Energy Intelligence

VOL. 45, NO. 43

OCTOBER 25, 2022

WWW.ENERGYINTEL.COM

ENERGY INTELLIGENCE **FINANCE**®

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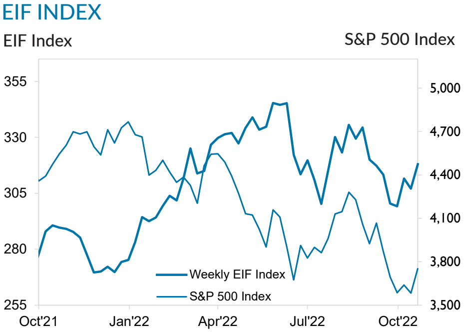

EIF Global Oil and Gas Index of 22 traded equities

OUR TAKE

Unease Amid the Uncertainty

Oil and gas companies remain on course to deliver record profits this year, but executives are unlikely to be sleeping too soundly as third-quarter earnings season arrives. The coming months could bring the industry one of its most volatile periods ever as upsized Western sanctions and a price cap on Russian oil threaten major dislocations in global energy flows against a wider backdrop of macroeconomic and inflation risks. Here are some of the key themes we'll be listening out for on earnings calls as we parse how companies are navigating the uncertainty.

- Much ink has been spilled on how corporate oil views the potential follies and (in)effectiveness of upcoming EU sanctions and the G7's proposed price cap on Russian crude. But we'll keep an ear out for more concrete insights into how companies are positioning themselves to manage potentially significant dislocations, such as (1) how far along European refiners are in eliminating Russian crude from their feedstock (2) whether trading houses are finding enough non-Russian products to stave off shortfalls and (3) how much success Latin American producers are having competing against discounted Russian barrels in Asia. EU plans for a gas price cap are unlikely to have been finalized as reporting begins in earnest, but companies may address concerns around the proposals and their possible impact.

- We'll have a close eye on how companies are coping with industry-wide cost inflation — and how it is affecting their project execution, returns and investment decisions. More than 80% of Morgan Stanley's universe of covered US E&Ps have raised capex guidance this year due to inflation, although this is having only a negligible impact on free cash flow. In Europe, TotalEnergies is among those seeing inflation in employee salaries, having increased wages for refinery workers to end strikes in France.

- While formal guidance on 2023 capex is not expected yet, comments on the macroeconomic outlook — and how that will impact energy demand and activity levels — may provide early clues. Olivier Le Peuch, CEO of services firm Schlumberger, which is rebranding as SLB, expects oil and gas markets to maintain an upward trajectory for the foreseeable despite growing economic uncertainty. He did, however, say there was an "urgent need" for more upstream investment.

- Earnings calls could also see top executives give more thoughts on the impact of the US Inflation Reduction Act (IRA), particularly on project timelines. Baker Hughes CEO Lorenzo Simonelli has already said the IRA's "attractive tax incentives" should accelerate green hydrogen, carbon capture, utilization and storage and direct air capture (DAC) buildout. Occidental CEO Vicki Hollub said earlier this month the IRA will allow the US independent to build as many as 135 large-scale DAC plants by 2035 — the very top of its previously guided range. But we also await remarks on other aspects of the bill, such as the impact of the methane fee and permitting issues.

PEER STRATEGY

BP Takes Lead in Majors' Biogas Race

Renewable natural gas (RNG) is becoming increasingly important for the Western majors as they advance decarbonization through so-called "green molecules." RNG is likely to remain a low-volume business relative to conventional gas, but it offers higher margins courtesy of subsidies for renewable fuels — particularly in transport — and adds to the suite of "green premium" products these diversifying majors can offer emissions-conscious customers.

Still, interest is hardly uniform across the group. BP now sits on one end of the spectrum, courtesy of its $4.1 billion agreed takeover of US RNG specialist Archaea Energy — CEO Bernard Looney's largest acquisition. Exxon Mobil, on the other hand, has barely uttered the terms "RNG" or "biogas" when articulating its low-carbon strategy, with its interests weighted toward liquid biofuels. Here, Energy Intelligence takes stock of the majors' RNG strategies to date.

- **BP's RNG ambitions through 2030 dwarf those of its peers.**

BP's Archaea purchase should help propel the UK major's global biogas supply to around 70,000 barrels of oil equivalent per day, or some 393 million cubic feet per day, by the end of this decade and deliver $1 billion annually of free cash flow.

By contrast, Chevron — among the most vocal supporters of RNG within its low-carbon plans — has set its 2030 sights at roughly one-tenth that level (40 MMcf/d). Energy Intelligence understands that the target could well go higher if expansion efforts move more quickly than expected and economics can support incremental capex, but the ambition remains as stated, for now. TotalEnergies sees biogas delivering about 180 MMcf/d (~30,000 boe/d) by the end of the decade, while Shell has yet to publish a specific target.

Exxon has not incorporated RNG or biogas into its stated low-carbon ambitions. Representatives declined to explain the rationale behind the limited participation when asked by Energy Intelligence, but the US major's research and early investments into biofuels point to a heavy, if not exclusive, bias toward liquid alternatives.

- **Most majors favor RNG for transportation in the US, while interest in Europe is set on displacing fossil gas in heating and power generation.**

RNG-to-compressed natural gas (CNG) for vehicle fleets and heavy-duty transport is the favored value chain path for the majors in the US.

Shell, for example, has earmarked 4.5 MMcf/d of RNG from its first operating US RNG facility and several dairy-based facilities under development for CNG-run transport fleets.

Andy Walz, Chevron's head of fuels and lubricants in the Americas, recently told Energy Intelligence that his firm is "bullish" on the role RNG could play in helping decarbonize heavy transport. That's in light of the lead times and breakthroughs required to advance hydrogen or electrification-based alternatives. Chevron will thus bias its fledging RNG business toward CNG transportation supplies.

Subsidies and other government-backed incentives provide the economic case for this strategic path. RNG-to-CNG providers are able to tap into federal US credits known as renewable identification numbers (RINs), while California's Low-Carbon Fuel Standard provides particularly robust additional incentives for RNG supplies that boast "carbon negative" emissions footprints, as RNG made from manure can sometimes claim.

BP's head of trading, Carol Howle, hinted that BP could potentially receive as much as $40 per million Btu for RNG sold to gas-based transportation fleets in the US, based on a Henry Hub price of $6.75/MMBtu and combined renewable fuel credits of $33/MMBtu.

The focus in Europe is in support of regional efforts to wean the continent off fossil gas while still using existing energy infrastructure — an initiative that now carries heightened energy security appeal as well. Recent climate-focused energy legislation such as the EU's Fit for 55 and REPowerEU plans demonstrate continued government commitment to incentivize biogas development.

The EU is hoping to boost biomethane production to 3.3 billion cubic feet per day by 2030, which it estimates will require investments of €37 billion ($37 billion), and reduce demand for fossil gas by 1.6 Bcf/d. Shell tells Energy Intelligence it is keen to develop RNG-to-LNG in Europe, while Total has biogas production up and running in France.

Notably, tax incentives included in the recently passed US Inflation Reduction Act provide new long-term fiscal support for biogas more broadly, potentially laying the groundwork for non-transport-focused developments in the US as well. Whether the majors will be interested is a different matter.

- **The biggest strategic differentiator is the majors' preference on biogas sourcing.**

The majors currently vary on whether they prefer landfill- or animal waste-based RNG production.

Landfill-derived gas is more cost efficient, but manure digesters create a higher volume of emissions credits due to their more advantaged carbon life-cycle footprint, boosting their access to emissions-based subsidies.

Through the Archaea deal, BP has chosen to focus its RNG production on landfill-based systems, but it remains exposed to animal waste-based volumes through its marketing agreements. Chevron's strategy is currently exclusively focused on manure-based systems, starting in its home state of California.

Joint ventures are helping it expedite development, as its partnership with San Francisco-based waste solutions firm Brightmark expands across several US states. Like Chevron, Shell has focused on animal-based facilities in the US.

Total is looking outside of its core markets in the US and Europe to India to help build a 300 gigawatt project pipeline.

- **Scarce inputs — such as the waste products needed to create RNG —are a bigger limiting factor on potential market size than a lack of end-users.**

RNG production and markets lack scale and are unlikely to ever reach anywhere near the volume of traditional natural gas production. "The key point is to have access to waste and residues," Total CEO Patrick Pouyanne recently told investors. Chevron would agree: Walz says his firm will look to diversify its RNG sources over time despite its current focus on dairy-based systems, just as it would conventional upstream supplies.

But the majors involved in RNG nevertheless see it contributing materially to future revenues and emissions reductions. "If you have less supply than demand, I feel that is good for the economics," Pouyanne has said.

Input scarcity suggests offtake agreements, acquisitions and joint ventures will feature heavily in the majors' expansion plans, as companies try to rapidly secure access to potential production with links to choice markets.

BP's Looney estimates that of the 2,500 landfill sites in the US, 500 already have gas capture in place and 1,000 more were suitable for development. The Archaea deal will give BP access to 100 of those.

Noah Brenner, London

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CORPORATE STRATEGY

Inpex Given Impetus to Expand LNG Portfolio

- *In its quest for more LNG from outside Australia, Inpex is exploring new investment opportunities and thought to be seeking exposure to US Henry Hub prices.*

- *The Japanese company wants to make its LNG production cleaner with carbon capture and storage (CCS) but its CEO vows to keep prices competitive.*

- *Inpex is talking to state-owned Pertamina over a reboot of the long-delayed Abadi LNG project in Indonesia.*

The Issue

Russia's invasion of Ukraine has pulled more LNG cargoes into Europe and triggered huge concerns over energy security for major Asian gas buyers like Japan. As the country's largest upstream company, which counts the Japanese government as its biggest shareholder on 19.97%, Inpex has a mission to help ensure Japan's energy security and to that end is seeking to expand its LNG portfolio.

Step on the Gas

Noting how Europe has been buying much more LNG because of the Ukraine crisis, Inpex CEO Takayuki Ueda believes the superchilled fuel will become a more global commodity that plays a key role in the energy transition. "We believe LNG has become more essential for global energy security to substitute Russian natural gas in the short term, and to materialize net zero by 2050 in the mid- to long term," he said in a recent interview with Energy Intelligence.

Inpex itself has a 2050 net-zero goal — and plans to spend 4 trillion yen ($30 billion) by 2030 to get there. By the same year, it aims to be allocating 70% of all hydrocarbon investment to gas, versus around 50% now, and to have driven down its net carbon intensity by at least 30%, from 2019 levels of 41 kilograms of carbon dioxide per barrel of oil equivalent. Some 40% of its net production of 654,000 boe per day in the first half of 2022 was gas.

One immediate plan is to unlock more gas output by debottlenecking Inpex's flagship 8.9 million ton per year Ichthys LNG project in Australia, raising production to 9.3 million tons/yr by 2024. Ueda said Inpex is speeding up exploration work around the Ichthys offshore field and wants to develop discovered but untapped resources. It holds interests in 17 exploration blocks in the vicinity of Ichthys LNG and multiple reservoirs have been found. Land has also been secured for potential new trains. "Ichthys is designed to operate for at least 40 years," Ueda noted, adding the feasibility of extra trains will be determined by the size of gas resources and commercial interest from buyers.

Beyond Australia

Inpex, which is also a shareholder in Shell's Prelude floating LNG project, will diversify and expand its LNG portfolio by seeking offtake from outside Australia, Ueda said, and talks are ongoing with various LNG sellers. The Japanese company currently has no equity in nor offtake from North American LNG projects but is understood to be seeking some exposure to US Henry Hub gas prices, which are playing an increasingly important role in the pricing of LNG. A bigger portfolio would help nudge Inpex closer to its goal of trading 10 million tons of LNG annually by 2030, up from 7 million tons now.

Another key region is the United Arab Emirates, where Inpex is understood to be keen on participating in Abu Dhabi National Oil Co.'s (Adnoc) 9.6 million ton/yr Fujairah LNG project; the two firms are already working together to establish an ammonia supply chain. Fujairah's strategic location on the Gulf of Oman would allow LNG cargoes to be shipped to both Asian and European markets.

Ueda warned a reluctance by banks and other institutions to fund hydrocarbon projects would pose a challenge for new LNG schemes, and hopes lenders understand the "reality of energy transition and energy security." As an E&P company, Inpex remains committed to investing in new oil and gas projects, Ueda said. Closer to home, the need for greater self-sufficiency has led Inpex to plan exploration of a new gas field near its existing onshore Minami-Nagaoka project in Niigata prefecture on the west coast of Japan. Drilling is slated to start next month and continue through June 2023, with production set to begin in 2026 at the earliest, Ueda said. It would be the first upstream project launched in the area since 2010.

Cleaner LNG

Whether or not Ichthys LNG adds more trains, the project will certainly be getting new CCS facilities. Carbon capture, utilization and storage (CCUS) is one of five net-zero businesses for which Inpex has earmarked up to 1 trillion yen of the 4.4 trillion yen spending. The other four are hydrogen/ammonia, renewable energy, methanation and forest conservation. Combined, they are intended to generate about 10% of group operating cash flow by the end of the decade. Inpex is planning to start CO_2 injection tests by next year at an enhanced oil recovery demonstration project in Niigata. That will be followed by plans for CCS at Ichthys, where the operator aims to inject 2.5 million tons/yr of CO_2 by around 2030 and work toward monetizing CCS as a business by 2050.

Ueda said CCS would be a prerequisite for Ichthys but Inpex would ensure LNG prices remain competitive. "Many buyers hope for a competitive price. But at the same time, they also hope that cleaner LNG is essential for the mid- to long term," he said. "The target for Ichthys ... in the future is to produce cleaner LNG which is a little higher priced than current levels. But that must be a competitive price as well." As for how CCS would impact existing Ichthys term buyers, Ueda said Inpex is happy to sell cleaner LNG to customers, depending on their interest. Inpex is also considering changing the power source at Ichthys from gas turbines to renewables and, together with partners TotalEnergies and Woodside, was recently awarded a greenhouse gas storage assessment permit in the Bonaparte Basin offshore Australia's Northern Territory. They plan to start CO_2 injection in the second half of the 2020s and Ichthys would be one of the natural users.

Inpex is similarly planning to incorporate CCS at Abadi, the long-delayed 9.5 million ton/yr LNG project in Indonesia, which would increase the scheme's cost by \$1.2 billion-\$1.3 billion to \$21 billion. "We are now therefore in discussion with the Indonesian government regarding the revisions of the current [plan of development], which may also include additional conditions required for commercial development of the field," Ueda said. The firm is eyeing a reboot of Abadi but with new partners, as Shell is expected to divest its 35% stake. Ueda confirmed Inpex is in discussions with Indonesian companies on the project, including state-owned Pertamina, and hopes to submit a revised plan of development to the government at the end of this year or in early 2023.

Clara Tan, Singapore

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PEER STRATEGY

Gas-Hungry IOCs Delve Deeper Into Egypt's Upstream

International oil companies (IOCs) seeking to boost their gas portfolios see Egypt as a prime destination thanks to its prolific Mediterranean deepwater and Nile Delta. The North African country produced 69.2 billion cubic meters (6.69 billion cubic feet per day) of gas in the 2021/22 fiscal year, generating \$8 billion in gas and LNG export revenue. Although its economy is still vulnerable to external shocks, Egypt has shown itself to be a flexible partner for IOCs, offering gas and transition opportunities. Here is the state of play ahead of the COP27 climate change conference in Sharm el-Sheikh next month.

• **Major drilling campaigns are on the horizon.**

A host of majors are next year planning to start drilling in Egypt's West Mediterranean, Petroleum Minister Tarek el-Molla told reporters on the sidelines of a recent industry conference in Nicosia, with seismic complete and data interpretation in the final stages. Shell is expected to begin drilling in the North East Amriya (Block 3) offshore area in mid-2023, while Eni should also start work in its North East Hap'y Block around the same time.

Chevron and BP are also gearing up to drill. BP, which together with its partners produces some 60% of Egypt's gas, was awarded the King Mariout Offshore Area in the West Nile Delta in June. Seismic firm CGG is meanwhile shooting 3-D seismic for BP in the Nile Delta covering the firm's 1.5 trillion cubic foot Atoll and Atoll North fields. Chevron, which is operator of four offshore exploration blocks and has nonoperating interests in two others, has said Egypt is now one of its two main exploration focuses worldwide, along with Suriname. Exxon ostensibly remains committed to exploration offshore Egypt despite selling its ownership of Block 3 to Shell. However, one executive says that while arriving to much fanfare in 2019, the US major has remained inactive, puzzling some in the local industry. Exxon has yet to comment on its long-term commitment to the country's upstream.

- **Wintershall is among the pacesetters as Europe chases Egyptian gas.**

The recent interest from the EU in Egyptian gas supply, as it seeks to replace Russian volumes, has led European companies to step up their engagement in the country, whose output has risen by some 66% from 2015-16 levels. Wintershall Dea's Egypt country chief Sameh Sabry confirmed to Energy Intelligence, on the sidelines of the Nicosia conference, that the German company is "discussing areas and opportunities to grow in Egypt and to play a bigger role in the East Med region." Its CEO Mario Mehren and COO Dawn Summers both visited Cairo earlier this month.

Wintershall, for which Egypt is a core region — particularly as it looks to wind down its business in Russia — is currently drilling the second of a planned five to seven wells at its onshore Nile Delta East Damanhour Block close to its Disouq producing facility that should help fast-track development. It is also "very, very close" to finalizing a farm-in deal for "at least one" of the large frontier West Mediterranean blocks, Sabry said. Wintershall is also a partner in BP's West Nile Delta project, which has suffered water encroachment across its fields, specifically Giza and Fayoum, El-Molla said previously. A decision on a second phase development of BP's Raven field, aimed at maintaining the current 830 million cubic feet per day plateau, is targeted for early next year, Sabry said.

- **Egypt needs IOCs to find another Zohr.**

Key fields in Egypt are depleting at a rate of 10%-15%, according to El-Molla. Given rising domestic gas consumption, that means Egypt will need to make some more discoveries like Eni's 30 Tcf Zohr find in 2015 to be able to satisfy local demand and provide a regular gas bridge to Europe as it transitions to a low-carbon economy by 2050. The European Commission's provisional LNG supply deal with Egypt could see Europe funding future liquefaction projects if required and El-Molla confirmed that "if in the coming few months, we would be able to discover additional gas offshore, then ... not a new plant but a new train" might be possible. The 7.2 million ton per year capacity of the Shell-operated Idku LNG facility could in theory be tripled, while the 5.5 million ton/yr capacity of the Eni-operated Damietta plant could be doubled.

- **Contract renegotiations continue as Cairo looks to keep investors.**

Conscious of the steep decline rates and having already suffered an energy crunch in 2012-14, when rampant domestic demand outstripped marketed gas exports, Egypt has proved willing to be flexible on fiscal terms to keep IOCs in the country and encourage more gas production.

Gas-focused regional independents like Dana Gas of the United Arab Emirates are seeking to consolidate portfolios in Egypt. Dana plans to split its 14 permits into three separate concession areas to improve its fiscal terms and allow for more capital investment to maximize gas output, CEO Patrick Allman-Ward told Energy Intelligence. It hopes to have negotiated an agreement with state Egyptian Natural Gas Holding Co. (Egas) by the end of this month. The aim is also to stem the natural decline from existing fields, with three new exploration wells planned. Dana is following in the footsteps of other independents like APA, whose operational fortunes saw a turnaround after it renegotiated the terms of its production sharing contract last December.

- **Upstream players see potential for carbon capture and storage (CCS).**

Ahead of next month's COP27 climate change conference, Egypt has started to attract more diverse investors to its energy sector, such as Abu Dhabi's Masdar and Saudi Arabia's Acwa Power. Acwa will develop a 1.1 gigawatt onshore wind project in the Gulf of Suez, while Masdar has a provisional deal to build 4 GW of electrolyzer capacity by 2030 for output of 480,000 tons of green hydrogen per year.

Existing upstream investors like Eni and Wintershall have expressed interest in CCS projects. The German firm sees Egypt as a potential pioneer in the region because "we believe Egypt has all the ingredients for it ... depleted fields [and] the emitters," Sabry said. Eni has invested $25 million in a small project capturing and storing 25,000-30,000 tons of carbon dioxide per year at its Meleiha field in the Western Desert. Cairo has already instructed joint venture companies across the hydrocarbon sector to define their emissions and reduce them year-on-year.

Tom Pepper, London, and Rafiq Latta, Nicosia

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ENERGY AND EQUITY MARKET DATA For the week ended Oct 25, 2022

EIF GLOBAL INDEX COMPONENTS*

	Close Oct 21	1-Wk Chg.	% Chg. 1-Wk	% Chg. 52-Wk	% Chg. YTD
Petrobras-4 (spse)	7.31	+1.03	+16.47	+98.28	+113.53
Petrobras-3 (spse)	8.05	+1.08	+15.44	+114.50	+111.32
Lukoil (mos)	72.75	+5.60	+8.34	-28.52	-17.43
Chevron (nyse)	173.19	+13.05	+8.15	+54.99	+47.58
Suncor (tse)	33.36	+2.35	+7.59	+47.64	+33.18
Exxon Mobil (nyse)	105.86	+6.67	+6.72	+68.86	+73.00
Rosneft (mos)	5.11	+0.32	+6.71	-42.55	-36.43
Shell (lse)	26.49	+1.14	+4.48	+9.38	+20.74
Ecopetrol (bvc)	0.48	+0.02	+4.18	-37.73	-27.52
Reliance Industries (bse)	29.95	+1.16	+4.02	-14.51	-5.81
Eni (mise)	11.89	+0.44	+3.83	-15.69	-14.42
BP (lse)	5.25	+0.17	+3.27	+6.86	+17.40
PetroChina-H (sehk)	0.43	+0.01	+3.04	-16.85	-2.69
CNOOC-H (sehk)	1.27	+0.04	+3.01	+25.38	+36.05
TotalEnergies (par)	52.23	+1.50	+2.95	+1.64	+2.94
ONGC (bse)	1.59	+0.04	+2.82	-23.13	-16.65
Sinopec-H (sehk)	0.44	+0.01	+2.68	-13.02	-5.33
Equinor (osl)	34.80	+0.63	+1.85	+24.48	+29.92
Saudi Aramco (sse)	9.59	+0.17	+1.78	+5.68	+10.64
Sinopec-S (sesh)	0.45	-0.00	-0.39	-34.24	-31.83
EIF Global Index	**333.27**	**+11.88**	**+3.70**	**+15.04**	**+14.86**

*Converted US$/share.

INDEXES

Equity Indexes	Close Oct 21	1-Wk Chg.	% Chg. 1-Wk	% Chg. 52-Wk	% Chg. YTD
DJIA	31,082.56	+1447.73	+4.89	-12.70	-14.46
S&P 500	3,752.75	+169.68	+4.74	-17.52	-21.26
FTSE 100	6,969.73	+110.94	+1.62	-3.07	-5.62
FTSE All-World	681.65	+22.31	+3.38	-22.24	-24.09
EIF Global	333.27	+11.88	+3.70	+15.04	+14.86
S&P Global Oil	1,806.43	+105.59	+6.21	+9.49	+16.37
FT Oil, Gas & Coal	8,125.30	+217.98	+2.76	+30.83	+41.85
TSE Oil & Gas	2,900.47	+145.57	+5.28	+23.63	+27.30
Emerging Markets					
Hang Seng Energy (HK)	22,186.55	+381.56	+1.75	+20.47	+32.01
BSE Oil & Gas (India)	18,639.75	+558.56	+3.09	-0.83	+6.46
RTS Oil & Gas (Russia)	+171.17	+8.10	+4.97	-35.24	-28.03

COMMODITY PRICES

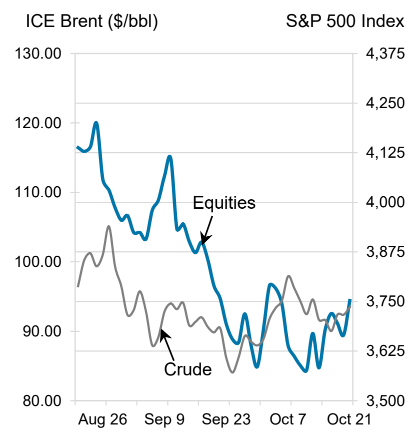
	Close Oct 21	1-Wk Chg.	% Chg. 1-Wk	% Chg. 52-Wk	% Chg. YTD
Dated Brent	91.95	-0.05	-0.05	+8.59	+18.89
Brent 1st ICE	93.50	+1.87	+2.04	+10.51	+20.21
WTI 1st (Nymex)	85.05	-0.56	-0.65	+3.09	+13.08
Oman 1st (DME)	91.10	+1.40	+1.56	+9.89	+18.79
RBOB (Nymex)	2.66	+0.03	+1.18	+7.33	+19.45
Heating Oil (Nymex)	3.83	-0.15	-3.72	+50.34	+64.47
Gas Oil (ICE)	1,050.50	-35.25	-3.25	+45.40	+57.50
Henry Hub (Nymex)	4.96	-1.49	-23.15	-3.05	+32.95
Henry Hub (Cash)	4.45	-1.65	-27.05	-9.94	+16.37
UK NBP (Cash)	85.00	-8.50	-9.09	-58.13	-34.62

SHARE PRICES IN LOCAL CURRENCY†

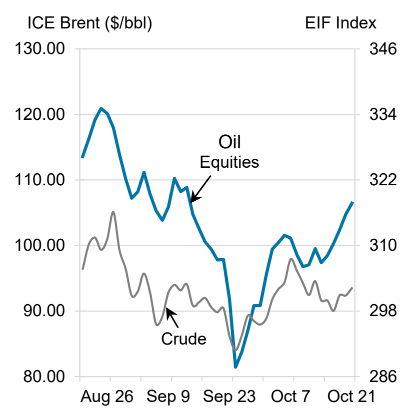
NOCs	Close Oct 21	1-Wk Chg.	% Chg. 1-Wk	% Chg. 52-Wk	% Chg. YTD
Petrobras-4 (spse)	37.72	+4.30	+12.87	+80.86	+97.82
Petrobras-3 (spse)	41.56	+4.41	+11.87	+95.65	+95.78
Ecopetrol (bvc)	2,353.00	+193.00	+8.94	-19.14	-12.53
Rosneft (mos)	310.20	+14.70	+4.97	-50.94	-48.29
PetroChina-H (sehk)	3.40	+0.10	+3.03	-16.05	-2.02
CNOOC-H (sehk)	9.95	+0.29	+3.00	+26.58	+36.99
Sinopec-H (sehk)	3.46	+0.09	+2.67	-12.18	-4.68
Gazprom (micex)	163.00	+3.62	+2.27	-54.97	-52.52
Saudi Aramco (sse)	36.05	+0.65	+1.84	+5.89	+10.77
PTTEP (set)	172.50	+2.50	+1.47	+37.45	+46.19
PetroChina-S (sesh)	5.19	+0.02	+0.39	-11.73	+5.70
Sinopec-S (sesh)	3.24	+0.01	+0.31	-25.52	-22.30
Equinor (osl)	364.40	+0.25	+0.07	+55.93	+54.47
CNOOC-S (sesh)	15.92	-0.37	-2.27	NA	NA
Majors					
Chevron (nyse)	173.19	+13.05	+8.15	+54.99	+47.58
Exxon Mobil (nyse)	105.86	+6.67	+6.72	+68.86	+73.00
Shell (lse)	2,344.00	+74.00	+3.26	+33.47	+44.53
BP (lse)	464.45	+9.40	+2.07	+30.39	+40.53
TotalEnergies (par)	52.97	+0.77	+1.48	+19.79	+18.69
Regional Integrateds					
Lukoil (mos)	4,412.50	+272.50	+6.58	-38.96	-32.84
Repsol (bme)	13.22	+0.71	+5.68	+15.44	+26.68
OMV (vse)	40.29	+1.77	+4.60	-24.58	-19.34
Eni (mise)	12.06	+0.28	+2.34	-0.63	-1.33
Global Independents					
Kosmos Energy (nyse)	6.48	+0.79	+13.88	+63.22	+87.28
EOG Resources (nyse)	135.00	+14.43	+11.97	+55.39	+57.32
Hess (nyse)	135.58	+12.99	+10.60	+54.93	+83.14
APA (nyse)	43.19	+3.26	+8.16	+59.90	+60.62
Occidental (nyse)	71.26	+4.58	+6.87	+117.26	+145.81
ConocoPhillips (nyse)	124.49	+6.53	+5.54	+66.90	+72.47
Woodside Petroleum (asx)	35.47	+1.52	+4.48	+48.10	+61.74
Refiners					
Valero (nyse)	127.74	+13.62	+11.93	+55.78	+70.07
PBF Energy (nyse)	43.45	+3.39	+8.46	+182.51	+235.00
Marathon Petroleum (nyse)	111.38	+7.28	+6.99	+66.16	+74.06
Phillips66 (nyse)	100.44	+6.34	+6.74	+21.41	+38.61
HollyFrontier (nyse)	59.74	+3.52	+6.26	+63.36	+82.25
Reliance Industries (bse)	2,471.95	+100.95	+4.26	-5.76	+4.38
Eneos (tyo)	484.20	-4.60	-0.94	+3.97	+12.53
Oil-Field Services, EPC					
Transocean (nyse)	3.59	+0.68	+23.37	-8.18	+30.07
Schlumberger (nyse)	50.41	+8.25	+19.57	+46.97	+68.31
Baker Hughes (nyse)	26.67	+3.75	+16.34	+9.87	+10.87
TechnipFMC (nyse)	10.80	+1.44	+15.38	+45.36	+82.43
Saipem (mise)	0.74	+0.10	+15.36	-86.70	-84.04
Halliburton (nyse)	33.88	+4.47	+15.20	+33.65	+48.14
Wood Group (lse)	127.90	+15.05	+13.34	-44.44	-33.07
Fluor (nyse)	28.55	+2.35	+8.97	+55.42	+15.26
Petrofac (lse)	102.60	+3.05	+3.06	-31.79	-11.01
Worley (asx)	13.73	+0.07	+0.51	+21.29	+29.16
Midstream					
Williams (nyse)	31.52	+2.11	+7.17	+10.52	+21.04
Plains All-American (nyse)	11.80	+0.73	+6.59	+7.47	+26.34
TC Energy (tsx)	58.73	+2.53	+4.50	-13.12	-0.17
Enbridge (tsx)	51.67	+1.73	+3.46	-1.81	+4.57
Kinder Morgan (nyse)	17.52	+0.33	+1.92	-0.06	+10.47
Enterprise Products (nyse)	25.01	+0.02	+0.08	+2.50	+13.89

*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

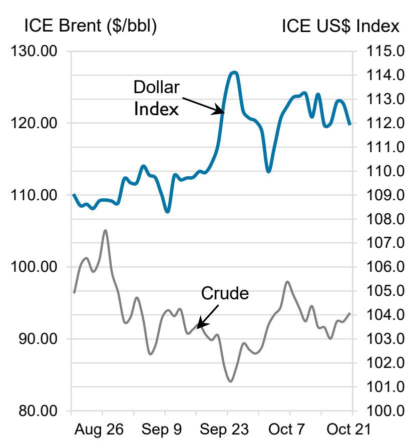
CRUDE VS. EQUITIES



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.