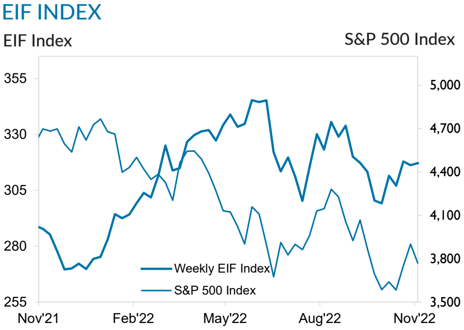
Energy Intelligence

VOL. 45, NO. 45
NOVEMBER 8, 2022
WWW.ENERGYINTEL.COM

ENERGY INTELLIGENCE **FINANCE**®

CONTENTS

EIF INDEX



EIF Global Oil and Gas Index of 22 traded equities

OUR TAKE

Time to Talk About Scope 3

Accounting for Scope 3 emissions — those that come from the end use of fossil fuel products — is a difficult and contentious task. But as world leaders convene for COP27 in Sharm el-Sheikh, we think it's time for all of the largest integrated oil companies to start reporting their Scope 3 emissions, which account for the lion's share of their overall carbon footprints, and including them in emissions reduction plans.

- Credible Scope 3 targets are part of a defensible emissions reduction strategy for a major oil and gas company. While many European firms already detail their Scope 3 volumes, only 10 globally include Scope 3 in their net zero plans. The prevailing argument that one company's Scope 3 emissions are captured in another's Scope 1 and 2 misses the point that these figures are not a tally of global emissions but a way to evaluate the financial exposure a company may have to climate risk and its alignment with society's climate goals.

- Scope 3 emissions reduction presents the greatest challenge for oil and gas companies trying to navigate the energy transition. Green groups, climate scientists and even many within the energy industry are skeptical of plans to just increase carbon capture and storage and the use of nature-based offsets. Even with these tools, every climate model sees Scope 3 cuts as requiring massive reductions in oil and gas sales. Reducing Scope 3 emissions ultimately requires society to transition to greater use of alternative fuels. The heads of TotalEnergies and Shell have warned they can only move at the pace of society's energy transition. Total CEO Patrick Pouyanne said he did not want to "limit the growth of the company because of the Scope 3 absolute value" if society failed to curb fossil fuel demand.

- Financial firms use Scope 3 to evaluate climate risk in equity and debt markets as well as for their own emissions benchmarking. That makes it an important metric for oil and gas firms, and a "useful indicator" on companies' true climate ambition, HSBC said in a recent note to clients. While there is significant pushback in the US against increasing environmental, social and governance (ESG) reporting requirements, those regulations continue to move forward.

- Civil society sees Scope 3 emissions as a crucial litmus test of the climate ambitions of energy companies, even if there is disagreement on how to calculate them. Major climate accounting frameworks like the Taskforce on Climate-Related Financial Disclosures, the Science Based Targets initiative and the Transition Pathway Initiative include Scope 3 emissions as a critical part of climate reporting. Activists and green groups will often clash with companies on emissions calculations, with groups like Follow This and Greenpeace pushing back against corporate claims. But ignoring Scope 3 altogether is no solution for the lack of credibility that oil and gas firms still face in the climate discussion.

Energy Intelligence Finance is part of Energy Intelligence's Competitive Intelligence Service. Other publications: EI New Energy, Energy Compass, International Oil Daily, Jet Fuel Intelligence, Natural Gas Week, Nefte Compass, NGW's Gas Market Reconaissance, Nuclear Intelligence Weekly, Oil Daily, Oil Markets Briefing, Oil Market Intelligence, Petroleum Intelligence Weekly, World Gas Intelligence. www.energyintel.com

PEER STRATEGY

Chinese NOCs Struggle to Shake Off Downstream Ills

- *Weak downstream results due to China's Covid-19 lockdowns are weighing on top refiner Sinopec's earnings while its global peers rack up bumper profits.*

- *Both Sinopec and PetroChina are set to cut capex in chemicals this year, with the former rethinking its ambitious expansion plans for the sector as revenues fall.*

- *China's refining industry may face dark days ahead, especially given rapid adoption of electric vehicles, but its petrochemical sector is still attracting investors.*

The Issue

Chinese national oil companies' third-quarter results have put their downstream struggles under the spotlight. Whereas upstream play CNOOC Ltd. saw profits surge, top refiner Sinopec's net income slumped due to a sharp deterioration in its downstream businesses. China's unending zero-Covid policy has hit demand for refined and chemical products hard but the sector also finds itself reeling from policies that encouraged overexpansion. Companies now find themselves having to rethink their downstream plans.

Unhealthy Margins

Sinopec's net income fell 38% year on year in the third quarter — and it posted operating losses in both refining and chemicals. On earnings calls, the company and its main rival, second-biggest Chinese refiner PetroChina, repeatedly blamed the "resurgence" of the coronavirus pandemic for their poor downstream results. Covid-19 lockdowns, a distant memory for most countries, have multiplied in China this year. Initially only hitting demand for refined products, as transportation was curtailed, they eventually came to affect consumer confidence, retail and ultimately chemicals demand. China's real estate debt crisis, which has led to a dramatic fall in the number of home sales, has meanwhile curbed demand for fixtures such as household appliances and lighting, further reducing the need for petchems. Consumption of ethylene, a petchem building block, was down 1% year on year in the first nine months of 2022, Sinopec said.

As China's largest refiner and smallest upstream producer, Sinopec has stumbled in a year when most energy companies around the world have been reporting stellar financial results. JPMorgan puts Sinopec's gross refining margins at a relatively meager \$2.70 per barrel in the third quarter, down from \$8.80/bbl a year ago. By comparison, Europe's top refiner TotalEnergies reported a still-robust average margin of \$13.53/bbl (\$99.20 per ton) for the three-month period.

For Sinopec, the two-month lockdown in April and May in Shanghai, China's most populous city where it is the dominant downstream player, was a particularly bitter pill to swallow. Inventory losses in the refining sector, as oil prices retreated over July-September, and costlier raw materials for chemicals made the situation even worse.

Still, both Sinopec and PetroChina expressed confidence that this quarter would see a rebound in demand for oil products, as China's economic recovery gathers pace. Official data showed GDP growth rebounded from 0.4% in the second quarter to 3.9% in the third quarter. But for the two refiners, their financial recovery may start with the award of fresh export quotas in late September, which gives them an additional — and much-needed — outlet for their products. "The quotas will be great help to mitigate the weakness in domestic demand," a Sinopec official said on the company's earnings call. A full recovery in Chinese demand will have to wait until China significantly relaxes its Covid-19 policy, which is not likely until after winter and the appointment of a new government in March.

Expansion Continues

The zero-Covid policy will ultimately be dropped, most experts agree, but even that will not address the 3 million barrel per day refining overcapacity and petchem capacity surpluses in the country. These have been building since 2014, when China embarked on a strategy to reduce its dependence on petchem imports and upgrade its own production. The country opened its downstream to more participants by setting up seven zones for new, integrated projects, and allowed private petchem players to enter the fray. They have since become significant competitors to Sinopec and PetroChina. Hengli Petrochemical Co., with its 400,000 b/d crude oil processing capacity, and China's largest complex, the 800,000 b/d plant run by Zhejiang Petroleum and Chemical Co., use their naphtha and liquefied petroleum gas output to make petchems, which account for some 40% of their end production. The other 60% is oil products, mostly transport fuels.

Not wanting to fall behind, PetroChina and Sinopec are also adding new capacity and upgrading their existing plants. PetroChina last month started trial runs at its new 400,000 b/d Jieyang refinery and petchem complex in the southern Guangdong province, China's largest region by economic output. The project was initially planned as a joint venture (JV) with Petroleos de Venezuela before that company's financial and political problems forced its withdrawal. PetroChina had planned to allocated 18.39% of its total capex to refining and chemicals this year but has now reduced that to 15%.

Sinopec, meanwhile, last year brought on line a new 220,000 b/d crude distillation unit (CDU) at its Zhenhai refinery in eastern China's Zhejiang, where a second CDU will be ready by end-2024, later than expected. The delay comes as Sinopec is considering cutting its chemicals capex, which — at 66.1 billion yuan ($9.1 billion) — was to account for almost a third of the company's planned record 198 billion yuan spending for 2022.

"The chemicals industry currently faces serious challenges ... We are now conducting research to reduce capex for the chemicals segment," the Sinopec official said. The capex was meant to be spent on the second Zhenhai CDU, as well as on bringing an associated ethylene plant, plus several other ethylene and aromatics facilities on stream over the next few years.

International Interest

Despite Beijing's plans to cap nationwide refining capacity at 20 million b/d by 2025, versus 18.8 million b/d currently, and China becoming a net exporter of certain chemicals, overseas investors are still keen to get a foothold in the country's downstream — albeit with a clear focus on value-added products. UK-based chemicals firms Ineos, for example, entered three petchem JVs with Sinopec worth a total $7 billion this summer.

Exxon Mobil and Saudi Aramco — the two remaining foreign companies in China's refining sector with 25% apiece in a 240,000 b/d Sinopec-operated plant in southeastern Fujian — have recently moved forward with new investments in the country after putting them on hold for several years. Aramco, looking to lock in outlets for its crude, will partner state-owned Norinco in a 300,000 b/d refinery and 1.5 million ton per year ethylene scheme in China's northeastern Liaoning.

Exxon, meanwhile, greenlighted a multibillion-dollar petchem complex in Guangdong. The facility, in Huizhou — where Shell already partners CNOOC Ltd.'s parent company at a separate petchem site — will include a 1.6 million ton/yr flexible feed steam cracker and several polyethylene and polypropylene lines that will help make packaging, automotive, agricultural and consumer products.

Maryelle Demongeot, Singapore

Click here for full report with graphics

CORPORATE STRATEGY

Lukoil Prepares for Life Without Europe

- *Lukoil, Russia's largest independent oil company, is restructuring downstream operations in Europe because of sanctions and trying to sell its Italian refinery.*
- *As Dubai effectively becomes the new headquarters for trading arm Litasco, Lukoil is also eyeing upstream expansion in the Middle East.*
- *The departure of co-founder and CEO Vagit Alekperov, who remains a Lukoil shareholder, has fueled speculation of a state-led takeover of the firm.*

The Issue

With less than one month to go before an EU embargo on Russian crude kicks in on Dec. 5, Lukoil has a lot to sort out. EU and Swiss sanctions on Russia following its invasion of Ukraine, while not targeting Lukoil itself, have led the company to rejig its marketing operations and split its trading arm, Litasco, into two. But other problems, such as what Lukoil should do about its refinery in Italy, cannot be so easily untangled, while the company's future in Russia is also far from certain.

Split Decision

Lukoil's days as a downstream player in Europe are coming to an end — and the company has to plan accordingly. Litasco, which Lukoil created in the early 2000s to market its own oil and handle third-party business in the Mideast, Far East and elsewhere, has been divided into two. Amid European sanctions, Litasco has delegated all Russia-related business to its office in Dubai, leaving its Geneva headquarters focused on supplying non-Russian crude to Lukoil's European refineries.

Energy Intelligence understands Lukoil has no plans to sell Litasco as it allows the company to remain active on the global market. It has, however, moved most Litasco staff to Dubai, a source close to the company says. The United Arab Emirates, which unlike Switzerland has placed no restrictions on Russian trade and finance, has effectively become Litasco's new base, handling all of its Russian sales as well as its existing Mideast trading.

Litasco remains the largest non-state offtaker of Russian oil, and its volumes have increased in recent months, as it handles the crude of other Russian producers, most notably West Siberian giant Surgutneftegas. According to port data, Litasco lifted around 700,000 barrels per day of Russian crude in the first 10 months of the year as volumes increased sharply from the latter months of 2021. It also handles regular shipments of gasoil and fuel oil from Lukoil's Russian refineries. On the international front, it supplies third-party barrels across the Mideast and North Africa, including Iraq, and is also active in the Far East.

Italian Impasse

Lukoil retains a 45% stake in the Zeeland refinery in the Netherlands that is operated by French major TotalEnergies, but its biggest dilemma in Europe is what to do with the plants it owns. It continues to supply Urals crude to its Neftokhim plant in Bulgaria and the Petrotel plant in Romania, and the EU embargo on Russian crude has exemptions that will allow it to keep up those shipments for now.

But the situation in Italy, where there is no such exemption, appears unresolvable. Sources close to the matter say Lukoil wants to sell the 320,000 b/d Isab plant in Sicily because — the bumper refining margins of 2022 aside — it has generally been loss-making since the Russian company assumed full control of the plant in 2014. Lukoil, which forked out a total €2.4 billion ($2.4 billion) to buy Isab, is said to have rejected selling it to Vitol-backed US investment group Crossbridge. The chances of any sale going through are receding, as the Dec. 5 deadline looms, leaving the prospect of the refinery falling idle because Lukoil is unable to supply it with crude. The Russian volumes previously sent to Isab will likely have to find new homes on the open market.

It appears increasingly likely that the Italian government will have to intervene and, if needed, find a buyer for the refinery. There are existing laws which allow the authorities "golden powers" to protect strategic companies from foreign interests, but it is not clear how they will be applied. The worst outcome for Italy, and Lukoil, would be if Isab stopped operating altogether and left the Italian market short of products.

Looking Upstream

Lukoil is much less concerned about its global upstream portfolio, even in the current geopolitical climate. This is focused on the Middle East, where the company is the majority partner in Iraq's West Qurna-2 project, and on the Caspian, where it is involved in several projects in Russia, Kazakhstan and Azerbaijan. Energy Intelligence understands Lukoil wants to expand in the Mideast and has no plans to exit Iraq, where it has been involved since 1997. The company is awaiting approval from the Iraqi government on its plan to develop the Eridu field on Block 10, which is expected to bring Lukoil much higher profits than West Qurna-2. It is unclear whether Japanese partner Inpex will stay the course, however.

The Caspian also has scope for expansion. In Kazakhstan, Lukoil retains minority stakes in the giant Chevron-led Tengizchevroil joint venture, the Eni- and Shell-led Karachaganak gas project, and has contracts with state oil company Kazmunaigas to develop new offshore acreage, although the costs of executing those projects may be prohibitive. Azerbaijan is also a big focus: Last year, Lukoil increased its stake in the BP-operated Shah Deniz gas project from 9.9% to 15.5% and it is carrying out exploration work with state oil company Socar. In Turkmenistan, Lukoil is eyeing a role in the development of the Dostluk field, which for years has been disputed with Azerbaijan.

Most of the impetus behind Lukoil's expansion in the Caspian came from Alekperov, the former CEO, who was born in Azerbaijan and knows the area as well as anyone. The big question being asked about Lukoil as a whole is what will happen to the company after Alekperov, 72, stepped down in April and was followed by other senior figures like Lukoil's vice president and co-founder Leonid Fedun. In September, Lukoil's then-chairman, Ravil Maganov, who used to be one of Alekperov's most trusted managers, died after falling from a Moscow hospital window. State-run Rosneft has never publicly stated a desire to take over Lukoil, but tightening Russian government control over the oil and gas sector makes that a distinct possibility.

Paul Sampson, London

Click here for full report with graphics

CORPORATE STRATEGY

EOG Takes Its Exploration Game to New Play

- *An exploration-hungry holdout among US E&Ps, EOG Resources wants its wells to deliver a "double premium" return rate of 60% in a $40 per barrel oil price environment.*

- *The Houston-based company will allocate most of its exploration budget for next year to its recently disclosed position in the Utica Shale.*

- *EOG is preparing to start drilling in shallow waters offshore Australia in 2023, aiming to replicate the success it has had in Trinidad.*

The Issue

With investor emphasis on financial discipline over growth, public US E&Ps have all but dropped the "exploration" part of their businesses. But exploration remains a core tenet at EOG Resources, which last week revealed its new position in the Utica Shale region of Ohio. Quelling investor concerns about growth was in some ways easier at the height of the coronavirus pandemic, when operators had few incentives to grow output given ultra-low commodity prices. But now US shale operators like EOG face a conundrum: How can they capitalize on the better pricing without angering shareholders?

Adding Inventory

While some operators have turned to acquisitions, snapping up already-producing properties so they can add barrels without extra rig or frack fleet expenses, EOG has long favored growing inventory through the drill bit. The company completed 15 exploratory wells in the US and overseas last year, more than double the seven it drilled in 2020. That is only five fewer than the number of exploration wells it completed at the height of the shale boom in 2013. It spent $2.6 billion on exploratory and development drilling in the first nine months of 2022, up around one-quarter year on year. “Our exploration program — it’s not really about producers and dry holes,” CEO Ezra Yacob, who has been in charge for just over a year, told investors last week. “It’s really about how, or if, these prospects are going to be additive to the quality of our existing inventory.”

Yacob’s predecessor, Bill Thomas, who retired as EOG chairman last month, defended the company’s exploration strategy in 2019 when fellow independents Occidental Petroleum and Diamondback Energy were making huge acquisitions to boost their well inventory. Adding inventory is becoming an even greater imperative now as shale basins mature and operators exhaust prime acreage. The Utica play, along with recent developments in Wyoming and South Texas, ranks lower in maturity when compared to existing areas such as the Delaware subbasin portion of the Permian and the Bakken Shale of North Dakota, according to EOG’s third-quarter results presentation.

Additionally, EOG has refined its spending and returns thresholds for where it plans to drill. In 2019, it was pursuing a strategy that targeted “premium” drilling locations, which the company defines as wells delivering a return rate of at least 30% at oil prices of $40/bbl or higher. But in the middle of the pandemic, the company shifted to a “double premium” strategy in 2021, targeting wells with a return rate of 60% at $40/bbl.

Utica Upswing

The Utica Combo assets — so called because they comprise oil, dry gas, and natural gas liquids (NGLs) resources — are expected to drive premium and double-premium returns, EOG executives said. The company revealed it had accumulated 395,000 net acres in the play at an entry cost of less than $500 million, and has already drilled four delineation wells that support its assessment. “These first four wells already own premium and double-premium returns when normalized to our development plan, which assumes 3-mile laterals,” Ken Boedeker, EOG’s head of exploration, said on an earnings call. He attributed the “exceptional” returns partly to the high productivity of the interval.

EOG is looking to drill about 20 wells next year on the asset. Liquids are the main target, with oil, natural gas and NGLs each making up 25%-35% of the ultimate recoveries, which — on wells with 3-mile laterals — could amount to 2 million-3 million barrels of oil equivalent, Boedeker said. “That type of performance really leads us to a low finding cost and will definitely be additive to our cost basis,” he said. The main target will be the Point Pleasant formation, Yacob told analysts, with the 20 wells taking the bulk of the company’s 2023 exploration budget. “It’ll basically be another delineation type of year for us,” he said.

Meanwhile, EOG is moving its massive Dorado dry gas play in South Texas from exploration to development. The company has ramped up drilling on Dorado and plans to spud 30 wells in 2022 — nearly triple what it drilled last year. Output has already grown, with Dorado producing 140 million cubic feet per day in the first quarter of 2022 — twice what it produced a year earlier. EOG is now constructing a pipeline to connect the play to the Agua Dulce hub near Corpus Christi and bring its gas to market. Executives said the link would be crucial for supplying the growing Gulf Coast LNG market, as well as the Texas and Mexico power generation markets. “We’ve also contracted for a large transport position on an interstate pipeline expansion to allow us to reach essentially all the LNG demand pool along the Gulf Coast from South Texas to Louisiana,” said Lance Terveen, EOG’s senior vice president for marketing, noting that the interstate line would directly connect to EOG’s pipe. “So we’re thinking very tactically, strategically, and setting up Dorado for the long term.”

Drilling Down Under

Overseas, EOG is preparing to start drilling next year at the shallow-water Beehive prospect in the Bonaparte Basin offshore northern Australia. According to the company’s last update in June, drilling of the Beehive-1 well is expected to start by the third quarter of 2023. The well is targeting the Sunbird formation and “anticipates the presence of a light oil or gas condensate,” the update said. Independent estimates have suggested it could hold up to 1.4 billion boe — although “best estimates” put the figure closer to 400 million boe.

The license may look out of place in EOG’s portfolio, which is largely focused on the US. However, an underrated part of EOG’s business is overseas — its high-return operations in Trinidad, where it has targeted gas in shallow waters for 25 years. EOG could be looking to replicate its success in the Caribbean off Australia. “The international opportunities have a higher hurdle to really be considered additive to the quality of our inventory,” Yacob said earlier this year. “Simply because we need to have access to services there, we need to have access to contracts, and we need to find the subsurface geology that actually makes it not just competitive, but really superior to much of what we’re drilling here.” EOG is also continuing to explore in areas that Yacob declined to disclose. On last week’s call, he would only describe them as similar to EOG’s recent discoveries — plays that are located in areas that have known oil and gas resources but where activity has been lagging the bigger basins.

Caroline Evans, Houston

Click here for full report with graphics

ENERGY AND EQUITY MARKET DATA For the week ended Nov 4, 2022

EIF GLOBAL INDEX COMPONENTS*

	Close Nov 4	1-Wk Chg.	% Chg. 1-Wk	52-Wk	YTD
Suncor (tse)	36.13	+2.41	+7.15	+39.42	+44.24
Eni (mise)	13.95	+0.87	+6.62	-3.83	+0.45
TotalEnergies (par)	57.53	+3.14	+5.78	+15.14	+13.39
Equinor (osl)	38.40	+1.88	+5.16	+47.35	+43.37
BP (lse)	5.69	+0.20	+3.57	+24.10	+27.19
ONGC (bse)	1.68	+0.06	+3.48	-17.52	-12.02
Reliance Industries (bse)	31.63	+0.92	+3.01	-5.64	-0.54
Sinopec-S (sesh)	0.44	+0.01	+2.91	-25.66	-33.62
Shell (lse)	28.74	+0.66	+2.35	+28.42	+30.98
Chevron (nyse)	183.42	+3.44	+1.91	+61.59	+56.30
Exxon Mobil (nyse)	112.31	+1.61	+1.45	+74.37	+83.54
CNOOC-H (sehk)	1.26	+0.01	+1.12	+29.85	+35.10
Sinopec-H (sehk)	0.42	+0.00	+0.60	-13.83	-9.16
Lukoil (mos)	76.64	+0.03	+0.04	-23.66	-13.02
Ecopetrol (bvc)	0.50	-0.00	-0.09	-32.70	-24.54
Saudi Aramco (sse)	9.13	-0.11	-1.14	-0.49	+5.29
Rosneft (mos)	5.48	-0.08	-1.38	-36.81	-31.83
PetroChina-H (sehk)	0.41	-0.01	-2.75	-12.90	-8.98
Petrobras-3 (spse)	6.27	-0.49	-7.18	+76.51	+64.58
Petrobras-4 (spse)	5.60	-0.55	-9.00	+58.74	+63.52
EIF Global Index	**334.35**	**+2.03**	**+0.61**	**+16.18**	**+15.23**

*Converted US$/share.

INDEXES

Equity Indexes	Close Nov 4	1-Wk Chg.	% Chg. 1-Wk	52-Wk	YTD
DJIA	32,403.22	-458.58	-1.40	-10.30	-10.83
S&P 500	3,770.55	-130.51	-3.35	-19.43	-20.89
FTSE 100	7,334.84	+287.17	+4.07	+0.75	-0.67
FTSE All-World	695.04	-12.55	-1.77	-22.37	-22.60
EIF Global	334.35	+2.03	+0.61	+16.18	+15.23
S&P Global Oil	1,918.09	+55.92	+3.00	+18.67	+23.57
FT Oil, Gas & Coal	8,763.70	+417.25	+5.00	+49.40	+52.99
TSE Oil & Gas	3,059.66	+90.54	+3.05	+28.35	+34.29
Emerging Markets					
Hang Seng Energy (HK)	21,442.01	+225.43	+1.06	+27.12	+27.58
BSE Oil & Gas (India)	19,722.21	+475.16	+2.47	+7.24	+12.65
RTS Oil & Gas (Russia)	+183.06	-3.55	-1.90	-27.20	-23.04

COMMODITY PRICES

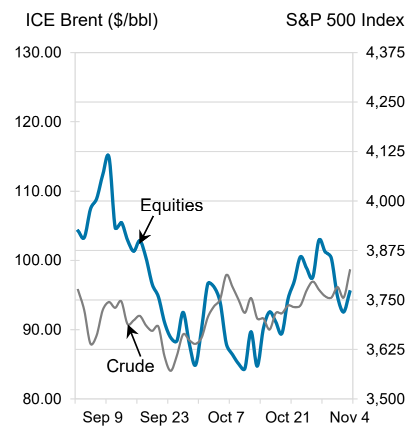
	Close Nov 4	1-Wk Chg.	% Chg. 1-Wk	52-Wk	YTD
Dated Brent	99.61	+4.42	+4.64	+23.69	+28.79
Brent 1st ICE	98.57	+2.80	+2.92	+22.39	+26.73
WTI 1st (Nymex)	92.61	+4.71	+5.36	+17.51	+23.14
Oman 1st (DME)	94.19	+3.36	+3.70	+19.29	+22.82
RBOB (Nymex)	2.73	-0.17	-5.91	+19.29	+22.72
Heating Oil (Nymex)	3.91	-0.64	-13.96	+62.67	+68.01
Gas Oil (ICE)	1,115.00	-18.50	-1.63	+57.15	+67.17
Henry Hub (Nymex)	6.40	+0.72	+12.60	+11.97	+71.58
Henry Hub (Cash)	4.00	-1.01	-20.18	-30.18	+4.68
UK NBP (Cash)	100.00	+21.00	+26.58	-43.82	-23.08

SHARE PRICES IN LOCAL CURRENCY†

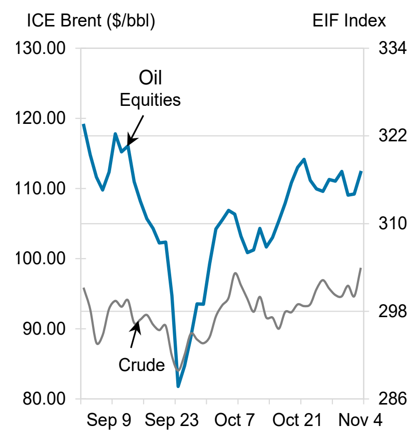
NOCs	Close Nov 4	1-Wk Chg.	% Chg. 1-Wk	52-Wk	YTD
PTTEP (set)	192.00	+11.50	+6.37	+62.71	+62.71
Ecopetrol (bvc)	2,540.00	+130.00	+5.39	-11.53	-5.58
Equinor (osl)	392.75	+15.40	+4.08	+76.20	+66.49
CNOOC-S (sesh)	15.74	+0.40	+2.61	NA	NA
Sinopec-S (sesh)	3.13	+0.06	+1.95	-16.53	-24.94
CNOOC-H (sehk)	9.88	+0.11	+1.13	+30.97	+36.02
Sinopec-H (sehk)	3.32	+0.02	+0.61	-13.09	-8.54
Gazprom (micex)	169.47	-0.83	-0.49	-51.68	-50.63
Saudi Aramco (sse)	34.30	-0.40	-1.15	-0.32	+5.39
Rosneft (mos)	334.55	-7.45	-2.18	-45.94	-44.23
PetroChina-S (sesh)	4.95	-0.12	-2.37	-2.37	+0.81
PetroChina-H (sehk)	3.18	-0.09	-2.75	-12.15	-8.36
Petrobras-3 (spse)	31.71	-4.07	-11.38	+59.30	+49.38
Petrobras-4 (spse)	28.30	-4.27	-13.11	+43.26	+48.41
Majors					
TotalEnergies (par)	57.76	+3.17	+5.81	+33.55	+29.42
BP (lse)	499.95	+27.00	+5.71	+47.26	+51.27
Shell (lse)	2,526.50	+108.00	+4.47	+52.38	+55.78
Chevron (nyse)	183.42	+3.44	+1.91	+61.59	+56.30
Exxon Mobil (nyse)	112.31	+1.61	+1.45	+74.37	+83.54
Regional Integrateds					
OMV (vse)	49.56	+4.05	+8.90	-7.05	-0.78
Eni (mise)	14.01	+0.87	+6.65	+11.54	+14.65
Repsol (bme)	14.30	+0.52	+3.74	+33.35	+36.98
Lukoil (mos)	4,675.00	-36.50	-0.77	-34.69	-28.84
Global Independents					
Kosmos Energy (nyse)	6.82	+0.61	+9.82	+87.36	+97.11
APA (nyse)	48.99	+3.55	+7.81	+68.47	+82.19
EOG Resources (nyse)	142.23	+8.54	+6.39	+63.71	+65.74
Woodside Petroleum (asx)	38.17	+2.17	+6.03	+66.03	+74.05
Hess (nyse)	146.53	+6.06	+4.31	+78.41	+97.93
ConocoPhillips (nyse)	132.32	+5.15	+4.05	+80.49	+83.32
Occidental (nyse)	73.27	+1.43	+1.99	+117.10	+152.74
Refiners					
Marathon Petroleum (nyse)	117.65	+4.08	+3.59	+85.07	+83.86
Reliance Industries (bse)	2,592.45	+66.45	+2.63	+3.75	+9.47
HollyFrontier (nyse)	63.09	+1.59	+2.59	+94.60	+92.46
Valero (nyse)	128.72	+2.74	+2.17	+68.59	+71.38
Eneos (tyo)	498.10	+8.40	+1.72	+7.35	+15.76
PBF Energy (nyse)	45.92	+0.14	+0.31	+227.30	+254.05
Phillips66 (nyse)	103.48	-0.72	-0.69	+34.60	+42.81
Oil-Field Services, EPC					
TechnipFMC (nyse)	11.66	+1.48	+14.54	+57.99	+96.96
Wood Group (lse)	158.10	+18.10	+12.93	-20.95	-17.27
Transocean (nyse)	4.06	+0.44	+12.15	+11.23	+47.10
Halliburton (nyse)	38.48	+2.53	+7.04	+56.93	+68.26
Baker Hughes (nyse)	29.13	+1.88	+6.88	+16.78	+21.10
Fluor (nyse)	31.73	+1.79	+5.98	+56.38	+28.10
Worley (asx)	15.02	+0.84	+5.92	+44.98	+41.30
Schlumberger (nyse)	53.10	+2.65	+5.25	+60.18	+77.30
Petrofac (lse)	119.90	+5.00	+4.35	-5.81	+3.99
Saipem (mise)	0.93	-0.03	-3.59	-80.59	-79.83
Midstream					
Plains All-American (nyse)	12.50	+0.62	+5.22	+17.92	+33.83
Williams (nyse)	33.54	+0.87	+2.66	+18.60	+28.80
Kinder Morgan (nyse)	18.17	+0.40	+2.25	+8.48	+14.56
Enbridge (tsx)	54.17	+1.04	+1.96	+3.54	+9.63
TC Energy (tsx)	60.06	+0.54	+0.91	-9.90	+2.09
Enterprise Products (nyse)	24.95	+0.11	+0.44	+11.38	+13.62

*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

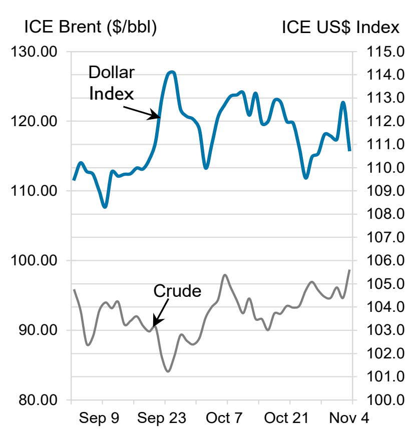
CRUDE VS. EQUITIES



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.