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Industry Grapples With Expanded Role of Policy

Global oil and gas producers are torn on the rising role governments are playing in energy markets. On one hand, taxes, price caps, sanctions and other direct market interventions are upending global energy flows and challenging corporate strategies, executives told this week's Energy Intelligence Forum in London. But on the other hand, conventional price-driven investment signals are broken for oil and gas given sustainability concerns, making it imperative that governments provide the industry with concrete road maps on where and how to invest. That dependency has executives jittery. Shell CEO Ben van Beurden warned it was "inevitable" that governments would use the energy industry to fund programs that would protect vulnerable consumers from high energy costs. But he — and dozens of other industry executives — warned on stage and on the sidelines of the Forum that more fundamental interventions in the way that gas and power markets form prices could have severely negative consequences that unintentionally distort critical investment signals. QatarEnergy CEO Saad al-Kaabi told delegates that a key reason Europe has been slow to secure additional volumes from his company's massive LNG expansion is that the continent's private companies have not been willing to pay a "security" premium for firm volumes. EU governments have been on whirlwind diplomacy tours but have yet to lead on directly securing energy supplies. That's new territory for European leaders, and so far, they're struggling with navigating such responsibilities, several executives familiar with negotiations said.

Given an increasing focus on energy security, it seems unlikely that the onslaught of government actions in energy issues will abate anytime soon. The difficulty is when signals from policymakers and the public at large seem to contradict conventional price signals from oil and gas mar-

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Opec-Plus Stuns Consumers With Massive Cut

Citing massive market uncertainty and a need to be "proactive and pre-emptive," Opec-plus has announced a 2 million barrel per day cut from August quota levels. The cut, the largest since the producer alliance's historic 9.7 million b/d Covid-19 supply response in 2020, exceeded pre-meeting talk of a 1 million-1.5 million b/d cut. Brent's relatively muted price response to the decision — the benchmark gained about $2 to around $94 per barrel — indicates that producers' demand fears have at least some validity, although oil prices have been rising since word of the big cut first surfaced last week. But the bold move could mark a watershed moment in producer-consumer relations, with the news triggering fury from the White House, which is desperate to keep inflation in check ahead of midterm elections in November and deny Russia a potential revenue tonic from high oil prices. Delegates in Vienna argued that rather than a bid to shore up prices, the decision was driven by a desire to reassert market control by freeing up spare capacity. Saudi Energy Minister Prince Abdulaziz bin Salman rejected any suggestion the move represented a weaponization of energy. "Show me where is the act of belligerence," he said. He noted that prices of numerous commodities, including coal, aluminum and even baby formula, have seen far greater recent increases than those for crude. But many analysts foresee substantial declines in Opec-plus member Russia's production in the coming months amid tightening Western sanctions and a G7 price cap, which left Opec-plus facing accusations that it was throwing a lifeline to Moscow and endangering a global economy on the cusp of recession.

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Although Opec-plus is cutting its headline production by 2 million b/d, Energy Intelligence estimates that it will only lower "real-world" output by around 1 million b/d, due to recent massive underproduction versus its targets. Nevertheless, it remains a controversial decision due to a combination of high energy prices, persistent inflation, repeated consumer appeals for more supply, and mounting recession fears. US President Joe Biden expressed "disappointment by the shortsighted decision" and a White House spokeswoman said it was "clear" that Opec-plus was "aligning with Russia." Producers, meanwhile, have grown frustrated by Western interventions in energy markets recently. Brussels and Washington rail against Moscow's alleged weaponization of energy, since Russian gas flows to Europe have been slashed following Russia's invasion of Ukraine. In this context, Opec-plus' decision will be seen by many in the OECD as the group taking Moscow's side by providing support to oil prices. But for producers, it is the West that is guilty of politicizing energy policy, through repeated and reflexive use of sanctions and other measures like the price cap. Resentment of OECD "arrogance" is not limited to producers, with many in the developing world railing against the West's anti-Russia measures, which they see as primarily responsible for driving high prices. It is noteworthy that Wednesday's decision appeared a smooth one, and that unlike during 2008's oil price surge, developing nations have largely refrained from calling for more Opec oil.

But more such interventions may be forthcoming, meaning producer-consumer tensions may ratchet higher. Further releases from US strategic stocks are now possible, and White House National Security Adviser Jake Sullivan warned of potential "additional tools and authorities to reduce Opec's control over energy prices." These could include revival of so-called "Nopec" legislation, which could see Opec member nations face antitrust lawsuits in the US for holding back oil production to push up prices. The cut could also give fresh US momentum to striking a nuclear deal with Iran, which would unleash more barrels.

Opec-plus cited heightened macroeconomic concerns — in addition to seeking greater spare capacity flexibility — in making the cut. But it did not — for now — revise its demand forecast lower, citing extreme volatility. Thus, it officially retains a relatively bullish view, projecting demand to rise 2.75 million b/d this quarter and fall 600,000 b/d next quarter. By contrast, Energy Intelligence sees demand rising 1.7 million b/d this quarter and falling 2 million b/d next. Stifel analysts said the quantum of the Opec-plus cut "does broadly match" International Energy Agency expectations of the world being relatively oversupplied through the next nine months by just under 1 million b/d.

In many ways, this week's meeting marks a new start for Opec-plus. Its cooperation agreement has been extended to end-2023, and producers are returning to their traditional biannual ministerial meetings, rather than the monthly gatherings that defined the pandemic. Ministers will meet again on Dec. 4. To retain flexibility in the face of high volatility, Opec-plus' Joint Ministerial Monitoring Committee will have the power to call for emergency ministerial meetings.

Markets Wary as Price Cap Approaches

The EU has included a price cap on Russian oil in its eighth sanctions package against Moscow for its invasion of Ukraine. The G7-inspired cap system is meant as a relief valve to preserve the trade of Russian oil, not take it off the market, US Treasury Assistant Secretary for Economic Policy Ben Harris told the Energy Intelligence Forum this week. But traders are wary that introducing a regulation that is difficult to navigate could have unintended consequences — including increased risk of shutting more Russian supply. In theory, a combination of insurance and finance constraints on global shipping capacity, technical limitations on refining slates in Asia, and competing market share dynamics within Opec-plus would essentially constrain Russia's ability to redirect its oil exports to countries not buying under the cap system. In other words, Russia would be forced to discount to the marginal buyer, which, in this case, are countries imposing a price cap. But industry players are dubious about practical implementation. TotalEnergies CEO Patrick Pouyanne dubbed the cap "a bad idea" at the Forum, saying it will give market control back to Russia. He suggested China and India could keep exacting large discounts from Moscow without the cap, which provides benchmark oil price support due to its added supply risk.

Analysts also say it is difficult to separate volumes from revenue, and that the large quantities of oil still shipping to China and India would still guarantee a steady stream of cash to Moscow, regardless of the cap. Energy Intelligence reckons the combined effect of the price cap and looming EU bans on Russian crude and products imports could result in the global market losing around 1.2 million barrels per day of supply

The cap will be set as a flat US dollar price for crude and refined fuels, including one product price set at a premium to crude — most likely for gasoil/diesel — and one set at a discount for fuel oil. Europe has not yet agreed on a price, but consensus expectations seem to hover around $50-$55 per barrel for crude, with the option to reset the price as often as required based on volatility. Traders say implementation must align with trading cycles to avert substantial disruptions. The market must also be convinced that buying under the cap is better than the alternative. About half of the 2.4 million b/d of Russian crude that used to ship to Europe has found new homes in India and China, both of which are reluctant to join the cap and remain hungry for more, cheap Russian barrels. Under the cap, both would still be allowed to purchase Russian crude without incurring sanctions. However, under the latest EU sanctions package, they would not be allowed to use Western shipping and finance to do so. The US Treasury Department reckons that the cap's mere existence will give these buyers more bargaining power, even if they don't buy under it. Critics worry that heightened demand for cheap Russian barrels could end up pushing up their price. They also highlight the possible use of kickbacks to circumvent the cap.

One intended benefit of the cap is to give developing countries the possibility to buy Russian oil at lower prices. The US Treasury reckons that buying under the cap could save emerging markets at least $160 billion on crude purchases. But the market remains dubious, and traders are trying to figure out what will and won't be legal. Successive sanctions packages have already brought many inefficiencies in crude logistics and shipping, they say, further stretching credit lines and the cost of supply. Replumbing the global diesel market once shorn of Russian products would be even more difficult, trading giant Vitol said. Replacement crudes for Russia's flagship Urals export blend in Europe are less efficient in terms of transportation flows and, more importantly, not available on a spot basis. Urals used to be the promptest-traded barrel and was available as late as 10 days to two weeks ahead of loading. Replacements are now available — but they have different trading cycles, and the cap would not fix this availability problem. Under the cap and absent spare refining capacity in the West, reshuffling product flows is difficult. Refined products trade mostly within regions, and fetching them from farther afield increases the transit times and shipping costs substantially.

Traders Sweat Over War's Impact on Markets

Traders expect more turbulence in global oil and gas markets over the next 12 months, as the distortions caused by Russia's war with Ukraine threaten to widen, both on the supply and demand sides. That was the message conveyed at this week's Energy Intelligence Forum by senior executives at three of the largest independent energy trading companies: Vitol, Trafigura and Gunvor. They all used the same word — uncertainty — to describe the near-term outlook. Russell Hardy, CEO at Vitol, the largest of the traders which supplies the market with more than 7 million barrels per day of oil and is also a big player in gas and LNG, said oil supply looked to be "adequate" but said volatility could increase toward the end of the year, when an EU price cap on Russian oil exports starts. He predicted that Russia would redirect more oil flows to Asian markets, especially India and China, as it has been doing in recent months, but may be forced to shut in some production. Ben Luckock, co-head of oil trading at Singapore-based Trafigura, said the market has to "reassert its signals" as Europe heads into recession, inflation grows and downward pressure on prices increases. "I see a very difficult battle between what's going on in the macro and what's going on in the micro," he said, which made it very difficult to predict where prices would go next year. The chairman and chief executive of Gunvor, Torbjorn Tornqvist, said the "big unknown" was around demand and the extent to which it would be affected by sanctions on Russia. Like Hardy, he said Russia would push more barrels into China and India, at a discount, but may struggle to find new homes for the diesel they were selling to Europe, which could push prices higher.

Traders agreed that uncertainty is greater in gas markets, where a collapse in Russian exports to Europe has forced a sharp fall in demand and forced European buyers to scramble for alternatives. Hardy said it was difficult to see currently sky-high prices showing much change in a year's time. The volumes of Russian gas lost to Europe were equivalent to around 100 million tons per year of LNG, he said, of which Europe has reclaimed around 40 million tons by tapping new sources of supply. As a result, European industrial demand had fallen by 20%-25%, he noted. Tornqvist was less bullish on prices; he said there was actually a surplus of gas in Europe, which had replaced "practically everything lost on Russian supply" and predicted that prices could start falling if winter is normal. He said high prices on the Dutch TTF futures had led to demand erosion of around 15% in Europe. Luckock said the destruction in European demand was "well understood" and already factored into current gas prices. But he warned that times could be much tougher next year. "While we may avoid disaster this winter, we're more concerned about the following winter," he said, adding that a prolonged drop in Russian supplies to Europe could trigger a Europe-wide crisis.

Traders also agreed on the need to accelerate the energy transition, which has slowed over the past two years as the world's attention shifted to energy security. Trafigura's Luckock admitted the transition had taken a "step back," citing the rise in coal production in China and other parts of the world, but said this could inject more urgency into the switch to greener energy. Tornqvist said the burning of more carbon should provide a "wake-up" call to governments to press the accelerator on renewables, but stressed it would be a "massive" task with 85%-87% of fossil fuels still needing to be replaced. Vitol boss Hardy said Europe was now pushing renewables hard, with more offshore wind farms coming into operation and green and blue hydrogen projects on the horizon, but said there was little scope to accelerate the rollout further.

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kets despite immediate energy security needs. In essence, the age-old industry adage that high prices are the cure for high prices no longer holds the same power, since high prices indeed signal a need for more energy — just not necessarily the same types of energy as before. What the desired energy mix looks like in a post-Ukraine crisis world remains unanswered. Wholesale Western replacement of Russian oil and gas requires new supplies as swiftly as possible, but development lead times mean producers would need longer-term assurances that their supplies are needed than governments are currently willing to give, given climate goals. Renewables could tick the boxes of energy security, sustainability and affordability longer term, but deployment will take significant time and capital — as Europe has painfully come to discover this year. This disconnect means that international oil company capex remains biased toward low-carbon initiatives and broader financial discipline, with investor support for incremental oil and gas spending limited to marginal increases in short-cycle projects. But such investments cannot underwrite significant future production capacity, warned Saudi Aramco CEO Amin Nasser. Yet, if given an extra $1 billion to invest, Shell's Van Beurden said he'd stick with transition businesses. TotalEnergies CEO Patrick Pouyanne says the preponderance of its incremental $2 billion in additional capex guidance would go to low-carbon businesses.

Still, not all government meddling in energy is necessarily negative. In fact, it is absolutely essential, executives acknowledged. Keeping the energy transition on track longer term will require robust policy support to spur innovation, support infrastructure build-outs, help develop end-use markets, break down red tape and unleash capital at the required rate. Here, the US Inflation Reduction Act (IRA) was repeatedly flagged as the gold standard — but also the tip of the needed iceberg. Grants and tax cuts can help cement momentum in areas like hydrogen and carbon capture, but one of the most critical supports companies need to invest is longevity and certainty of policy, executives told Energy Intelligence. Occidental CEO Vicki Hollub revealed at the Forum that her company now plans to build 135 direct air capture facilities by 2035 due to the incentives in the IRA — effectively double its previous plans. Cepsa CEO Maarten Wetselaar noted Germany's quick move to license new floating LNG import facilities should be a blueprint for further action, with similar clarity in permitting for hydrogen and other energy projects potentially doubling the pace of clean energy development across Europe.

Critics Take Aim at EU Gas Crisis Management

EU Council President Charles Michel called on Europe to take a "quantum leap" this week and set up an energy union to tackle its gas crisis. Europe's energy strategy should aim to reduce consumption, ensure security of supply and reduce gas prices, he said, ahead of an upcoming meeting in Prague. Member states have agreed on measures to tackle demand, impose a cap on the revenues of low-cost power producers and a solidarity levy on oil and gas companies. But there remains deep division among states over imposing a wholesale gas price cap favored by 15 countries, as well as a cap on Russian piped gas and LNG. Meanwhile, global gas suppliers, traders and executives at this week's Energy Intelligence Forum voiced unease over the direction of increasing state intervention in Europe's internal market. Michel said the European energy crisis arising from Russia's invasion of Ukraine had "exposed the cracks in a union composed of 27 energy private preserves." The EU's energy imports in the first half of this year totaled €380 billion ($373 million), which was close to what the bloc usually pays for an entire year, he wrote in a *Financial Times* editorial this week. With Europe's energy trade likely to double in 2022, reaching 5% of GDP, urgent action was required. Ahead of Prague, states have already agreed to cap the revenues of low-cost power producers no higher than €180 per megawatt hour ($51.70 per million Btu), with the levy set at a rate of 33% on surplus profits of oil and gas companies.

Industry leaders at the Forum complained about a lack of understanding in Europe of how global gas markets worked while predicting a series of tough winters ahead for the continent. QatarEnergy CEO Saad al-Kaabi told delegates that European governments had found themselves pushed into a role "where they really don't have experience in ... procuring LNG." While Asian governments have state-owned firms to do this for them, Europe is reliant on private companies. Key global supplier Qatar, which has been extensively courted by the European Commission since the war began, has earmarked 12 million-15 million tons of LNG to Europe out of its 77 million tons available, al-Kaabi said, but future volumes will not be available until 2025-27. TotalEnergies CEO Patrick Pouyanne said he was surprised that European governments had not directly approached either Total or Shell to bring in additional LNG volumes.

Forum delegates also expressed concern that EU gas price cap proposals could have an unpredictable impact on Europe's supply outlook. Fifteen states including Italy and France are pushing for an EU-wide wholesale gas price cap despite opposition from Germany, the Netherlands and others, while there are also calls for a cap on Russian piped gas and LNG with support from the European Commission — although Hungary, Cyprus and others remain opposed. Moreover, European solidarity is already being tested by Germany's €200 billion stimulus this month, which was greeted by a wave of criticism from its neighbors, who question if the package has breached EU state aid rules. Traders and executives warned that any imposition of a wholesale price cap could simply result in LNG cargoes flowing to Asian buyers. But greater state intervention in Europe's internal market will prove hard to resist as calls mount for a coordinated approach, and the EU is already targeting consumption.

Europe's gas supply outlook for next winter and beyond is unsettling policymakers, European diplomats confirm. The Commission is due to visit Algeria, the continent's second-largest supplier, on Oct. 10, while governments are calling for Europe to use its leverage with Washington in supply talks with US LNG developers. Talks are also ongoing with Japan, says a diplomat, to "reduce aggressive competition over volumes," but there are no channels with South Korea yet. Replacing 155 billion cubic meters of Russian piped gas next year will be even more challenging with Russian gas unlikely to fill storage, while a cold weather spike in Asia-Pacific or an unforeseen outage from top supplier Norway could easily disrupt Europe's fragile supply balance. Russia's westward export capacity this winter will be limited to the Ukrainian transit and the Turk Stream pipeline in the Black Sea — now shipping a combined 70 million-80 million cubic meters per day — both of which may not be available next year or sooner if Russia responds aggressively to the EU's price cap on Russian oil introduced this week.

Oil Primed for Chaotic Chapter

The oil market will be extremely messy over the next six months, setting the stage for continued havoc in 2023 and beyond. On paper, the world is producing enough oil to meet demand. In practice, supply tightness and dislocations of both crude oil and refined products are likely to remain the norm, rather than the exception, while demand can flip-flop. Extremely volatile oil prices will reflect the uncertainty. The immediate mess stems from Russia's invasion of Ukraine and Western sanctions against Moscow, which are creating a new order in trade flows, with large volumes of Russian oil heading to Asia rather than Europe. Benchmark Brent has gyrated between $80 and $125 per barrel so far this year, with a muscular war premium rising after Russia's Feb. 24 invasion of Ukraine, then deflating in recent months — and now possibly getting new life from tougher sanctions and a big Opec-plus supply cut. Daily swings of multiple dollars per day are set to continue as oil markets realign. Before the war, Russia was selling 3.6 million barrels per day of crude and products into Europe and 700,000 b/d into the US. Some 1.8 million b/d of remaining EU imports from Russia — after taking into account exemptions from import bans — must find new markets.

Adding more bumps in the road, the world is facing a natural gas supply crisis that is causing massive fuel switching and rising oil demand, mostly for diesel and fuel oil. But high prices are in turn fanning inflation and adding to economic uncertainty, which is dampening demand. Supply sees downside risks. It stands to lose more Russian exports, while record sales of 1 million b/d of oil from the US Strategic Petroleum Reserve are nearing an end. At the same time, Opec-plus is "stabilizing" the market with a headline 2 million b/d cut in production. The tug of war between supply and demand continues, which makes oil balances unreliable. High fuel prices are scaring consumers and denting demand. A rising value for the US dollar — the dollar index is up 16% so far this year — makes oil even more expensive for emerging markets that pay for oil imports in local currencies. An economic recession would further limit consumption growth — or halt it altogether. Energy Intelligence for now sees demand growth in 2023 at 2 million b/d, largely relying on a rebound in China and rising jet fuel demand. But there is another twist. Even if there is enough crude, new refining capacity may arrive too late to meet consumers' product needs in 2023.

An eroding war premium has helped deflate oil prices by 30% since June, partly because Russian crude exports have held up better than expected. In September, Russia's crude exports were 300,000 b/d higher than before the war. But Moscow's crucial product exports are now 800,000 b/d below prewar levels — and this is rattling the physical market. Russian diesel exports were down 350,000 b/d in September, keeping the global market undersupplied and diesel cracks at historic highs. Lower Russian exports are partly due to refinery maintenance, but they also signal an inability to find new markets now that the EU is buying less — after months of gorging on Russian supply ahead of coming import bans. EU loadings of Russian fuels are falling fast, especially for diesel and heavy oils, shipping data for September shows. EU crude imports dropped 200,000 b/d from August and product imports by 300,000 b/d for a combined total of 2.2 million b/d, an Energy Intelligence analysis shows. Russian exports are expected to drop further once the EU bans on crude (Dec. 5) and products (Feb. 5) take effect.

Russia's war and deep impact on trade flows come at the end of a pandemic — which has kept demand below 2019 levels — and the start of an energy transition. There is no playbook for the latter, but the transition is impacting investments in new supply and refining capacity. Trading executives agree that Russia's limits on natural gas supplies to Europe set expectations for oil. This creates a "massive acceleration" in Europe to get new renewable and clean energy projects going, Vitol CEO Russell Hardy told the Energy Intelligence Forum this week.

When Will China's Demand Rebound?

With Opec-plus' big production cut now in the books, oil markets are likely to turn their attention to the future of Chinese demand. The world's most important oil market is expected to see demand fall this year for the first time in two decades due to the country's strict zero-Covid-19 policy, which has curbed economic growth and reduced mobility. But Chinese market players expect demand to rebound this quarter, thanks in part to several rounds of government stimulus measures that will support diesel consumption. Still, a full recovery may have to wait until 2023. China's apparent oil demand fell 3.5% in the first eight months of 2022, Energy Intelligence calculates, using official data for refining production and net imports of 11 products. China's gasoline demand was flat over this period at 3.13 million barrels per day, while jet demand, at 467,000 b/d, was down 42% from a year ago, reflecting the deterioration in mobility. Sluggish domestic demand, combined with limited export quotas until this month and surging oil prices due to the Ukraine crisis, have led to a 4.7% fall in China's crude imports to 10.03 million b/d in the first eight months of 2022.

Chinese refiners say that oil demand and economic growth have already bottomed out this year. But demand for gasoline and jet fuel won't return to normal levels until Chinese President Xi Jinping lifts his signature zero-Covid-19 policy — and there is little visibility as to when this will happen. September oil demand may have suffered from renewed Covid-19 lockdowns, but high-frequency mobility data and construction rates point to improvements in November and December, PetroChina International's chief economist Wu Qiunan told the S&P Global Appec conference in Singapore last week. As for the future of zero-Covid-19, observers are split into two camps: those who believe Beijing may drop the policy after the mid-October China Communist Party Congress, where Xi is expected to be re-elected to a third five-year term; and those who believe it will remain in place until at least end-March 2023, once the government reshuffle is completed and the Chinese winter, which could bring higher Covid-19 cases, ends. Whether the policy is repealed this year or next, oil demand won't fully rebound immediately.

The government's allocation late last week of an additional 13.25 million tons of export quotas for gasoil, gasoline and jet fuel will encourage a recovery in Chinese refinery runs, which have been the biggest reason for China's oil demand decline this year. Runs fell by 6.3%, or 890,000 b/d, in the January-August period as refiners struggled amid weak domestic demand and high crude import prices. The latest allocation brings China's 2022 product export quotas to 37.25 million tons, broadly in line with last year's. Some analysts believed that Beijing would act to reduce its exports to discourage refiners from over-producing and reduce carbon emissions in the downstream. Instead, slowing economic growth prompted Beijing to prioritize raising production and exports — at least for now — sources say. The extra quotas, larger than the 7 million-10 million tons that some sources had predicted, will only be used this quarter if exports are economic, according to a Chinese refiner source. Chinese refinery runs could surge by close to 1 million b/d in October and November, surpassing 14 million b/d in November before touching 14.4 million b/d in January 2023, oil consultancy FGE calculates. The higher runs won't return China's apparent oil demand to growth this year — but they could lead to a surge in crude imports in December.

Aramco CEO: Energy Transition Lacks 'Constructive Dialogue'

Energy Intelligence's 2020 Energy Executive of the Year, Amin Nasser, CEO of Saudi Aramco, the world's number one oil firm, spoke to the Energy Intelligence Forum on the threats facing the energy industry, the state of the market, his firm's strategy and the energy transition. Edited highlights follow.

Q. From your unique perspective as the world's biggest oil exporter, can you tell us how you see the Ukraine crisis and the current energy crisis in Europe reshaping the flows?

A. The crisis between Russia and Ukraine and the amount of production that Russia is contributing to the market is significant, and it has its own impact on the global energy supply. However, I need to say that we have seen the tightness in the market even before the crisis. The crisis between Russia and Ukraine only intensified what's happening [already]. The embargo will only happen in December and then the products [in] first quarter next year. For the time being, the more serious issue, I think, is gas and LNG. First of all, there's no spare capacity available in the market. These are all long-term contracts and also you need to build LNG terminals, receiving terminals, that will take a couple of years so it's a much bigger issue for gas and LNG than [for] crude oil.

Q. In the short term, how do you see this impacting Aramco operations? Are you finding that there is more demand in Europe? Will you be cutting allocations to Asia?

A. First, you know, to us, the Asian market is the main market. We have a lot of our investment in Asia, and we are going to grow the number of investments that we have in Asia. So, it is a very critical and important market. We have long-term customers, great relationships, and we also have long term contracts with these customers. So, we will maintain our position, and we didn't see any impact because of the shifting of barrels from Europe to Asia. We also maintain good markets in Europe and North America. And we will continue to meet the call on us to the extent possible in Europe because they are really facing problems right now.

Q. You mentioned the discounted barrels, the Russian discounts. Is that affecting at all Aramco operations in terms of market share? Are there [concerns]?

A. None whatsoever. Let me put it that way. Even with these discounts, as I said, we have long-term relations, long-term contracts. These markets, we have to also understand, they don't want to create an overdependence on one source.

Q. In your view, how prepared is Europe for the embargoes?

A. Crude oil, it's a fungible commodity. It will be shifting. The issue, I think, for Europe is gas and LNG because there is no spare capacity available. These are all in long-term contracts. As you drop supply coming from Russia, no one else really can step up and meet the additional demand. So, it is going to be a major issue for Europe when it comes to gas and LNG. For crude oil, you know, these are markets and you know the right price crude will be shifting from one location to the other.

Q. I know that the Jafoura sour gas field [in Saudi Arabia] is one of the priorities for Aramco. Is there a potential for Aramco to export gas?

A. We are going to export hydrogen, blue hydrogen. So, our priority, you know, we are expanding our gas by close to 60% over the next eight years, which is significant growth in gas, and this is to satisfy local demand and eliminate liquid burning in the kingdom. We have close to a million barrels liquid burning in the kingdom. It will improve the economics, in terms of using gas. It will reduce the emissions and it will also help Aramco because we receive power to the grid, in [terms of] Scope 2 emissions.

Some of the Jafoura gas will be going to blue hydrogen and will be exported to different markets. Similarly, you know, LNG and others will be considered based on supply and the kingdom's needs.

Q. Are you finding markets for blue hydrogen at the moment, and when do you think this market is going to develop?

A. I think the challenge for hydrogen is infrastructure and costs. Customers would like to have hydrogen but not at any cost. That is the issue. So, today, we are identifying customers based mainly in East Asia—Japan and Korea, South Korea, and some of the Europeans.

For the prices of hydrogen to go down, you need to scale up. So, when you scale up, you know, technologies will be developed and efficiencies and all of that you will be able to reduce costs. But if you are going to develop it now, you need an offtake agreement, for at least 15 to 20 years, in order to develop all of this blue hydrogen.

Q. Why is the oil market behaving the way it is? Why is there a pressure on prices when we're seeing tightness around supply and also around the spare capacity?

A. I think the market is focusing on short-term economics rather than supply fundamentals. They are focusing on what could happen to demand if a recession happened in different parts of the world. They are not focusing, as you mentioned, on supply fundamentals. Today, inventories are extremely low, spare capacity is also extremely low. And if China opens up a little bit, you will find out that spare capacity will be eroded completely. The aviation industries by the way, compared to pre-Covid levels, we are still 1.7 million barrels per day in jet fuel lower than pre-Covid. And the spare capacity that we have currently is like almost one and a half percent of total supply, talking about 100 million [barrels per day]. So, even if the aviation industry picks up, you will erode that spare capacity, and when you erode that spare capacity ... the world should be worried, because there is not going to be any buffer for any hiccup, any interruption, any unforeseen events anywhere in the world.

Today, what's happening to gas is the same, LNG, everything available is long-term contracts going to certain markets. There is no available capacity to meet any interruptions in the system.

Q. That leads well into my next question about underinvestment. When do you believe that there's going to be a return of investment into the sector?

A. Unfortunately, the underinvestment is still going on. You know, it's the pressure the companies are seeing from regulators, policymakers, shareholders, about no need for investment.

We decided to go to 13 million b/d capacity in 2020. It's going to come in 2027. These things take time. So, we're talking about six to seven years from the time you take the decision for that additional barrels to come to the market. Unfortunately, because of all the pressure that we are seeing on companies, from different policymakers and regulators, and the sentiment that is there in the market, we see only short-cycle projects coming on, but not long-term projects that will sustain a plateau for a longer period of time. The increment we are talking about is going to sustain the plateau for 20 and 30 years. You need to believe in the long term.

Q. Can you tell us a little bit more about your plans to build capacity to 13 million b/d? Where are you exactly in the process?

A. That additional capacity is coming mainly from offshore, a number of increments that we are bringing on stream. We are bringing Marjan, we are bringing Berri, Zuluf, heavy and also Safaniyah. Marjan and Berri is currently under construction, Zuluf contracts were awarded, and Safaniya is under FEED (front-end engineering and design). But progress is going very well. We are on target to meet our plan to add 1 million barrels, go from 12 million to 13 million barrels of capacity.

Q. I am sure you've been asked this question a million times, but given the current market tightness, how fast could Aramco reach the 12 million b/d, and how long could you sustain it for?

A. You know, based on our maximum sustained capacity policy, it's 90 days to bring that capacity. But in 2020, we were asked by the Ministry of Energy... [and] we brought it in 30 days. But I said it before and I'm going to say it again, we should be really concerned if we reach that level, because it means you are running in the world with no spare capacity. You will have volatility and prices will escalate so fast.

Q. Let's move to the demand side. Where does Aramco see it?

A. For us, what we believe is that demand will continue to grow to 2030 and beyond. And that's where we made the decision, as I said, in 2020, to expand our capacity to 13 million b/d.

If you think about it today, alternatives, solar, wind, only contribute 2% to the primary industry, 10% in electric power, electric cars 2% of the total global fleet. So, alternatives are not ready yet. Until they are ready, we need to work in parallel. We need to develop our oil and gas and make sure that we decarbonize our resources that by building carbon capture and sequestration.

Also, we are involved in building our renewables, blue hydrogen, other means of alternatives to eliminate any emissions. We are for climate protection, but we need to work in parallel.

Look at what's happening globally today: 8 billion tons of coal [consumption]. This is the highest in history. So, if you think about it, we are transitioning to coal. Think about it. These are the signals. You know, affordability and availability is key.

Q. You've mentioned renewables, and this is something that Aramco is working on, and you do have a net-zero target by 2050. What progress are you making towards reaching that target?

A. We are progressing very well. We issued our sustainability report this year. In that sustainability report we put our roadmap to achieve net zero Scope 1 and 2 by 2050. We had an interim target of reducing 52 million tons by 2035 compared to our baseline in 2018. We will be doing that by efficiency improvements in our existing facilities. By shifting the power sector to gas, we will reduce Scope 2 emissions coming to the company by carbon [capture and] sequestration [CCS].

The biggest element is CCS because we will be building the biggest [project] in the world. And of course, we will be building our low-carbon or no carbon energy in terms of renewables, blue hydrogens. At the same time, we're working on a lot of technologies that will also help us, in addition to nature-based solutions. We are talking about 300 million mangroves in kingdom and out of kingdom. And at the same time, we're working on deployment of separate carbon economies and creation of these separate carbon economies. Techniques and direct air capture, more engine efficiencies, and mobile CO2 capture, there's a lot of things that are part of our strategy to achieve our net zero Scope 1 and 2 by 2050.

Q. I don't know if you agree with me or not, but when we talk about the energy transition, usually what we see in the mass media are the extreme voices from both ends of the argument, and it ends up being a kind of shouting match. What is your view on arguments that oil companies should contribute to civil society?

A. As I said, you know, we are for climate protection. And we are an integral part of the solution, the energy industry as a whole. We need to work together. We need to ensure that we have enough supplies of oil and gas with much less emissions than it is today going on. The energy industry has the experience. It has the capabilities, the subject matter experts to do the giga and mega projects, capabilities available for them to do all of these projects, in hydrogen—in green, blue, in renewables, in all of these things.

Unfortunately, there is no constructive dialogue currently going on. Even though as I said, you see in some of these [demand] scenarios talking about 70 million [barrels per day of demand] in 2030. Why would you do an investment to start with if you are thinking in 2030 there will be 70 million barrels [per day of demand]? We need to have a much better dialogue, because this is only going to work if we put our heads together and find the solution to what's going on. Otherwise you will see more utilization of coal going on. And because we will need energy at the end of the day. So, I think the energy industry as a whole has the experience and capabilities available for creating the right transition that we're all aiming for.

What's New Around the World

COUNTRIES

BRAZIL — The first round of Brazil's bitterly contested presidential elections on Sunday saw former President Luiz Inacio Lula da Silva finish in first place, although incumbent Jair Bolsonaro made a stronger-than-expected showing as the pair head to a runoff vote on Oct. 30. Final tallies had Lula, a left-wing former trade union boss who served as president from 2003 until 2010, receiving 48.4% of the vote in the first round. Bolsonaro, a right-wing populist, finished with 43.2%. The fate of Brazilian state oil company Petrobras has been a prominent feature in campaign rhetoric. A frequent target of Bolsonaro due to high fuel prices, Petrobras has churned through four CEOs during his time in office, and the president has made no secret of his desire to privatize the company. Lula, who was jailed in connection to the Operation Car Wash scandal before being released in 2019 with his convictions nullified, has said that he would keep Petrobras in the state's control and position it for a transition to renewable and green energies. He has also suggested that Petrobras needs to diversify from an over-reliance on offshore pre-salt fields and "go back to being an integrated energy company," with more emphasis on biofuels.

QATAR — Qatar's negotiations with potential equity partners in the second phase of its LNG mega-expansion are almost concluded, the country's energy minister said Wednesday. "We see about three partners entering this project," Saad al-Kaabi told the Energy Intelligence Forum in London, referring to Phase 2 of Qatar's expansion, which is also known as North Field South (NFS). "We are done with almost everything. We are just defining the date of when my counterparts can come to Qatar to celebrate," he added. Al-Kaabi also serves as CEO of QatarEnergy, which recently announced the first winner of an equity stake in NFS — French major TotalEnergies which landed a 9.375% stake. The other partners in the 16 million ton/yr NFS expansion will come from the pool of companies that were awarded stakes in Phase 1 of the LNG expansion, which is also known as North Field East (NFE). There will be "no surprises" when the names are announced, al-Kaabi acknowledged. In addition to Total, the Phase 1 equity stakeholders are Exxon Mobil (6.25%), Shell (6.25%), Eni (3.125%) and ConocoPhillips (3.125%). In total, 25% of NFS is believed to be available for strategic equity partners.

Opec-Plus Ekes Out More Barrels in September

Opec-plus raised crude oil production in September by 220,000 b/d to 44.9 million b/d, Energy Intelligence's preliminary assessment shows. The 19 members with a monthly quota fared better and increased output by 310,000 b/d for a total 38.8 million b/d. However, the result was an enormous 3.4 million b/d short of the September target of 42.2 million b/d for the 19 countries. Russia, whose September output was 9.75 million b/d, down a slight 20,000 b/d on August, came up 1.28 million b/d short of its target. Nigeria's shortfall was 820,000 b/d. The Saudis, by contrast, raised output by 103,000 b/d to 11.05 million b/d, which theoretically represents a peak now that the kingdom has pledged to decrease production by 550,000 b/d over the last three months of 2022.

Compliance With Opec-Plus Production Cuts

Opec	Base	Sep Ceiling	Sep Production	Under/Over Target
Saudi Arabia	11,500	11,030	11,047	17
Iraq	4,803	4,663	4,408	-255
UAE	3,500	3,186	3,192	6
Kuwait	2,959	2,818	2,818	0
Nigeria	1,830	1,830	1,010	-820
Angola	1,529	1,529	1,235	-294
Algeria	1,057	1,057	1,056	-1
Congo (Br.)	325	325	291	-34
Gabon	187	187	193	6
Eq. Guinea	127	127	95	-32
Opec 10	**27,817**	**26,752**	**25,345**	**-1,407**
Iran	3,296	NA	2,570	NA
Venezuela	1,171	NA	675	NA
Libya	1,114	NA	1,161	NA
Opec 13	**33,398**	**26,752**	**29,751**	**-1,407**

Non-Opec	Base	Sep Ceiling	Sep Production	Under/Over Target
Russia	11,500	11,030	9,750	-1,280
Mexico*	1,753	1,753	1,711	0
Kazakhstan	1,710	1,710	1,357	-353
Oman	883	883	888	5
Azerbaijan	718	718	566	-152
Malaysia	595	595	363	-232
Bahrain	205	205	210	5
South Sudan	130	130	153	23
Brunei	102	102	74	-28
Sudan	75	75	75	0
Non-Opec 9	**15,918**	**15,448**	**13,436**	**-2,012**
Combined 19*	**43,735**	**42,202**	**38,781**	**-3,419**
Opec-Plus 23	**51,069**	**NA**	**44,898**	**NA**

In '000 b/d. Opec and non-Opec compliance based on crude oil only. Mexico no longer has a quota but nominally is a member of the non-Opec alliance. *Source: Opec, government data, Jodi, Energy Intelligence.*

Supply Back to Pre-Pandemic High

Hydrocarbon liquids production worldwide amounted to 101.57 million b/d in September, a 790,000 b/d improvement on August, according to Energy Intelligence's preliminary estimate. It is also just 100,000 shy of the pre-pandemic high posted in November 2019. Crude output rose by 500,000 b/d for the month, led by 100,000 increases from both Saudi Arabia and Norway, to 77.7 million b/d. But this is 180,000 million b/d short of the most recent high in March 2020, just before Covid-19 crashed markets. The difference has been compensated by production of natural gas liquids (NGLs) globally.

World Crude Oil and Other Liquids Supply

('000 b/d)	Aug'22	Sep'22	Chg.	Crude Sep	Other Sep
Non-Opec-Plus	**45,928**	**46,670**	**742**	**32,837**	**13,833**
US	19,031	19,452	422	11,950	7,502
Canada	5,449	5,425	-24	4,520	905
Brazil	4,173	4,224	52	3,071	1,154
Colombia	751	752	1	734	18
Norway	1,998	2,190	192	1,874	316
UK	861	886	25	815	71
Egypt	659	663	4	550	113
Qatar	2,134	2,148	14	613	1,535
China	4,276	4,308	33	4,203	105
India	755	765	10	581	184
Indonesia	798	786	-12	605	181
Other Non-Opec-Plus	5,045	5,071	26	3,322	1,749
Opec-Plus	**52,456**	**52,522**	**66**	**44,898**	**7,624**
Opec	**35,040**	**35,039**	**0**	**29,751**	**5,288**
Saudi Arabia	13,318	13,297	-21	11,047	2,250
Iraq	4,548	4,467	-81	4,408	59
Iran	3,514	3,445	-69	2,570	875
UAE	4,232	4,241	9	3,192	1,049
Kuwait	2,975	2,982	7	2,818	164
Nigeria	1,158	1,194	36	1,010	184
Libya	1,271	1,237	-33	1,161	76
Algeria	1,550	1,516	-33	1,056	460
Angola	1,141	1,274	133	1,235	39
Other Opec	1,333	1,385	52	1,254	131
Non-Opec	**17,416**	**17,483**	**67**	**15,147**	**2,335**
Russia	11,035	11,182	147	9,750	1,432
Kazakhstan	1,517	1,472	-45	1,357	115
Azerbaijan	703	717	14	566	151
Mexico†	1,917	1,925	7	1,711	214
Oman	1,104	1,097	-7	888	209
Malaysia	589	557	-32	363	194
Other Non-Opec	551	533	-18	512	20
World Supply	98,384	99,192	808	77,736	21,457
Refinery gains	2,390	2,373	-18	0	0
Total World	**100,775**	**101,565**	**790**	**77,736**	**23,829**

*Other liquids include natural gas liquids, biofuels, gas-to-liquids, coal-to-liquids, refinery additives. †Mexico nominally is a member of the Opec-plus alliance but has no production quota. Source: IEA, EIA, Jodi, government and trade data, Energy Intelligence.

Marketview

Europe's Gasoil Gap

The EU's scramble to replace the remaining 450,000 barrels per day of Russian gasoil that it still imports will strain an already-stretched global refining system. The effort, which must be completed before a Feb. 5 EU ban on Russian refined product imports takes effect, is further complicated by many refiners' inability to meet Europe's stringent winter specifications for gasoil.

Most refineries in China and India, the two refining powerhouses East of Suez, are unable to meet Europe's strictest cold weather properties for gasoil.

However, the recent bumper crop of Chinese oil product export quotas announced by Beijing, if extended into 2023, could be an important lifeline for Europe, said a middle distillates trader.

Before Russia's invasion of Ukraine, spikes in European winter heating demand for gasoil already pulled in arbitrage gasoil from refineries East of Suez. But the loss of a substantial volume of Russian gasoil, perfectly suited to winter's cold, would force Europe to turn to a limited number of far-flung refineries to supply replacement volumes.

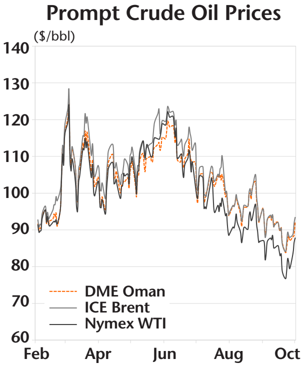
In winter, gasoil needs to meet stringent cloud points, flash points, pour points and other specifications to ensure it can function safely in the cold. And those specifications get stricter the further north the fuel gets in Europe, with tougher requirements in Germany and Scandinavia.

In India, Reliance's 1.3 million b/d Jamnagar refining complex is the only plant that can meet Europe's strictest specifications, although some other Indian plants might be able to meet less stringent requirements in countries like the UK, trading sources say.

In the Middle East, the newer, more sophisticated export-oriented refineries like the Saudi 400,000 b/d Yasref plant can meet the requirements. Some refineries in South Korea, a major supplier of Asian arbitrage middle distillates, can also meet these specifications.

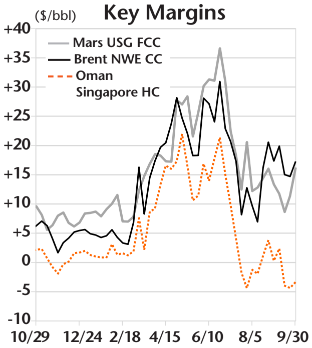
But in China, most refineries cannot, sources say, with those in northern China more likely to be capable.

Prompt Crude Oil Prices



Source: Nymex, ICE, DME

Historic Trends for Key Margins



Source: OMI

Europe will also rely heavily on US Gulf Coast refiners, which should be able to supply it with winter gasoil, said a Europe-based refining source.

Apart from a refinery's configuration, the type of crude it processes and the refining cut points it decides on can determine if the refined gasoil meets European winter specifications, the distillates trader said. For example, a crude with a low pour — the lowest temperature at which the oil will pour or flow when it is cooled — would be more likely to produce it.

And blending can only help gasoil meet some of these winter requirements, said a European refining source.

When the EU ban kicks in, Russian gasoil is expected to head East of Suez, while gasoil from the region that meets European standards would flow westward, said Vitol CEO Russell Hardy at this week's Energy Intelligence Forum.

The gasoil market will likely be tight. But if Chinese refineries ramp up sufficiently, some think this could help plug Europe's gaping hole through the end of the first quarter.

This would depend on whether Chinese refiners are able to extend their new product export quotas into 2023. Talks are ongoing with Beijing about extending quotas through the end of the first quarter. Two China-focused analysts say this is likely to happen, at least for some refiners.

Russia Sees Slight Drop in Oil, Gas Revenues

Russia's base-case budget scenario shows a modest decline in its oil and gas revenues over the next three years. The base case assumes an average price for Russia's Urals crude of $70.10/bbl in 2023, $67.50/bbl in 2024 and $65/bbl in 2025. Oil and gas revenues are seen at 8.939 trillion rubles ($184 billion) in 2023, 8.656 trillion rubles in 2024 and 8.489 trillion rubles in 2025. Russia's oil and gas revenues for the first eight months of the year exceeded those for the same period of 2021, but Energy Intelligence expects its revenues from oil and refined products to decline in 2023 as EU embargoes kick in, forcing Russia to suspend some production as it seeks out alternative markets.

PIW Market Indicators

($/barrel)	Oct 3-Oct 5	Sep 26-Sep 30	Sep 5-Sep 9
Spot Crude			
Opec Basket	$92.29	$90.94	$96.56
UK Brent (Dtd.)	93.14	87.19	90.19
US WTI (Cushing)	86.23	79.97	85.29
Nigeria Bonny Lt.	96.28	90.64	93.84
Dubai Fateh	89.42	86.11	92.23
US Mars	85.08	79.28	84.34
Russia Urals (NWE)	69.28	63.52	67.04
Crude Futures			
Brent 1st (ICE)	91.34	87.22	91.71
Brent 2nd (ICE)	89.46	85.62	90.71
B-wave (ICE)	90.69	87.17	91.93
WTI 1st (Nymex)	85.97	79.62	84.79
WTI 2nd (Nymex)	85.01	78.87	84.39
Oman 1st (DME)	90.57	86.31	90.99
Oman 2nd (DME)	88.15	85.03	88.34
Murban 1st (ICE)	93.03	88.59	93.21
Murban 2nd (ICE)	90.22	86.64	90.36
Forward Spreads			
Brent (1st-Dtd.)	-$1.80	+$0.03	+$1.52
Brent (2nd-1st)	-1.89	-1.60	-1.00
WTI (2nd-1st)	-0.96	-0.74	-0.40
WTI (3rd-2nd)	-1.26	-0.92	-0.52
Oman (2nd-1st)	-2.42	-1.28	-2.65
Oman (3rd-2nd)	-3.23	-2.41	-2.05
Murban (2nd-1st)	-2.81	-1.95	-2.85
Murban (3rd-2nd)	-2.40	-2.93	-1.88
Grade Differentials			
WTI-Brent (1st)	-$6.33	-$7.60	-$6.31
WTI-LLS	-2.70	-2.70	-2.34
WTI-Mars	+1.15	+0.69	+0.95
Brent(Dtd)-Dubai	+3.73	+1.08	-2.04
Brent(Dtd.)-Urals	+23.86	+23.68	+23.15
Brent(Dtd.)-Bonny Lt.	-3.14	-3.45	-3.65
Term Crude Formulas			
Arab Lt.-US (c.i.f.)	$92.71	$86.91	$91.97
Arab Lt.-Europe (Med)	95.39	91.87	96.63
Arab Lt.-Far East (f.o.b.)	97.18	97.10	103.57
Nigeria Bonny Lt.	99.05	93.10	96.10
Arab Light Gross Product Worth			
Rotterdam	$104.84	$95.14	$102.34
US Gulf Coast	106.56	101.38	101.85
Singapore	90.18	86.32	98.97
Gross Product Worth & Margins			
Rotterdam			
UK Brent GPW	$116.89	$105.58	$104.58
UK Brent Margin	+21.78	+16.76	+12.91
US Gulf Coast			
Mars GPW	100.04	95.44	96.19
Mars Margin	+14.86	+16.06	+11.75
Singapore			
Oman GPW	89.33	86.28	98.61
Oman Margin	-5.01	-3.36	+2.39
US Nymex			
WTI 3-2-1 Crack	+$36.86	+$36.56	+$31.71
Refined Products			
Rotterdam ($/ton)			
Eurobob Gasoline	$901.93	$810.15	$817.92
Gasoil (0.1%)	1045.50	985.81	1081.35
Fuel Oil (0.5%)*	608.50	585.85	633.25
US Gulf Coast (¢/gal)			
RBOB Gasoline	268.00¢	254.60¢	231.36¢
ULS Diesel	357.84	331.74	351.78
Fuel Oil (0.5%, $/ton)	$641.67	$612.80	$685.20
Singapore ($/bbl)			
Naphtha	$74.06	$70.38	$70.48
Gasoil (0.05%)	124.61	116.61	133.68
Fuel Oil (0.5%, $/ton)	705.67	675.00	687.60

*ARA fuel oil prices for 1% sulfur fuel oil (LSFO) have been discontinued as the market becomes increasingly illiquid. The new 0.5% sulfur fuel oil (VLSFO) specs reflect the transition to new emissions standards set by the International Maritime Organization effective Jan. 1 2020. Latest week's data are preliminary. For GPW and margin calculations, see Refining Profitability Methodologies on the Energy Intelligence website in Reference Tools Publication Methodologies. Spot prices from Thomson Reuters. Opec basket source, Opecna. 3-2-1 crack spread for 3 parts crude, 2 parts gasoline, and 1 part heating oil. PIW Numerical Datasource subscribers can download all indicators in Excel worksheets.