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ENERGY INTELLIGENCE **FINANCE**®

CONTENTS

OUR TAKE

Major Services Gap Awaits Russian Producers

The halting of new investments and technology deployment by Western oil-field services companies in Russia will cause significant — but not insurmountable — challenges for Russia's domestic producers, if sustained. Longer-term plans to expand Russia's oil, gas and LNG production will now have to navigate potentially lengthy processes to replace foreign technology and equipment.

- Western services giants are hitting the brakes following the EU's fresh ban on new investments in Russia's energy sector, including oil and gas upstream and downstream and the liquefaction and regasification of natural gas. Halliburton and Linde are suspending future business and winding down existing operations, while Schlumberger, Baker Hughes, Technip Energies and Weatherford are halting new investments and technology deployment.

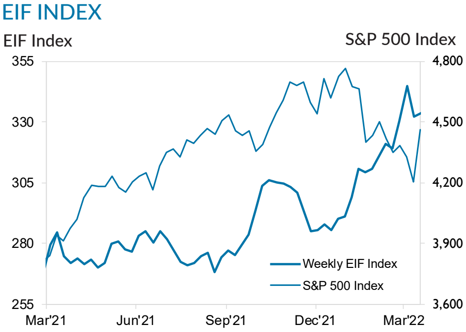
- Foreign firms account for less than one-fifth of Russia's oil-field services market share, local analysts say, but their presence is felt most via technology transfer. Russia's Vygon Consulting estimates that foreign services provide nearly 60% of the high-tech solutions deployed in Russia's oil and gas patch, making them key enablers of its growth prospects — particularly given the increasingly complex nature of remaining reserves. The country's downstream is meanwhile heavily dependent on Western-made catalysts, equipment, and services.

- Western sanctions following Russia's annexation of Crimea in 2014 already fostered a credible push to replace technology imports, particularly in areas around Arctic, deepwater and tight resource development, as well as downstream catalysts. But industry sources tell us full substitution remains a way off. Rosneft and Gazprom Neft started producing homemade catalysts, but output has yet to increase and performance questions remain. Russian oil producers have multiple deals with local entities to develop a domestic hydraulic fracturing fleet, rotary-controlled systems and other technologies, but replacements remain in the testing phase. More broadly, much has yet to be done to fine-tune the use of domestic equipment and ready it for commercial deployment.

- The challenge only gets bigger as a wider set of crucial technologies is compromised. For instance, Russia still lacks its own liquefaction technology for large LNG plants, with Novatek's Arctic Cascade process struggling to scale up, mainly due to a lack of quality domestic equipment. Gazprom claims it will use technology produced jointly by itself and Linde at its Ust-Luga facility, but imported equipment needs may thwart those plans. Russia had been gunning to more than quadruple LNG export capacity by 2035, to up to 140 million tons per year.

- Russia's output is not likely to see a near-term impact from the services pullback, sources say. But we see producer support of import replacement becoming a critical strategic objective longer term. Higher investment in the development of local services and technologies will likely accompany a greater domestic bias in capex plans. From a capacity standpoint, Rosneft is most ahead of the curve, having developed its own service unit that already handles more than 50% of its in-house needs.

EIF INDEX



EIF Global Oil and Gas Index of 22 traded equities

PEER STRATEGY

SE Asian NOCs Not Spared From Russian Exposure

- *Southeast Asian NOCs are keeping a close eye on everexpanding Western sanctions targeting energy investments in Russia and certain financial transactions with Russian state-backed firms.*

- *Over the longer term, Russian partners may deprioritize shared investments in Southeast Asia in favor of domestic developments to buoy potentially compromised output from the exodus of IOCs and foreign technologies.*

- *Vietnam would be most exposed to such a retreat, while Indonesia's energy security strategy could face a major setback if Pertamina and Rosneft's proposed Tuban refining-petrochemical complex is hit.*

The Issue

Western sanctions on Russia amid its ongoing invasion of Ukraine are quickly ratcheting up — just last week, the European Union extended a broad ban on new energy investments in Russia. For now, Southeast Asian heavyweights Petrovietnam, Pertamina and Petronas are staying the course in strategic ventures with Russian state-run Gazprom, Zarubezhneft and Rosneft, both in upstream and downstream projects in Russia and their home countries. But these companies will have to navigate an ever-harder landscape to transact with their Russian partners — and may find themselves at odds strategically longer term if their Russian counterparts are tipped to prioritize domestic investments.

Petrovietnam

Petrovietnam has the most at stake of the trio given its years of cooperation with Russia dating back to the Cold War. Last year, Petrovietnam derived 28% of its after-tax profits from three joint ventures (JVs) — Vietsovpetro, Rusvietpetro and Gazpromviet — set up with Russian companies to invest in both Vietnam and Russia. This is equivalent to 1.7 trillion dong ($491.1 million).

"Vietnam depends a lot on Russian equipment, so it will face difficulties/barriers in the future, if it cannot find an alternative source in time," state-controlled Petrovietnam said in a recent statement, with regard to potential future sanctions.

Projects that could be impacted include the $10 billion Block B gas-to-power project, which the company hoped to sanction around midyear. The scheme would develop two offshore gas fields to supply 490 million cubic feet of gas per day to the 3,800 megawatt O Mon power generation complex. Pending FID, construction work would start in the second half of 2022, with first gas expected in 2025.

Vietsovpetro, Petrovietnam's 51% JV alongside Zarubezhneft (49%), meanwhile has several projects in the pipeline, including putting two rigs to work at the Dragon oil field in Block 09-1 in the fourth quarter of this year. The JV produced about one-third of Vietnam's crude oil in 2020 — some 68,000 barrels per day out of a total of just over 200,000 b/d. Vietsovpetro expects to produce at least 58,000 b/d of crude oil and condensate this year, most of which will come from Block 09-1, home of the large Bach Ho (White Tiger) oil field.

Petrovietnam's other Russian-backed JVs are invested within Russia itself, and thus will have to be particularly mindful of the minefield of financial and technology sanctions aimed at Russia's domestic energy sector. Rusvietpetro (Zarubezhneft 51%, Petrovietnam 49%) is developing 13 oil fields in the Nenets autonomous district, while Gazpromviet (Gazprom 81.318%, Petrovietnam 18.682%) operates the Nagumanovskoye oil, gas and condensate field, as well as the Severo-Purovsky gas block.

Pertamina

The proposed Tuban refinery and petrochemical complex project, shared between Pertamina (55%) and Rosneft (45%), is not in trouble yet. Rosneft remains committed to completing front-end engineering and design (Feed) work, according to Indonesian media outlet Katadata, citing Pertamina International Refinery's corporate secretary, Ifki Sukarya.

But Indonesia will need to keep an eye on Rosneft's ability to navigate sanctions and a tumbling ruble, and the project's ability to secure key components and technologies. Tuban is part of Pertamina's already scaled-down Refinery Development Master Plan designed to increase refining capacity from 1 million b/d to 1.4 million b/d by 2030.

Indonesia sees Tuban as critical to helping improve fuel quality and support its energy security by reducing the product imports.

KEY PROJECTS AND JVS INVOLVING SOUTHEAST ASIAN NOCS AND RUSSIAN COMPANIES

Asset	Country	Stake
Vietsovpetro	Vietnam	Petrovietnam 51%; Zarubezhneft 49%
Rusvietpetro	Russia	Zarubezhneft 51%; Petrovietnam 49%
Gazpromviet	Russia	Gazprom 81.318%; Petrovietnam 18.682%
Pertamina Rosneft Pengolahan & Petrokimia	Indonesia	Pertamina 55%; Rosneft 45%
Badra	Iraq	Gazprom Neft 30%; Iraqi Oil Exploration Co. 25%; Kogas 22.5%; Petronas 15%; Turkiye Petrolleri AO 7.5%

Source: Petrovietnam, Pertamina, Gazprom, Gazpromviet, Rusvietpetro

Pertamina currently operates six older refineries with minimal secondary conversion capacity, limiting the feedstocks they can run on and constraining their output of high-value refined products.

Located in East Java, the 300,000 b/d, $`3.5 billion Tuban complex is expected to start commissioning in the second quarter of 2026 and reach commercial operations in the first quarter of 2027. Tecnicas Reunidas, which is in charge of Feed work, said last year it would participate in bids for the various engineering, procurement and construction packages for Tuban if the project is sanctioned in the third quarter of 2023.

Petronas

The Malaysian national oil company is so far keeping a cool head with regard to its potential exposure, which is limited to a lubricant plant in Russia and a 15% stake in the Gazprom Neft-operated Badra oil field in Iraq.

"Insofar as any position to be taken, we are taking guidance on the kind of sanctions that are going to apply," Petronas CEO Tengku Muhammad Taufik said at the company's 2021 results briefing. "We are not going to be rushing into any decisions here."

"While the situation there is unfortunate, I can only say that as a responsible, reliable and committed energy producer, we will serve our consumers and partners everywhere throughout this period where prices are going to be volatile," he added.

Petronas' wait-and-see approach is perhaps helped by the mature nature of Badra. Output is declining and any further work will depend on Baghdad improving its terms, Gazprom Neft Deputy CEO Vadim Yakovlev told Energy Intelligence last year. Production at Badra dropped from 2.9 million tons in 2019 to 2.1 million tons in 2020.

Marc Roussot, Singapore

CORPORATE STRATEGY

OMV Bolstered by Europe's Energy Resolve

- *OMV's upsized emissions reduction plans come as Europe is contemplating an accelerated energy transition amid the Russia-Ukraine crisis.*
- *The company's sustainable fuel and chemical feedstock strategy for Europe, plus support of a circular petrochemicals economy globally, looks ripe for expansion against this shifting backdrop.*
- *But OMV's current exposure to Russian gas could cause headaches, while risks arising from a sudden change in the EU's pace of direction would slow its plans.*

The Issue

OMV's ambition to become carbon neutral by 2050 involves a gradual exit from traditional oil and gas and a shift toward sustainable fuels, specialty chemicals and high-grade materials. Underpinned by its majority stake in polyolefin producer Borealis, the Austrian major sees its corporate transformation as "now more relevant than ever in view of the terrible Ukraine crisis." Indeed, Europe's new resolve to accelerate the low-carbon transition and curb its dependency on fossil resources could help facilitate OMV's shift to a more sustainable future. But the firm's re-evaluation of its sizable business in Russia, which accounts for one-third of its natural gas output, could pose challenges.

Russian Exposure

For all of OMV's grand ambitions longer term, sorting out its existing business linked to Russia is an inevitable near-term priority.

Like its Western major peers, OMV will not pursue future investments in Russia — a core business area for the Austrian major since 2017. But its exposure is still significant: OMV is owed €700 million in corporate debt by Russia's Gazprom due to its position as one of five European financial backers of the suspended Nord Stream 2 pipeline, says analyst Tamas Pletser with Erste Investment in Hungary.

OMV is also weighing the strategic options for its 24.99% stake in the Yuzhno Russkoye gas field, including a potential sale or exit. Gazprom is the 40% majority owner of the Severneftegazprom joint venture (JV) that operates Yuzhno Russkoye, alongside OMV (25%) and Germany's Wintershall Dea (35%). The field delivers about 100,000 barrels of oil equivalent per day and is a key contributor to the original Nord Stream gas pipeline to Germany. OMV expects to take a €1.5 billion-€1.8 billion impairment on its Russian business, including €987 million for loans and accrued interest related to Nord Stream 2.

The financial loss is significant, but OMV CEO Alfred Stern assured investors last week that it was not catastrophic. Russia's overall contribution is "limited," he added, with Russian E&P accounting for 3% of OMV's "clean" operating profit over the last three years and 2% of operating cash flow, excluding net working capital effects.

Net income from Yuzhno was paid as an annual dividend, typically between €150 million-€200 million. Stern said some €200 million of cash was currently "trapped" in Russia, and that OMV would take a "balanced view of value preservation" regarding its Yuzhno stake. He stressed the fate of Yuzhno would not impact its progressive dividend policy.

Bridging the Gap

The loss of Russia is certainly more abrupt than OMV planned, but the company already intended to exit oil and gas production for energy use by midcentury. By 2030, it now anticipates a 15%

— or 70,000 boe/d — drop in output from this year's guidance, to below 400,000 boe/d, with Russia accounting for 60,000 boe/d of the decline.

That said, Stern acknowledged that OMV is currently an important supplier of natural gas to Europe, and his firm is working to "identify and develop" substitute supplies for its Russian gas in the meantime.

One such source could be Romania. Europe's gas crisis could spur the country to expedite necessary changes to a new offshore law that would allow OMV to progress its 50%-operated Neptun Deep project. Exxon Mobil would also need to conclude the sale of its 50% holding to Romania's state Romgaz. OMV is targeting project sanction in 2023 with first gas in 2027, anticipated investment of up to €2 billion, and plateau output of 70,000 boe/d net to OMV over 10 years.

OMV's upstream business will meanwhile continue to be a cash engine to support its broader strategic transformation. Around 36% of the group's €3.5 billion of annual capex will be ploughed into the upstream through 2025, although that figure will fall to 20% in the second half of the decade. Priorities include gas in Norway, Malaysia, New Zealand and the United Arab Emirates — home to OMV's second-largest shareholder, sovereign wealth fund Mubadala (24.9%).

Making up for E&P declines, OMV will increasingly pivot its upstream focus toward its new geothermal energy and carbon capture and storage (CCS) businesses. In geothermal, OMV aims to generate up to 9 terawatt hours annually of heat capacity by 2030. With just one project in the pipeline in Austria, the company will seek partnerships in Europe and globally.

OMV meanwhile sees CCS as a key tool to offset its absolute emissions as well as for captive use, targeting 5 million tons of annual storage by 2030. Initial efforts will focus offshore Norway and Romania, as well as Southeast Asia.

In the downstream, OMV will shift to more "circular" and sustainable feedstocks to offset expected declines in volumes and refining margins for fossil-refined products in Europe. By 2030, OMV expects to generate around 20% of its earnings from refining and marketing.

To that end, OMV will reconfigure its Austrian, German and Romanian refineries and build a new plant in Belgium to boost production of sustainable fuels and chemical raw materials to 1.5 million tons per year this decade. Around half will be sustainable jet fuel, with the remainder road transportation fuels and chemical feedstocks.

OMV will also invest in co-processing first-generation and advanced biofuels, and in ethanol production and synthetic fuels. Stern said the company already has a clear sourcing plan for around 80% of its biofeedstock requirements for 2030. OMV sees particular opportunities in "emerging" fuel products in Central Europe, where its Schwechat and Burghausen refineries are located, and in Romania.

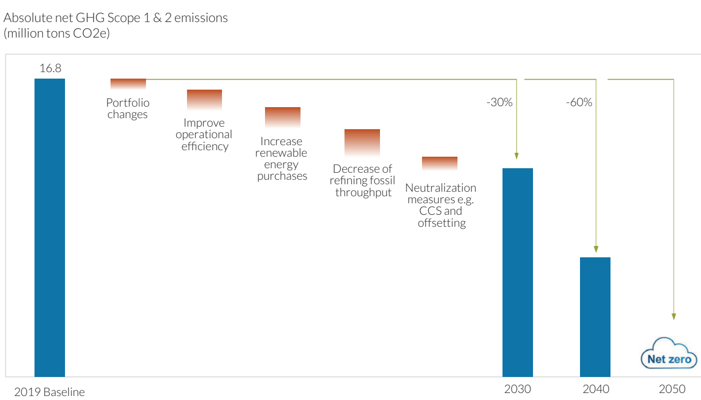
Beyond 2030, the company anticipates rising contributions from more advanced alternative fuels, such as synthetic fuel made from carbon dioxide and renewable electricity. OMV is already advancing a pilot project in Austria to capture CO_2 to combine it with renewable electricity to produce renewable chemicals. That said, while OMV will no longer produce fossil fuels for energy use by 2050, it might still produce oil to make chemicals, plastics or other materials.

In a new departure, OMV is also expanding into e-mobility, targeting over 2,000 charging points at highway and transit filling stations and convenience hubs across Central Europe and 17,000 wall box charging points near offices.

Specialty Chemicals

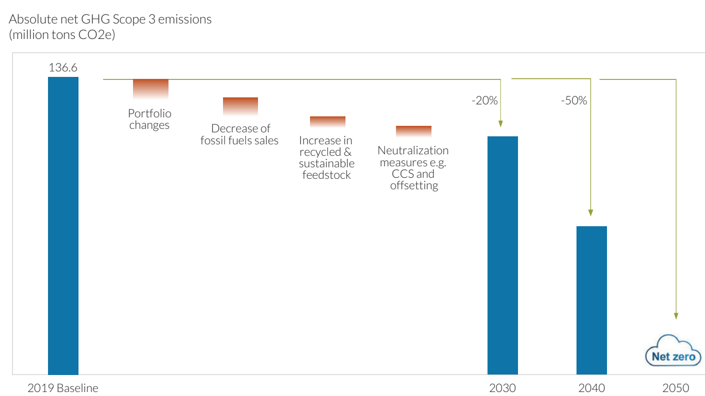
Chemicals & Materials is the largest pillar of OMV's transition strategy and should contribute about half of group earnings by 2030. The company believes "circular" plastic recycling initiatives, such as turning plastic waste into synthetic crude oil and then using it as a feedstock in its refineries, will help the world meet its low-carbon aspirations.

SCOPE 1 & 2 EMISSIONS: OMV'S PATH TO NET ZERO IN OPERATIONS BY 2050



Source: OMV

SCOPE 3 EMISSIONS: OMV'S PATH TO NET ZERO IN SCOPE 3 BY 2050



Source: OMV

The firm's 75% controlling stake in compatriot Borealis, Europe's second-largest polyolefin producer, will be crucial to its strategy. OMV is keen to expand its footprint in North America and Asia, but the lion's share of sustainable polyolefin production capacity will come from Europe, representing up to 40% of its total output in the region.

Europe's goal to recycle 55% of plastic packaging by 2030 will facilitate this growth. OMV aims to deliver around 2 million tons/yr of sustainable products by 2030.

OMV's stake in Borealis gives access to the Borouge 40-60 JV between Borealis and Abu Dhabi National Oil Co. (Adnoc), now developing a fourth-phase expansion of the Ruwais petchems complex to boost capacity to 6.4 million tons of polyolefins by late 2025. Adnoc and Borealis are also exploring a potential listing of a minority stake in Borouge. And Borealis is part of the US Baystar JV with TotalEnergies and Nova Chemicals in Texas.

Its proprietary Borstar polymer technology is "the core ingredient of our strategy in chemicals and materials," OMV said, offering a high share of specialty products for the automotive and health care sectors, among others.

Borealis and OMV recently sanctioned further development of a ReOil recycling pilot plant at the Schwechat refinery using OMV's patented technology which processes synthetic light crude from waste plastic. This is used as feedstock for polyolefins production at Schwechat. The aim is to produce 16,000 tons of chemically recycled plastics before going to a full-scale plant by 2026.

Deb Kelly, London

OMV: By The Numbers

Transition Strategy Ranking	15
EI Ranking*	44
Financials	
Revenue	€35.6 billion
Net Income	€2.8 billion
Adjusted Income	€3.7 billion
Operating Cash Flow	€8.9 billion
Free Cash Flow	€5.2 billion
Gearing Ratio (Net Debt-to-Equity)	21.00%
Market Capitalization	€14.29 billion
Operational	
Liquids Production	200,000 b/d
Gas Production	286,000 boe/d
Oil-Equivalent	486,000 boe/d
2P Oil-Equivalent Reserves	2.365 billion boe

*EI Ranking refers to the company's position in the Energy Intelligence Top 100, based on size of revenues, oil and gas production and reserves, refinery capacity and product sales. Transition Strategy Ranking refers to the company's position in the Energy Intelligence Transition Strategy Index, tracking the relative vulnerability of 29 NOCs, IOCs and independents, with No. 1 scoring the highest. Financial and operational metrics are for trailing 12 months ending Dec. 31, 2021, except for reserves, which are year-end 2020. *Source: Energy Intelligence, Yahoo Finance*

PEER STRATEGY

Court Complicates Already-Thinning Kurdistan Prospects

- *An Iraqi Supreme Court ruling has thrown fresh turmoil on oil and gas activity in semiautonomous Kurdistan, with the KRG determined to have no legal right to manage resources within its territory.*
- *The decision presents few problems to Western majors given their heavy prior exodus, but Russian giant Rosneft and Gazprom Neft and a handful of independents remained keen.*
- *Raising capital for Kurdish gas development — the region's recent focus — now looks particularly problematic, while heightened security risks also remain in play.*

The Issue

Western oil majors were already heading for the door in the Kurdistan region of Iraq, disappointed by the geology and commercial uncertainty. Last month's bombshell ruling by Iraq's highest court has now sent shock waves around those still willing to stay, as doubt encircles the legality of their contracts in what was once considered a safer jurisdiction to invest in than southern Iraq. So far, a light enforcement touch has meant operations are ongoing and companies continue to get paid. Some argue that such allowances should continue, preventing another wave of departures. But the ruling raises serious questions about future investment just the same.

Heavyweight Loss

The past year has seen a number of signaled or sealed departures of the biggest international oil companies from Iraqi Kurdistan. The recent surge in oil prices might once have generated hope of renewed interest in the region, whose production-sharing contracts offer companies direct exposure to those prices, unlike in federal Iraq. But the Supreme Court ruling, which entitles Baghdad to pursue the nullification of oil and gas contracts that the Kurdistan Regional Government (KRG) has entered into, is a huge blow to any such hopes.

"There are many issues at play, but the point in brief is that, while the oil and gas sector in Kurdistan has never been entirely without risk, the likelihood of risk materializing has now increased significantly," law firm Norton Rose Fulbright said last week.

Chevron is still a minority partner in two remaining assets, having transferred operatorship of the producing Sarta Block to minority partner Genel Energy in January. But TotalEnergies already left last year, after selling its 18% legacy stake in the producing Sarsang Block to Canada's Shamaran Petroleum for $155 million. So in effect did Exxon Mobil, when Norway's DNO acquired its 32% stake in the Bashiqa license.

KURDISTAN'S UPSTREAM PARTNERS

Operator	Asset	Production (b/d)
Kar Group	Khurmala	150,000
DNO	Tawke	105,000
	Bashiqa	4,000
Gulf Keystone	Shaikan	46,000
Taqa	Atrush	41,500
HKN	Sarsang	30,000
Gazprom Neft	Garmian	23,000
Forza Petroleum	Hawler	13,700
Genel Energy	Sarta	7,000
	Taq Taq	5,500
Rosneft	Batil, Zawita, Qasrok, Harir-Bejil and Darato	NA
Dana Gas	Khor Mor (gas)	450 MMcf/d
Total*		425,700

*Excluding Khor Mor. *Source: Companies, Energy Intelligence*

Companies still active in Kurdistan's upstream are putting on a brave face, as is the KRG, whose prime minister blasted the court ruling as a "blatant political move." DNO admitted last week that it might impact the company's future operations and financial performance. But Genel CEO Bill Higgs described it as "just part of the risk profile of working and producing in Kurdistan," adding that the continued receipt of payments demonstrated the KRG's commitment to its operators.

While true, the reality for these firms is also a bit more pointed — most lack the investment alternatives and geographic diversification of the majors, and analysts warn that while the new dangers may not be immediate or visible, they are no less serious.

"I think everyone's worried. If you don't see it from the operational side, I think from a finance point of view, anyone who needs money now, they're in trouble," says Kurdistan expert Shwan Zulal. "They'll go to the bank and they'll be told: 'This is illegal.' It's a big deal, and I think the KRG haven't quite digested it."

Leverage for Baghdad

The KRG's upstream partners will be closely watching how Iraq's yet-to-be-formed next federal government responds to the ruling. With oil well above $100 per barrel and Baghdad struggling to hit its Opec targets, it has little reason to cause trouble right now.

Instead, some argue that the ruling's main short-term impact will be to give the central government the upper hand in negotiations with the KRG, including over the long-disputed budget allocation. But it could also complicate Kurdish oil sales. Iraqi state marketer Somo has long wanted to wrest control of the KRG's marketing of crude exports from Ceyhan, some of which go to Israel.

Separately, the Kurdish oil and gas law provided the legal basis for the KRG's export agreements with Turkey's state-owned pipeline operator Botas. By ruling it unconstitutional, the Supreme Court appears to have given Baghdad a clear advantage in its arbitration case against Turkey at the International Chamber of Commerce. The Iraqi government is seeking around $25 billion in compensation from Turkey for violating its own export agreement with Botas and facilitating what it claims are the KRG's illegal oil sales. A final hearing could take place in July, after years of delay.

New Opportunities, New Risks

Like the oil ministry in Baghdad, the KRG is increasingly keen to develop its gas resources for power generation fuel. Gazprom Neft said in November that it was looking for new opportunities in Kurdistan, such as Repsol's Topkhana gas block. But such acquisitions look much more complicated now, especially for the Russian firm, which also has a producing asset in federal Iraq.

If exported, Kurdish gas could assist Turkey in reducing its dependence on Russia. One of the region's biggest projects is the Khor Mor gas development, where operator Dana Gas is building a new 250 million cubic foot per day gas-processing train that is due on stream next year.

To help fund it, Dana secured a $250 million financing agreement last year with the Development Finance Corp., the US government-backed financing body for overseas investment projects. "Whenever you get such funding, it brings some implicit political risk insurance ... It gives the US government an interest in the project," notes one legal expert.

Dana also hopes to build a second train, which will be needed if the KRG is to realize its gas export dream, which includes constructing a pipeline toward the Turkish border. But besides the increased difficulty it likely now faces in raising the cash, the Mar. 13 rocket attack on Erbil, which was claimed by Iran, is a sobering reminder of the volatile political environment. The main target appeared to be the house of Baz Karim, the CEO of Kar Group, the Kurdish energy firm executing the pipeline project.

Simon Martelli, London

ENERGY AND EQUITY MARKET DATA For the week ended Mar 18, 2022

EIF GLOBAL INDEX COMPONENTS*

	Close Mar 18	1-Wk Chg.	% Chg. 1-Wk	52-Wk	YTD
Lukoil (mos)	NA	NA	NA	NA	NA
Rosneft (mos)	NA	NA	NA	NA	NA
Equinor (osl)	34.46	+2.61	+8.20	+72.46	+28.64
Sinopec-H (sehk)	0.47	+0.02	+4.32	-15.70	+0.73
Reliance Industries (bse)	32.61	+1.25	+3.97	+17.94	+2.53
Saudi Aramco (sse)	11.16	+0.20	+1.82	+18.86	+16.97
TotalEnergies (par)	50.31	+0.57	+1.15	+4.42	-0.85
BP (lse)	4.75	+0.05	+1.10	+9.39	+6.23
CNOOC (sehk)	1.26	+0.01	+0.57	+11.34	+22.09
Shell (lse)	25.59	-0.00	-0.02	+21.78	+16.64
Eni (mise)	14.07	-0.15	-1.06	+14.23	+1.29
Suncor (tse)	31.04	-0.73	-2.30	+42.58	+23.92
PetroChina-H (sehk)	0.49	-0.01	-2.48	+26.51	+10.55
ONGC (bse)	2.24	-0.06	-2.64	+47.80	+17.01
Petrobras-3 (spse)	6.60	-0.26	-3.77	+95.75	+19.78
Ecopetrol (bvc)	0.86	-0.03	-3.79	+29.31	+29.55
Sinopec-S (sesh)	0.56	-0.03	-4.62	+1.70	-14.51
Petrobras-4 (spse)	6.09	-0.31	-4.82	+72.95	+19.31
Chevron (nyse)	161.73	-9.17	-5.37	+55.33	+37.82
PetroChina-S (sesh)	0.83	-0.05	-6.24	+21.75	+6.78
Exxon Mobil (nyse)	78.67	-6.25	-7.36	+38.48	+28.57
EIF Global Index	**333.76**	**+1.12**	**+0.34**	**+21.43**	**+14.29**

*Converted US$/share. Russian shares halted trading on Feb. 25, 2022

INDEXES

Equity Indexes	Close Mar 18	1-Wk Chg.	% Chg. 1-Wk	52-Wk	YTD
DJIA	34,754.93	+1810.74	+5.50	+5.76	-4.36
S&P 500	4,463.12	+258.81	+6.16	+13.99	-6.36
FTSE 100	7,404.73	+249.09	+3.48	+9.22	+0.27
FTSE All-World	839.02	+45.64	+5.75	+6.26	-6.57
EIF Global	333.76	+1.12	+0.34	+21.43	+14.29
S&P Global Oil	1,664.02	-24.55	-1.45	+20.90	+7.20
FT Oil, Gas & Coal	6,641.08	-40.22	-0.60	+24.96	+15.94
TSE Oil & Gas	2,805.34	-57.79	-2.02	+47.95	+23.12
Emerging Markets					
Hang Seng Energy (HK)	19,117.22	+26.58	+0.14	+22.61	+13.75
BSE Oil & Gas (India)	18,208.73	+103.61	+0.57	+19.70	+4.00
RTS Oil & Gas (Russia)	NA	NA	NA	NA	NA

*Russian shares halted trading on Feb. 25, 2022

COMMODITY PRICES

	Close Mar 18	1-Wk Chg.	% Chg. 1-Wk	52-Wk	YTD
Dated Brent	114.87	-2.79	-2.37	+84.77	+48.53
Brent 1st ICE	107.93	-4.74	-4.21	+70.56	+38.76
WTI 1st (Nymex)	104.70	-4.63	-4.23	+74.50	+39.21
Oman 1st (DME)	106.60	-5.49	-4.90	+72.83	+39.00
RBOB (Nymex)	3.24	-0.07	-2.21	+66.60	+45.34
Heating Oil (Nymex)	3.60	+0.18	+5.28	+101.66	+54.42
Gas Oil (ICE)	1,064.75	+52.75	+5.21	+106.55	+59.63
Henry Hub (Nymex)	4.86	+0.14	+2.92	+96.01	+30.38
Henry Hub (Cash)	4.87	+0.09	+1.80	+99.06	+27.38
UK NBP (Cash)	226.00	-87.00	-27.80	+410.73	+73.85

SHARE PRICES IN LOCAL CURRENCY†

NOCs	Close Mar 18	1-Wk Chg.	% Chg. 1-Wk	52-Wk	YTD
Gazprom (micex)	NA	NA	NA	NA	NA
Rosneft (mos)	NA	NA	NA	NA	NA
Equinor (osl)	300.80	+14.15	+4.94	+76.89	+27.51
Sinopec-H (sehk)	3.67	+0.15	+4.26	-15.05	+1.10
Saudi Aramco (sse)	41.85	+0.75	+1.82	+18.89	+16.90
CNOOC (sehk)	9.84	+0.05	+0.51	+12.20	+22.54
PetroChina-H (sehk)	3.85	-0.10	-2.53	+27.48	+10.95
PTTEP (set)	145.00	-4.50	-3.01	+24.46	+22.88
Ecopetrol (bvc)	3,270.00	-130.00	-3.82	+39.15	+21.56
Petrobras-4 (spse)	30.61	-1.88	-5.79	+56.24	+7.59

*Russian shares halted trading on Feb. 25, 2022

Majors	Close Mar 18	1-Wk Chg.	% Chg. 1-Wk	52-Wk	YTD
BP (lse)	360.40	0.00	0.00	+15.53	+9.05
TotalEnergies (par)	45.51	-0.09	-0.19	+12.54	+1.96
Shell (lse)	1,941.80	-21.80	-1.11	+28.61	+19.73
Chevron (nyse)	161.73	-9.17	-5.37	+55.33	+37.82
Exxon Mobil (nyse)	78.67	-6.25	-7.36	+38.48	+28.57

Regional Integrateds	Close Mar 18	1-Wk Chg.	% Chg. 1-Wk	52-Wk	YTD
Lukoil (mos)	NA	NA	NA	NA	NA
OMV (vse)	42.31	-0.30	-0.70	-5.47	-15.30
Eni (mise)	12.73	-0.31	-2.36	+23.12	+4.16
Repsol (bme)	11.22	-0.42	-3.58	+4.65	+7.49

*Russian shares halted trading on Feb. 25, 2022

Global Independents	Close Mar 18	1-Wk Chg.	% Chg. 1-Wk	52-Wk	YTD
Hess (nyse)	97.41	+2.80	+2.96	+44.70	+31.58
Kosmos Energy (nyse)	6.41	+0.17	+2.72	+112.96	+85.26
ConocoPhillips (nyse)	99.60	+1.19	+1.21	+86.59	+37.99
Apache (nyse)	39.11	+0.06	+0.15	+103.27	+45.44
EOG Resources (nyse)	115.80	+0.12	+0.10	+74.16	+31.49
Woodside Petroleum (asx)	31.37	-0.61	-1.91	+25.88	+43.05
Occidental (nyse)	56.24	-1.71	-2.95	+111.27	+94.00
BHP (asx)	46.25	-1.44	-3.02	+1.23	+11.45

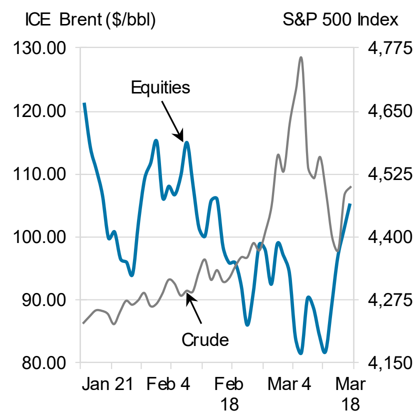
Refiners	Close Mar 18	1-Wk Chg.	% Chg. 1-Wk	52-Wk	YTD
Reliance Industries (bse)	2,479.65	+81.15	+3.38	+23.40	+4.71
HollyFrontier (nyse)	36.61	+0.93	+2.61	+1.69	+11.68
Eneos (tyo)	458.30	+6.70	+1.48	-9.62	+6.51
Marathon Petroleum (nyse)	78.32	-0.19	-0.24	+48.19	+22.39
Valero (nyse)	90.43	-1.24	-1.35	+22.70	+20.40
Phillips66 (nyse)	78.76	-2.01	-2.49	-3.21	+8.69
PBF Energy (nyse)	20.69	-4.59	-18.16	+43.98	+59.52

Oil-Field Services, EPC	Close Mar 18	1-Wk Chg.	% Chg. 1-Wk	52-Wk	YTD
Saipem (mise)	1.05	+0.08	+8.37	-55.80	-43.04
Petrofac (lse)	118.00	+7.10	+6.40	+20.18	+2.34
Wood Group (lse)	178.85	+5.50	+3.17	-36.44	-6.41
Worley (asx)	12.69	-0.01	-0.08	+14.32	+19.38
Fluor (nyse)	28.13	-0.39	-1.37	+23.70	+13.56
TechnipFMC (nyse)	7.30	-0.17	-2.28	-7.36	+23.31
Halliburton (nyse)	36.04	-1.37	-3.66	+62.56	+57.59
Baker Hughes (nyse)	35.38	-2.27	-6.03	+53.96	+47.11
Schlumberger (nyse)	39.73	-3.17	-7.39	+45.80	+32.65
Transocean (nyse)	4.26	-0.47	-9.94	+12.11	+54.35

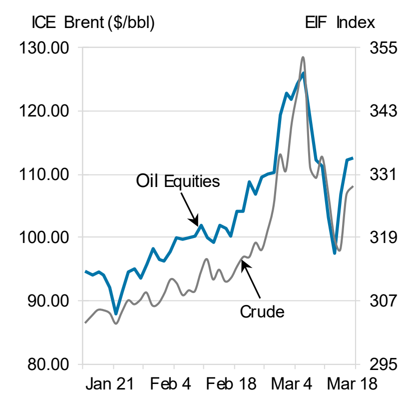
Midstream	Close Mar 18	1-Wk Chg.	% Chg. 1-Wk	52-Wk	YTD
Enbridge (tsx)	56.46	-0.20	-0.35	+25.89	+14.27
TC Energy (tsx)	68.81	-0.85	-1.22	+20.78	+16.96
Williams (nyse)	31.46	-0.44	-1.38	+38.22	+20.81
Plains All-American (nyse)	10.52	-0.28	-2.59	+13.00	+12.63
Kinder Morgan (nyse)	17.36	-0.74	-4.09	+10.15	+9.46
Enterprise Products (nyse)	24.13	-1.09	-4.32	+8.25	+9.88

*set=Bangkok; bme=Madrid; sehk=Hong Kong; osl=Oslo; bvc=Bogota; micex=Moscow; bse=Mumbai; par=Paris; nyse=New York; lse=London; mise=Milan; tyo=Tokyo; tsx=Toronto; asx=Sydney; spse=Sao Paulo; sse=Riyadh

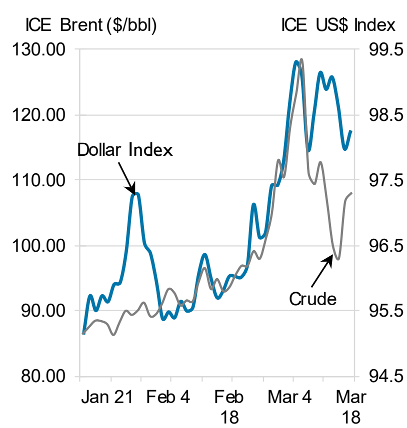
CRUDE VS. EQUITIES



CRUDE VS. OIL EQUITIES



CRUDE VS. CURRENCY



EIF Index based on share prices of the 22 equities listed under EIF components, adjusted for US$ market capitalization. All equities listed are ordered by percentage change over the previous week. Local share prices are shown in local currency. Crude prices in $/bbl; Nymex oil products prices in $/gallon; ICE gas oil in $/ton; Henry Hub natural gas prices in $/MMBtu; UK NBP natural gas prices in pence/therm.