 levels. Main reasons include a more conservative GDP growth estimate for major world economies, due to the increase in infections, the emergence of new virus variants, and slow vaccination rollouts (except in the US). Many non-OECD, especially Africa, are facing a delayed impact of mobility restrictions that has eliminated a large portion of jet fuel and gasoline consumption.

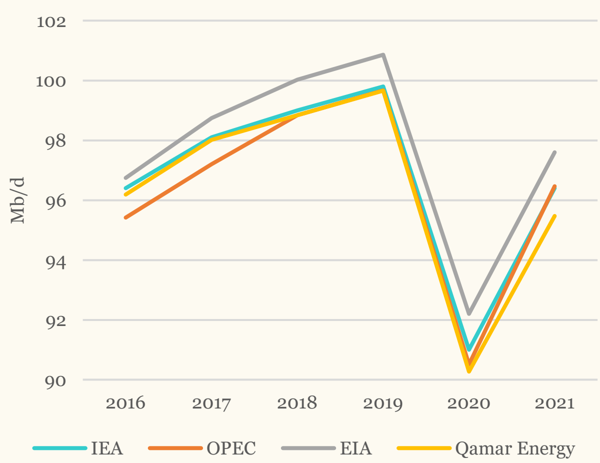


FIGURE 1 Global Oil Demand Forecasts

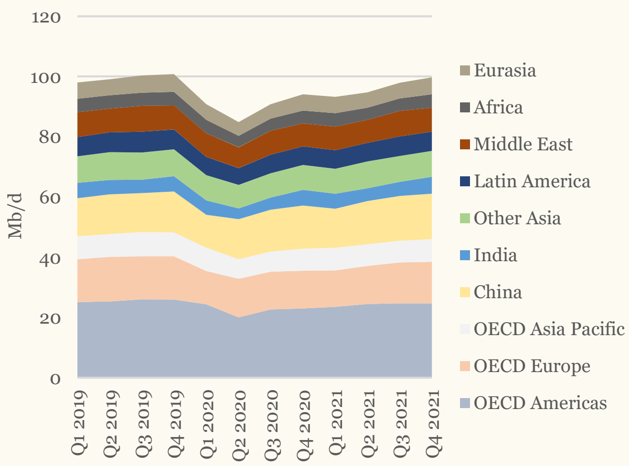


FIGURE 2 Global Oil Demand Forecast by Region till 2021, OPEC

Vaccination Rollout Statistics	• In the US, 277 million doses of coronavirus vaccines have been administered; 57.9 million in the UK; and 19.3 million in Canada • China has administered over 436 million doses, while India has administered over 187 million • In the Middle East, Saudi Arabia is leading the charge with 12.1 million doses administered, and 11.7 M in the UAE
Challenges	• Second-wave and in some economies, third-wave infections, and infections of new coronavirus strains, continue to weigh on the prospects of robust oil demand recovery till H2 2021. The IEA believes global oil demand could return to pre-crisis levels only by 2023. • Concerns over long-term effects of the Moderna, Pfizer-BioNTech and Oxford-AstraZeneca vaccines has ushered a new wave of hesitance amongst vaccine-eligible candidates. Moreover, geographies like Africa, Latin America, and several parts of Central Asia and the Middle East are yet to receive sufficient vaccines to step up their vaccination campaigns.

MIDDLE EAST DEMAND OUTLOOK

SUCCESSFUL VACCINATION ROLLOUT CAMPAIGNS HAVE LENT BULLISHNESS TO MIDDLE EAST DEMAND	
Latest Updates	• Overall Middle East demand increased by 34 kb/d in April from March levels. Lifted restrictions along with improvements in mobility might cause demand to pick up pace further in H2 2021. • Saudi Arabia and the UAE have the most vaccinations in the region so far; 12.1 M doses of coronavirus vaccines have been administered so far in Saudi, followed by 11.7 M in the UAE.
Key Demand Change Factors	• Large increases in the new coronavirus strain infections in Bahrain especially, and also in Qatar, Kuwait, Iran, and Iraq territories is resulting in a rising uptick in daily deaths, which has somewhat slowed down mobility amongst citizens and residents. This is reflected in gasoline demand remaining largely unchanged from March levels, rising only by a mere 3 kb/d. Flight cancellations to hard-hit international destinations like India will keep jet fuel demand growth modest at best and flight activity from Dubai and other major regional airports has flatlined and then declined slightly. Demand could grow in Q3 as Saudi Arabia lifts travel bans for vaccinated citizens. • Diesel demand meanwhile has improved by 104 kb/d in April due to an increase in domestic logistics activity.
Main Sectors Impacted	• Slow economic activity has particularly affected infrastructure and construction projects, but this looks poised to turnaround, reflected in increased diesel consumption. Construction activity has increased in Saudi Arabia, but continued uncertainty around workforce limitations might cause the rise to remain skittish. In the UAE, the construction sector appears to be stabilising. • Industrial fuel demand will also be impacted by lower power generation requirements at project sites. • Transportation fuels are expected to continue to recover as international air travel picks up modestly.
Saudi Arabia Updates	• Demand for oil products in Saudi Arabia has posted healthy gains in the first 4 months of 2021, at an average of 1.94 Mb/d, mainly due to growing mobility as the country charges ahead with its vaccination campaign. • Motor gasoline consumption did not witness a significant change, although diesel increased by 67 kb/d from March figures as industrial activity grows.
UAE Updates	• Our analysis indicates no significant change in gasoline and diesel demand in the UAE for April, with diesel demand returning to pre-pandemic levels of 134 kb/d and road traffic returning to normal. Economic activity is likely to soar as restrictions on hotel occupancy, live entertainment and permitted concerts for vaccinated people are lifted. • The lead up to Expo 2020 in Dubai is expected to keep demand for road transportation fuels stable, if not robust. • Air travel has recovered to under 50% of pre-pandemic levels but gained only very slowly since November 2020 • Local sentiment for investment and resumption of business is quite positive in the UAE, even though teleworking and distance education methods are expected to continue into Q2 2021.

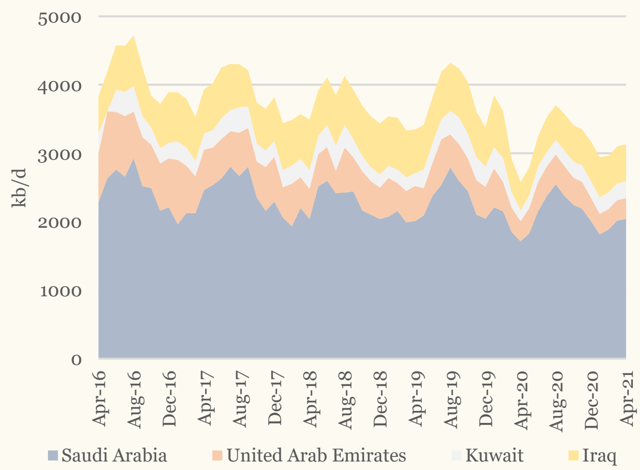


FIGURE 3 Total Oil Products' Demand

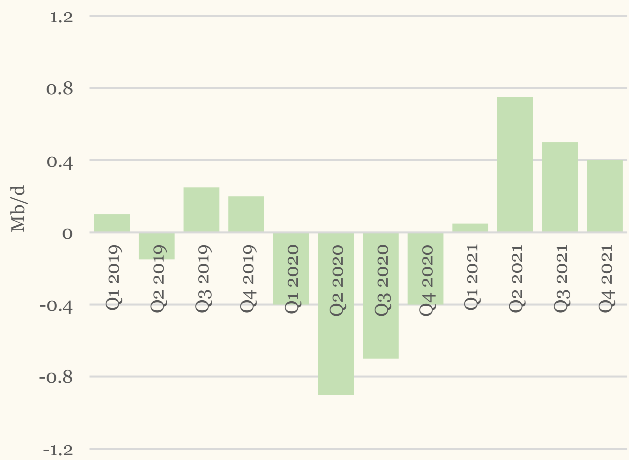


FIGURE 4 Middle East demand, year-on-year change

Other MENA Updates	• In Iraq, total oil products demand in April still remains 120 kb/d lower than pre-pandemic levels, while in Iran, oil demand has witnessed a slight uptick to 1.5 Mb/d, with gas and hydroelectric shortages replaced by oil for power generation, and as economic momentum increases as a result of recent increases in oil exports and hopes of some relief from the US on sanctions in the near-term. • In Kuwait, demand has remained largely flat in the first 4 months of 2021, at 244 kb/d, 20% lower than Q1 2020, while LNG demand for power is strong.
2021 Demand Forecast	• Overall MENA oil demand according to OPEC is expected to reach ~8 Mb/d, a 400 kb/d increase from 2020 levels, with the highest growth witnessed in Q2 2021, in line with historic seasonal demand patterns.
Challenges	• Severely constrained medical and vaccination capabilities and a rising death rate in lesser-able MENA countries like Iraq and Iran, and in GCC states like Oman, could temper the growth of demand in 2021. • The outflow of expatriate populations from the GCC shall also lower demand, though not as severely as previously expected. In the UAE, a new retirement visa is expected to boost foreign in-migration.

OPEC COMPLIANCE & SUPPLY OUTLOOK

13-MEMBER OPEC GROUP REPORTS STRONG COMPLIANCE FOR APRIL 2021

Country	Pledged Cuts	March '21 Compliance	April '21 Compliance		Cuts
Algeria	-181	109%	105%	↓	-190
Angola	-261	141%	148%	↑	-388
Congo	-56	99%	99%	~	-55
Equatorial Guinea	-22	170%	69%	↓	-15
Gabon	-32	53%	6%	↓	-2
Iraq	-1016	91%	92%	↑	-733
Kuwait	-480	100%	101%	↑	-483
Nigeria	-313	115%	90%	↓	-281
Saudi Arabia	-1881	155%	152%	↓	-2,868
UAE	-542	103%	102%	↓	-554

PLANNED MAY 2021 OPEC+ CUTS (kb/d)

Country	Reference Production	Target Production	Pledged Cut
Algeria	1057	887	170
Angola	1528	1283	245
Congo	325	273	52
Eq. Guinea	127	107	20
Gabon	187	157	30
Iraq	4653	3905	748
Kuwait	2809	2358	451
Nigeria	1829	1535	294
Saudi Arabia	11000	9232	1768
UAE	3168	2659	509
Total OPEC-10	26,683	22,396	4,287
Total non-OPEC	15,267	13,154	2,263
Total OPEC+	**41,950**	**35,550**	**6,541**

- An accurate assessment of Iraq's compliance with additional cuts is hard to ascertain due to the continuously changing pledges and timelines made by the country, but on OPEC+'s official target production of 3.86 Mb/d for April, Iraq achieved a compliance of 92%. Iraq Oil Report meanwhile reports production for April at ~4.1 Mb/d, which pushes compliance much lower, at 71%, thanks to a 70 kb/d output increase at West Qurna-2.
- Higher oil prices and bullish expectations on demand have helped reduce some of the scrutiny from *de facto* cartel leader Saudi Arabia. Moreover, Iraq's cap official cap will rise to 3.9 Mb/d for May, 3.96 Mb/d for June, and 4.0 Mb/d for July, which gives it more leeway in expanding production while overlooking additional curbs which were reiterated as mandatory during an April 01 OPEC+ meeting.
- Members like the UAE have previously expressed disgruntlement at Iraq's lack of compliance while they have had to make extra cuts for increasing production last summer as demand peaked due to the lockdown period. Currently, the UAE is observing perfect compliance. OPEC+ ministers will convene on June 01 to review cuts and adjudicate compliance, and are largely expected to continue with the planned easing of quotas for June and July.
- Among non-OPEC members, only Russia and Kazakhstan have been given the luxury of boosting production by minor volumes. Russia will increase production by 114 kb/d from May to July, ramping up evenly over that span.
- The main reason for allowing production increases to Russia and Kazakhstan is to keep them roped-into the pact. Oil producers in Russia, during earlier OPEC+ pacts, had expressed growing discontent at being limited by production caps, which risked Russia exiting the cartel, a move that would potentially unleash a swathe of oil in the market, depressing markets.
- Russia has indicated recently that it wants to "push ahead with a supply increase", as according to it, the market had already balanced in February. The country pumped 9.5 Mb/d in April, a rise of 160 kb/d from March, and well above its quota of 9.38 Mb/d. Saudi Arabia has publicly encouraged allied partners to remain "extremely cautious" on production policy, warning the group against complacency to ensure full recovery.
- The US has allegedly asked Saudi Arabia to keep oil prices "affordable", which might have informed OPEC+'s April 01 decision to ease production gradually. Saudi Arabia was earlier showing preference for extending its 1 Mb/d voluntary cut into May and June, but will now wind down the additional cuts by 250 kb/d in May, 350 kb/d in June, and 400 kb/d in July.

2020/2021 DEMAND-SUPPLY BALANCE, OPEC

MB/D	Q1 2021	Q2 2021	Q3 2021	Q4 2021
World Demand	93.29	94.79	97.90	99.74
Non-OPEC Supply	67.48	68.31	69.20	70.20
Call on OPEC	25.81	26.48	28.70	29.54
OPEC Supply	**25.14**	**?**	**?**	**?**

HEADLINE DEVELOPMENTS

Established Producers Supply

Aramco is planning to divest a 1% stake over the next two years to a 'major global investor', with China showing strong interest

The potential stake sale could rake in about US$ 19 B based on the current market value of the company. Aramco has recently sought more innovative ways to bring in external capital following the effects of the pandemic and 2020 oil price crash on its coffers. For example, it recently signed a US$ 12.4 B deal for the sale of a 49% stake in the newly formed venture Aramco Oil Pipelines Company to a consortium led by Washington-based EIG Global Energy Partners, the largest agreement so far since Aramco's listing on the Tadawul exchange in 2019, when it raised more then US$ 29 B.

Opening up its assets to international players could lead to long-term gains. International capital and experience will lend extra value to the company, helping Saudi Arabia allocate domestic resources to diversification. The sale of a 1% stake is planned to be finalised within two years, and "will bolster Aramco's sales in Saudi Arabia", as well as "demand for Aramco's products in the country where the company buys the 1% stake".

The stake sale is allegedly a privatisation move, which is a key pillar of Vision 2030

The first move towards privatisation was in 2019 when Aramco launched its IPO. However the deal with EIG, and similar potential future transactions, are essentially securitisations rather than privatisations. They have a fixed term, in this case 25 years. Aramco retains a majority stake in the Aramco Oil Pipelines Company and continues to have operational responsibility. Other deals might follow suit, meaning investors can bring only a limited amount of new technological and business insight.

Part of government shares in Aramco could be transferred to the Public Investment Fund (PIF), in addition to what it already holds, effectively maintaining the Saudi leadership's consolidation over the energy giant, only through a different platform.

Aramco is a capable operator of its assets, so it is unlikely oilfields will be the target of any deal

Gas and unconventional resources, meanwhile, are a different matter. The country intends to produce 70% of its electricity from natural gas by 2030, up from 58% in 2019. Energy Intelligence has reported that any opening in Aramco's upstream assets would most likely invite investors to take (minority) joint venture stakes in new gas projects. Aramco is looking at the option of offering a stake in its Jafurah unconventional natural gas field, as well as conventional non-associated gas fields, which tend to require more investment and expensive technology to develop.

Jafurah contains 200 TCF of unconventional gas, enough to double Saudi Arabia's existing reserves. It has been compared to the Eagle Ford formation of South Texas and covers a similar area. However, it is twice as thick, giving more rock to exploit. In previous years Aramco has held talks with US energy companies including Chevron about technologies needed to develop its gas resources. We suspect Jafurah might be a project that could interest US firms today. The field has an eventual development price tag of US$ 110 B, and is expected to start producing in 2024.

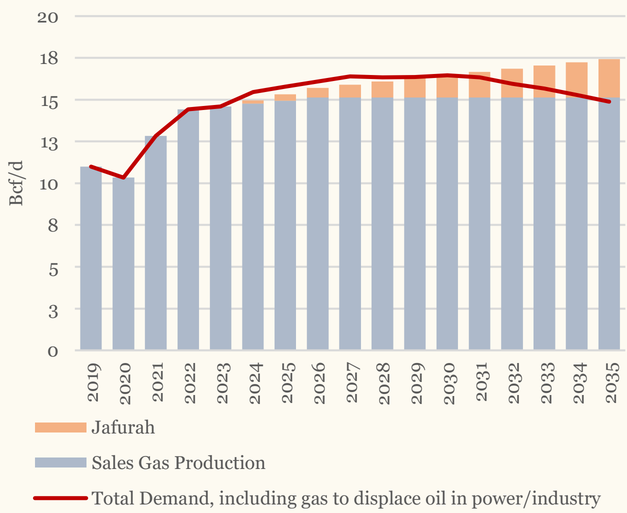


Figure 5 Saudi Arabia's Natural Gas Balance, including planned Jafurah development[6]

An opening suggests Aramco believes investors are still interested in long-cycle megaprojects

This is despite IOCs' recent focus on capital discipline and commitments to invest in more low-carbon energy. Aramco

[6] Qamar Energy Research; chart shows meaningful export volumes appear only post 2031, after meeting gas demand including displacing oil currently used in industry and power, the 'oil equivalent' line

will need to make the opportunity more attractive than its last attempt with IOCs, the early-2000s drilling expedition in the Rub' Al Khali desert for gas with Shell, Lukoil, Repsol and Sinopec, which carried on for a decade, but did not lead to commercial production.

Jafurah and other gas projects that could be potentially offered may be more appealing to investors since no exploration is needed – Aramco has documentation of potential reserves. However, economics and reforms to the regulation of gas prices will dictate the interest Aramco is able to generate.

Aramco is under pressure to pay dividends, boost production capacity, and diversify

Diverting some of the burden to outside investors could help. With its finances squeezed, partnerships could help it raise necessary cash to pay a fat dividend, put into action oil and gas production capacity expansion plans and diversify the Saudi economy. Other GCC countries have already demonstrated the difference that partnerships with IOCs can make. For example, PDO, which is majority state-owned by the Omani government, is another able operator with strong support from Shell, but was unable to make much progress on the Khazzan tight natural gas field, while BP has made it Oman's leading producer. Any move to bring in outside investors will mark a major change in Aramco's upstream strategy, which has been to operate alone. Ultimately, well-structured partnerships with IOCs to hasten progress in unconventional gas could be vital to the success of its other initiatives, including the planned sale of a 1% stake.

ADNOC will add another feather to its clean energy credentials with a 100 ktpa 'blue' ammonia plant

Further extending its interests in developing a hydrogen-based infrastructure in the country, ADNOC will build a big-scale 'blue' ammonia plant in Ruwais at the new Ta'ziz industrial and chemicals hub. This follows the commissioning of the UAE's first green hydrogen plant in Dubai last week which will supply buses and cars to be used during the Expo 2020 in October. That plant, a collaboration between the Dubai Electricity and Water Authority (DEWA), Expo 2020 Dubai and Siemens Energy, is the first of its kind in the MENA region, implemented at the outdoor testing facilities of DEWA's R&D Centre at the Mohammed bin Rashid Al Maktoum Solar Park.

ADNOC CEO Dr. Sultan al-Jaber, who is also the Minister of Industry and Advanced Technology of the UAE, has reiterated his firm's commitment to taking advantage of the UAE's strong position as a producer of competitive, low-carbon natural gas and a leader in CCUS. Blue ammonia is a more easily transportable fuel source made from blue hydrogen, with by-product CO_2 captured and stored.

The UAE is drawing up a comprehensive road map to establish a 'hydrogen ecosystem'

To establish itself as an exporter of hydrogen, the country has formed an alliance of Mubadala, ADNOC, and holding company ADQ. The alliance will produce both 'blue' and 'green' hydrogen, with ADNOC responsible for 'blue' hydrogen.

Recently ADNOC signed an agreement with Korea's GS Energy to collaborate on potential development of new value chains for blue hydrogen and ammonia to boost ADNOC's carrier fuel export position. Talks have also taken place with India, where ADNOC is planning to export blue hydrogen in the future to meet the country's demand.

Green hydrogen meanwhile, is being developed by Masdar, to find uses for fuel cells in buses at Masdar City as well as in aviation fuel to be used by Etihad and Lufthansa.

In its race to lead the supply potential of the region, the UAE has signed a flurry of both blue and green hydrogen deals recently, summarised in the table below. These deals will form the basis of an integrated 'hydrogen ecosystem' with potential of becoming a global manufacturing hub for hydrogen infrastructure.

Table 1 The UAE's Hydrogen Deals

Deal	Date	Description
Masdar and Toyota Joint Research Programme on Green Hydrogen	January 2017	Toyota and Masdar have been working with ADNOC to develop hydrogen for Toyota's fuel-cell electric vehicle Mirai
ADNOC & Total Strategic Framework Agreement	November 2020	ADNOC and Total will explore partnerships in emissions reduction, including CCUS and Hydrogen
ADNOC, Mubadala, ADQ Hydrogen Alliance	January 2021	ADNOC, sovereign wealth fund Mubadala Investment Co., and investor ADQ have formed an alliance to make Abu Dhabi a leader in producing low-carbon 'green' and 'blue' hydrogen, and will create a roadmap for adoption of hydrogen in the country's utilities, mobility

		and industry sectors with international partners
ADNOC & Japan's Ministry of Economy, Trade and Industry Ammonia Cooperation Deal	January 2021	ADNOC and METI will advance bilateral cooperation in hydrogen and fuel ammonia to help Tokyo develop its supply chain of blue ammonia in the UAE
Masdar, Siemens, and Marubeni Green Hydrogen Development Deal	January 2021	Masdar, Siemens, and Marubeni will work with other energy companies to develop a solar-powered electrolyser in Abu Dhabi to produce green hydrogen for transportation within Masdar City
ADNOC & Korea's GS Energy Opportunity Exploration Agreement on 'Blue' hydrogen and ammonia	March 2021	ADNOC and South Korea's GS Energy signed an agreement to explore opportunities in 'blue' hydrogen and ammonia as carrier fuels
UAE & Japan's Ministry of Economy, Trade and Industry Hydrogen Cooperation Agreement	April 2021	UAE and METI will collaborate in hydrogen production and development of a supply chain for exports to Japan
DEWA, Siemens Energy and Expo 2020 Dubai	May 2021	DEWA and Siemens have launched the Middle East's first solar-powered green hydrogen plant at the Mohammed bin Rashid Al Maktoum Solar Park in Dubai, which will be deployed in transportation vehicles at Expo 2020
ADNOC & Wood PLC 'Blue' Ammonia Plant at Ruwais	May 2021	ADNOC has appointed UK-based Wood PLC to carry out pre-FEED on its planned 100 ktpa 'blue' ammonia facility in Ruwais; FID is due in 2022 with start-up in 2025
KIZAD Abu Dhabi & Helios 'Green' Ammonia Plant	May 2021	Helios Industry will invest US$ 1 B for the development of a 'green' ammonia plant at KIZAD in Abu Dhabi, which will produce 200 ktpa of green ammonia from 40 ktpa of green hydrogen. The facility will be powered by a dedicated 800 MW solar plant with a capacity of 100 MW in Phase-1

Hydrogen is widely regarded as the fuel of the future for the UAE, with several benefits

To meet its commitments under the Paris Agreement, converting oil and gas into hydrogen is being regarded as an initial step before ultimately settling on green hydrogen for a full transition. The UAE has attractive conditions for hydrogen use in industry, due to cheap production potential and existing gas-based industrial facilities. Hydrogen can also be processed further into derivatives such as methanol and synthetic kerosene and gasoline, offering additional revenue potential for the UAE and cost savings (carbon taxes) for exports to Europe, Asia, and elsewhere. The UAE can also easily ship hydrogen derivatives in contrast to shipping pure hydrogen, as reflected in the deals in Table 1.

Qatar has resumed LNG shipments to the UAE for the first time since 2017

The UAE already imports 2.1 Bcf/d of Qatari natural gas through the Dolphin Pipeline, but since 2017, when it joined Saudi Arabia and Bahrain in imposing an embargo on Qatar due to its alleged links to terrorism, Qatari LNG cargoes had stopped arriving at Emirati ports.

The Al Ghariya tanker, which loaded a cargo of LNG from Ras Laffan on May 10, discharged at the Dubai Supply Authority's Jebel Ali Terminal on May 13. This follows the resumption of monthly exports of natural gas condensate to the UAE since February, which jumped to 1.7 Mbbl in April, from February's 287 kbbl, mostly used by the Emirates National Oil Company (ENOC)'s Jebel Ali refinery.

The resumption signals improving ties between both countries

Ever since the 2017 embargo, the UAE was forced to tap alternative sources for condensate, importing its first US cargo in mid-2017. However, ENOC's refinery is built to better process North Field/South Pars condensate, which can explain the steady rise in imports from Qatar this year, since US sanctions have prevented use of Iranian condensate.

The UAE reopened its land, sea, and air borders with Qatar in January, after Saudi Arabia announced a breakthrough in ending a dispute between the GCC and Qatar. Prior to the dispute, Qatar was a regular exporter of LNG to the UAE during the summer, when demand for power generation increases.

In 2020, lockdown restrictions led to exceptionally high peak summer demand (due to lack of travel, and more residents being confined to their homes), causing the UAE to slack on its OPEC+ agreement and under-comply to meet demand with associated gas.

Qatari gas will remain crucial for the UAE, even though it is developing its own resources

Much of the UAE's natural gas resources are sour. This increases the challenge in making them commercially profitable, even though the country has one of the lowest costs of production for its large associated gas output and some relatively sweet fields. The 2020-discovered Jebel Ali shallow unconventional gas find could be an important resource to make the UAE self-sufficient, as targeted for 2030, but development is likely to take years.

Abu Dhabi is already on track to be self-sufficient from Qatari gas around 2026, particularly because of the ramp-up of its Baraka nuclear power plant, but they are likely to continue pipeline imports till 2032, to meet demand in other emirates. Dubai meanwhile will continue requiring LNG but its imports will drop as new coal and solar power projects come online.

Emerging Producers Supply

European refiners might return to buying Iranian crude for the first time since 2018

Traders in Europe are banking on the removal of US sanctions on Iran's oil sector to resume purchases of Iranian crude for the first time since 2018. Italy, Greece, and Spain were the last among major European customers to shut off purchases of Iranian crude right before the US sanctions took effect in November 2018. France had ended purchases in May 2018 itself, when then-President Trump had announced the US's exit from the JCPOA.

If current talks in Vienna are successful in reaching a negotiating point on the JCPOA and the removal of sanctions, it would provide European, especially Mediterranean, refiners the confidence to return to Iranian crude supplies.

Many Mediterranean refineries are configured to run Iranian crudes among other MENA grades

Many southern European refineries are configured to run Iranian crude, with monthly imports between Italy, Greece, Spain, and France sometimes averaging >700 kb/d before 2018. For example, Greece's Hellenic and Italy's Saras refineries each relied on Iranian term supplies for up to 20% of their crude feedstock. France's Total, Italy's Eni, and Spanish firms Repsol and Cepsa also had several term supply agreements with Iran. To replace Iranian supplies, Mediterranean refineries had begun taking in larger volumes of Kurdish blends coming via Ceyhan as a preferred alternate. Other options, currently, include crude from Gabon, Congo, and even Brazil.

Greece meanwhile has turned to Iraq's Basrah Heavy and Medium grades to replace the Iranian Heavy and Medium grades which share similar specifications.

An unnamed European refiner has visited Tehran to discuss resumption of purchases

NIOC has been pricing its crude to Northwest Europe at massive discounts to Dated Brent, steeper than its other regional counterparts. Reports of European refiners visiting Tehran began doing the rounds on the eve of US-Iran negotiations in Vienna. Some European refiners are discussing resumption of purchases with the NIOC if sanctions are lifted, but have clarified that "every decision is based on economics and an attractive price". NIOC's main aim if sanctions are lifted will be to win back as much market share as possible, so steep discounts are likely to continue in the coming months.

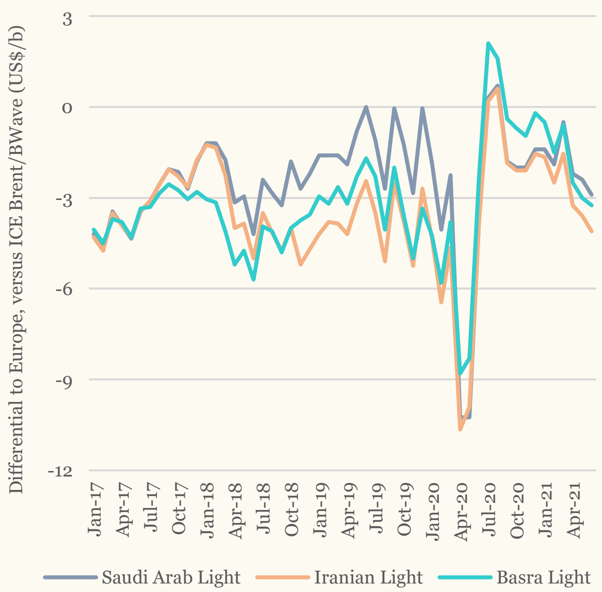


Figure 6 NIOC's OSPs for Iranian Light vs Regional Counterparts to North-West Europe[7]

Iran might not regard Europe as its priority market, however, with that spot reserved for Asia

Even though European refiners have started showing interest in resuming purchases of Iranian crude, restrictions on the US banking system took a long time to be removed under the previous sanctions' removal. This will remain a deterrent for any immediate-term purchases if sanctions are eased. Moreover, the Mediterranean has more or less accustomed to a life without Iranian crude, and even prior to the

[7] MEES; NIOC

sanctions, there were many months when France and Spain would not purchase any Iranian blends. France especially has an appetite for Libya's sweeter crude, and alternate supplies from Kurdistan and Iraq can meet demand in other European countries.

Iran is aware of this fact and therefore sees Europe as a second-priority market after Asia led mainly by China (who is starting to favour lighter and more medium oil blends, lending well to increased production from Iran's West Karoun oilfields), and hopefully, as sanctions are removed, by India. India has not lifted a barrel of Iranian oil since November 2019, when its waiver for 180 kb/d expired. The pro-US incumbent government will be hesitant to rapidly return to signing term deals with Iran if sanctions are lifted, as it would prefer having US support in other foreign policy areas in exchange for minimal interaction with Iran, but might snap up spot cargoes, which are popular amongst refiners on its port cities. Indian refiners have expressed disgruntlement at Saudi Arabia's voluntary production cuts, resulting in higher prices for its grades, which could result in India deciding to return to Iranian purchases if the US lifts sanctions.

Moreover, India is battling the devastating effects of the pandemic, and oil demand in the country is likely to remain weak. Iran might not be able to supply as much as it would like to, to India, but will continue offering attractive discounts and credit terms nevertheless.

Does this mean Iran exports won't witness a significant revival this year?

Yes and no. Assuming up to a 3-month implementation period of sanctions relief, exports could rise sharply to 2 Mb/d from the current 1 Mb/d by year-end. However, this scenario is optimistic, as it assumes low buyer reticence and the swift reversal of technical (shipping and insurance) and financial (banking) constraints. It also assumes that the Vienna talks will result in a preliminary "definitive" deal with the outgoing Rouhani government, which will be the first policy item executed by the new government.

As explained above, buying appetite for Iranian crude is beginning to show some interest from OECD Europe, but this is still slow-moving. The same is likely with OECD Asia Pacific, who will not want to begin taking in Iranian crude until the deal is fully formalised and all restrictions are removed. Turkey and India will also be slow-moving, and even though China could take in larger volumes, it is currently committed to a variety of term agreements with attractively-priced, "more reliable" suppliers. However, independent refineries, known as "teapots", could continue taking in 200-300 kb/d of Iranian crude. It should be noted that officially, China skipped imports from Iran in February and March.

A base case scenario would see an initial agreement towards a deal reached with the outgoing government, and further discussions towards its implementation taking place after June/July, once the election period in Iran concludes and the new government takes office. If a hardliner is elected, reaching a deal with the US might take longer, particularly if it is to include any follow-on talks on issues outside the nuclear programme. As the US would like a deal sooner than later, it could be safely said that some form of agreement would be officialised within the year, with the removal of some of the more stringent sanctions on the oil and banking sectors reversed.

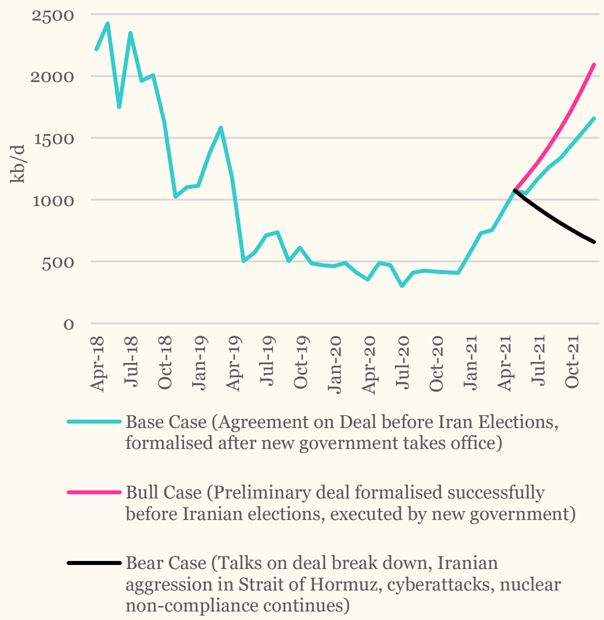


Figure 7 Iran's Crude Export Scenarios in 2021[8]

The election of a hardliner might deflate international optimism for a credible reformist/moderate government, which could also dictate collective action on meaningful resumption of trade with Iran. Nevertheless, exports of crude from the Islamic Republic will definitely pick up, reaching 1.7 Mb/d, with the bulk being purchased by China. Prices are relatively high, and Iran will continue to offer attractive discounts as it has to clear out its excessive oil stockpiles.

A bear case scenario is also possible, where talks on any potential deal with the new government break down. Political

[8] Qamar Energy Research

reasons for this transpiring are several. For example, the US would struggle hard to sell a potential deal to Congress, who will be opposed to a hardliner government. In Iran, hardliners are typically ideological and newcomers may lack the experience and familiarity with their US counterparts that Rouhani's administration had. Previous hardliners have been intransigent and made little progress during the negotiations of 2007-2013. Moreover Iran would be unwilling to discuss issues outside of the nuclear deal, which might stagnate talks further.

Any indication of slow or no action on the US's part could result in Iran escalating its routine microaggressions in the Strait of Hormuz and elsewhere, or completely exceeding the uranium enrichment levels for civil power generation for its nuclear reactors. This could pose the threat of not only military retaliation by US allies in the region, but also much stricter enforcement of existing sanctions, effectively eliminating any chance for Iran to revive its oil trade. Under this scenario, exports would fall back to a low of 600-650 kb/d, mostly headed to China.

Exports

Kurdistan's recent highs in oil revenues might be facing a downhill slide in the near-term

A unilateral decision by the KRG to change the schedule and terms for payments to IOCs without prior warning or consultation has now cast new uncertainty on the region's oil sector, putting a question mark over the realisation of planned expansion projects for 2021 and future investment to boost output. This could result in a further scale back of production and capital spending (following scale backs in 2020 because of the pandemic-induced collapse in oil prices and restrictions to operations), which will translate to lower output and therefore lower export earnings.

IOCs will be paid outstanding dues at a new, much slower rate

In a letter signed by KRG Minister of Natural Resources Kamal Atroshi, IOCs will now be paid 60 working days after submission of their invoices at the end of each month, rather than 15 days. IOCs will also be paid outstanding dues and debts at a new, slower rate. In December 2020, the KRG had informed IOCs that it would allocate 50% of all incremental revenue above US$ 50/b to clear outstanding debts. However, that share has now been revised to 20%. The decision has taken foreign operators by shock, with several expressing dismay at the KRG's unilateral decision, and what it means for future oil production plans in the region.

Plans to resume field spending might be delayed as payments slow down

Since oil prices witnessed an uptick following the success of the April 2020 OPEC+ production cuts, some foreign operators had announced plans to resume field spending, supported also by consistent payments by the MNR. Now with payment changes taking effecting with March and April 2021 invoices, these plans have come into doubt. The revision effectively cuts the rate of repayment by more than half, reducing cash flows for the IOCs.

Most majors currently operating in the KRG have yet to accept the amended terms

For example, DNO, Genel, HKN, and Gulf Keystone Petroleum (GKP) have declined to accept the KRG's revised terms and have yet to discuss the change with the KRG. While this may not result in a significant impact on current operations, the news has shed an uncertain light on planned expansion for the year. To illustrate, DNO had stepped up its spend early in the year with the drilling of new wells and workovers of existing ones in its flagship Tawke licence to sustain gross operated production from the Tawke and Peshkabir fields at 112 kb/d in Q1, up from 110 kb/d from Q4 2020. The company has budgeted a full year operational spend of US$ 700 M, including 9 wells in Tawke and 3 in Peshkabir. It has now said that it will be "reviewing its position and will engage with Kurdistan to seek agreement regarding payment terms, interest on arrears and revised lifting arrangements".

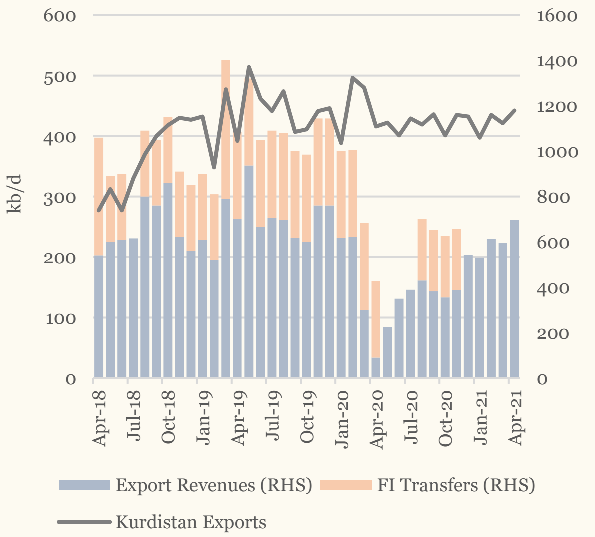


Figure 8 Kurdistan's Oil Exports & Revenues[9]

GKP meanwhile, operator of the Shaikan oilfield, has resumed growth plans earlier in March to ramp-up gross oil production towards 55 kb/d, from the current ~44 kb/d. Expansion activity includes completion of the SH-13 well, which was suspended last year, drilling SH-14, the final well in the programme from the same pad, and installing ESPs into two existing wells. SH-13 is targeted for Q3, and capex required to deliver the overall expansion programme is estimated to be US$ 40-45 M. Realisation of the programme now appears uncertain.

Newcomer Chevron, operator of the Sarta licence with a 50% interest, began output from the field in March 2021 at a rate of 10 kb/d, expected to increase from two existing wells after optimisation. Genel holds 30% in the licence, with the KRG holding the remaining 20%. Genel has often been exposed to payment delays more than its counterparts (like Shamaran, HKN, and GKP) although they are all KRG-focussed. Delays could result in lower finances for Sarta, and therefore delayed development.

Aside from timely payments, most IOCs are owed large arrears that are yet to be cleared

For example, GKP is owed US$ 65 M in arrears, and has received a gross payment of US$ 28.1 M, of which US$ 22 M is net to the company for the sales it made from Shaikan in March 2021, leaving it with below US$ 6 M in cleared debts. DNO meanwhile, which is owed US$ 239 M, has received a net payment of US$ 42.4 M, of which US$ 31.9 M represents DNO's entitlement share of January 2021 crude oil deliveries from the Tawke licence. This leaves it with US$ 10.5 M as payment for outstanding arrears.

Lack of consultation with IOCs indicates the KRG is looking for quick fixes to its deficit problem

Even though the 2021 Budget passed in April, it has not yet resulted in any payments to the KRG from Baghdad due to perennial disagreements on how to implement the budget deal, including the 250 kb/d of Kurdish crude to be transferred to the State Oil & Marketing Organisation (SOMO). If transfers to the KRG begin, it would receive US$ 6.6 B from the federal government. Without that financial cushion, the KRG appears to be looking for cost savings from other sources, including from its relationship with IOCs.

This approach may be short-sighted and could cost the KRG in the near-term

Inconsistent payments are directly correlated to lower production levels. Moreover the lack of consultation has left a bitter taste with the IOCs who are still waiting to engage with Atroshi formally on the decision. Production momentum, which as been on a high recently, due to stable oil prices and a budget deal, could now dwindle, impacting the KRG's credibility further. In the short-term, lower production will translate into lower export revenues, further exacerbating the KRG's deficit problem.

However, if monthly payments resume from Baghdad, the decision could be rolled back

A negotiating team has travelled to Baghdad to discuss activating budget transfers. If successful, it could help roll back the KRG's unilateral "investment-chilling" decision. However, for this to transpire, the KRG will have to agree on the terms set out in the budget deal, which has been challenged by the Ministry of Oil and the Ministry of Finance in Baghdad (and might need to be addressed by the President or the Federal Supreme Court).

If the KRG does not transfer its 250 kb/d of crude share to SOMO, it stands to lose the value of that amount of oil from its monthly transfer. On an oil sales price of US$ 60/b, that would amount to US$ 450 M deducted from the stipulated monthly transfer of US$ 550 M (US$ 6.6 B annual), meaning the KRG would receive from the federal government only US$ 100 M. Even with the oil sales of about $675

[9] Qamar Energy Research; IOR

million (and noting that the KRG sells its crude at a substantial discount to federal prices), this would not be enough to cover the KRG's monthly expenses of US$ 440 M to its civil servants and ~US$ 360 M to IOCs and traders/contractors.

New Supplies/Discoveries

Italian major Eni will drill a second well on a new target in Oman's Block 52

Even though its first deepwater exploration well in Block 52 turned up dry, the Italian major is preparing to drill a second well on a new target, in alignment with Oman's plans for additional LNG export facilities. Block 52 is spread across 90,000 km², with water depth ranging from 10 metres to more than 3,000, and is operated by Eni (55%), Qatar Petroleum (30%), and the Oman Oil Company Exploration and Production division (15%).

The unsuccessful probe is believed to be the Sultanate's first ever deep-water exploration well

It was drilled by drillship Pacific Bora in a water depth of about 880 metres. While unsuccessful in its first well, Eni is optimistic of making a hydrocarbon discovery among the "many other structures", which it plans to drill next year. The firm signed an EPSA for Block 52 in 2017, and expanded its upstream portfolio further in 2019 when it signed an EPSA for Block 47 (in which it would be 90% operator), and an HoA with the Ministry of Petroleum and BP for the acquisition of E&P rights for Block 77.

New gas production from these projects could result in building additional Oman LNG facilities

In recent years Oman has attracted several international majors, including Shell, BP, PTTEP, and Petronas to invest in its upstream projects, mostly natural gas prospects. Any new or additional gas production from these projects could be converted into additional Oman LNG export facilities, further establishing the Sultanate as a significant regional player in the GCC after Qatar and the UAE.

Oman's natural gas available for export could expand further with debottlenecking operations

Current consumption of natural gas is ~2.4 Bcf/d, with exports at ~1.1 Bcf/d. Since 2019, Oman has been conducting debottlenecking operations at its Oman LNG facility, which will allow LNG exports to expand by about ~200 MMscf/d, making exports reach ~1.4 Bcf/d over the next five years. Natural gas is the second highest revenue generator in the Sultanate after oil, and has provided the country with ~US$ 950 M in revenues in Q1 2021.

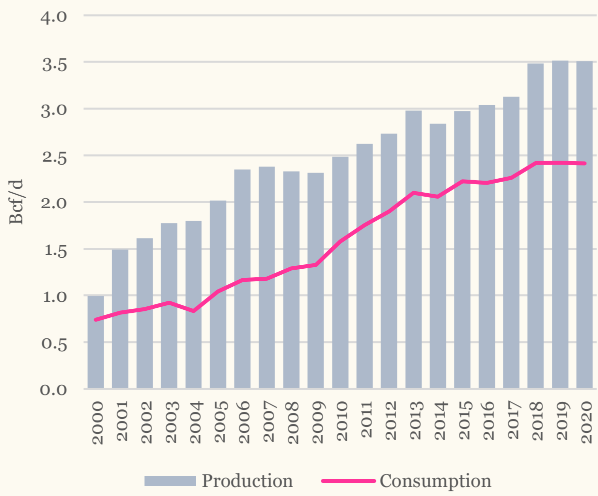


Figure 9 Oman's Sales Natural Gas Production & Consumption[10]

A 3rd processing train at Ghazeer has been commissioned, which will increase gas output

Oman has prioritised wet gas production to maximise condensate output, which does not come under its OPEC+ quota. Ghazeer, which is officially known as the second phase of the Khazzan gas project, operated by BP, has a production capacity of 1 Bcf/d, taking total field output to 1.5 Bcf/d. The third train could push output further, and further optimisation could increase production on all trains by 100 MMscf/d each.

[10] BP: MEES

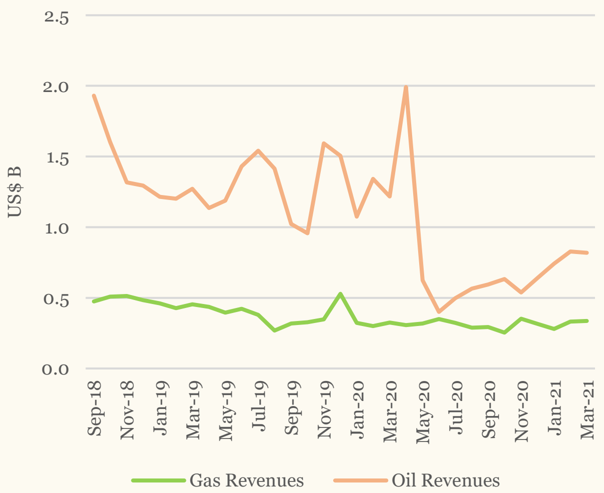


Figure 10 Oman's Revenues from Oil & Gas; Gas Revenues have historically been more stable than Oil Revenues[11]

SPOTLIGHT OF THE MONTH

What are the challenges OPEC+ will face in the long-term?

In 2020, CoVid-19 led to an unprecedented disruption in oil markets, urging quick OPEC action

In its initial stages, it had detrimental impacts on the global economy, the energy sector, and the global crude oil markets, as lockdowns cut most of 7.5 Mb/d of jet fuel use as well as drastically reducing road traffic, initially especially in North America and Europe, then also in the Middle East and parts of Asia. The global crude oil market saw demand in freefall, global storage capacity filling up quickly, combined with large-scale volatility.

The OPEC+ agreement briefly fell apart in March 2020, and Saudi Arabia and several other OPEC countries massively ramped up production, causing further price falls and threatening the over-filling of storage facilities. This led OPEC and OPEC+ members, as per the Declaration of Co-operation, to intensify their collaboration to restore stability, which effectively resulted in the largest voluntary production adjustments in the history of the crude oil industry.

[11] NCSI Oman

Even though the cuts stabilised markets, OPEC remains susceptible to global events

Going forward, despite OPEC's efforts to manage crude oil production and maintain targeted price levels, the cartel is susceptible to global economic events, disruptions on the energy markets, and/or future volatility from the pandemic.

Although its production cuts led to a strong recovery in prices to above US$60/b in November 2020, the group faces a difficult challenge in steadily regaining market share and drawing down excess inventories, avoiding another price slump, but not raising prices too high and facing demand declines or another sharp recovery in US shale output.

A longer-term role for the cartel must, first, address the threat of rising competition

OPEC oil faces competition from other producers, but also from other energy sources. Since the first oil shock, oil has been squeezed out of more contestable markets such as power generation, but has maintained a near-monopoly in transport. With the growing sales of electric vehicles, that too may be changing. Oil demand is much more elastic in the longer term than the short term, as capital turns over and new technologies are introduced. Therefore high prices that appear to be sustainable for a while can be misleading and followed by sharp crashes.

The US remains a particularly challenging competitor

US shale continues to challenge OPEC's global market share. Tight crude oil production rose from negligible in 2008 to an all-time high of 8.31 Mb/d in November 2019. US tight oil alone was thus comparable to the whole output of Saudi Arabia. Even a relatively minor shale play such as the Niobrara of Colorado-Wyoming was producing more than several OPEC member states including Ecuador, Gabon and Congo.

“Shale” or “tight” oil, initially showed exceptionally rapid production growth, along with “short-cycle” characteristics as wells could be drilled and put on production within months, far faster than megaprojects in OPEC countries. Shale reservoirs also show rapid decline rates, requiring continuous drilling to sustain output levels. This makes shale uniquely responsive to short-term oil prices. While too low prices could put many US shale drillers out of business, as in 2020, this strategy would ultimately be harmful for OPEC as well.

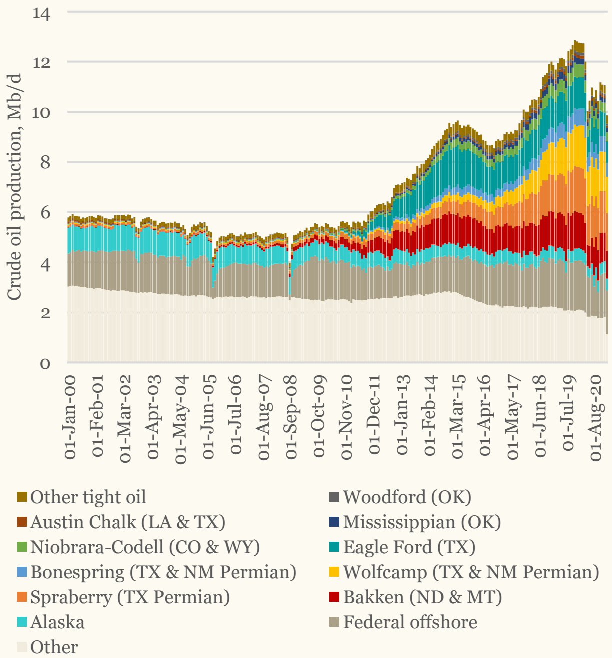


Figure 11 US Tight Oil Production, 2000-Present[12]

For example, Saudi Arabia responded with a price war, increasing output and trying to drive some US shale producers out of business. American production did gradually decline, but the industry proved much more robust than OPEC had anticipated. With increasing pressure on public finances and budgets on its member countries, Saudi Arabia and Russia collaborated to create an informal alliance called OPEC+, which agreed to its first cut by 2016. Kazakhstan, Azerbaijan, Oman and several other non-OPEC exporters joined the alliance. This was the first time Russia seriously cooperated with OPEC in production cuts. It had become clear that, given the threat of losing market share to both the US and Russia, OPEC could no longer act alone. By 2020, OPEC+ cuts increased to 2.1 Mb/d with Saudi Arabia making the largest reductions.

Within OPEC, countries with the largest ratios of reserves to production are an impending threat

The countries with the largest ratios of reserves to production, i.e. those that are producing their reserves at the slowest rate, are OPEC members. Official reserves figures have to be viewed with caution. Venezuela is a special case because of its large extra-heavy oil resources and production collapse, Iran's output is of course limited by sanctions and Libya's by civil war, but the pattern is clear, with stable and wealthy countries such as Kuwait, Saudi Arabia and the UAE also having very long reserves lives. It is probably not surprising that two ex-OPEC members, Indonesia and Ecuador, features with much lower R/P ratios. By preventing rapid exploitation of large, low-cost reserves over the past half-century, OPEC has kept prices on average much higher than they would have been in a fully competitive situation. As noted in the case of Venezuela, OPEC has served as a vehicle to punish members who try to increase their market share too rapidly. OPEC+ countries also now feature heavily in the longer reserves-life countries, and of course OPEC+ production cuts increase the R/P ratio, slow reserves depletion, and discourage investment in new production.

However, as explained below, extended production cuts threaten the internal cohesion of the group. If members like Russia, Iraq, and Nigeria were to leave, they could quickly add enough output to lead to a supply glut, due to their large, low-cost reserves.

Aside from competition in production, maintaining internal cohesion is also a challenge

Nation states do more than maximise profits – political problems lead to difficulty for OPEC reaching a decision. Some countries are high population and need immediate income (such as Nigeria and Algeria), some countries are engaged in conflicts and need cash, while others have relatively small populations, low production costs, and large per-capita hydrocarbon reserves and earnings, and large sovereign wealth holdings, such as Kuwait, the UAE and, while it was in OPEC, Qatar. The wealthier states can take a longer-term view and have tended to prioritise market share over short-term prices. But rising populations and budgets and recent price falls have tended to blur this distinction.

Saudi Arabia has generally played a role similar to that of a "dominant firm" in a cartel of corporates, giving a lead on prices and volumes that other countries follow. The problem is that the cartel price gives each country the opportunity to cheat on the agreement by producing more than they are officially allotted to. The price of oil is significantly above the marginal cost of production, encouraging many countries in OPEC to increase their production beyond their allocations and as production increases, prices fall.

Potential departures by key producers are becoming a new threat

Qatar and some other previous OPEC members have departed, some to return later and leave again. The UAE, currently OPEC's third-largest producer, and usually a close

[12] EIA

Saudi ally, reportedly raised in November 2020 the idea of leaving the organisation, as it was unhappy with its production allocation in the face of its plans to grow capacity. This appears to have been a negotiating point for now.

But given that some members' production is in long-term decline (Algeria, Angola, Venezuela) while others can grow strongly (Iraq, UAE, possibly a post-sanctions Iran, post-civil war Libya or Venezuela under a new regime), the current quotas will have to be significantly realigned in the medium term. Saudi Aramco has been instructed to raise its sustainable production capacity from to 12 to 13 Mb/d but this is proportionately less than the gains planned by the UAE and Iraq.

OPEC has at various times been challenging by members making a dash for increased market share, notably Venezuela in the late 1990s. At the moment, beyond some difficult discussions on new quotas as mentioned above, it is not obvious that any member has both the intent and ability to make sustained production gains on a level that would threaten the organisation.

However, if oil demand flattens and goes into decline because of the adoption of electric vehicles and other non-oil technologies, OPEC countries would face a difficult choice. They could continue restricting production to support prices, but this would result in oil demand's declining even faster, and they would lose some of the residual market to the US, Russia and other producers. Some, possibly a large proportion, of their large resources would never be produced.

OPEC+ faces a challenging future ahead, but will not collapse or disappear anytime soon

However, its role will need to change in a world of peak oil demand and climate targets. There will probably not be a radical change in membership, though some smaller producers may join or leave. Diverging interests and capabilities between its members will become increasingly apparent if and when peak oil demand is reached and climate policy begins seriously to affect the long-term future of oil. Before then, though, post-pandemic recovery and underinvestment elsewhere could still cause a temporary spike in prices, which may obscure the best strategy.

For now, OPEC has to make some tough choices about how quickly to bring back output, when and how to reallocate quotas, whether to pursue a strategy of higher market share and lower prices, and how to manage its relationship with Russia and the other OPEC+ adherents.

SCENARIOS TO WATCH

BRAZIL BECOMES 4TH LARGEST OIL PRODUCER IN THE WORLD

Timing: 2026

Event: Brazil reaches an oil production level of 5.2 Mb/d in 2026, an 86% increase compared to current production levels of >2.8 Mb/d, thanks to Petrobras' efforts to create a conducive investment climate encouraging discoveries and new developments. Growth is led by offshore 'pre salt' field deposits (Tupi, Búzios, and Sapinhoá, all located in the Santos Basin, in addition to other deposits in the Campos Basin) under operatorship of multinational oil companies, encouraging the set up of new refineries. This takes Brazil comfortably past OPEC's third-largest oil producer, the UAE, and makes it the world's fourth largest oil producer after the US, Russia, and Saudi Arabia.

Impact: The growing supply of Brazil's sweet medium crude produced from its pre-salt fields lends well to IMO 2020 sulphur regulations, especially in China and other Asian countries, which could potentially dent demand for Arab light varieties, which are particularly sour with a high sulphur content, making them more costly to process into VLSFO. This increases the threat Brazil's growing production poses to OPEC, who will feel compelled to ditch any plans of carrying forward post-2022 production curbs in an attempt to not lose market share. Return of production from Iran, more stable output from Libya, and new production from Suriname and Guyana softens oil prices significantly to ~US$ 30/b. OPEC members will increase their output, with the GCC trio of Saudi Arabia, Kuwait, and the UAE able to put another 5 Mb/d on the market by 2026/27, leading to another oil price crash.

Mitigation: The GCC-trio will lose in this scenario from lower oil prices, but can partly make up for the loss on higher output. Russia will be quick to exit the cartel, followed by routine transgressors Iraq and Nigeria. De facto leader Saudi Arabia will try to reconvene the alliance with a new agreement in quotas to restrain too-rapid production growth, as was witnessed in March 2020. It will try to encourage Brazil to join the alliance, more likely if a left-wing president follows the current right-wing Jair Bolsonaro. Simultaneously, Aramco and ADNOC benefit from the revival in Brazil's oil industry, deciding to invest there when the situation permits. For example, UAE's Mubadala has already completed negotiations to buy Brazil's Refinaria Landulpho Alves in Bahia.

Probability: 25%

Alternate Future:

35%: Brazilian production falls well short of the 5.2 Mb/d level, peaking at ~3.5 Mb/d by 2026, because of underinvestment and unfriendly and unstable terms for investors.

25%: Iran fails to increase oil production meaningfully once Biden's term ends in 2024 and a Republican US President re-imposes Trump's sanctions. Infighting in Libya and Venezuela keeps production mute from these countries, creating a tightness in the market which Brazil can address with higher output.

15%: Brazil agrees to join the OPEC alliance as a supply glut due to return of Iranian and Libyan production harms E&P plans for its pre-salt deposits, due to the very low oil prices.

A GAS HUB IS MOBILISED IN IRAQI KURDISTAN

Timing: 2035

Event: The Kurdistan region has a natural gas resource base, including both associated and non-associated gas resources, to produce nearly 35 BCM of gas by 2035, about 7 times higher than current production levels. Major new production is realised from the Miran West, Bina Bawi, Chemchemal, and Topkhana natural gas fields, in addition to expansion of production at the currently operational Khor Mor and Khurmala fields. Growth is led by the rise in demand for natural gas in Federal Iraq, and the commissioning of the KRI-Turkey natural gas pipeline, already fully constructed on the Turkish side. The KRG develops investor friendly terms and sets up a natural gas regulatory body to oversee contracts and offer attractive terms, encouraging entry of major international actors into its upstream E&P business. Some political motives, such as US support for reducing Iranian natural gas into Iraq, lends well to developing the natural gas market in Kurdistan.

Opportunity: Kurdistan manages to amass a much larger export market, despite a smaller market in Turkey, who continues reducing reliance on gas by transitioning to renewables and soft economic indicators keeping demand flattish. This enables Kurdistan to sell additional gas (over what it supplies to Federal Iraq) to south-east Europe via Turkey, and also supply natural gas to Jordan through the yet-to-be-commissioned Iraq-Jordan natural gas pipeline. It also manages to sell some of its gas via Basrah to Kuwait, by reviving the defunct Basrah-Kuwait pipeline. In this way, Kurdistan becomes a key supplier to Federal Iraq, Turkey, Greece, Italy, Kuwait, and Jordan, establishing it as a natural gas hub.

Probability: **40%**

Alternate Future:

35%: Current political problems (such as disagreements with the central government over territory and budget transfers), security problems (particularly in the south of Kurdistan, where most of the natural gas resources are concentrated), commercial disputes, uncertainty in global oil and natural gas prices and an ongoing financial deficit will delay the development of Kurdistan's natural gas resources, delaying a marketable surplus.

25%: Kurdistan develops a marketable natural gas surplus but is unable to sell to external markets (except Federal Iraq) due to several competitors in the Turkish market, lack of a meaningful gas pricing mechanism for its gas, and the difficulty of accessing the European markets who are now already taking in gas from the TAP pipeline.

TOP ENERGY DEALS IN THE NEWS

Project	Summary	Client	Contractor	Implications
Gas Field Contract	Iran's Petropars Ltd. has been awarded a USD 1.78B contract by the National Iranian Oil Co. to develop the Farzad-B gas field.	Petropars Ltd.	National Iranian Oil Co.	The giant Farzad-B gas field, which was previously intended to be tapped by an Indian consortium led by ONGC Videsh Ltd., is estimated to hold reserves of 500 billion cubic meters. Petropars is set to produce 28 million cubic meters of gas per day within five years. This will help relieve gas shortages in Iran and compensate for falling pressure in South Pars. But the contract may be delayed due

				to lack of finance and sanctions-related challenges in obtaining equipment.
Gas Storage Heavy Lifting	Mammoet has won a subcontract for heavy lifting work at Saudi Aramco's Hawiyah Unayzah Gas Reservoir Storage (HUGRS).	Mammoet	Samsung Engineering	Samsung Engineering had previously won the uSD 1.8B contract in January 2020. Mammoet is set to transport more than 60 components from the King Fahad Industrial Port, in Jubail, to the HUGRS site, 260km east of Riyadh. The facility is set to be complete in 2023, and will inject 1.5 billion cubic feet per day of gas. It will enable Saudi Arabia to replace oil with gas in power generation by providing swing capacity for the high-demand summer months.
ADNOC Smart Wells at the Bu Hasa field	ADNOC awarded contracts worth US$ 318 M to connect smart wells at the Bu Hasa field. The contracts were awarded in two packages by ADNOC Onshore, subsidiary of ADNOC. Package 1, valued up to US$ 158.6 M, is awarded to China Petroleum Pipeline Engineering, while Package 2, valued at US$ 159.1 M, has been awarded to Abu Dhabi's Robt Stone (ME), with each package including a three-year duration and a 2-year extension period.	ADNOC	China Petroleum Pipeline Engineering & Robt Stone	The contractors will install up to 260 conventional and unconventional smart wells, enabling remote operations. They will also procure on an upfront basis all equipment, signifying that the installed tie-ins will not be the same traditional tie-ins used by ADNOC Onshore previously, ensuring quicker construction and hand-over. The EPC award will ensure over 50% of the combined value of both awards to flow back into the country's economy under ADNOC's In-Country Value (ICV) programme. Back in 2018, the expansion of Bu Hasa from 550 kb/d to 650 kb/d was achieved under a US$ 1.4 B contract awarded to Spain's Tecnicas Reunidas, which was a major contributor to ADNOC's successful capacity expansion to more than 4 Mb/d. The company is currently targeting 5 Mb/d by 2030.
ADNOC's Belbazem Offshore Block	ADNOC announced the award of a US$ 744 M contract to the National Petroleum Construction Co. (NPCC). for the development of the Belbazem offshore block, 120 kms northwest Abu Dhabi, consisting of three marginal offshore fields: Belbazem, Umm Al Salsal and Umm Al Dholou.	ADNOC	National petroleum Construction Company (NPCC)	The project will contribute about 45 kb/d to the emirate's production capacity target 5 Mb/d by 2030, with first oil expected by 2023. Al Yasat Petroleum Operations Co., ADNOC;s subsidiary and JV with China National Petroleum Corp. awarded the EPC contract to NPCC. ADNOC and CNPC hold 60% and 40% stakes in Al Yasat, respectively, strengthening the solid bilateral relations and energy partnerships between the UAE and China. The EPC contract will see 65% of the award value flow back to the country's economy under the ICV program.
ADNOC Ruwais Blue Ammonia	ADNOC announced a world-scale blue ammonia production facility in Ruwais, Abu Dhabi.	ADNOC	Ruwais	The facility will be developed at the new Ta'ziz industrial ecosystem and chemical hub in Ruwais. The project adds to ADNOC's series of agreements to explore hydrogen production and exports opportunities in key demand centers including the Ministry of Economy, Trade and industry of Japan and Korea's GS Energy. The company is already a major producer of hydrogen and ammonia, producing over 300 ktpa at the Ruwais Industrial Complex.

MACRO DASHBOARD

MENA OIL EXPORTERS				
	REAL GDP GROWTH (%)		FISCAL BALANCE (% OF GDP)	
	2020f	2021f	2020f	2021f
Algeria	-6.0	2.9	-12.7	-18.4
Bahrain	-5.4	3.3	-18.3	-9.1
Iran	1.5	2.5	-8.4	-6.8
Iraq	-10.9	1.1	-19.8	-9.2
KSA	-4.1	2.9	-11.1	-3.8
Kuwait	-8.1	0.7	-9.4	-6.8
Libya	-59.7	131.0	-103.0	0.3
Oman	-6.4	1.8	-17.3	-4.4
Qatar	-2.6	2.4	1.3	1.4
UAE	-6.6	1.3	-7.4	-1.3
Yemen	-5.0	0.5	-9.6	-6.1

* Subject to downward revision

MENA OIL IMPORTERS				
	REAL GDP GROWTH (%)		FISCAL BALANCE (% OF GDP)	
	2020f	2021f	2020f	2021f
Djibouti	-1.0	5.0	-1.3	-2.0
Egypt	3.6	2.5	-7.0	-7.5
Jordan	-2.0	2.0	-8.9	-7.7
Lebanon	-25.0	...	-9.9	...
Mauritania	-2.2	3.1	2.1	-2.5
Morocco	-7.0	4.5	-7.6	-6.4
Palestine	-11.0	5.7	-10.7	-10.5
Somalia	-1.5	2.9	...	...
Sudan	-3.6	0.4	-5.9	-3.1
Syria	...	...	...	...
Tunisia	-8.8	3.8	-10.6	-9.3

	Economic updates	Comments
Inflation	• Egypt's annual core inflation declined to 3.3% YoY in April from 3.7% YoY in March. • Headline Consumer Price Index (CPI) slowed to 4.1% YoY in April, from 4.5% in the previous month.	• The decrease in inflation is on the back of the lower inflation of food items. Food inflation declined back to negative territory and registered -0.3% YoY in April from 1% in March. This is despite a MoM rise in food prices by 2.3%. The increase in food prices is mainly due to the spike in demand during Ramadan. • Inflation is still below the Central Bank of Egypt's (CBE) target range of 7% (±2%). We expect weak underlying inflation pressures will persist, with inflation to average at 4.4% YoY this year. • The CBE has held interest rates steady for a fourth consecutive time. The overnight lending rate is at 9.25% and the overnight deposit rate is at 8.25%. • But given the benign inflation outlook, there could be a case for rate cuts in the near term.
	• Saudi Arabia's CPI picked up to 5.3% YoY in April, from 4.9% in March, after softening for three consecutive months.	• The increase in inflation was nearly fully driven by an acceleration of transport prices, which holds 13% weight in the basket to 14.9% YoY in April compared with 10.5% in the previous month. • The inflation pickup is an indication of improving economic activity.

		• The effect of the 15% VAT increase at the beginning of July 2020 is starting to ease, but average inflation could remain elevated for Q2 2021, at a similar rate as Q1, at 5.3%.
PMI	• Saudi Arabia's PMI grew to 55.2 in April from 53.3 in March, hitting a three-month high.	• April's stronger expansion reflected faster growth in new orders, which was underscored by an increase in export sales due to improving demand conditions in Asia. • Employment levels have also increased for the first time in five months, and at the fastest pace since 2019. Output increased at the fastest rate as well since January 2021. • A continued pick-up in activity is expected in the coming months as the vaccine rollout gains momentum. • The recovery, however, will remain slower than previous ones. It could take until H2 of 2022 for the lost private sector output of 2020 to be fully recovered.
	• The UAE's PMI slightly edged up to 52.7 in April from 52.6 in March.	• Despite the tepid pick up, this was the UAE's highest level since July 2019 and the fifth consecutive month it has held above the 50 level. • The expansion in April was supported by a strong rise in new business volumes and growth in output that were linked to the ongoing post-COVID economic recovery. • Employment, however, fell for the third month in a row, contributing to a renewed increase in backlogs of work. • The largest driver to the PMI is the New Orders Index, which rose to a 20-month high in April, indicating a sharp increase in new business inflows.

Policy and Geopolitics	• Saudi Arabia’s budget shortfall narrowed in Q1 2021 mainly on the back of higher revenues and a reduction in CAPEX. Oil revenues in the coming months are expected to support a further deficit reduction. This could allow Riyadh to start loosening its tight fiscal policy stance as the rebound continues to gather momentum.	- The latest data released from the General Authority for Statistics (GaStat) shows that GDP contracted by a tepid 0.1% QoQ in Q1 2021. On a YoY basis, the economy fell by 3.3%. This was, however, the softest contraction since Q2 2020. ○ The continued decline in GDP was a result of the sharp 12% drop in oil GDP in Q1. ○ Saudi Arabia’s voluntary cuts of 1M bpd which started in February have also weighed heavily on oil GDP on a QoQ basis. ○ Oil GDP contracted by 5.1% in Q1, after having entered a positive growth territory of 0.4% in Q4 for the first time in 2020. - This underscores that the impact of the additional voluntary cuts went beyond simply offsetting the rebound in non-oil GDP. However, with oil output cuts having eased and the domestic vaccination programme gathering pace, the economic drive should get back on track. - On the back of a rise in non-oil revenue in Q1 by 39% YoY to around USD 24B and a reduction in capital spending by 47% YoY to around USD 4B, the budget deficit narrowed by around USD 1.97B (-1% of GDP vs -5% in Q1 2020). This is broadly in line with 2021 budget expectations. - The growth in non-oil revenue was driven by the 75% YoY increase in excise tax and VAT, which totalled around USD 14.3B. - The narrowing of the deficit indicates that Saudi Arabia’s consolidation drive is starting to reap rewards. Fiscal strings, however, could remain tight at least until the end of this quarter.
	• Tunisia is in talks with the IMF over a new financing package as part of governmental plans to phase out subsidies and to trim the public wage bill. While this is certainly a step in the right direction, securing funding quickly could prove difficult, leaving the country having to restructure its debt.	- The scale of Tunisia’s economic rebound will depend on the pace of the vaccine rollout and a boost in the recovery of investor confidence. - There is also an urgent need to finance the country’s fiscal and current account gaps, estimated to be at 9.3% and 9.5% of GDP, respectively.

		- The current account deficit is forecast to widen this year from 6.8% of GDP in 2020 as imports recover and oil prices increase. - Recovery in trade flows, manufactured exports and tourism (which is expected to pick up gradually) could further support a gradual deficit decline to 8.9% of GDP by 2023. - The risks remain high. The absence of effective reform implementation amid depleting fiscal buffers compounds a sluggish exports recovery following the heavy toll of the pandemic on firm capacity. - Nonetheless, the tide could be turning (slowly). It expects to agree on a new USD 4B financing programme with the IMF within three months. Yet this all remains heavily contingent on the pace of governmental reforms. - Among the key proposals is the reduction of the public sector wage bill to 15% of GDP this year, from 17.4% in 2020. - This comes alongside a reduction in the number of employees in the public sector and the gradual removal of subsidies on food, electricity and natural gas by 2024. These should be replaced with direct cash transfers for society's most vulnerable individuals. - We expect it will be challenging to put these reforms into effect quickly; the cuts will face fierce opposition from powerful labour unions. - Additionally, downsizing the civil service payroll risks worsening the unemployment rate (which stands at 17%). This does not account for workers in the informal sector who are without social protection.

	• The ongoing Joint Comprehensive Plan of Action (JCPOA) discussions appear to be bearing some fruit. Even after an International Atomic Energy Agency (IAEA) agreement expired last week, an extension was granted to the agency's inspectors.	- Although there were hopes that the contours of a potential deal would be clearer by now, an extension giving inspectors access to Iran's nuclear sites to keep up monitoring activity has been put into effect. o The IAEA agreement now has an expiration date of 24 June, coinciding with the arrival of a new Iranian administration. o This development means IAEA cameras will continue to record activity at Iran's nuclear sites as part of the monitoring and verification agreements. o Iran did not agree to the extension immediately. This reluctance prompted concern regarding the survival of the JCPOA talks. o Nonetheless, Iran eventually agreed to the IAEA terms unconditionally. - The fourth round of nuclear negotiations ended on 19 May after ten days of discussions. The fifth round will begin this week. - While progress has been slow (but tangible), the rhetoric surrounding negotiations aims to produce a 'longer and stronger' deal. We are likely to see a sequenced return by both parties to a new deal in the coming weeks; both sides are desperate to sign something before a new administration comes to power in Iran.

OUTLOOK FOR 2020

Rows with a red border indicate updates to previous developments, or new developments, relevant to the sector

ALGERIA	
Oil	• After regaining his post in February after 8 months away, Energy Minister Mohamed Arkab reported that 96% of the implementing texts of the new hydrocarbons law have now been published, with only three other texts still under preparation. 70 texts in total were required for the law to be fully implemented, which took longer than initially expected.

	• Sonatrach has entered into an MoU agreement with Shell International Trading and Shipping, the trading and marketing arm of Royal Dutch Shell, on exploring prospective trading opportunities. The Shell unit has a major fleet for transporting energy products. The two companies also agreed to consider carbon reduction and management strategies. Algeria's upstream sector seems to attract several IOCs' interest, with Sonatrach signing 9 agreements since passing the new oil law end-2019. These include agreements with US major Chevron, MoUs with Turkey's TPAO, Russia's Zarubezhneft, US's ExxonMobil, Russia's Lukoil, Italy's Eni, Spain's Cepsa, Austria's OMV and Germany's Wintershall Dea. • One of the latest is a series of agreements between Sonatrach and Eni, covering exploration and production, research and development, decarbonization and training fields. • ENI is in talks to take over BP's oil and gas assets in Algeria, possibly for cash or an asset swap, or could form a joint venture as they recently did in Angola. BP holds 45.89% in the In Amenas gas field and 33% in In Salah. ENI is already a major producer in the country with 81 kboe/d including 152.5 Mcf/d of gas. • Renewed IOC interest in Algeria's oil and gas industry could offset production decline, but due to the recent IOC spending cuts, it remains unclear whether the country can bring about the interest it needs. Potential IOCs might also be scared off by Sonatrach's announcement to terminate the contractual interest held by UK's Sunny Hill Energy in Ain Tsila, a long-delayed gas project.
Gas	• Sonatrach has seized Sunny Hill Energy's 38.25% in the field, located south-east Algeria. The NOC terminated the contract with Sunny Hill's subsidiary Petroceltic Ain Tsila, without offering any compensation saying that the IOC failed to meet the contractual obligations. Subsequently, Sunny Hill forwarded a US$ 1 B claim in compensation from Sonatrach, as it invested "hundreds of millions of dollars" in the field. Such moves might reverse the country's intention to attract foreign investors into its ailing energy sector. • UK-services firm Petrofac is demanding US$ 533 M compensation from BP, Equinor and Algerian state-firm Sonatrach owing to a security-related disruption at the 9 BCM/y In Salah gas development back in 2013-14 • Petrofac initiated the arbitration on August 07 as its finances continue to be stretched after facing corruption investigations in the UAE, Saudi Arabia and Iraq, its former core markets • The arbitration runs the risk of souring relations with Sonatrach, a significant blow to Algeria, who is relying on Petrofac for two other EPC contracts worth a combined US$ 1.5 B: the US$ 500 M 4.8 BCM/y Tinhert Phase-1 expansion at Sonatrach's aging Ohanet field, and the US$ 1 B, 4.8 BCM/y Ain Tsila project
Alternative Energy	• Among the agreements Sonatrach had with Eni was an MoU to develop a partnership in renewable energy, biofuels and hydrogen. Algeria's solar and wind resources and proximity to European hydrogen-hungry countries make it a potential H_2 leading exporter. • Algeria has announced plans for a giant, 4 GW solar project costing US$ 3.2-3.6 B, which will be developed through five annual tenders up to 2024, the Tafouk 1 solar field; current total renewables capacity is just 673 MW • In light of these plans, Systeme Panneaux Sandwichs (SPS), Algerian solar panel maker, formed a partnership with UAE mounting system provider Qi-energy to jointly manufacture mounting structures for PV systems; the JV's new product will be offered domestically and on the African market
Geopolitics	• The Government of Algeria in a cabinet reshuffle has appointed Mohamed Arkab as the new energy minister of Algeria. He replaces Abdelmajid Attar. The moves come as President Tebboune is trying to defuse public calls for a mass protest. • Amidst the public discontent over the pace of economic and political reforms, the government is on track to implement a new hydrocarbon law in Q2, 2021. The law was announced in 2019 and outlines fiscal terms for investors in an attempt to revive exploration and production developments and reverse years of declining oil & gas output.

EGYPT	
Oil	• Two oil companies led by US independent Apache are planning to invest more than US$ 1 B in the Western Desert's oil exploration. About US$ 830 M is expected to be invested by Khalda Petroleum Co., a joint venture with the Egyptian Ministry of Petroleum, as part of its search for hydrocarbons in its concession areas in the Western Desert during the 2021-2022 fiscal year, which starts July. • Khalda plans to drill 87 wells, 35 for exploration and 52 for development/production, enabling output to increase to 130 kb/d of crude and condensate along with 630 MMscf/d of natural gas.

	• Meanwhile, Qarun Petroleum is planning to invest US$ 252 M in its concession areas in the Western Desert. This includes drilling 24 development wells and five exploration wells, along with implementation of a plan to maintain and repair wells, aiming to achieve an annual target of 9 Mbbl of crude production. • From July 2014 to June 2020, Egypt signed 84 petroleum agreements with international companies for oil and gas exploration, with investment reaching to at least US$ 14.8 B, along with US$ 1.1 B worth of grants to drill 351 wells. • The country's energy sector should, however, consider raising operations efficiency, optimizing the use of infrastructure and implement cost reduction programs in times of crisis.
Gas	• Dana Gas has abandoned a US$ 236 M oil and gas assets sales deal to IPR Wastani Petroleum after conditions for the transaction could not be met. This has resulted in request for arbitration against Dana Gas by IPR Wastani, who is disputing Dana Gas' right to terminate the sale and purchase agreement. Dana Gas remains "very confident" of its legal position and right to cancel the agreement, and has said it will defend the proceedings. Dana Gas has been looking to sell most of its Egypt assets since 2019 in a bid to focus on its operations in Kurdistan, reduce debts, and strengthen its balance sheet during a financially vulnerable period. • BP announced its first gas from the offshore Raven field in the Mediterranean Sea. The project represents the 3rd stage of the US$ 9 B West Nile Delta (WND) development, including 5 gas fields across the North Alexandria and West Mediterranean Deepwater offshore blocks. • The project follows Taurus/Libra and Giza/Fayoum projects that commenced operations in 2017 and 2019, respectively. • The field is currently producing 600 MMscf/d and is expected to reach 900 MMscf/d and 30 kb/d of condensate. The WND development includes a total 25 wells producing gas to the onshore facility using three long-distance subsea tiebacks. • Gas produced is sent to a new onshore processing plant next to the existing West Nile Delta onshore processing facility. This takes the onshore facilities' total gas processing capacity up to 1.4 Bcf/d, all of which is supplied to the national grid. The project takes Egypt a step closer to reaching its self-sufficiency in locally produced natural gas, which it targeted since September 2018. • The Ministry of Petroleum and Mineral Resources has announced that Egypt's natural gas production is expected to increase to 7.2 BCF/d between 2021 – 2022 – as the ministry aims to complete 10 natural gas wells in the Delta and the Mediterranean regions, as well as preparing for drilling 9 other wells. • The Ministry of Petroleum and Mineral Resources has also announced a set of dispute-settling agreements between the Ministry and the Egyptian National Gas Holding Company (EGAS), Union Fenosa Gas and the Spanish Egyptian Gas Company (SEGAS), which is expected to resume operations at the Damietta LNG Liquification Plant. ENI will take a 50% share, which may facilitate gas imports from its interests in Cyprus.
Alternative Energy	• The European Bank for Reconstruction and Development (EBRD, along with other partners, is offering a US$ 114 M financing package for the Kom Ombo 200 MW solar PV plant. EBRD is extending an up to US$ 36 M loan to ACWA Power, the plant's developer. Meanwhile, OPEC Fund for International Development (OPEC Fund) is disbursing US$ 18 M and the African Development Bank (AfDB) and the Green Climate Fund (GCF) are providing US$ 17.8 M and US$ 23.8 M grants. The Arab Bank is going to lend the remaining US$ 18 M. • This is a new financing agreement as EBRD and APICORP have already agreed to issue US$ 14 M and US$ 35.5 M equity bridge loans. • Kom Ombo is set to start commercial operations by Q3 2022, with a 25-year power purchase agreement, a network connection contract and usufruct agreement already in place. • Saudi Arabia-based, power & utilities infrastructure developer, ACWA Power has entered a 25-year PPA and grid connection agreement for 200 MW Kom Ombo Solar Power Project. The construction for the project is expected to begin in Q3, 2021.
Geopolitics	• Egypt's Foreign Minister, Sameh Shoukry, has said Egypt will continue to exert all possible efforts alongside the Lebanese political parties to overcome the political crisis facing the formation of the new government in Lebanon. The announcement comes at a time when ongoing political deadlocks threatens the stability of Lebanon. • In March, 2021, Egypt's foreign exchange reserves have increased by US$ 136M from US$ 40bn at the end of February, 2021 at the back of a contracting current account deficit.

KUWAIT

Oil	• Kuwait's Oil Minister, Mohammad Abdulatif Al-Fares, has expressed cautious optimism at the recent joint meeting of OPEC and other major crude oil producers that the global crude oil demand will improve as COVID-19 vaccination programs gather pace and industrial output recovers. He said the supply-demand balance has largely improved as a result of the crude oil production cuts implemented by cartel. • The NOC, Kuwait Petroleum Corporation, is looking to raise US$ 20bn through a debt issuance over the next 5 year to make up for an expected shortfall in capital raising. The capital raising programme highlights the impact of the COVID-19 pandemic on the oil & gas sector in the country and the capital expenditure requirement to maintain the country's crude oil production levels.
Gas	• A key hydrocracker unit has been commissioned at the Mina Abdullah Refinery by Petrofac Clean Fuels for Kuwait National Petroleum Co. (KNPC), making it the second largest hydrocracker unit in the country. The unit is licensed with a feed processing capacity of 50,000 barrels per stream day and will produce lighter products through hydrocracking using catalyst and hydrogen. • This unit will unlock Kuwait's new generation of ultra-low sulphur fuels, including Euro 5, kerosene and jet fuel, Naphtha and LPG. • Kuwait Foreign Petroleum Exploration Company (KUFPEC) has revealed details of its natural gas discovery in Malaysia. The company's wholly owned subsidiary, KUFPEC Malaysia, was successful at the Lang Lebah-2 appraisal well in the SK-410B Block, which is located ~90 km offshore from Sarawak, Malaysia. The appraisal drilling in Lang Lebah-2 was completed at a total depth of 4,320 metres, with over 600 metres of proven net gas pay. KUFPEC Malaysia holds a 42.5% working interest under the PSC, with Petronas Carigali and PTTEP HK Offshore holding 15% and 42.5% working interests, respectively.
Alternative Energy	• After abandoning plans to build the 1.5 GW al-Dabdaba solar complex due to the CoVid-19 pandemic's economic impact, the Kuwait Authority for Partnership Projects (KAPP) invited consultants to submit bids. The cancellation was said to allow Kuwait Petroleum to better focus on its priorities and keep its position in the international oil markets, but it marked a setback for Kuwait's renewable plans and its attempts to reduce domestic oil consumption. Consultants are invited to submit proposals by 27 June. The project will be procured as an independent power producer (IPP) project. • The project was undertaken by Kuwait National Petroleum Co. (KNPC) in 2018 and was planned to become operational in February 2021 in the Al-Shagaya Renewable Energy Park bordered by Saudi Arabia. It was expected to cover 15% of the electricity needs of the oil sector
Geopolitics	• Kuwait's Emir Sheikh Nawaf Al-Ahmad Al-Jaber Al-Sabah on 7th April, 2021 met with the Prime Minister of Libya, Abdulhamid Dbeibeh and his accompanying delegation at Bayan Palace in Kuwait. The Prime Minister's visit comes at a time to unify the GCC's position on Libya, and to strengthen the relationship with all GCC member countries on the basis of mutual respect.

IRAN	
Oil	• India's crude oil refiners are gearing up in advance for a possible removal of sanctions and penalties, as they look to enter into contracts for crude oil supply from Iran. Preparations include, drafting of commercial terms and putting in place mechanisms that assess crude oil quality. India has been vocal in its support for crude oil purchases from Iran as it reconsiders the price of supplies from Saudi Arabia. • The Tehran Oil Refinery was hit by a fire on 2nd June, which reportedly started in an LPG pipeline, continuing a recent trend of accidents, with suspicion some might be related to sabotage.
Gas	• The National Iranian Oil Co. has awarded Iran's Petropars Ltd a US$ 1.78 B contract to develop the giant Farzad-B gas field which was initially intended to be tapped by a consortium of Indian companies. • The company will produce 28 mcm/d of gas from the offshore field in 5 years. Farzad-B is estimated to contain around 500 Bcm of reserves. The field is the latest major energy project awarded to Petropars following IOCs' exodus. • The project aims to increase production and eventually exports as the country inches closer to an agreement with the US over a sanctions relief as it works its way into the revival of the 2015 nuclear deal. • Iranian energy minister Reza Ardakanian warned that the country would become a natural gas importer if the current consumption trends continue. Recently, Iran has been suffering from widespread power outages. The shortage in natural gas supplies could eventually hinder the country's petrochemical production.

	• Iran has launched three major gas projects worth over US$ 5.5 B to develop the Phase 1 of Bushehr Petrochemical plant, national gas network lines and the West Karun Oil Cluster power plant • Phase 1 of Bushehr Petrochemical Plant aims to produced 4 Mtpa, for which the plant will receive 9.6 MCM/day of sour gas from South Pars Complex fourth refinery • An explosion occurred at an oxygen transmission pipeline for the Mobin and Damavand petrochemical complexes in the Pars Special Energy Economic Zone, causing the death of one person and injury of two others. The explosion has now been brought under control, while its causes are being investigated. • Meanwhile, the 1,850 km long national gas network lines project aims to accelerate the gas transfer capacity by 110 MCM/d, which enables the National Iranian Gas Co. to ensure continuous supply of gas for exports to the western and north-western regions; the 492 MW West Karun power plant seeks to provide electricity for the joint fields and oil facilities in the region
Alternative Energy	• Six new solar plants will come online in Fars province in southern Iran, raising overall RE capacity in Fars to 58.6 MW. Iran's solar plants continue to be small compared to its Gulf neighbours', due to lack of access to finance for the mostly private developers. • Permits have been issued to set up 17 more solar plants with capacities ranging from 1-25 MW in the province
Geopolitics	• Iran and the United States have begun indirect talks in Vienna on 6th April, 2021 that are aimed at bringing both countries back into full compliance with the JCOPA (nuclear deal), which the United Stated abandoned 3 years ago. As result of the abandonment, Iran has steadily increased its limits on its nuclear programme in response to the US's withdrawal from the accord in 2018 and its reimposition of sanctions that have crippled Iran's economy. Both countries have described the indirect talks as a "useful step" and "constructive". However, US President, Joe Biden has ruled out any "unilateral gestures" as the US explores options on how it might resume its own compliance with the deal. • Iran and China have entered in a 25-year trade and security cooperation pact, which could lead to increased crude oil supplies from Iran to China. The exact details of the agreement have not been released but reports suggest that in exchange for greater access to Iranian crude oil supplies, China has pledged assistance and investment in Iran's energy sector, which includes the hydrocarbon, renewable energy, and the nuclear sector. However the scope and significance of the deal has been exaggerated by some Iranian officials as well as outside analysts.

IRAQ	
Oil	• Iraq rejected ExxonMobil's request to sell its stake in the West Qurna-1 oilfield to two Chinese companies, raising concerns and uncertainty over a project accounting for about one-tenth of the country's oil output. Iraq requested the project be sold to the state-owned Basra Oil Company but did not agree with the US$ 350 M price. • On 7th April, 2021, protests at energy facilities in Dhi Qar province of Iraq shut down the Nassiriya refinery causing fuel shortages and other disruptions, leading to further political chaos and social instability in the region. The demonstrations have not caused any significant disruptions to crude oil production, but they do appear to be spreading through the region and increasingly threaten the energy sector. • SOMO has finalised a term contract to supply 750,000 tonnes / month of straight-run fuel oil (SRFO) from April to September, 2021. Chevron Corporation, Reliance Industries, and an unidentified Iraqi crude oil trader were awarded the 6-month SRFO supply contract with 50% of the monthly volume going to Chevron and 25% of the volume going to Reliance and the oil trader each. • The Iraqi cabinet at the end of March, 2021 has approved a deal to award US-based, Schlumberger a US$ 480M deal to drill 96 crude oil wells in south Iraq. • At the end of March, 2021, the Government of Iraq announced that it is discussing a "giant" agreement with Total to build large infrastructure installations, develop crude oil and natural gas fields in Iraq under a US$ 7bn deal. Oil Minister, Ihsan Abdul Jabbar, expects the contract to be finalized before July, 2021. Under the agreement, Total's initiatives will be based on installing water injection facilities, targeting the low-carbon industry, capturing all flared natural gas, and develop a 1GW of solar power project. A specialized team from the oil ministry is leading these discussions with Total.
Gas	• The Oil Ministry announced the completion of an 18", 22 km gas pipeline to Mosul's 750 MW Al Qayara power plant. The pipeline connects to the Baiji-Mosul gas pipeline which feeds power plants from Kirkuk. It was built

	and commissioned by the State Company for Oil Projects (SCOP) and Oil Pipelines Company (OPC) in three months • The new pipeline will supply 130 MMscf/d of gas to the power station from Kirkuk. However, if Iraq does not tackle its flaring issue, supplying Al Qayara with gas implies that less gas will go to other plants. • In an attempt to lower its dependence on Iranian gas imports, Iraq is moving ahead with plans to develop associated gas projects in the next two to three years • Currently the country is looking to develop 1.2 Bcf of associated gas projects; this includes 200 MMscf/d at Nasiriyah field, 300 MMscf/d at Halfaya, 400 MMscf/d at Ratawi and 300 MMscf/d from other fields • More recently, Iraq is seeking to spend US$ 15 B to boost its gas production as it works on reducing reliance on Iranian energy imports. Along with other partners, Iraq intends to use the investment to increase gas production to 4 Bcf/d, enough to produce as much as 16 GW of power. • Amongst the projects is a US$ 3 B development plan for Basra Gas Co., where Shell, Mitsubishi Corp. and Iraq's state-owned South Gas Co. are shareholders, holding 44%, 5% and 51% respectively. The plan is to increase its production to 1.4 Bcf/d from the current 1 Bcf/d by 2025. However Shell is looking at selling its stake in the venture. • Iraq is looking at an ultimate plan for Basrah Gas to reach 2.4 Bcf/d of production over an unspecified period of time. • Following years of contracting and security issues, Sinopec won a bid to develop the 4.5 Tcf Mansuriyah gas field. The deal seeks to provide the country with much-needed feedstock for its power plants, which could eventually reduce its dependence on Iranian gas imports. The field will produce 300 MMscf/d with a short-term target of 50 MMscf/d. While Sinopec will have a 49% stake, Midland Oil Company will remain the operator with a 51% stake. The contract is under the new model similar to the 5th Bid Round, with Sinopec receiving 23.88% of profits.
Alternative Energy	• Total is planning to develop a 1 GW solar power project in Iraq and has reached an agreement "in principle" for the large utility-scale solar power project as one of four projects covering gas and seawater reprocessing. Further details are not publicly given over the project; however an official proposal will be submitted to Iraq's Council of Ministers for approval. • Results are expected from the 755 MW solar PV tender kicked off in May 2019 • Oil minister Ihsan Abdul Jabbar has announced plans to build 10 GW of solar power by the end of 2030, but these remain unrealistic until the country reforms its finances and investment conditions for renewable energy.
Geopolitics	• Iraq has passed a US$ 89bn federal budget bill. The budget confronted issues of unemployment, currency devaluation and non-oil revenues and was passed as lawmakers prepare for upcoming general election in October. The approved budget shielded the dinar's devaluation and in order to settle the Erbil-Baghdad disagreement, the Kurdistan Region will receive its 13% share of the budget when it hands over the revenue of no less than 250,000 bbl/d at the price set by the State Organization for Marketing of Oil at US$ 45/bbl. • The US has granted Iraq a 120-day waiver to avoid penalties for buying electricity from Iran as the Biden administration takes a more lenient stance than the preceding administration.

IRAQI KURDISTAN	
Oil	• IOCs are disconcerted by the KRG's decision to change the schedule and terms for payments, without prior notice. The decision might affect production growth and investment, according to several IOCs' officials active in the region. • The letter sent by the KRG informs IOCs that they will be paid 60 working days after submission of invoices by each month-end, instead of 15 days. Companies were also informed that they would be paid for overdue invoices at a new reduced rate. Previously, the KRG promised it would dedicate 50% of all incremental revenues above US$ 50/b to make debt payments, which now was reduced to only 20%. • Gulf Keystone Petroleum is resuming crude oil output expansion plans at its Shaikan field and expects to reach gross production of 55,000 bbl/d by Q1, 2022. Expansion work was delayed last year – Gulf Keystone was unable to meet its crude oil production target of 55,000 bbl/d due to the pandemic and near lockdown in Kurdistan. • Gazprom Neft's Sarqala oil field has restarted production after a dispute within the Patriotic Union of Kurdistan party led to a temporary shutdown of its 30,000 bbl/d per day of production.

Gas	• Kalar is nearing completion, a power plant using associated gas as a feedstock from the Sarqala oilfield, marking the KRG's practical steps into reducing the environmental impact of gas flaring, while adding to power supply. • The 165 MW plant is built by UK's Aggreko in Garmian and connected to the power grid since May 1, with 90% of the plant constructed, expected to come online by end-May. • The project represents an opportunity to provide adequate feedstock as many power plants are operating below capacity, with some plants running on expensive and polluting liquid fuels instead of natural gas. • Dana Gas, part of the Pearl consortium, plans to secure US$ 250 M development loan from the US Development Finance Cooperation to build two gas processing facilities, each has a 250 MMscf/d capacity. This is likely to boost production at the Khor Mor field from the current 440 MMscf/d to 940 MMscf/d in Q1 2025. • The company operates 2 major natural gas fields in the region: Khor Mor and Chemchemal, owning 35% shares through Pearl Consortium since 2007; the firm has signed a 20-year GSA with the Kurdish government to enable production sales of an additional 250 MMscf/d by 2021
Alternative Energy	• Limited investment in renewables (priority would be given to thermal power stations), but some interest in small-scale solar (including a new EU-funded 2 MW solar plant in Duhok) and a private 100 MW plant in planning • Ministry of Electricity plans to build 25 MW of solar in each of the Sulaimani, Erbil and Duhok governorates, with tendering starting soon • Slow progress in construction and rehabilitation of new dams.
Geopolitics	• President of the Kurdish Regional Government (KRG), Nechirvan Barzani has announced on 31st March 2021 that the Kurdistan region is fully committed to the agreement, which concluded negotiations with the Federal Government of Iraq regarding the budget for 2021. The President's remarks came during a press conference held in Paris, France.

LEBANON	
Oil	• Tensions with Israel over both countries' maritime borders (which have gained importance after large and lucrative natural gas discoveries in the region) has resulted in US-mediated negotiations, even though a settlement to the dispute is likely a long way off, and should not impact current hydrocarbon efforts in the region • On October 29, mediators announced that Israeli-Lebanese maritime talks were productive. The Lebanese delegation raised issues related to areas outside the disputed waters, including the Karish and Tanin gas fields currently operated by Energean, which Israel rejected discussing in the second meeting. This was followed by a letter from Udi Adiri, Israel's Ministry of energy's director general to Energean clarifying "matters"
Gas	• Lebanon will continue using fuel oil power ships for electricity supplies till at least 2021/22 until the country's two planned LNG FSRUs are ready, probably a long wait given the country's financial crisis • The Ministry of Electricity wants to add a third temporary power ship (1.45 GW) to ease the power supply-demand gap (estimated to be 1 GW); this could delay LNG imports further
Alternative Energy	• Lebanon is planning up to 400 MW of wind farms and 300 MW of solar PV plants with electricity storage, announced by the Ministry of Electricity on September 13
Geopolitics	• On 8th April, 2021, the President of Lebanon, Michel Aoun, held a phone conversation with Syrian President, Bashar Al-Assad to discuss the demarcation of the Lebanon-Syria maritime borders. Lebanon seeks to end the maritime demarcation with Syria after the discovery of oil and gas resources in the Mediterranean region, where Syria has offered a 4-year contract to a Russian IOC, Tatneft, to conduct exploration in the disputed area known as Block No. 1. • Lebanon and Iraq plan to exchange about US$ 200M worth of heavy fuel for in-kind services. The deal has been in discussion for over the last three years and involves Lebanon buying 500,000 tonnes of heavy fuel from Iraq worth US$ 200M. The Lebanese government will deposit the money in a special account at Lebanon's central bank for Iraq to spend locally on services, such as healthcare.

LIBYA	
Oil	• Libya is studying projects for the construction of refineries across several regions in the country. The projects would be financed by local and international investments in the form of PPPs.

	• Libyan Minister of Economy and Trade, Mohamed Hwej, said that "the government, through its relevant ministries, will take all necessary legislative and executive measures to support these projects, provide facilities and technical support to local and foreign private companies, in cooperation with specialized national companies. • Tensions have increased between the Ministry of Oil and state-owned company, NOC, over delays to a proposed medical clinic for oil workers. The Ministry insists that it is only a temporary postponement, but the decision has faced heavy criticism, AGOCO, NOC subsidiary Sirte Oil, Libya's General Union of Oil and Gas Workers, and the energy committee of Libya's legislative body, the House of Representatives. The dispute represents the first point of tension for Libya's new Ministry of Oil since it was formed last month as part of the Government of National Unity.
Gas	• Libya-based Waha Oil Company is looking to restart the 2nd phase of its key El-Farag natural gas field development, which produces 15,000 bbl/d of condensate and 70 MMCF/d of natural gas. After the completion of the 2nd phase, the field will produce 180 MMCF/d of natural gas and 15,000 bbl/d of condensate. Waha Oil operates a set of crude oil fields in the Eastern Sirte Basin, which accounts for ~33% of crude oil production in Libya. The company is a subsidiary of state-owned NOC.
Alternative Energy	• Libya has inaugurated the construction of a 100 MWp solar PV power plant in Kufra by a Chinese company, southeast Libya; the plant should help secure electricity supply for the town's population, which is currently supplied by a 75 MW thermal power plant • The thermal plant has been out of service for several months because of a fuel supply issue caused by the country's instability.
Geopolitics	• The Prime Minister of Greece, Kyriakos Mitsotakis, along with the country's foreign minister, will be visiting Libya in early April, with the aim of restarting relations with the new government in Libya. As domestic efforts are underway to normalize domestic politics and restore international relations abroad, Greece supports the new Libyan government and looks forward to improving relations with its neighbour; it also wants to compete with Turkish influence.

OMAN	
Oil	• Oman-based, state-owned, integrated energy company, OQ, is exploring capital raising options, which includes a potential initial public offering. The Government of Oman has been speaking with potential advisers as it considers alternatives for OQ, which could also include selling a stake in one of its subsidiaries. OQ operates a portfolio of operations consisting of oil & gas exploration and production, refineries, a retail fuel network, and a large petrochemical business. • Oman Oil Marketing Company (OOMCO) is providing an opportunity to local start-ups and SMEs to sell their products at its retail fuel stations by offering retail space at Ahlain Stores, Car Care, and Café Amazon shops across the country, in an attempt to enrich local businesses and empower the local community.
Gas	• Omani Petroleum investment company OQ announced the successful commissioning of the OQ Liquified Petroleum Gas Plant, one of the country's vital extraction projects. Located in the Salalah Free Zone, the project has been constructed at a total investment of US$ 826 M, with a capacity of 283 mcf/d. • The facility includes "an extraction plant, a fractionation facility, storage tanks, shipping facilities and an interconnection pipeline system". • The project has been promoting ICV in the gas sector as it spent "US$ 260 M of ICV value, with over 150 SMEs, 33 sub-contractors and Omani registered vendors." • The commissioning of OQ LPG is expected to be completed by mid-May 2021. • Thai PTTEP has bought a 20% stake in Block 61 (Khazzan gas field) from BP, as part of the latter's fossil fuels asset divestment campaign as it focusses more on renewable energy. • Block 61 is BP's biggest asset in Oman with a capacity of 1.5 Bcf/d and more than 65 kb/d of condensate. The company expects the deal to close this year, after which it will stay the block's operator and largest shareholder with 40% ownership • BP started production from its Phase-2 1 Bcf/d Khazzan tight gas project (also known as Ghazeer) by end-2020, well ahead of the major's initial mid-2021 plan • The project will add 500 MMscf/d to total Khazzan output, bringing Oman's capacity close to 5 Bcf/d

Alternative Energy	• Oman plans to build one of the largest green hydrogen plants in the world, which will be powered by 25 GW of renewable energy and could cost over US$ 30 B. Oman's state-owned energy company OQ, Honk-Kong-based InterContinental Energy and Kuwait's EnerTech will be working together on the development of the H2 plant. • A final investment decision for the project is expected in 2026 or later. • India-based infrastructure developer ACME Solar Holdings has signed an MOU with the Oman Company for the Development of the Special Economic Zone at Duqm (Tatweer) to construct a green hydrogen and green ammonia production facility in Oman. The JV will invest US$ 2.5bn in the project with the goal of supplying green ammonia to Europe, America, and Asia. The large-scale facility will produce 2,200 metric tonnes per day of ammonia and will be located at the port of Duqm.
Geopolitics	• Oman implemented 5% VAT from 16th April, 2021 in a move aimed at easing the country's long-standing reliance on hydrocarbon sector and to fund its national budget. Oman followed the UAE, Saudi Arabia and Bahrain as the 4th GCC country to introduce VAT under the GCC VAT framework that was ratified in 2016. VAT will be levied at 0% for the upstream and midstream segments of the oil & gas sector.

QATAR	
Oil	• Qatar's North Oil Company (NOC) has issued the huge Gallaf offshore tenders for work on multiple packages involving further expansion of its Al Shaheen field, the country's largest offshore oilfield
Gas	• QP plans to issue the country's first ever dollar bonds, seeking between US$ 7-10 B of 5, 10 and 30-year notes, to fund the giant North Field gas expansion project. The company is inviting banks to submit their proposal for the planned debt sale, which comes as energy companies in the region seek different and innovative ways to raise cash following the double whammy of CoVid-19 and the oil price crash. • The Ukrainian Energy Ministry and Qatar Petroleum have signed an MOU on energy cooperation, through which the 2 countries intend to develop cooperation in natural gas exploration and production in Ukraine, as well as LNG exports from Qatar to Ukraine. The MOU will remain in force for 3 years. • Qatar Petroleum has entered into an agreement with Royal Dutch Shell on 2 offshore exploration blocks in Namibia. Under the terms of the agreement, Qatar Petroleum will hold a 45% participating interest in the PEL 39 exploration license in Block 2913A and Block 2914B, with Royal Dutch Shell holding a 45% operating interest and the National Petroleum Corporation of Namibia holding the remaining 10% interest. This continues QP's policy of expanding in international exploration with its experienced IOC partners, especially Total. • Qatar Petroleum will become the single owner of Qatargas 1 (QG1) from Q1, 2022 after deciding not to renew its JV agreements with Total, ExxonMobil, Marubeni, and Mitsui. QG1 has 3 processing trains, each with a production capacity of 3.3 MMTPA of LNG. The decision comes as Qatar Petroleum plans to increase its LNG production by 64% in 2024 via the North Field expansion project. • Italy-based, Saipem has been awarded a contract of ~US$ 1bn from Qatargas for offshore export pipelines and onshore related works on the North Field Production Sustainability Project. Under the EPC agreement, Saipem will be responsible for developing the 3 export trunklines starting from their respective offshore platforms to the Qatargas North and South Plants in Ras Laffan Industrial City.
Alternative Energy	• Qatar's 800 MW solar tender (Kharsaah) was awarded to a consortium of Total and Marubeni for US¢ 1.6/kWh. A further 800 MW solar plant is planned to help power the North Field Expansion LNG project, with Qatar Petroleum targeting 3000 MW by 2030.
Geopolitics	• With the campaign to normalise ties with Israel spreading across the Middle East, Qatar announced that it will not join Gulf Arab neighbours in establishing diplomatic relations with Israel until its conflict with the Palestinians is resolved

SAUDI ARABIA	
Oil	• Saudi Aramco has raised US$ 12.4bn from the sale of a minority stake in Saudi Aramco Oil Pipeline Ventures to a consortium of investors led by US-based EIG Global Energy Partners. Saudi Aramco will lease the usage rights of its pipelines to the new venture, which is valued at US$ 25.3bn and has rights to 25 years of tariff payments for oil transported through the kingdom's crude network. Saudi Aramco will continue to hold a 51%

	stake in the crude oil pipeline business while retaining full ownership and operational control of the network. Details on the other member of the consortium are unknown. • On 17th March, 2021, an oil refinery in Riyadh was attacked by drones, causing a fire according to the official Saudi Press Agency (SPA). No injuries were reported, and the crude oil supply and its derivatives were not affected. The attack comes at a time when Saudi Arabia thwarted a missile and drone attack on Ras Tanura earlier in the month. Ras Tanura is the world's biggest crude oil export terminal.
Gas	• Malaysian Sapura Energy has been awarded contract by Saudi Aramco involving projects in the Zuluf, Ribyan and Abu Safah oilfields offshore the Kingdom. • The scope of work entails the engineering, procurement, fabrication, transportation and installation and pre-commissioning of jackets for three new wellhead platforms at the three oilfields. The work completion is scheduled on Q1 2022. • The 2.5 Bcf/d Fadhili gas processing plant has begun partial operations, supplying power plants and desalination plants in Saudi Arabia with gas; Fadhili will help displace liquids from power plants and boost Riyadh's flexibility in managing its crude oil reserves
Alternative Energy	• The Kingdom has also awarded India's Larsen & Toubro construction group an EPC contract for a 1.5 GW solar project that signed a power off-take deal just recently. • Saudi Arabia signed PPAs of roughly 3 GW of solar PV projects. The capacity will come from 7 projects. The PV park, owned by a consortium led by ACWA Power, will be the country's first utility-scale renewable energy complex. • India-based, E&C conglomerate Larsen & Toubro has secured a turnkey EPC contract for the development of a 1.5 GW, Sudair Solar PV Power Project in Saudi Arabia. The contract was awarded by a consortium of ACWA Power and the Water and Electricity Holding Company. Saudi Arabia aims to generate 50% of its energy from renewable energy sources by 2030. • A consortium of investors and developers led by UAE-based, MASDAR EDF Renewables, and Nesma Company has announced they have reached financial close on a 300 MW Solar PV Power Project in Jeddah and has started construction. The consortium entered into a 25 year PPA agreement with Saudi Power Procurement Company, and under the terms of the PPA, the consortium will design, finance, build and operate the plant, which will be located at 3rd Jeddah Industrial City, which is 50 km south-east of Jeddah. The project will achieve commercial operations in 2022.
Geopolitics	• The Saudi Press Agency has announced that three soldiers who worked for the Saudi Ministry of Defence have been executed for committing crimes of high treason. Investigations revealed that the three ministry employees committed treason in cooperation with the enemy in a way that violates the Kingdom and its military interests. The ministry said the three men were convicted in court and a later royal order served as their death warrant. The swift conviction affirms Saudi Arabia's commitment to maintaining the Kingdom's law and order, and preserving its security and stability in the region.

SYRIA	
Oil	• Syria's parliament approved contracts for oil exploration with Russia's Mercury LLC and Velada LLC • The deals cover exploration and pro-duction in three blocks, including an oilfield in north-eastern Syria, scene of Turkey's recent offensive and also desired by Ankara, and a gas field north of the capital Damascus
Gas	• Palmyra gas fields under government control
Alternative Energy	• The Syrian Ministry of Electricity Transmission Establishment has issued two tenders for the construction of solar power plants with a combined generation capacity of 63 MW • The first tender is for a 40 MW solar plant near the Jandar natural gas power plant in the Homs province, and the second tender is for a 23 MW solar plant near Damascus. Bid deadline was set for March 20, but the continuing war, sanctions, and pandemic-induced economic recession have delayed these, and should also exclude serious bidders
Geopolitics	• Earlier in March, Russian forces took control over the Al-Thawra crude oil facility, located in southwest Raqqa governorate in northeastern Syria, after the Iran-aligned Liwa Fatemiyoun militia withdrew from the site. The Al Thawra crude oil facility produces around 2,000 bbl/d and used to produce around 6,000 bl/d before 2010. • On 4th April, 2021, the US military deployed reinforcements to Syria's crude oil-rich eastern province of Dayr Al-Zawr, despite the opposition of the Syrian government on the US's presence. A convoy of military vehicles,

	loaded with logistical equipment as well as ammunition, entered a base set up by American forces inside 'Kuniko' (Conoco) gas facility, located 20 km east of the provincial capital city of Dayr Al-Zawr.

UAE	
Oil	• ADNOC awarded contracts worth US$ 318 M to connect smart wells at the Bu Hasa field. The contractors will install up to 260 conventional and unconventional smart wells, enabling remote operations. Aimed at performance optimization, the contracts are expected to sustain production capacity of 650 kb/d at the Bu Hasa oilfield. • Abu Dhabi National Energy Company (TAQA) is considering potential sale options for its oil and gas assets as the state-owned company focuses more on electricity generation projects. Analysts estimate the company's oil & gas portfolio, spread across the UK, Netherlands, Canada and the Kurdistan Region of Iraq, is worth less than what it spent to build it. TAQA has a monopoly on power & water distribution in the Emirate of Abu Dhabi, UAE. • Abu Dhabi National Oil Company (ADNOC) is talking to financial institutions about the potential initial public offering on its crude oil drilling unit. ADNOC Drilling is the largest drilling company in the Middle East, and operates 63 onshore rigs, 20 offshore jack-up rigs, and 11 island rigs, and provides drilling rigs and associated services to companies' part of the ADNOC Group. • The Murban crude oil futures contract was launched at the end of March, 2021. The Murban futures are a key contract on the new ICE Futures Abu Dhabi (IFAD) exchange, which offers a potential rival benchmark for trading Middle East crude oil. The contract was priced at US$ 63.93 / bbl as of 01:00 GMT with 2,132 lots traded. Each lot consists of 1,000 bbl. IFAD is the Abu Dhabi, UAE-based exchange backed by the Intercontinental Exchange Incorporation, ADNOC, and partners including international major oil companies.
Gas	• ADNOC also announced the successful conclusion of a US$ 5.5 real estate investment deal with a consortium of investors, led by US Apollo Global Management; The latter will receive rental income from select ADNOC properties over the next 24 years, while ADNOC will receive US$ 2.7 B as an upfront payment
Alternative Energy	• Japan and the UAE have signed a hydrogen cooperation agreement, which aims to speed up bilateral support for collaboration in hydrogen production and development of a supply chain for exports to Japan. Japanese Vice Trade and Industry (Meti) Minister, Kiyoshi Ejima and the UAE's Energy Minister, Suhail al-Mazrouei signed the cooperation deal yesterday during a virtual meeting. The two ministers also agreed to work towards further deepening bilateral ties and materialising a joint hydrogen project. • Masdar has signed agreements to develop a utility-scale solar PV power project in Azerbaijan, which is expected to start commercial operations in Q1, 2023. The project will have an installed operational capacity of 230 MW and will be the country's first foreign investment-based independent solar project structured as a public-private partnership. The project is located 9 km, northwest of the Alat settlement in Azerbaijan. • A public-private partnership, consisting of Dubai Holding, ITOCHU Corporation, Hitachi Zosen Inova, BESIX Group and Tech Group is looking to develop a US$ 1bn waste-to-energy project, under a 35-year concession agreement with Dubai Municipality. The Dubai Centre for Waste Processing is in the Warsan area and will treat 5,666 tonnes of municipal solid waste produced by Dubai per day and 1.9 million tonnes will be converted into renewable energy. ~200 MW of electricity will be generated as clean energy.
Geopolitics	• The UAE has suspended a planned summit in the Emirate of Abu Dhabi with Israel and Arab states. The country is angered by outgoing Israeli Prime Minister Benjamin Netanyahu's invoking one of its rulers in his election campaign. Media reports pointed to the UAE's dissatisfaction with Netanyahu publicly claiming in a campaign rally that the Abu Dhabi Crown Prince, Mohammed bin Zayed has assured him of an immediate investment of up to US$ 10bn into the country, but investment has been low-profile since the recent fighting in Gaza.

YEMEN	
Oil	• A farm-out of a 75% stake in Yemen's Block S-1 might boost the country's output even as conflict continues. preparations are ongoing to restart production from the block's An Nagyah field by mid-year 2021. Initial production is expected starting 5 kb/d, which will be transported to Block 4 to be injected in a pipeline to the Bir Ali export terminal.

	• 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 • Oil pipeline, used by OMV among others, blown up in Shabwa province by unknown attackers
Gas	• State firm Safer restarted operations at Block 18 which is crucial to providing gas feedstock for Yemen LNG
Alternative Energy	• 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 at 400 MW, has been a success to mitigate wartime power shortages
Geopolitics	• A group of more than 70 congressional Democrats have sent US President Joe Biden a letter pushing him to encourage Saudi Arabia to end a blockade of Yemen that has led to food and fuel shortages in the country that have hampered the delivery of food aid. The letter comes after a CNN investigative report that revealed Saudi warships was preventing crude oil tankers from docking at the key rebel-controlled port of Hodeidah, which had gained approval from a UN clearance mechanism to berth. • Fighting has been raging in the mountains outside of Marib as Iranian-backed Houthi rebels, who hold Yemen's capital of Sanaa, attempt to seize the city, which is crucial to the country's energy supplies. The battle for Marib likely will determine the outline of the future political settlement in Yemen. On 10th April, 2021, the Houthis militias have made small territorial gains but do not yet threaten Marib city itself.

ABOUT US

Arabia Monitor is an independent research firm specialised in economic and market analysis, and strategy advisory on the Middle East and North African region, which it views as the new emerging market. Arabia Monitor's in-depth, locally informed analysis by Arabic, Persian and Chinese speakers has placed it consistently ahead of the curve in identifying new trends within and around the region, and understanding its geopolitics.

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