Energy Tidbits

Shouldn’t US Shooting Down Houthis 4 Cruise/30 Drones in Red Sea Bring Risk to Tanker Transit in Red Sea/Bab el Mandeb?

Produced by: Dan Tsubouchi

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Dan Tsubouchi
Chief Market Strategist
dtsubouchi@safgroup.ca

Ryan Dunfield
CEO
rdunfield@safgroup.ca

Aaron Bunting
COO, CFO
abunting@safgroup.ca

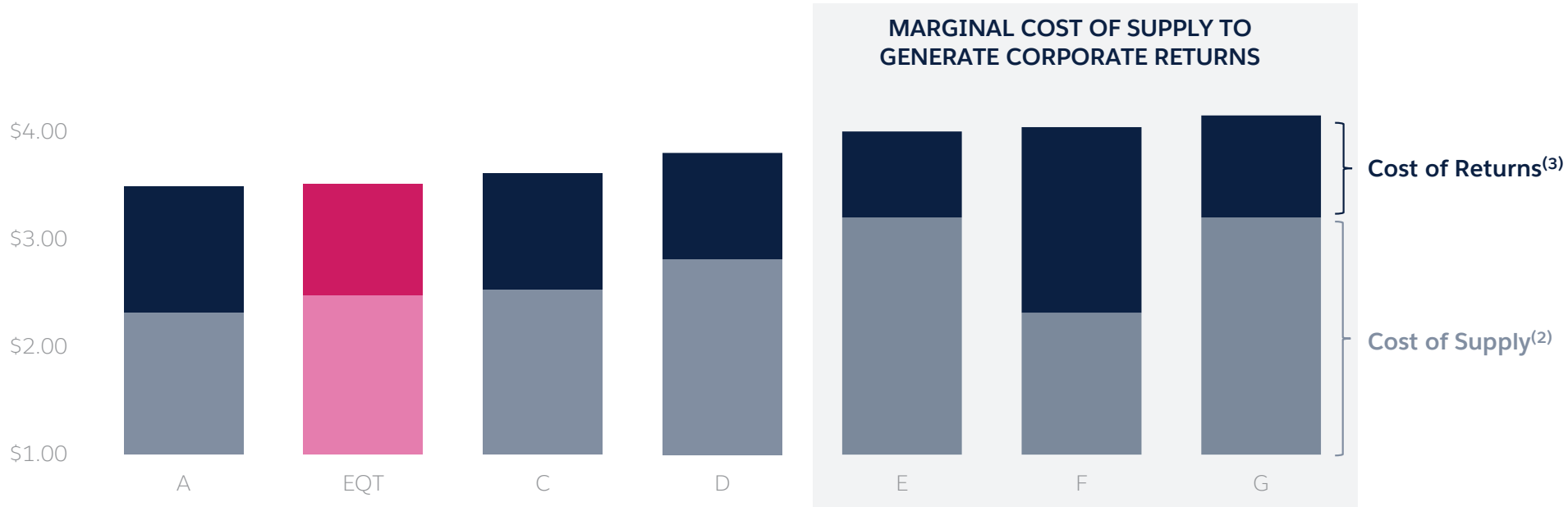
Ryan Haughn
Managing Director
rhaughn@safgroup.ca

EQT is at the Low End of Both the Cost of Supply and Return Curves

Structurally positioned to provide investors the optimal combination of downside protection and upside price exposure

NYMEX GAS PRICE NEEDED TO GENERATE CORPORATE RETURNS[1]

$/MMBtu



NYMEX Gas Price Needed to Generate Corporate Returns[1] = **Cost of Supply[2]** *NYMEX gas price needed to cover cash costs, net of differentials impact and liquids revenues* + **Cost of Returns[3]** *Incremental NYMEX gas price needed to generate 10% of enterprise value*

1. Based on EQT modeling and management estimate averages for the period of 2024E – 2028E, using EQT internal estimates and peers' public disclosures and guidance. Peers consist of AR, CHK, CNX, CRK, RRC and SWN. 2. Cost of Supply is calculated as operating expenses, plus capital expenditures, less the impact of differentials and liquids revenues, divided by net natural gas sales volume. 3. Cost of Capital is calculated as 10% of enterprise value divided by net natural gas sales volumes where enterprise value is estimated as of 9/30/2023 based on publicly filed data available as of 9/30/2023; based on share price as of 10/20/2023.

LNG Macro: Material Global Natural Gas Demand Growth

Non-North American demand set to increase by ~90 Bcf/d in less than 30 years

STRENGTHENING INTERNATIONAL MARKET OUTLOOK

~4 - 5 Bcf/d

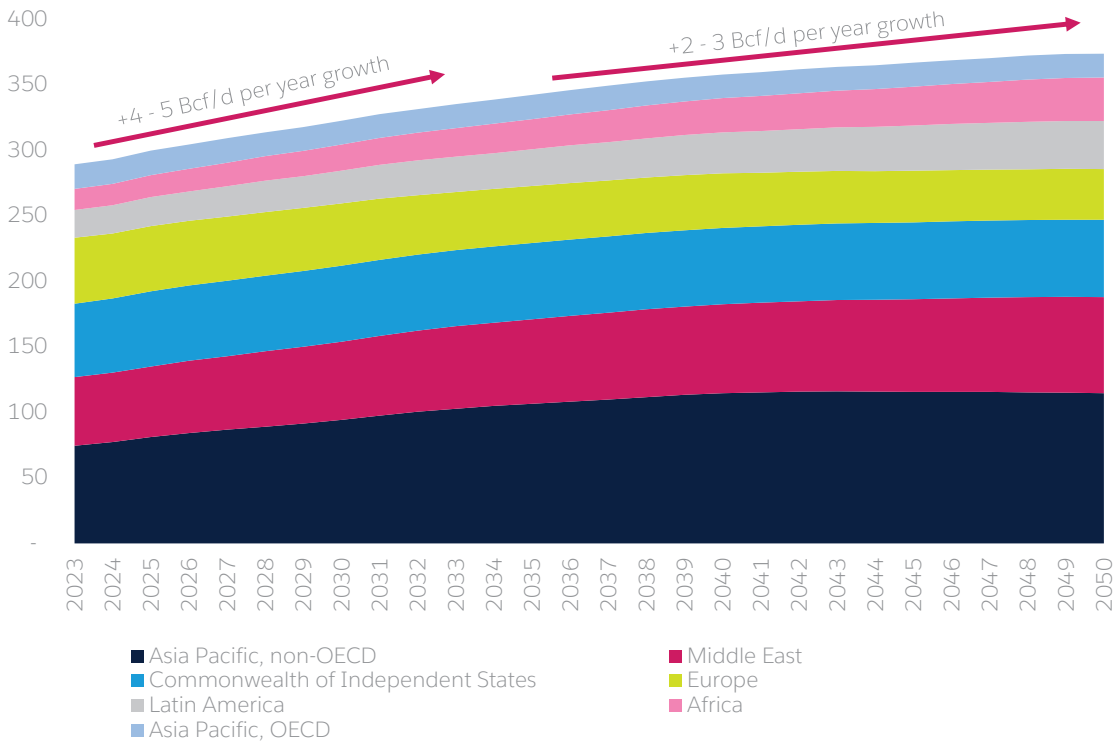
› 1.5 - 2.5% average annual growth of gas demand through 2035

~2 - 3 Bcf/d

› 0.5 -1.5% average annual increase beginning in 2035, even with renewables adding to overall market share

NON-NORTH AMERICAN NATURAL GAS DEMAND FORECAST

Bcf/d



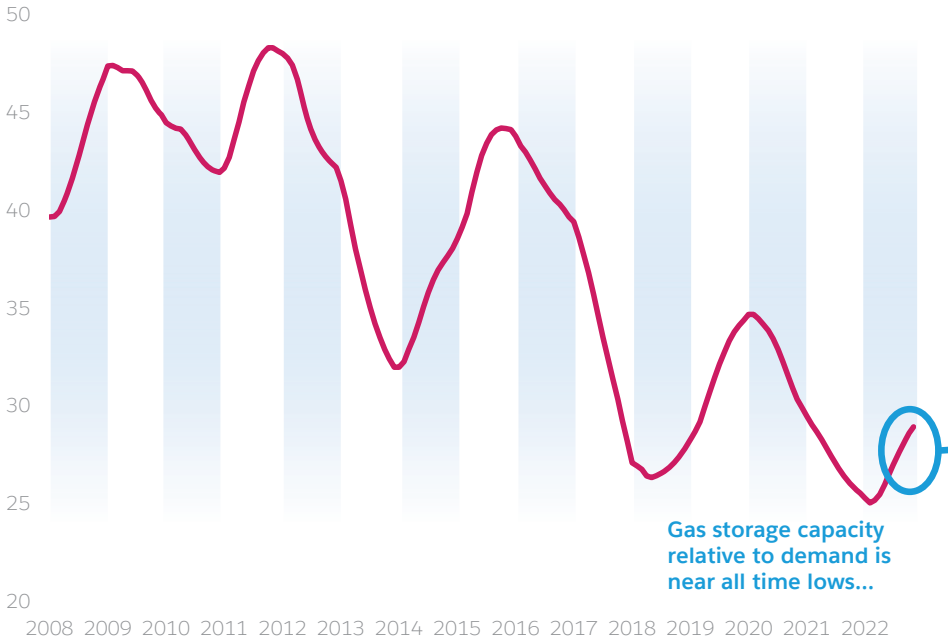
Source: EQT internal estimates.

Inadequate Natural Gas Storage Will Amplify Price Volatility

Lack of storage capacity relative to demand, limited coal switching ability and renewable intermittency will amplify price volatility

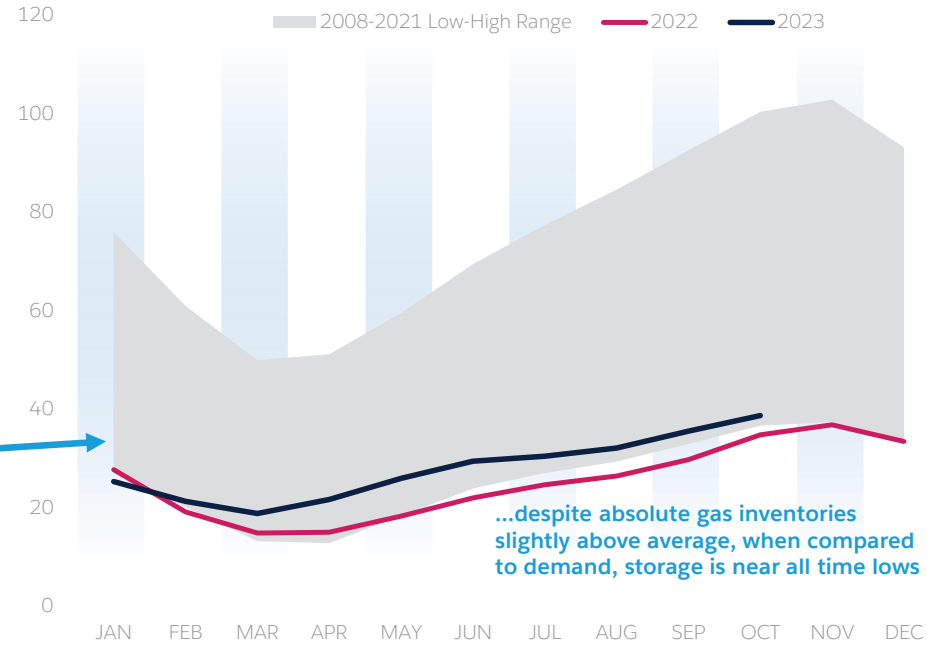
U.S. GAS STORAGE: DAYS OF LTM DEMAND COVER[1]

Storage / Daily Demand



STORAGE EXPRESSED IN DAYS' DEMAND COVER[1]

Storage / Daily Demand



UNDER THIS DYNAMIC, PRICE IS INCREASINGLY BECOMING THE ONLY MECHANISM TO BALANCE INVENTORIES, CREATING A MORE VOLATILE GAS PRICING MARKET

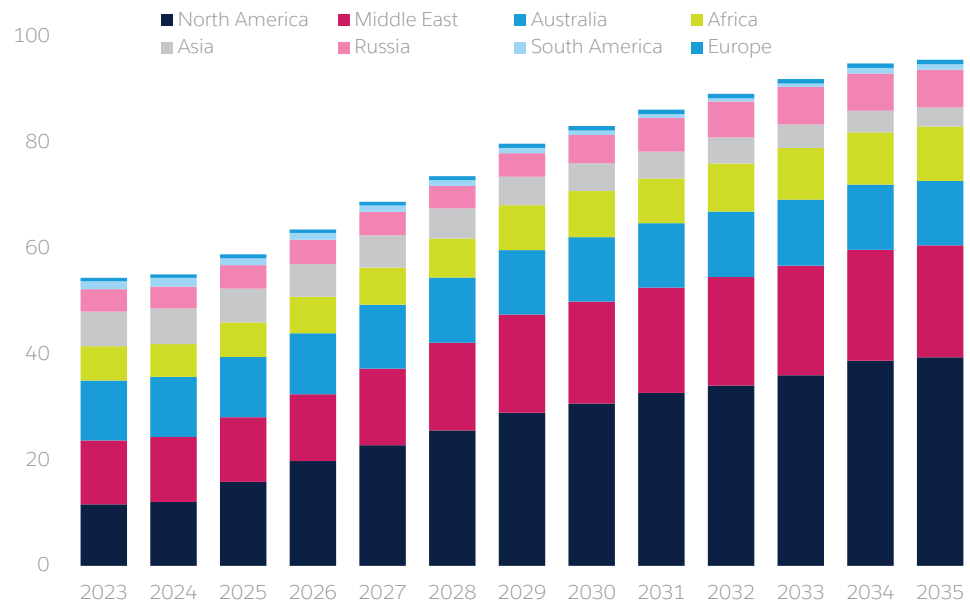
1. Source: EQT internal analysis. Days of demand cover = Storage / Daily gas demand. Represents the days of gas demand available in storage.

Global LNG Supply and Demand Forecast

The LNG market is expected to double by the late 2030s, with the U.S. expected to be one of the largest suppliers

LNG SUPPLY

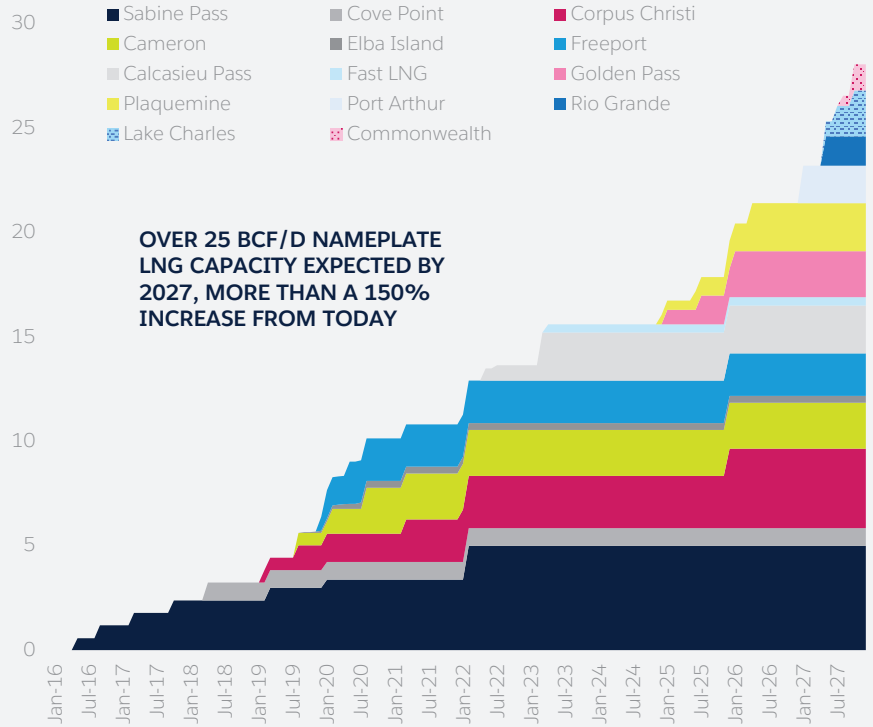
Bcf/d



NORTH AMERICA LEADING THE WAY IN LNG CONSTRUCTION

U.S. LNG CAPACITY BUILDOUT

Bcf/d



Source: EQT internal analysis, Rystad, IHSMarkit

very attractive rates of return with minimal risk, while simultaneously improving our operational efficiency.

Our share buyback program also remains a key tool for opportunistic execution at points in the cycle where we see favorable risk-reward potential for generating returns well in excess of our weighted average cost of capital. Recall, at our current share price, we have generated an approximate 40% return for shareholders. On the roughly $600 million of share repurchases we have executed to date, which is the highest amongst our peer group, and we still have approximately $1.4 billion remaining under our existing authorization. And finally, sustainable long-term-based dividend growth is a key pillar of our shareholder return strategy, and to this end, we recently raised our dividend by 5% to $0.63 per share on an annualized basis.

Since initiating our dividend in late 2021, we have now increased it by more than 25% cumulatively over that period, which underscores our confidence in the sustainability of our business and a corporate free cash flow break-even price that is amongst the lowest in North America. As we eliminate structural costs from the business through actions such as debt repayment, share repurchases, and synergy capture, we expect to continue growing our base dividend over time without putting upward pressure on our corporate cost structure. Returning to the macro environment, we see several factors lending support to the natural gas market in 2024 and beyond. First, strong gas-fired power generation, resilient LNG export demand, and lower-than-expected production this summer reduced expected storage overhang than many were forecasting back in the spring by over 300 Bcf.

Second, while we do expect some incremental supply from associated gas in connection with new Permian pipeline capacity commencing in the 4th quarter, we see lower 48 volumes exiting this year flat to slightly down compared to Q3 of 2023. And we see further decline from the first half of 2024 as the impact from a 25%-plus drop in gas rigs since March begins to set in, especially in the high-decline Haynesville play where the rig count remains well below maintenance levels. Third, the progress demonstrated commissioning the Golden Paths and Plaquemines LNG facilities has been encouraging and will create structural tailwinds allow an LNG demand to reach a record 15 Bcf per day, even before the facilities are fully operational. Fourth, we expect natural gas power generation to continue taking away share from coal as the investment case for coal weakens further, with the market increasingly turning to cleaner burning natural gas.

We expect coal production to drop by over 20% year-over-year in 2024 as the effect of the recent wave of coal retirement takes hold. And a tightening coal market will further support the natural gas fundamentals in the power sector moving forward, where total gas equivalent demand for coal still stands at 14 Bcf per day in the United States alone. Moving to hedging, we tactically added to our hedge position during the quarter to further de-risk a portion of our expected pre-cash flow and debt repayment goals. We now have greater than 40% of our Q1 through Q3 2024 2024 production hedged, inclusive of Tug Hills volumes, with a weighted average floor price of approximately $3.60 per MMBtu and a weighted average ceiling of $4.10 per MMBtu.

these opportunities will ultimately allow us to continue to create differentiated shareholder value relative to peers in the years ahead.

Importantly, these types of opportunities are not simply due to scale, but underpinned by EQT's world-class assets coupled with a culture and teams that are relentless in the pursuit of excellence as the operator of choice and driven to maximize value for shareholders. I'll close by highlighting Slide 12 of our investor presentation, which illustrates an internal analysis of the natural gas price required to generate sufficient free cash flow such that a gas producer generates a simple 10% return on current respective enterprise value. What we view to be the most basic tenet of shareholder value creation. We believe the days of well-head IRRs driving activity levels amongst US gas producers are in the rear view mirror, as this behavior led to the destruction of hundreds of billions of dollars of capital in the last decade.

Put very simply, well-head IRRs on D&C CapEx are unrelated to corporate returns and cost of capital. Instead, we see the marginal cost of US natural gas supply beholden to a fully burdened corporate cost curve that requires a sufficient return on corporate capital or enterprise value, not just a return on field-level CapEx. I want to highlight a few observations from this slide. First, the marginal molecule of US gas supply is coming from the Haynesville, requiring a natural gas price of approximately $3.50 per MMBtu to even begin generating cashflow in maintenance mode, meaning below this price, no no shareholder value is being created and inventory optionality is being depleted.

On the other hand, EQT is at the low end of the cost of supply curve, which translates to structurally more durable through the cycle free cash flow generation and returns for our shareholders and also less need to defensively hedge away gas price upside. Further, we see the price required to generate corporate return for Haynesville producers already at north of $4 per MMBtu based on current market valuations. On the other hand, EQT shares are pricing in a level embedding a mid $3 gas price, providing a superior entry point to gain exposure to natural gas prices and in a superior risk adjusted manner due to EQT's lower cost of supply. As previously noted, our contractual gathering rate improvements, unrivaled depth of repeatable low cost inventory, and new firm sales agreements will drive EQT's cost of supply even lower over the next five years in contrast to the rest of the industry, which will likely see upward pressure over this period as peer producers move toward lower quality inventory.

As a result, we believe EQT is uniquely positioned to capture a disproportionate amount of natural gas price upside relative to peers in the years ahead. I'll now turn the call back over to Toby for some concluding remarks.

Toby Z Rice {BIO 18495401 <GO>}

Thanks, Jeremy. To conclude today's prepared remarks, I want to reiterate a few key points.

Number one, the momentum and gravity at EQT right now is unrivaled, and I have never felt anything like it in my career. We are executing at record levels, signing historic physical supply deals that simultaneously maximize the value of each molecule and provide secure

One question I had was, as you have been probably as longer-term broadcast in projections and when begin the infrastructure pieces, some of the trends look really compelling. As you look at different pricing scenarios, do you picture (Inaudible). Do you picture a gas price high enough for your bull feeder kind of gets reintroduced of the industry over drilling again. And I mean, I know is that sustained $6, $7 or something like that.

A - Unidentified Speaker

Yes. I mean, I think our biggest thing that is going to be the biggest driving force maybe on how people think about the dollars they spent towards drilling is really getting away from the half cycle wellhead returns and looking more at a holistic cost of returns and gas price needed to actually not just generate free cashflow and cover your cost of supply, but actually create, deliver value to back towards shareholders. And that right now scenario is showing us that even with current strip is below the price level needed to generate the cost of returns that investors are demanding right now. So if look at it from that perspective, I think you'd be a little bit more cautious over activity levels.

But we think that what's happened in this industry over the past few years in this sustainable shale era is operators I think are being much more holistic when they're making their investment decisions. And that's going to lead to better, a more durable industry that's better to serve customers over the long-term and also keep investors happy and satisfied with the returns that they're making.

Yes, I'd say another interesting caveat to that that's really important to remember. I think a lot of people like to talk in terms of averages when talking about future gas prices or commodity prices.

In our view, I think what's going to change a bit in the character of the gas market going forward is in a world where there's less coal to switch to, you have renewable intermittency, you have your days of demand covered dwindling for gas, you're going to see a lot more volatility. and so instead of a clear price signal, so to speak, of $5 or $6, as you suggested, which would give you confidence to drill and grow, I think you might see a year where gas is really high and another year where gas is really low. That will average out to an attractive price in the middle, but it does create a lot of volatility. And I think from a planning perspective for companies that are just pure upstream producers, it creates a lot more pause before saying, we want to go invest an extra $1 billion in drilling in a given year.

And I think that, if you want to look at a case study of that, you can see what happened in the past 12 months where that really seemed to be all the rage in 2022 prices were high single digits and all it took were a couple events and events and prices fell as low as $2. Now you're seeing the Haynesville start to really decline. So, I think, when you look ahead, I think that's an important differentiation, but I think the net effect is you're going to see some air gaps emerge of oversupply and undersupply. And that really underpins our focus on cost structure because we don't want to be one of those producers that has to decline and has to ramp back up.

We'd love to be able to really produce durable cashflow in return for investors through the cycle. And again, if you're worried about prices when you're falling to $2, like we just saw this year, and you have to hedge that, but then you miss prices going back up materially higher, over the long run, you're not going to generate nearly as much value. So again, that outlook is really informing how we sculpt the business, whether it's through just organic cost-cutting, it's our hedging strategy, our balance sheet, how we think about future M&A But that characteristic, I think, is an important caveat. And it'll be a lot different in the next five years compared to the prior five years.

Q - Analyst

Great. Thanks a lot for bringing the volatility angle into it. And I also wanted to touch on the issue of coal replacement. And I was just wondering, as you see utilities doing their longer-term planning, do you see any signs of the impact from some of the advanced technology out there, for example, for gas turbines, greater efficiency, lower emissions, and so forth? Is that in the equation as you see some of these coal replacements on the horizon?

A - Unidentified Speaker

Well, I think what you are seeing is energy security coming back into the headlines in the American grid.

And when you look at a lot of the power generation capacity that's been added, over the last five years, a lot of it has come from intermittent, albeit lower carbon energy solutions like wind and solar, and people are now stepping back and saying, do we have the reliability that we need? And you see this across all ISOs across the country where your peak demand number is coming very close to your reliable electricity generation. While you may have coverage from intermittent sources above that, you realize that when that peak demand hits and you're pushing, you're redlining your reliable electricity power generation, you're on your knees praying for the wind to blow and the sun to shine. And I think people are looking at this now and looking for more energy security and realizing that low-carbon energy solutions like natural gas are going to be the solution that the world needs.

Q - Analyst

Great.

Thanks a lot.

Operator

Thank you. Your final question comes from the line of Bert Donnes with Truist. Please go ahead.

Q - Bertrand Donnes {BIO 20389042 <GO>}

Hey, thanks, guys. Toby, I think you brought this up a few times, the idea of downside protection. When it comes to hedging and even your LNG strategy that I think provides a

https://investors.bakerhughes.com/news-releases/news-release-details/baker-hughes-company-announces-third-quarter-2023-results

Baker Hughes Company Announces Third Quarter 2023 Results

October 25, 2023 at 5:00 PM EDT

HOUSTON and LONDON, Oct. 25, 2023 (GLOBE NEWSWIRE) -- Baker Hughes Company (Nasdaq: BKR) (Baker Hughes or the Company) announced results today for the third quarter of 2023.

"We were pleased with our third quarter results and remain optimistic on the outlook. We maintained strong orders performance in both Industrial & Energy Technology (IET) and Oilfield Services & Equipment (OFSE), with large awards coming from Venture Global in Liquefied Natural Gas (LNG) and Vår Energi in subsea. We also delivered strong operating results at the upper end of our EBITDA* guidance range, booked almost $100 million of new energy orders and generated $592 million of free cash flow*. We continue to see positive momentum across our portfolio despite persisting global economic uncertainty," said Lorenzo Simonelli, Baker Hughes chairman and chief executive officer.

"Oil prices have rebounded as the combination of resilient oil demand and production cuts have tightened the market. As a result, the oil market is likely to see inventory draws through the rest of 2023. Continued discipline from the world's largest producers, the pace of oil demand growth in the face of economic uncertainty, and geopolitical risk will be important factors to monitor as we look into 2024."

"Outside of the upstream markets, the global LNG market remains fundamentally tight despite recent economic softness. This tightness is evidenced by the recent LNG price spikes that resulted from the current Middle East conflict and strikes by LNG workers in Australia, which temporarily interrupted operations at several LNG facilities. Globally, we expect 2023 LNG demand to approach 410 million tons per annum (MTPA), or up about 2% compared to last year. With estimated global nameplate capacity of 490 MTPA this year, effective utilization is expected to be over 90%, which has historically represented a tight market. As a result, the LNG project pipeline remains strong, both in the U.S. and internationally."

"As we enhance our position as a leading energy technology company, we remain excited about the continued growth that we see across both segments. While there is a growing consensus the energy transition will likely take longer and be more complex than many expected, our unique portfolio is set to benefit irrespective of the pace of development. Importantly, we are laying the foundation today for a more durable earnings and free cash flow growth profile, enabling best-in-class returns and structurally increasing shareholder returns. I want to thank our shareholders, our customers, and our employees for their continued support as we continue to take energy forward," concluded Simonelli.

Baker Hughes Company Announces Second Quarter 2023 Results

July 19, 2023 at 7:00 AM EDT

HOUSTON and LONDON, July 19, 2023 (GLOBE NEWSWIRE) -- Baker Hughes Company (Nasdaq: BKR) (Baker Hughes or the Company) announced results today for the second quarter of 2023.

"We were pleased with our second quarter results and remain optimistic on the outlook for 2023. We maintained our strong order momentum in Industrial & Energy Technology (IET) and Oilfield Services & Equipment (OFSE), specifically within Subsea & Surface Pressure Systems (SSPS). We also delivered solid operating results at the higher end of our guidance in both business segments, booked almost $150 million of New Energy orders and generated approximately $620 million of free cash flow," said Lorenzo Simonelli, Baker Hughes chairman and chief executive officer.

"Growing economic uncertainty continues to drive commodity price volatility globally. However, despite lower oil prices over the first half of the year, we maintain a constructive outlook for global upstream spending in 2023. Market softness in North America is expected to be more than offset by strength in international and offshore markets."

"Outside of the upstream markets, we remain confident on the LNG outlook, with solid demand growth this year led by Europe and Asia. Based on the continued development of the LNG project pipeline, we still expect the market to exceed 65 million tons per annum (MTPA) of FIDs this year and should see a similar level of activity in 2024. We continue to see the potential for this LNG cycle to extend for several years with a pipeline of new international opportunities expanding project visibility out to 2026 and beyond."

"Overall, I am extremely excited about the multitude of new opportunities developing for solutions that leverage our unique portfolio. Combining these growth opportunities with our business transformation objectives provides attractive upside for our margins and returns going forward, and I want to thank our shareholders, our customers, and our employees for their continued support," concluded Simonelli.

https://investors.bakerhughes.com/news-releases/news-release-details/baker-hughes-company-announces-first-quarter-2023-results

Baker Hughes Company Announces First Quarter 2023 Results

April 19, 2023 at 7:00 AM EDT

“We were pleased with our first quarter results and remain optimistic on the outlook for 2023. We maintained our strong order momentum in IET and SSPS. We also delivered solid operating results at the high end of our guidance in both business segments, booked almost $300 million of New Energy orders and generated approximately $200 million of free cash flow,” said Lorenzo Simonelli, Baker Hughes chairman and chief executive officer.

“While 2023 has already started off with some macro volatility, we remain optimistic on the outlook for energy services and Baker Hughes. Our diverse portfolio features long cycle and short cycle businesses that position us well to navigate any periods of variability that may occur across the energy sector.”

“We continue to believe that the current environment remains unique, with a spending cycle that is more durable and less sensitive to commodity price swings, relative to prior cycles. Another notable characteristic of this cycle is the continued shift towards the development of natural gas and LNG. As the world increasingly recognizes the crucial role natural gas will play in the energy transition, serving as both a transition and destination fuel, the case for a multi-decade growth opportunity in gas is steadily improving as both a transition and destination fuel.”

“In addition to capitalizing on the commercial opportunities presented by this favorable macro backdrop, Baker Hughes remains committed in 2023 to transforming the Company operationally and positioning it for growth in the energy and industrial markets. I want to thank our shareholders, customers, and our employees for their continued hard work to deliver against our strategic goals,” concluded Simonelli.

of operating income and other GAAP to non-GAAP measures can be found in our earnings release.

With that, I'll turn the call over to Lorenzo.

Lorenzo Simonelli {BIO 15243700 <GO>}

Thank you, Chase. Good morning, everyone, and thanks for joining us. We were pleased with our third-quarter results and remain optimistic on the outlook. As you can see on Slide 4, we maintained strong orders performance in both IET and SSPS with large awards coming from Venture Global in LNG and Var Energi in Subsea. We also delivered strong operating results at the upper end of our EBITDA guidance range, booked almost $100 million of new energy orders, and generated $592 million of free cash flow. We continued to see positive momentum across our portfolio despite persisting global uncertainty.

Turning to the macro on Slide 5. Oil prices have rebounded as a combination of resilient oil demand and production cuts have tightened the market. As a result, the oil market is likely to see inventory draws through the rest of 2023, continued discipline from the world's largest producers, the pace of oil demand growth in the face of economic uncertainty, and geopolitical risks will be important factors to monitor as we look into 2024.

While oil prices have strengthened during the second half of this year, upstream development plans are mostly set through year-end. Therefore, we remain confident in our 2023 outlook. We still expect international drilling and completion spending to be up year-over-year in the mid-teens and North America up by mid-to-high single-digits. As we have said previously, we expect this upstream spending cycle to be more durable and less sensitive to commodity price swings relative to prior cycles. Higher hydrocarbon prices do provide positive momentum into operators' development plans for next year. While it is still early and with the caveat there is growing geopolitical risk, we do see another year of solid upstream spending growth in 2024, led by international and offshore markets.

In the offshore market, specifically, we were awarded 21 subsea trees during the quarter, which includes a significant equipment order from a sub-Saharan African operator. This award expands Baker Hughes' presence in offshore Angola and consists of 11 deepwater horizontal trees Aptara manifold and subsea controls. OFSE also saw continued growth in the North Sea booking two major multiyear contracts from Var Energi, one being a long-term contract for well intervention and exploration logging services, and the other being an order to deliver seven vertical tree systems for the Balder Field.

Turning to LNG. Despite a soft economy, the global LNG market remains fundamentally tight. This tightness is evidenced by the recent LNG price spikes that resulted from the current geopolitical situation and strikes in Australia by LNG workers, which temporarily interrupted operations at several LNG facilities. In the third quarter, global LNG demand was up approximately 1.5% year-over-year. Year-to-date global LNG demand has reached record levels at just over 300 MTPA. This is despite softer than anticipated gas demand and economic weakness persisting in key LNG-consuming markets like Europe and China. Globally, we expect 2023 LNG demand to approach 410 MTPA, or up about 2% compared

to last year. With estimated global nameplate capacity of 490 MTPA this year, effective utilization is expected to be over 90%, which has historically represented a tight market.

Looking into 2024, we forecast LNG demand to increase by 3%, which should result in utilization rates remaining at elevated levels as we forecast just 15 MTPA of nameplate capacity coming online next year. Looking out to 2025 and 2026, we see similar trend of supply growth being balanced by demand growth, which should keep global LNG market at relatively strong utilization levels.

LNG prices remain healthy, which has helped to sustain the strength in off-take contracting, a key driver of LNG FIDs. During the quarter, we received an order to provide additional liquefaction equipment and a power island to Venture Global as part of our upsized monster equipment supply agreement of over 100 MTPA. As a reminder, we have provided LNG modules for both of Venture Global's 10 MTPA Calcasieu Pass and 20 MTPA Plaquemines projects.

Additionally, we were pleased to be recently awarded by ADNOC Gas on behalf of ADNOC two electric liquefaction systems for the 9.6 MTPA Ruwais LNG project in the United Arab Emirates. The award is expected to be booked in the fourth quarter of 2023 and was announced at this year's ADIPEC conference. The LNG trains will be driven by Baker Hughes' 75 MW BRUSH electric motor technology and will feature our state-of-the-art compressor technology making Ruwais LNG one of the first all-electric LNG projects in the Middle East.

We are pleased to see continued traction from BRUSH Power Generation, which we acquired in 2022 to enhance our industrial electric machinery portfolio and to support our strategic commitment to provide lower carbon solutions. Since then, we have secured several additional orders for our electric machinery portfolio, including a contract from within in the first quarter before e-LNG compressor trains in Sub-Saharan Africa. These recent successes of BRUSH further validate our strategy of investing in bolt-on M&A opportunities that can complement the current IET and OFSE portfolios as well as our efforts in new energy.

Turning to Slide 6. Through the third quarter 53 MTPA of capacity has taken FID this year. For 2023, we expect to book LNG orders totaling approximately 80 MTPA, given we sometimes receive larger LNG orders before projects have taken FID. The LNG project pipeline remains strong both in the US and internationally. Therefore, we expect to see similar year-over-year levels of FID activity in 2024 and could see between 30 MTPA to 60 MTPA of LNG FIDs in both 2025 and 2026.

Based on our existing capacity, projects under construction and future FIDs in the pipeline, we have line-of-sight for global LNG installed capacity to reach 800 MTPA by the end of 2030. This represents an almost 70% increase in nameplate capacity from 2022, which provides significant near-term growth for Gas Tech Equipment and further long-term structural growth for Gas Tech Services. Importantly, since 2017, there have been 204 MTPA of LNG FIDs and Baker Hughes has been selected for 201 MTPA of this new capacity. These projects are scheduled to come online over the coming years,

representing an almost 50% increase in our global liquefaction installed base between now and 2028.

Turning to Slide 7. We have long-held view that natural gas is an abundant low-carbon and versatile energy source. It will play a critical role as both the transition and destination fuel. Accordingly, natural gas will be fundamental in satisfying the world's energy needs for many decades to come, while also improving air quality and reducing global emissions displacing coal in the broader energy mix. We forecast the primary energy demand will continue to grow beyond 2040, due to rising population and increase in consumption per capita in the developing world. However, it is essential to meet this growing demand with affordable and reliable energy to ensure a strong global economy.

Today's mix of primary energy demand is still heavily reliant upon coal, which accounted for 24% of global energy demand in 2022. In many Asian countries like China and India, coal is a much higher share of the energy mix. This is the opportunity for cleaner, burning natural gas to be paired with renewables and/or CCUS as a base-load energy source to displace coal in the energy mix over the coming decades. That being said, all energy sources will be needed to meet increasing energy demand, although we have an increasing importance on minimizing global emissions. Importantly, many of our customers' long-term spending plans are beginning to reflect this evolving energy mix. This presents significant customer synergies across our IET and OFSE portfolios, providing a unique opportunity to be an integrated solutions provider as the energy transition takes shape.

Turning to Slide 8. As we take energy forward, making it safer, cleaner and more efficient for people and the planet, we are focused on our strategic framework of transforming our core to strengthen our margin and returns profile, while also investing for growth and positioning for new frontiers in the energy transition. Through these key pillars, our company is building and executing a plan to deliver sustainable value for our shareholders and stakeholders.

As our strategy and the energy markets have evolved, we have been increasingly focused on the execution of our strategy across three time horizons. Across the first time horizon, which spans through 2025, we are focused on driving enhanced margin accretion through organizational simplification and expanded efficiencies, operational discipline, and optimization of asset and people productivity. Importantly, these actions are well within our control.

During this period, Baker Hughes remains poised to benefit from the macro tailwinds that we see across our two business segments. Specifically, we remain well positioned to benefit from the continued strength in the natural gas and LNG growth cycle as well as multi-year increases in upstream spending, driven by international and offshore markets. We also remain focused on navigating short-term supply constraints, specifically in aerospace sector and broader macroeconomic and political uncertainty. Throughout Horizon One, we will be focused on transforming our business and simplifying the way we work. Additionally, we remain committed to further developing and commercializing our new energy portfolio, while also evolving our digital offerings. All of this will underpin our goals to deliver 20% EBITDA margins in OFSE by 2025, and in IET by 2026.

EBITDA between $2.55 billion and $2.65 billion. We will provide detailed 2024 guidance alongside our fourth-quarter results in January.

Looking out to next year, we remain optimistic for continued growth across both OFSE and IET as well as further operational enhancements to drive increasing margins and returns. We also remain focused on navigating aeroderivative supply chain challenges and broader macroeconomic and geopolitical uncertainty as we head into 2024.

More broadly, our transformation journey continues and we're pleased with the progress we're making and identifying areas to drive efficiencies, structurally removing costs, and modernizing how the business operates. We are continuing to see the cost outperformance come through our operating results and we see further opportunities to enhance our operating performance through continued business transformation efforts.

In summary, we remain relentlessly focused on achieving the targets we've set for 20% EBITDA margins in OFSE in 2025 and IET in 2026. And we remain committed to delivering our ROIC targets of 15% for OFSE and 20% for IET. Importantly, we are continuing to take actions today to help us achieve and exceed these targets. Overall, we remain excited about the future of Baker Hughes.

I will turn the call back over to Lorenzo.

Lorenzo Simonelli {BIO 15243700 <GO>}

Thank you, Nancy. As we enhance our position as a leading energy technology company, we remain encouraged about the continued growth that we see for our organization across our three time horizons. While there is a growing consensus that the energy transition will likely take longer than many expected, our unique portfolio is set to benefit irrespective of how quickly the energy transition develops.

For example, a faster energy transition drives quicker growth across our Climate Technology Solutions business, while a slower energy transition would extend the cycle of our traditional Oil & Gas businesses. Accordingly, we have set out a strategy to grow irrespective of the pace that the energy transition unfolds. Considering this balanced portfolio, Baker Hughes is becoming less cyclical in nature and, therefore, set to experience solid growth irrespective of the energy transition pace. Importantly, we are laying the foundation today for a more durable earnings and free cash flow growth profile, which will enable us in parallel to deliver best-in-class performance and structurally increasing shareholder returns.

With that, I will turn the call back over to Chase.

Chase Mulvehill {BIO 17240736 <GO>}

Thanks, Lorenzo. Operator, let's open the call for questions.

Questions And Answers

Great. Just a follow-up. You know, Lorenzo, on Slide 6, you gave us a fulsome update on LNG. But I was wondered if you could talk a little bit about the pipeline of opportunities that you see over the next, you know, 12 months to 18 months, you know, Brownfield versus Greenfield, you know, US Gulf Coast versus international, you know, modular versus stick-built. What are you seeing in terms of the emerging pipeline for Baker?

A - Lorenzo Simonelli {BIO 15243700 <GO>}

Yeah, it's definitely all of the above. And as you think about LNG and you think about also the role that natural gas is going to play as a transition and destination fuel, we see that we need an installed capacity of LNG by 2030 of 800 MTPA. We've mentioned that before. And as you look at '23, we had a good set of FIDs, there is 53 MTPA that's happened of FID. We've obviously booked 80 MTPA because we do get some orders prior to projects going to FID. But we see that continuing as we go into 2024, and also feel good about 65 MTPA of FIDs in '24, and continuing in '25 and '26 at what we stated previously, the rate of 30 to 60 MTPA. And I think, when you look at both Greenfield, International, North America, Brownfield, we're seeing activity across the board. I think, obviously, the US has a unique opportunity with the natural gas reserves that it has and also the associated gas, and a number of projects both Greenfield and Brownfield Cheniere. Venture Global have made comments about their activity. You know, that there are some projects in Mexico. There is new projects that again working towards FID, such as Tellurian. So US continuing to be strong. But then also internationally, you see, Qatar, you also see, again, Canada, you see the ADNOCs of the world. And I think you're starting to emerge with Africa as well. So, you know, we remain very positive. And I think at the end of the day, it's all towards that 800 MTPA that we need to have by 2030 to make sure that we meet the energy demands of the world.

Q - Arun Jayaram {BIO 5817622 <GO>}

Great. Thanks, Lorenzo.

A - Lorenzo Simonelli {BIO 15243700 <GO>}

Thanks.

A - Chase Mulvehill {BIO 17240736 <GO>}

Operator? Justin, next question, please. Operator, can we go to the next question, please? Operator?

Operator

Our next question comes from Luke Lemoine with Piper Sandler. Luke, your line is open.

Q - Luke Lemoine {BIO 15190258 <GO>}

Yeah. Hey, good morning.

A - Lorenzo Simonelli {BIO 15243700 <GO>}

Hi, there.

Thank you. One moment for our next question. Our next question comes from Dave Anderson with Barclays. Your line is open.

Q - Dave Anderson {BIO 6875231 <GO>}

Well, great. Thanks. Nancy, I'm just going to stick with you, if we could, please. I want to ask about the backlog conversion of the Gas Tech Equipment side. Last quarter, there was a little bit slower. It seems like you righted it this quarter. If I look kind of overall compared to last year, it's like conversion will be something like 45% compared to 2022 year-end backlog. Just wondering how we should think about this trending over the next year or two? Are you doing things internally that should speed up backlog conversion? But on the other hand, I also think that there's a mix of orders and how that includes conversion rate might kind of change that a little bit. Can you just talk about how you see that progressing?

A - Lorenzo Simonelli {BIO 15243700 <GO>}

Dave, I'll take this one. And, look, as you can imagine, with the intake of orders that we've had, we've been working on making sure that we've got lean processes and Kaizens in the different manufacturing shops that we have. And we feel very good about the ability to take on the additional orders and also turn it around. From a cycle time perspective and also from a conversion, you won't see that dramatic a change. Again, if you look at the large LNG projects, they normally take between 18 to 24 months from the intake out to the actual installation. And so, that will remain the case. But, definitely, we're focused on making sure that we're meeting the customer commitments.

Q - Dave Anderson {BIO 6875231 <GO>}

Okay. Thank you. And, Lorenzo, you made a statement earlier that you said that there's a growing consent that the energy transition is taking longer, is more complex than many expected. We saw Shell just announced yesterday that they're pulling back from some of the CCS side. BP is kind of pivoting away as well. You -- as you highlighted, you're in a way to benefit either way in EIT. But I'm just wondering, if you've had any kind of change in kind of longer-term view, do you think that LNG and upstream business now has longer runway than you initially thought? And as -- also, if you could kind of unpack some of those complexities that you've talked about in technology of kind of what's driving that? There's an interesting statement you made and you wrote in the release as well.

A - Lorenzo Simonelli {BIO 15243700 <GO>}

Yes, Dave, look, we definitely see that the transition is complicated. We've always said that. And I think there was an eagerness that it should happen overnight. There's an energy supply that needs to be given to the growing population and also the developing world that needs to be there. And we're going to see in parallel the continuation of the use of oil and gas. And we're going to see it continuing to be cleaner as well with the adoption of CCUS, the adoption of emissions management. And what we're mentioning here is that the reality is, I think, becoming known that it's going to take some time and it's going to be more gradual, but it doesn't change the destination. And I think, ultimately, we're going towards a low-carbon economy, and everybody is focused on that. And we're going to see growing activity across both of our business segments associated with that. So,

again, we're in a, I think, unique position, where irrespective of the speed of the transition, we have the opportunity to benefit.

Q - Dave Anderson {BIO 6875231 <GO>}

Understood. Thank you.

Operator

Thank you. (Operator Instructions) Our next question comes from Kurt Hallead with Benchmark. Your line is open.

Q - Kurt Hallead {BIO 23251258 <GO>}

Hey, good morning.

A - Lorenzo Simonelli {BIO 15243700 <GO>}

Hi, Kurt.

Q - Kurt Hallead {BIO 23251258 <GO>}

Hey. Lorenzo, I just wanted to maybe follow on to some of the early questions around the New Energy business and maybe kind of outline the growth opportunities on a number of different occasions. And you may have referenced a little bit earlier to, you know, the fact that you have existing technologies that are going to be used to kind of tap into that market. So you got a 10 -- a 10x kind of growth profile and order intake over the course of the next, you know, seven years or so. You know, do you -- are you confident and comfortable in what you can deliver internally? Do you have to invest a substantial amount to maybe execute on that $6 billion to $7 billion? Just want to get a sense from you as to kind of how you think about that.

A - Lorenzo Simonelli {BIO 15243700 <GO>}

Yes, Kurt. And actually, we have been investing. And I think, as you've seen the associated R&D expenditures increased this year. And, you know, we are preparing for that $6 billion to $7 billion and feel very comfortable. And it's not just within the compression space. It's also within the turboexpander base. And you look at NET Power, for example, and we've, obviously, linked closely with them, and we see that as a big growth opportunity in the future with regards to Clean Power generation, Hydrogen, and again, application of our compression. You look at our gas turbines that we already have that can be -- that are hydrogen-ready.

So, I actually think, we've got a large complement of the equipment either already ready to go or already in research and development with the aspect of the associated engineering that's taking place. And we're seeing the flow of orders and also pipeline opportunities come about. And that's just further reinforced with ERA, it's further reinforced with some of the European policies, and also what you're seeing in the Middle East. So many -- many opportunities as we go forward and feel comfortable with that $6 billion to $7 billion, and also our opportunity to convert on it.

https://www.qatarenergy.qa/en/MediaCenter/Pages/newsdetails.aspx?ItemId=3777

QATARENERGY, ENI SIGN 27-YEAR LNG SUPPLY AGREEMENT FOR UP TO 1 MTPA TO ITALY -

DOHA, Qatar • 23 October 2023 – Affiliates of QatarEnergy and Eni signed a long-term LNG sale and purchase agreement (SPA) for the supply of up to one million tons per annum (MTPA) of LNG from Qatar to Italy.

Pursuant to the SPA, the LNG will be delivered to FSRU Italia, a floating storage and regasification unit, located in the port of Piombino, in Italy's Tuscany region.

LNG deliveries are expected to start in 2026 for a term of 27 years and will be sourced from the joint venture between QatarEnergy and Eni that holds an interest in Qatar's North Field East (NFE) expansion project.

The SPA was signed by His Excellency Mr. Saad Sherida Al-Kaabi, the Minister of State for Energy Affairs, the President and CEO of QatarEnergy, and Mr. Claudio Descalzi, the CEO of Eni, at a special event held in Doha in the presence of senior executives from both companies.

Commenting on this occasion, His Excellency Minister Al-Kaabi said: "Today, we are taking another important step in strengthening our partnership with Eni that will foster our mutual cooperation for many years to come. Our partnership with Eni has borne fruitful results including LNG deliveries through the Fluxys LNG terminal in Belgium's Zeebrugge port and upstream exploration projects in various locations around the world. This agreement further builds on Eni's first entry in the upstream sector in the State of Qatar through our partnership in the historic North Field East expansion project."

His Excellency Minister Al-Kaabi added: "Together, we will continue to demonstrate commitment to the European markets in general, and to the Italian market in particular. Since 2009, Qatari LNG has been arriving at the Adriatic LNG terminal in the northern Adriatic to meet more than 10% of Italy's natural gas requirements."

Eni is a partner in the 32 MTPA NFE expansion project with a 3.125% share.

Asian LNG Buyers Abruptly Change and Lock in Long Term Supply – Validates Supply Gap, Provides Support For Brownfield LNG FIDs

Posted 11am on July 14, 2021

The last 7 days has shown there is a sea change as Asian LNG buyers have made an abrupt change in their LNG contracting and are moving to lock in long term LNG supply. This is the complete opposite of what they were doing pre-Covid when they were trying to renegotiate Qatar LNG long term deals lower and moving away from long term deals to spot/short term sales. Why? We think they did the same math we did in our April 28 blog "*Multiple Brownfield LNG FIDs Now Needed To Fill New LNG Supply Gap From Mozambique Chaos? How About LNG Canada Phase 2?*" and saw a much bigger and sooner LNG supply gap driven by the delay of 5 bcf/d of Mozambique LNG that was built into most, if not all LNG supply forecasts. Asian LNG buyers are committing real dollars to long term LNG deals, which we believe is the best validation for the LNG supply gap. Another validation, Shell, Total and others are aggressively competing to invest long term capital to partner in Qatar Petroleum's massive 4.3 bcf/d LNG expansion despite plans to reduce fossil fuels production in the 2020s. And even more importantly to LNG suppliers, the return to long term LNG contracts provides the financing capacity to commit to brownfield LNG FIDs. The abrupt change by Asian LNG buyers to long term contracts is a game changer for LNG markets and sets the stage for brownfield LNG FIDs likely as soon as before year end 2021. It has to be brownfield LNG FIDs if the gap is coming bigger and sooner. And we return to our April 28 blog point, if brownfield LNG is needed, what about Shell looking at 1.8 bcf/d brownfield LNG Canada Phase 2? LNG Canada Phase 1 at 1.8 bcf/d capacity is already a material positive for Cdn natural gas producers. A FID on LNG Canada Phase 2 would be huge, meaning 3.6 bcf/d of Cdn natural gas will be tied to Asian LNG markets and not competing in the US against Henry Hub. And with a much shorter distance to Asian LNG markets. This is why we focus on global LNG markets for our views on the future value of Canadian natural gas.

Sea change in Asian LNG buyers is also the best validation of the LNG supply gap and big to LNG supply FIDs. Has the data changed or have the market participants changed in how they react to the data? We can't recall exactly who said that on CNBC on July 12, it's a question we always ask ourselves. In the LNG case, the data has changed with Mozambique LNG delays and that has directly resulted in market participants changing and entering into long term contracts. We can't stress enough how important it is to see Asian LNG buyers move to long term LNG deals. (i) Validates the sooner and bigger LNG supply gap. We believe LNG markets should look at the last two weeks of new long term deals for Asian LNG buyers as being the validation of the LNG supply gap that clearly emerged post Total declaring force majeure on its 1.7 bcf/d Mozambique LNG Phase 1 that was under construction and on track for first LNG delivery in 2024. Since then, markets have started to realize the Mozambique delays are much more than 1.7 bcf/d. They have seen major LNG suppliers change their outlook to a more bullish LNG outlook and, most importantly, are now seeing Asian LNG buyers changing from trying to renegotiate long term LNG deals lower to entering into long term LNG deals to have security of supply. Asian LNG buyers are cozying up to Qatar in a prelude to the next wave of Asian buyer long term deals. What better validation is there than companies/countries putting their money where their mouth is. (ii) Provides financial commitment to help push LNG suppliers to FID. We believe these Asian LNG buyers are doing much more than validating a LNG supply gap to markets. The big LNG suppliers can move to FID based on adding more LNG supply to their portfolio, but having more long term deals provides the financial anchor/visibility to long term capital commitment from the buyers. Long term contracts will only help LNG suppliers get to FID.

It was always clear that the Mozambique LNG supply delay was 5.0 bcf/d, not just 1.7 bcf/d from Total Phase 1. LNG markets didn't really react to Total's April 26 declaration of force majeure on its 1.7 bcf/d Mozambique LNG Phase 1. This was an under construction project that was on time to deliver first LNG in 2024. It was in all LNG supply forecasts. There was no timeline given but, on the Apr 29 Q1 call, Total said that it expected any restart decision would be least a year away. If so, we believe that puts any actual construction at least 18 months away. There will be work to do just to get back to where they were when they were forced to stop development work on Phase 1. Surprisingly, markets didn't look the broader implications, which is why we posted our 7-pg Apr 28 blog "*Multiple Brownfield LNG FIDs Now Needed To Fill New LNG Supply Gap From Mozambique Chaos? How About LNG Canada Phase 2?*" [LINK] We highlighted that Mozambique LNG delays were actually 5 bcf/d, not 1.7 bcf/d. And this 5 bcf/d of Mozambique LNG supply was built into most, if not all, LNG supply forecasts. The delay in Total Phase 1 would lead to a commensurate delay in its Mozambique LNG Phase 2 of 1.3 bcf/d. Total Phase 2 was to add 1.3 bcf/d. There was no firm in service date, but it was expected to

follow closely behind Phase 1 to maintain services. That would have put it originally in the 2026/2027 period. But if Phase 1 is pushed back at least 2 years, so will the follow on Phase 2, so more likely, it will be at least 2028/2029. The assumption for most, if not all, LNG forecasts was that Phase 2 would follow Phase 1. Exxon Rozuma Phase 1 of 2.0 bcf/d continues to be pushed back in timeline especially following Total Phase 1. Exxon's Mozambique Rozuma Phase 1 LNG will add 2.0 bcf/d and, pre-Covid, was originally expected to be in service in 2025. The project was being delayed and Total's force majeure has added to the delays. Rozuma onshore LNG facilities are right by Total. On June 20, we tweeted [LINK] on the Reuters report "*Exclusive: Galp says it won't invest in Rovuma until Mozambique ensures security*" [LINK]. Galp is one of Exxon's partners in Rozuma. Reuters reported that Galp said they won't invest in Exxon's Rozuma LNG project until the government ensures security, that this may take a while, they won't be considering the project until after Total has reliably resumed work on its Phase 1, which likely puts any Rozuma decision until at least end of 2022 at the earliest. Galp has taken any Rozuma Phase 1 capex out of their new capex plans thru 2025 and will have to take out projects in their capex plan if Rozuma does come back to work. This puts Rozuma more likely 2028 at the earliest as opposed to before the original expectations of before 2025. Pre-pandemic, Exxon's March 6, 2019 Investor Day noted their operated Mozambique Rovuma LNG Phase 1 was to be 2 trains each with 1.0 bcf/d capacity for total initial capacity of 2.0 bf/d with FID expected in 2019 and first LNG deliveries sometime before 2025. LNG forecasts had been assuming Exxon Rozuma would be onstream around 2025. The 2019 FID expectation was later pushed to be expected just before the March 2020 investor day. But the pandemic hit, and on March 21, 2020, we tweeted [LINK] on the Reuters story "*Exclusive: Coronavirus, gas slump put brakes on Exxon's giant Mozambique LNG plan"* [LINK] that noted Exxon was expected to delay the Rovuma FID. There was no timeline, but now, any FID is not expected until late 2022 at the earliest, that would push first LNG likely to at least 2028. What this means is that the Mozambique LNG delays are not 1.7 bcf/d but 5.0 bcf/d of projects that were in all, if not most, LNG supply forecasts. There is much more in our 7-pg blog. But Mozambique is what is driving a much bigger and sooner LNG supply gap starting ~2025 and stronger outlook for LNG prices

<u>One of the reasons why it went under the radar is that major LNG suppliers played stupid on the Mozambique impact.</u> It makes it harder for markets to see a big deal when the major LNG suppliers weren't making a big deal of Mozambique or playing stupid in the case of Cheniere in their May 4 Q1 call. In our May 9, 2021 Energy Tidbits memo, we said we had to chuckle when we saw Cheniere's response in the Q&A to its Q1 call on May 4 that they only know what we know from reading the Total releases on Mozambique and its impact on LNG markets. It's why we tweeted [LINK] "*Hmm! $LNG says only know what we read on #LNG market impact from $TOT $XOM MZ LNG delays*. *Surely #TohokuElectric & other offtake buyers are reaching out to #Cheniere. MZ LNG delays is a game changer to LNG in 2020s, see SAF Group blog. Thx @olympe_mattei @TheTerminal #NatGas".* How could they not be talking to LNG buyers for Total and /or Exxon Mozambique LNG projects. In the Q1 Q&A, mgmt was asked about Mozambique and didn't know any more than what you or I have read. Surely, they were speaking to Asian LNG buyers who had planned to get LNG supply from Total Mozambique or Exxon Rozuma Mozambique or both. Mgmt is asked "*wanted to just kind of touch on the color use talking about for these supply curve. And are you able to kind of provide any thoughts on the Mozambique and a deferral with the project of that size on 13 and TPA being deferred by we see you have you noticed any impact to the market has is there any impact for stage 3 with that capacity? Thanks*." Mgmt replies "*No. Look, I only know about the Mozambique delay with what I read as well as what you read that from total and an Exxon. And it's a sad situation and I hope everybody is safe and healthy that were there to experience that unrest but no I don't think it's, again it's a different business paradigm than what we offer. So, we offer a full value product, the customer doesn't have to invest in equity, customer doesn't have to worry about the E&P side of the business because, we've been able to both the by at our peak almost 7 Dee's a day of US NAT gas from almost a 100 different producers on 26 different pipelines and deliver it to our to facilities. So we take care of a lot of what the customer needs".*

<u>There are other LNG supply delays/interruptions beyond Mozambique.</u> There have been a number of other smaller LNG delay or existing supply interruptions that add to Asian LNG buyers feeling less secure about the reliability of mid to long term LNG supply. Here are just a few examples. (i) Total Papua LNG 0.74 bcf/d. On June 8, we tweeted [LINK] *"Timing update Papua #LNG project. $OSH June 8 update "2022 FEED, 2023 FID targeting 2027 first gas". $TOT May 5 update didn't forecast 1st gas date. Papua is 2 trains w/ total capacity 0.74 bcf/d."* We followed the tweet saying [LINK] *"Bigger #LNG supply gap being created >2025. Papua #LNG originally expected FID in 2020 so 1st LNG is 2 years delayed.*

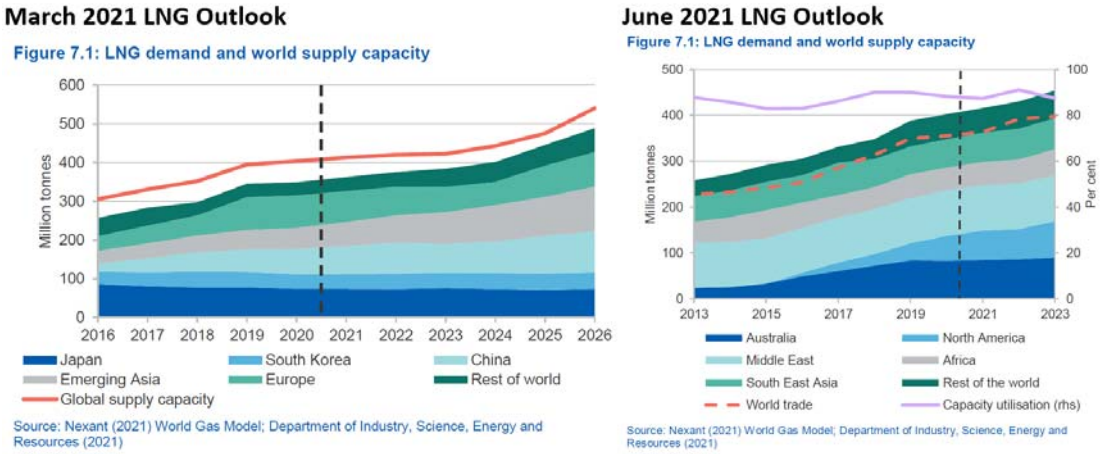
Common theme - new LNG supply is being delayed ie. [Total] Mozambique. Don't forget need capacity>demand due to normal maintenance, etc. Positive for LNG." (ii) Chevron's Gorgon. A big LNG story in H2/20 was the emergence of weld quality issues in the propane heat exchangers at Train 2, which required additional downtime for repair. Train 2 was shut on May 23 with an original restart of July 11, but the repairs to the weld quality issues meant it didn't restart until late Nov. The same issue was found in Train 1 but repairs were completed. However extended downtime for the trains led to lower LNG volumes. Gorgon produced ~2.3 bcf/d in 2019 but was down to 2.0 bcf/d in 2020. (iii) Equinor's Melkoeya 0.63 bcf/d shut down for 18 months due to a fire. A massive fire led to the Sept 28, 2020 shutdown of the 0.63 bcf/d Melkoeya LNG facility in Norway. On April 26, Equinor released "*Revised start-up date for Hammerfest LNG*" [LINK] with regard to the 0.63 bcf/d Melkoeya LNG facility. The original restart date was Oct 1, 2021 (ie. a 12 month shut down), but Equinor said "*Due to the comprehensive scope of work and Covid-19 restrictions, the revised estimated start-up date is set to 31 March 2022".* When we read the release, it seemed like Equinor was almost setting the stage for another potential delay in the restart date. Equinor had two qualifiers to this March 31, 2022 restart date. Equinor said "*there is still some uncertainty related to the scope of the work*" and "*Operational measures to handle the Covid-19 situation have affected the follow-up progress after the fire. The project for planning and carrying out repairs of the Hammerfest LNG plant must always comply with applicable guidelines for handling the infection situation in society. The project has already introduced several measures that allow us to have fewer workers on site at the same time than previously expected. There is still uncertainty related to how the Covid-19 development will impact the project progress."*

Cheniere stopped the game playing the game on June 30. Our July 4, 2021 Energy Tidbits memo noted that it looks like Cheniere has stopped playing stupid with respect to the strengthening LNG market in 2021. We can't believe they thought they were fooling anyone, especially their competitors. Bu that week, they came out talking about how commercial discussions have picked up in 2021 and it's boosted their hope for a Texas (Corpus Christi) LNG expansion. On Wednesday, Platts reported "*Pickup in commercial talks boosts Cheniere's hopes on mid-scale LNG project*" [LINK] Platts wrote "*Cheniere Energy expects to make a "substantial dent" by the end of 2022 in building sufficient buyer support for a proposed mid-scale expansion at the site of its Texas liquefaction facility, Chief Commercial Officer Anatol Feygin said June 30 in an interview." " As a result, he said, " The commercial engagement, I think it is very fair to say, has really picked up steam, and we are quite optimistic over the coming 12-18 months to make a substantial dent in that Stage 3 commercialization."* Platts also reported that Cheniere noted this has been a tightening market all year (ie would have been known by the May 4 Q1 call). Platts wrote "*We obviously find ourselves at the beginning of this year and throughout in a very tight market where prices today into Asia and into Europe are at levels that we frankly haven't seen in a decade-plus," Feygin said. "We've surpassed the economics that the industry saw post the Fukushima tragedy in March 2011, and that's happened in the shoulder period."* It's a public stance as to a more bullish LNG outlook

But we still see major LNG suppliers like Australia hinting but not outright saying that LNG supply gap is coming sooner. We have to believe Australia will be unveiling a sooner LNG supply gap in their September forecast. On June 28, we tweeted [LINK] on Australia's Resources and Energy Quarterly released on Monday [LINK] because there was a major change to their LNG outlook versus their March forecast. We tweeted "*#LNGSupplyGap. AU June fcast now sees #LNG mkt tighten post 2023 vs Mar fcast excess supply thru 2026. Why? $TOT Mozambique delays. See below SAF Apr 28 blog. Means brownfield LNG FID needed ie. like #LNGCanada Phase 2. #OOTT #NatGas".* Australia no longer sees supply exceeding demand thru 2026. In their March forecast, Australia said "*Nonetheless, given the large scale expansion of global LNG capacity in recent years, demand is expected to remain short of total supply throughout the projection period."* Note this is thru 2026 ie. a LNG supply surplus thru 2026. But on June 28, Australia changed that LNG outlook and now says the LNG market may tighten beyond 2023. Interestingly, the June forecast only goes to 2023 and not to 2026 as in March. Hmmm! On Monday, they said "*Given the large scale expansion of global LNG capacity in recent years, import demand is expected to remain short of export capacity throughout the outlook period. Beyond 2023, the global LNG market may tighten, due to the April 2021 decision to indefinitely suspend the Mozambique LNG project, in response to rising security issues. This project has an annual nameplate capacity of 13 million tonnes, and was previously expected to start exporting LNG in 2024*." 13 million tonnes is 1.7 bcf/d so they are only referring to Total Mozambique LNG Phase 1. So no surprise the change is Mozambique LNG driven but we have to believe the reason why they cut their forecast off this time at 2023 is that they are looking at trying to figure out what to forecast beyond 2023 in addition to Total Phase 1. And, importantly, we believe they will be changing their LNG forecast for more than Mozambique ie. India

demand that we highlight later in the blog. They didn't say anything else specific on Mozambique but, surely they have to also be delaying the follow on Total Phase 2 of 1.3 bcf/d and Exxon Rozuma Phase 1 of 2.0 bcf/d.

Australia's LNG Outlook: March 2021 vs June 2021 Forecasts

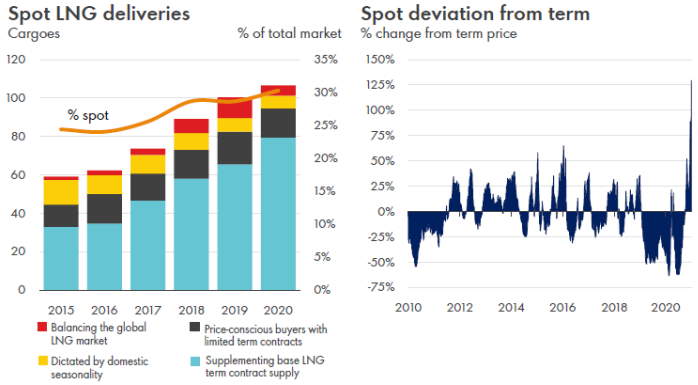


Source: Australia Resources and Energy Quarterly

Clearly Asian LNG buyers did the math, saw the new LNG supply gap and were working the phones in March/April/May trying to lock up long term supply. We wrote extensively on the Total Mozambique LNG situation before the April 26 force majeure as it was obvious that delays were coming to a project counted on for first LNG in 2024. Total had shut down Phase 1 development in December for 3 months due to the violence and security risks. It restarted development on Wed March 24, violence/attacks immediately resumed for 3 consecutive days, and then Total suspended development on Sat March 27. That's why no one should have been surprised by the April 26 force majeure. Asian LNG buyers were also seeing this and could easily do the same math we were doing and saw a bigger and sooner LNG supply gap. They were clearly working the phones with a new priority to lock up long term LNG supply. Major long term deals don't happen overnight, so it makes sense that we started to see these new Asian long term LNG deals start at the end of June.

A big pivot from trying to renegotiate down long term LNG deals or being happy to let long term contracts expire and replace with spot/short term LNG deals. This is a major pivot or abrupt turn on the Asian LNG buyers contracting strategy for the 2020s. There is the natural reduction of long term contracts as contracts reach their term. But with the weakness in LNG prices in 2019 and 2020, Asian LNG buyers weren't trying to extend long term contracts, rather, the push was to try to renegotiate down its long term LNG deals. The reason was clear, as spot prices for LNG were way less than long term contract prices. And this led to their LNG contracting strategy – move to increase the proportion of spot LNG deliveries out of total LNG deliveries. Shell's LNG Outlook 2021 was on Feb 25, 2021 and included the below graphs. The spot LNG price derivation from long term prices in 2019 and 2020 made sense for Asian LNG buyers to try to change their contract mix. Yesterday, Maeil Business News Korea reported on the new Qatar/Kogas long term LNG deal with its report "*Korea may face LNG supply cliff or pay hefty price after long-term supplies run out*" [LINK], which highlighted this very concept – Korea wasn't worried about trying to extend expiring long term LNG contracts. Maeil wrote "*Seoul in 2019 secured a long-term LNG supply contract with the U.S. for annual 15.8 million tons over a 15-year period. But even with the latest two LNG supply contracts, the Korean government needs extra 6 million tons or more of LNG supplies to keep up the current power pipeline. By 2024, Korea's long-term supply contracts for 9 million tons of LNG will expire - 4.92 million tons on contract with Qatar and 4.06 million tons from Oman, according to a government official who asked to be unnamed."*

Spot LNG deliveries and Spot deviation from term price



Source: Shell LNG Outlook 2021 on Feb 25, 2021

Asian LNG buyers moving to long term LNG deals provide financing capacity for brownfield LNG FIDs. We believe this abrupt change and return to long term LNG deals is even more important to LNG suppliers who want to FID new projects. The big LNG players like Shell can FID new LNG supply without new long term contracts as they can build into their supply options to fill their portfolio of LNG contracts. But that doesn't mean the big players don't want long term LNG supply deals, as having long term LNG contracts provide better financing capacity for any LNG supplier. It takes big capex for LNG supply and long term deals make the financing easier.

Four Asian buyer long term LNG deals in the last week. It was pretty hard to miss a busy week for reports of new Asian LNG buyer long term LNG deals. There were two deals from Qatar Petroleum, one from Petronas and one from BP. The timing fits, it's about 3 months after Total Mozambique LNG problems became crystal clear. And as noted later, there are indicators that more Asian buyer LNG deals are coming.

> Petronas/CNOOC is 10 yr supply deal for 0.3 bcf/d. On July 7, we tweeted [LINK] on the confirmation of a big positive to Cdn natural gas with the Petronas announcement [LINK] of a new 10 year LNG supply deal for 0.3 bcf/d with China's CNOOC. The deal also has special significance to Canada. (i) Petronas said "*This long-term supply agreement also includes supply from LNG Canada when the facility commences its operations by middle of the decade*". This is a reminder of the big positive to Cdn natural gas in the next 3 to 4 years – the start up of LNG Canada Phase 1 is ~1.8 bcf/d capacity. This is natural gas that will no longer be moving south to the US or east to eastern Canada, instead it will be going to Asia. This will provide a benefit for all Western Canada natural gas. (ii) First ever AECO linked LNG deal. It's a pretty significant event for a long term Asia LNG deal to now have an AECO link. Petronas wrote "*The deal is for 2.2 million tonnes per annum (MTPA) for a 10-year period, indexed to a combination of the Brent and Alberta Energy Company (AECO) indices. The term deal between PETRONAS and CNOOC is valued at approximately USD 7 billion over ten years.*" 2.2 MTPA is 0.3 bcf/d. (iii) Reminds of LNG Canada's competitive advantage for low greenhouse gas emissions. Petronas said "*Once ready for operations, the LNG Canada project paves the way for PETRONAS to supply low greenhouse gas (GHG) emission LNG to the key demand markets in Asia."*
>
> Qatar Petroleum/CPC (Taiwan) is 15 yr supply deal for 0.16 bcf/d. Pre Covid, Qatar was getting pressured to renegotiate lower its long term LNG contract prices. Now, it's signing a 15 year deal. On July 9, they entered in a new small long term LNG sales deal [LINK], a 15-yr LNG Sale and Purchase Agreement with CPC Corporation in Taiwan to supply it ~0.60 bcf/d of LNG. LNG deliveries are set to begin in January 2022. H.E. Minister for Energy Affairs & CEO of Qatar Petroleum Al-Kaabi said *"We are pleased to enter into this long term LNG SPA, which is another milestone in our relationship with CPC, which dates back to almost three decades. We look forward to commencing deliveries under this SPA and to continuing our supplies as a trusted and reliable global LNG provider."* The pricing was reported to be vs a basket of crudes.

BP/Guangzhou Gas, a 12-yr supply deal for 0.13 bcf/d. On July 9, there was a small long term LNG supply deal with BP and Guangzhou Gas (China). Argus reported [LINK] BP had signed a 12 year LNG supply deal with Guangzhou Gas (GG), a Chinese city's gas distributor, which starts in 2022. The contract prices are to be linked to an index of international crude prices. Although GG typically gets its LNG from the spot market, it used a tender in late April for ~0.13 bcf/d starting in 2022. BP's announcement looks to be for most of the tender, so it's a small deal. But it fit into the trend this week of seeing long term LNG supply deals to Asia. This was intended to secure deliveries to the firm's Xiaohudao import terminal which will become operational in August 2022.

Qatar/Korea Gas is a 20-yr deal to supply 0.25 bcf/d. On Monday, Reuters reported [LINK] "*South Korea's energy ministry said on Monday it had signed a 20-year liquefied natural gas (LNG) supply agreement with Qatar for the next 20 years starting in 2025. South Korea's state-run Korea Gas Corp (036460.KS) will buy 2 million tonnes of LNG annually from Qatar Petroleum".* There was no disclosure of pricing.

More Asian buyer long term LNG deals (ie. India) will be coming. There are going to be more Asian buyer long term LNG deals coming soon. Our July 11, 2021 Energy Tidbits highlighted how India's new petroleum minister Hardeep Singh Puri (appointed July 8) hit the ground running with what looks to be a priority to set the stage for more India long term LNG deals with Qatar. On July 10, we retweeted [LINK] "*New India Petroleum Minister hits ground running. What else w/ Qatar but #LNG. Must be #Puri setting stage for long term LNG supply deal(s). Fits sea change of buyers seeing #LNGSupplyGap (see SAF Apr 28 blog http://safgroup.ca) & wanting to tie up LNG supply. #OOTT".* It's hard to see any other conclusion after seeing what we call a sea change in LNG buyer mentality with a number of long term LNG deals this week. Puri tweeted [LINK] "*Discussed ways of further strengthening mutual cooperation between our two countries in the hydrocarbon sector during a warm courtesy call with Qatar's Minister of State for Energy Affairs who is also the President & CEO of @qatarpetroleum HE Saad Sherida Al-Kaabi".* As noted above, we believe there is a sea change in LNG markets that was driven by the delay in 5 bcf/d of LNG supply from Mozambique (Total Phase 1 & Phase 2, and Exxon Rozuma Phase 1) that was counted on all LNG supply projections for the 2020s. Puri's tweet seems to be him setting the stage for India long term LNG supply deals with Qatar.

Supermajors are aggressively competing to commit 30+ year capital to Qatar's LNG expansion despite stated goal to reduce fossil fuels production. It's not just Asian LNG buyers who are now once again committing long term capital to securing LNG supply, it's also supermajors all bidding to be able to commit big capex to part of Qatar Petroleum's 4.3 bcf/d LNG expansion. Qatar Petroleum received a lot of headlines following the their June 23 announcement on its LNG expansion [LINK] on how they received bids for double the equity being offered. And there were multiple reports that these are on much tougher terms for Qatar's partners. Qatar Petroleum CEO Saad Sherida Al-Kaabi specifically noted that, among the bidders, were Shell, Total and Exxon. Shell and Total have two of the most ambitious plans to reduce fossil fuels production in the 2020's, yet are competing to allocate long term capital to increase fossil fuels production. And Shell and Total are also two of the global LNG supply leaders. It has to be because they are seeing a bigger and sooner LNG supply gap.

Remember Qatar's has a massive expansion but India alone needs 3x the Qatar expansion LNG capacity. In addition to the competition to be Qatar Petroleum's partners, we remind that, while this is a massive 4.3 bcf/d LNG expansion, India alone sees its LNG import growing by ~13 bcf/d to 2030. The Qatar announcement reminded they see a LNG supply gap and continued high LNG prices. We had a 3 part tweet. (i) First, we highlighted [LINK] "*1/3. #LNGSupplyGap coming. big support for @qatarpetroleum expansion to add 4.3 bcf/d LNG. but also say "there is a lack of investments that could cause a significant shortage in gas between 2025-2030" #NatGas #LNG".* This is after QPC accounts for their big LNG expansion. The QPC release said "*However, His Excellency Al-Kaabi voiced concern that during the global discussion on energy transition, there is a lack of investment in oil and gas projects, which could drive energy prices higher by stating that "while gas and LNG are important for the energy transition, there is a lack of investments that could cause a significant shortage in gas between 2025-2030, which in turn could cause a spike in the gas market."* (ii) Second, this is a big 4.3 bcf/d expansion, but India alone has 3x the increase in LNG import demand. We tweeted [LINK] "*2/3. Adding 4.3 bcf/d is big, but dwarfed by items like India. #Petronet gave 1st specific forecast for what it means if #NatGas is to be 15%*

of energy mix by 2030 - India will need to increase #LNG imports by ~13 bcf/d. See SAF Group June 20 Energy Tidbits memo." (iii) Third, Qatar's supply gap warning is driven by the lack of investments in LNG supply. We agree, but note that the lack of investment is in great part due to the delays in both projects under construction and in FIDs that were supposed to be done in 2019. We tweeted [LINK] "3/*3. #LNGSupplyGap is delay driven. $TOT Mozambique Phase 1 delay has chain effect, backs up 5 bcf/d. See SAF Group Apr 28 blog Multiple Brownfield LNG FIDs Now Needed To Fill New #LNG Supply Gap From Mozambique Chaos? How About LNG Canada Phase 2? #NatGas*."

Seems like many missed India's first specific LNG forecast to 2030. Our June 20, 2021 Energy Tidbits memo highlighted the first India forecast that we have seen to estimate the required growth in natural gas consumption and LNG imports if India is to meet its target for natural gas to be 15% of its energy mix by 2030. India will need to increase LNG imports by ~13 bcf/d or 3 times the size of the Qatar LNG expansion. Our June 6, 2021 Energy Tidbits noted the June 4 tweet from India's Energy Minister Dharmendra Pradhan [LINK] reinforcing the 15% goal "*We are rapidly deploying natural gas in our energy mix with the aim to increase the share of natural gas from the current 6% to 15% by 2030."* But last week, Petronet CEO AK Singh gave a specific forecast. Reuters report "*LNG's share of Indian gas demand to rise to 70% by 2030: Petronet CEO"* [LINK] included Petronet's forecast if India is to hit its target for natural gas to be 15% of energy mix by 2030. Singh forecasts India's natural gas consumption would increase from current 5.5 bcf/d to 22.6 bcf/d in 2030. And LNG shares would increase from 50% to 70% of natural gas consumption ie. an increase in LNG imports of ~13 bcf/d from just under 3 bcf/d to 15.8 bcf/d in 2030. Singh did not specifically note his assumption for India's natural gas production, but we can back into the assumption that India natural gas production grows from just under 3 bcf/d to 6.8 bcf/d. It was good to finally see India come out with a specific forecast for 2030 natural gas consumption and LNG imports if India is to get natural gas to 15% of its energy mix in 2030. Petronet's Singh forecasts India natural gas consumption to increase from 5.5 bcf/d to 22.6 bcf/d in 2030. This forecast is pretty close to our forecast in our Oct 23, 2019 blog "*Finally, Some Visibility That India Is Moving Towards Its Target For Natural Gas To Be 15% Of Its Energy Mix By 2030*". Here part of what we wrote in Oct 2019. "*It's taken a year longer than we expected, but we are finally getting visibility that India is taking significant steps towards India's goal to have natural gas be 15% of its energy mix by 2030. On Wednesday, we posted a SAF blog [LINK] "Finally, Some Visibility That India Is Moving Towards Its Target For Natural Gas To Be 15% Of Its Energy Mix By 2030".* Our 2019 blog estimate was for India natural gas demand to be 24.0 bcf/d in 2030 (vs Singh's 22.6 bcf/d) and for LNG import growth of +18.4 bcf/d to 2030 (vs Singh's +13 bcf/d). The difference in LNG would be due to our Oct 2019 forecast higher natural gas consumption by 1.4 bcf/d plus Singh forecasting India natural gas production +4 bcf/d to 2030. Note India production peaked at 4.6 bcf/d in 2010.

Bigger, nearer LNG supply gap + Asian buyers moving to long term LNG deals = LNG players forced to at least look at what brownfield LNG projects they could advance and move to FID. All we have seen since our April 28 blog is more validation of the bigger, nearer LNG supply gap. And now market participants (Asian LNG buyers) are reacting to the new data by locking up long term supply. Cheniere noted how the pickup in commercial engagement means they "*are quite optimistic over the coming 12-18 months to make a substantial dent in that Stage 3 commercialization."* Cheniere can't be the only LNG supplier having new commercial discussions. It's why we believe the Mozambique delays + Asian LNG buyers moving to long term deals will effectively force major LNG players to look to see if there are brownfield LNG projects they should look to advance. Prior to March/April, no one would think Shell or other major LNG players would be considering any new LNG FIDs in 2021. Covid forced all the big companies into capital reduction mode and debt reduction mode. But Brent oil is now solidly over $70, and LNG prices are over $13 this summer and the world's economic and oil and gas demand outlook are increasing with vaccinations. And we are starting to see companies move to increasing capex with the higher cash flows. The theme in Q3 reporting is going to be record or near record oil and gas cash flows, reduced debt levels and increasing returns to shareholders. And unless new mutations prevent vaccinations from returning the world to normal, we suspect that major LNG players, like other oil and gas companies, will be looking to increase capex as they approve 2022 budgets. The outlook for the future has changed dramatically in the last 8 months. The question facing major LNG players like Shell is should they look to FID new LNG brownfield projects in the face of an increasing LNG supply gap that is going to hit faster and harder and Asian LNG buyers prepared to do long term deals. We expect these decisions to be looked at before the end of 2021 for 2022 capex budget/releases. One wildcard that could force these decisions sooner is the already stressed out global supply chain. We have to believe that discussion there will be pressure for more Asian LNG buyer long term deals sooner than later.

For Canada, does the increasing LNG supply gap provide the opportunity to at least consider a LNG Canada Phase 2 FID over the next 6 months? Our view on Shell and other LNG players is unchanged since our April 28 blog. Shell is no different than any other major LNG supplier in always knowing the market and that the oil and gas outlook is much stronger than 9 months ago. Even 3 months post our April 28 blog, we haven't heard any significant talks on how major LNG players will be looking at FID for new brownfield LNG projects. We don't have any inside contacts at Shell or LNG Canada, but that is no different than when we looked at the LNG markets in September 2017 and saw the potential for Shell to FID LNG Canada in 2018. We posted a September 20, 2017 blog *"China's Plan To Increase Natural Gas To 10% Of Its Energy Mix Is A Global Game Changer Including For BC LNG*" [LINK]. Last time, it was a demand driven supply gap, this time, it's a supply driven supply gap. We have to believe any major LNG player, including Shell, will be at least looking at their brownfield LNG project list and seeing if they should look to advance FID later in 2021. Shell has LNG Canada Phase 2, which would add 2 additional trains or approx. 1.8 bcf/d. And an advantage to an FID would be that Shell would be able to commit to its existing contractors and fabricators for a continuous construction cycle following on LNG Canada Phase 1 ie. to help keep a lid on capital costs. We believe maintaining a continuous construction cycle is even more important given the stressed global supply chain. No one is talking about the need for these new brownfield LNG projects, but, unless some major change in views happen, we believe its inevitable that these brownfield LNG FID internal discussions will be happening in H2/21. Especially since the oil and gas price outlook is much stronger than it was in the fall and companies will be looking to increase capex in 2022 budgets.

A LNG Canada Phase 2 would be a big plus to Cdn natural gas. LNG Canada Phase 1 is a material natural gas development as its 1.8 bcf/d capacity represents approx. 20 to 25% of Cdn gas export volumes to the US. The EIA data shows US pipeline imports of Cdn natural gas as 6.83 bcf/d in 2020, 7.36 bcf/d in 2019, 7.70 bcf/d in 2018, 8.89 bcf/d in 2017, 7.97 bcf/d in 2016, 7.19 bcf/d in 2015 and 7.22 bcf/d in 2014. A LNG Canada Phase 2 FID would be a huge plus for Cdn natural gas. It would allow another ~1.8 bcf/d of Cdn natural gas to be priced against pricing points other than Henry Hub. And it would provide demand offset versus Trudeau if he moves to make electricity "emissions free" and not his prior "net zero emissions". Mozambique has been a game changer to LNG outlook creating a bigger and sooner LNG supply gap. And with a stronger tone to oil and natural gas prices in 2021, the LNG supply gap will at least provide the opportunity for Shell to consider FID for its brownfield LNG Canada Phase 2 and provide big support to Cdn natural gas for the back half of the 2020s. And perhaps if LNG Canada is exporting 3.6 bcf/d from two phases, it could help flip Cdn natural gas to a premium vs US natural gas especially if Biden is successful in reducing US domestic natural gas consumption for electricity. The next six months will be very interesting to watch for LNG markets and Cdn natural gas valuations. Imagine the future value of Cdn natural gas is there was visibility for 3.6 bcf/d of Western Canada natural gas to be exported to Asia.

Highlights for the month

- Indigenous crude oil and condensate production during September 2023 was 2.38 MMT. OIL registered a production of 0.27 MMT, ONGC registered a production of 1.55 MMT whereas PSC registered production of 0.56 MMT during September 2023.
- 'Total Crude oil processed during September 2023 was 20.3 MMT which is 3.8% higher than September 2022. Where PSU/JV Refiners processed 13.8 MMT and PVT Refiners Processed 6.5 MMT of Crude Oil. Total Indigenous Crude Oil processed was 2.4 MMT and total Imported Crude oil processed was 17.9 by all Indian Refineries (PSU+JV+PVT). There was a growth of 2.8 % in Total Crude oil processed in April September FY 2023 – 24 as compared to same period of FY 2022 – 23.
- Crude oil imports increased by 6.1% and 0.4% during September 2023 and April-September 2023 respectively as compared to the corresponding period of the previous year.As compared to net import bill for Oil & Gas for September 2022 of $10.8 billion, the net import bill for Oil & Gas for September 2023 was $10.0 billion. Out of which, crude oil imports constitutes $10.6 billion, LNG imports $1.2 billion and the exports were $3.9 billion during September 2023.
- The price of Brent Crude averaged $94.00/bbl during September 2023 as against $86.22/bbl during August 2023 and $89.87/bbl during September 2022. The Indian basket crude price averaged $93.54/bbl during September 2023 as against $86.43/bbl during August 2023 and $90.71 /bbl during September 2022.
- 'Production of petroleum products was 21.5 MMT during September 2023 which is 5.5% higher than September 2022. Out of 21.5 MMT, 21.2 MMT was from Refinery production & 0.3 MMT was from Fractionator. There was a growth of 3.8 % in Production of petroleum products in April September 2023–24 as compared to the corresponding period of the previous year. Out of total POL production, in September 2023, HSD has 41.6 %, MS has 16.6 %, Naphtha has 6.4 %, ATF has 6.0 %, Pet Coke has 5.4, % LPG has 4.1 % which are of major products and rest are shared by Bitumen, FO/LSHS, LDO, Lubes & others.
- POL products imports increased by 26.2% and 10.2% during September 2023 and April-September 2023 respectively as compared to the corresponding period of the previous year. Increase in POL products imports during April-September 2023 were mainly due to increase in imports of bitumen, petcoke, fuel oil (FO) and motor spirit (MS).

•	Exports of POL products increased by 0.9% and decreased by 2% during September 2023 and April-September 2023 respectively as compared to the corresponding period of the previous year. Decrease in POL products exports during April-September 2023 were mainly due to decrease in exports of high-speed diesel (HSD) and naphtha.
•	The consumption of petroleum products during April-September 2023, with a volume of 113.7 MMT, reported a growth of 5.9% compared to the volume of 107.4 MMT during the same period of the previous year. This growth was led by 6.3% growth in MS, 6.3% in HSD & 13.2% in ATF & 9.4% in Naptha consumption besides LPG, Lubes, Bitumen, Petcoke and LDO during the period. The consumption of petroleum products during September 2023 recorded a growth of 7.7% with a volume of 18.2 MMT compared to the same period of the previous year.
•	Ethanol blending with Petrol was 11.3% during August 2023 and cumulative ethanol blending during December 2022-August 2023 was 11.7%.
•	Total Natural Gas Consumption (including internal consumption) for the month of September 2023 was 5254 MMSCM which was 11 % higher than the corresponding month of the previous year. The cumulative consumption of 32614 MMSCM for the current financial year till September 2023 was higher by 6.6% compared with the corresponding period of the previous year.
•	Gross production of natural gas for the month of September 2023 (P) was 3027 MMSCM which was higher by 6.1% compared with the corresponding month of the previous year. The cumulative gross production of natural gas of 17879 MMSCM for the current financial year till September 2023 was higher by 4.0% compared with the corresponding period of the previous year.
•	LNG import for the month of September 2023 (P) was 2278 MMSCM which was 17.5% higher than the corresponding month of the previous year. The cumulative import of 15110 (P) MMSCM for the current financial year till September 2023 was higher by 9.4% compared with the corresponding period of the previous year.

2. Crude oil, LNG and petroleum products at a glance

	Details	Unit/ Base	2021-22 (P)	2022-23 (P)	September		April-September	
					2022-23 (P)	2023-24 (P)	2022-23 (P)	2023-24 (P)
1	Crude oil production in India[#]	MMT	29.7	29.2	2.4	2.4	14.7	14.7
2	Consumption of petroleum products*	MMT	201.7	223.0	16.9	18.2	107.4	113.7
3	Production of petroleum products	MMT	254.3	266.5	20.3	21.5	131.4	136.3
4	Gross natural gas production	MMSCM	34,024	34,450	2,852	3,027	17,184	17,879
5	Natural gas consumption	MMSCM	64,159	59,969	4,668	5,254	30,451	32,614
6	Imports & exports:							
	Crude oil imports	MMT	212.4	232.7	16.8	17.8	115.7	116.2
		$ Billion	120.7	157.6	11.8	10.6	89.3	63.4
	Petroleum products (POL) imports*	MMT	39.0	44.5	3.2	4.0	20.7	22.8
		$ Billion	23.7	26.8	1.8	2.0	14.0	10.7
	Gross petroleum imports (Crude + POL)	MMT	251.4	277.3	19.9	21.8	136.5	139.0
		$ Billion	144.3	184.4	13.7	12.7	103.2	74.1
	Petroleum products (POL) export	MMT	62.8	61.0	5.0	5.0	31.5	30.9
		$ Billion	44.4	57.3	4.4	3.9	33.0	23.2
	LNG imports*	MMSCM	31,028	26,304	1,878	2,278	13,680	15,110
		$ Billion	13.5	17.1	1.4	1.2	9.4	6.6
	Net oil & gas imports	$ Billion	113.4	144.2	10.7	10.0	79.7	57.4
7	Petroleum imports as percentage of India's gross imports (in value terms)	%	23.6	25.8	21.6	23.5	27.7	22.6
8	Petroleum exports as percentage of India's gross exports (in value terms)	%	10.5	12.7	12.5	11.3	14.2	11.0
9	Import dependency of crude oil (on POL consumption basis)	%	85.5	87.4	86.7	86.2	86.5	87.8

#Includes condensate; *Private direct imports are prorated for the period Aug'23 to Sept'23 for POL. RIL data prorated LNG Imports figure from DGCIS are prorated for August'23 to September 2023.Total may not tally due to rounding off.

3. Indigenous crude oil production (Million Metric Tonnes)

Details	2021-22	2022-23 (P)	September			April-September		
			2022-23 (P)	2023-24 Target*	2023-24 (P)	2022-23 (P)	2023-24 Target*	2023-24 (P)
ONGC	18.5	18.4	1.5	1.6	1.5	9.3	9.7	9.1
Oil India Limited (OIL)	3.0	3.2	0.3	0.3	0.3	1.6	1.7	1.6
Private / Joint Ventures (JVs)	7.0	6.2	0.5	0.6	0.5	3.2	3.6	2.9
Total Crude Oil	**28.4**	**27.8**	**2.3**	**2.5**	**2.2**	**14.1**	**15.0**	**13.7**
ONGC condensate	0.9	1.0	0.09	0.0	0.08	0.5	0.0	0.5
PSC condensate	0.3	0.31	0.03	0.0	0.10	0.14	0.0	0.48
Total condensate	**1.2**	**1.4**	**0.12**	**0.0**	**0.2**	**0.6**	**0.0**	**1.0**
Total (Crude + Condensate) (MMT)	**29.7**	**29.2**	**2.4**	**2.5**	**2.4**	**14.7**	**15.0**	**14.7**
Total (Crude + Condensate) (Million Bbl/Day)	0.60	0.59	0.58	0.61	0.58	0.59	0.60	0.59

*Provisional targets inclusive of condensate.

4. Domestic and overseas oil & gas production (by Indian Companies)

Details	2021-22	2022-23 (P)	September		April-September	
			2022-23 (P)	2023-24 (P)	2022-23 (P)	2023-24 (P)
Total domestic production (MMTOE)	63.7	63.6	5.2	5.4	31.9	32.6
Overseas production (MMTOE)	21.8	19.5	1.5	1.6	9.7	9.9

Source: ONGC Videsh, GAIL, OIL , IOCL, HPCL & BPRL

5. High Sulphur (HS) & Low Sulphur (LS) crude oil processing (MMT)

	Details	2021-22	2022-23 (P)	September		April-September	
				2022-23 (P)	2023-24 (P)	2022-23 (P)	2023-24 (P)
1	High Sulphur crude	185.0	197.9	15.1	15.1	98.3	100.1
2	Low Sulphur crude	56.7	57.4	4.5	5.2	28.0	29.7
Total crude processed (MMT)		**241.7**	**255.2**	**19.5**	**20.3**	**126.3**	**129.8**
Total crude processed (Million Bbl/Day)		4.85	5.13	4.78	4.96	5.06	5.20
Percentage share of HS crude in total crude oil processing		**76.6%**	**77.5%**	**77.0%**	**74.5%**	**77.8%**	**77.1%**

6. Quantity and value of crude oil imports			
Year	**Quantity (MMT)**	**$ Million**	**Rs. Crore**
2021-22 (P)	212.4	120,675	9,01,262
2022-23 (P)	232.7	157,597	12,60,910
April-Sept 2023-24(P)	116.2	63,396	5,22,107

7. Self-sufficiency in petroleum products (Million Metric Tonnes)							
Particulars		**2021-22**	**2022-23 (P)**	**September**		**April-September**	
				2022-23 (P)	**2023-24 (P)**	**2022-23 (P)**	**2023-24 (P)**
1	Indigenous crude oil processing	27.0	26.4	2.1	2.4	13.6	13.3
2	Products from indigenous crude (93.3% of crude oil processed)	25.2	24.7	2.0	2.2	12.7	12.4
3	Products from fractionators (Including LPG and Gas)	4.1	3.5	0.3	0.3	1.8	1.5
4	Total production from indigenous crude & condensate **(2 + 3)**	29.3	28.2	2.2	2.5	14.5	13.9
5	Total domestic consumption	201.7	223.0	16.9	18.2	107.4	113.7
% Self-sufficiency (4 / 5)		**14.5%**	**12.6%**	**13.3%**	**13.8%**	**13.5%**	**12.2%**

8. Refineries: Installed capacity and crude oil processing (MMTPA / MMT)

Sl. no.	Refinery	Installed capacity (01.04.2023) MMTPA	Crude oil processing (MMT)							
			2021-22	2022-23 (P)	September			April-September		
					2022-23 (P)	2023-24 (Target)	2023-24 (P)	2022-23 (P)	2023-24 (Target)	2023-24 (P)
1	Barauni (1964)	6.0	5.6	6.8	0.5	0.5	0.5	3.4	3.3	3.3
2	Koyali (1965)	13.7	13.5	15.6	1.3	1.3	1.2	7.8	6.7	7.5
3	Haldia (1975)	8.0	7.3	8.5	0.7	0.4	0.3	4.2	3.3	3.8
4	Mathura (1982)	8.0	9.1	9.6	0.8	0.7	0.7	4.6	4.3	4.3
5	Panipat (1998)	15.0	14.8	13.8	1.2	1.3	1.2	7.2	7.6	7.4
6	Guwahati (1962)	1.0	0.7	1.1	0.09	0.1	0.1	0.55	0.5	0.6
7	Digboi (1901)	0.65	0.7	0.7	0.04	0.06	0.05	0.3	0.3	0.3
8	Bongaigaon(1979)	2.70	2.6	2.8	0.2	0.2	0.3	1.3	1.5	1.5
9	Paradip (2016)	15.0	13.2	13.6	0.3	1.3	1.2	5.6	7.6	7.8
	IOCL-TOTAL	**70.1**	**67.7**	**72.4**	**5.1**	**5.9**	**5.5**	**35.0**	**35.2**	**36.5**
10	Manali (1969)	10.5	9.0	11.3	1.0	0.5	1.0	5.8	4.7	5.7
11	CBR (1993)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	CPCL-TOTAL	**10.5**	**9.0**	**11.3**	**1.0**	**0.5**	**1.0**	**5.8**	**4.7**	**5.7**
12	Mumbai (1955)	12.0	14.4	14.5	1.3	0.9	1.4	6.6	7.2	8.1
13	Kochi (1966)	15.5	15.4	16.0	1.2	1.3	1.3	8.1	7.8	8.4
14	Bina (2011)	7.8	7.4	7.8	0.7	0.7	0.7	3.7	3.1	3.0
	BPCL-TOTAL	**35.3**	**37.2**	**38.4**	**3.1**	**2.9**	**3.3**	**18.4**	**18.1**	**19.5**
15	Numaligarh (1999)	3.0	2.6	3.1	0.2	0.3	0.3	1.6	1.2	0.8

Sl. no.	Refinery	Installed capacity (01.04.2023) MMTPA	Crude oil processing (MMT)							
			2021-22	2022-23	September			April-September		
					2022-23	2023-24 (Target)	2023-24 (P)	2022-23	2023-24 (Target)	2023-24 (P)
16	Tatipaka (2001)	0.066	0.075	0.073	0.007	0.005	0.004	0.035	0.030	0.033
17	MRPL-Mangalore (1996)	15.0	14.9	17.1	1.3	0.8	0.8	8.3	7.4	7.6
	ONGC-TOTAL	**15.1**	**14.9**	**17.2**	**1.3**	**0.9**	**0.8**	**8.3**	**7.4**	**7.6**
18	Mumbai (1954)	9.5	5.6	9.8	0.8	0.8	0.8	4.9	4.7	5.0
19	Visakh (1957)	11.0	8.4	9.3	0.8	1.0	1.0	4.4	5.5	6.2
20	HMEL-Bathinda (2012)	11.3	13.0	12.7	0.9	0.6	1.1	6.3	5.5	6.5
	HPCL- TOTAL	**31.8**	**27.0**	**31.8**	**2.5**	**2.3**	**2.9**	**15.6**	**15.8**	**17.7**
21	RIL-Jamnagar (DTA) (1999)	33.0	34.8	34.4	2.8	2.8	2.8	17.9	17.9	17.2
22	RIL-Jamnagar (SEZ) (2008)	35.2	28.3	27.9	1.8	1.8	2.0	13.6	13.6	14.6
23	NEL-Vadinar (2006)	20.0	20.2	18.7	1.7	1.7	1.7	10.2	10.2	10.1
All India (MMT)		**253.9**	**241.7**	**255.2**	**19.5**	**19.1**	**20.3**	**126.3**	**124.0**	**129.8**
All India (Million Bbl/Day)		**5.02**	**4.85**	**5.13**	**4.78**	**4.66**	**4.96**	**5.06**	**4.97**	**5.20**

Note: Provisional Targets; Some sub-totals/ totals may not add up due to rounding off at individual levels. The Inputs to Refinery includes both Crude Oil and Other Inputs (OI), however Other Inputs (OI) do not form part of the above data.

9. Major crude oil and product pipeline network (as on 01.10.2023)

Details		ONGC	OIL	Cairn	HMEL	IOCL	BPCL	HPCL	Others*	Total
Crude Oil	Length (KM)	1,284	1,193	688	1,017	5,819	937			**10,938**
	Cap (MMTPA)	60.6	9.0	10.7	11.3	53.8	7.8			**153.1**
Products	Length (KM)		654			12,200	2,599	5,123	2,399	**22,975**
	Cap (MMTPA)		1.7			70.6	22.6	37.4	10.2	**142.5**

*Others include GAIL and Petronet India. HPCL and BPCL lubes pipeline included in products pipeline data

11. Production and consumption of petroleum products (Million Metric Tonnes)												
Products	2021-22		2022-23 (P)		September 2022		Sept-2023 (P)		Apr-Sept 2022		Apr-Sept 2023 (P)	
	Prod	Cons	Prod	Cons	Prod	Cons	Prod	Cons	Prod	Cons	Prod	Cons
LPG	12.2	28.3	12.8	28.5	1.0	2.4	0.9	2.6	6.4	13.8	6.2	14.1
MS	40.2	30.8	42.8	35.0	3.1	2.8	3.6	3.1	21.1	17.4	22.4	18.5
NAPHTHA	20.0	13.2	17.0	12.2	1.4	1.0	1.4	1.0	8.8	6.0	8.8	6.5
ATF	10.3	5.0	15.0	7.4	1.3	0.6	1.3	0.7	7.0	3.5	8.4	4.0
SKO	1.9	1.5	0.9	0.5	0.1	0.0	0.1	0.0	0.5	0.3	0.5	0.3
HSD	107.2	76.7	113.8	85.9	8.8	6.3	8.9	6.5	56.5	41.4	57.2	44.0
LDO	0.8	1.0	0.6	0.7	0.05	0.1	0.07	0.1	0.3	0.4	0.3	0.4
LUBES	1.2	4.5	1.3	3.7	0.1	0.3	0.1	0.3	0.6	1.7	0.7	1.9
FO/LSHS	8.9	6.3	10.4	7.0	0.8	0.6	0.8	0.5	5.2	3.4	5.6	3.3
BITUMEN	5.1	7.8	4.9	8.0	0.3	0.4	0.3	0.5	2.2	3.2	2.3	4.1
PET COKE	15.5	14.3	15.4	18.3	1.2	1.4	1.1	1.5	7.7	8.8	7.5	9.4
OTHERS	30.9	12.3	31.5	15.8	2.2	1.1	3.0	1.5	15.1	7.6	16.3	7.3
ALL INDIA	**254.3**	**201.7**	**266.5**	**223.0**	**20.3**	**16.9**	**21.5**	**18.2**	**131.4**	**107.4**	**136.3**	**113.7**
Growth (%)	**-3.1%**	**-5.4%**	**4.8%**	**10.6%**	**6.6%**	**8.2%**	**5.5%**	**7.7%**	**10.1%**	**14.6%**	**3.8%**	**5.9%**

Note: Prod - Production; Cons - Consumption

15. LPG consumption (Thousand Metric Tonne)

LPG category	2021-22	2022-23	September			April-September		
			2022-23	2023-24 (P)	Growth (%)	2022-23	2023-24 (P)	Growth (%)
1. PSU Sales :								
LPG-Packed Domestic	25,501.6	25,381.5	2,167.7	2,222.3	2.5%	12,392.0	12,443.9	0.4%
LPG-Packed Non-Domestic	2,238.8	2,606.0	232.0	243.5	4.9%	1,147.9	1,359.6	18.4%
LPG-Bulk	390.9	408.9	32.2	77.6	141.0%	179.0	284.1	58.7%
Auto LPG	122.0	106.7	8.8	7.9	-10.5%	55.2	47.7	-13.6%
Sub-Total (PSU Sales)	28,253.3	28,503.1	**2,440.8**	**2,551.3**	**4.5%**	**13,774.1**	**14,135.3**	**2.6%**
2. Direct Private Imports*	0.1	0.1	0.00	0.01	2240.9%	0.02	0.06	206.0%
Total (1+2)	28,253.4	28,503.2	**2,440.8**	**2,551.3**	**4.5%**	**13,774.1**	**14,135.4**	**2.6%**

*Aug-Sept'23 DGCIS data is prorated

16. LPG marketing at a glance

Particulars (As on 1st of April)	Unit	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	1.10.23 (P)
LPG Active Domestic Customers	(Lakh)				1486	1663	1988	2243	2654	2787	2895	3053	3140	3154
	Growth					11.9%	19.6%	12.8%	18.3%	5.0%	3.9%	5.5%	2.9%	1.0%
LPG Coverage (Estimated)	(Percent)				56.2	61.9	72.8	80.9	94.3	97.5	99.8	-	-	-
	Growth					10.1%	17.6%	11.1%	16.5%	3.4%	2.3%	-	-	-
PMUY Beneficiaries	(Lakh)						200.3	356	719	802	800	899.0	958.6	958.5
	Growth							77.7%	101.9%	11.5%	-0.2%	12.2%	6.6%	-100.0%
LPG Distributors	(No.)	11489	12610	13896	15930	17916	18786	20146	23737	24670	25083	25269	25386	25425
	Growth	9.0%	9.8%	10.2%	14.6%	12.5%	4.9%	7.2%	17.8%	3.9%	1.7%	0.7%	0.5%	0.4%
Auto LPG Dispensing Stations	(No.)	652	667	678	681	676	675	672	661	657	651	601	526	496
	Growth	7.9%	2.3%	1.6%	0.4%	-0.7%	-0.1%	-0.4%	-1.6%	-0.6%	-0.9%	-8.5%	-12.5%	-13.0%
Bottling Plants	(No.)	184	185	187	187	188	189	190	192	196	200	202	208	210
	Growth	0.5%	0.5%	1.1%	0.0%	0.5%	0.5%	0.5%	1.1%	2.1%	2.0%	1.0%	4.5%	2.4%

Source: PSU OMCs (IOCL,BPCL and HPCL)

1.Growth rates as on 01.10.2023 are with respect to figs as on 01.10.2022. Growth rates as on 1 April of any year are with respect to figs as on 1 April of previous year.

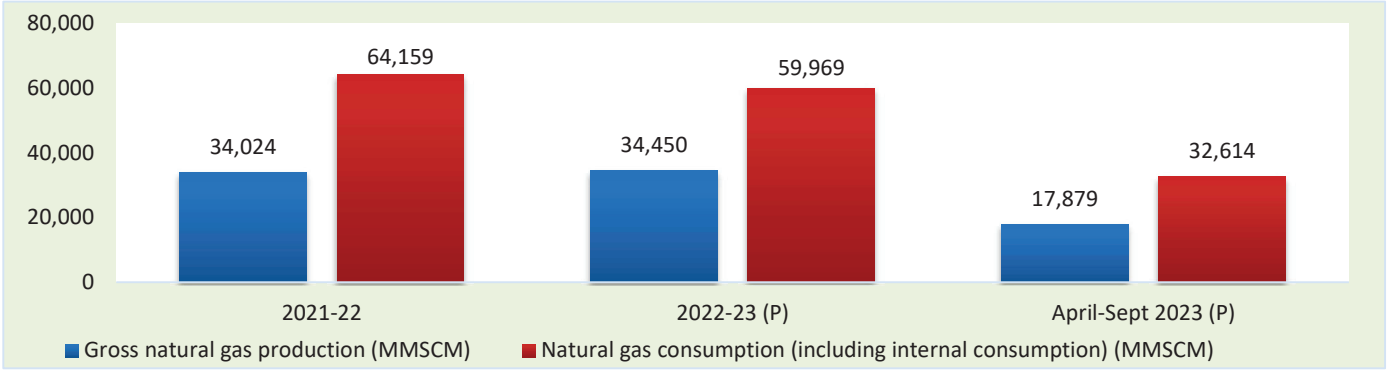
2. The LPG coverage is calculated by PSU OMCs based upon the active LPG domestic connections and the estimated number of households. The number of households has been projected by PSU OMCs based on 2011 census data. Factors like increasing nuclearization of families, migration of individuals/ families due to urbanization and reduction in average size of households etc. impact the growth of number of households. Due to these factors, the estimated no. of households through projection of 2011 census data may slightly differ from the actual no. of households in a State/UT. Further, this methodology does not include PNG (domestic) connections.

18. Natural gas at a glance

(MMSCM)

Details	2021-22 (P)	2022-23 (P)	September			April-September		
			2022-23 (P)	2023-24 (Target)	2023-24 (P)	2022-23 (P)	2023-24 (Target)	2023-24 (P)
(a) Gross production	34,024	34,450	2,852	3,269	3,027	17,184	18,498	17,879
- ONGC	20,629	19,969	1,665	1,733	1,578	10,076	10,331	9,751
- Oil India Limited (OIL)	2,893	3,041	256	265	256	1,527	1,557	1,517
- Private / Joint Ventures (JVs)	10,502	11,440	931	1,271	1,192	5,582	6,610	6,611
(b) Net production (excluding flare gas and loss)	33,131	33,664	2,791		2,976	16,771		17,504
(c) LNG import#	31,028	26,304	1,878		2,278	13,680		15,110
(d) Total consumption including internal consumption (b+c)	64,159	59,969	4,668		5,254	30,451		32,614
(e) Total consumption **(in BCM)**	64.2	60.0	4.7		5.3	30.5		32.6
(f) Import dependency based on consumption (%), {c/d*100}	48.4	43.9	40.2		43.4	44.9		46.3

July 2023 DGCIS data prorated.



19. Coal Bed Methane (CBM) gas development in India

Prognosticated CBM resources		91.8	TCF
Established CBM resources		10.4	TCF
CBM Resources (33 Blocks)		62.8	TCF
Total available coal bearing areas (India)		32760	Sq. KM
Total available coal bearing areas with MoPNG/DGH		12254*	Sq. KM
Area awarded		20,460**	Sq. KM
Blocks awarded*		36	Nos.
Exploration initiated (Area considered if any boreholes were drilled in the awarded block)		10670	Sq. KM
Production of CBM gas	April-Sept 2023 (P)	324.70	MMSCM
Production of CBM gas	Sept 2023 (P)	53.27	MMSCM

*ST CBM Block awarded & relinquished twice- in CBM Round II and Round IV -Area considered if any boreholes were drilled in the awarded block. **MoPNG awarded 04 new CBM Blocks (Area 3862 sq. km) under Special CBM Bid Round 2021 in September 2022. ***Area considered if any boreholes were drilled in the awarded block.

19a. Status of Compressed Bio Gas (CBG) projects under SATAT (as on 01.10.2023) (Provisional)

Particulars	Units	IOCL	HPCL	BPCL	GAIL	IGL	Total
No. of CBG plants commissioned and initiated sale of CBG	No. of plants	22	6	3	10	4	**45**
Start of CBG sale from retail outlet(s)	Nos.	52	30	45	1	2	**130**
Sale of CBG in 2022-23	Tons	5,822	77	6	5322#		**11,227**
Sale of CBG in 2023-24 (up to July, 2023)	Tons	3203	73	27	3829#		**7,132**
Sale of CBG in CGD network	GA Nos.				18		**18**

Sale of CBG sourced under CBG-CGD synchronization scheme through its own marketing channels as well as other CGDs/OMCs.

20. Common Carrier Natural Gas pipeline network as on 31.03.2023

Nature of pipeline		GAIL	GSPL	PIL	IOCL	AGCL	RGPL	GGL	DFPCL	ONGC	GIGL	GITL	Others*	Total
Operational	Length	10,932	2,716	1,479	143	107	304	73	42	24				**15,820**
	Capacity	43.0	85.0	20.0	2.4	3.5	5.1	0.7	6.0					-
Partially commissioned#	Length	4,342			386						1,279		365	**6,006**
	Capacity													-
Total operational length		**15,273**	**2,716**	**1,479**	**529**	**107**	**304**	**73**	**42**	**24**	**1,279**	**0**	**365**	**22,191**
Under construction	Length	4,327	100		1,110						1,053	220	4,361	**11,172**
	Capacity	-	3.0								-	-	-	-
Total length		**19,601**	**2,816**	**1,479**	**1,639**	**107**	**304**	**73**	**42**	**24**	**2,332**	**220**	**4,726**	**33,141**

Source: PNGRB; Length in KMs ; Authorized Capacity in MMSCMD (Arithmetic sum taken for each entity -capacity may vary from pipeline to pipeline); *Others-APGDC, , IGGL, IMC,GTIL,HPPL Consortium of H-Energy. Total authorized Natural Gas pipelines including Tie-in connectivity, dedicated & STPL is 33,515 Kms (P)

21. Existing LNG terminals

Location	Promoters	Capacity as on 01.10.2023	% Capacity utilisation (April-Sept 2023)
Dahej	Petronet LNG Ltd (PLL)	17.5 MMTPA	94.3
Hazira	Shell Energy India Pvt. Ltd.	5.2 MMTPA	39.2
Dabhol	Konkan LNG Limited	*5 MMTPA	32.3
Kochi	Petronet LNG Ltd (PLL)	5 MMTPA	19.6
Ennore	Indian Oil LNG Pvt Ltd	5 MMTPA	15.1
Mundra	GSPC LNG Limited	5 MMTPA	12.5
Dhamra	Adani Total Private Limited	5 MMTPA	24.0
Total Capacity		**47.7 MMTPA**	

* To increase to 5 MMTPA with breakwater. Only HP stream of capacity of 2.9 MMTPA is commissioned

22. Status of PNG connections and CNG stations across India (Nos.), as on 31.08.2023(P)				
State/UT (State/UTs are clubbed based on the GAs authorised by PNGRB)	CNG Stations	PNG connections		
		Domestic	Commercial	Industrial
Andhra Pradesh	166	261,259	448	36
Andhra Pradesh, Karnataka & Tamil Nadu	40	1,749	0	6
Assam	6	52,346	1,366	449
Bihar	109	113,042	92	4
Bihar & Jharkhand	4	7,624	2	0
Bihar & Uttar Pradesh	14	0	0	0
Chandigarh (UT), Haryana, Punjab & Himachal Pradesh	26	26,194	129	29
Chhattisgarh	10	0	0	0
Dadra & Nagar Haveli (UT)	7	11,532	56	60
Daman & Diu (UT)	5	5,162	56	45
Daman and Diu & Gujarat	15	3,010	15	0
Goa	12	11,335	19	34
Gujarat	996	3,106,477	22,813	5,745
Haryana	354	360,775	897	1,954
Haryana & Himachal Pradesh	10	4	0	0
Haryana & Punjab	25	468	0	0
Himachal Pradesh	10	6,476	4	0
Jharkhand	81	113,801	10	1
Karnataka	325	399,244	547	333
Kerala	115	51,225	25	18
Kerala & Puducherry	9	426	0	0
Madhya Pradesh	248	216,797	387	469
Madhya Pradesh and Chhattisgrah	7	0	0	0
Madhya Pradesh and Rajasthan	32	578	0	0
Madhya Pradesh and Uttar Pradesh	16	0	0	2
Maharashtra	787	2,990,714	4,705	935
Maharashtra & Gujarat	60	179,889	8	26
Maharashtra and Madhya Pradesh	12	0	0	0
National Capital Territory of Delhi (UT)	481	1,465,791	3,700	1,854

Russia’s Seaborne Crude Exports Rise to a Four-Month High
2023-10-24 12:08:17.380 GMT
By Julian Lee
(Bloomberg) -- Russia’s oil flows are climbing steadily as Moscow’s adherence to a pact with Saudi Arabia to keep barrels off the global market shows signs of waning.
About 3.53 million barrels a day of crude was shipped from Russian ports in the week to Oct. 22, an increase of 20,000 barrels a day from the previous seven days, tanker-tracking data monitored by Bloomberg show. That lifted the less volatile four-week average to 3.5 million barrels a day, the highest since June, and up by about 610,000 barrels a day in the past two months.
The small weekly gain reflected increases in flows from the Baltic and Pacific, which more than offset a drop in shipments from the Black Sea.

Deputy Prime Minister Alexander Novak said in early August that Moscow would prolong export restrictions at a reduced level of 300,000 barrels a day below their May-June average until the end of the year. Bloomberg calculations indicate that shipments through ports should be running now at about 3.28 million barrels a day.
Four-week average volumes have been rising relative to the reduced shipments target since the start of September, exceeding it by about 220,000 barrels a day in the most recent period.

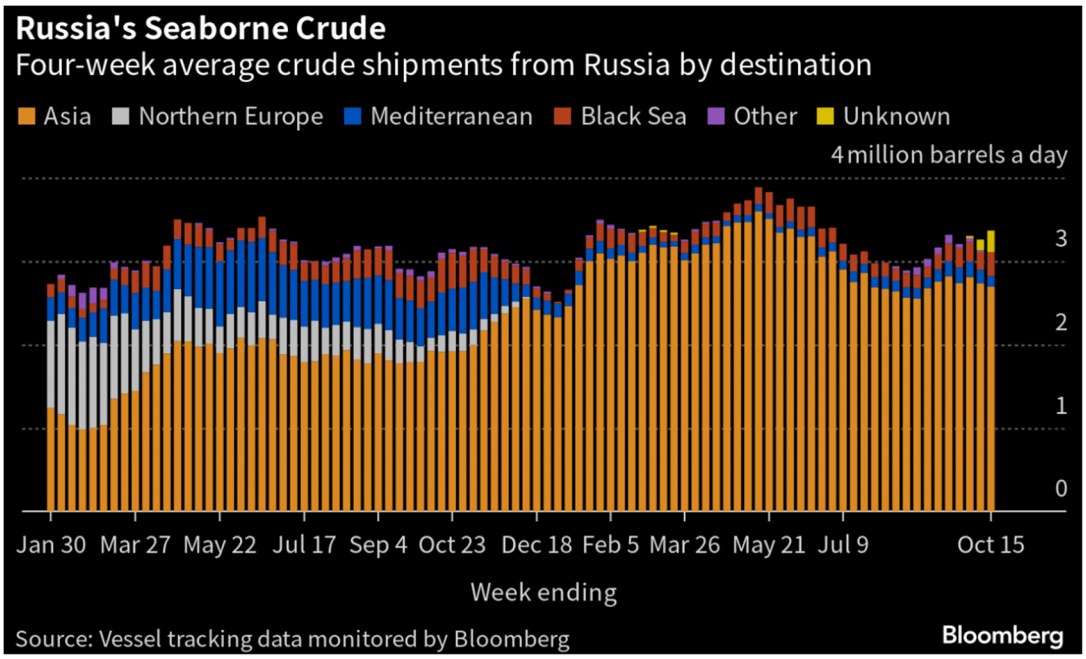
The increase in volumes raised the Kremlin's weekly revenues from oil export duties to a new high for the year, while the four-week average rose for a 12th straight week, setting a new high for the period since mid-January.

One of two vessels sanctioned by the US Treasury for carrying Russian cargoes in breach of a price cap earlier in the year has been allowed to discharge its latest, non-Russian, cargo at Houston and depart the port, tanker-tracking and US customs data show.

The recovery in Russia's oil refining rate ground to a halt last week, with runs up just 10,000 barrels a day in the seven days to Oct. 18 from the previous week. Analysts expect the next surge in processing volumes by mid-November, when more plants will complete seasonal maintenance.

Flows by Destination

Russia's seaborne crude flows edged higher in four weeks to Oct. 22 to average 3.5 million barrels a day. That's the highest since the four weeks to June 25 and up from 3.36 million barrels a day in the period to Oct. 15. Shipments remain about 85,000 barrels a day below the average seen during the surge in volumes between April and June.



All figures exclude cargoes identified as Kazakhstan's KEBCO grade. Those are shipments made by KazTransoil JSC that transit Russia for export through Novorossiysk and the Baltic port of Ust-Luga and are not subject to European Union sanctions or a price cap.

The Kazakh barrels are blended with crude of Russian origin to create a uniform export grade. Since Russia's invasion of Ukraine, Kazakhstan has rebranded its cargoes to distinguish them from those shipped by Russian companies.

*** Asia**

Observed shipments to Russia's Asian customers, including those showing no final destination, rose for a fourth week. Flows edged higher to 3.06 million barrels a day in the four weeks to Oct. 22, from 2.95 million barrels a day in the period to Oct. 15. That's still well below a peak of about 3.6 million barrels a day seen in May.

Flows to India remain well below their peak levels seen earlier this year. If all of the cargoes on ships without an initial destination eventually end up in India, shipments to the country will be about 285,000 barrels a day, or 14%, down from their May high. Adding the "Unknown Asia" and "Other Unknown" volumes to the total for India gives a figure of 1.8 million barrels a day in the four weeks to Oct. 22. That's the most in 18 weeks, but down from a high of 2.15 million barrels a day in the period to May 21.

India is rejecting pressure from Russian oil suppliers to pay for crude imports in Chinese yuan as tensions between New Delhi and Beijing continue to simmer.

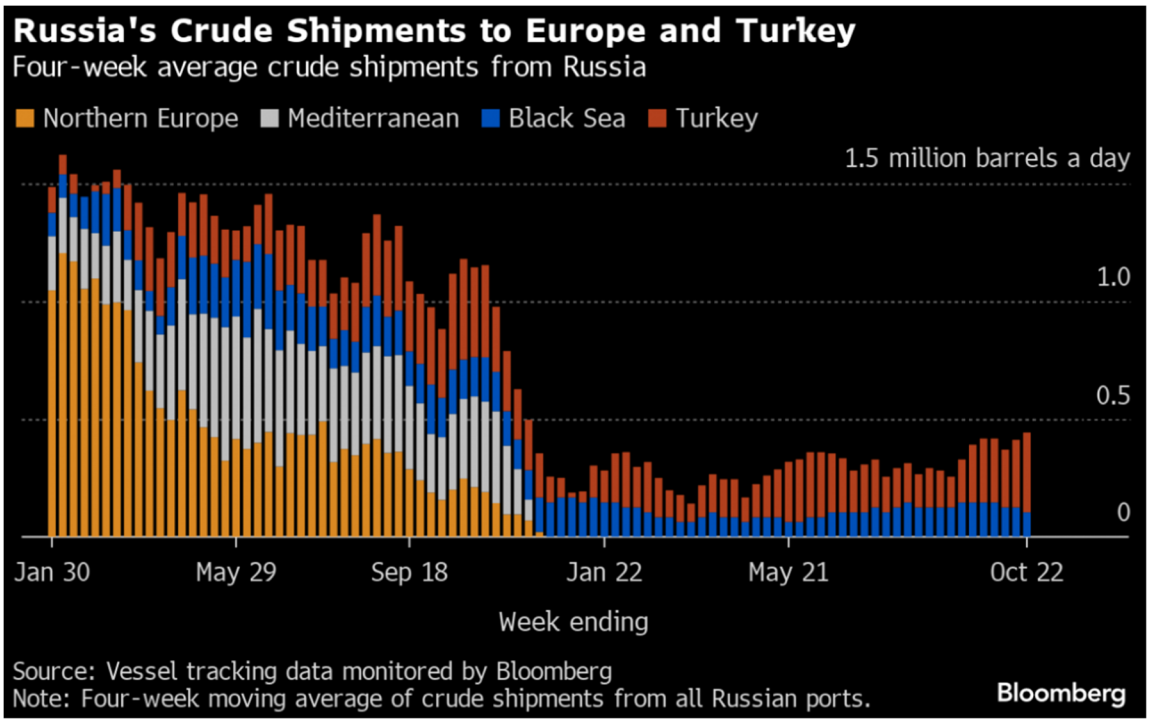
The equivalent of about 350,000 barrels a day was on vessels signaling Port Said or Suez in Egypt, or are expected to be transferred from one ship to another off the South Korean

port of Yeosu. Those voyages typically end at ports in India or China and show up in the chart below as “Unknown Asia” until a final destination becomes apparent.
The “Other Unknown” volumes, running at about 230,000 barrels a day in the four weeks to Oct. 22, are those on tankers showing no clear destination. Most of those cargoes originate from Russia’s western ports and go on to transit the Suez Canal, but some could end up in Turkey. Others could be moved from one vessel to another, with most such transfers now taking place in the Mediterranean, off the coast of Greece.

Pakistan Refinery Ltd. has signed a long-term supply deal with Russia under which it will receive as much as 75,000 tons of crude oil a month, equivalent to about 18,000 barrels a day. The first cargo is due to arrive in December.

*** Europe and Turkey**

Russia’s seaborne crude exports to European countries have collapsed since Moscow’s troops invaded Ukraine in February 2022. A market that consumed about 1.5 million barrels a day of short-haul seaborne crude, coming from export terminals in the Baltic, Black Sea and Arctic has been lost almost completely, to be replaced by long-haul destinations in Asia that are much more costly and time-consuming to serve. These figures do not include shipments to Turkey.



No Russian crude was shipped to northern European countries, or those in the Mediterranean in the four weeks to Oct. 22.

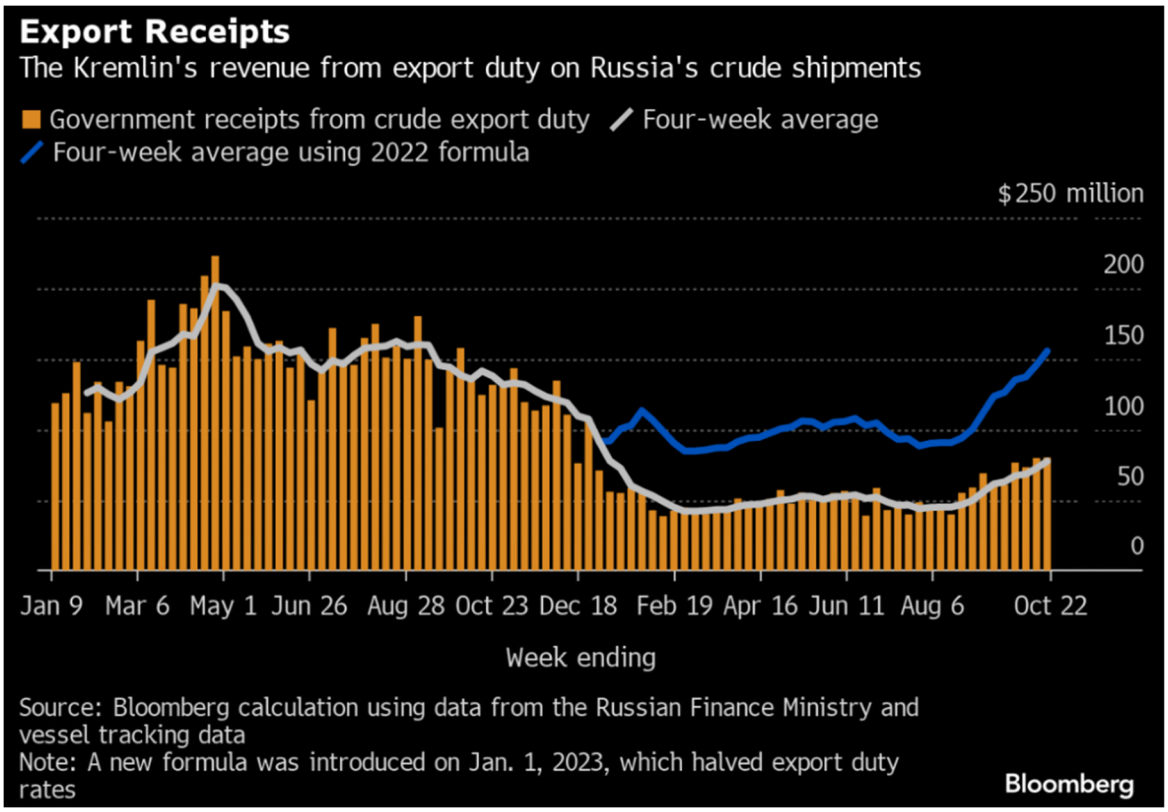
Flows to Bulgaria, now Russia's only European market for crude, fell to equal a 19-week low of about 104,000 barrels a day. Litasco SA, the main shareholder of a refinery at Burgas, has denied being in any negotiations to sell the plant after the country's Prime Minister Nikolai Denkov said various potential buyers have for months expressed an interest in purchasing the refinery.

Exports to Turkey jumped to about 340,000 barrels a day in the four weeks to Oct. 22. That's the highest in almost a year. Flows had topped 425,000 barrels a day in October 2022, before falling sharply after a Group of Seven price cap came into effect in early December. The jump in flows comes after Lukoil resumed deliveries to the Azerbaijani-owned Star refinery at Aliaga. Supplies are expected at about 100,000 barrels a day, equivalent to half of the refinery's capacity.

Vessel-tracking data are cross-checked against port agent reports as well as flows and ship movements reported by other information providers including Kpler and Vortexa Ltd.

Export Revenue

Inflows to the Kremlin's war chest from its crude-export duty edged higher to $80.5 million in the seven days to Oct. 22, while four-week average income jumped to $77.8 million. The four-week average set a new high for the period since mid-January. Rising oil prices and the rebound in flows are both contributing to the increase in receipts.



The duty rate for October has been set at $3.26 a barrel, based on an average Urals price of $77.03 during the calculation period between Aug. 15 and Sept. 14. That was $11.60 a barrel below Brent over the same period. October's duty rate sets a new high for the year. The rate for November has been set at $3.57 a barrel, based on an average Urals price of $83.35 during the calculation period between Sept. 15 and Oct. 14. That was about $7.70 a barrel below Brent over the same period. November's duty rate sets a new high for the year.

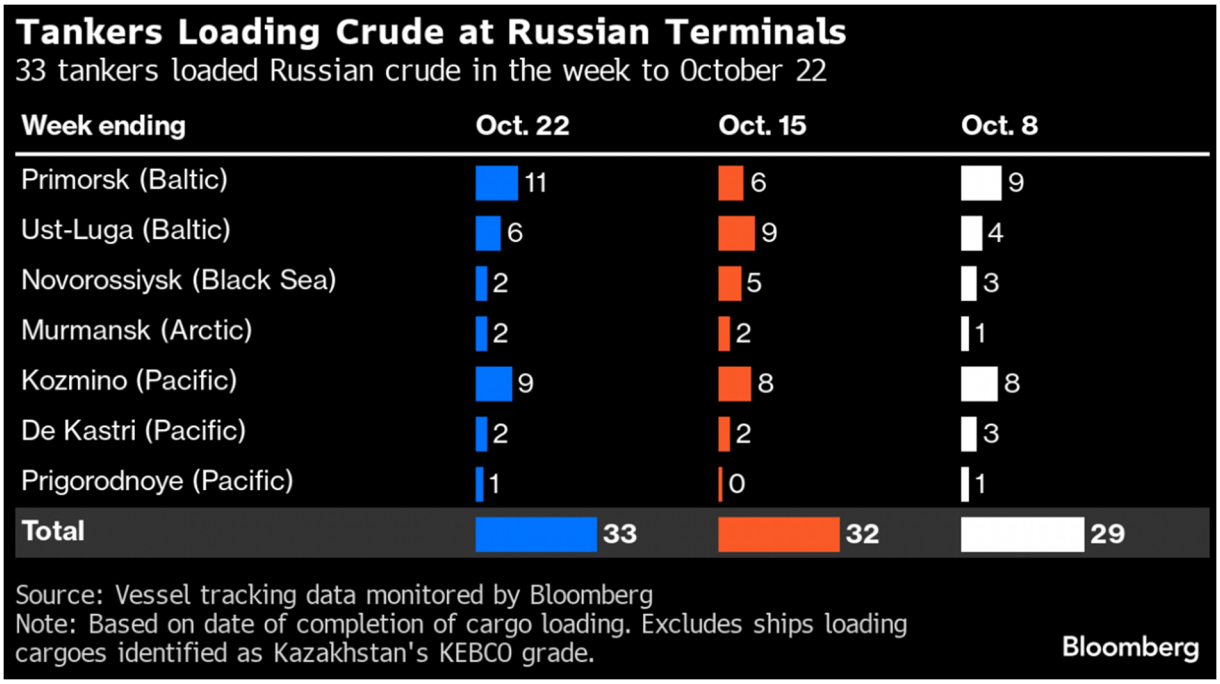
Origin-to-Location Flows

The following table shows the number of ships leaving each export terminal.

A total of 33 tankers loaded 24.71 million barrels of Russian crude in the week to Oct. 22, vessel-tracking data and port agent reports show. That's up by about 110,000 barrels from the previous week.

A jump in shipments from Primorsk in the Baltic was more than offset by a drop in the number of vessels leaving nearby Ust-Luga and Novorossiysk in the Black Sea.

Destinations are based on where vessels signal they are heading at the time of writing, and some will almost certainly change as voyages progress. All figures exclude cargoes identified as Kazakhstan's KEBCO grade.



In addition, two cargoes of KEBCO were loaded at Novorossiysk and one at Ust-Luga during the week.NOTES
Note: This story forms part of a weekly series tracking shipments of crude from Russian export terminals and the export duty revenues earned from them by the Russian government. Weeks run from Monday to Sunday. The next update will be onTuesday, Oct. 31.
Note: All figures exclude cargoes owned by Kazakhstan's KazTransOil JSC, which transit Russia and are shipped from Novorossiysk and Ust-Luga as KEBCO grade crude.
If you are reading this story on the Bloomberg terminal, click here for a link to a PDF file of four-week average flows from Russia to key destinations.

--With assistance from Sherry Su.

To contact the author of this story:
Julian Lee in London at jlee1627@bloomberg.net
To contact the editor responsible for this story:
John Deane at jdeane3@bloomberg.net

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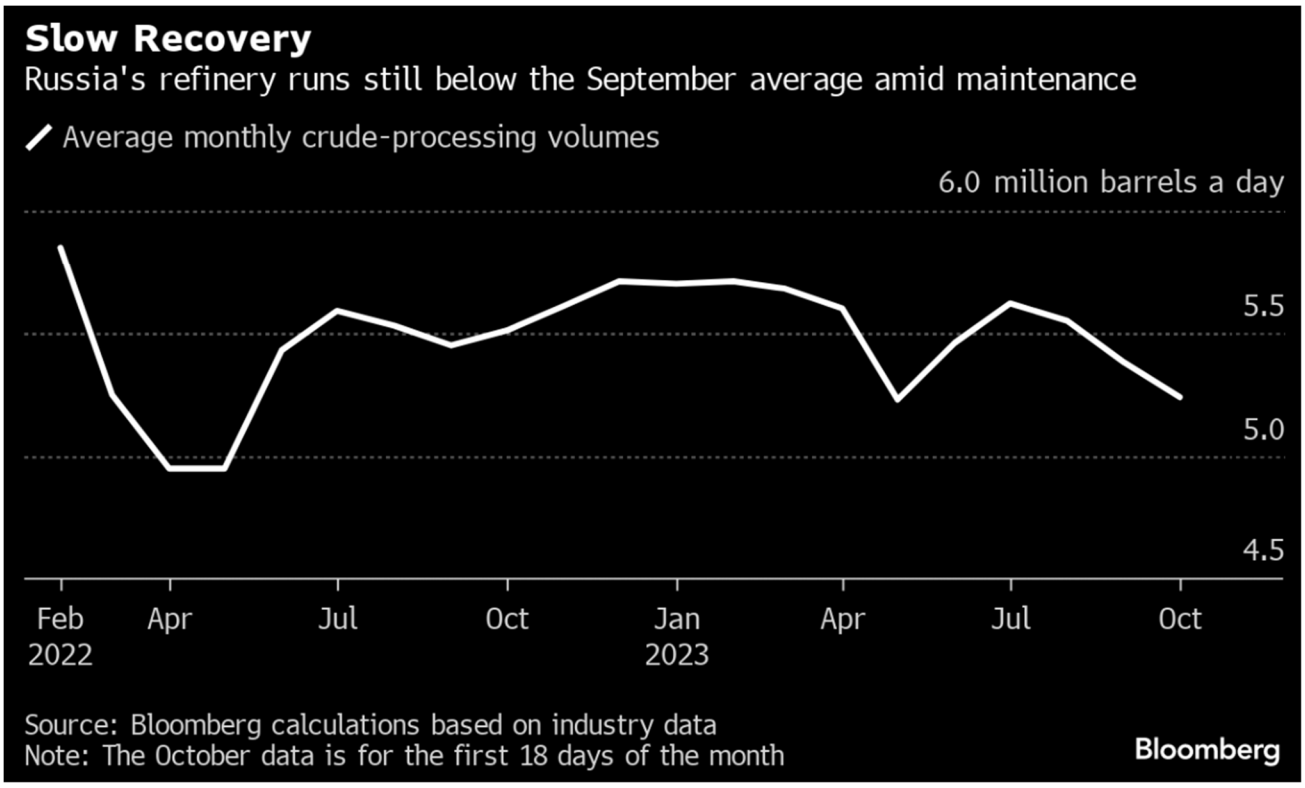
Russian Refinery Runs Stagnate as Seasonal Maintenance Goes On
2023-10-23 10:16:49.371 GMT

By Bloomberg News
(Bloomberg) -- The recovery in Russia's crude-processing capacities has slowed, with some key refineries already having completed seasonal maintenance earlier in the month. Analysts expect the next surge in volumes by mid-November.
Russia processed 5.27 million barrels a day in the seven days through Oct. 18, according to a person with knowledge of the matter. That's only about 10,000 barrels a day more than the previous week, according to Bloomberg calculations based on historic data.
"After a string of returning capacity in the first 10 days of October, there are only incremental upside runs in the second half of this month," said Viktor Katona, head crude analyst at market intelligence firm Kpler.
Russia's oil-processing in the period Oct. 1-18 was 133,000 barrels a day below the average for September, Bloomberg calculations show.



"Mid-November will be the watershed moment for Russia's refining as refiners aim to ramp up production into the winter months," with some 200,000 barrels a day of capacity set to return on completion of planned maintenance, Katona said.
The global market is closely monitoring Russia's oil processing for clues to its crude production levels after the nation stopped releasing official output data. Lower refinery runs amid the seasonal maintenance help support the nation's

seaborne crude exports.
Russia's average four-week oil flows abroad through Oct. 15 jumped to the highest in more than three months, according to tanker-tracking data monitored by Bloomberg.

To contact Bloomberg News staff for this story:
James Herron in London at jherron9@bloomberg.net
To contact the editors responsible for this story:
James Herron at jherron9@bloomberg.net
John Deane

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“When you have [Houthi] cruise missiles heading towards one of our DDGs, one of our destroyers, that vessel is going to do what it needs to do to protect itself. The same applies for the UAVs” Defense Secretary Austin.

Oct 22, 2023

Excerpt https://abcnews.go.com/Politics/week-transcript-10-22-23-secretary-defense-lloyd/story?id=104198342

'This Week' Transcript 10-22-23: Secretary of Defense Lloyd Austin, Sen. Tim Scott, Rep. Michael McCaul and Cindy McCain

This is a rush transcript of "This Week" airing Sunday, October 22.

By ABC News

October 22, 2023, 7:18 AM

Joining us now is Secretary of Defense Lloyd Austin.

Secretary Austin, thank you for being here.

I want to start with those moves you announced late yesterday, last night. You've got the USS Eisenhower going to the Persian Gulf. You've got more missile defense systems headed to the region. Troops put on standby. What's behind these moves?

LLOYD AUSTIN, U.S. SECRETARY OF DEFENSE: Well, Jonathan, as you know, recently we’ve seen rocket and UAV attacks against bases housing our troops in Iraq and Syria. We're concerned about potential escalation. In fact, what we're seeing is a -- is a prospect of a significant escalation of attacks on our troops and our people throughout the region. And because of that, we're going to do what's necessaryto make sure that our troops are in the right -- in a good position, and they're protected, and that we have the ability to respond.

Now, this additional deployment sends another message to those who would -- who would seek to widen this conflict. As President Biden said earlier and as you've heard me say, if any group or any country is looking to widen this conflict and take advantage of this very unfortunate situation that we see, our advice is don't. We maintain the right to defend ourselves, and we won't hesitate to take the appropriate action.

KARL: Well, in fact, we saw the USS Carney take down those Houthi missiles. Houthis, again, that's an Iranian-backed group in Yemen and also several drones.

Were -- was that takedown defending our ships in the region or was it defending Israel?

AUSTIN: Jonathan, when you have cruise missiles heading towards one of our DDGs, one of our destroyers, that vessel is going to do what it needs to do to protect itself. The same applies for the UAVs.

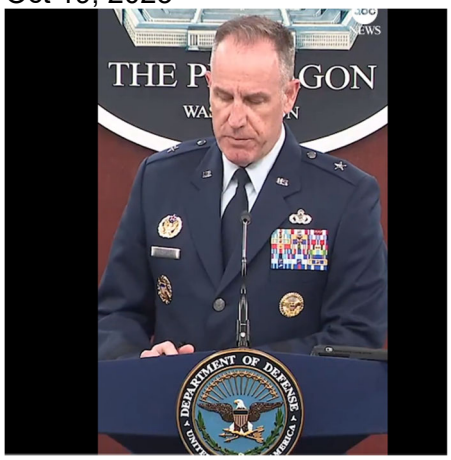
And I applaud the work of the crew of the Carney. They demonstrated what the -- what our very capable United States Navy can do and will do if challenged.

KARL: And you've given the authority to do that. That was done in an instant.

AUSTIN: They have the inherent right for self-protection there, Jon. Yeah.

"We cannot say for certain what these missiles and drones were targeting but they were launched from Yemen heading north along the Red Sea potentially towards targets in Israel" Pentagon's Brig. Gen. Ryder

Oct 19, 2023



https://twitter.com/ABC/status/1715108948418646474

SAF Group created transcript of comments by Pentagon spokesman Brig Gen. Pat Ryder on Oct 19.

Items in "italics" are SAF Group created transcript.

Ryder "*the crew of the guided missile destroyer USS Carney operating in the Northern Red Sea earlier today, shot down three land attack cruise missiles and several drones that were launched by Houthi forces in Yemen. This action was a demonstration of the integrated air and missile defense architecture that we have built in the Middle East and that we are prepared to utilize whenever necessary to protect our partners and our interests in this important region. There were no casualties to US forces and none that we know of to any civilians on the ground. Information about these engagements is still being processed. We cannot say for certain what these missiles and drones were targeting but they were launched from Yemen heading north along the Red Sea potentially towards targets in Israel. Our defensive response was one that we would have taken for any similar threat in the region where we're able to do so against our interests, personnel and our partners*. "

Prepared by SAF Group https://safgroup.ca/news-insights/

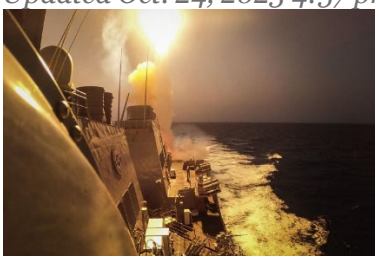
https://www.wsj.com/world/middle-east/iranian-backed-militias-mount-new-wave-of-attacks-as-u-s-supports-israel-d51364d4?mod=Searchresults_pos3&page=1

Iranian-Backed Militias Mount New Wave of Attacks as U.S. Supports Israel

Tehran appears to have ended an undeclared six-month truce

By Michael R. Gordon Follow, Nancy A. Youssef Follow and Gordon Lubold Follow

Updated Oct. 24, 2023 4:57 pm ET



The USS Carney guided missile cruiser, which was operating in the northern Red Sea, shot down four Iranian-provided cruise missiles last week, according to people familiar with the episode. PHOTO: U.S. NAVY

U.S. Secretary of State Antony Blinken warned Tuesday that Washington would react "swiftly and decisively" if Iran or its proxy forces attack U.S. personnel after Tehran raised the risk of a larger Middle East conflict in recent days by unleashing the regional militias it has spent years arming.

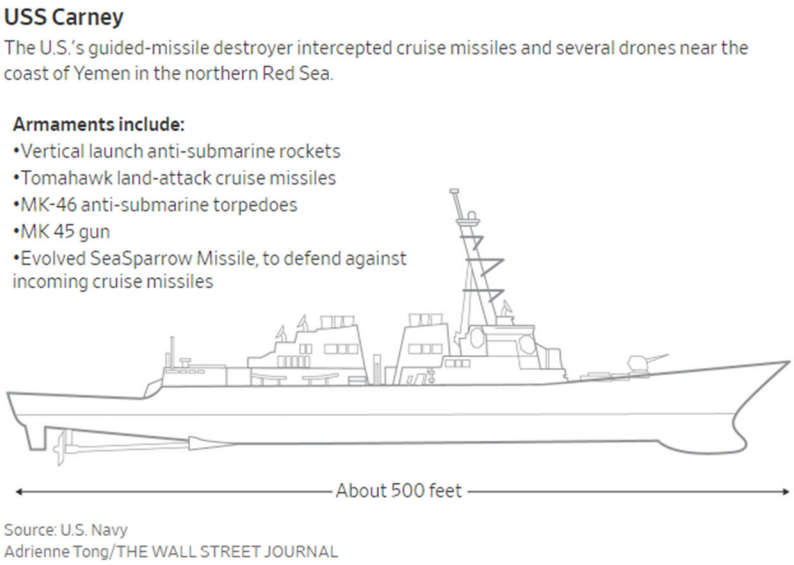
For more than six months, these Iranian-backed militia groups refrained from launching drones or rockets against American troops in Iraq and Syria, as part of what appeared to be an undeclared truce between Tehran and Washington.

That came to an abrupt end when U.S. officials said that Iran-backed groups launched 10 drone and rocket attacks against bases that U.S. troops use in Iraq and another three on a U.S. base in southeast Syria.

The attacks were carried out between Oct. 17 and Oct. 24. In one of the attacks at al-Asad air base in Iraq last week, U.S. troops shot a militia group's drone out of the sky, where it fell atop of an American drone and destroyed it, U.S. military officials said.

In Yemen, the Iranian-backed Houthis also fired five Iranian-provided cruise missiles and launched about 30 drones toward Israel in an attack that was larger than initially described by the Pentagon, U.S. officials said.

Last week, the USS Carney guided missile cruiser, which was operating in the northern Red Sea, shot down four of the cruise missiles while a fifth cruise missile was intercepted by Saudi Arabia as it protected its airspace, according to people familiar with the episode. Those cruise missiles have a range of more than 2,000 kilometers (about 1,240 miles), the Pentagon said Tuesday, which would enable them to reach targets in Israel.



Amid the surge of attacks on U.S. forces, the Pentagon deployed nearly a dozen air defense systems to countries across the Middle East ahead of Israel's expected land invasion of Gaza, moving missile launchers to Iraq, Syria and the Gulf, U.S. officials said.

The Pentagon is sending a Terminal High Altitude Area Defense, or Thaad, to Saudi Arabia, and Patriot surface-to-air missile systems to Kuwait, Jordan, Iraq, Saudi Arabia, Qatar and the United Arab Emirates. The systems are expected to be in place later this week, the officials said.

Military bases at al-Udeid in Qatar, Prince Sultan Air Base in Saudi Arabia, and the al-Dhafra base in the United Arab Emirates are all getting air defense systems, military officials said.

The additional forces mark a shift in how the U.S. is deploying in the region. The U.S. had previously sent military assets to deter attacks on Israel from the Lebanese militia Hezbollah, but this week, the U.S. focus is on threats to American troops throughout the Middle East.

"The United States does not seek conflict with Iran; we do not want this war to widen," Blinken said Tuesday at a tense United Nations meeting. "But if Iran or its proxies attack U.S. personnel anywhere, make no mistake, we will defend our people, we will defend our security, swiftly and decisively."

Though Pentagon spokesman Air Force Brig. Gen. Pat Ryder said Monday that the U.S. doesn't have information that Iran "explicitly ordered" the recent militia attacks, Defense Department officials also say that Tehran is either actively encouraging the drone and missile strikes or is removing restraints on the groups it has armed and trained. But in either case, they hold Iran responsible.

"When you see this uptick in activity and attacks by many of these groups," a senior Defense official said, "there's Iranian fingerprints all over it."

This latest wave of militia attacks comes after Hamas's Oct. 7 assault on Israel and marks the end of what had been a relatively calm period between Washington and Tehran as the two sides conducted quiet talks over the release of American detainees held in Iran and the pace of Iran's nuclear program.

More broadly, however, the militia attacks reflect Iran's longstanding goal of driving American forces out of the Middle East and creating a wedge between Arab states and Washington.

U.S. interceptions of missiles and drones in Middle East

Note: As of Sunday, 3 p.m. *approximate
Source: Defense Department

Before the latest flare-up, the last attack was in March when an Iranian supported-militia in Iraq mounted a drone attack on American forces across the border in northeast Syria that killed an American contractor and injured U.S. military and civilian personnel. The Biden administration carried out airstrikes against Iranian-backed militias in Syria in response.

The new spate of militia attacks serves several purposes for Tehran in the view of regional analysts. In the near term, they say, Iran is trying to pressure the U.S. to encourage its Israeli ally to put off its ground incursion in Gaza.

That would help Hamas, which has long benefited from Iranian weapons, training and financial support, and would be a win for "the entire axis of resistance" that Tehran leads, said Kenneth Pollack, a former Central Intelligence Agency analyst who is now at the American Enterprise Institute think tank.

They want these groups not just to be attacking Israel but to be attacking us to draw a link between us and the Israelis," he added. "The more that they can do that, the more that they make it difficult for the Arab states, both to reconcile with Israel and continue to maintain these close relationships with us."

Iran's strategy of fighting through proxy forces goes back to the early 1990s when Tehran was recovering from its bloody eight-year war with Iraq and its goal was to devise a way to counter its adversaries without always meeting them head on.

While Iran has retained its ability to carry out conventional military operations, including with ballistic missiles and the Islamic Revolutionary Guard Corps naval forces, a main way of war is through militias that it has trained, financed and equipped.

“Iran understands that it would lose a conventional conflict with the United States,” said Norman Roule, a former CIA official with long experience in the Middle East. “However, Iran sees little cost and significant regional political gains if it fuels proxy attacks against the United States or Israel that may lead to long-term conflict that erodes the U.S. and Israeli reputation in the region.”

Iran’s militia network extends through Lebanon, Syria, Iraq, Yemen and Gaza. Many of the groups have their own agendas and a degree of autonomy, yet are under Iran’s influence.

The U.S. has long and at times bitter experience in confronting Iran-equipped militias. During the U.S. war in Iraq, hundreds of U.S. troops were killed and wounded by Shia militias that were equipped with explosively formed penetrators—a deadly type of roadside bomb supplied by Iran.

In the later campaign against Islamic State, Iran and the U.S. shared a common adversary and refrained from interfering with each other’s military activities in Iraq, though the goal was deconfliction and never cooperation.

After the defeat of Islamic State, the rivalry heated up again. Iran-backed militias attacked U.S. forces in Iraq during the Trump administration, which prompted the U.S. to carry out airstrikes against the Iranian militia Kataib Hezbollah and eventually a drone strike that killed Quds Force commander Qassem Soleimani in 2020.

President Biden’s first use of force as commander in chief was to carry out an airstrike against an Iranian supported group in Syria in response to a rocket attack in northern Iraq against the U.S.-led coalition. But Biden refrained from striking Iranian-backed militias in Iraq, and until last week those groups had been somewhat restrained as well.

Vivian Salama contributed to this article.

Write to Michael R. Gordon at michael.gordon@wsj.com, Nancy A. Youssef at nancy.youssef@wsj.com and Gordon Lubold at gordon.lubold@wsj.com

https://www.eia.gov/todayinenergy/detail.php?id=41073
AUGUST 27, 2019

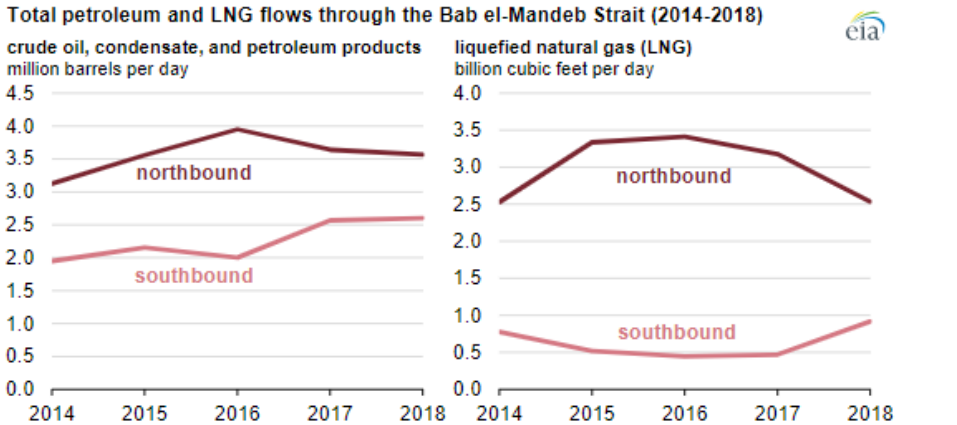
The Bab el-Mandeb Strait is a strategic route for oil and natural gas shipments

Source: U.S. Energy Information Administration

The Bab el-Mandeb Strait is a sea route chokepoint between the Horn of Africa and the Middle East, connecting the Red Sea to the Gulf of Aden and Arabian Sea. Most exports of petroleum and natural gas from the Persian Gulf that transit the Suez Canal or the SUMED Pipeline pass through both the Bab el-Mandeb and the Strait of Hormuz.

Chokepoints are narrow channels along widely used global sea routes that are critical to global energy security. The Bab el-Mandeb Strait is 18 miles wide at its narrowest point, limiting tanker traffic to two 2-mile-wide channels for inbound and outbound shipments. Closure of the Bab el-Mandeb Strait could keep tankers originating in the Persian Gulf from transiting the Suez Canal or reaching the SUMED Pipeline, forcing them to divert around the southern tip of Africa, which would increase transit time and shipping costs.

In 2018, an estimated 6.2 million barrels per day (b/d) of crude oil, condensate, and refined petroleum products flowed through the Bab el-Mandeb Strait toward Europe, the United States, and Asia, an increase from 5.1 million b/d in 2014. Total petroleum flows through the Bab el-Mandeb Strait accounted for about 9% of total seaborne-traded petroleum (crude oil and refined petroleum products) in 2017. About 3.6 million b/d moved north toward Europe; another 2.6 million b/d flowed in the opposite direction mainly to Asian markets such as Singapore, China, and India.



Source: U.S. Energy Information Administration, based on ClipperData, Inc; Suez Canal Authority; and International Group of LNG Importers (GIIGNL) using EIA conversion factors.
Note: CSV data

Before 2015, volumes of liquefied natural gas (LNG) passing through the Bab el-Mandeb Strait matched those passing through the Suez Canal because the Red Sea did not have any LNG infrastructure. In 2015, both Jordan and Egypt began importing small volumes of LNG into Red Sea ports, and these countries' imports of LNG peaked in 2016 at 1.4 billion cubic feet per day, 80% of which was delivered through the Bab el-Mandeb Strait.

More recently, as new natural gas fields in Egypt have come online, the need for Egypt to import LNG has decreased. Like flows to Egypt, total northbound flows of LNG via the Bab el-Mandeb have also decreased since 2016 as northbound flows to other destinations have remained fairly constant.

Organisation of Islamic Cooperation

The Collective Voice of The Muslim World

9th Ministerial Conference for Food Security and Agricultural Development ...

Member States


Republic of AZERBAIJAN
Member since 1992
National day 28/5

Hashemite Kingdom of JORDAN
Member since 1969
National day 25/5


Islamic Republic of AFGHANISTAN
Member since 1969
National day 19/8


Republic of ALBANIA
Member since 1992
National day 28/11


State of The UNITED ARAB EMIRATES
Member since 1972
National day 2/12


Republic of INDONESIA
Member since 1969
National day 17/8


Republic of UZBEKISTAN
Member since 1996
National day 1/9


Republic of UGANDA
Member since 1974
National day 9/10


Islamic Republic of IRAN
Member since 1969
National day 11/2


Islamic Republic of PAKISTAN
Member since 1969
National day 23/3


Kingdom of BAHRAIN
Member since 1972
National day 16/12


BRUNEI-DARUSSALAM
Member since 1984
National day 23/2


People's Republic of BANGLADESH
Member since 1974
National day 26/3


Republic of BENIN
Member since 1983
National day 1/8


BURKINA-FASO (then Upper Volta)
Member since 1974
National day 11/12


Republic of TAJIKISTAN
Member since 1992
National day 9/9


Republic of Türkiye
Member since 1969
National day 29/10


Turkmenistan
Member since 1992
National day 27/9


Republic of CHAD
Member since 1969
National day 11/8


Republic of TOGO
Member since 1997
National day 27/4


Republic of TUNISIA
Member since 1969
National day 20/3


People's Democratic Republic of ALGERIA
Member since 1969
National day 1/11


Republic of DJIBOUTI
Member since 1978
National day 27/6


Kingdom of SAUDI ARABIA
Member since 1969
National day 23/9


Republic of SENEGAL
Member since 1969
National day 4/4


Republic of The SUDAN
Member since 1969
National day 1/1


SYRIAN Arab Republic
Member since 1972
National day 17/4


Republic of SURINAME
Member since 1996
National day 25/11


Republic of SIERRA LEONE
Member since 1972
National day 27/4


Republic of SOMALIA
Member since 1969
National day 1/7


Republic of IRAQ
Member since 1975
National day --/--


Sultanate of OMAN
Member since 1972
National day 18/11


Republic of GABON
Member since 1974
National day 17/8


Republic of The Gambia
Member since 1974
National day 18/2


Republic of GUYANA
Member since 1998
National day 23/2


Republic of GUINEA
Member since 1969
National day 2/10


Republic of GUINEA-BISSAU
Member since 1974
National day 24/9


State of PALESTINE
Member since 1969
National day 15/11


Union of The COMOROS
Member since 1976
National day 6/7


KYRGYZ Republic
Member since 1992
National day 31/8


State of QATAR
Member since 1972
National day 18/12


Republic of KAZAKHSTAN
Member since 1995
National day 16/12


Republic of CAMEROON
Member since 1974
National day 20/5


Republic of COTE D'IVOIRE
Member since 2001
National day 7/8


State of KUWAIT
Member since 1969
National day 25/2


Republic of LEBANON
Member since 1969
National day 22/11


Libya
Member since 1969
National day 24/12


Republic of MALDIVES
Member since 1976
National day 26/7


Republic of MALI
Member since 1969
National day 22/9


MALAYSIA
Member since 1969
National day 31/8


Arab Republic of EGYPT
Member since 1969
National day 23/7


Kingdom of MOROCCO
Member since 1969
National day 30/7


Islamic Republic of MAURITANIA
Member since 1969
National day 28/11


Republic of MOZAMBIQUE
Member since 1994
National day 25/6


Republic of NIGER
Member since 1969
National day 18/12


Federal Republic of NIGERIA
Member since 1986
National day 1/10


Republic of YEMEN
Member since 1969
National day 22/5

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION
OFFICE OF THE SECRETARY
WASHINGTON, D.C.

Issued by the Department of Transportation
on the 27th day of October, 2023

Served: October 27, 2023

In the matter of 14 CFR Part 213 Phase 2 Amendment of Order 2020-6-1 regarding: **Air China Limited d/b/a Air China; Beijing Capital Airlines Co., Ltd.; China Eastern Airlines Corporation Limited; China Southern Airlines Company Limited; Hainan Airlines Holding Co. Ltd.; Sichuan Airlines Co., Ltd.; and Xiamen Airlines**	Docket DOT-OST-2020-0052

ORDER AMENDING 14 CFR PART 213 ORDER 2020-6-1

Summary

As discussed below, the U.S. Department of Transportation (the Department) is further modifying the decision reached under 14 CFR Part 213 in Order 2020-6-1 to permit the above-captioned combination carriers of China to operate additional weekly round-trip scheduled passenger flights to and from the United States. Specifically, effective November 9, 2023, the specified Chinese carriers may operate, in the aggregate, a total of thirty-five (35) weekly round-trip scheduled passenger flights to and from the United States.

Background

Beginning on June 3, 2020, the Department took a series of actions under 14 CFR Part 213 to address pandemic-related measures taken by the Government of the People's Republic of China (PRC). The Department fully set forth background information and the bases for its decisions in Orders 2020-5-4, 2020-6-1, 2020-6-3, 2020-6-6, 2020-8-6, 2023-5-6, and 2023-

8-10. Order 2020-6-3 and the Orders that followed have authorized incremental increases in authorized services by PRC air carriers in the China-U.S. market. On August 11, 2023, the Department issued Order 2023-8-10 to allow for the most recent increase of services by the above-captioned carriers. Specifically, Order 2023-8-10 provided for (1) effective September 1, 2023, the specified Chinese carriers to operate, in the aggregate, a total of eighteen (18) weekly round-trip scheduled passenger flights to and from the United States; and (2) effective October 29, 2023, the specified Chinese carriers to operate, in the aggregate, a total of twenty-four (24) weekly round-trip scheduled passenger flights to and from the United States. In Notices issued on August 21, 2023, and September 26, 2023, the Department approved Chinese-carrier schedules for the respective increases in weekly flights provided for by Order 2023-8-10.[1]

Decision

The Department has continued to assess market conditions and other factors associated with its Part 213 posture. In that regard, we have determined that it is in the public interest to undertake a sixth modification of Order 2020-6-1 to permit the above-captioned combination carriers of China, in accordance with the schedules that have been and/or will be filed as required by Order 2020-5-4 and are approved by the Department, to operate additional weekly round-trip scheduled passenger flights to and from the United States. Specifically, effective November 9, 2023, the specified Chinese carriers may operate, in the aggregate, a total of thirty-five (35) weekly round-trip scheduled passenger flights to and from the United States.

As the Department stated in Order 2020-6-1, our overriding goal is an improved environment wherein the carriers of both parties are able to exercise fully their bilateral rights to maintain a competitive balance and fair and equal opportunity among U.S. and Chinese air carriers. To that end, we seek to continue the ongoing and productive dialogue with CAAC to facilitate a gradual, broader reopening of the U.S.-China air services market. Accordingly, the Department intends to establish a roadmap that will provide for a phased and predictable return to the capacity entitlements in the Agreement conditioned upon carriers' ability to exercise all rights and opportunities provided for under the Agreement. Contingent upon that outcome, the Department hopes to realize a significant step forward in the further normalization of the U.S.-China air transportation market in anticipation of the Summer 2024 traffic season.

ACCORDINGLY,

1. We modify Order 2020-6-1 to permit, effective November 9, 2023, in the aggregate and subject to the limitations and schedule approval requirements outlined above, thirty-five (35)

[1] *See* Department Notice issued in this Docket on September 26, 2023, for a summary of the approved schedules for the twenty-four (24) weekly round-trip scheduled U.S.-China passenger flights by Chinese carriers that are currently authorized by the Department. The Department reiterates that, pursuant to the terms of our previous Orders and Notices in this Docket, the schedules for these twenty-four (24) weekly flights may not be modified unless expressly authorized by the Department.

weekly round-trip scheduled passenger operations to be operated by the above captioned Chinese carriers in accordance with the schedules filed pursuant to Order 2020-5-4;

2. For the services specified in ordering paragraphs 1 and 2, we direct Air China Limited d/b/a Air China; Beijing Capital Airlines Co., Ltd.; China Eastern Airlines Corporation Limited; China Southern Airlines Company Limited; Hainan Airlines Holding Co. Ltd.; Sichuan Airlines Co., Ltd.; and Xiamen Airlines, as appropriate, to file proposed schedules in Docket DOT-OST-2020-0052 for Department consideration;[2]

3. We may amend, modify, or revoke this Order at any time and without hearing; and

4. We will serve this Order on Air China Limited d/b/a Air China; Beijing Capital Airlines Co., Ltd.; China Eastern Airlines Corporation Limited; China Southern Airlines Company Limited; Hainan Airlines Holding Co. Ltd.; Sichuan Airlines Co., Ltd.; and Xiamen Airlines; all certificated U.S. carriers operating large aircraft; the Embassy of the People's Republic of China in Washington, D.C.; the Civil Aviation Administration of China (CAAC); the Department of State; the Transportation Security Administration; and the Federal Aviation Administration.

By:

Carol A. (Annie) Petsonk
Assistant Secretary
Aviation and International Affairs

(SEAL)

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[2] The Department intends to continue to take separate actions to explicitly specify the schedules for the services that we will approve.

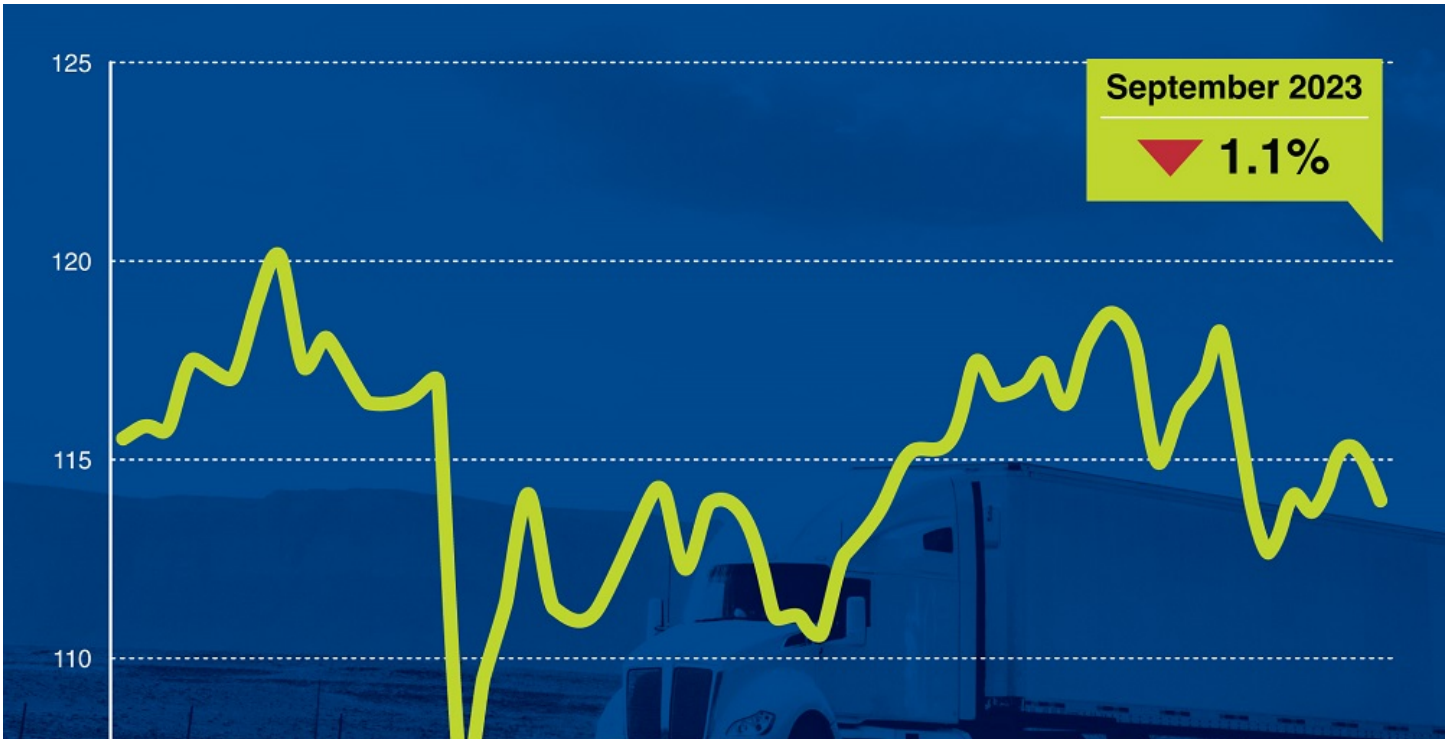
Article Link

ATA Truck Tonnage Index Fell 1.1% in September

Oct 24, 2023

Index 4.1% Below September 2022

Washington – American Trucking Associations' advanced seasonally adjusted (SA) For-Hire Truck Tonnage Index decreased 1.1% in September after rising 0.2% in August. In September, the index equaled 113.9 (2015=100) compared with 115.2 in August.



"After hitting a bottom in April, tonnage increased in three of the previous four months, gaining a total of 2.2% before September's drop," said **ATA Chief Economist Bob Costello.** "However, this freight market remains in flux, and the index contracted by 1.1% in September, which erased half of those gains. Additionally, the year-over-year decrease was the largest drop since November 2020 on a very difficult comparison – September 2022 – which was the previous cycle high. While it is likely a bottom has been hit in truck freight tonnage, there could still be choppy waters ahead as the freight market remains volatile."

August's increase was unchanged from our September 19 press release.

Compared with September 2022, the SA index fell 4.1%, which was the seventh straight year-over-year decrease and the largest over that period. In August, the index was down 2.4% from a year earlier.

The not seasonally adjusted index, which represents the change in tonnage actually hauled by the fleets before any seasonal adjustment, equaled 112.5 in September, 6.8% below the August level (120.7). In calculating the index, 100 represents 2015. ATA's For-Hire Truck Tonnage Index is dominated by contract freight as opposed to spot market freight.

Trucking serves as a barometer of the U.S. economy, representing 72.6% of tonnage carried by all modes of domestic freight transportation, including manufactured and retail goods. Trucks hauled 11.46 billion tons of freight in 2022. Motor carriers collected $940.8 billion, or 80.7% of total revenue earned by all transport modes.

ATA calculates the tonnage index based on surveys from its membership and has been doing so since the 1970s. This is a preliminary figure and subject to change in the final report issued around the 5th day of each month. The report includes month-to-month and year-over-year results, relevant economic comparisons, and key financial indicators.

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TEXAS UPSTREAM EMPLOYMENT INCREASES WHILE GEOPOLITICAL CONFLICTS UNDERSCORE CRITICAL IMPORTANCE OF DOMESTIC ENERGY PRODUCTION

Austin, Texas – Citing the latest Current Employment Statistics (CES) report from the U.S. Bureau of Labor Statistics (BLS), the Texas Independent Producers and Royalty Owners Association (TIPRO) today highlighted new employment figures showing an increase in upstream employment for the month of September. According to TIPRO's analysis, direct Texas upstream employment for September 2023 totaled 210,700, an increase of 1,700 jobs from revised August employment numbers. Texas upstream employment in September 2023 represented the addition of 18,700 positions compared to September 2022, including an increase of 2,600 jobs in oil and natural gas extraction and 16,100 jobs in the services sector.

TIPRO's new employment data yet again indicated strong job postings for the Texas oil and natural gas industry during the month of September. According to the association, there were 11,990 active unique jobs postings for the Texas oil and natural gas industry in September, including 4,564 new job postings added during the month by companies. In comparison, the state of California had 3,376 unique job postings last month, followed by Louisiana (1,652), Oklahoma (1,649) and Pennsylvania (1,218). TIPRO reported a total of 52,767 unique job postings nationwide last month within the oil and natural gas sector.

Among the 17 specific industry sectors TIPRO uses to define the Texas oil and natural gas industry, Gasoline Stations with Convenience Stores led in the ranking for unique job listings in September with 2,898 postings, followed by Support Activities for Oil and Gas Operations (2,343) and Crude Petroleum Extraction (1,365). The leading three cities by total unique oil and natural gas job postings were Houston (3,555), Midland (950) and Odessa (501), said TIPRO.

The top three companies ranked by unique job postings in September were Cefco (1,412), Love's (782), and John Wood Group (433), according to TIPRO. Of the top ten companies listed by unique job postings last month, six companies were in the services sector, followed by two in the gasoline stations category with convenience stores, one midstream company, and one in oil and natural gas extraction. Top posted industry occupations for September included first-line supervisors of retail sales workers (858), maintenance and repair workers (608) and heavy tractor-trailer truck drivers (314). The top posted job titles for September included store managers (301), customer service representatives (247), and maintenance people (194).

Top qualifications for unique job postings included valid driver's license (2,003), commercial driver's license (CDL) (237) and transportation worker identification credential (TWIC) card (209). TIPRO reports that 39 percent of unique job postings had no education requirement listed, 35 percent required a bachelor's degree, and 26 percent required a high school diploma or GED. There are 1,340 advertised salary observations (11 percent of the 11,990 matching postings) with a median salary of $52,100. The highest percentage of advertised salaries (30 percent) were in the $75,000 to $324,000 range.

Additional TIPRO workforce trends data:

- – A sample of 500 industry job postings in Texas for September 2023 can be viewed here.

- – The top three posting sources in September included www.indeed.com (4,978), www.simplyhired.com (1,929) and www.dejobs.org (1,575).
- – Average annual wages for the Texas oil and natural gas industry can be viewed here.
- – Leading industry positions in Texas with median hourly earnings, education, work experience and typical on-the-job training is available here.

TIPRO also highlights recent data released from the Texas comptroller's office showing tax contributions provided by the Texas oil and natural gas industry for the month of September. Texas energy producers last month paid $544 million in oil production taxes, up from the prior month, and also contributed $208 million in natural gas production taxes, also higher than totals collected in August. Oil and natural gas severance taxes remain an important source of revenue for state and local governments and continue to be used help to support and pay for road and infrastructure investments, water conservation projects, schools and education, first responders and other essential public services across the Lone Star State.

"Texas and the Permian continue to break production records while meeting rising energy demand for Americans and our allies abroad," said TIPRO President Ed Longanecker. "We are proud to see that high production numbers from our state are also contributing to a growth in employment in the oil and natural gas industry. With geopolitical conflicts escalating overseas and related market volatility, our industry continues to play an outsized role in supplying energy amid growing demand, underscoring the critical importance of U.S. oil and gas production at home and abroad."

"Texas continues to lead the nation in energy production," Longanecker continued. "Year-to-date through July 2023, Texas oil production accounted for over 43 percent of all oil production in the U.S. Similarly, natural gas production grew 5 percent nationwide, with a majority of the growth coming from the Permian Basin, where forecasts say natural gas production will increase by 11 percent (2.2 billion cubic feet per day) by the end of 2023, with more growth expected in 2024. Meanwhile, liquified natural gas (LNG) exports from Texas and Louisiana to our allies abroad have increased by 116 percent."

"No other industry in the world is as consequential from an economic, energy and national security perspective," Longanecker emphasized. "Operators across the United States and Texas need supportive policies at all levels of government to continue meeting energy demand and maintaining strong employment numbers, not policies that reward regimes like Venezuela, providing them with revenues to stay in power while putting pressure on responsible American producers. Supportive policy decisions must include the use of American oil and natural gas, addressing an outdated permitting process and avoiding policies that put our country at risk of an increased dependence on foreign energy sources. We need collaboration, not politics, to develop a cohesive and sensible strategy that recognizes the critical importance of the U.S. oil and gas industry and the necessary investment in energy infrastructure."

https://www.ft.com/content/1902a8ef-7078-47e2-8a62-b6f0050ed569

The CEO Mike Wirth
Chevron's Mike Wirth: 'We are not selling a product that is evil'

Andrew Edgecliffe-Johnson and **Jamie Smyth** YESTERDAY

To Chevron's critics, who range from Just Stop Oil protesters to the governor of its home state and the president of the United States, the $300bn US oil and gas major exemplifies an industry recklessly promoting products it knows are warming the globe while greedily pushing up petrol prices.

But to its chief executive, Mike Wirth, the business he joined 41 years ago is "selling a product that has changed the quality of life on this planet. For the better".

Speaking in the weeks before Chevron agreed to buy US oil and gas producer Hess Corporation in a $53bn deal, Wirth said his company would seek to engage with critics "to be part of the solution". But he added: "that can't deter us from what we do."
Chevron's culture was "grounded in integrity and a deep belief in doing the right thing", Wirth said, with steady conviction. "We are not selling a product that is evil. We're selling a product that's good."

Wirth has chosen to run one of the world's largest oil and gas producers at a time when scientific consensus is pointing more clearly than ever to the role fossil fuels play in heating that world. That makes running an energy company in 2023 a singular leadership challenge. The prospect of winning over big oil's antagonists looks remote, and the bodyguard travelling with Wirth is a reminder that the opposition he faces is not just rhetorical.

"I think of the CEO position as being a weight-bearing position," Wirth said. Rather than cave in to the pressure, the 63-year-old recently extended his term, with Chevron's board waiving its mandatory retirement age so he can keep running the western world's second most valuable oil company. The rest of his tenure looks set to feature a reshaping of Chevron's industry, as highlighted by rival ExxonMobil's recent $60bn bid for Pioneer Natural Resources, which preceded its Hess deal by less than two weeks, and continued disputes over its environmental responsibilities. As peers such as BP and Shell tout more aggressive transitions to a lower-carbon future, Wirth set out the message that lower emissions matter, but should not come at the expense of an affordable and reliable energy supply. His blunt response to an International Energy Agency forecast that demand for fossil fuels will peak before 2030 was: "I don't think they're remotely right . . . You can build scenarios, but we live in the real world, and have to allocate capital to meet real world demands".

Energy security, energy affordability and lower emissions were "in tension with one another" Wirth admitted. But he said he was working on the basis that Chevron's core products will be in demand for decades to come. What that means, in practice, is that Chevron will spend just $2bn of its $14bn capital spending budget on lower carbon investments this year, because such bets offer lower returns. Like Exxon, it was bulking up in fossil fuels even before the Hess acquisition, announcing a $6.3bn deal in May for oil and gas producer PDC Energy. Despite headlines suggesting that an environmentally conscious new generation is turning its backon the oil business, Wirth said Chevron was having no problem hiring. And he reminds its people "every single day" that they "help make the world better".

Wirth was born in Los Alamos, where his father worked in the National Laboratory, a federally funded research and development centre, before moving the family to Golden, Colorado, to become an executive at Coors. In one summer job at the brewer, Wirth found himself making ashtrays, and realised what loyalty his father inspired by talking to people on the production line.

On site visits now he makes a point of talking to "the operators, the mechanics, the people who work with their hands", he said. "The people that really do the hard work are the ones that I try to spend time with because I learned how important it was to show your respect for them."

Wirth also credits schools football and basketball coaches for instilling in him values of hard work, discipline and teamwork. One coach pushed Wirth to do things he did not think were possible, including running up and down Lookout Mountain, a more than 7,000-foot peak overlooking his hometown.

It taught him “the power of believing in somebody and seeing something in somebody that they don’t see in themselves”, he said. Wirth now leans on the advice of three former Chevron CEOs, who all live within five miles of his house. “These guys have lived through the fall of the Soviet Union, multiple recessions and wars and embargoes and terrorist attacks,” he noted. Over regular lunches he grills them on the lessons they learnt from such crises. He said his own leadership of Chevron is defined by “capital discipline”. Wirth, who has a degree in chemical engineering from the University of Colorado, led the company’s refining business before becoming CEO, where tight margins mean “you have to watch every penny”. He took charge at the end of a decade-long shale investment boom in the US and soon applied the brakes on spending. One of his first big decisions was to walk away from a $50bn-plus takeover battle with rival Occidental Petroleum for Anadarko Petroleum. “I told people we want to win in any environment but we are not going to win at any cost,” he recalled. It was a prescient decision. Soon after, the pandemic struck, oil prices collapsed and a debt-laden Occidental was plunged into crisis. Since then, Wirth’s cost controls and surging oil prices following Russia’s invasion of Ukraine have turned Chevron into a cash generating machine, with returns on capital employed more than double what they were in 2018. After almost $70bn in dividends and buybacks since he became CEO, its shares have outshone big European rivals. That capital discipline created the backdrop for Chevron’s latest megamerger. The deal was announced in the weeks after Wirth spoke with the FT in September, but he hinted at the time towards the possibility of further acquisitions: “Could it happen? I think it probably could.” Wirth also cautioned, however, that big dealmaking was “more difficult today”, highlighting that companies were better run than they were when Chevron bought Texaco for $36bn in 2000, so acquisitions offered fewer savings. “The regulatory issues become more germane as you get to larger and larger deals,” he noted, adding: “Big companies are complicated to run; they’re really complicated to put two of them together.” Chevron’s decision to prioritise profits and continued oil production over decarbonisation has made it a target for progressive politicians, climate litigants and campaigners.

Last month California — the state where Chevron is headquartered — sued the company and several of its competitors, claiming they deceived the public for decades about the environmental harm fossil fuels were doing. California’s governor, Gavin Newsom, followed up with a potshot at Wirth. “Decent guy, I’m sure — or I thought, before we filed the lawsuit and I finally understood more than I did before we put together all the evidence,” Newsom remarked. Wirth denies the lawsuits’ claims. “We have never deceived anybody. We have been part of that[climate] discussion all along but we didn’t know something and say ‘Oh well, wait, we are going to mislead people or we are going to not talk about this’.”

Last year Wirth sparred with President Joe Biden, who complained about energy companies “making more money than God” — at consumers’ expense — after Russia’s invasion of Ukraine. “He’d written . . . a public letter to me and some other CEOs that I felt was inaccurate and I wanted to set the record straight,” Wirth explained. But he has bucked a trend among CEOs to speak out on polarising issues from abortion to transgender rights. Doing so could divide the company’s more than 43,000 employees, he reasons, many of whom work in progressive California or conservative Texas. “I’ve avoided speaking up because I’d be speaking on behalf of part of my workforce, and in opposition to another part of my workforce. And my role isn’t to weigh in on election laws, or bathroom policies, or gun laws,” Wirth said. Most of these issues “are things that companies aren’t there to adjudicate”.

Chevron’s extension of Wirth’s tenure was a divergence from succession planning orthodoxy, which he defended as avoiding the distracting “guessing game” a fixed retirement date could have started. His predecessors typically served for around a decade, he noted. That would take Wirth up to2028. Asked what he wanted his legacy to be, he replied “I hope they say, ‘hey, he was a decent leader that cared about the people and cared about the culture and moved the company forward in a world that’s moving forward’. I don’t have a deep kind of a statement on legacy.”

https://www.siemens-energy.com/global/en/home/press-releases/ad-hoc--siemens-energy-comments-on-media-reports.html

Ad-hoc: Siemens Energy comments on media reports

Press release

October 26, 2023 Berlin

In light of recent media reports regarding talks with the German government, Siemens Energy AG states the following: Siemens Energy financial results for fiscal year 2023 are expected to be fully in line with guidance. The former Gas and Power businesses are expected to continue their excellent performance in fiscal year 2024 and are on track to achieve their mid-term targets (fiscal year 2025). The wind business Siemens Gamesa is working through the quality issues and is addressing the offshore ramp up challenges as announced in the third quarter communication for fiscal year 2023. As Siemens Gamesa is for the time being not concluding new contracts for certain onshore platforms and is applying strict selectivity in the offshore business, order intake and revenue are expected to be lower than market expectations for fiscal year 2024, and net losses and cash outflow are expected to be higher than market forecasts.

The strong growth in order intake, particularly in the former Gas and Power business areas, leads to a rising need of guarantees for long-term projects. Considering this requirement, the Executive Board is evaluating various measures to strengthen the balance sheet of Siemens Energy and is in preliminary talks with different stakeholders, including banking partners and the German government, to ensure access to an increasing volume of guarantees necessary to facilitate the anticipated strong growth.

Siemens Energy's budgeting process is still ongoing and no decisions in respect to the annual budget 2024 and/or any specific financing measures have yet been taken by the Executive Board.

Explanations of financial measures used can be found in the Annual Report 2022 of Siemens Energy AG (available at www.siemens-energy.com/annual-report-2022), in particular in Section 2.2.

Siemens Energy AG is also guarantor for the mandatory convertible bond with ISIN DE000A3K81W7 und the bonds with ISIN XS2601458602 and XS2601459162.

https://www.siemens-energy.com/global/en/company/investor-relations.html

Notice to Shareholders of Siemens Gamesa Renewable Energy

Notice to Shareholders of Siemens Gamesa Renewable Energy

We are pleased to announce that Siemens Gamesa minority shareholders approved the capital reduction and as a result the shareholders will receive compensation of €18.05 per Siemens Gamesa share probably in July. You do not need to take any action in this regard. The payment will be made automatically via your bank in July.

Siemens Energy withdraws profit guidance due to Siemens Gamesa - June 22, 2023

Following the substantial increase in failure rates of wind turbine components, the board of Siemens Gamesa initiated an extended technical review of Siemens Gamesa's installed fleet and product designs.

The current status of the technical review suggests that in order to reach the targeted product quality of certain Onshore platforms, significantly higher costs will be incurred than previously assumed. Potential quality related measures and the associated costs are currently under evaluation and are likely to be in excess of 1 bn Euro.

We are also reviewing assumptions critical to the existing business plans given productivity improvements are not materializing to the extent previously expected. In addition, we continue to experience ramp up challenges in Offshore.

It is too early to have an exact estimate of the potential financial impact of the quality topics and to gauge the impact of the review of our assumptions on our business plans. However, based on our initial assessment as of today, the potential magnitude of the impact leads us to withdraw the profit assumptions for Siemens Gamesa and consequently the profit guidance for Siemens Energy Group for fiscal year 2023. We maintain our revenue guidance for the Group as well as all our assumptions for Gas Services, Grid Technologies and Transformation of Industry. Further details and quantification will be provided in the context of our regular disclosure for the 3rd quarter of fiscal year 2023.

Conference Call on ad-hoc announcement

When: Friday, June 23, 2023
Time: 07:30am (CEST) / 06:30am (BST) / 01:30am (EDT)

If you intend to listen to the call and **to ask a question during the call** please get the **dial-in details** using the following **link for registration**.

You can also follow the call as a webcast.

https://www.msn.com/en-us/money/markets/electricity-prices-must-rise-by-70pc-to-pay-for-more-wind-farms/ar-AA1iQeUS

The Telegraph

Electricity prices ‘must rise by 70pc to pay for more wind farms’

Story by Jonathan Leake • 3d

RWE's Tom Glover: 'No new wind farms will be built off UK shores until the Government budges on price' - Andre Laaks© Provided by The Telegraph

No new wind farms will be built off Britain’s shores unless the Government lets operators earn more money from the electricity they produce, the chief of the nation’s biggest generator has said.

Tom Glover, country chair of RWE’s UK arm, said the price offered by the Government to wind farm operators must rise by as much as 70pc to entice companies to build.

Developers must be offered between £65 and £75 per megawatt hour (MwH) for the power generated from wind farms, Mr Glover said.

That compares to the £44 offered in the most recent government-run auction.

His warning follows the disastrous result of the last offshore wind allocation round in September, which ended in a humiliation for ministers with not one company offering to build new offshore wind farms.

Mr Glover called the incident “clumsy” and said a failure to increase the price offered to developers risked a repeat.

Under the terms of the government auction, developers sign up to a “contracts for difference” programme that offers a minimum “strike price” for their output. If market prices fall below the strike price, the generators are paid the difference.

If market prices are above the strike price, the generators pay the excess.

His comments come as the Government prepares draft plans for its next allocation round, expected to be published in the next two to three weeks.

Increasing the strike price could mean higher consumer bills.

However, Mr Glover argued that the most likely alternatives, such as gas, would be even more expensive than wind.

Mr Glover said the UK risked missing its target of building 50 gigawatts (Gw) of offshore wind capacity by 2030 unless the next round was redesigned to attract investors.

The UK currently has just 14Gw of offshore wind capacity, so must install at least one new turbine a day from now to 2030 to meet its goal.

That will only happen if developers are paid the right money, Mr Glover said.

He said: “We need to see a materially higher price. Every project is different but £65 to £75 feels about the right range.

Ana Musat, policy director at RenewableUK, the wind industry’s trade body, said: “International competition to secure private investment in clean energy projects is intense as other countries are seeking to lure developers away from the UK to work elsewhere.

“We cannot afford a repeat of what happened in this year’s auction, so the success of the next one is vital if we’re to reassure investors and build up our offshore wind supply chain.”

Generators may never make a profit if the strike price is set too low, which is why the last round failed.

Many in the industry believe the failure of the last round was avoidable with Grant Shapps, then the energy secretary, given repeated warnings that the £44 strike price was too low.

Mr Glover said: “The industry warned the Government about this. We’d seen a global increase in costs of up to 40pc and demand was also booming because, post-Ukraine, everybody wants more energy independence.

“The industry warned the Government but it decided not to increase the prices.”

Inflation hitting the sector means some developers also pulled out of existing projects. In July, Vattenfall announced it was halting development of the Boreas offshore wind farm, which was slated to add 1.4Gw of generating capacity.

Mr Glover estimated the Government's failure to respond to inflation in energy projects had delayed UK offshore wind development by up to two years.

RWE is a German firm but has operations across Europe, Asia-Pacific and North America, collectively employing 19,000 people.

In the UK, it supplies 15pc of the nation's electricity – making it the biggest single power generator with an output sufficient for 14 million homes.

That power comes from a fleet of gas-fired power stations, hydroelectric plants and more than a dozen offshore wind farms in operation or under development.

A Department for Energy Security and Net Zero spokesman said it was planning "appropriate adjustments" to the contracts for difference offered to offshore wind developers.

The spokesman said: "We have contracted 20GW of offshore wind since 2014 – cementing the UK as a world leader in the technology with the five largest operational wind farms in the world off our shores.

"The Government remains committed to its ambition for 50GW of offshore wind, including up to 5GW floating wind, by 2030."

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Follow

Is there a perfect storm brewing in the offshore wind industry?

In recent weeks, for the first time, offshore wind projects in Europe and the U.S. have been stopped, mainly citing cost increases. In other news, turbine manufacturers were once again in the red in their latest quarterly reports, with losses running into billions.

This is not good news, it's in fact the worst-case scenario for the energy transition when large projects that have already been awarded are not realised as planned. Happening at a time when the entire offshore industry has to scale up to achieve expansion targets, this quickly calls into question the achievement of climate protection goals.

This dilemma is fuelled by a combination of factors, including cost increases due to ongoing inflation and rising interest rates, as well as structural supply shortages and the strained state of supply chains.

This development must serve as a wake-up call for policymakers to adapt the regulatory framework to market realities. Five areas of action can help navigate through the storm.

1. A frontloaded auction schedule can increase the investment certainty for the whole industry. That includes the early auctioning of large sea areas.

2. Grid connection of offshore wind farms have to be accelerated and developers need to have certainty about connection dates.

3. Allowance for dual route-to-market: 2-sided Contracts for Difference (CfDs) with inflation indexation as one element, and a second element which allows the marketing of offshore power to industrial customers through private PPAs. In addition, qualitative auction criteria can strengthen the European supply chain, sustainability, and deliverability.

4. When auction schemes cap budgets, for example like CfDs in the UK, governments need to recognise the inflationary environment and that costs have gone up significantly. Sticking with the old assumptions of nominal cost reduction will simply slow down or stop offshore technology deployment.

5. Direct and indirect financial support to stimulate investments in European manufacturing capacities and a master plan to secure access to vital raw materials.

In a nutshell: we need a framework that allows for more investment certainty for both manufacturers and

developers.

At RWE, we are building and driving forward the development of several projects where we have been awarded the seabeds: in Germany, the UK, the Netherlands, Denmark, Ireland, Poland and the U.S. To deal with the challenging market situation, securing financing and strong relationships with your supply chain are key.

However, the right framework and policies, as outlined here, are imperative for offshore wind energy to realise its fullest potential in the future.

	Ford Blue	Ford Model e	Ford Pro
Q3 2023 Results			
Wholesales (000)	736	36	314
H / (L) Q3 22	(1) %	44 %	(2) %
Revenue ($B)	$ 25.6	$ 1.8	$ 13.8
H / (L) Q3 22	7 %	26 %	16 %
EBIT ($M)	$ 1,718	$ (1,329)	$ 1,654
H / (L) Q3 22	252	(717)	1,252
EBIT Margin (%)	6.7 %	(75.6) %	12.0 %
H / (L) Q3 22	0.6 ppts	(31.9) ppts	8.6 ppts
Year-To-Date Results			
Wholesales (000)	2,162	82	1,016
H / (L) YTD 22	4 %	23 %	8 %
Revenue ($B)	$ 75.7	$ 4.3	$ 42.7
H / (L) YTD 22	11 %	16 %	22 %
EBIT ($M)	$ 6,649	$ (3,131)	$ 5,411
H / (L) YTD 22	1,351	(1,629)	3,639
EBIT Margin (%)	8.8 %	(72.8) %	12.7 %
H / (L) YTD 22	1.1 ppts	(32.1) ppts	7.6 ppts

Ford Blue is rolling out new derivatives of its iconic nameplates, which are hugely popular with customers and generate superior revenue and margins. They include the forthcoming Ranger Raptor pickup, Mustang GTD super-car and track variants, and new extensions of the Bronco and Maverick nameplates.

Third-quarter wholesales of **Ford Model e**'s first-generation electric vehicles increased 44% and revenue was up 26%. The segment recorded an EBIT loss of $1.3 billion, attributable to continued investment in next-generation EVs and challenging market dynamics.

According to the company, many North America customers interested in buying EVs are unwilling to pay premiums for them over gas or hybrid vehicles, sharply compressing EV prices and profitability. Partly in response, Ford this month introduced the F-150 Lightning Flash pickup, combining popular technology-based features in a competitively priced electric truck.

"Ford is able to balance production of gas, hybrid and electric vehicles to match the speed of EV adoption in a way that others can't," said CFO John Lawler. "That's obviously good for customers, who get the products they want – and good for us, too, because disciplined capital allocation and not chasing scale at all costs maximizes profitability and cash flow."

All Ford customers will benefit over time from newly imagined, developed and delivered **software-enabled services**. During the third quarter, total paid software subscriptions were up more than 50% year-over-year and are now approaching 600,000.

In August, the company announced that former Apple veteran Peter Stern would establish and lead Ford Integrated Services. Stern's team will market high-value services leveraging technologies such as the Ford BlueCruise advanced driver-assistance system – with which customers have now driven more than 125 million hands-free miles – and in areas like productivity, security, and next-generation buying and service experiences.

Our discussion also includes forward-looking statements about our expectations. Actual results may differ from those stated. The most significant factors that could cause results to differ are included on Page 26. Unless otherwise noted, all comparisons are year-over-year. Company EBIT, EPS, and free cash flow are on an adjusted basis.

Now, I'd like to turn the call over to Jim.

James D. Farley {BIO 5304530 <GO>}

Thank you, Lynn. Hello, everyone, and thanks for joining us today.

I wanted to start by thanking the Ford team who worked tirelessly and creatively over the past several months to reach a tentative agreement with the United Auto Workers. I'm pleased, so pleased for our employees. This week, I was able to visit each of the struck plants. I was impressed by their preparation for startup. And the feeling I got is people just want to get back to work.

Once the deal is ratified, we will provide all of you a deeper look at the contract and its impact on our business. Right now, we're focused on restarting three important assembly plants: Calling back more than 20,000 Ford employees to work, Supporting our suppliers as they restart, and shipping lots of Super Duties Explorers and Broncos to our customers. It's been a challenging situation for sure. Matter of fact, our business is never short of challenges, especially right now with the evolution of the EV market and new global competitors from China, as well as the technology disruptions. But I am more excited and motivated than ever.

Our team is making tremendous progress every day towards building a Ford that thrives at the intersection of fantastic and iconic vehicles, terrific brands, and especially software and services. We are deep into the development of our future software platforms, which provide the foundation for rapid innovation in a profitable new software and services business and constantly improving experiences for our customers.

We believe Ford Plus is the right strategy to win in this constantly evolving industry transformation. We're building a more dynamic and less cyclical company, and we are nowhere near peak profitability. We have the right team and talent, and we are in the process of building a culture of excellence and execution. In a moment, John will detail the quarter, which I would call mixed. The strength of our products, and revenues, and businesses to find definitely came through in our results. But at the same time, we were negatively impacted by the strike and our cost and quality remained a drag on our business.

Now, last week, we made some important leadership changes. Kumar Galhotra, as COO, will now control the key levers for transformative change in our industrial system; powertrain, ice and hybrid products, vehicle hardware engineering, cycle plan, quality, supply chain, and manufacturing. He'll work in tandem, of course, with Doug Field, Chief of our EV, Digital and Design Officer, to move us forward. I believe this will accelerate our progress on cost and quality. And I hope we get into that in the Q&A. These are my top two priorities.

Overall, we are seeing the clear benefits of creating three distinct growth businesses, now with Ford Blue, Model e, and Pro. The story of Ford Blue comes down to product strength. Incredibly strong brands like Mustang and Bronco and Raptor, they have durable pricing power and real choice between gas and hybrid. Ford is America's best-selling brand now through three quarters, even with the effects of the strike and we have a wave of new products coming in the next few months.

The new F-150, the Ranger, a brand-new Explorer, an Expedition and Navigator. In fact, close to 60% of our volume and revenues in the U.S. will be new and refreshed next year. I'm so thankful we have kept our foot on the gas to freshen our ICE and HEV products as we enter a changing market. In Europe, we bring out new versions of Puma and Kuga, our high-volume gas and hybrid SUVs. And the Ranger pickup and our Everest SUV that's based on it continue to gain share in international markets. So bottom line, Ford Blue will be strong and a growing business for years to come.

We also remain bullish on Model e and our EV future, but clearly, the market is a moving target. I'm optimistic because customers are smart and they're rational. And for many of them, EVs are a great choice. I've been spending a ton of time in our product development center with both Doug Field and Alan Clarke. And you should see the Gen 2 and Gen 3 EVs we're working on. Our Gen 2 all-new full-size pickup truck, for example, is one of the one of the most thrilling vehicles I've ever seen in my career.

Let me be specific. Stunning performance like no truck has ever performed. Ability and unexpected innovation for truck customers far beyond the normal truck attributes. A super flexible cabin that feels like a lounge or a tiny office. Take the wheels off this truck and it's still a mind-blowing product. And a digital experience that totally is immersive and personalized. I take this truck seven days of the week over a cyber truck. But great product is not enough in the EV business anymore. We have to be totally competitive on cost. Tesla actually gave us a huge gift with the laser focus on cost and scaling the Model Y. They set the standard.

And we are now making real progress on our second and third-cycle EVs that are in the midst of being developed today as we get closer to the Introductions. While our Gen 2 EVs we're targeting to deliver an EBIT margin comparable to ICE by 2026, the dynamic changes in the market, pricing, adoption rates, regulations are forcing us to further reduce the cost of our EVs. The key levers to deliver this competitive cost structure are scaling, vertical integration, and batteries. So, let's double-click on each of these three.

On scaling, this is much more than building new facilities or scaling high-quality batteries with thermal propagation. We're leveraging digital prognostic capabilities in our manufacturing lines to improve quality. We are also reducing complexity, and we are optimizing our vehicle design engineering for manufacturability. Yes, we're designing these vehicles for our manufacturing team.

On vertical integration, this is the most fundamental change. We are insourcing batteries, inverters, scaling production of our drive units and gearboxes, and designing and producing unicastings in-house at Ford. In addition, on our next-generation utility vehicles,

I want to briefly touch on China, where our strategy to turn our business around is gaining traction. The restructuring of EV business there is nearly complete, and the internal combustion engine business is now profitable. We are now expanding China's role to a profitable export hub including Ford Pro. We've already exported a record number of vehicles so far from China to markets like Mexico, South America, and Asia. There is so much more opportunity ahead for us. Yes, the China market is extremely competitive in the middle. But Ford can succeed by staying asset-light, partnering where it makes sense, and competing in very narrow segments where we can clearly win, like commercial vehicles, off-road vehicles, large SUVs, and Lincoln.

Finally, I'm so pleased to have Peter Stern on today to share more about our newly formed Ford Integrated Services, which will create and market valuable software-enabled customer experiences across Blue, e, and Pro. Now, this is transformational because the cornerstone of Ford Plus, the plus and our plan is creating incredible customer services and experiences enabled by not just hardware, but software. There's simply no one in the world better able than Peter, who is the driving force behind services at Apple, to build this strategically vital business for us.

Peter, over to you.

Peter C. Stern {BIO 20199121 <GO>}

Thanks, Jim.

I've spent my career creating new customer experiences and launching businesses at the intersection of hardware, software, and services. And I came to Ford because this company puts that kind of innovation at the center of its long-term strategy. As you said, it's literally the plus in Ford Plus. Now, over two months in, I'm even more excited to be here and to be part of this exceptional team that's working together to bring the Ford Plus plan to life for our customers, employees, and shareholders. Our vision for integrated services is to transform every aspect of the Ford customer experience across our three segments. We're making our vehicles even more connected, convenient, productive, secure, and exhilarating.

Over the past couple of months, we've identified a portfolio of services that will improve our customers' lives and businesses by building on our industry-leading early successes with Ford Pro intelligence and BlueCruise. This portfolio will elevate the Ford brand and introduce us to millions of new customers who may have never considered a Ford before. It will drive new high-margin, acyclical, recurring revenue streams for Ford and result in stronger relationships with our customers. And we'll do this while adhering to the values that distinguish Ford from our competitors, like our respect for customer privacy, safety, and very importantly, choice. Whether you choose to add our services or not, you'll have an amazing vehicle.

Our momentum around software and services is building fast. Here are three examples. First, Ford Pro Intelligence builds on Ford's industry-leading share in the commercial vehicle space by making the people who drive our vehicles even more productive and by reducing total cost of ownership. Adoption of vehicle telematics, fleet management, and

Our disciplined capital allocation continues to drive strong free cash flow, which will be critical as we adjust our spending to match the pace of EV adoption.

We ended the quarter with over $29 billion in cash and $50 billion in liquidity, one of our strongest quarters ever. This includes the new $4 billion contingent liquidity facility we put in place in August to help withstand uncertainties in the present environment.

Now turning to our customer-focused segments, Ford Pro generated EBIT of $1.7 billion and delivered a strong double-digit margin of 12%. Both metrics improved driven by our Super Duty and Transit franchises that helped deliver a 16% improvement in revenue, that's reflecting strong demand and continued pricing power.

In addition, we are launching a new version of our flagship product in Europe, the Transit Custom, which along with the new Super Duty and F-150 will give Pro its freshest vehicle lineup in years. We also continue to see strong growth in both our new software subscriptions and mobile repair orders, up roughly 50% and 200%, respectively for the quarter.

Regarding Model e, our EV startup incurred $1.3 billion of losses in the quarter, reflecting continued investment in our next-generation products and a more challenging market for our Gen 1 products. Given the dynamic EV environment, we are being judicious about our production and adjusting future capacity to better match market demand. For example, we have taken out some Mustang Mach-E production, and we are also slowing down several investments, including making a decision with SK On to delay the second BlueOval SK JV battery plant in Kentucky.

And we have also said we are evaluating our BlueOval Battery Park, Michigan plant to determine the best path forward. In fact, all told, we have pushed about $12 billion of EV spend, which includes CapEx, direct investment, and expense. The ultimate success of our EV transition will be driven by our Gen 2 and Gen 3 products, which will be cost-optimized and guided by the learnings of our first-generation vehicles that are currently in the market.

Turning to Ford Blue. In the third quarter, we delivered EBIT of $1.7 billion, up $300 million, driven by lower commodity costs and higher net pricing that more than offset higher warranty costs. The higher warranty was driven by recalls, and higher per unit repair costs due to inflation. Importantly, Blue continues to be profitable in all regions with a strong fresh portfolio poised for continued global success.

Hybrids also continue to be a success, a strategy we've had in place now for almost two decades. We are the clear leader of the hybrid pickup truck segment in the U.S. thanks to Maverick and F-150. We expect to extend this lead next year when we introduce our refreshed 2024 F-150 with more advanced technologies. The F-150 Power Boost Hybrid not only offers a 25% improvement in CO2 emissions, but on average, they are more profitable than our highest volume gas powertrains. And hybrids aren't just limited to North America as we are launching a PHEV Ranger for Europe and IMG next year.

Ford Credit generated EBT of $358 million. As expected, our results were down year-over-year reflecting lower lease residuals and financing margin and the non-reoccurrence of derivatives market valuation gains. Credit loss performance remains strong and below our historical average but continues to normalize. Option values remain strong but are down sequentially in line with our expectations.

Finally, turning to software and services, we continue to see sustained quarter-over-quarter growth in subscriptions across all our business segments and most importantly at gross margins of around 50%. And our next-generation digital platform will enable a step function change in capability allowing us to scale and deliver value to both our retail and commercial customers even faster. And as Peter highlighted, as we continue to build out our capabilities here, we expect it to be a significant source of future value creation.

In closing, there's obviously an amount going on in our business. But I'm confident in our Ford Plus plan and the underlying run rate of our business. So that wraps up our prepared remarks. We'll use the balance of the time to address what's on your minds. Thank you.

And operator, please open the line for questions.

Questions And Answers

Operator

(Question And Answer)

We will now begin the question-and-answer session. (Operator Instructions). Our first question today is from Adam Jonas with Morgan Stanley. Please go ahead.

Q - Adam Jonas {BIO 3339456 <GO>}

Thanks, everybody. So, John, I know you push out the $12 billion of the direct and cap investment and other expenditure on EVs. But I guess I'm interpreting that as just temporary, that you still plan on spending it. So my question is, how long can you keep allocating $10 billion a year, round number to EVs?

A - John T. Lawler {BIO 17882934 <GO>}

Yes, So, Adam, we're going to match demand and capital needed to meet that demand. The first step here is given the flatter growth curve that we're seeing relative to what the industry expected and we expected. We've made this decision to push out $12 billion of capital expenditures. But it doesn't mean that we'll actually go ahead and pull the trigger on it, if we don't need to.

And we're going to look at the overall EV business and be balanced about that. There's a lot that's going to change between now in 2026 and 2030, and we're going to adjust appropriately. So, it's something that's going to adjust as we move and how that business develops, and we'll adjust that capital allocation appropriately. We'll change our strategy and make different decisions as well.

And one of the other things I'd say is that. Well, I'll pass it over to Jim, because Jim has something he wants to say.

A - James D. Farley {BIO 5304530 <GO>}

Hey, Adam. Thanks for your question. I just want to emphasize the importance of our Gen 2 and Gen 3 products, because they're a very transformation in our profitability in EV. We've learned a lot in Gen 1. We've reduced the material costs. We got the learning loop on the software. We learned how to scale batteries. We have the LFP battery now. We're starting to ship to customers. But there's only so much we can do on Gen 1.

On Gen 2, as I said, we have a totally different approach from arrow[ph], vertical integration, design for manufacturability. And there's a lot of other things we can do beyond allocating less capital to battery plants, for example. We've learned a lot about derivatives like Rally. We're going to push services a lot more like Level 2 Plus or Level 3 Autonomy. And we really plan on, even redesign or improving the scale of a component by working with other companies.

And the other big breakthrough is going to be, which we're designing in parallel, the Gen 3 products, where we use the battery as a structural member of the vehicle. We go to low-cost sourcing, go to smaller vehicles. We maximize unit casting even more than we are, and radical cost reduction in our distribution.

I think the other thing that's important to understand about Ford's strategy on EVs is Pro. We actually followed a very different strategy for Pro, using a multi-energy platform. So, we didn't bet on pure electric vehicles for Transit, for example. We're now launching the Transit custom in Europe, and that has diesel, gas, and it will have, eventually hybrid and pure electric. That's a very different bet on our Pro. We're even starting to export Pro vehicles from China to develop markets around the world that are pure electric. And that part won't change our product strategy.

Q - Adam Jonas {BIO 3339456 <GO>}

I appreciate that. Jim, maybe just a follow-up. Hybrids, you point out in the prepared remarks. The growth there, and I think you've made comments that, that technology is something you want to lean in on more as a transition. Not that you won't continue to sell your Gen 1 EVs, but that there is just real demand for hybrids.

Can you refresh us as you kind of turn that dial back up on hybrids? Categorically, how the margins on those products might compare to your normal ICE margins? Is it accretive? Is it kind of in the ballpark? I didn't know if there was any kind of sacrifice or gap there between hybrid and the normal pure ice. Thanks.

A - John T. Lawler {BIO 17882934 <GO>}

Yes. Do you want me to jump in?

A - James D. Farley {BIO 5304530 <GO>}

Yep.

That's great. Can I maybe just sneak in one follow-up? EV demand is not materializing quite as robustly as we were expecting this year. Pricing is a little bit down. Costs are going to be up with labor. So, I mean, as you mentioned EVs are going to become more challenging going forward. But when you think about, like, a program like the -- or a product like the Explorer that, we have at least in car wares launching in calendar year '26, '25 as a model year '26, and you might disagree or agree with that, but that products coming at some point soon.

That was an EV variant and an ICE variant we had and we were expecting. And it would have been sort of, an expectation that maybe you would have crossed out that ICE variant and just had an EV six months ago. But now, actually, things have switched in the other direction. You might actually cross out the EV and just keep the ICE. I mean, how are you making these decisions right now with sort of these tectonic shifts going on? I mean, there's data, there's consumer groups, and all sorts of stuff, but they're incredibly difficult and impactful decisions that you have to make. What is the process, Jim, that you're going through on these powertrain decisions as you're going through the product launches over the coming years and planning?

A - James D. Farley {BIO 5304530 <GO>}

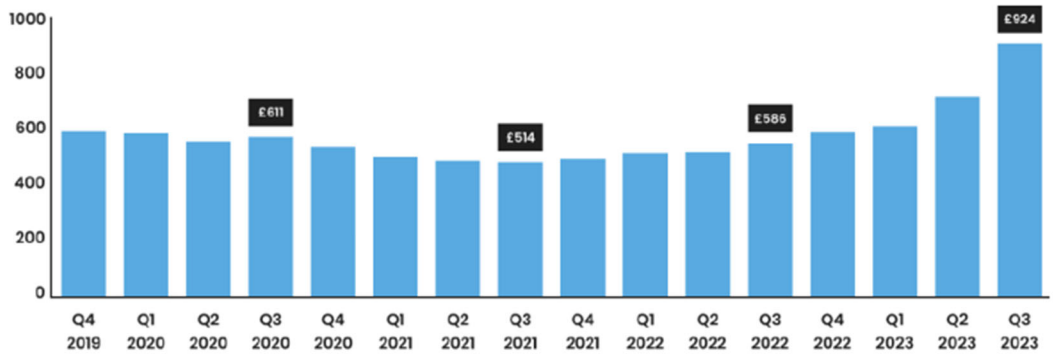
Yes. Got it. So things are changing. EVs are still in high demand. It's just, as you said, the pricing is much lower, and there's a lot of overcapacity in the middle of the market. For us, I think our EV strategy and our ICE strategy is to go after customers we know really well, and so on our ICE and hybrids, very much of a loyalty target. And in the case of EVs, many of the same segments, but a Conquest strategy. And I would say we feel very confident on that strategy because Ford has a great reputation in those segments, like full-size truck or pickups, or vans, commercial vehicles, or three-row crossovers. But our products are not substitutional because the customers we're going after are different, but they are the same segment. We know the use cycle really well, but the innovation will be pointed at different things.

The F-150, I think, is probably the best example of Ford, because we have world-class ICE. We have a hybrid that will probably be 20% mix, and then we have Lightning and the next generation Lightning that we're working on right now. And when you compare the ICE of the hybrid F-150 to the EV F-150, you will be surprised at how much more Conquest the vehicle is executing. And we believe that innovation will give us pricing power for those EV Conquest customers. The first generation has helped us there. I think that's our strategy. As far as the changeability of that strategy of flexibility, we certainly have choice. But as John mentioned, we're really flexing the capital and the timing of the capital, especially around battery plants and overall manufacturing capacity.

So we're not changing that over -- we're not changing the product strategy, but we are flexing and that's our bet is that we will flex the capacity. From a product planning standpoint, we've made I think really good bets on the ICE and HEV side in case the EV market is not as fast as we thought. We have affordable Mavericks. We have a strong international business now with Ranger and Everest, those markets won't go EV anytime soon. And the markets where we're in, like F-150, Super Duty, Pro, they're not duty cycles that are going to go EV, and we have really fresh product. So our bet is maybe different than others who just said, look, we're going to get rid of an ICE Explorer and go to an EV Explorer. That's not our strategy.

The bigger picture
How prices have changed

The latest Confused.com car insurance price index reveals car insurance now costs £924, on average



https://www.confused.com/meet-our-experts/content/transitioning-from-petrol-cars-to-electric

transitioning from petrol cars to electric: What still needs to happen?

Written By Louise Thomas Motor Insurance Expert11 min read | Published 25/10/2023

Our expert panel reviews all content. Learn more about our editorial standards and how we operate.

When it comes to electric vehicle (EV) adoption, there's no doubt that the UK is making good progress.

As of August 2023, electric cars made up 27.8% of new car sales in the UK, according to data from Zapmap. Meanwhile, across Europe, 3% of vehicles on the road are now electric, a proportion that's roughly doubled each year since 2019.

In fact, the UK is currently ahead of the government's targets for 22% of car sales to be EVs. That's according to the Climate Change Committee's (CCC) 2023 report to Parliament.

Despite this, the CCC report states more urgency is needed to hit our goal of halting sales of internal combustion engine (ICE) vehicles by 2035.

In this article, I discuss the transition from petrol to electric vehicles, and consider the implications for consumers and the insurance industry.

The state of EV adoption in the UK

Compared to its international peers, the UK is doing well at adopting EVs. Ernst & Young ranks the country fifth globally for EV transition readiness. Among European nations, we're ninth in EV sales as a proportion of all car sales.

EY's latest Mobility Consumer Index has found that 38% of UK consumers are leaning towards an EV or a hybrid for their next purchase.

The data is clear: The UK is making real progress in the transition from petrol to electric.

One of the drivers of the early adoption market was government grants that helped reduce the costs of EVs for consumers.

As of 2023, these grants no longer exist, making the UK the only large European country without an EV subsidy. Analyses suggest that grants helped to increase EV car sales from under 1,000 in 2011 to over 100,000 at the start of 2022.

Without these grants, there's a risk that EV car adoption might slow down.

Still, even without grants, many factors are going right in the UK's plan for EV adoption:

- **There's political consensus that EVs are the future.** While prime minister Rishi Sunak has delayed the ban on ICE sales from 2030 to 2035, EV regulation is still in place. We're seeing more and more low-emission zones pop up across the country.
- **The number of charging points is rapidly increasing.** According to Zapmap's data, the UK has seen a 40% increase in charge points in the year to August 2023. A widespread network of charging points is essential for drivers. This network will help combat EV's 'charging anxiety' - a fear of running out of charge too far from a charging point. This is one of the main worries that discourages consumers from switching to EVs.
- **The private sector is supporting the market as a valuable source of innovation.** For instance, Zapmap is an app drivers can use to find EV charging points. This makes it easier for EV drivers to find places to refuel over long distances, helping to reduce charging anxiety. It's an inspiring example of a private company whose service has become central to the UK's EV infrastructure.

The automotive industry has shown that it can sell electric vehicles.

The challenge now is ensuring regular consumers can fit EVs into their everyday lives.

What still needs to happen for EV adoption to become mainstream?

For the UK to meet its targets, everyone who owns an ICE car right now needs to be able to buy and live with an EV. There are 3 changes I think we need to see to make that a realistic prospect.

1. Electric vehicle costs still need to come down

While costs have decreased in recent years, EVs are still substantially more expensive than ICE vehicles.

Data from JATO shows that in Europe, the average price of a new EV is 27% more than its ICE equivalent. In fact, no new EVs were available in Europe or the US under €20,000 (US$21,300/£17,414).

These prices are a barrier to broader market access. And they're compounded by other costs, too. For instance, insurance costs for EVs are typically higher, and vehicle parts remain more expensive.

There are also concerns around the second-hand car market. While new EVs are too expensive, second-hand electric cars aren't widely trusted, and there are limited options compared to used ICEs.

That's largely because we don't yet know for how long older batteries will keep their charge. Estimates suggest they can last for 15 to 20 years, but few EV batteries in the market have reached this age.

It poses a big risk for the consumer. If someone decides to buy second-hand and the battery doesn't hold its charge, the cost of replacing that battery will likely be high.

A common argument for EVs is that they're cheaper over their entire lifespan thanks to lower vehicle excise duty and no ULEZ charge. But even these calculations are no longer as compelling as they once were.

For one, EV drivers will have to pay tax from 2025, and ULEZ charges currently only apply to older cars - so you don't *need* an electric car to use low emissions zones.

But the main issue making EVs seem less valuable is the increased electricity price. Typical household energy bills increased by 54% in April 2022 and 27% in October of that year. While they've fallen since then, they remain well above early 2022 levels, which will affect the cost of charging an EV at home.

2. Charging infrastructure needs to be improved

In 2022, the UK government announced a £1.6 billion investment to improve charging infrastructure, promising 300,000 new charging points nationwide by 2030.

There are currently just under 50,000 charging points in the UK. But according to EY, we'll need 20 million EV chargers by 2040 - 88% of which we'll need in private homes.

That means we need 2.4 million public chargers by the end of the next decade. In this context, the 300,000 charge points promised by the government are not nearly enough.

One of the factors holding back EVs most is 'charging anxiety'. Without enough public charging points, potential EV drivers will continue to have concerns about travelling long distances. And this will likely remain a barrier to mainstream adoption.

One of the most urgent questions in this context is: Who should pay for this public infrastructure? The government is doing its bit, but car manufacturers may have to contribute if EV infrastructure is to become widespread. One way they can do this is by working towards a unified public charging network.

For instance, Tesla has installed charging stations nationwide, but these are only available to Tesla customers. If every manufacturer did the same, it would make the charging infrastructure challenging to navigate for consumers and greatly limit the accessibility of EVs.

When it comes to private charging, it might sound easy enough to charge your vehicle on your driveway. But that's not helpful for the third of UK homeowners who don't have a driveway or garage.

Another downside is the cost of domestic electricity. To address this, many EV drivers are turning to solar panels to meet their charging needs. Data shows that EV drivers are 7 times more likely to have domestic solar panels installed than other consumers. But like EVs themselves, solar panels come with significant upfront costs, which many people can't afford.

For EVs to become mainstream, the UK needs to work on its charging infrastructure and look to lower its electricity costs.

3. There needs to be more investment in supply chains and EV skills

One of the biggest challenges of EV adoption is car repairs and maintenance. As EVs use electric motors and large batteries, mechanics will need the expertise to repair these new technologies.

EV maintenance issues like motor repair and software issues require knowledge that's highly specialist and in short supply. There'll likely be a shortage of about 16,000 electric

vehicle-qualified mechanics come 2032. That's according to data from the Institute of the Motor Industry published in The Guardian.

This shortage contributes to the already high cost of repairing an electric vehicle. According to one 2022 study, average costs for an EV breakdown were £596, compared to £221 for an ICE vehicle.

Yet these prices aren't just about the cost of specialist labour. EV parts are much more difficult to source, particularly as there's often still a waiting list for new models.

How the transition to electric affects the insurance industry

The rise of EVs will likely change the insurance market in 2 main ways.

1. Car insurance costs may increase

The cost of insuring an EV is currently a lot higher than for ICE vehicles. And there's no real sign that will change, at least not in the short or medium terms. In fact, the cost is actually increasing.

The latest Confused.com car insurance price index reveals that car insurance now costs £924 in Q3 2023. This is compared to £586 in Q3 2022. Yet Confused.com's own data shows that, for EVs, it's an increase of 72%, while for ICE drivers, it's only 29%.

Many factors contribute to these higher prices. One is that insurers just don't have the experience of pricing premiums for EVs, as the industry is still in its infancy.

That's compounded by the fact that most people aren't used to driving an EV. Unlike ICEs, EVs have instant acceleration, which can take drivers a bit of getting used to. Similarly, braking can feel different in an EV. The brakes will activate as the driver lifts their foot off the accelerator, even before you hit the brake pedal.

Consider, too, that EVs are much quieter than ICE vehicles, which can be dangerous. There's concern that the quietness of EVs could lead to more accidents. And for insurers, that means more claims - which will inevitably mean higher premiums.

Of course, the labour and parts associated with EV repairs are more expensive, too. As such, there are plenty of good reasons why EV insurance coverage is higher. But this is not good news for anyone.

It's not sustainable for some EV drivers to pay thousands of pounds per year for their insurance. Also, it doesn't help anyone if insurers simply decide not to insure customers at all due to costs. This was what John Lewis recently decided not to do.

So, for the sake of wider adoption, what can insurers do to bring premiums down?

All of us in the industry should work to ensure that companies have a network to source skills and parts as cheaply as possible. Then we can hope that, as more EVs hit the road and technology advances, some of the costs will come down by themselves.

2. More people may use car subscriptions to get access to EVs

Many drivers are turning to different payment models to access electric vehicles so they can avoid the upfront costs of buying an EV. It's something insurers should be well aware of.

One of the most common of these is car subscriptions. In this car-as-a-service model, drivers can sign up for a subscription service, like Elmo or Mycardirect, and have access to a vehicle that they pay for monthly.

This monthly payment includes everything a driver needs to run the vehicle: Maintenance, tax, and insurance.

Research from Wagonex, a subscription company, found that 9 million UK consumers would consider using vehicle subscriptions in the future.

If this trend continues, there's no doubt that the way insurers engage with consumers will have to change. For example, as more drivers access insurance through subscription companies, there's a good chance that insurers' direct-to-consumer market may decrease.

Insurers could be better off focusing on B2B opportunities by forging relationships with car subscription companies or manufacturers themselves.

As car subscriptions grow, insurers could remain more appealing to consumers by offering more flexible plans so that consumers only pay for the miles they drive. It could give consumers the flexibility they get from subscriptions while bringing down the cost of EV insurance.

Learn more about car as a service and how it's affecting the insurance industry.

How Confused.com is adapting to the EV transition

At Confused.com, we're following these changes in the EV industry closely. As a price comparison website (PCW), it's our job to cater to all of our customers' needs and give them an experience in line with current demands.

For us, that starts with ensuring we can cover every type of vehicle on the market. To do that, we invite a huge range of insurers - including specialist EV insurers - to our panel. This lets our customers find insurers willing to cover EVs and then find the best deals available among them.

It also involves ensuring that policies cover issues that are specific to EVs. For example, cover for problems like using the wrong fuel is no longer relevant, but issues like running out of charge or electrical faults will become more prevalent.

Plus, through our panel, Confused.com offers customers access to various types of insurance, including flexible deals and short-term car insurance.

Yet our role goes beyond insurance. We're helping consumers adjust to the EV transition through useful content, such as providing our customers with up-to-date charge point maps.

The transition to EVs is moving quickly - but there's still a way to go

The electric vehicle transition is undoubtedly picking up speed. But for EVs to truly become mainstream, policymakers, manufacturers, insurers, and PCWs must work together to make EVs accessible to the consumer.

Discover more about how we're working towards a better future at Confused.com.

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IFIC Monthly Investment Fund Statistics – September 2023

Mutual fund and exchange-traded fund (ETF) assets and sales

October 20, 2023 (Toronto) – The Investment Funds Institute of Canada (IFIC) today announced investment fund net sales and net assets for September 2023.

Mutual fund assets totalled $1.836 trillion at the end of September. Assets decreased by $64.8 billion or 3.4 per cent compared to August 2023. Mutual funds recorded net redemptions of $7.6 billion in September.

ETF assets totalled $346.5 billion at the end of September. Assets decreased by $8.5 billion or 2.4 per cent from August. ETFs recorded net sales of $2.9 billion in September.

September Insights

- Year to date, mutual fund assets increased by $26.5 billion or 1.5 per cent and ETF assets increased by $32.8 billion or 10.5 per cent.
- Similar to last month, money market fund sales were highest across all major asset classes for both mutual funds and ETFs, with the majority going into high-interest saving account (HISA) funds.
- Thirty per cent of mutual funds had positive net sales and 51 per cent of ETFs had positive net sales.

Mutual fund net sales/net redemptions ($ millions) *

Asset class	Sep. 2023	Aug. 2023	Sep. 2022	YTD 2023	YTD 2022
Long-term funds					
Balanced	(6,187)	(4,750)	(4,986)	(37,189)	(14,304)
Equity	(2,197)	(2,152)	(2,891)	(15,744)	(409)
Bond	(890)	(452)	(1,914)	7,656	(8,850)
Specialty	133	366	1	2,772	1,215
Total long-term funds	(9,142)	(6,988)	(9,790)	(42,505)	(22,349)
Total money market funds	1,572	1,400	825	11,819	3,643
Total	(7,570)	(5,588)	(8,965)	(30,686)	(18,705)

Mutual fund net assets ($ billions) *

Asset class	Sep. 2023	Aug. 2023	Sep. 2022	Dec. 2022
Long-term funds				
Balanced	861.1	893.6	863.0	880.6
Equity	672.4	701.4	615.6	649.6
Bond	229.5	234.5	224.8	222.7
Specialty	25.4	25.6	21.7	22.2
Total long-term funds	1,788.4	1,855.0	1,725.1	1,775.1
Total money market funds	47.6	45.8	30.8	34.5
Total	1,836.0	1,900.8	1,755.9	1,809.6

* See below for important information about this data.

ETF net sales/net redemptions ($ millions) *

Asset class	Sep. 2023	Aug. 2023	Sep. 2022	YTD 2023	YTD 2022
Long-term funds					
Balanced	188	140	67	1,291	1,452
Equity	334	335	(390)	7,296	9,614
Bond	1,040	641	540	8,127	3,688
Specialty	18	(283)	(81)	1,063	1,079
Total long-term funds	1,581	833	136	17,777	15,832
Total money market funds	1,297	1,051	1,712	8,161	5,036
Total	2,878	1,884	1,849	25,938	20,868

ETF net assets ($ billions) *

Asset class	Sep. 2023	Aug. 2023	Sep. 2022	Dec. 2022
Long-term funds				
Balanced	13.6	13.9	11.4	12.0
Equity	211.6	220.0	179.7	194.9
Bond	85.4	86.3	75.0	80.4
Specialty	11.5	11.7	10.1	10.2
Total long-term funds	322.1	331.9	276.2	297.5
Total money market funds	24.4	23.1	11.4	16.3
Total	346.5	355.0	287.6	313.7

* See below for important information about this data.

IFIC direct survey data (which accounts for approximately 85 per cent of total mutual fund industry assets and approximately 83 per cent of total ETF industry assets) is complemented by estimated data to provide comprehensive industry totals.

IFIC makes every effort to verify the accuracy, currency, and completeness of the information, however, IFIC does not guarantee, warrant, represent or undertake that the information provided is correct, accurate or current.

*** Important information about investment fund data**

1. Mutual fund data is adjusted to remove double counting arising from mutual funds that invest in other mutual funds.
2. Starting with January 2022 data, ETF data is adjusted to remove double counting arising from Canadian-listed ETFs that invest in units of other Canadian-listed ETFs. Any references to IFIC ETF assets and sales figures prior to 2022 data should indicate that the data has not been adjusted for ETF of ETF double counting.

3. The balanced funds category includes funds that invest directly in a mix of stocks and bonds or obtain exposure through investing in other funds.
4. Mutual fund data reflects the investment activity of Canadian retail investors.
5. ETF data reflects the investment activity of Canadian retail and institutional investors.

About IFIC

The Investment Funds Institute of Canada is the voice of Canada's investment funds industry. IFIC brings together 150 organizations, including fund managers, distributors and industry service organizations to foster a strong, stable investment sector where investors can realize their financial goals. By connecting Canada's savers to Canada's economy, our industry contributes significantly to Canadian economic growth and job creation. To learn more about IFIC, please visit www.ific.ca.

For more information, please contact:

Christine Harminc
Senior Manager, Communications and Public Affairs
charminc@ific.ca
416-309-2313

Dan Tsubouchi @Energy_Tidbits · 3h

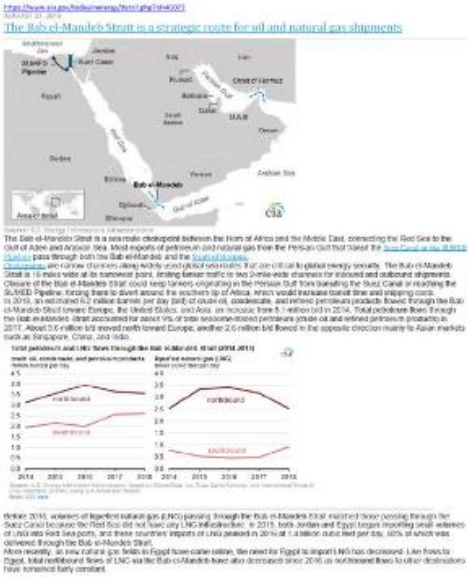
Suez Canal 101

Tanker/cargo ships thru the Suez have to go thru Red Sea & Bab el Mandeb.

Surprised US shooting down Houthis 4 cruise missiles & 30 drones in Red Sea hasn't got more attention.

See 👇 @EIAgov Bab el Mandeb choke point for #Oil tankers.

Show more



> **Dan Tsubouchi** @Energy_Tidbits · Oct 25
>
> Peeling the onion?
>
> WSJ: Houthis launched 5 cruise & ~30 drones (vs 3 & several drones per Pentagon). US shot down 4 cruise
>
> ---
>
> Show more

1 7 11 2.5K

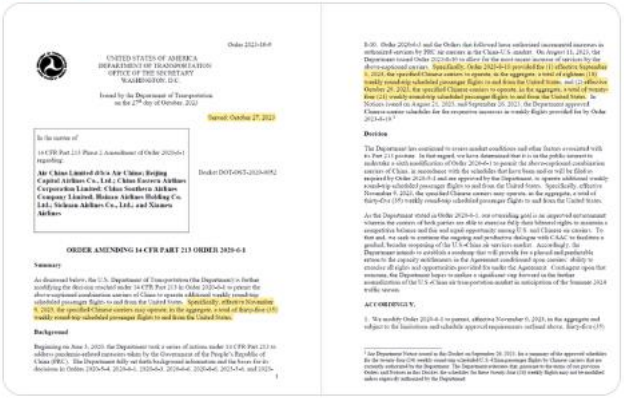
Dan Tsubouchi @Energy_Tidbits · 12h

Approved increase in China flights to/from US.

More international flights = more domestic feeder flights.

@USDOT approved # of weekly round trips, in aggregate, for major China airlines.

Today: 18 wkly round trips
Oct 29: 24
Nov 9: 35...
Show more



UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION
OFFICE OF THE SECRETARY
WASHINGTON, D.C.

ORDER AMENDING 14 CFR PART 213 ORDER 2020-6-1

Summary

Background

Dan Tsubouchi @Energy_Tidbits · Oct 23

Negative.

China scheduled domestic flights back to pre-summer holiday levels.

...
Show more

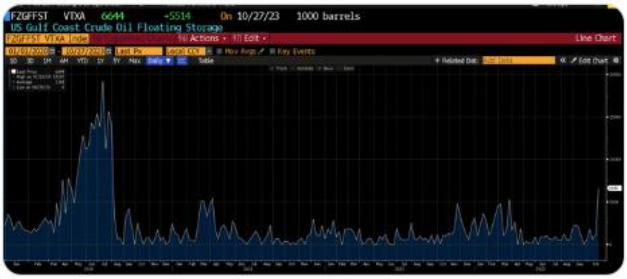
3 10 4.1K

Dan Tsubouchi @Energy_Tidbits · 12h

Here's why floating #Oil storage in Gulf Coast is either set for downward revision next week or it's an unusual one-time spike.

Other than during Covid or some unusual refinery issues, sitting in floating storage in the Gulf Coast isn't the norm

Thx @Vortexa @business
#OOTT



> **Dan Tsubouchi** @Energy_Tidbits · 14h
>
> 
>
> Floating #Oil storage up but 75 mmb is still low.
>
> Only been 4 wks <70 mmb since Covid
>
> Plus maybe US GC revised down next wk, 6.64 mmb ...
> Show more

2 5 2.4K

Dan Tsubouchi @Energy_Tidbits · 14h

Floating #Oil storage up but 75 mmb is still low.

Only been 4 wks <70 mmb since Covid

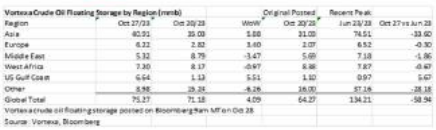
Plus maybe US GC revised down next wk, 6.64 mmb vs normal ~1 mmb?

10/27: 75.27 mmb
10/20: 71.76, revised +6.91
10/13: 68.98, rev -2.78
10/06: 66.23, rev -3.32...
Show more

Source: Bloomberg, Vortexa

Posted Oct 28, 9am MT | Oct 21, 9am MT | Oct 14, 9am MT

Source: Bloomberg, Vortexa



Vortexa Crude Oil Floating Storage by Region (mmb)				Original Posted	Recent Peak	
Region	Oct 27/23	Oct 20/23	WoW	Oct 20/23	Jun 23/23	Oct 27 vs Jun 23
Asia	40.91	39.00	1.88	31.00	74.51	-33.60
Europe	6.22	2.82	3.40	2.07	6.52	-0.30
Middle East	5.32	8.79	-3.47	5.69	7.18	-1.86
West Africa	7.30	8.17	-0.87	8.88	7.87	-0.57
US Gulf Coast	6.64	1.13	5.51	1.10	0.97	5.67
Other	8.98	25.24	-6.26	16.00	37.16	-28.18
Global Total	75.27	71.18	4.09	64.27	134.21	-58.94

Vortexa crude oil floating storage posted on Bloomberg 9am MT on Oct 28.
Source: Vortexa, Bloomberg

Prepared by SAF Group: https://safegroup.ca/news-insights/

5 | 26 | 6.3K

Dan Tsubouchi @Energy_Tidbits · 16h

Something to strive for each day
"*best way you get word of mouth is by creating a great quality product. Right. It's like if you build it, they will come. Because at the end of the day, you gotta have a good quality product to have staying power*"
@JillianMichaels to @JonErlichman

1 | 1 | 2 | 1.6K

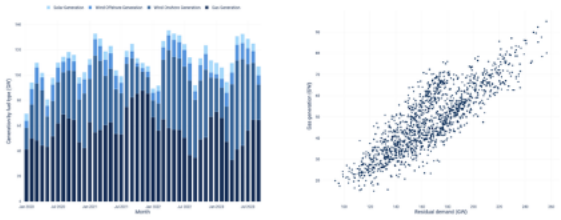
Dan Tsubouchi @Energy_Tidbits · 12h

#NatGas 101

#Solar #Wind are intermittent and #NatGas is always needed to fill any gap

Biggest factor as to how much #NatGas needed is weather. EU winter 22/23 was 2nd hottest on record ie. lower total electricity needed = less #NatGas to fill gap.

Thx @Kpler...
Show more

> **Kpler** @Kpler · 18h
> Renewables and the effect on gas-to-power demand
>
> Residual demand, total demand minus renewables, correlates strongly with gas-to-power generation in our analysis of data from Jan 2020 to Oct 2023 across 7 European countries, emphasising its importance f...
> Show more
>
> **renewables and the effect on gas-to-power demand**
>
> 
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1 3 6 3K

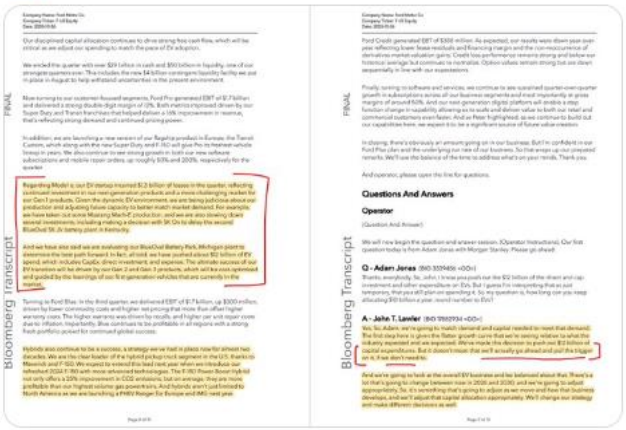
Dan Tsubouchi @Energy_Tidbits · 16h

Maybe more than just a delay in Ford #EV spend.

#Ford says "*pushed back about $12b of EV spend, which includes Capex, direct investment and expense*".

BUT then in Q&A "*but in doesn't mean that we'll actually go ahead and pull the trigger on it, if we don't need to*".

#OOTT



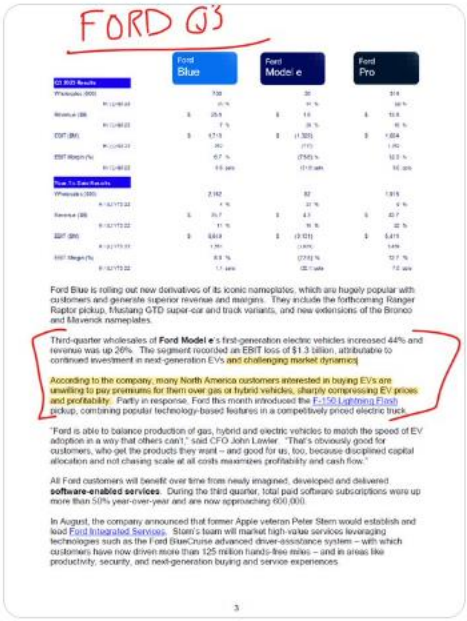
1 2 8 2.4K

Dan Tsubouchi @Energy_Tidbits · 17h

#EVs 101 - price matters.

"*... and challenging market dynamics. According to the company, many North America customers interested in buying EVs are unwilling to pay premiums for them over gas or hybrid vehicles, sharply compressing EV prices and profitability.*" #Ford Q3.

#OOTT



> **Dan Tsubouchi** @Energy_Tidbits · Oct 22
>
> Challenge for #EV forecasts - will huge rate of growth in EV sales to higher income continue in middle/lower income.
>
> Median family household income.
> New ICE car buyers = $122k...
> Show more

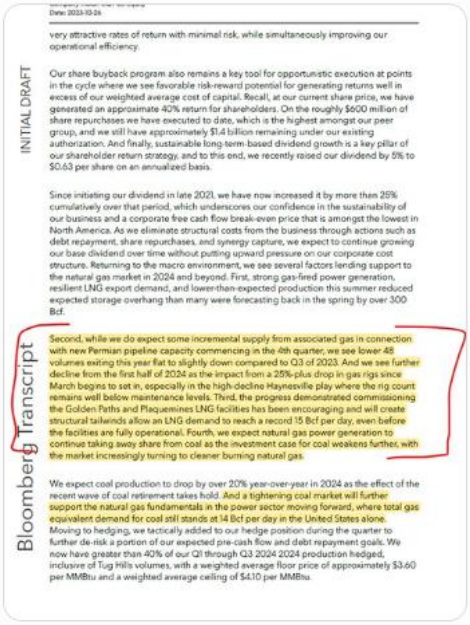
5 5 2.8K

Dan Tsubouchi @Energy_Tidbits · 18h

#EQT sees Lower 48 #NatGas volumes exit 2023 flat to slightly down vs Q3/23, further decline from the 1st half of 2024 as impact of gas rigs decline flows thru.

#NatGas consumers better hope forecasts for warm start to winter in US, EU & Asia come true.

#OOTT



Date: 2023-10-26

very attractive rates of return with minimal risk, while simultaneously improving our operational efficiency.

Our share buyback program also remains a key tool for opportunistic execution at points in the cycle where we see favorable risk-reward potential for generating returns well in excess of our weighted average cost of capital. Recall, at our current share price, we have generated an approximate 40% return for shareholders. On the roughly $600 million of share repurchases we have executed to date, which is the highest amongst our peer group, and we still have approximately $1.4 billion remaining under our existing authorization. And finally, sustainable long-term-based dividend growth is a key pillar of our shareholder return strategy, and to this end, we recently raised our dividend by 5% to $0.63 per share on an annualized basis.

Since initiating our dividend in late 2021, we have now increased it by more than 25% cumulatively over that period, which underscores our confidence in the sustainability of our business and a corporate free cash flow break-even price that is amongst the lowest in North America. As we eliminate structural costs from the business through actions such as debt repayment, share repurchases, and synergy capture, we expect to continue growing our base dividend over time without putting upward pressure on our corporate cost structure. Returning to the macro environment, we see several factors lending support to the natural gas market in 2024 and beyond. First, strong gas-fired power generation, resilient LNG export demand, and lower-than-expected production this summer reduced expected storage overhang than many were forecasting back in the spring by over 300 Bcf.

Second, while we do expect some incremental supply from associated gas in connection with new Permian pipeline capacity commencing in the 4th quarter, we see lower 48 volumes exiting this year flat to slightly down compared to Q3 of 2023. And we see further decline from the first half of 2024 as the impact from a 25%-plus drop in gas rigs since March begins to set in, especially in the high-decline Haynesville play where the rig count remains well below maintenance levels. Third, the progress demonstrated commissioning the Golden Paths and Plaquemines LNG facilities has been encouraging and will create structural tailwinds allow an LNG demand to reach a record 15 Bcf per day, even before the facilities are fully operational. Fourth, we expect natural gas power generation to continue taking away share from coal as the investment case for coal weakens further, with the market increasingly turning to cleaner burning natural gas.

We expect coal production to drop by over 20% year-over-year in 2024 as the effect of the recent wave of coal retirement takes hold. And a tightening coal market will further support the natural gas fundamentals in the power sector moving forward, where total gas equivalent demand for coal still stands at 14 Bcf per day in the United States alone. Moving to hedging, we tactically added to our hedge position during the quarter to further de-risk a portion of our expected pre-cash flow and debt repayment goals. We now have greater than 40% of our Q1 through Q3 2024 2024 production hedged, inclusive of Tug Hills volumes, with a weighted average floor price of approximately $3.60 per MMBtu and a weighted average ceiling of $4.10 per MMBtu.

INITIAL DRAFT

Bloomberg Transcript

6 17 3.2K

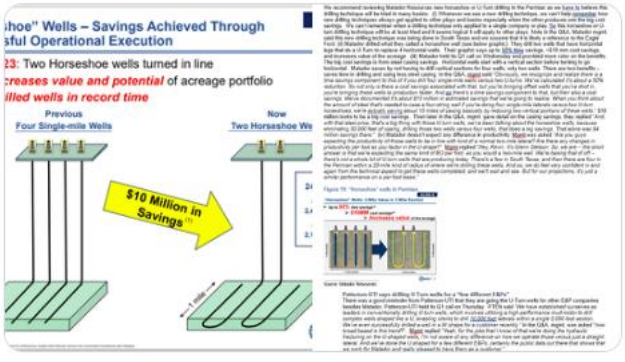
Dan Tsubouchi @Energy_Tidbits · Oct 26

$MDTR Q3: Horseshoe drilling success in Permian brings big value add.

Other E&Ps are also Horseshoe/U-Turn drilling.

See 👇 SAF Group 04/30/23 Energy Tidbits re prior $MDTR disclosure & $PTEN saying they were doing U-Turn/Horseshoe drilling for a "few different E&Ps".

#OOTT



hoe" Wells – Savings Achieved Through
sful Operational Execution
23: Two Horseshoe wells turned in line
creases value and potential of acreage portfolio
illed wells in record time
Previous
Four Single-mile Wells
Now
Two Horseshoe We
$10 Million in Savings

2 6 2.4K

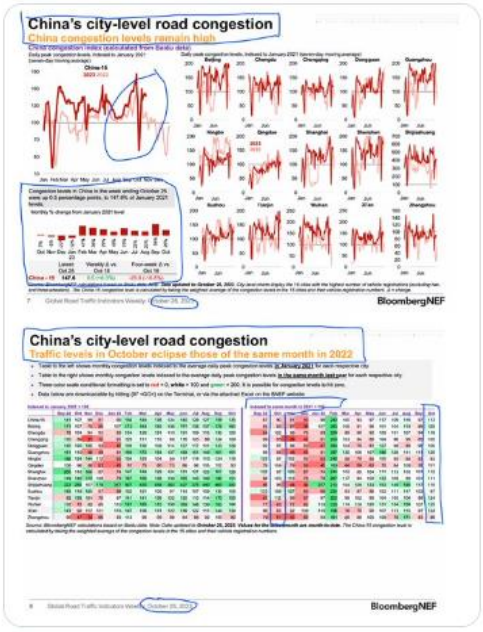
Dan Tsubouchi @Energy_Tidbits · Oct 26

Positive China mobility indicator.

China Baidu city-level road congestion MTD Oct 25 for Top 15 cities are now 113% of Oct 2021 levels.

Up big YoY as still had Covid restrictions in Q4/22.

Thx @BloombergNEF.
#OOTT



2 9 12 3.8K

Dan Tsubouchi @Energy_Tidbits · Oct 26

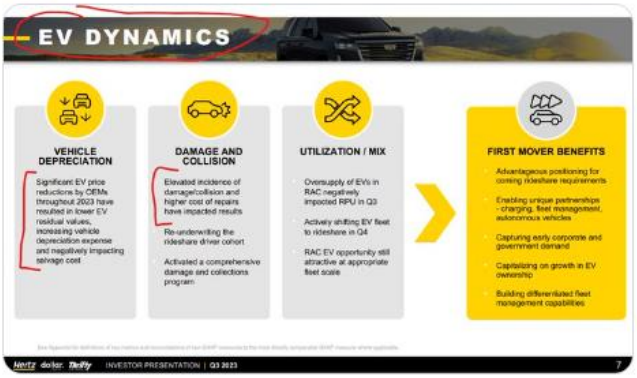
Hertz Tesla #EVs Q3 issues.

Everyone should know re factors "*negatively impacting salvage cost*".

But may not be aware of "*Elevated incidence of damage/collision and higher cost of repairs have impacted results*"

Hope EV owners are better drivers than EV renters.

#OOTT



3 9 2.7K

Dan Tsubouchi @Energy_Tidbits · Oct 26

#Mercedes CFO on #EVs.

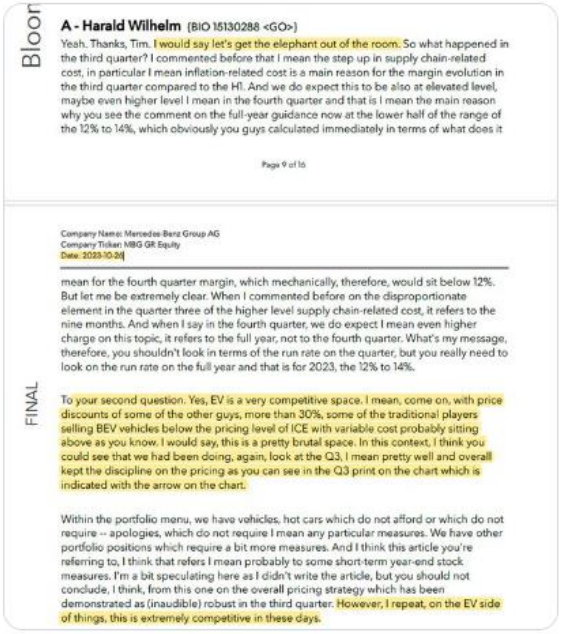
"*this is a pretty brutal space*"

"*I repeat, on the EV side of things, this is extremely competitive in these days*"

"I mean, come on, with price discounts on some of the other guys, more than 30%..... "

...

Show more



Bloor

A - Harald Wilhelm (BIO 15130288 <GO>)

Yeah. Thanks, Tim. I would say let's get the elephant out of the room. So what happened in the third quarter? I commented before that I mean the step up in supply chain-related cost, in particular I mean inflation-related cost is a main reason for the margin evolution in the third quarter compared to the H1. And we do expect this to be also at elevated level, maybe even higher level I mean in the fourth quarter and that is I mean the main reason why you see the comment on the full-year guidance now at the lower half of the range of the 12% to 14%, which obviously you guys calculated immediately in terms of what does it

Page 9 of 16

FINAL

Company Name: Mercedes-Benz Group AG
Company Ticker: MBG GR Equity
Date: 2023-10-26

mean for the fourth quarter margin, which mechanically, therefore, would sit below 12%. But let me be extremely clear. When I commented before on the disproportionate element in the quarter three of the higher level supply chain-related cost, it refers to the nine months. And when I say in the fourth quarter, we do expect I mean even higher charge on this topic, it refers to the full year, not to the fourth quarter. What's my message, therefore, you shouldn't look in terms of the run rate on the quarter, but you really need to look on the run rate on the full year and that is for 2023, the 12% to 14%.

To your second question. Yes, EV is a very competitive space. I mean, come on, with price discounts of some of the other guys, more than 30%, some of the traditional players selling BEV vehicles below the pricing level of ICE with variable cost probably sitting above as you know. I would say, this is a pretty brutal space. In this context, I think you could see that we had been doing, again, look at the Q3, I mean pretty well and overall kept the discipline on the pricing as you can see in the Q3 print on the chart which is indicated with the arrow on the chart.

Within the portfolio menu, we have vehicles, hot cars which do not afford or which do not require -- apologies, which do not require I mean any particular measures. We have other portfolio positions which require a bit more measures. And I think this article you're referring to, I think that refers I mean probably to some short-term year-end stock measures. I'm a bit speculating here as I didn't write the article, but you should not conclude, I think, from this one on the overall pricing strategy which has been demonstrated as (inaudible) robust in the third quarter. However, I repeat, on the EV side of things, this is extremely competitive in these days.

5 16 5.9K

Dan Tsubouchi @Energy_Tidbits · Oct 26

Ouch!

Siemens Energy shares -34% on today's #OffshoreWind #OnshoreWind update.

"*for the time being not concluding new contracts for certain onshore platforms & is applying strict selectivity in the offshore business*".

#EnergyTransition is a slow, costly, rocky road.
#OOTT

Announcement Conference Call

Ad-hoc: Siemens Energy comments on media reports

Bloomberg Transcript

6 20 4.2K

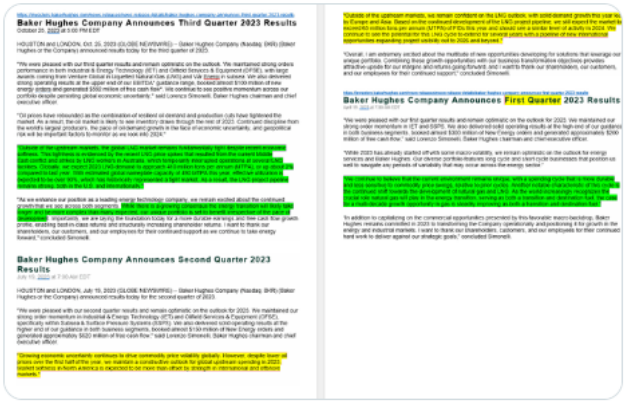
Dan Tsubouchi @Energy_Tidbits · Oct 25

See 👇 as always wonder why items dropped vs Q2 message,

$BKR Q3 drops specifics on #LNG FIDs in 23/24 & mention of LNG cycle extending for several yrs.

Hope analysts drill down on his LNG outlook past 23 in Q3 call as will give insight to overall LNG market.

#NatGas #OOTT



Baker Hughes Company Announces Third Quarter 2023 Results

Baker Hughes Company Announces Second Quarter 2023 Results

Baker Hughes Company Announces First Quarter 2023 Results

1 4 1.8K

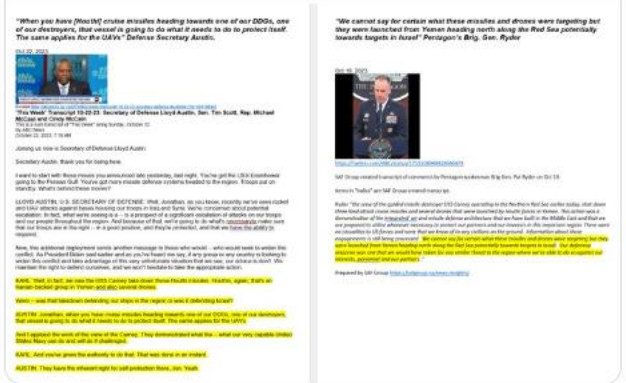
Dan Tsubouchi @Energy_Tidbits · Oct 25

Peeling the onion?

WSJ: Houthis launched 5 cruise & ~30 drones (vs 3 & several drones per Pentagon). US shot down 4 cruise

"*5th cruise missile was intercepted by KSA as it protected its airspace.*" airspace over land or hugging coast? Was it on different flight path?

Houthis...
Show more

> **Dan Tsubouchi** @Energy_Tidbits · Oct 22
>
> Were Houthi missiles/drones "*heading towards one of our DDGs, one of our destroyers*" as SecDef Austin said? or "*heading north along the Red Sea potentially towards target in Israel*" as Pentagon said?
>
> If it's Austin, would seem to add risk to Red Sea #Oil tanker transit....
> Show more
>
> 
>
> *"When you have [Houthi] cruise missiles heading towards one of our DDGs, one of our destroyers, that vessel is going to do what it needs to do to protect itself. The same applies for the UAVs" Defense Secretary Austin.*
>
> *"We cannot say for certain what these missiles and drones were targeting but they were launched from Yemen heading north along the Red Sea potentially towards targets in Israel" Pentagon's Brig. Gen. Ryder*

2 5 3K

Dan Tsubouchi @Energy_Tidbits · 2h

For those not near their laptops. At 830am MT, @EIAgov released its #Oil #Gasoline #Distillates inventory as of Oct 20. Table below compares EIA data vs @business expectations and vs @APIenergy yesterday. Prior to release, WTI was $83.25. #OOTT

Oil/Products Inventory Oct 20: EIA, Bloomberg Survey Expectations, API

(million barrels)	EIA	Expectations	API
Oil	1.37	-0.45	-2.67
Gasoline	0.16	-1.27	-4.17
Distillates	-1.69	-1.75	-2.31
	-0.16	-3.47	-9.15

Note: Oil is commercial so builds in no change in SPR for the Oct 20 week
Note: Included in the oil data, Cushing had a 0.21 mmb build for Oct 20 week
Source EIA, Bloomberg
Prepared by SAF Group https://safgroup.ca/news-insights/

2 5 1,264

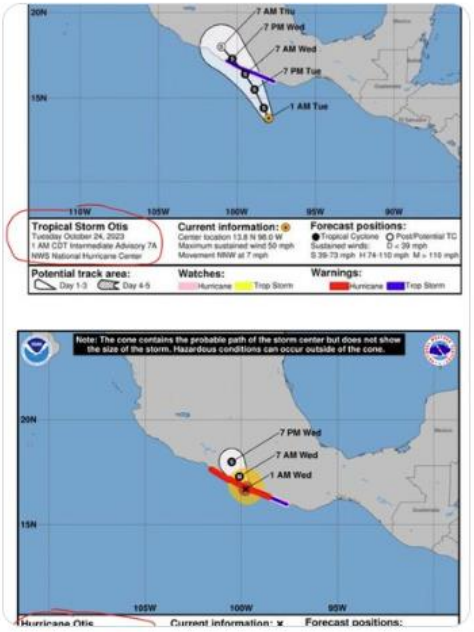
Dan Tsubouchi @Energy_Tidbits · 2h

Who had ever heard of a surprise Category 5 hurricane?

24 hrs before landfall, Otis was Tropical Storm at 50 mph and forecast to hit Acapulco at Tropical Storm strength.

24 hrs later, it hits Acapulco at Cat 5 and 165 mph.

Hoping people got somewhere safe!



3 8 1,412

Dan Tsubouchi @Energy_Tidbits · 4h

support for #Gasoline consumption.

ave age of ICE on the road is 12 yrs & climbing. ave miles driven of cars thru their service is up 2,000 miles per yr and expect miles driven only increases .... Group 1 CEO to @JoeSquawk @SquawkCNBC.

#OOTT

4 9 1,187

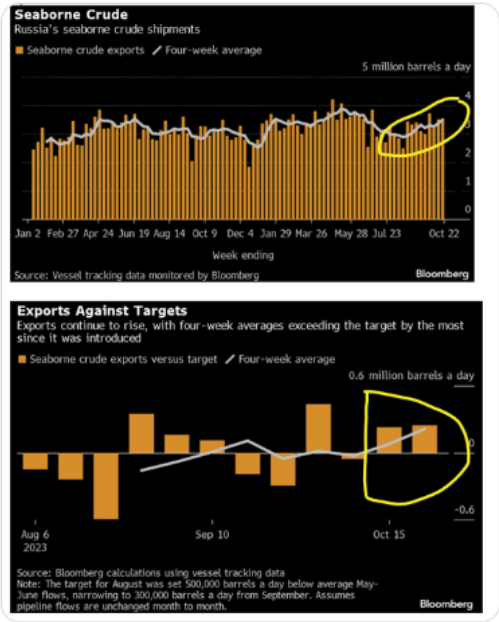
Dan Tsubouchi @Energy_Tidbits · 5h

Time for another Saudi reminder to Russia to get back in line.

@JLeeEnergy's weekly Russia seaborne crude oil shipments for week ended Oct 22.

Highest since June, +610,000 b/d past 2 months, 4-week average +220,000 b/d vs its commitment to reduce exports by 300,000 b/d.

#OOTT



3 17 1,586

Dan Tsubouchi @Energy_Tidbits · 14h

Still net selling of Chinese stocks by foreigners.

@business earlier tonight "Northbound Stock Connect Flows Into China. *Foreign funds have been net sellers of late"*

#OOTT

1 2 4 1,562

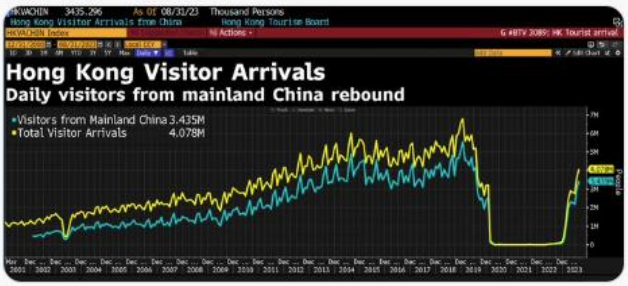
Dan Tsubouchi @Energy_Tidbits · 14h

Still a long way to go for recovery of travel in China.

@business visitors to Hong Kong from Mainland China and in total still down ~40% vs Pre-Covid.

Less travel = less consumption of #JetFuel #Diesel

#OOTT



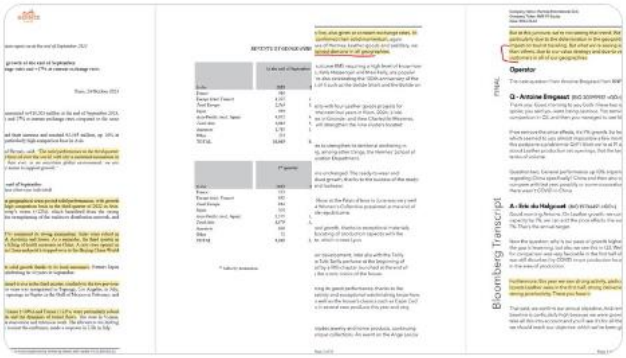
1 3 1,405

Dan Tsubouchi @Energy_Tidbits · 14h

One China consumer group doing as well as in EU, US, Japan is the small # of rich people who shop at Hermes.

All regions +20%, incl China.

Hermes says not as exposed to geopolitical risks due to *"very low customer base, high-quality customers in all of our geographies."*



2 4 1,277

Dan Tsubouchi @Energy_Tidbits · Oct 24

Oil 101 - shale/tight wells have very high 1st year decline rate.

"And, also just the decline rates in North America, so the reality is that you have to do more work in order to stay flat." $HAL CEO Miller on just ended Q3 call.

#OOTT #Oil

***"And, also just the decline rates in North America, so the reality is that you have to do more work in order to stay flat."* Halliburton CEO Miller.**

HALLIBURTON

Q3 2023 Halliburton Company Earnings Conference Call

SAF Group created transcript of comments by Halliburton CEO Jeff Miller on Halliburton Q3 call on October 24, 2023.

Items in "italics" are SAF Group created transcript

At 7:33am MT, CEO Miller, "… *as we go into the 1st half of next year, I think that we're going to clearly see North America up from here. Maybe that's the color that wasn't clear when I answered the last question. But in terms of where the commodity price is and also, not as dependent on that, but really what we're seeing in terms of customer's plans. And also just the decline rates in North America, so the reality is that you have to do more work in order to stay flat. So I suspect we will see some of that as well."*

Prepared by SAF Group https://safgroup.ca/news-insights/

1 4 20 3,077

Dan Tsubouchi @Energy_Tidbits · Oct 24

"Everything I see today strengthens my conviction in the long duration of this upcycle" $HAL CEO.

Not pointing to a big ramp in fracking. "I am pleased with the stability of our NA business"

Like $SLB, it's international "*,,,the profitability of our International growth*" $OOTT

***"Everything I see today strengthens my conviction in the long duration of this upcycle"* Halliburton CEO Jeff Miller**

HALLIBURTON

Halliburton CEO comments

Halliburton Q3 release October 24, 2023

"Halliburton delivered an impressive third quarter and our margin strength demonstrated the power of our strategy. I am pleased with the stability of our North America business and the profitability of our international growth," commented Jeff Miller, Chairman, President and CEO. "Everything I see today strengthens my conviction in the long duration of this upcycle. Against this backdrop, we expect continued demand growth for oilfield services in 2024 and beyond.

Halliburton Q2 release July 19, 2023

"Halliburton's strong performance in the second quarter demonstrates the earnings power of our business. Total company revenue increased 14% and operating income grew 41% compared to second quarter of 2022 adjusted operating income[1]. Both of our divisions delivered strong margin performance across all regions." commented Jeff Miller, Chairman, President and CEO. "Oil and gas are critical to the global economy and meeting long term demand requires sustained capital investment. I am confident in the strength and duration of this upcycle and Halliburton's ability to outperform in it."

Halliburton Q1 release April 25, 2023

""Halliburton's performance in the first quarter again demonstrated the earnings power of our strategy, the strength of our competitive position globally and execution for our customers. Total company revenue increased 33% and operating income grew 91% compared to the first quarter of 2022. Both of our divisions delivered strong margin performance," commented Jeff Miller, Chairman, President and CEO. "My Halliburton outlook -- for both the current year and the long-term -- is strong. We hear it from our customers, and we see it in our first quarter results. Our customers are clearly motivated to produce more oil and gas and service capacity is tight."

Dan Tsubouchi @Energy_Tidbits · Oct 20

NOCs/IOCs see #Oil #NatGas here to stay

$SLB "*multiyear growth cycle that has shifted to the international & offshore markets...upstream spending is accelerating as operators continue to invest in long...*

Show more

5 10 3,173

Dan Tsubouchi @Energy_Tidbits · Oct 24

3 items come to mind.

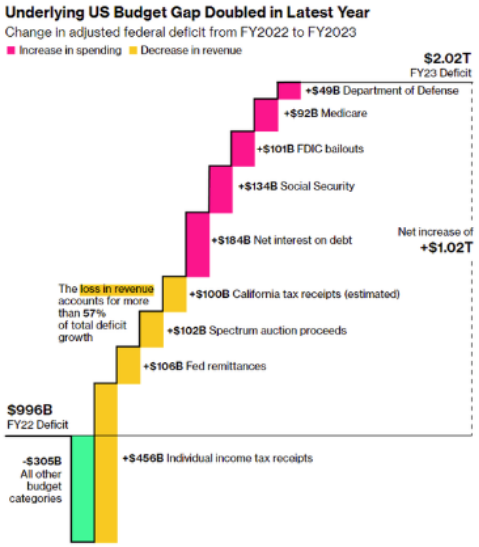
Biggest spending up is net interest, sb higher in FY2024.

DoD sb higher with Israel, FY2024 started 10/01/23

Election year. if Biden won't cut back on goodies, won't he have to hit his normal targets (corporations, the wealthy & #Oil #NatGas)?

#OOTT

> **Lisa Abramowicz** @lisaabramowicz1 · Oct 24
> The US government had a $2 trillion budget deficit for the fiscal year through September, a gap that's $1 trillion more than the prior year. bloomberg.com/news/articles/...



1 · 6 · 2,502

Dan Tsubouchi @Energy_Tidbits · Oct 24

"*You can eat less calories but you can't drink less liquids*" Coke CEO to @SaraEisen @SquawkCNBC on if Coke worries about mass adoption of obesity drugs.

2 · 2 · 6 · 2,877

Dan Tsubouchi
@Energy_Tidbits

$CVX CEO on IEA fossil fuels demand peaks <2030 "*I don't think they're remotely right . .You can build SCENARIOS, but we live in the real world & have to allocate capital to meet real world demands"*

But G7 use IEA SCENARIOS & not real world for NetZero plans ie. why it's a messy energy transition.
#OOTT
ft.com/content/1902a8...

8:11 PM · Oct 23, 2023 · **5,524** Views

1 11 32 4

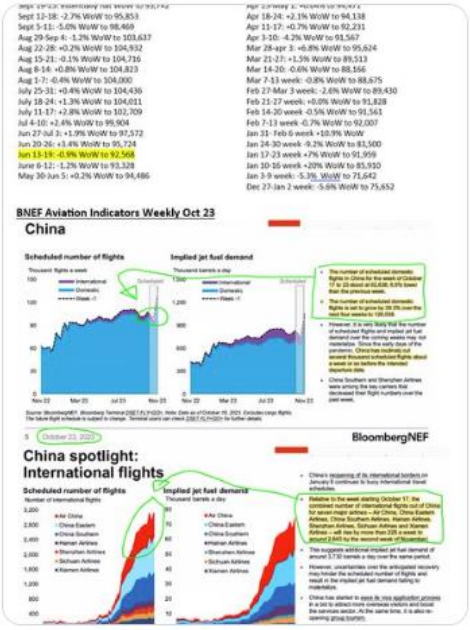
Dan Tsubouchi @Energy_Tidbits · Oct 23

Negative.

China scheduled domestic flights back to pre-summer holiday levels.

Domestic flights -6.9% WoW to 92,638 flights, back to Jun 13-19 level of 92,568.

Thx @BloombergNEF Claudio Lubis
#OOTT



3 9 2,440

Dan Tsubouchi @Energy_Tidbits · Oct 23

How best in class separate from the pack.

@andrewrsorkin on other players ask "*how can i get a $200mm fund myself?*" to @andre on his new VC fund.

Iguodala "*it's kind of like golf, you have to be obsessed with it*".

Be obsessed to be the best often gives an edge somewhere.

1 · 1 · 1,222

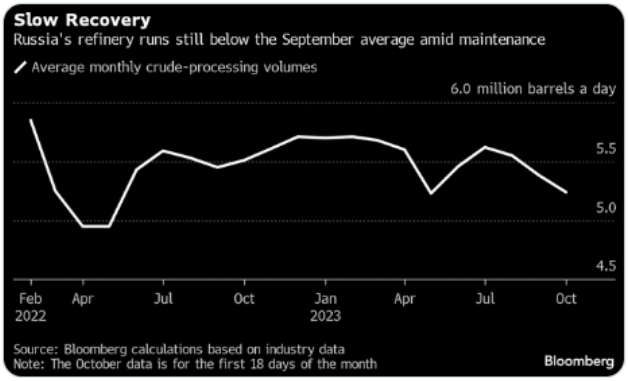
Dan Tsubouchi @Energy_Tidbits · Oct 23

Less #Oil processed thru Russian refineries = more Russian oil for export.

See @ja_herron 👇 Russian refinery runs graph, Oct 1-18 was 133,000 b/d below Sept.

He also reports @Kpler Viktor Katona: mid-Nov should see ~200,000 b/d capacity coming back after maintenance.

#OOTT



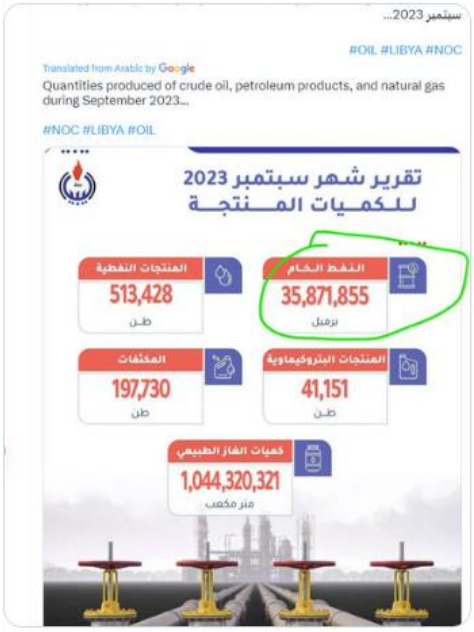
> **Dan Tsubouchi** @Energy_Tidbits · Oct 17
>
> 
>
> "*Russia's Crude Oil Shipments Are Creeping Up Again*", reports @JLeeEnergy on @business tanker tracking.
>
> Latest 4-wk average to Oct 15 creeped up to 3.36 mmb/d, 80,000 b/d over commitment to cut to 3.28 ...
> *Show more*

4 · 11 · 3,393

Dan Tsubouchi @Energy_Tidbits · Oct 23

Libya #Oil production continues stable at ~1.2 mmb/d with @NOC_Libya reporting 1.196 mmb/d for Sept.

#OOTT



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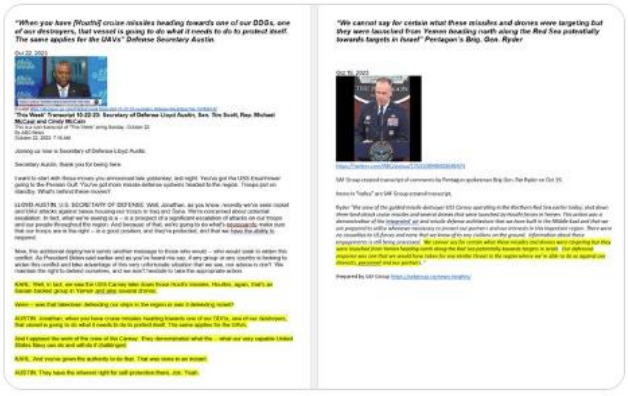
Dan Tsubouchi @Energy_Tidbits · Oct 22

Were Houthi missiles/drones "*heading towards one of our DDGs, one of our destroyers*" as SecDef Austin said? or "*heading north along the Red Sea potentially towards target in Israel*" as Pentagon said?

If it's Austin, would seem to add risk to Red Sea #Oil tanker transit.
#OOTT



2 · 6 · 2,481