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OUR TAKE

When Spending Big Makes Sense

We believe healthy company balance sheets and a need to address supply concerns — in both the near and medium term — are behind a recent wave of M&A in the energy space. While capital discipline remains of paramount importance to both majors and independents as they assess acquisition opportunities, the strategic appeal of certain traditional and transition assets — coupled with a continued robust oil price environment — is proving enough to get more deals over the line.

- Upstream M&A activity globally totaled \$34.8 billion in July–September, according to Energy Intelligence’s latest quarterly M&A Monitor. That was up more than 67% from \$20.8 billion in the second quarter and the highest quarterly total this year. “Supportive oil/gas prices, stronger balance sheets and energy security drivers may have finally outweighed ongoing capital restraint, geopolitical uncertainty and recession fears to drive deal flow,” the report says.
- In Europe, on the doorstep of the conflict in Ukraine, Poland was able to agree a \$7.6 billion long-planned merger of state-backed refiner PKN Orlen and upstream-focused PGNIG, at a time when the country is looking to source as much non-Russian gas as it can. PGNIG President Iwona Waksmundzka-Olejniczak stressed the deal would “ensure Poland’s energy security for many years to come.” Italy’s Eni, another company under pressure to supply more gas to the continent, paid an undisclosed amount to acquire BP’s stakes in two gas fields in Algeria, within easy reach of Europe.
- The energy transition is another overriding motivation behind recent dealmaking, as companies look to future fuel supply. BP this week agreed its biggest acquisition to date under CEO Bernard Looney — the purchase of US renewable gas producer Archaea Energy for \$4.1 billion, including debt. The valuation tops the \$3.15 billion Chevron paid for biodiesel specialist Renewable Energy Group earlier this year but falls short of what would constitute a transformative acquisition of a major renewables player. The deal is nonetheless set to help BP grow its biogas supply to 70,000 barrels of oil equivalent globally by 2030. BP sees demand for the fuel growing more than 25-fold from 2019–50.
- In North America, private equity companies remain among the most prolific buyers of upstream assets, although we note that in some cases they are on the other side of the transaction; US-based Carlyle, for example, has decided now is a good time to listen to offers for Gabon-focused oil producer Assala. The US Permian Basin has continued to see subdued M&A activity but Diamondback Energy’s \$1.6 billion cash-and-stock offer this month to acquire Permian player FireBird Energy could kickstart another round of deals.
- On the whole, we believe the oil price environment will remain favorable for M&A going forward, with Energy Intelligence forecasting a Brent price north of \$90 per barrel through 2025.

EIF INDEX



PEER STRATEGY

US Majors Take Diverging Paths on Hydrogen

- *Chevron is eyeing a slice of global hydrogen trade, building on its strong position in LNG trading and shipping.*
- *Rival Exxon Mobil, meanwhile, is focused on using hydrogen as a process, not a fuel, to decarbonize its refineries.*
- *Transportation of hydrogen remains a complex challenge, with uncertainty over whether US gas pipelines could ship it over long distances.*

The Issue

The US Department of Energy has secured \$8 billion of funding for at least four hydrogen hubs in the country and aims to slash production costs for the fuel by 80% to \$1 per kilogram by 2031. Development of projects is likely to accelerate with the August passage of the Inflation Reduction Act, which provides a tax credit for hydrogen production. US energy majors are sold — and bullish — on hydrogen’s potential but see it contributing to their business in very different ways.

Chevron’s Next Step

Chevron has largely been focused on testing hydrogen as a solution for decarbonizing transport. The California-based company has announced partnerships with the likes of auto-maker Toyota and engine manufacturer Cummins to explore fuel-cell technologies.

But it has also focused on hydrogen as a power source, said Austin Knight, vice president of hydrogen at Chevron New Energies. “Certain geographies won’t be able to be self-sufficient in what they want to do in this space [power] because they just don’t have the renewable resources locally,” Knight said at the Reuters Hydrogen North America conference in Houston last week. “And so that’s also something, as Chevron, that we already do every day in the energy space, supporting with LNG and other energy products with global trade. And we see hydrogen fitting into that piece as well.”

A Chevron spokesperson told Energy Intelligence its target of producing 150,000 tons per year of hydrogen through 2028 had not changed. “We continue to believe that all methods of lower-carbon hydrogen production will be necessary to cost-effectively create and scale the industry,” the spokesperson said.

“We plan to produce hydrogen from a variety of supply sources, including natural gas, geothermal, waste/biomass, wind and solar.”

Marketing hydrogen globally would be a natural next step for Chevron, which is already a major LNG trader. Further, the company has expressed interest in entering the North American liquefaction business, an area that could facilitate development of blue hydrogen from natural gas. Several LNG operators, including Semptra, have proposed exporting hydrogen from their developments.

Knight sees the hydrogen trade filling a need for early movers in decarbonization in Europe, Japan and South Korea. Because of their lack of local resources, those regions — which are already major destinations for US LNG — may not be self-sufficient on the hydrogen front, he said. “So we will bring that low carbon intensity product from geographies that have those resources to these early mover geographies that don’t,” he said. “And what’s great about that is — we’re already seeing today, you can start to reduce coal consumption in coal-fired power plants by using ammonia as co-firing in Japan, for example. So this is something that is advancing at this point.”

Exxon’s Incentive

Exxon, meanwhile, is itself a huge consumer of hydrogen globally. It uses about 3 million tons/yr in its own industrial processes, said Ed Graham, vice president of ventures at Exxon’s low-carbon solutions business. “We have incentives to decarbonize that whole process ... using hydrogen as a process not as a fuel,” he said at the conference. The company is planning to build a huge blue hydrogen plant at its petrochemical and refining complex in Baytown, in its home state of Texas, with the goal of cutting the facility’s carbon dioxide footprint by up to 30%. The project would also sell hydrogen to other parties, Graham said.

“For blue hydrogen, where you have low-cost feedstock, the natural gas, and sequestration nearby, it is clearly the winner near term on cost and on scale,” he said. “There are many places in the world where those combinations don’t play out well. And in those cases, transporting that hydrogen in some form over does have an opportunity, but it is more expensive, and it’s going to take longer to build out at scale.” Elsewhere, Exxon is looking at ways to lower the industrial CO₂ emissions in the Southampton area of the UK, including its Fawley refinery and petchem complex, using blue hydrogen.

The company also announced last week what appears to be its first “CCS as a service” deal, agreeing to capture and perma-

nently store CO₂ from CF Industries' ammonia plant in Donaldsonville, Louisiana, starting in 2025. Ammonia — a compound of hydrogen and nitrogen — is seen by many as key to a hydrogen economy because it is easier to store and ship, but can be reconverted to hydrogen if needed. "I would say we're in all pieces of that right now, where we're actually going to be in the hydrogen business, but we're also helping others develop hydrogen as well," Graham said.

Infrastructure Issue

The question of how to move hydrogen has been top of mind for developers. Pipelines are the most efficient and cost-effective medium, but it's unclear whether existing interstate networks can move the product, Chevron's Knight said.

While hydrogen is already transported short distances via pipeline in the Texas refining corridor, longer stretches pose a challenge. "Large interstate pipeline networks that exist today may not be suitable for moving hydrogen," Knight said. "And I think that's something that we do need to unlock as a country to connect some of these hubs and early mover nodes together for an efficient movement of the product."

Meanwhile, utility executives noted that hydrogen pipelines in the US are likely to face a slew of challenges, not least regulatory and public hostility.

Natural gas pipelines have been held up in the US Northeast for years because of safety and environmental concerns; hydrogen pipelines are likely to face similar battles, said Mark Webb, chief innovation officer at Virginia-headquartered utility Dominion Energy. "I think you're going to end up with much more concentrated production and delivery in the hub-type concept, or localized areas where you could permit and [have] a delivery system that is local and avoids as many permits as possible," Webb told conference attendees.

Neil Navin, vice president of Sempra subsidiary Southern California Gas, noted that his company's proposed Angeles Link green hydrogen system is likely to include "hundreds of miles" of pipelines; one solution could be to use existing natural gas pipeline rights-of-way to build new systems. "A lot of those right-of-way agreements today either specify natural gas, or they specify gas without designation," he said. "And so you're going to have to work through all of the complexity to make it happen. And communities are not necessarily going to want to permit, especially in urban communities, new pipeline routes. So we firmly believe, as a society, we need to figure out how to reuse the existing infrastructure corridors today and use hydrogen in them."

Caroline Evans, Houston

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CORPORATE STRATEGY

Ecopetrol Eyes Ambitious Expansion in Asia

- *Ecopetrol has set up a trading post in Singapore, in a sign of growing interest in the Asia-Pacific crude oil market — and is already selling 55% more than forecast.*
- *The Colombian company recently signed a crude supply deal with refiner Indian Oil Corp. as it focuses on India — and not bigger rival China — for growth in sales.*
- *Ecopetrol faces stiff competition for Asian market share as Russia's invasion of Ukraine reshapes global energy trade flows.*

The Issue

Ecopetrol is looking to expand its market share in Asia at a time of radical change for the state-controlled Colombian oil producer and the global energy market in general. With the world emerging from the coronavirus pandemic, Ecopetrol has spotted an opportunity for its crude to help meet rising demand in the East. The problem is — so have its competitors.

Appec Appearance

When CEO Felipe Bayon appeared at the Asia Pacific Petroleum Conference (Appec) in Singapore last month, he took the opportunity to both announce the opening of an Ecopetrol office in the Southeast Asian city-state and speak more broadly about the company's ambitions in the region. "We've been trading in Singapore for decades but remotely," Bayon said. "During Covid, Asia kept us running." Earlier in the month, he told Colombia's *La Republica* newspaper Ecopetrol's move to Singapore was motivated by the conclusion that "Asia is the main destination for our exports and being here makes it easier for us to be close to our customers and capture more and better opportunity."

Asia's share of Ecopetrol sales had been steadily rising in recent years, reaching 49% of its crude oil exports in 2020 — almost double 2017 levels — before slipping back to 41% in 2021. Nonetheless, in a statement announcing the establishment of Ecopetrol Trading Asia, which began operations in the second quarter, the company said Asia sales currently account for 60% of its exports. It further claimed the Singapore subsidiary was trading 8 million barrels of crude per month and selling 55% more than expected. In the first half of 2022, Ecopetrol's crude sales to Asia — mainly China, India and Brunei — were 153,000 barrels per day.

Ecopetrol noted that demand for its Apiay, Castilla and Mares blends was greatest in Asia. But it also plans additional, third-party offerings in the form of crudes from the

Brazilian offshore and the US Permian Basin, where it has upstream operations.

India Over China

Ecopetrol is hardly alone in having identified the Asian market — home to the world’s largest crude importer in China — as a key source of oil demand growth. Asia has long been the bedrock of Saudi Aramco’s sales and has become increasingly important for Russian majors like Rosneft. Colombia accounted for just 80,400 b/d of China’s total 9.54 million b/d of crude oil imports in August, according to Chinese customs data — less than 1%. That may imply there is plenty of room to grow but with the West shunning barrels from Russia in the wake of its invasion of Ukraine, trade flows are changing radically and Asia is becoming a very crowded market. On the plus side, Bayon said his company was looking to export more oil to Europe once a ban on seaborne shipments of Russian crude to the EU takes effect on Dec. 5.

On a recent conference call with investors, Ecopetrol’s vice president for commercial and marketing, Pedro Gutierrez, said the main challenge with China was its ongoing Covid-19 lockdowns, which disrupt logistics and hit demand. “Obviously ... they’re being cautious again. But one of the things that we are doing is basically focusing in another market that is growing, which is the Indian market,” Gutierrez said. This diversification will allow the company to “maintain our realization at attractive levels even under the current competitive price scenarios,” Bayon added.

Ecopetrol made inroads in India, the world’s third-biggest crude importer, last month, signing— on the sidelines of Appec — a deal with state-run refiner Indian Oil Corp. (IOC) that was described as one of a series of term contracts aimed at diversifying IOC’s supplier base. The deal is for 6 million barrels of Ecopetrol crude over six months. Like China, however, India has started taking a lot more Russian crude since the invasion of Ukraine. Its imports of Russian barrels shot up to over 900,000 b/d in September, according to ship-tracking data from Vortexa, from only some 33,000 b/d in December last year. Analysts see room for Russian volumes to increase to 1.5 million b/d but not beyond that because India has term contracts with other suppliers to honor — particularly with heavyweight Middle East producers. By comparison, Colombia’s crude supplies to India fell from 131,200 b/d last December to 37,400 b/d in August, according to Reuters data. That leaves it with roughly the same low share of India’s market as it has of China’s — and suggests Ecopetrol still has plenty of work to do.

Carbon Offset Cargoes

Among the other tasks set for the Ecopetrol Singapore office is to enter new markets like Japan and South Korea, and to contribute to the company’s path to net zero by 2050 through the sale of carbon offset crude oil cargoes. The first of these was

made last year, to PetroChina, and the company has sold two of the planned four for 2022. Back home, however, environmental policy could scupper any kind of expansion Ecopetrol was planning in oil, with Colombian President Gustavo Petro vowing not to issue any more drilling contracts as he looks to a future “without coal and without oil.” Colombia’s congress is also debating a bill that would ban fracking in the country, forcing Ecopetrol to suspend its fracking pilots for 90 days.

Bayon, of course, sees the future differently, but pledged to comply with Colombian law. “We’ve made some recent offshore discoveries, and with this we can basically take the country through the transition,” he said at Appec, referring to finds in the southern Caribbean and in Brazil. “But if the Colombian government decides not to do fracking in Colombia, for example, we won’t do fracking in Colombia. Some things will remain buried forever.”

Michael Deibert, Washington

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PEER STRATEGY

Singapore Refining Giants Scope Out CCS Options

- *The lion’s share of emissions from Singapore come from two small islands that house refineries operated by Shell, Exxon Mobil, Chevron and PetroChina.*
- *As they address their emissions, the majors aim to generate new revenue by offering carbon capture and storage (CCS) as a service to clients in hard-to-abate sectors.*
- *Chevron and PetroChina are teaming up to look at using carbon dioxide from industry in Singapore to make plastics, fuels and cement.*

The Issue

Singapore’s strategic location on the Malacca Strait has seen it become a hub for many things, including shipping and oil refining. So what are the prospects of it becoming a regional CCS hub? The oil majors that run Singapore’s refineries have embraced CCS in their transition strategies and will find ample emissions to capture in the Southeast Asian city-state. When it comes to storage, however, unsuitable geology means they will have to look beyond Singapore, with nearby Malaysia and Indonesia both under consideration.

Islands in the Stream

Singapore has three major oil refineries: Shell’s 250,000 barrel per day Bukom plant; Exxon Mobil’s 592,000 b/d refinery — the

largest operated by the company worldwide, and 290,000 b/d Singapore Refining Co. (SRC), a 50–50 joint venture between Chevron and PetroChina. The concentration of these large facilities on two small adjacent islands — Jurong and Bukom, with land areas of 32 sq km and 1.45 sq km, respectively — offers significant potential for synergies in the capture of carbon. It would also allow the refiners to share the costs and risks associated with the development of projects based on technologies that have not yet been proven at scale. Combined, the two islands account for most of Singapore’s primary emissions, with Jurong alone responsible for 62%, according to research conducted by the National University of Singapore.

Shell is seeking partners for its Asia–Pacific CCS hub in Singapore, which is expected to capture and store 5 million–15 million tons per year of CO₂. The project is set to account for 16%–50% of Shell’s total CCS capacity by 2035. Shell, which currently has 4.5 million tons/yr of CCS capacity in operation or in the pipeline globally, aims to have an extra 25 million tons/yr by then. The UK major will take care of capturing the CO₂ itself at its hub in Singapore, while transport and storage activities may involve another company and will involve another country. Part of the CO₂ will come from Shell’s own refinery as it seeks to cut its emissions in Singapore by about one-third by 2030.

Exxon, meanwhile, has plans to develop a Southeast Asian CCS hub in Singapore to decarbonize its refining and petrochemical activities concentrated on Jurong Island, as well as CO₂ from manufacturing facilities. Compatriot Chevron is also looking at CCS, with the SRC refinery “a clear source of emissions,” according to its vice president for carbon capture, utilization and storage (CCUS), Chris Powers, who also says the US major is “interested in providing solutions that can meet the broader market.”

Together with SRC partner PetroChina, as well as Keppel Infrastructure and gases firm Air Liquide, Chevron last month agreed to form a consortium that will “evaluate and advance” development of large-scale CCUS and integrated infrastructure in Singapore. The group will seek to support the energy and chemicals sector by capturing and aggregating CO₂ from large industrial emitters at a centralized collection facility, a statement said, without putting a capacity on the plant. “The CO₂ could then be utilized to make useful products, such as plastics, fuels, and cement, and/or transported through either pipelines or ships to suitable reservoirs in the Asia–Pacific region for sequestration,” it added.

Malaysia Woos Majors

Singapore does not have the right geology to store CO₂ underground, but the country still offers significant competitive advantages to the majors through its easy access to a large stream of CO₂ and proximity to available storage capacity in nearby Malaysia and Indonesia, where many depleted oil and gas reser-

voirs are located. This helps lower capture and transport costs, increasing the chances for CCS projects to be economically viable.

The majors — notably Shell and Exxon — are actively lobbying Malaysia and Indonesia to create a conducive legal, regulatory, and fiscal environment, including the introduction of a price on carbon, for the development of CCS projects, including cross-border CO₂ transport and storage. This would open the door not only to decarbonizing their operations in Singapore, but also to selling storage capacity to places like Japan, South Korea and Taiwan, which — like Singapore — do not possess the right geological conditions to store CO₂ underground themselves.

Malaysia’s recently announced plans to pass tax incentives for CCS in its 2023 budget show that majors’ calls are being heard. The incentives herald a “massive breakthrough and will be a major booster for growth of CCUS project deployment in the country,” said Sohini Chatterjee, Rystad Energy’s senior CCUS analyst, adding that they could put the country ahead of Indonesia in the CCUS stakes. However, more than 85% of the planned CCUS projects in Indonesia are onshore enhanced oil or gas recovery projects. In general, these are less expensive than permanent storage projects or offshore storage, said Chatterjee, adding that such projects can in turn generate enough revenue thereafter.

Solutions in the Pipeline?

Indonesia is still working on its regulatory framework slated to be passed by the end of the year, but companies have already said that the draft is not holistic enough to cater to their needs. For instance, the draft omits any mention of using saline aquifers for CCS projects, Indonesian Petroleum Association (IPA) president Irtiza H. Sayyed told Energy Intelligence at the recent IPA conference in Jakarta. The Indonesian government should show greater “openness” to sourcing CO₂ from abroad, added Sayyed, who also serves as Exxon’s country president. In their current form, the regulations are not primarily aimed at making Indonesia a regional CCS hub, but instead focus on its own decarbonization needs and the supply of CO₂ for use in enhanced oil and gas recovery.

The outlook for Indonesian CCS could improve, however, with the use of two pipelines that currently ship natural gas to Singapore. The supply contract for one of these, the West Natuna Transportation System, which runs to Jurong Island, ends this year and it is unclear whether it will be renewed, while the other expires in 2023. Energy Intelligence understands a re-purposing of these pipelines for CO₂ flows is already under consideration. The technology to ship CO₂ by pipeline is not yet mature but Shell is currently developing solutions and the process is expected to be cheaper and easier than by ship, which would require some form of compression or liquefaction.

Marc Roussot, Singapore

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ENERGY AND EQUITY MARKET DATA For the week ended Oct 14, 2022

EIF GLOBAL INDEX COMPONENTS*

	Close Oct 14	1-Wk Chg.	1-Wk	% Chg. 52-Wk	YTD
Sinopec-S (sesh)	0.45	+0.03	+7.24	-29.45	-31.56
Rosneft (mos)	4.79	+0.27	+5.86	-46.26	-40.43
Lukoil (mos)	67.15	+1.44	+2.19	-33.39	-23.79
Chevron (nyse)	160.14	+0.11	+0.07	+47.17	+36.46
Eni (mise)	11.45	-0.08	-0.71	-17.56	-17.57
TotalEnergies (par)	50.73	-0.50	-0.98	-0.10	-0.00
Saudi Aramco (sse)	9.42	-0.15	-1.61	+4.25	+8.71
Exxon Mobil (nyse)	99.19	-1.84	-1.82	+59.98	+62.10
Reliance Industries (bse)	28.80	-0.58	-1.99	-20.03	-9.45
BP (lse)	5.08	-0.12	-2.24	+3.93	+13.68
Sinopec-H (sehk)	0.43	-0.01	-2.32	-16.73	-7.80
PetroChina-H (sehk)	0.42	-0.01	-2.37	-18.86	-5.55
CNOOC-H (sehk)	1.23	-0.03	-2.43	+21.78	+32.08
Shell (lse)	25.36	-0.64	-2.47	+6.28	+15.56
Petrobras-4 (spse)	6.28	-0.19	-2.97	+53.43	+83.33
Petrobras-3 (spse)	6.98	-0.22	-3.11	+70.35	+83.06
Equinor (osl)	34.17	-1.48	-4.15	+25.14	+27.56
ONGC (bse)	1.55	-0.07	-4.26	-26.93	-18.93
Suncor (tse)	31.01	-1.78	-5.43	+31.78	+23.78
Ecopetrol (bvc)	0.46	-0.05	-9.23	-40.57	-30.43
EIF Global Index	321.41	-5.20	-1.59	+10.59	+10.77

*Converted US\$/share.

SHARE PRICES IN LOCAL CURRENCY†

	Close Oct 14	1-Wk Chg.	1-Wk	% Chg. 52-Wk	YTD
NOCs					
Sinopec-S (sesh)	3.23	+0.25	+8.39	-21.22	-22.54
Rosneft (mos)	295.50	+20.65	+7.51	-53.52	-50.74
CNOOC-S (sesh)	16.29	+0.46	+2.91	NA	NA
PetroChina-S (sesh)	5.17	+0.04	+0.78	-9.30	+5.30
PTTEP (set)	170.00	0.00	0.00	+37.65	+44.07
Petrobras-4 (spse)	33.42	-0.21	-0.62	+48.20	+75.27
Saudi Aramco (sse)	35.70	-0.25	-0.70	+5.28	+9.69
Petrobras-3 (spse)	37.15	-0.29	-0.77	+64.54	+75.00
Sinopec-H (sehk)	3.37	-0.08	-2.32	-17.40	-7.16
PetroChina-H (sehk)	3.30	-0.08	-2.37	-18.11	-4.90
CNOOC-H (sehk)	9.66	-0.24	-2.42	+22.89	+33.00
Equinor (osl)	364.15	-16.85	-4.42	+57.95	+54.37
Ecopetrol (bvc)	2,160.00	-180.00	-7.69	-25.98	-19.70
Gazprom (micex)	159.38	-42.02	-20.86	-56.42	-53.57
Majors					
Chevron (nyse)	160.14	+0.11	+0.07	+47.17	+36.46
TotalEnergies (par)	52.20	-0.40	-0.76	+19.18	+16.96
Exxon Mobil (nyse)	99.19	-1.84	-1.82	+59.98	+62.10
BP (lse)	455.05	-14.05	-3.00	+27.22	+37.69
Shell (lse)	2,270.00	-75.50	-3.22	+30.10	+39.97

Regional Integrated

Lukoil (mos)	4,140.00	+151.00	+3.79	-42.39	-36.99
Eni (mise)	11.78	-0.06	-0.49	-1.65	-3.58
Repsol (bme)	12.51	-0.18	-1.42	+8.54	+19.87
OMV (vse)	38.52	-1.41	-3.53	-27.46	-22.88

Global Independents

ConocoPhillips (nyse)	117.96	-0.55	-0.46	+59.73	+63.42
Woodside Petroleum (asx)	33.95	-0.88	-2.53	+35.85	+54.81
Hess (nyse)	122.59	-5.61	-4.38	+36.30	+65.60
Occidental (nyse)	66.68	-3.12	-4.47	+108.44	+130.01
EOG Resources (nyse)	120.57	-6.88	-5.40	+39.28	+40.50
APA (nyse)	39.93	-2.59	-6.09	+52.29	+48.49
Kosmos Energy (nyse)	5.69	-0.44	-7.18	+60.28	+64.45

Refiners

PBF Energy (nyse)	40.06	+1.00	+2.56	+154.35	+208.87
Phillips66 (nyse)	94.10	+1.60	+1.73	+14.53	+29.86
Valero (nyse)	114.12	+0.34	+0.30	+44.15	+51.94
HollyFrontier (nyse)	55.56	+0.02	+0.04	+50.94	+69.49
Eneos (tyo)	488.80	-1.30	-0.27	+7.10	+13.60
Reliance Industries (bse)	2,371.00	-62.25	-2.56	-12.18	+0.12
Marathon Petroleum (nyse)	104.10	-2.74	-2.56	+56.12	+62.68

Oil-Field Services, EPC

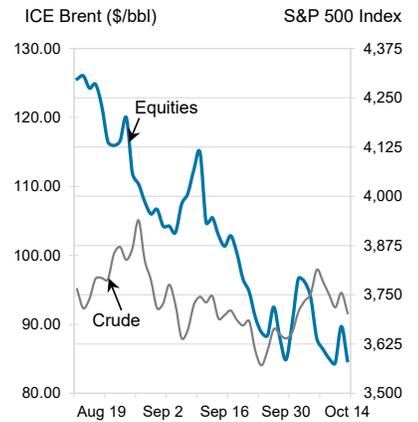
Baker Hughes (nyse)	22.92	+0.03	+0.13	-14.57	-4.70
TechnipFMC (nyse)	9.36	-0.06	-0.64	+20.00	+58.11
Schlumberger (nyse)	42.16	-0.43	-1.01	+25.78	+40.77
Worley (asx)	13.02	-0.22	-1.66	+23.53	+22.48
Halliburton (nyse)	29.41	-1.00	-3.29	+18.59	+28.60
Petrofac (lse)	99.55	-5.35	-5.10	-37.38	-13.66
Transocean (nyse)	2.91	-0.18	-5.83	-25.38	+5.43
Fluor (nyse)	26.20	-2.16	-7.62	+49.54	+5.77
Saipem (mise)	0.64	-0.09	-11.96	-88.35	-86.17
Wood Group (lse)	112.85	-18.35	-13.99	-48.28	-40.95

Midstream

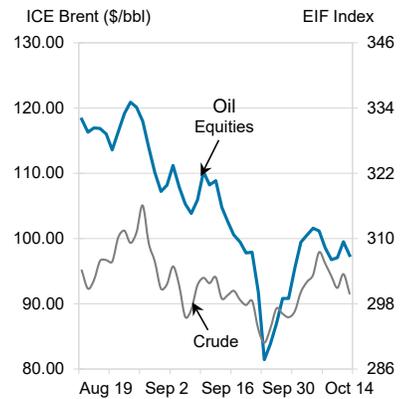
Enterprise Products (nyse)	24.99	0.00	0.00	+3.69	+13.80
Kinder Morgan (nyse)	17.19	-0.05	-0.29	-6.47	+8.39
Plains All-American (nyse)	11.07	-0.05	-0.45	+1.56	+18.52
TC Energy (tsx)	56.20	-0.39	-0.69	-13.54	-4.47
Williams (nyse)	29.41	-0.38	-1.28	+0.14	+12.94
Enbridge (tsx)	49.94	-0.94	-1.85	-5.20	+1.07

*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

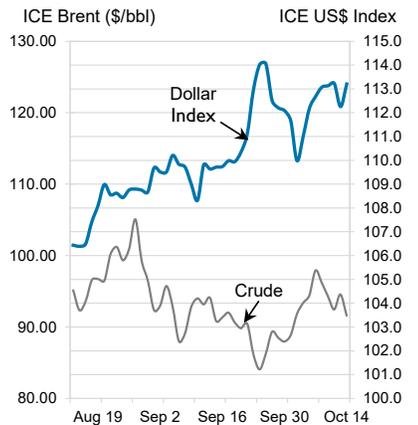
CRUDE VS. EQUITIES



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.

INDEXES

Equity Indexes	Close Oct 14	1-Wk Chg.	1-Wk	% Chg. 52-Wk	YTD
DJIA	29,634.83	+338.04	+1.15	-15.12	-18.45
S&P 500	3,583.07	-56.59	-1.55	-19.27	-24.82
FTSE 100	6,858.79	-132.30	-1.89	-4.84	-7.12
FTSE All-World	659.34	-11.88	-1.77	-23.20	-26.58
EIF Global	321.41	-5.20	-1.59	+10.59	+10.77
S&P Global Oil	1,700.84	-43.50	-2.49	+3.20	+9.57
FT Oil, Gas & Coal	7,907.32	-272.94	-3.34	+27.75	+38.04
TSE Oil & Gas	2,754.90	-106.24	-3.71	+17.47	+20.91
Emerging Markets					
Hang Seng Energy (HK)	21,804.99	-757.72	-3.36	+19.44	+29.74
BSE Oil & Gas (India)	18,081.19	-593.37	-3.18	-5.91	+3.27
RTS Oil & Gas (Russia)	+163.07	-3.87	-2.32	-38.47	-31.44

COMMODITY PRICES

	Close Oct 14	1-Wk Chg.	1-Wk	% Chg. 52-Wk	YTD
Dated Brent	91.99	-7.53	-7.57	+9.63	+18.94
Brent 1st ICE	91.63	-6.29	-6.42	+9.08	+17.81
WTI 1st (Nymex)	85.61	-7.03	-7.59	+5.29	+13.83
Oman 1st (DME)	89.70	-7.92	-8.11	+9.10	+16.96
RBOB (Nymex)	2.63	-0.10	-3.79	+8.05	+18.06
Heating Oil (Nymex)	3.98	-0.04	-0.96	+55.39	+70.82
Gas Oil (ICE)	1,085.75	-172.00	-13.68	+49.24	+62.78
Henry Hub (Nymex)	6.45	-0.30	-4.37	+13.47	+73.00
Henry Hub (Cash)	6.10	-0.15	-2.40	+3.04	+59.52
UK NBP (Cash)	93.50	-86.50	-48.06	-60.51	-28.08