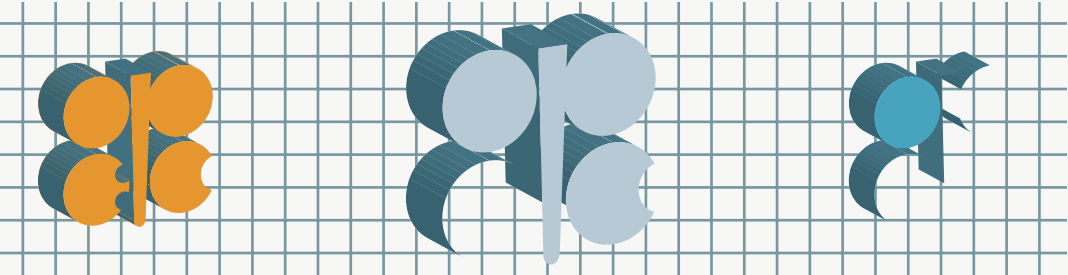


OPEC & GLOBAL MARKETS

Global Supply In Spotlight Amid Libya Outages

With half of Libya’s output now offline, Opec+ now looks highly likely to proceed with plans to begin unwinding output cuts. Iraq’s belated attempts to make good on ‘compensation cuts’ are also set to take more crude off the market, and represent more of a structural shift than Libya’s woes. **Page 8, 9**



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ECONOMY & FINANCE

Saudi Oil Export Revenues Up As Volumes Fall

Saudi Arabia notched up the highest oil export revenues in more than a year last quarter despite a 1mn b/d year-on-year drop in volumes. **Page 17**

UPSTREAM OIL & GAS

Egypt Touts Oil & Gas Reform, Offshore Blocks

Cairo is rolling out “investment incentives” in a bid to boost waning output. The acid test will be the participation rates in a bid round for 12 gas prone blocks. **Page 2**

CORPORATE

Cyprus, Chevron Trade Blows Over Aphrodite

Nicosia has given Chevron three months’ notice of its expulsion from the 3.5tcf Aphrodite gas field. Chevron hopes modified plans will placate Nicosia. **Page 6**

GEOPOLITICAL RISK

Houthis Step Up Strikes With Tanker Ablaze

Yemen’s armed Houthi movement has conducted its third major strike on a 1mn barrel tanker now abandoned in the Red Sea. **Page 11**

CORPORATE

Qatar Plans To Export Barzan Gas Volumes

With renewables set to play an increasingly large role in Qatar’s power mix, QatarEnergy has plans to divert gas from Barzan to LNG export terminals. **Page 7**

POWER & WATER

Morocco & Egypt: Green Ammonia Plans

Australia’s Worley says it is set to launch Feed on a \$7bn Morocco green ammonia project for 2027 start up as Egypt firms up a sales deal. **Page 16**

GEOPOLITICAL RISK

Iraq’s Shia Militias Test KRG Defences

An incursion by Iran-backed militias into territories disputed between Baghdad and the KRG highlights the volatile security situation in the country’s north. **Page 10**

DOWNSTREAM

Egypt Refinery Upgrades Edge Forward

Despite piecemeal expansions, Egypt’s refining fleet is showing its age with national throughputs some 300,000 b/d below nominal 820,000 b/d capacity. **Page 12**



# Egypt Launches Upstream Charm Offensive Alongside 12-Block Bidding

*Cairo is rolling out “investment incentives” as it hopes to encourage firms to boost waning oil and gas output. The acid test will be the participation rates in a bid round launched by Egas for 12 gas prone blocks.*

**E**gypt's state gas firm Egas on 26 August launched a bid round for ten Mediterranean and two onshore Nile Delta blocks as newly appointed oil minister Karim Badawi attempts to charm firms back to the country's gas heartland.

The following day the ministry announced it is “launching new investment incentives to encourage [an] oil and gas production increase.” The minister is looking “to improve the investment climate” as “investments are considered the cornerstone of supporting and boosting” oil and gas output. A key sticking point in recent months has been the increase in receivables firms are owed for their Egypt output, with some castigating the lack of clarity from the ministry.

The release details that the incentives “include new mechanisms that are associated with achieving an increase in production beyond the current rates, as well as an increase in exploratory, developmental drilling activities and production operations.”

“This will result in allocating [EGPC's share of] the [export] revenue generated from the increased production [from 1 September] to settle part of the Petroleum sector's partners' dues and provide additional gas and oil to narrow the gap between production and local consumption,” the ministry says.

The widening gap between gas consumption and output, which fell to a seven year low of 4.923bn cfd for June (MEES, 23 August) has seen Cairo turn to record imports of Israeli gas and LNG (see p5 & MEES, 23 August).

While the minister's statement has been hailed by some oil industry executives, several canvassed by MEES were critical of the lack of concrete measures to pay down receivables in the coming months.

“It is difficult to comprehend how or why incremental production of both oil and gas would be exported when Egypt is a significant net importer of each,” one industry source says. “Payment of at least part of the arrears should be the first step in order to make investment in incremental production possible, and not the other way around,” an

oil industry executive tells MEES.

## WILL THEY BID?

The ministry says the bid round, whose deadline is set for 25 February next year, is part of “efforts to attract new investments to Egypt.” The acreage on offer is split into three distinct categories; frontier West Mediterranean acreage, previously held and well worked onshore Nile Delta acreage and previously held but not extensively drilled blocks in the more prolific offshore Nile Delta basin (see table & map).

Block 1, North El Fuka is the most detached and least explored of all the blocks on offer, lying in the northwestern corner of the country's frontier West Mediterranean offshore or Herodotus basin. Just 717km of 2D seismic is available: no 3D seismic and no wells drilled. Block 1 was included in deepwater ‘West Med’ acreage that was offered up in 2021 bidding but attracted no takers (MEES, 7 January 2022).

Further east but also in near-3,000m water depths, Block 2 North Burg El Arab has also had no previous wells drilled. This too was in part offered up in 2021 without takers. However US major ExxonMobil subsequently in early 2023 snagged two giant deepwater blocks, Cairo and Masry, immediately to the south (MEES, 10 February 2023), with QatarEnergy taking 40% stakes in each earlier this year (MEES, 17 May).

With Exxon having wrapped up a 8,000km<sup>2</sup> seismic survey earlier this year, it may have seen something that would pique its interest in the neighboring block, which Egas says has 3.094tcf of risked resources “for one major Messinian lead.”

Exxon and QatarEnergy are also partners on the two blocks just over the maritime border in Cypriot waters, Blocks 5 and 10, where they are set to drill two exploration wells early next year after Exxon finishes up a Q4 wildcat on the North Makaria block in Egypt's shallow-water West Med (MEES, 21 June).

With Exxon having made the c.3tcf Glaucus discovery on Cyprus Block 10 in 2019 (MEES, 1 March 2019), it



**Payment of at least part of the arrears should be the first step in order to make investment in incremental production possible, and not the other way around.”**

-Egypt oil industry executive

may also have spotted a trend that may extend into the on-offer Blocks 3 and 4 on the Egypt side of the border.

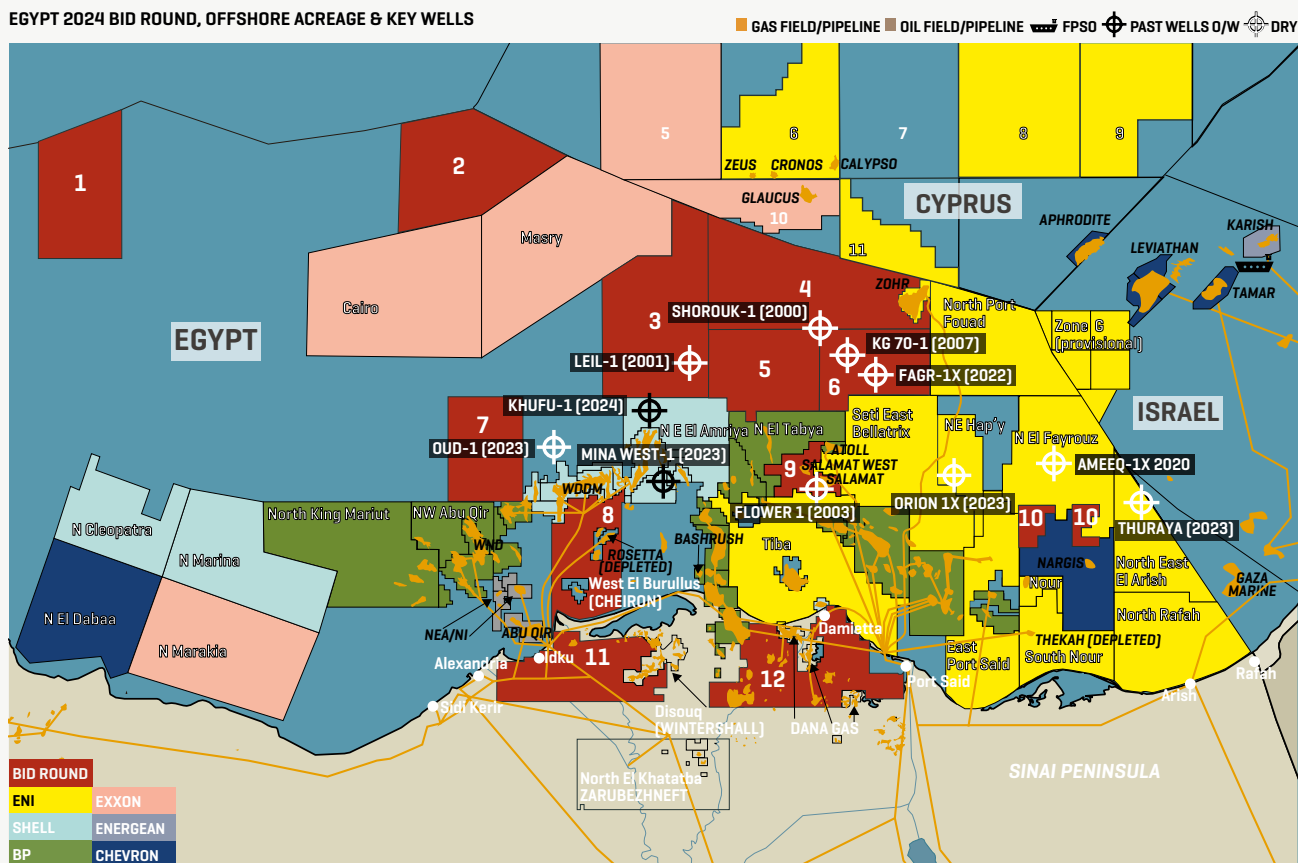
Block 3, North Simian, which also abuts Exxon's Masry was the site of one previous well, albeit substantially further south. ‘Leil-1’ drilled by Shell in 2001 on its then giant ‘Nemed’ concession struck sub-commercial quantities of gas, Egas says. That said, if Exxon sees anything new in Block 3 it will likely be in the northern portion of the acreage: the southern half, including Leil-1, was part of the ‘Star’ block held by Exxon between 2020 and 2023, as was part of the on-offer Block 4 and almost all of Block 5. Exxon relinquished Star without drilling.

‘North Simian’ takes its name from one of the key fields on Shell's West Delta Deep Marine (WDDM) acreage to the south. Though Simian is largely depleted, Shell continues to drill nearby acreage in search of additional reserves to tie back to its WDDM facilities, making the recent modest Khufu and Mina West discoveries (MEES, 21 June).

Block 4, ‘West Zohr’, also shares a long border with Cyprus and was also part of Shell's Nemed block (as were Blocks 2, 5 & 6), with Shell in 2000 having drilled the only past well on the acreage, the Shorouk-1 dry hole. The eastern part of Block 4, as well as almost all of Block 6, formed part of Eni's Shorouk block which in 2015 turned up Egypt's largest ever discovery, Zohr, in its northeast corner. Needless to say the Zohr development

Continued on – p3

## EGYPT 2024 BID ROUND, OFFSHORE ACREAGE &amp; KEY WELLS



## EGAS 2024 BID ROUND: 12 BLOCKS ON OFFER

| Offshore Mediterranean |                    |       |                      | Seismic |        | Past Wells | Discovery                                                                                                      | Nearest Onshore Gas Facilities |
|------------------------|--------------------|-------|----------------------|---------|--------|------------|----------------------------------------------------------------------------------------------------------------|--------------------------------|
| No.                    | Name               | km²   | Water Depth (m)      | 2D (km) | 3D (%) |            |                                                                                                                |                                |
| 1                      | North El Fuka      | 3,131 | 2,500-2,900          | 717     | -      | -          | -                                                                                                              | Obaiyed (Bapetco) 230km        |
| 2                      | North Burg El Arab | 3,092 | 2,800-3,000          | 2,208   | -      | -          | -                                                                                                              | WND [BP] 220km                 |
| 3                      | North Simian       | 4,367 | 1,600-2,400          | 3,796   | 95     | 1          | Shell, Leil-1, 2001, non commercial* gas                                                                       | WND [BP] 125km                 |
| 4                      | West Zohr          | 4,319 | 1,400-2,200          | 3,152   | 100    | 1          | -                                                                                                              | El-Qaraa (Eni) 148km           |
| 5                      | North West Atoll   | 2,161 | 700-1,900            | 1,978   | 95     | -          | -                                                                                                              | El-Qaraa (Eni) 107km           |
| 6                      | South Zohr         | 1,952 | 1,200-1,600          | 1,710   | 80     | 2          | -                                                                                                              | El-Qaraa (Eni) 109km           |
| 7                      | Ras El Tin         | 2,271 | 700-1,900            | 4,326   | 30     | -          | -                                                                                                              | WND [BP] 75km                  |
| 8                      | East Alexandria    | 1,937 | 0-200                | 2,054   | 95     | 22         | BG, 2008; Engie 2010, both gas.                                                                                | WND [BP] 75km                  |
| 9                      | West Atoll         | 552   | 200-1,000            | 1,307   | 100    | 3          | BP Salamat-1, 2012, "significant" gas; Salamat West-1, 2017, gas.<br>Eni (Flower-1, 2003), non-commercial* gas | El-Qaraa (Eni) 65km            |
| 10                     | North Nour         | 551   | 400-800              | 645     | 100    | -          | Chevron                                                                                                        | West Harbour [BP] 95km         |
| Onshore Nile Delta     |                    |       |                      | Seismic |        | Wells      | Previous Operator                                                                                              | Nearest Gas Facilities         |
| No.                    | Name               | km²   | Nearby Fields        | 2D (km) | 3D (%) |            |                                                                                                                |                                |
| 11                     | West Disouq        | 2,352 | Disouq, Abu Qir      | 1,807   | 70     | 13         | Repsol, Phillips, RWE Dea, Edison                                                                              | WND [BP] - 4km, Disouq 11km    |
| 12                     | North El Mansoura  | 2,635 | El-Qar'a, El Wastani | 5014    | 80     | 96         | Centurion, Marathon, Dana Gas, Eni, Edison, RWE Dea                                                            | El-Qaraa (Eni) 5km             |

\*AS DEFINED BY EGAS. CLEARLY THE OTHER NON-DEVELOPED 'DISCOVERIES' ARE ALSO DE-FACTO SUBCOMMERCIAL. SOURCE: EUG, MEES

## Continued from - p2

lease is excluded from the acreage on offer. Eni itself tried and failed to find 'more Zohr' across both this and its other nearby acreage (MEES, 24 March 2017), including 2022's Fagr-1 dry hole on the on-offer Block 6 (South Zohr).

Zohr was discovered in a carbonate build-up in the Cretaceous formation. And it is in the Cretaceous that Egas flags up 10.7tcf of risked resource on the block, the highest figure for any of the blocks on offer. Block 5, North West Atoll, has

seen no previous wells and just 30% 3D seismic cover. Neither has Block 7, Ras El Tin, to the southwest in 700-1,900m water depth which lies immediately north of BP's West Nile Delta acreage. To the east Shell drilled the Oud-1 dry hole earlier this year before subsequently relinquishing the acreage as well as a second exploration block to the immediate west of Block 7 (MEES, 21 June).

Immediately south of Shell's WDDM is Block 8, East Alexandria. Of the offshore blocks on offer this has had by far the most wells drilled, 22, with 95% 3D seismic cover. It was offered

up in the previous Egas bid round but with no takers (MEES, 6 January 2023). Formerly the Rosetta block, it was relinquished in 2003 by BG (now Shell) before it was taken by Engie.

With the West El Burullus (WEB) development concession – now held by Egyptian independent Cheiron – having been carved out of the former block, as have the now depleted Rosetta fields, the block on offer has seen 22 past wells, of which two were

## Continued on - p4





## Continued from – p3

(presumably modest) gas discoveries.

## RECYCLING ACREAGE

A feature of the well-worked eastern portion of Egypt's Mediterranean is that acreage often isn't relinquished for long.

Block 9, West Atoll, was held by BP until 2023 and contains the major's 2012 Salamat – reported at the time as a "significant gas discovery" (MEES, 13 September 2013) – and 2017 Salamat West discoveries.

Block 10, North Nour, was until recently the northern portion of the Nargis concession where Chevron (45%op) and Eni (45%) made a 2.8tcf (gas in place) discovery in 2023. The firms are looking at potential development options here that could include tie-in of Eni's 2020 sub-1tcf Nour gas discovery further south and the use of the Italian firm's nearby offshore Thekah infrastructure (MEES, 3 May).

Chevron and Eni have been angling for a higher gas price for Nargis (MEES, 7 June) – something which may set a precedent that Cairo is uneasy to accept, as it currently pays a more manageable \$5-6/mn BTU for new offshore gas discoveries.

## ENI: ENOUGH EGYPT?

While Eni holds the largest footprint of any firm in Egypt's offshore Mediterranean it has had a difficult time of it in recent years. Despite being the big winner in last year's bidding, and taking acreage early last year outside of official bidding (MEES, 10 February 2023), recent drilling efforts have disappointed.

Its two most recent deepwater wildcats, Thuraya on North East El Arish and Orion on Northeast Hap'y (where it has subsequently relinquished the northeast segment of the block) have come up dry and that's not to mention the continued decline of its key Zohr gas field where output has slumped to 1.85bn cfd, some 42% below 3.2bn cfd capacity (MEES, 2 August).

Eni has also criticized Cairo over mounting receivables, although relations have improved since Mr Badawi took office with official awards made for the North Port Fouad and South Nour made in July (MEES, 12 July). But whether Eni will have an appetite to bid for more offshore acreage remains to be seen. With not only a leading presence offshore Egypt but also the dominant player off Cyprus and the yet-to-be-finalized Israel Zone G which abuts Egypt's North Port Fouad (MEES, 3 November 2023), Eni may well sit this one out.

The latest Egas bid round material indicates that Eni has relinquished both the West Sherbean onshore block – located between the on-offer Blocks 11 & 12 – and the North El Hammad

Offshore (NEHO) block directly to the north. Here Eni made the 150mn cfd Bashrush discovery in 2020 and retains the development lease around the block.

The two onshore Nile Delta blocks on offer, 11 West Disouq and 12 North El Mansoura, are both well-worked. West Disouq which has been previously held by the likes of Repsol, Wintershall Dea and Edison has seen 13 past wells with the eastern part of the block surrounding Wintershall's 30mn cfd Disouq field (Wintershall assets in Egypt and elsewhere are in the process of being acquired by UK firm Harbour Energy in a deal the firms say will complete in Q4).

North El Mansoura, with 96 past wells and significant past output, may be one for the enhanced recovery specialists. Previous holders of the acreage include Eni, Edison and UAE firm Dana Gas. The latter continues to hold development concessions adjoining Block 12 and has recently received Cairo's approval to merge these concessions, which it says will lead to more investment – music to the ministry's ears.

## DIFFERING DETAILS

With the blocks all differing from an exploration standpoint it's only natural that commitments and phases of the contracts will differ. For the onshore Block 11 and 12 the exploration phase shall not exceed 6 years and will be split into two periods. The first phase will include reprocessing the seismic data and the drilling of at least two wells while the second phase includes a commitment to drill three wells.

For Blocks 1, 2, 9 and 10 the exploration phase will not exceed eight years in total and can be split into two or three periods, although no phase should exceed three years. Blocks 1 and 2 comes with a commitment to shoot 3D seismic during the first phase and drill a well in each of the second and third phases. Blocks 9 and 10 differ in the first phase in that they are obliged to reprocess seismic and drill one well.

The exploration phases in Blocks 3, 6, 7 and 8 can also be split into three although the first exploration phase can exceed three years. For Blocks 3, 6 and 8 the first phase comes with an option to either reprocess seismic and drill three wells during three years or acquire 3D seismic, which Egas says is "preferable" and drill one well over three and a half years.

For Blocks 4, 5 and 7 the first phase can be split into two. For Blocks 4 and 5 the first phase of the first exploration period requires reprocessing 3D seismic over one and a half years or acquiring 3D seismic over two with the second portion of the first phase including drilling a well. For Block 7, firms are committed to acquiring 3D seismic first before drilling a well during the first exploration phase. All three blocks have a commitment to drill one well in the second and third phases. ♦♦

## Egypt, Cyprus Ministers Talk Gas In First Meet

Egypt's new oil minister Karim Badawi flew into Nicosia on 29 August to meet with his Cypriot counterpart, Energy Minister George Papapanastasiou. While both have extensive industry experience and will have brushed shoulders previously, this is the first time the pair have met as respective ministers of their countries.

The ministers "discussed ways to enhance cooperation and expedite the exploitation of natural gas discoveries within Cyprus' exclusive economic zone," according to an Egypt oil ministry statement.

Both Eni's 2.5tcf Cronos and Chevron's 3.5tcf Aphrodite are earmarked for export to Egypt (MEES, 3 May). With Nicosia serving Chevron notice of breach of contract this week, Aphrodite development is looking less certain (see p6).

"The discussions also focused on accelerating the development of Cyprus' natural gas reserves by utilizing Egypt's existing infrastructure. This includes transporting gas from Cyprus' exclusive economic zone to Egypt for liquefaction and export to global markets," the statement concluded.

Chevron's modified development plans for Aphrodite eye tieback 240km to Port Said, whilst Eni has made little secret of its plan to send Cronos gas to the now under-utilized Zohr field just 90km away on Egypt's side of the maritime border (see map, p3). Water breakthrough at Zohr has seen output slump to 1.85bn cfd, some 42% below 3.2bn cfd capacity, leaving plentiful ullage for potential tie ins from Eni's nearby field (MEES, 16 February).

But whether that gas will make its way to 'global markets' remains contentious especially considering Egypt's own gas deficit that is being plugged by Israeli gas and LNG imports (MEES, 23 August). Eni operates the 5mn t/y Segas LNG export terminal at Damietta but has recently admitted that it is unlikely to load any cargoes any time soon (MEES, 2 August).

Cairo will be hoping to make further gas discoveries in the not-so-distant future with Mr Badawi rolling out new incentives to oil firms and launching a bid round for 12 gas prone blocks, mainly in the offshore Mediterranean (see p2).

# EGYPT SQUEEZED AS ISRAEL GAS EXPORTS FALL FOR Q2

\*Israel produced 2.50bn cfd of gas for Q2, down fractionally on Q1 but still the third highest figure on record behind 2.66bn cfd for 3Q 2023 (see chart 1). That quarter's record came as output from the Karish field ramped up to top 500mn cfd for the first time having started up at the end of 2022. And Q2's near-record overall output figure came as Karish hit a new record of 530mn cfd.

\*Israel's largest field Leviathan (23tcf resource, 1.2bn cfd capacity) saw output rise 7% sequentially to 1.09bn cfd for Q2 despite a brief outage in late June (MEES, 28 June). However, the country's overall output was held back by a substantially-longer 12-day June shutdown at the country's second field Tamar (14 tcf resource, 1.1bn cfd capacity), which saw output slump 14% to 877mn cfd (MEES, 14 June). Both Tamar and Leviathan are operated by Chevron.

\*The June shutdown was for work to expand the field's capacity to 1.2bn cfd by mid-2025 and 1.6bn cfd by late next year (MEES, 23 February). Tamar began the year strongly with output in Q1 near doubling to 1.025bn cfd after the field's month-long shutdown following the onset of war between Israel and Hamas on 7 October (MEES,

13 October 2023).

\*Key export market Egypt, which was suffering an acute gas and power shortage in Q2, now somewhat alleviated (MEES, 23 August), was hit hardest by the Tamar outage. As Israel's overall output dipped so did supplies to Egypt which fell by 60mn cfd from Q1's record 1.03bn cfd to 973mn cfd for Q2, though this still equated to almost 40% of Israel's total gas output (see chart 2).

\* Leviathan to Egypt volumes fell to 687mn cfd from Q1's record 714mn cfd (see chart 3) with those from Tamar also down at 286mn cfd. All Israel-Egypt volumes go to state-backed offtaker Blue Ocean Energy, with which the Tamar partners in February signed a deal to increase once exports expansion is complete.

\* Jordan saw offtake rise to 261mn cfd for Q2, though this remains well shy of the record 324mn cfd hit in Q3 last year. Of Q2 volumes, 244mn cfd of Leviathan went to Jordan's state utility Nepco, whilst Tamar supplied 17mn cfd to the Arab Potash and Jordan Bromine industrial plants on the Dead Sea.

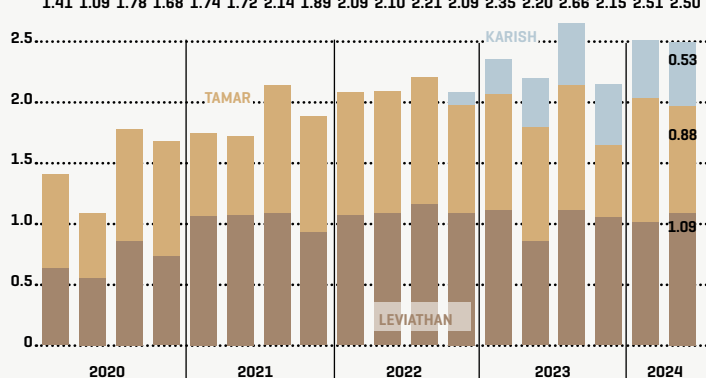
\*Whilst Israel's domestic offtake was near-steady at 1.26bn cfd this came as that from Leviathan near doubled to 159mn cfd to make up for the Tamar outage resulting in the squeeze to Egypt deliveries. Both fields have been losing market share to Karish which is barred from exporting (MEES, 19 August 2016).

\*With Q3 seeing peak domestic gas demand, deliveries to Egypt have remained below the record 1bn cfd-plus levels seen early this year despite none of Israel's three gas producers reporting significant outages this quarter. In addition to next year's planned Tamar expansion, Leviathan is also due to see capacity increased to 1.4bn cfd by mid-2025 with further expansion to 2.1bn cfd and potentially even 2.35bn cfd further down the road (MEES, 2 August). Karish operator Energean is targeting a ramp up towards the 8bcm/y (780mn cfd) of the Energean Power FPSO.

\*With the Jordan market sated (and, indeed Jordan looking to lessen its reliance on Israel via LNG imports: MEES, 23 August), Egypt is the key target market for expanded Tamar and Leviathan output. A look at the relative prices achieved for Leviathan gas sales explains why.

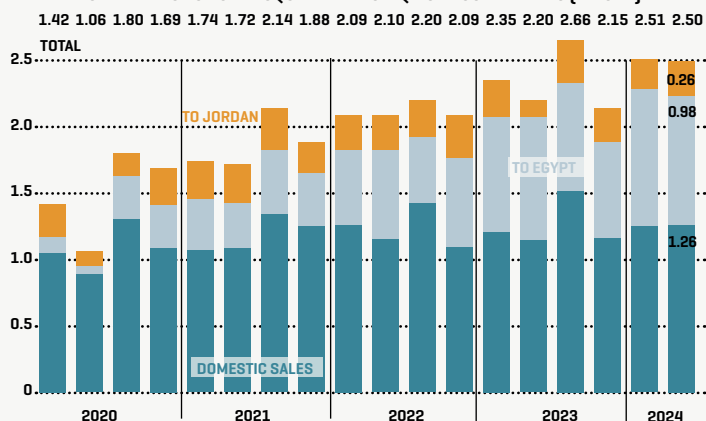
\*For Q2 Leviathan received \$6.29/mn BTU for gas sales to Egypt and \$6.89/mn BTU from Jordan with the average domestic sales price almost a dollar lower at \$5.58/mn BTU (see chart 5). Tamar gas achieved just \$4.50/mn BTU for domestic sales.

1: ISRAEL GAS OUTPUT FLAT FOR Q2 AS KARISH OFFSETS 14% TAMAR SLUMP (BN CFD)...



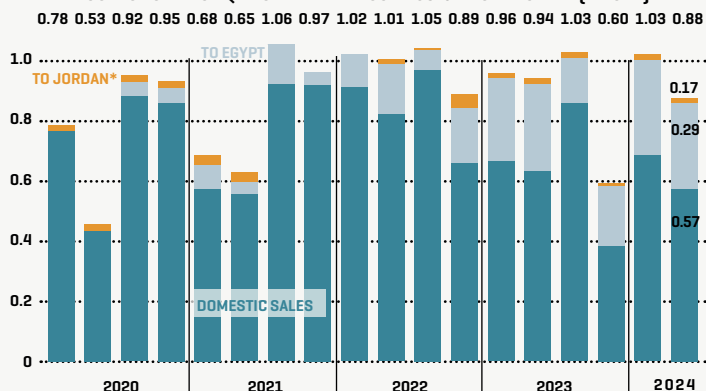
SOURCE: CHEVRON, NEWMED, RATIO, TAMAR PETROLEUM, ISRAMCO, ENERGEAN, ISRAEL ENERGY MINISTRY, MEES.

2: ...WITH SHIPMENTS TO EGYPT SQUEEZED FROM Q1'S RECORD LEVELS (BN CFD)



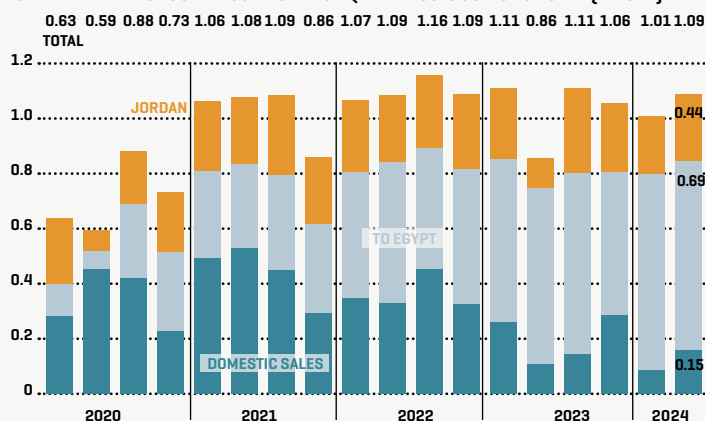
SOURCE: CHEVRON, NEWMED, RATIO, TAMAR PETROLEUM, ISRAMCO, ENERGEAN, ISRAEL ENERGY MINISTRY, MEES.

4: TAMAR OUTPUT SLID FOR Q2 BUT A NEAR-RECORD 35% WAS EXPORTED (BN CFD)



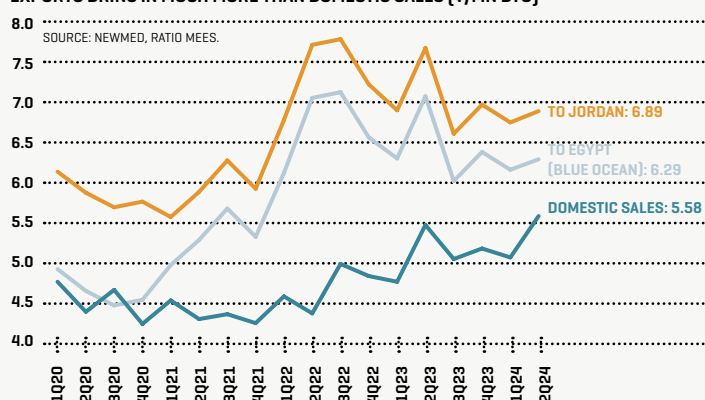
\*ARAB POTASH & JORDAN BROMINE. SOURCE: CHEVRON, ISRAMCO, TAMAR PETROLEUM, ISRAEL ENERGY MINISTRY, MEES.

3: LEVIATHAN PRODUCED 1.09BN CFD FOR Q2 WITH 63% GOING TO EGYPT (BN CFD)



SOURCE: CHEVRON, NEWMED, RATIO, ISRAEL ENERGY MINISTRY, MEES.

5: LEVIATHAN GAS SALES PRICE BY DESTINATION: EXPORTS BRING IN MUCH MORE THAN DOMESTIC SALES (\$/MN BTU)



# CYPRUS' APHRODITE: CHEVRON SUBMITS NEW PLAN AS NICOSIA SERVES 'BREACH OF CONTRACT'

*Nicosia has given Chevron three months' notice of its expulsion from the 3.5tcf Aphrodite gas field. Chevron hopes modified plans will placate Nicosia.*

Cyprus' energy ministry on 23 August sent a notice of breach of contract to Chevron (35%), operator of the 3.5tcf Aphrodite gas field. The notice threatens the revocation of the development license held by the US major and partners Shell (35%) and Israel's NewMed (30%) in three months once the letter, sent on 23 August is received at Chevron's headquarters in Houston, should a compromise agreement not be reached.

Nicosia believes it is entitled to issue the breach after Chevron missed a 7 November 2023 contractual milestone to launch FEED under the terms of a development plan approved in 2019 (MEES, 8 November 2019).

Chevron, which took over as operator in 2020 with its purchase of Noble Energy has since sought to modify the development plan to improve the project economics (see table), but to date its attempted modifications have been rejected by Nicosia which insists that the terms agreed in 2019 remain valid with Chevron's refusal to abide by them leaving it in breach of contract.

Initially Nicosia overlooked the missed November 2023 FEED milestone in a bid to find a compromise on how to develop Aphrodite having rejected a modified development plan filed by Chevron in May last year (MEES, 25 August 2023).

A revised development concept presented by Chevron in March was also rejected by Nicosia. In his 30 April letter rejecting the proposals, Energy Minister George Papanastasiou requested a "prompt" reply as to whether the partners intended to adhere to the 2019 plan. Were the partners to commit, Nicosia indicated that it would formally relax the FEED deadline (MEES, 3 May).

Chevron and its partners in turn have attempted to sidestep Mr Papanastasiou's request by instead continuing to table further "modifications" to the 2019 plan. "Chevron's refusal to respond really irked the ministry. That was the final straw and ultimately what led to the decision to issue notice," a government source tells MEES.

"We are disappointed by the decision of the Government of the Republic of Cyprus," Chevron says. "Together with our partners we have been focused on proposing development concepts aimed at developing Aphrodite for the benefit of all stakeholders involved," the US major adds.

"In the coming days, we intend to submit a modified Development and Production Plan for the Aphrodite project," Chevron says. In a filing to the Tel Aviv Stock Exchange (TASE) on 26 August NewMed says that this is "based on the original [2019] development plan."

MEES understands that the latest 'plan' submitted by Chevron as MEES went to press largely consists of a more detailed version of the proposals presented by Chevron to Nicosia in March.

## CYPRUS APHRODITE DEVELOPMENT OPTIONS

■ GAS FIELD/PIPELINE ■ 2019 PLAN ■ MAY 2023 PROPOSAL ■ LNG TERMINAL ■ FPSO ■ FLOATING PRODUCTION UNIT



In the March proposal, Chevron and its partners did include a floating production unit (FPU), one of the key demands made by Cyprus. But it also envisaged lower output, whilst stating that its terms would need to be improved to make "the FPU case investible" in light of last year's Aphrodite reserves downgrade (MEES, 8 September 2023).

Nicosia says that altering contractual terms is a non-starter. However, Chevron is confident that with the additional details in its firmed-up proposals it can allay Nicosia's key concerns and that plans to proceed with Aphrodite development can ultimately be agreed upon.

"Let me be clear, Cyprus is under no obligation contractually to consider submission of modifications or new plans. If Chevron unilaterally takes the risk to file a formalized version of more or less what was discussed in March and rejected by April then it will likely be rejected again regardless of whether they include an FPU or not," a Cyprus government source says.

If Chevron previously believed Cyprus was bluffing, the receipt of notice may now convince it otherwise, with the 'notice' letter catching observers by surprise.

"Previous attempts to strongarm Chevron into following the 2019 development plan were viewed as Nicosia bluffing and few believed it would issue breach but the general atmosphere around the situation has changed with the minister seemingly keen to pull the trigger," a source close to the talks says.

## MAJOR INTEREST

What gives Cyprus the confidence to potentially give Chevron, Shell and NewMed the boot? A recent visit by UK major BP and UAE state giant Adnoc touched on the pair's potential interest in Aphrodite if the license was vacated (MEES, 2 August).

Last year, before BP and Adnoc's proposed 50% purchase of NewMed was shelved (MEES, 15 March), the UK major's interim CEO Murray Auchincloss told investors that the deal

## APHRODITE DEVELOPMENT PLANS

|                  | 2019 Plan | Chevron's Proposed Revisions |            |
|------------------|-----------|------------------------------|------------|
|                  |           | May 2023                     | March 2024 |
| Production Wells | 5         | 3                            | 4          |
| Output           | 800       | 650                          | 400-600    |
| Processing via   | FPU       | WDDM                         | FPU        |
| Pipeline Length  | 480km     | 390km                        | 240km      |
| Cost             | \$3.6bn   | \$2.6bn                      | unknown    |

would give the pair "access into Aphrodite and [Israel's 23tcf] Leviathan two great fields that can be developed for the future for Europe."

London-listed Israel-focused Energen has also let it be known to Cypriot officials that it would be keen to take on Aphrodite development should Chevron depart. A source with knowledge of the matter says that Aphrodite would hit Energen's return on investment demands even if it misses those of Chevron. That said, Energen would need partners in order to finance a \$3bn-plus project.

While MEES understands that interest in Aphrodite from BP, Adnoc and Energen is concrete, if Chevron decides to file for arbitration once Nicosia revokes the license this could stymie attempts to bring in a new operator.

## PRIOR PLANS

The 2019 plan envisages an above-field floating production unit (FPU) with five wells tied-back to Egypt's Idku. Chevron's 2023 modifications sought to scrap the FPU and reduce the number of producing wells to three with shorter tie-back to Shell's West Delta Deep Marine (WDDM) offshore facilities in Egypt, shaving \$1bn off the original \$3.6bn development costs.

The 'FPU variant' of the proposals presented by Chevron in March, which is set to form the basis of the freshly-filed plan, would see four wells drilled with output at between 400-600mn cfd and shorter tieback to Port Said, utilizing the Zohr gas pipeline corridor (see map). ♦♦

# Qatar Plans To Export Barzan Gas Volumes

*With renewables set to play an increasingly large role in Qatar's power mix in the years ahead, QatarEnergy has plans to divert gas from the domestic-focused Barzan project to its LNG export terminals.*

**W**ith Qatar bringing online an additional 875MW of solar power capacity this year, gas demand growth from the power sector is set to be limited in the near term. As such, the emirate intends to connect a major domestic-focused gas complex to the country's nearby LNG export facilities in order to enable the export of displaced gas volumes, affording it more operational flexibility.

The Barzan Gas Plant was finally commissioned in 2022, after initially starting up in 2020 (MEES, 2 April 2021), and processes around 1.9bn cfd of raw gas into 1.4bn cfd of sales gas, 6,000 t/d of ethane, 1,500 t/d of LPG and 30,000 b/d of condensate. Developed by QatarEnergy (93%) and ExxonMobil (7%), the Barzan plant provides output solely for the domestic market, where gas demand has fallen in early 2024 despite record power demand. QatarEnergy LNG therefore sees the Barzan Gas Diversion Project (BGDP) "as a top priority, commencing operations as soon as possible."

Under the project, Qatar is building two 36" high-pressure pipelines running from the 1.4bn cfd Barzan gas plant to Qatar's existing 77mn t/y LNG production facilities and to its under-development expansion projects. The pipelines will transport any excess gas from the plant to the LNG facilities for liquefaction and export.

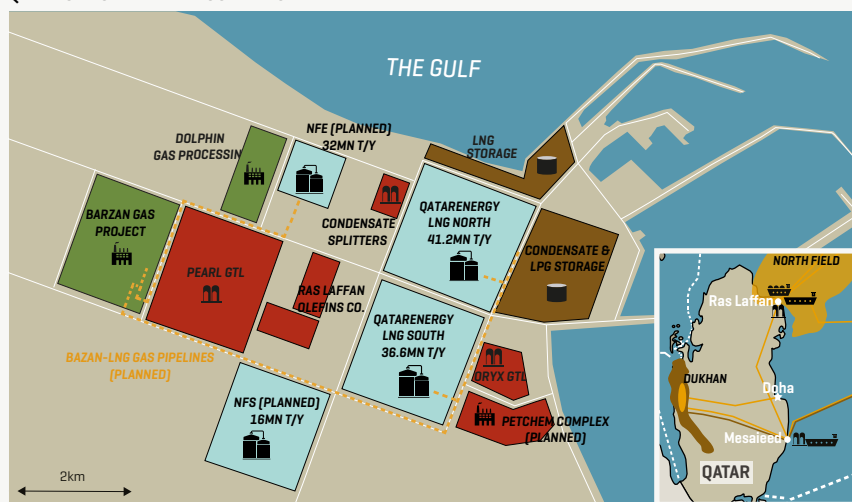
"Overall, BGD will boost QatarEnergy LNG's production and exports to enable QatarEnergy LNG to meet increasing global demand for natural gas as a transition fuel," the company says.

## IN THE PIPELINE

One pipeline will head to QatarEnergy's existing LNG trains. It will travel 12km from the Barzan plant to the 41.2mn t/y seven-train QatarEnergy North LNG plant and a 30" line will branch off to the 36.6mn t/y seven-train QatarEnergy South LNG facility. A valve station will also be built to potentially supply the 16mn t/y North Field South (NFS) phase of the North Field Expansion project which is slated to be operational by 2028.

The second pipeline will service

QATAR'S RAS LAFFAN INDUSTRIAL CITY



future trains in the 32mn t/y North Field East (NFE) phase of the mammoth expansion project. Construction of the NFE trains is more than 50% complete according to contractor Technip Energies with the first train expected online in 2026 (MEES, 2 August).

QatarEnergy says BGDP "is planned to be operational within three years of the idea conception," with QatarEnergy LNG seemingly targeting completion in 2027.

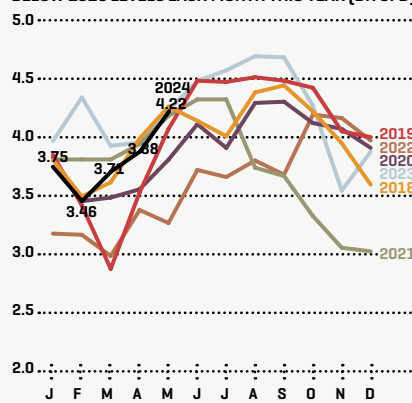
## FALLING DOMESTIC DEMAND?

The Barzan plant is one of three primary facilities supplying the domestic market, the others being QatarEnergy's 2bn cfd Al Khaleej Gas project and its 680mn cfd North Field Alpha (NFA) project, which also process gas from the North Field. Combined, the three plants can provide around 4.3bn cfd to the local market, while there is also associated and non-associated gas produced at oil fields such as Dukhan (220mn cfd).

Gas for the domestic market primarily supplies power plants, petrochemicals facilities and industrial plants such as the Qatalum aluminum smelter in Mesaieed.

National gas consumption increased last year to a record 4.2bn cfd according to Qatar's Jodi submissions, up 17% on the previous year. However, it is on course to fall back this year, with reported gas consumption over the

QATAR DOMESTIC GAS CONSUMPTION HAS BEEN BELOW 2023 LEVELS EACH MONTH THIS YEAR (BN CFD)



SOURCE: JODI, MEES.

first five months of the year down 7% year-on-year to an average of 3.8bn cfd.

Gas fired power plants account for the vast bulk of Qatar's 12.7GW installed power generation capacity, with the 800MW Al Kharsaah solar PV plant the only exception. However, solar capacity is to hit 1.7GW by year-end with the installation of two new plants at Mesaieed and Ras Laffan, and satellite imagery shows that panel installation is now complete (MEES, 19 July). QatarEnergy appears confident that such developments mean it will no longer be required to supply as much gas to the local market as previously expected, especially with renewables planned to reach 4GW by 2030. ♦♦



## SUPPLY DYNAMICS BACK IN FOCUS AMID PROSPECT OF IRAQ CUTS, LIBYA OUTAGES

*The prospect of reduced near-term output from Libya and Iraq could create the space necessary for Opec+ production cuts to be eased as planned in October without weakening the market. Instability has returned to Libya, while Iraq's latest compliance pledges appear more concrete.*

**G**lobal oil market participants have had the first week of September circled on their calendars ever since Opec+ countries announced in June that they will begin easing 2.2mn b/d of voluntary cuts from October (MEES, 7 June). Amid ongoing concerns over the market's readiness to absorb these volumes, any decision to pause the process would have to be made by that week.

Other opportunities to announce a pause, such as last month's JMMC meeting, have been and gone with no real expectation of a re-evaluation. Opec+ leaders, such as Saudi Arabia's Minister of Energy Prince Abdulaziz bin Salman, typically prefer to leave such decisions until late on as they seek to have access to as much information as possible. But as the clock ticks down there have been no indications that a change of strategy is on the cards. Opec sources this week say that as yet no such discussions have been held.

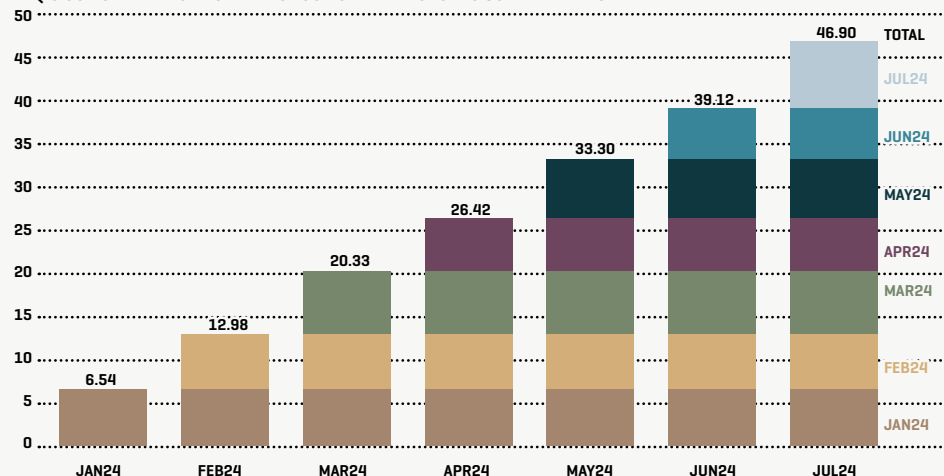
One of the key reasons there is doubt over the market's ability to absorb new volumes – Opec+ intends to ease cuts by 180,000 b/d each month during Q4 this year – is that despite the deepening of voluntary cuts from January, the group's overall output has not dropped significantly since end-2023. The IEA puts July output at 41.70mn b/d, barely down from 41.80mn b/d in Q4. Opec itself has July output of 40.91mn b/d down by 640,000 b/d from Q4.

This is down in large part to the unusual resilience in production shown by the trio of Iran, Libya and Venezuela which are exempt from production cuts. Seven months into 2024, the trio were on course for a fourth consecutive annual increase in production, with combined output of 5.14mn b/d up 420,000 b/d on 2023.

Meanwhile, as one of the 'Group of 8' to have signed up for the additional voluntary cuts, Iraq should have cut production by 220,000 b/d from January to 4mn b/d. Far from adhering to this, its production of 4.27mn b/d so far this year has undermined the voluntary cut process. Kazakhstan and Russia too have been frequent overproducers, albeit less so than Iraq, with Russia showing signs of improved compliance of late.

With September looming, events over the past week could have a significant impact on the supply picture. Outages in Libya and potentially significant cuts from Iraq mean that the Group of 8 may be able to

IRAQ'S CUMULATIVE 2024 OVERPRODUCTION\* APPROACHES 50MN BARRELS



\*BASED ON OPEC SECONDARY SOURCES PRODUCTION. SOURCE: OPEC, MEES.

begin raising output in October and yet see overall Opec+ production fall markedly.

The most dramatic development has been in Libya where the resumption of a tussle for power between the rival eastern and western governments has already had a profound impact on production (MEES, 9 August).

With the eastern government of General Khalifa Haftar ordering the shutdown of the country's major eastern fields, Libya could lose as much as 1mn b/d of production (see p9). How long the crisis will last is impossible to tell, but a previous power struggle crippled output for the vast bulk of 2020. "If Libya outages continue, the market could witness a tight situation," notes one source.

### IRAQ BREAKTHROUGH?

Opec Secretary General Haitham al-Ghais has been leading an increasingly active diplomatic effort to encourage Kazakhstan and Iraq to improve compliance in recent weeks. This week saw the Secretary General visit both countries for high-level talks, and there is growing optimism that pledges made to improve compliance will this time translate into real cuts.

An informed source at Iraq's state oil marketer Somo says that Iraq has already cancelled an upcoming 1mn barrel spot export cargo of Basrah Medium and will attempt to defer three further export shipments into September. While these deferrals have little-to-no impact on balances, Somo is at least hoping to demonstrate stronger commitment to the cuts. However, more concrete action will be required for September if Iraq is to comply with its latest compensation plan submitted last week. That plan calls for 95,000 b/d of compensation cuts for September, implying a quota of 3.905mn b/d.

Going forward, the source says that crude exports under Baghdad's (as opposed to Iraqi

Kurdistan's) control will be held at a maximum of 3.3mn b/d, which would represent a 190,000 b/d drop from July's official figure of 3.49mn b/d. If implemented, this will have a significant impact on Iraq's supplies to global market. At the same time, domestic consumption should now be falling as the power sector's demand for oil reduces seasonally.

Sources in Iraq and Opec are confident that this time around, the cuts will be made. Baghdad is now feeling the urgency to bring down its output, having been persuaded that its continued overproduction may damage the group's cohesion, resulting in other members overproducing. This would risk further weakening oil prices and delaying the move to ease cuts.

Iraq's oil ministry has been under pressure from the highest levels of government to maximize production given the country's dependence on oil revenues, but the threat of this backfiring appears to have convinced Prime Minister Mohammed al-Sudani of the need to cut. After meeting with Oil Ministry executives, the Opec Secretary General held discussions with Mr Sudani on 29 August to seal the deal.

Iraqi officials also pledged that production from fields outside of Federal Iraq's direct control in the Kurdistan Region will drop. Output in Kurdistan is currently around 300,000 b/d, with volumes being refined domestically, and Iraqi officials are hopeful that this might be cut by as much as 130,000 b/d.

Iraq has previously been unable to coerce the Kurdistan Regional Government (KRG) into ordering IOCs in the region to cut production, and despite Mr Sudani's assurances to Opec, it's far from clear what levers Baghdad can pull now which could achieve results. That said, the threat to withhold salary payments could help secure some concessions, and MEES understands that the KRG has intimated that some cuts could be made. ♦♦

*Khalifa Haftar, de-facto leader of eastern Libya, says his forces will enforce a shut-in of the country's entire output in a dispute over control of the Central Bank. Instability is back with a vengeance.*

**L**ibya's oil sector instability is back with a vengeance. Output has slumped since eastern officials allied with General Khalifa Haftar on 26 August ordered a halt to Libya's oil output and exports. Their key demand is that the country's internationally-recognized government in Tripoli reinstate al-Sadiq al-Kabir as governor of the Central Bank.

Almost all of the country's output appears to be at risk. Forces loyal to Haftar control all of the ports in the center and east of the country, those on which output from the country's Sirte Basin oil heartland is dependent (see map). These ports accounted for 74% of Libya's 1.03mn b/d of crude exports for the first eight months of 2023 (see chart).

Already, as of 28 August, NOC says that output had fallen to just 591,000 b/d, around half of levels of 1.2mn b/d prior to the first shut-ins at the Sharara fields early this month.

And whilst they don't control the ports of Mellitah and Zawiya west of Tripoli, they do exert control over the area of southwest Libya that supplies crude to these ports. This control was already on clear display with the shut-in of 260,000 b/d Sharara output from 3 August (MEES, 9 August).

Back then Mr Haftar and his son Saddam who orchestrated the move were already citing control of the Central Bank, and with it the country's oil revenues as a key concern.

PM Abdul Hameed Dbeibeh engineered Mr Kabir's de-facto ouster after the Central Bank reportedly withheld funds from his government. The FT on 30 August reports that Mr Kabir and other central bank officials have since fled the country in fear for their lives.

Mr Kabir had, at least until recently, been a well-respected and long-standing governor: almost uniquely among Libyan officials the veteran had been in the post for the whole of Libya's post-revolutionary period, since 2011. When Mr Kabir's position came under threat earlier this month, US Libya envoy Richard Norland spoke out in defense of central bank independence (MEES, 16 August).

#### WHAT'S OFFLINE?

Several of Libya's producing companies announced that they were cutting output in the immediate aftermath of Mr Haftar's statement. However, port loading data for now remains buoyant, suggesting that some cuts to date may have lagged the rhetoric (oil storage at Libya's ports is threadbare so a halt in upstream output quickly manifests in lower loadings).

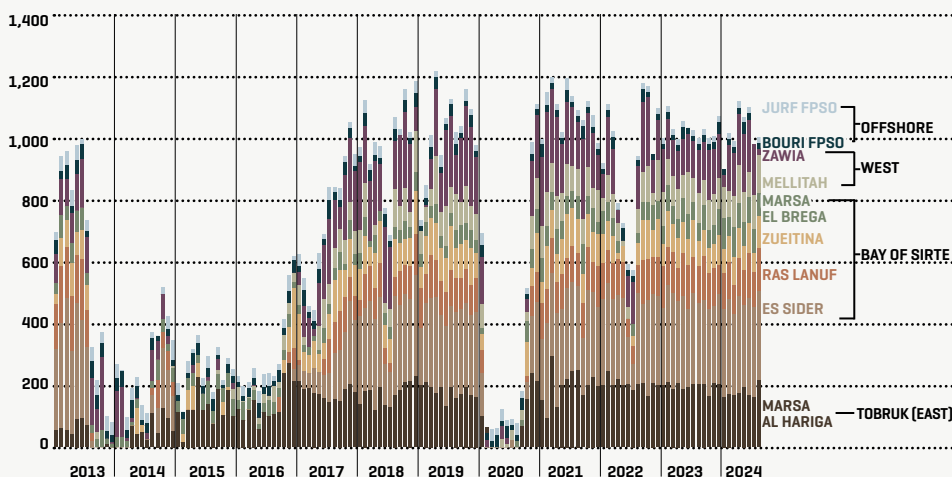
Given that Mr Haftar's self-proclaimed Libyan National Army (LNA) has greater control over

#### LIBYA: KEY OIL AND GAS INFRASTRUCTURE

■ OIL FIELD/PIPELINE ■ GAS FIELD/PIPELINE 🚢 LNG EXPORT TERMINAL 🚢 OIL TERMINAL 🏭 REFINERY



#### LIBYA CRUDE EXPORTS ('000 B/D): THOUGH VOLUMES ARE SO FAR HOLDING UP 2020'S COLLAPSE GIVES A TASTE OF WHAT MIGHT COME



the key oil ports of central and eastern Libya than over the fields themselves, which are often in remote areas (see map), it is unclear why he did not target the ports rather than the fields, as he did in early 2020 when the shut-in of almost all facilities saw output and exports fall below 100,000 b/d for almost a year (MEES, 24 January 2020).

The Waha consortium, which groups TotalEnergies and ConocoPhillips with NOC on 27 August said it was "gradually reducing" its output which stood at 300,000 b/d for Q2 and appeared to have regained this level following a pipeline fire early last week. Latest figures from data intelligence firm Kpler indicate bumper loadings of 295,000 b/d from the key Waha port of Es Sider for the week beginning 26 August. However, Reuters reports that Waha output had fallen to 150,000 b/d as of 29 August.

Other producers who have pledged to wind down output in line with Mr Haftar's dictate are NOC-affiliate Sirte Oil which produced 83,000

b/d for 2023, Eni's El Feel with 70,000 b/d output, and Agoco which on 28 August announced a halt to output from the 140,000 b/d Sarir field. However, loadings of Sarir crude from the port of Hariga near Tobruk continue seemingly unabated with a 720,000 b/d cargo slated to load on 31 August. Output from Sharara, meanwhile, is apparently running at around 80,000 b/d, somewhat higher than last week, after acute fuel shortages in the Tripoli area led to the restart of crude supplies to the Zawia refinery west of the capital.

Ironically, Libya's oil sector had been enjoying one of the longest periods of calm since a July 2022 deal, which saw Haftar-backed candidate Farhat Bengdara installed as NOC Chairman (MEES, 15 July 2022). Output hit an 11-year high 1.24mn b/d for July, whilst an uptick in exploration and development drilling appeared to lay the groundwork for more output gains (MEES, 2 August). With these gains now unravelling global oil markets are set to tighten (see p8). ♦♦

# IRAQ'S SHIA MILITIAS LOOK TO EXPAND SECURITY ROLE IN DISPUTED OIL PATCH WITH KURDISTAN

*A brief incursion by Iran-backed militias into territories disputed between Baghdad and the KRG highlights the volatile security situation in the country's north.*

**I**raq's Popular Mobilization Units (PMUs) orchestrated a show of force over the weekend in oil-rich disputed areas between Federally-controlled Diyala and Iraqi Kurdistan's Sulaymaniyah provinces. Early on the morning of 25 August, some 3,000 personnel from the government-funded paramilitary force moved into Kurdish-controlled areas near Gulajo in what the Kurdistan Regional Government (KRG) considers to be Sulaymaniyah's Garmian subdistrict. They occupied the site of an old well at the Qamar oilfield for few hours before departing.

The incident raises much speculation as to the PMUs' ultimate goal from the brief incursion. Acting without coordination with local Kurdish Peshmerga forces affiliated with the Sulaymaniyah-dominant Patriotic Union of Kurdistan (PUK), the incident questions the strength of PUK leader Bafel Talabani's bonds with Iran-backed militia factions of the ruling Shia Coordination Framework (SCF) political bloc in Baghdad.

Amidst a charged landscape ahead of parliamentary elections in the Kurdistan Region, media outlets affiliated with the PUK's rival, Erbil-based Kurdistan Democratic Party (KDP), were quick to report that the swift incursion was in coordination with PUK forces. Some even reported that the operation was part of a larger plan to "hand over a number of oil wells and a significant portion of the Garmian area to the militias."

The incursion also appears to have come without the Federal government's approval, highlighting long-standing concerns over Baghdad's capacity to rein in the militias (MEES, 2 February). While Baghdad has kept largely quiet, Iraqi Army Chief of Staff General Abdulamir Yarahall was sent on 26 August to the Diyala Operations Command to "consider the redeployment of units to enhance security and stability in the province." Mr Yarahall's visit came after PUK protest and objections.

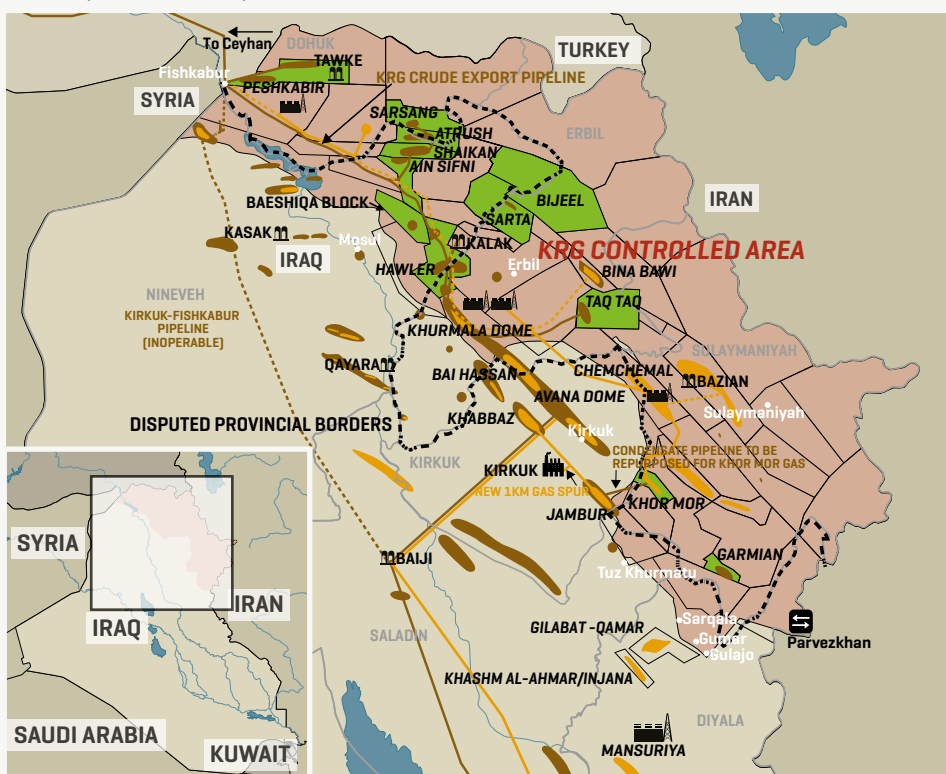
## DISPUTED OIL NODE

The area is one of many territories of northern Iraq disputed by the Federal government and the KRG in which a security vacuum has emerged following the defeat of the Islamic State terrorist group in 2018. With security coordination between both governments lacking, smuggling and lawlessness have become rife.

Administratively, the area lies within Diyala province, but security provision has largely been by the PUK-affiliated Peshmerga. The reasoning for the incursion remains unclear. Some reports said the PMUs planned to secure the area for future oil development, others to stop oil smuggling from Qamar. Officially, the force said it was conducting an anti-Islamic State opera-

## IRAQI KURDISTAN: KEY OIL & GAS INFRASTRUCTURE

■ OIL FIELD/PIPELINE ■ GAS FIELD/PIPELINE ■ KEY BLOCKS ■ REFINERY ■ POWER STATION



tion that required deployment farther afield.

The 40°API Qamar oil field and its adjoining Gilabat gas field constitute the Gilabat/Qamar block awarded to Emirati firm Crescent Petroleum in 2018 (MEES, 24 February). Further east also lies the company's adjacent Khashim al-Ahmar/Injana gas block where development plans are more advanced (see p19).

The area also sits near producing fields in Kurdistan, including Gazprom Neft's 30,000 b/d-capacity Garmian block and the 400mn cfd Khor Mor gas field operated by Crescent and its affiliate Dana Gas.

The PMUs' claim that they moved in to secure, or even inspect, the area does not add up as preparations for security coordination with Peshmerga were reportedly already in discussion earlier this year. As for smuggling from Qamar itself, the well in question has been plugged for some 40 years.

## A PUK EMBARRASSMENT

A swift military operation against the Islamic State would not require the deployment of a large number of troops, nor the 200-300 vehicles used. Reports are that PMU forces had surrounded an outpost of the PUK-linked Garmian Oil Police force near the well, and that they plan to return in the future to build posts and fortifications.

At any rate, the episode comes at great embarrassment to the PUK and Mr Talabani. The latter's growing ties with the SCF, especially Iran-backed proxy Asa'ib Ahl al-Haq (AAH), saw a PUK candidate become Kirkuk governor recently thanks to

support by Shia parties and the boycott of the vote by the KDP. But the incursion makes Mr Talabani look weak, harming his image domestically ahead of Kurdistan's delayed parliamentary elections which are currently scheduled for 20 October.

## TESTING THE WATERS

Diyala is a vital operational area for the PMUs given its proximity to Iran. The force has recently been tasked with protecting Iranian pilgrims visiting Iraq's Shia shrines through border crossings in the province. It is also where a 1.2bn cfd-capacity pipeline carries Iranian gas to Baghdad and two power lines, the 400kV Diyala-Mersad and the 132kV Khaniqin-Serpel-o-Zahab, are located. Beyond this, poorly monitored border crossings make controlling the province lucrative for Iran-backed factions.

The PMUs are mostly headed by Hadi al-Amiri, leader of the historically Iran-backed Badr Organization, who hails from Diyala. But for years, Badr's influence in Diyala has been challenged by AAH. The incursion is understood to have been ordered by Talib al-Mousawi, head of PMU Diyala operations and a Badr loyalist. As such, it could also be seen as a blow to growing PUK-AAH ties.

Overall, the operation may have also tested the waters for the PMUs, allowing them to assess Peshmerga operational readiness in case of a future Federal takeover of the Gilabat/Qamar block. Or if they decide to carve out a larger security role within disputed areas. ♦♦

# Third Ship Abandoned In The Red Sea As Houthis Deepen Regional Conflict

***Yemen's armed Houthi movement has conducted its third major strike on a 1mn barrel tanker now abandoned in the Red Sea. The devastating event underlines once again the insecurity of the maritime channel.***

**Y**emen's Houthis returned to their Red Sea campaign in August after a near-two-week pause in dramatic style, forcing the abandonment of a third merchant vessel off their shores (the first since June) with devastating effect.

In the early morning of 21 August, two boats carrying Houthi forces approached the Sounion crude oil tanker 140km west of Hodeidah. Three projectiles struck the vessel knocking out its engine and forcing the crew to evacuate the burning ship. Houthi military media outlet MMY released a video taken the next day of an explosion and fireball rising from the ship.

As MEES went to press the vessel is drifting in the Red Sea and according to the Pentagon "appears to be leaking oil," with the US State Department warning that "through these attacks, the Houthis have made clear they are willing to destroy the fishing industry and regional ecosystems that Yemenis and other communities in the region rely on for their livelihoods." However, on 28 August, the EU's naval forces in the Red Sea under Operation Aspidos stated that "Operating assets in the area have confirmed that there's no oil spill, and the ship is still anchored and not drifting."

## 1MN BARREL TANKER ABLAZE

The Greek-owned Sounion crude tanker was carrying nearly 1mn barrels of Iraqi Basrah Heavy crude. Having departed Basrah on 11 August, the tanker was bound for Greece. The tanker has in the past delivered Iraqi medium and heavy crudes to Greece's 200,000 b/d Corinth refinery, as well as conducting ship-to-ship transfers offshore Kalamata.

The Sounion now acts as a reminder of the instability the maritime corridor faces. Since their attacks in November last year the Houthis have sunk two ships and killed four sailors (MEES, 21 June). Attacks from the Houthis have been dangerously effective with the deployment of drone boats since June, one of which sunk the Tutor coal carrier.

In an effort to avoid the sinking of the ship and a major oil leak, international pressure has been placed on the Houthis

for a temporary truce in the waters. After originally denying access to salvagers, the group acquiesced to EU negotiators on 28 August to allow boats to tow the tanker.

The Sounion was the third vessel owned by Delta Tankers to be attacked in the Red Sea in a matter of weeks following attacks against Delta Blue and Delta Atlantica on 8 and 12 August respectively. Like Sounion, both vessels had been carrying crude from Basra to the Corinth refinery of Greece's MOH according to data intelligence firm Kpler. The Houthis deliberately targeted Delta Tankers vessels, alleging that the firm has violated its ban on "entry to the ports of occupied Palestine."

Delta Tankers appears to have learned to avoid the Red Sea, with the Delta Spirit currently on a course around the southern tip of Africa as it carries a cargo of Basrah Medium to Corinth.

## A LIE AND TWO TRUCES?

As a member of the so-called "Axis of Resistance" of Iran-backed militias in the region, the Houthis' actions continue to be bound up with the war in Gaza and its spillover across the region. They continually have justified their attacks on merchant vessels in the Red Sea as a supposed embargo on ships supporting Israel's economy.

Speaking about the burning of the Sounion, Muscat-based Houthi spokesman Mohammed Abdel Salam says it was "an example of Yemen's seriousness in targeting any ship that violates the Yemeni ban on ships from passing to the ports of occupied Palestine [Israel] with the aim of putting pressure on the Zionist enemy entity to stop its aggression on Gaza."

In reality the Houthis have attacked ships that have no relationship with Israel. As yet no evidence has shown the Sounion has any links with Israel and vessel tracking data from Kpler does not show it ever docking at an Israeli port. With few vessels now opting for the perilous Red Sea route, there are few targets for the Houthis any more, making the group have to work harder to find justifications for its attacks.

The attacks come at a time when the Houthis may be seeking to escalate the ongoing regional conflict. On 19 July, a deadly Houthi drone attack in Tel Aviv prompted Israel to open a new front to its war, striking the Houthi-controlled Hodeidah port the following day (MEES, 26 July).

Hopes for the revival of a negotiated truce after a 28 July meeting in Rome between Israeli, Egyptian, Qatari, and American officials were quickly dashed

when Israel assassinated Hamas political leader Ismail Haniyeh in Iran three days later (MEES, 2 August).

Iran has vowed revenge for the attack, although this has yet to materialize. Instead, conflicts involving Iran-backed forces in the region have ramped up, with the Houthis seemingly playing their part in the Red Sea.

But far from acting only for the benefit of Iran, the attacks serve the Houthis' own domestic goals. Throughout this year the group has been participating in on-and-off negotiations with Saudi Arabia to finalize a truce with their opponents in Yemen, the internationally-recognized government.

## THE HOMEFRONT

Saudi Arabia has been pushing for a truce between the two sides in Yemen's nearly decade-old civil war particularly since the end of last year (MEES, 1 December 2023). Wanting to complete its withdrawal from the protracted conflict and ensure stability on its southern border, Saudi Arabia has put pressure on the government it supports to move towards an agreement.

Both sides are wrangling over key economic demands that neither side wants to abandon. The lifeblood of any functioning Yemeni government is oil revenues. Currently, the government controls the country's oil-rich territories, but an effective blockade on exports by the Houthis has stopped it reaping much-needed revenues (MEES, 3 November 2023).

The Houthis are demanding a share of oil revenues if they allow exports to restart. At its core, the oil income will provide the Houthis with effective political legitimacy, something they have managed to get a short-term supply of from the widespread support for the group's attacks in the Red Sea (MEES, 26 January).

The group won an economic victory at the end of July when the government had to backtrack on its sanctions against the Houthi central bank. According to sources quoted by independent think tank Sana'a Center for Strategic Studies, Saudi Ambassador to Yemen Mohammed al-Jaber pressured the Yemeni government to reverse its sanctions.

For months prior, the Houthis threatened direct attacks against Saudi Arabia (MEES, 19 July), a risk Riyadh is keen to eliminate with its push for a truce. If pressure continues to bear down on the internationally-recognized government, any truce may end in the Houthis' favor: another victory for its bellicose tactics. ♦♦



*Following the 60,000 b/d expansion of Egypt's newest refinery, Midor Alexandria, the country's two oldest plants are having new units added. But national throughputs remain some 300,000 b/d below nominal 820,000 b/d capacity.*

**E**gyptian state energy engineering firm Petrojet announced on 25 August that it had completed manufacturing work on the 60-meter vacuum distillation tower which forms a key element of ongoing expansion work at the century-old 60,000 b/d Suez (SOPC) refinery.

The \$250mn expansion project which the London-based EBRD development bank is funding in full involves five key new units:

- \*Vacuum Distillation Unit (VDU) to replace the existing unit;
- \*Distillate Hydrotreating Unit (DHTU) to replace two such existing units;
- \*Delayed Coker and support-units to replace existing units;
- \*New Vacuum Distillation Unit to produce asphalt;
- \*New Vapor Recovery Unit.

The aim is to allow on-site upgrade of the plant's typical 5,000 tons/day (33,000 b/d) output of atmospheric residue into Euro 5-6 specification diesel and gasoline, as well as low sulfur marine bunker fuels, LPG, jet fuel, petcoke and asphalt.

Though the EBRD's loan was approved in 2018, the key work tenders were only issued in March 2020, with site work beginning much more recently.

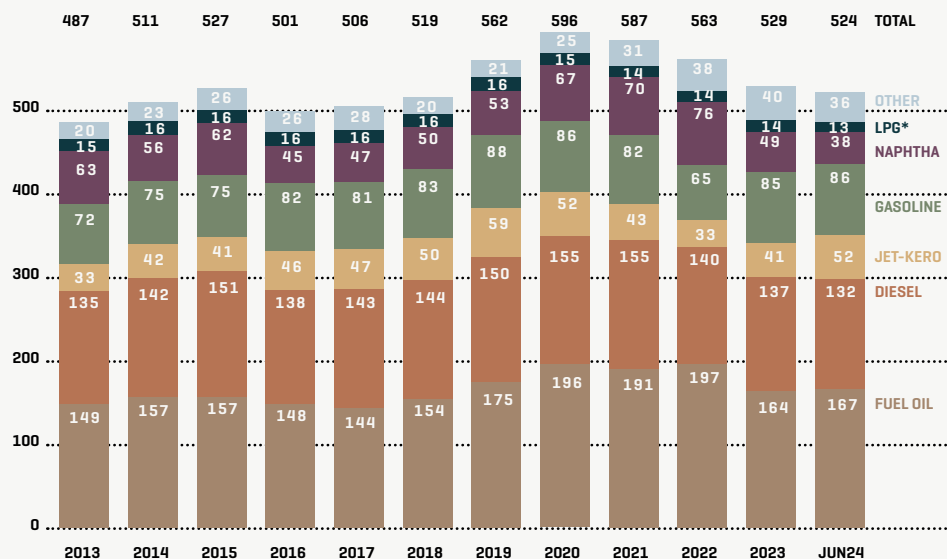
Egypt's refining fleet is split across seven plants of varying degrees of decrepitude. The latest addition, taking total CDU capacity to 820,000 b/d (see table), came in Q2 with completion of \$2.7bn expansion from 100,000 b/d to 160,000 b/d at Alexandria's Midor refinery (MEES, 17 May). \$1.7bn EPC contractor TechnipEnergies confirms in its Q2 results on 1 August that "in the 2nd quarter, the Midor refinery expansion – a facility that will deliver cleaner fuels to Egypt – reached nameplate capacity with performance tests executed successfully." New units include a 60,000 b/d CDU, 60,000 b/d VDU and 44,000 b/d diesel hydrotreater (MEES, 3 April 2020).

TechnipEnergies is also EPC contractor on Egypt's next major refinery expansion project, the \$2.5bn, 60,000 b/d hydrocracker based-expansion of the 90,000 b/d Assiut refinery in southern Egypt. Here work began in early 2023 (MEES, 6 January 2023) and as of last month was 77% complete and on track for December 2025 completion (MEES, 26 July).

Notwithstanding the Midor expansion – and, though Technip's comments imply that the new units have hit 100% capacity they do not necessarily imply this for the plant as a whole – there is little sign of an uptick in Egypt's overall refining stats.

Latest stats from Jodi indicate both refinery

**EGYPT'S REFINED PRODUCTS OUTPUT HIT A RECORD 600,000 B/D FOR 2020 ON ERC START-UP BUT NEW MIDOR UNITS FROM LATE 2023 HAVE PROVIDED LITTLE-TO-NO DISCERNABLE BOOST ('000 B/D)**



\*REFINERY OUTPUT ONLY. SOURCE: JODI, MEES.

#### EGYPT'S REFINERIES: QUANTITY OVER QUALITY

|                             | Start-Up | Capacity  |            | notes                                                   |
|-----------------------------|----------|-----------|------------|---------------------------------------------------------|
|                             |          | mn t/y    | '000 b/d   |                                                         |
| Cairo [CIRC]                | 1969     | 10        | 200        | 90kbd ERC hydrocracker complex added 2019.              |
| Midor, Alexandria           | 2001     | 8         | 160        | Expanded from 100kbd 1H 2024.                           |
| Nasr Petroleum, Suez [NPC]* | 1913     | 6.5       | 130        | New 1.2mn t/y condensate splitter (late-2024 start-up). |
| Alexandria Petroleum [APC]  | 1957     | 5         | 100        | \$650mn upgrade plan cancelled 2021.                    |
| Assiut [Asorc]              | 1987     | 4.5       | 90         | \$2.5bn, 60kbd hydrocracker-based expansion (Dec 2025). |
| Amreya [APRC]               | 1972     | 4         | 80         |                                                         |
| Suez Oil Processing [SOPC]  | 1921     | 3         | 60         | Ongoing upgrade includes several new units.             |
| <b>TOTAL*</b>               |          | <b>41</b> | <b>820</b> |                                                         |

\*CAPACITY FIGURES EXCLUDE 1.2MN T/Y NASR CONDENSATE SPLITTER WHICH HAS YET TO BEGIN REGULAR OPERATIONS. SOURCE: MEES.

throughputs and output averaged 510,000 b/d for 1H 2024, well down on 2023 and on pace for the lowest figures since 2017, whilst the latest figures for June are only slightly higher (see chart).

For 2023, national throughputs of 530,000 b/d were just 70% of the country's then primary distillation capacity of 760,000 b/d.

The most recent by-company runs figures, for the 2022-23 financial year (y/e 30 June 2023), indicate near-across-the-board low runs figures. SOPC throughputs of 2.2mn tons (44,000 b/d) equate to 73% of capacity; for Alexandria's ARPC, 2022-23 throughputs of 3.2mn tons (64,000 b/d) imply an average run rate of 80%; for Assiut the figure is 3.3mn tons (66,000 b/d; 73%). And whilst Cairo refinery, the country's largest, does somewhat better (8.4mn tons or 168,000 b/d, 84% of 200,000 b/d capacity), for Nasr Petroleum the figure is just 2.4mn tons (48,000 b/d, 37% of capacity).

#### NASR PETROLEUM: CONDI BOOST

Nasr Petroleum in Suez, which started up in 1913, is Egypt's oldest refinery. But it also has the country's newest primary distillation unit,

with Petrojet on 3 June announcing mechanical completion of a 1.2mn t/y condensate splitter which, when it enters full service, will take overall Nasr primary distillation capacity to 7.7mn t/y. Work continues on an associated 320,000 t/y vapor recovery unit. Speaking on 4 August, Nasr Petroleum chair Mohamed Abdullah said that trial operations would begin in December.

Egypt is self-funding the Nasr expansion. And, with multilateral funding for hydrocarbon-related projects drying up, this is likely to remain the state of affairs for any future expansion projects.

#### EBRD FUNDING DRIES UP

In terms of EBRD funding, the SOPC loan will likely be the last. Though the EBRD in October 2019 provisionally signed up to fund \$250mn of a similar project costing at \$647mn at the 100,000 b/d Alexandria (APC) refinery (MEES, 9 October 2019), Egypt withdrew the funding request in November 2021, just days before it was due to be considered by the EBRD board. Cairo had apparently been tipped off that it would be rejected. With no alternate funding forthcoming the project was canned. ♦♦

# Saudi Petchems Firm Sipchem Inks Capacity Expansion Deals

*Saudi Arabia's Sipchem has signed two expansion projects worth \$359mn in the space of two months as it aims to double capacity by the mid-2030s.*

**S**audi petrochemicals firm Sipchem announced on 26 August that it has awarded engineering, procurement and construction (EPC) contracts for the expansion of its Al Waha subsidiary's propylene and polypropylene complex.

The contracts, worth \$169mn, were made to Singapore's SCG E&C and its regional subsidiary SGC Arabia on 26 August. In a filing with the Tadawul, Sipchem says that the work entails the addition of 72,000 t/y of propylene capacity and 150,000 t/y of polypropylene capacity to Al Waha's facilities at Jubail. The work is expected to take 28 months, implying end-2026 completion, following which Al Waha will have capacity to produce 537,000 t/y of propylene and 600,000 t/y of polypropylene.

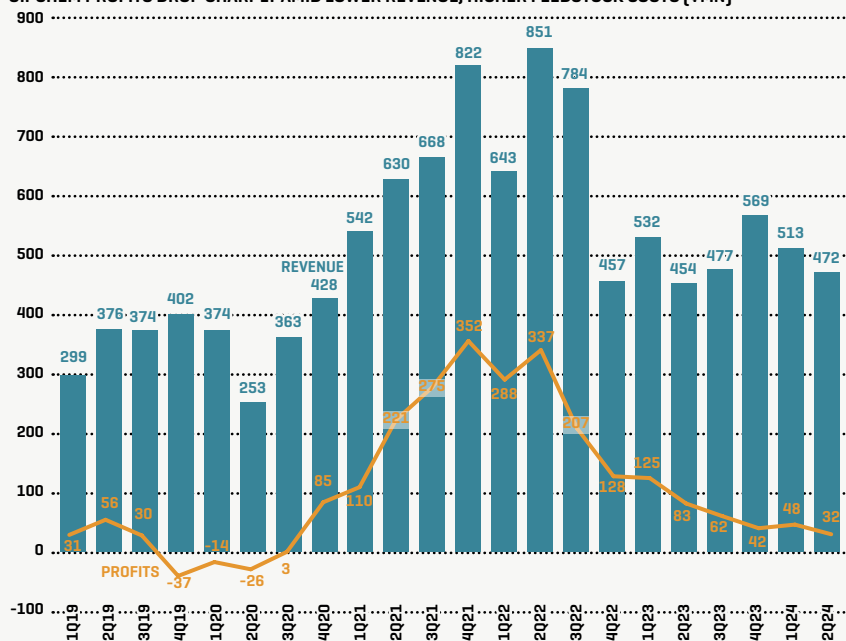
The Al Waha expansion is part of Sipchem's broader plans to double capacity by the middle of the next decade. CEO Abdullah Saif al-Saadoon said in 2021 that the firm is studying \$6.6bn of projects with Saudi Arabia's Ministry of Energy through the Shareek Program which is intended to boost the role of the private sector in diversifying the kingdom's economy (MEES, 29 October 2021). The CEO said at the time that he envisaged doubling the firm's production capacity over the next 10-15 years.

The award comes just one month after Sipchem awarded a \$190mn EPC contract to SGC E&C and SGC Arabia for a 70,000 t/y expansion of its 220,000 t/y ethylene vinyl acetate (EVA) plant in Jubail. The 40-month contract is due to be completed by end-2027. The plant is operated by Sipchem's International Polymers Company subsidiary, which is a 75:25 venture with Korea's Hanwha Chemical. Sipchem says the products contribute to a number of industries, including "the manufacture of solar power cell encapsulants and hot-melt adhesives."

## TROUBLESOME HEADWINDS

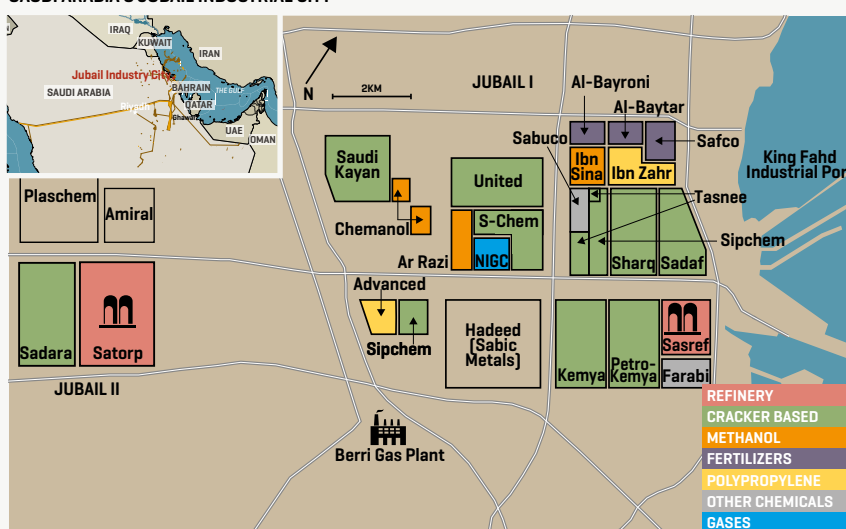
The awards come as Sipchem is navigating a difficult operational landscape. Profits dropped by 60% year-on-year to just \$32mn in Q2. This was the lowest quarterly figure since 3Q 2020 during the peak of the Covid-19 pandemic, when it made a profit of just \$3mn (see chart).

SIPCHEM PROFITS DROP SHARPLY AMID LOWER REVENUE, HIGHER FEEDSTOCK COSTS (\$MN)



SOURCE: SIPCHEM, MEES.

SAUDI ARABIA'S JUBAIL INDUSTRIAL CITY



Sipchem's largest markets are in Asia, with the region accounting for 44% of sales volumes in 2022 according to the firm's latest Annual Report, against 14% in Saudi Arabia and 12% in Europe. Nevertheless, CEO Saadoon flags up the ongoing Houthi attacks against shipping in the Red Sea (see p11) as a significant headwind for the firm. Mr Saadoon said the Q2 drop in profits was in part driven

by the redirection of available shipping capacity to Europe as diversions have caused Asia-Europe transit times to increase. The CEO earlier said in March that shipping costs were up 15-18% as a result of the Red Sea diversions.

At the same time, weak Chinese demand has resulted in Sipchem increasing exports to other markets, including to Europe, says Mr Saadoon. ♦♦





# Kuwait Secures Qatari LNG Amid New Power Demand Record

*KPC has signed a major new LNG import deal with QatarEnergy to nearly double volumes to 7mn t/y from January. The power sector remains the largest driver of gas consumption, although Kuwait's biggest problem remains lack of generation capacity.*

**K**uwait and Qatar further strengthened their energy ties this week when KPC signed up to import an additional 3mn t/y of Qatari LNG over 15 years from January 2025. The agreement near-doubles Kuwait's contracted volumes with Qatar to 7mn t/y, supplementing an existing 3mn t/y 15-year agreement signed in 2020 and another 2020 deal Qatar signed with Shell to supply 1mn t/y to Kuwait for 15 years (MEES, 14 February 2020).

The agreement was signed by KPC CEO Sheikh Nawaf Al Sabah and QatarEnergy's CEO Saad al-Kaabi in Kuwait City. Mr Kaabi says the new arrangement "constitutes a central element in supporting Kuwait's sustainability goals particularly in the electricity generation sector." Sheikh Nawaf highlighted LNG's role in securing feedstock for Kuwait's power sector, telling Qatar News Agency (QNA) that the volumes will help meet the increasing demand for electricity during the peak summer season.

Initially the volumes will come from Qatar's existing 77mn t/y capacity (see map, p7), but Mr Kaabi said

that eventually some volumes could be supplied from QatarEnergy's expansion facilities. The first new trains are due online in 2026, and will take capacity to 142mn t/y by the end of the decade through three phases.

The new sales agreement comes as Kuwait is experiencing an unprecedented power crisis, with high demand for air conditioning forcing the Ministry of Electricity and Water (MEW) to roll out a number of power cuts since June (MEES, 21 June). Electricity demand has risen at a rapid pace in recent years, but generation capacity has fallen in 2024 as years of political dysfunction and bureaucracy have prevented new facilities from being developed.

## SUPPLIERS OF CHOICE

Qatar has been Kuwait's largest supplier ever since the latter began importing LNG in 2009, and last year it received a record 3.41mn tons from its neighbor. At 56%, Qatar's share of Kuwaiti imports was the highest since 2013 as overall imports edged up by 2.5% to 6.1mn tons (see chart 1).

While additional LNG imports won't resolve the core of Kuwait's power problem – insufficient power generation capacity – it will provide Kuwait with improved assurances on LNG import prices and volumes. Of Kuwait's 2023 LNG imports, some 2.5mn tons, 40% of the total, were spot cargoes according to Giignl.

Both countries see opportunities in strengthening bilateral energy ties. Close proximity lowers shipping costs, and just as Qatar is Kuwait's supplier of choice for LNG, QatarEnergy imports all of the IMO-compliant VLSFO (<0.5% sulfur) it needs for its local bunkering market from Kuwait's 615,000 b/d Al Zour refinery (MEES, 28 July 2023).

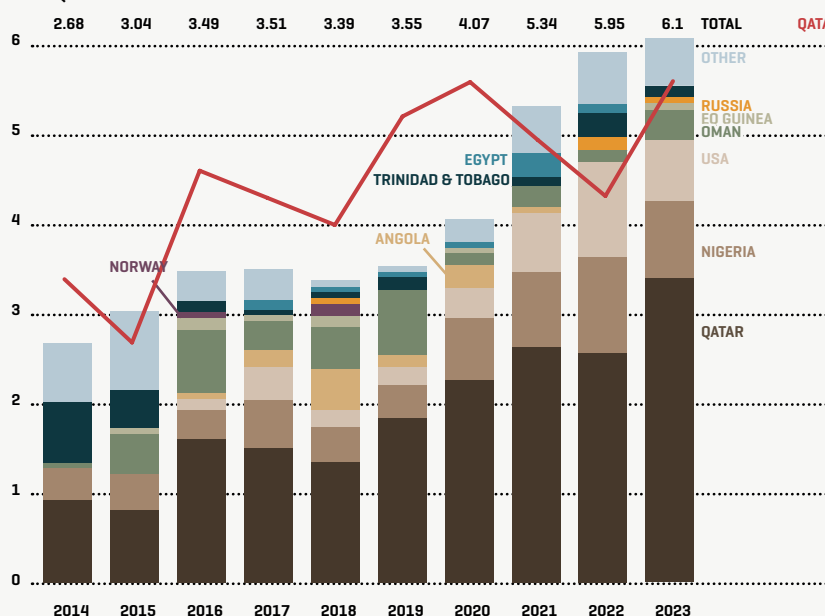
Kuwaiti VLSFO exports to Ras Laffan Industrial City Port began in 2023 and have thus far averaged 15,000 b/d this year, on a par with last year's flows.

## POWER SECTOR...AND BEYOND

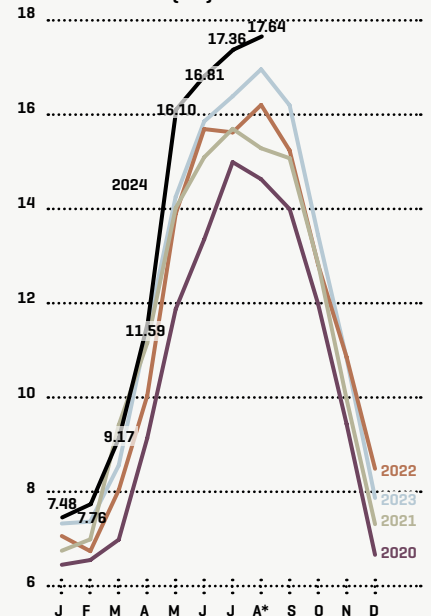
LNG imports are key to meeting the power sector's increased demand for gas

Continued on – p15

**1: KUWAIT LNG IMPORTS (MN T/Y) ROSE ABOVE 6MN T/Y FOR THE FIRST TIME IN 2023, WITH QATAR SUPPLYING 56% OF VOLUMES**



**2: KUWAIT'S POWER DEMAND HIT A NEW ALL-TIME RECORD IN AUGUST (GW)**



Continued from – p14

during the hot summer months, with volumes typically peaking in Q3. Kpler data shows that imports year-to-date are around 660,000 tons above the same period last year, putting Kuwait well on track for another record year of imports.

Kuwait also resorts to burning more oil in its power plants during the summer, although MEW has switched power plants from more polluting HSFO to Al Zour's VLSFO. Oil burn, primarily of fuel oil, was at 193,000 b/d in June.

## NEW PEAK LOAD: IS IT OVER?

Securing more LNG supplies is a positive development for Kuwait, but until the emirate can bring new generation capacity online it will continue to suffer blackouts. On the morning of 27 August, MEW said it was cutting supply to non-residential areas due to high loads and emergency repairs at power plants, only to announce later that day that peak load had hit a new record 17.64GW (see chart 2). The previous record of 17.36GW was set in July.

Kuwait will be hoping it has now passed the peak, and while the 27 August figure is a massive 700MW above last year's peak of 16.94GW, it is less than the ministry's previous forecast of 17.96GW. With electricity consumption set to continue increasing, the challenge of meeting demand will be even greater next year. MEW will become increasingly reliant on imports though the GCCIA interconnector from Saudi Arabia. These flows have been running close to the link's 600MW operational limit this summer.

Making matter worse, MEW's generation fleet, much of which dates from the 1970s, has had many units de-rated as ageing and delayed maintenance have taken their toll. Installed capacity was revised downward from 20.25GW at end-2023 to 19.38GW in June, a loss of more than 870MW when Kuwait needs every megawatt it can muster. Most of the reduction was in steam turbines and gas turbines, while there was a slight 13MW gain from more efficient combined cycle units.

Looking ahead, MEW plans to develop an extra 7.5GW of CCGT capacity, but even an April-approved 900MW CCGT expansion at the 7GW Sabiya power complex is yet to proceed (MEES, 5 April).

CCGT conversions will be key for Kuwait to boost the efficiency of its power fleet, and it is also looking to build out renewables capacity. Kuwait is far behind other GCC players, although last week consortia were shortlisted for 1.1GW of solar capacity at the Dibdibah Power and Al-Shagaya Phase 3 project. The test will be to see an award by year-end. ♦♦

# Fertiglobe Firms Up Egypt-Germany Green H2 Deal

*Egypt's first green hydrogen project is slated for FID in 1H 2025. Fertiglobe and partners must decide if firm sales of 54% of volumes for the first six years provide a sufficient income guarantee.*

**H**intco, the German state-backed entity charged with securing green hydrogen supplies, on 28 August announced the inking of a formal contract for UAE-Egypt JV Fertiglobe to supply Germany with green ammonia from 2027, firming up a tender award made last month (MEES, 19 July).

Under the deal worth "up to €397mn" Fertiglobe will provide "renewable ammonia" from its facilities at Ain Sukhna in Egypt "to European ports" at a delivered price of €1000/ton. Deliveries are slated to start at a "potential" 19,500 tons in 2027, "with total deliveries expected to rise to a cumulative 397,000 tons by 2033, contingent on production and supply conditions," Hintco says.

The €1000/ton price is in line with recent Platts assessments for green ammonia delivered to northwest Europe and is around twice the assessment for 'regular' grey ammonia.

Fertiglobe, a JV of Adnoc and Egypt's Orascom, has signed a 20-year contract as sole offtaker for the proposed 13,000 t/y of green hydrogen output (from an

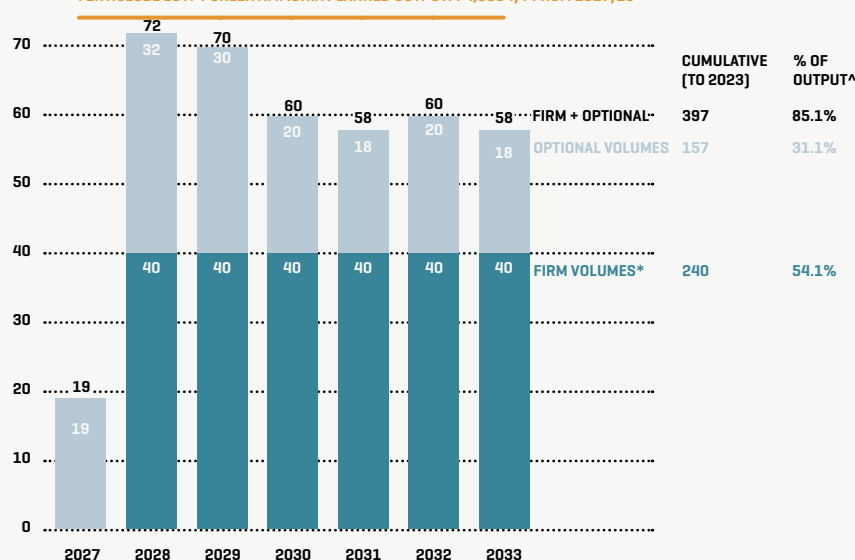
100MW electrolyzer powered by 270MW of renewables) of the Egypt Green Hydrogen project earmarked for a site adjacent to Fertiglobe's at Ain Sukhna.

Fertiglobe says this will produce 74,000 t/y of green ammonia. As such the German sales deal, which equates to 63,000 t/y over 2028-2033, nominally equates to 85% of proposed output over this period. However, this falls to 54% based on only the "guaranteed minimum offtake" volumes of 40mn t/y for 2028-33 (with zero for 2027) (see chart).

Norway's Scatec, which operates Egypt Green with 45% (Fertiglobe 19.5%, Orascom 19.4%, The Sovereign Fund of Egypt 13.6%, Egypt Electricity Holding Co 2.5%) previously said it expected tying up financing for the Egypt Green project to be relatively straightforward, with firming up sales the key hurdle to taking FID as planned in 1H 2025. Fertiglobe, in its Q2 results on 1 August says the German deal "provides critical demand and pricing support to help Fertiglobe and the Egypt Green Hydrogen consortium reach a Final Investment Decision (FID) on the project in 1H 2025." ♦♦

**FERTIGLOBE'S DEAL TO SUPPLY GERMANY WITH EGYPTIAN GREEN AMMONIA NOMINALLY EQUATES TO 85% OF OUTPUT CAPACITY BUT A LARGE PORTION OF THIS IS OPTIONAL VOLUMES ('000 TONS)**

FERTIGLOBE EGYPT GREEN AMMONIA PLANNED OUTPUT: 74,000 T/Y FROM 2027/28



\*GUARANTEED MINIMUM OFFTAKE\*. <sup>a</sup>PERCENT OF OUTPUT FIGURES EXCLUDE 2027. SOURCE: FERTIGLOBE, MEES.





# Morocco \$7bn, 1mn t/y Green Ammonia: Feed Imminent For 2027 Start Up

**A**ustralian engineering firm Worley says in its freshly-released 2024 report that it and Moroccan fertilizers giant OCP are moving ahead with plans to produce 1mn t/y of green ammonia by 2027.

In the report, released on 27 August alongside its results for y/e 30 June, Worley says “the world’s first Power-to-X green ammonia program in Morocco” which it costs at \$7bn will turn Morocco into a “global hydrogen hub” and form the key element of the \$12bn 2023-27 “Green Investment Program” of Moroccan state fertilizers giant OCP.

Worley says it will commence Front-End Engineering & Design (FEED) at the Tarfaya site in the far south of Morocco “in September 2024 and when complete, will progress to engineering, procurement and construction management (EPCM).” “The project is expected to be operational in 2027,” Worley adds, with target output of 1mn t/y of green ammonia produced from green hydrogen which in turn will be produced by 1.65-2GW of electrolyzer capacity powered by 2.3GW of wind and 1GW of solar PV.

Some 2.7GWh of battery storage is also planned for the coastal Tarfaya site as well as “a transmission grid” and 60mn m<sup>3</sup>/year of water desalination capacity – deliberately oversized

to enable the additional supply of drinking water to local communities.

Worley says there is the potential to triple green ammonia output capacity at the site to 3mn t/y by 2032.

Project delivery is being led by JESA, an OCP/Worley joint venture set up in 2010 which Worley says is “now the largest engineering group in Morocco and provides professional services around the world.”

Both the 1mn t/y 2027 figure and 3mn b/d by 2032 are in line with headline green ammonia targets in OCP’s \$12bn 2023-27 ‘Green Investment Program’ which also targets total “clean energy” generation of 5GW by 2027 and 13GW by 2032, and carbon neutrality by 2040.

## SECOND SITE: FEED IN NOVEMBER

This \$12bn figure includes plans for a second site, Jorf Lasfar, where Worley is wrapping up pre-FEED with a view to launching FEED in November.

The “Jorf Hydrogen Project (JH2P)” envisages “an industrial-scale green ammonia plant delivering 100,000 tons per year” on a greenfield site alongside OCP’s existing Jorf facilities. “Delivery is being led by JESA in Morocco and Worley’s team in Spain and is currently in pre-Feed. Feed and detailed design

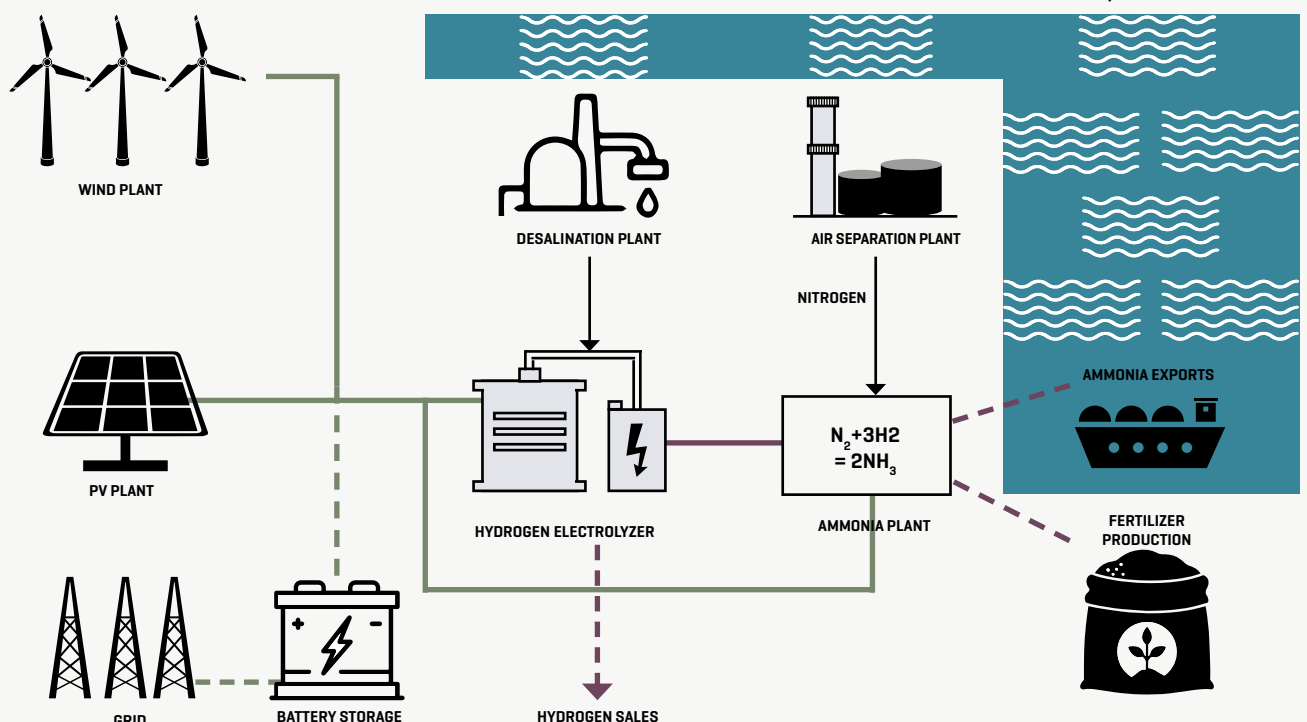
are expected to commence in November 2024 and when complete, will progress to EPCM. The project is expected to be complete in 2026,” Worley says.

Jorf, 100km south of Casablanca, is Morocco’s largest port and site of OCP’s key current facilities which produce fertilizer from the state-owned firm’s world-leading phosphate production together with imported ammonia. The scale of OCP’s operations means it is the world’s fourth largest ammonia importer to the tune of 2mn tons/year: replacing this with locally-produced ‘green’ output is thus the key goal of its \$12bn green investment plans (MEES, 23 June 2023).

OCP’s green plans also envisage leveraging its world-beating phosphate output to become a major producer of EV Batteries (MEES, 6 October 2023). OCP targets output of 30,000 tons of intermediate products for Lithium Iron Phosphate batteries by 2027.

Worley and OCP’s Tarfaya plans are ambitious, but they are not the most ambitious ‘Power to X’ project in southern Morocco. This honor goes to UK-based start-up Xlinks which envisages 10.5GW of renewables capacity just up the coast from Tarfaya supplying 3.6GW of power to the UK via 3,800km submarine HDVC cables at a cost of \$20-25bn (MEES, 1 December 2023). ♦♦

## GREEN HYDROGEN/AMMONIA PRODUCTION CHAIN



SOURCE: SCATEC, MEES.

# Saudi Oil Export Revenues Rise Despite Drop In Volumes

*When Saudi Arabia and its allies decide whether to ease production cuts as planned from October, they will have to assess whether to prioritize market share or revenues. For Saudi Arabia, oil export revenues last quarter were the highest in more than a year, despite a 1mn b/d year-on-year drop in volumes which has seen the US open up a 3mn b/d lead as the world's largest oil exporter.*

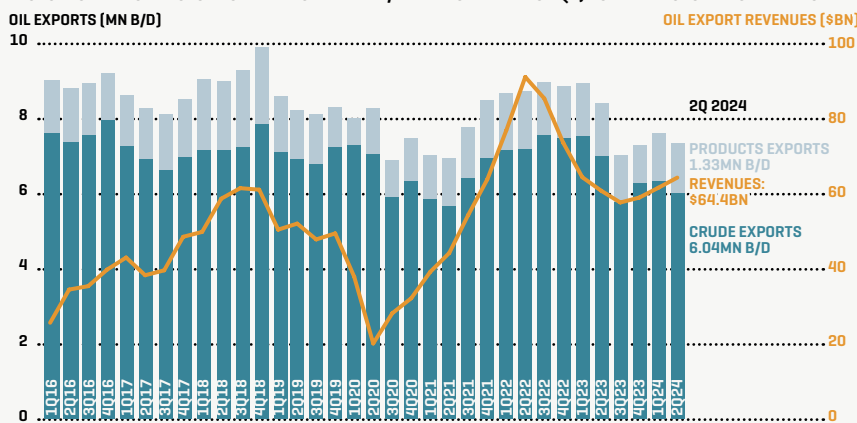
**S**audi Arabia has been implementing deep Opec+ production cuts since July last year, and exports have fallen accordingly. The voluntary production cuts have helped to prop up oil prices amid demand concerns in China, but they have come at the cost of losing market share to producers outside of the group. Saudi Arabia and seven other Opec+ states (the 'Group of Eight') are due to begin unwinding their 2.2mn b/d of voluntary cuts from October in a bid to reclaim some lost market share. But, with markets precariously balanced and expected to weaken further in 2025, major doubts persist over whether Opec+ can proceed as planned (MEES, 7 June). "With demand set to slow after summer, and both Opec and non-Opec supply to increase from 4Q, we foresee a softening balance, turning to surplus in 2025," notes Morgan Stanley.

Gross Saudi oil exports averaged just 7.51mn b/d over the first half of the year, down more than 1mn b/d year-on-year, and are well on course for the lowest full year figure since 2010. If the cuts are eased from October then Saudi exports will stand a better chance of being lifted above 2021's recent lows of 7.57mn b/d, but it could be a close-run thing.

Although export volumes have declined significantly this year, revenues have been on the rise and Riyadh will be cautious when it comes to making production policy decisions which could threaten to reverse the recent revenue gains. Saudi oil export revenues were up 5.8% year-on-year at \$64.4bn in Q2, for the highest quarterly figure since 1Q 2023's \$64.5bn, despite export volumes being down 1.06mn b/d year-on-year (see chart 1).

The default position is that Saudi Arabia will increase production by 83,000 b/d in October as the Group of Eight returns a total of 180,000 b/d. However, Saudi Minister of Energy Prince Abdulaziz bin Salman has emphasized that the easing of cuts could be paused or reversed and the producers effectively have until early-September

1: SAUDI OIL EXPORT VOLUMES WERE DOWN 1MN B/D YEAR-ON-YEAR FOR Q2, BUT REVENUES ARE ON THE RISE



SOURCE: JODI, GENERAL AUTHORITY FOR STATISTICS, MEES.

2: SAUDI ARABIA OIL EXPORTS HAVE DROPPED AMID DEEP OPEC+ PRODUCTION CUTS WHILE US EXPORTS\* CONTINUE TO SOAR AND RUSSIAN VOLUMES OVERTAKE THE KINGDOM (MN B/D)



\*CRUDE, NGLS AND OIL PRODUCTS. SOURCE: EIA STEO, JODI, RUSSIAN MINISTRY OF ENERGY, IEA, MEES.

to decide whether to change course.

"We have given ourselves the liberty to maintain our pre-cautious and pre-emptive approach. That's why we said we can pause and we can reverse, because we are human and our scope of judgement is limited to the data and information we have today," the Saudi minister said in June. "If things change either way, we will have to figure out a way of attending to that." If Opec ministers had hoped that markets would have since strengthened, they will have been disappointed, although renewed instability in Libya could result in as much as 1mn b/d being shut in (see page 9).

## CEDING MARKET SHARE

Saudi Arabia has traditionally been the world's largest oil exporter, but it is on course to drop down to No.3 this year as a result of the production cuts. It was only in 2019 that the US inched ahead of Saudi Arabia as the world's largest liquids exporter, but unencumbered by Opec+ restrictions US producers have massively ramped up

production and exports in recent years and have opened up a 3mn b/d lead on Saudi exports over the first half of 2024 (see chart 2).

US exports hit a record 10.15mn b/d in 2023 and have climbed further to a massive 10.62mn b/d over the first half of the year. Although the pace of production gains has slowed recently, the rate is widely forecast to pick up again in 2025, helping to drive further increases in exports.

Exports of US liquids are now well in excess of Saudi Arabia's all-time high of 9.34mn b/d in 2018. Even were Opec+ production cuts to be lifted entirely, Saudi Arabia's ability to challenge the US for the No.1 position looks limited given its crude oil production capacity of around 12.2mn b/d and domestic demand of 2.4mn b/d. This may change by 2030, when Saudi Arabia plans to have halted burning around 1mn b/d of oil for power generation and boosted liquids output by another 1mn b/d from large gas developments such as

Continued on - p18





## Continued from – p17

Jafurah unconventional project (MEES, 15 March), but near-term gains will be limited.

Saudi Arabia is also facing competition from within Opec+, with the IEA's latest monthly oil market report showing Russian oil exports averaging 7.78mn b/d over the first half of the year. Although this does represent a slight dip from 7.90mn b/d for 2023, Russia still overtook Saudi Arabia's as the global No.2 oil exporter as exports from the kingdom dropped faster. Russia's compliance with its Opec+ voluntary cuts has been shaky and it submitted a compensation plan in July to make up for overproduction (MEES, 26 July).

It's a far cry from the picture two years ago when many forecasts pointed to Russian production and exports dropping off a cliff in the wake of its invasion of Ukraine. Instead, Russia has redrawn its supply chains, shifting exports from Europe and the US to Turkey, India and China. This shift has been especially pronounced in India, where Russian crude supplies have surged from barely 100,000 b/d in 2021 to more than 1.8mn b/d this year (see chart 3). Meanwhile having held the top spot in China over 2019-2022, Saudi Arabia was 600,000 b/d below Russia's 2.2mn b/d for the first half of 2024.

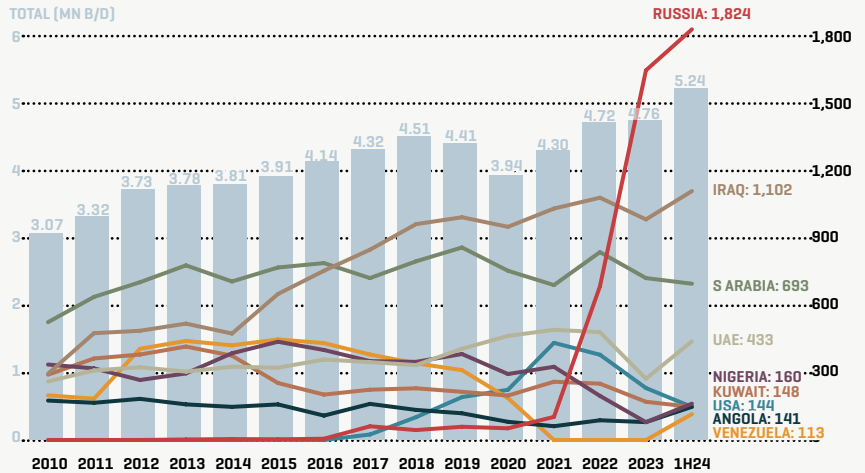
## GO WEST: EUROPE REVENUES RISE

The majority of Saudi Arabia's oil exports flow east to Asia, and China remains the kingdom's largest single market, both by volume and revenue. However, the latest government statistics show that the value of exports (including non-oil) to Europe have exceeded those to China through the first half of the year (see chart 4). The \$13bn of exports to Europe last quarter was the highest figure to the continent since the third quarter of 2022.

Saudi oil exports to Europe had increased in 2022 as Saudi Arabia helped backfill the exodus of Russian volumes, with crude exports increasing from 517,000 b/d to 759,000 b/d. They dropped back down to 678,000 b/d in 2023 amid increasing competition from the US, but are on course to increase again in 2024 as Saudi Arabia capitalizes on its geographically advantageous position. Houthis attacks on shipping in the southern Red Sea have forced Gulf-Europe shipments to divert around the southern tip of Africa resulting in higher shipping costs, but Saudi Arabia has been able to continue safely exporting from its own Red Sea terminals located north of the danger zone (see p11).

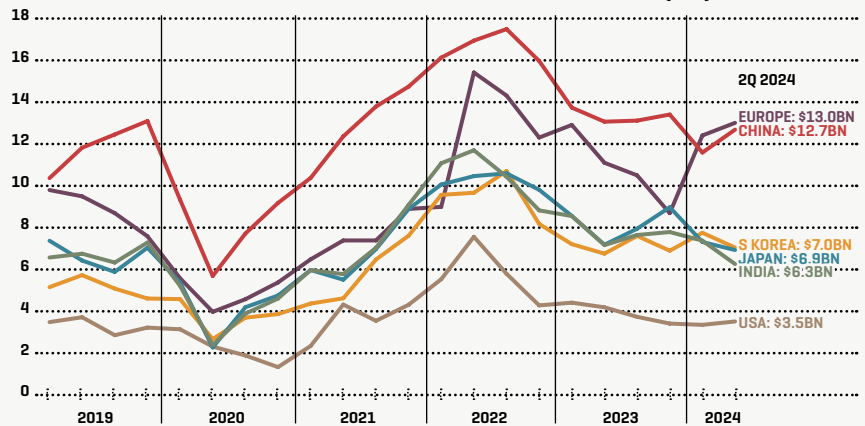
Not just are overall volumes up, but so are those of higher-value refined products. Kpler data shows that Saudi exports of clean products to Europe and Egypt's Mediterranean storage and trading hub of Sidi Kerir increased from 355,000 b/d last year to 400,000 b/d so far this year. The gains have come from exports of gasoil/diesel and gasoline, and there has been a marked shift

## 3: INDIA'S TOP CRUDE SUPPLIERS ('000 B/D): RUSSIA SURGES AHEAD AS TOP SUPPLIER AS IMPORTS TOP 5MN B/D



SOURCE: INDIA COMMERCE MINISTRY, MEES.

## 4: SAUDI ARABIA'S KEY EXPORT MARKETS: EUROPE REVENUES RISE ABOVE THOSE FROM CHINA OVER THE FIRST HALF OF 2024 (\$BN)



SOURCE: GENERAL AUTHORITY FOR STATISTICS, MEES.

of exports from the Gulf coast to the Red Sea export terminals to enable European shipments to avoid the Bab al-Mandeb.

Much of the gains have come from increased activity at Saudi Arabia's youngest refinery, the 400,000 b/d Jazan refinery on the southwestern coast just 90km from the Yemen border. Exports from Jazan to Europe and Sidi Kerir have increased from just 5,000 b/d last year to 67,000 b/d this year, with overall exports from the facility up from 91,000 b/d to 148,000 b/d over the same period according to Kpler. 105,000 b/d of the refinery's exports have been of high value gasoline and ultra low sulfur diesel (ULSD).

## CHINA FOCUS REMAINS

China is Saudi Arabia's largest market for crude oil exports, but it has been increasingly squeezed out by discounted Russian volumes over the past two years. Chinese crude imports from Saudi Arabia peaked at 1.75mn b/d in 2021, before dipping to 1.72mn b/d last year and 1.60mn b/d so far this year.

Aramco cut June allocations for Chinese term customers to a five-year low of around 36mn barrels (1.20mn b/d), with July volumes also kept low, ensuring that arrivals will remain low in August. However, Aramco boosted August allocations to 46mn barrels (1.48mn b/d) and kept them at 42.5mn barrels (1.42mn b/d) for September,

pointing to a rebound in arrivals from September onwards. October allocations will be made in the first week of September.

Certainly, Aramco doesn't intend to lose market share in China for any lengthy period in time. The firm is prioritizing picking up equity positions in integrated refining and petrochemicals facilities in China both to secure and future-proof demand for its core offerings (MEES, 9 August). Aramco has signed preliminary agreements to take 10% stakes in four Chinese refiners since 2023, but the only one to be converted into a final agreement to-date is with Chinese independent Rongsheng (MEES, 28 July 2023). Rongsheng was allocated the most Saudi cargoes for September, with its 16mn barrels out of 42.5mn well ahead of Unipet's 10.5mn.

Aramco EVP of Products and Customers Yasser Mufti is one of the leading personnel in developing and implementing these partnerships with Chinese refiners. During a 27 August speech at China's Qingdao Multinationals Summit, Mr Mufti emphasized that "we have frequently chosen to invest in China because we believe in its long-term growth potential." He added that it was at the same summit last year that an MoU to invest in Shandong Yulong was signed "And we are encouraged by the good will on display from all sides as this deal moves closer to a win-win reality on the ground" (MEES, 13 October 2023). ♦♦

### SAUDI ARABIA'S SEC: \$4BN CREDIT FACILITY

The Saudi Electricity Company (SEC) announced in a 25 August filing to the Tadawul that it has signed International Syndicated Revolving Credit Facilities worth \$4bn with a number of international and regional banks. The loan duration is three years, extendable by another two, and SEC says the purpose is for general financing and general corporate purposes. SEC's capital expenditure surged by 51.8% last year to a six-year high SAR41.6bn (\$11.1bn), with the bulk of the increase focused on transmission and distribution. With SEC investing to boost Saudi Arabia's generation capacity and prepare its grid to integrate renewables, investment will remain high and capex guidance for 2024 is SAR35-41bn (\$9.3-10.9bn).

### CRESCENT PETROLEUM TO AWARD IRAQ SEISMIC CONTRACT

Sharjah-based Crescent Petroleum is planning to award a 3D seismic contract for its Khashim al-Ahmar/Injana block in Diyala province. An industry source tells MEES that the company has made good progress in recent months after completing de-mining work and is currently conducting surveys to begin civil works at the site. The award must be approved by Iraq's oil ministry and an announcement is expected next month.

The seismic work is intended to help Crescent achieve its existing target of up to 250mn cfd early production from Khashim al-Ahmar/Injana (MEES, 20 October 2023). Gas will be crucial for power provision in Diyala, feeding the nearby 1GW gas-fired Mansuriya plant. Subsequent phases would take output to 400mn cfd. The Emirati firm has been able to commence work at the block given that it is relatively distant from disputed areas with Iraqi Kurdistan, unlike its adjacent Gilabat-Qamar block where security provision remains challenging (see p10).

### NEW KUWAIT TRADING FIRM TARGETS FUJAIRAH

Having established a trading office in Dubai, Kuwait's state-run KPC is now starting to gear up to take a foothold in the nearby storage and trading hub of Fujairah. KPC Trading was established in the Dubai International Financial Center (DIFC) in May, listing KPC's Managing Director of International Marketing Khaled Al Sabah, Legal Affairs Manager Hessah al-Twajiri and Mudhi al-Shammiri as its directors.

"KPC is entering Fujairah in a big way," says a trading source, noting that the new trading firm is seeking to aggressively hire from established trading firms in the UAE. "They're going to start trading everything; fuel oil, gasoil, naphtha, the works," the source adds. With record exports from its 1.4mn b/d of domestic refineries this year and a 50% stake in Oman's 230,000 b/d Duqm refinery down

the coast, KPC can bring significant volumes to Fujairah. Now it just needs to secure tankage.

### OMAN: SALALAH FUEL STORAGE

State energy firm OQ has broken ground on a \$124mn strategic fuel storage project at Salalah in the southern governorate of Dhofar. With a 110,000m<sup>3</sup> capacity, the facility will store gasoline, gasoil and jet fuel intended to secure a 30-day supply to the region. It will be located in the Salalah Free Zone and receive oil through pipeline from the Salalah Port. Construction of the project is expected to take 36 months, implying 3Q 2027 completion.

During the 26 August groundbreaking ceremony, Energy Minister Salim Al-Aufi labelled it "a significant step in reinforcing Oman's strategic fuel reserves, ensuring the availability of essential products, and securing supplies during emergencies. This development is crucial in guaranteeing our petroleum product needs are met."

### ADNOC-COVESTRO DUE DILIGENCE NEARS COMPLETION

Adnoc has completed the bulk of its due diligence into German chemicals firm Covestro and is expected to officially make an offer valuing the firm at €11.7bn (\$12.5bn) in September according to sources. The due diligence work itself was completed last week, says one source, with Covestro waiting for Adnoc to either sign off on it or come back with any follow up requests. Adnoc did not respond to a request for comment.

Covestro's leadership is impatient for Adnoc to move ahead with the process, MEES understands. The firm will hold a number of investor roadshows in the weeks ahead, starting on 4 September, and wants to be able to demonstrate concrete progress in the transaction.

Although the due diligence process has stretched out for longer than initially hoped for (MEES, 28 June), investors are optimistic that it will be completed soon. "I'm confident on the outcome of this, I think that we're approaching the end," says one source.

### ABU DHABI ENERGY ENGINEERING IPO

Abu Dhabi engineering firm NMDC announced in a statement on Abu Dhabi's ADX on 28 August that it is carrying out an initial public offering (IPO) of 1.15bn shares of its wholly owned subsidiary NMDC Energy. The shares equate to 23% of NMDC's issued share capital, and at an offer price of AED2.8 (\$0.76) per share it is set to raise AED3.22bn (\$880mn). The closing date for the offering is 4 September, with shares expected to start trading on 11 September.

NMDC Energy (formerly known as NPCC) is an active firm in the regional sector, picking up several high-profile EPC awards from Abu Dhabi's Adnoc and Saudi Aramco in recent years. This includes a \$5.5bn award to a JV

of TechnipEnergies, NMDC Energy and JGC for Adnoc's 9.6mn t/y Ruwais LNG project (MEES, 14 June); an \$8.2bn contract with Saipem for Adnoc's Hail and Ghasha sour gas development (MEES, 10 October 2023) and \$2.23bn of contracts for Saudi Aramco's Zuluf oilfield expansion (MEES, 7 January 2022).

### ADNOC PLANS AI EFFICIENCY BOOST

Abu Dhabi's Adnoc is deploying an "industry leading AI-enabled process optimization technology" at two prominent energy facilities. 'Neuron 5' was developed by Adnoc alongside the AIQ national holding company and UK firm Aveva. It has initially been deployed at Adnoc Onshore's 230,000 b/d North Eastern Bab (NEB) asset and Adnoc Gas's Taweelah gas compression plant. Adnoc says "the technology has the potential to cut the number of unplanned shutdowns by 50% and enhance planned maintenance intervals across operations by 20%, while freeing Adnoc operators for more productive activities."

### KEY GULF TO ASIA OSPS (\$/B)

|                                                                      | Aug24 | Sep24 | Oct24 | Nov24 |
|----------------------------------------------------------------------|-------|-------|-------|-------|
| <b>SAUDI ARABIA: to Asia (FOB Ras Tanura, vs Oman/Dubai average)</b> |       |       |       |       |
| Arab Super Light (>40°)                                              | +2.75 | +2.95 |       |       |
| Arab Extra Light (36-40°)                                            | +1.60 | +1.70 |       |       |
| Arab Light (32-36°)                                                  | +1.80 | +2.00 |       |       |
| Arab Medium (29-32°)                                                 | +1.25 | +1.25 |       |       |
| Arab Heavy (<29°)                                                    | +0.50 | +0.50 |       |       |

|                                              |       |       |  |  |
|----------------------------------------------|-------|-------|--|--|
| <b>IRAQ: to Asia (vs Oman/Dubai average)</b> |       |       |  |  |
| Basrah Medium (FOB)                          | -0.10 | +0.00 |  |  |
| vs Saudi Arab Heavy                          | -0.60 | -0.50 |  |  |
| Basrah Heavy (FOB)                           | -3.00 | -3.00 |  |  |

|                                             |       |       |  |  |
|---------------------------------------------|-------|-------|--|--|
| <b>KUWAIT: to Asia (FOB, vs Oman/Dubai)</b> |       |       |  |  |
| Kuwait Export Blend (31°)                   | +1.25 | +1.25 |  |  |
| vs Saudi Arab Medium                        | +0.00 | +0.00 |  |  |
| Kuwait Super Light (48°)                    | +1.35 | +1.25 |  |  |
| Khafji (28.5°)                              | +0.50 | +0.50 |  |  |
| Hout (33°)                                  | +1.51 | +1.60 |  |  |

|                                                                |       |       |  |  |
|----------------------------------------------------------------|-------|-------|--|--|
| <b>IRAN: to Asia (FOB Kharg Island, vs Oman/Dubai average)</b> |       |       |  |  |
| Iranian Light (33-34°)                                         | +2.10 | +2.35 |  |  |
| vs Saudi Arab Light                                            | +0.30 | +0.35 |  |  |
| Iranian Heavy (30-31°)                                         | +0.10 | +0.15 |  |  |
| vs Saudi Arab Medium                                           | -1.15 | -1.10 |  |  |
| Foroozan (31°)                                                 | +0.25 | +0.30 |  |  |
| South Pars Condensate                                          | -0.95 | -0.95 |  |  |
| Soroosh (18.6°) vs Iran Heavy                                  | -2.70 | -2.75 |  |  |

|                                    |       |       |       |  |
|------------------------------------|-------|-------|-------|--|
| <b>DUBAI: Dubai (31°, vs Oman)</b> |       |       |       |  |
| outright price                     | 82.50 | 83.85 | 77.64 |  |
| <b>OMAN: Oman (34°)</b>            | 82.50 | 83.85 | 77.54 |  |

|                                                  |     |     |  |  |
|--------------------------------------------------|-----|-----|--|--|
| <b>SAUDI LPG OFFICIAL CONTRACT PRICES (\$/T)</b> |     |     |  |  |
| Propane                                          | 590 | 605 |  |  |
| Butane                                           | 570 | 595 |  |  |
| propane vs butane                                | +20 | +10 |  |  |

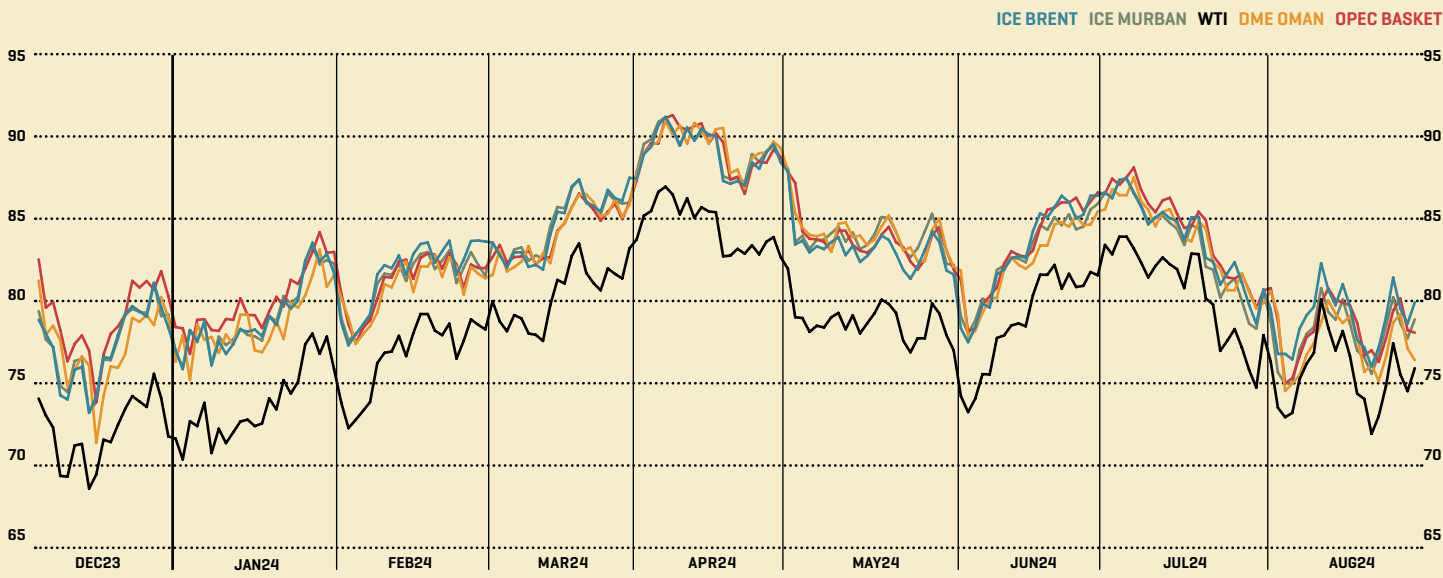


## SELECTED DATA

### BENCHMARK CRUDE PRICES (\$/B)

|             | 29Aug | 19-23Aug | 12-16Aug | Jul24 | Jun24 | May24 | Q2 2024 | Q1 2024 | Q4 2023 | 2024 (29Aug) | 2023  | 2022   | 2021  |
|-------------|-------|----------|----------|-------|-------|-------|---------|---------|---------|--------------|-------|--------|-------|
| WTI         | 75.91 | 73.64    | 78.04    | 80.63 | 78.84 | 78.58 | 80.61   | 76.99   | 78.31   | 78.63        | 77.58 | 94.37  | 68.09 |
| ICE Brent   | 79.94 | 77.43    | 80.69    | 83.88 | 83.06 | 83.00 | 85.02   | 81.84   | 82.69   | 82.94        | 82.18 | 99.02  | 70.97 |
| ICE Murban  | 78.90 | 76.89    | 79.56    | 83.51 | 82.78 | 83.76 | 85.24   | 81.71   | 83.74   | 82.81        | 82.80 | 98.84  | 72.92 |
| DME Oman    | 76.42 | 76.30    | 79.15    | 83.84 | 82.45 | 83.86 | 85.20   | 81.25   | 83.39   | 82.63        | 82.02 | 94.42  | 69.00 |
| OPEC Basket | 78.10 | 77.31    | 80.09    | 84.44 | 83.24 | 83.59 | 85.33   | 81.83   | 85.23   | 83.07        | 82.90 | 100.01 | 69.82 |
| JCC         | na    | na       | na       | na    | 87.85 | 88.87 | 87.48   | 84.09   | 92.26   | na           | 86.56 | 102.70 | 69.11 |

AVERAGE SETTLEMENT PRICES FOR PERIOD IN QUESTION.



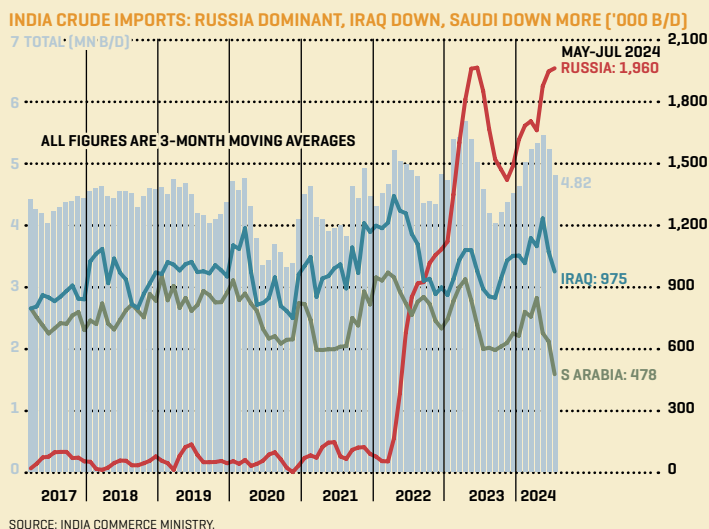
### INDIA CRUDE IMPORTS SLUMP FOR JULY: SAUDI & GULF AT RECORD LOW

\*With demand in the world's number one oil importer, China, underperforming expectations this year [MEES, 16 August] a lot of hopes are on India to pick up the slack.

\*But the country's latest official import data for July shows crude imports falling to 3.90mn b/d, the lowest in two and a half years. Year-to-date volumes, at 50.4mn b/d for 7M 2024 are also now down year-on-year, albeit fractionally.

\*Russia remained way out in front with a firm 1.74mn b/d, making India almost level with China (1.76mn b/d) as Russia's top market for July and giving Russia a record 44.6% market share: this for a country whose market share was just 2% as recently as 2021.

\*With overall volumes down and Russia's share up, that means other key suppliers have been squeezed. India took just 665,000 b/d from longtime number one supplier Iraq in July, a four-year low, whilst for Saudi Arabia imports of 374,000 b/d were by a wide margin the lowest in the MEES database stretching back to 2010 with the three-month-moving-average figure falling below 500,000 b/d for the first time in over a decade [see chart]. Ditto the Middle East as a whole with just 1.47mn b/d for July for a record low 37.7% market share.



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