

Energy Tidbits

Nov 7, 2021

Produced by: Dan Tsubouchi

Vitol: China Oil Buyers Yet to Enter Jan Trading Cycle, Despite Oil +\$1-2/b, “They Will Buy Because They Need To”

Welcome to new Energy Tidbits memo readers. We are continuing to add new readers to our Energy Tidbits memo, energy blogs and tweets. The focus and concept for the memo was set in 1999 with input from PMs, who were looking for research (both positive and negative items) that helped them shape their investment thesis to the energy space, and not just focusing on daily trading. Our priority was and still is to not just report on events, but also try to interpret and point out implications therefrom. The best example is our review of investor days, conferences and earnings calls focusing on sector developments that are relevant to the sector and not just a specific company results. Our target is to write on 48 to 50 weekends per year and to post by noon mountain time on Sunday.

This week's memo highlights:

1. Bullish near term China oil insights this morning from Vitol's Head Asia ie. China is very much in the inventory building mode, and more ([Click Here](#))
2. More Asian LNG buyers rushing to lock in long term LNG supply ([Click Here](#))
3. Biden's oil supply tease, says dealing with other countries and “at an appropriate time, I will talk about it – that we can get more energy in the pipeline, figuratively and literally speaking” ([Click Here](#))
4. Biden seems to follow Macron in recognizing oil demand isn't going away as fast as they hoped/planned ([Click Here](#))
5. Concern food prices will be even worse in 2022, UN FAO Food Price Index +31.3% YoY and at its highest since July 2011. ([Click Here](#))
6. Please follow us on Twitter at [LINK](#) for breaking news that ultimately ends up in the weekly Energy Tidbits memo that doesn't get posted until Sunday noon MT.
7. For new readers to our Energy Tidbits and our blogs, you will need to sign up at our blog sign up to receive future Energy Tidbits memos. The sign up is available at [LINK](#).

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Natural Gas – Natural gas injection of 63 bcf, storage now -313 bcf YoY deficit

US natural gas storage is starting winter about 300 bcf lower YoY. The EIA reported a 63 bcf injection (vs 66 bcf injection expectations) for the Oct 29 week, which was above the 5-yr average injection of 62 bcf, and above last year's injection of -36 bcf. Storage is 3.611 tcf as of Oct 29, decreasing the YoY deficit to -313 bcf, from 403 bcf last week and storage is 63 bcf below the 5-year average vs 126 bcf below last week. Below is the EIA's storage table from its Weekly Natural Gas Storage Report [\[LINK\]](#).

YoY storage at
-313 bcf YoY
deficit

Figure 1: US Natural Gas Storage

Region	Stocks billion cubic feet (Bcf)				Historical Comparisons			
	10/29/21	10/22/21	net change	implied flow	Year ago (10/29/20)		5-year average (2016-20)	
					Bcf	% change	Bcf	% change
East	899	885	14	14	946	-5.0	913	-1.5
Midwest	1,071	1,052	19	19	1,119	-4.3	1,086	-1.4
Mountain	213	212	1	1	241	-11.6	221	-3.6
Pacific	256	255	1	1	320	-20.0	304	-15.8
South Central	1,172	1,144	28	28	1,298	-9.7	1,188	-1.3
Salt	320	304	16	16	350	-8.6	319	0.3
Nonsalt	852	840	12	12	948	-10.1	869	-2.0
Total	3,611	3,548	63	63	3,924	-8.0	3,712	-2.7

Source: EIA

Natural Gas – Cheniere sees potentially even tighter season swings in LNG prices

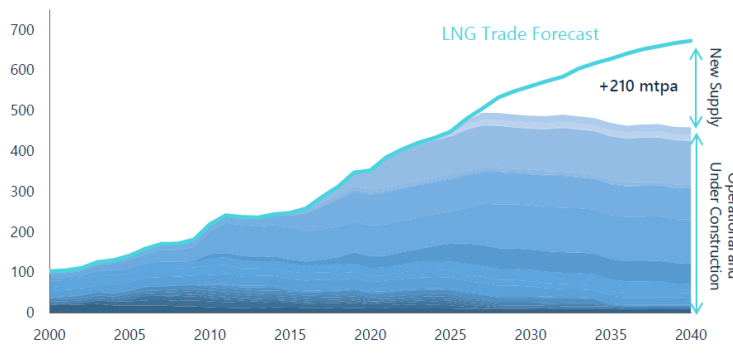
On Thursday, Cheniere held its Q3 call and continued with its bullish LNG outlook and deservedly so given it is signing more long term LNG supply deals with major Asian LNG buyers. One of the LNG warnings in the Q3 call was mgmt saying *"We now estimate that this tight market could extend well through 2025 and potentially tighter seasonal swings over the midterm period, especially for production from legacy plans remains inelastic and the current constraints on the coal supply cycle persist."* LNG buyers must hate to hear that there could be even tighter season swings over the next few years. Cheniere's warning is simple – LNG supply is inelastic over the short term. Cheniere forecasts *"70 mtpa of LNG supply needed by 2030 and over 210 mtpa needed by 2040"*. Our Supplemental Documents package includes slides from the Cheniere Q3 call slide deck.

Cheniere's mid
term LNG
outlook

Figure 2: Global LNG Supply Outlook

Global LNG Supply Outlook

70 mtpa of LNG supply needed by 2030 and over 210 mtpa needed by 2040



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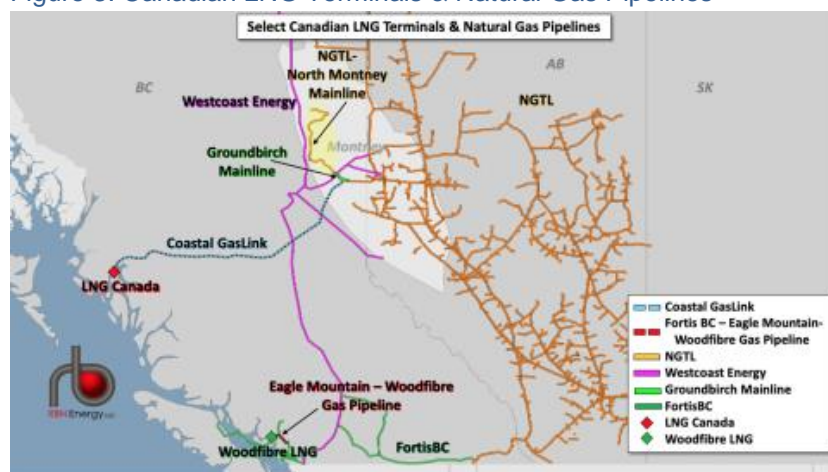
Source: Cheniere

Natural Gas – RBN notes Canadian Pacific coast LNG projects gain traction

As gas markets around the world continue to face shortages, North American Pacific coast export projects are moving along to capitalize on the strong Asian demand. On Tuesday, RBN posted a good blog [“Go West - Pacific Coast LNG Export Projects Gain Traction”](#) [LINK]. Canada has two export facilities on the Pacific Coast, LNG Canada, and Woodbridge LNG. LNG Canada is a two train 1.85 bcf/d terminal that is under construction in Kitimat BC. The project is a JV between Shell, who holds the greatest stake of LNG volumes, Petronas, PetroChina, Mitsubishi and Korea Gas Corporation (KOGAS). The project is situated on indigenous land and must garner support of the indigenous population as well as obtain environmental approval. LNG is set to make it to pass from the Montney basin to the Pacific coast LNG Canada terminal through the Coastal Gaslink pipeline via connection to Westcoast energy’s SilverStar connector that is due to be completed by year end. Covid -19 and construction related disputes have delayed TC Energy’s Coastal GasLink construction timelines have pushed the expected feedgas delivery date for Coastal GasLink to as late as 2025. The most likely project that will achieve FID in the near term is Pacific Oil & Gas’s Woodbridge LNG terminal. The single train 0.3 bcf/d facility is underpinned by two 15-year SPA agreements with BP, for 70% of the terminal’s capacity (0.2 bcf/d). The terminal plans to access feedgas from the Montney basin through the new 0.25 bcf/d Eagle Mountain pipeline that is currently under development by FortisBC. RBN notes, *“North America will have 16.5 MMtpa (2.19 Bcf/d) of export capacity on the western edge of the continent available by mid-decade. Another 11.5 MMtpa (1.53 Bcf/d) of capacity could be available in the same time frame if Woodfibre and Mexico Pacific Limited are able to reach FID in the next year, as both have quicker proposed construction timelines than LNG Canada. These pre-FID projects each face individual challenges based on their specifications and locations, but from a macro perspective, the prospect for LNG development has not looked this good in years. Several new North American LNG projects will likely take FID in 2022, and with the importance of the Asia market, it seems likely that at least some of them will be out West.”* Our Supplemental Documents package includes the RBN blog.

NA LNG projects gain traction

Figure 3: Canadian LNG Terminals & Natural Gas Pipelines



Source: RBN

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Natural Gas – Record natural gas prices are helping set up a food crisis

Natural gas prices are a key part of the narrative for why food prices are going up again in 2022. We are surprised that food prices haven't had more attention from media and politicians but worry it's only getting way worse in 2022. Later in the memo, we note the UN latest Food Price Index and how food prices are at the highest levels since July 2011. Well, it looks like 2022 food prices are being set up to be even worse. Yesterday, we tweeted [\[LINK\]](#) on comments from Yara International CEO Holsether at COP26. Our September 19, 2021 Energy Tidbits wrote "On Friday, Norway's Yara announced [\[LINK\]](#) 'Record high natural gas prices in Europe are impacting ammonia production margins, and as a result Yara is curtailing production at a number of its plants. Including optimization of on-going maintenance, Yara will by next week have curtailed around 40% of its European ammonia production capacity. Yara will continue to monitor the situation, with the objective to keep supplying customers but curtailing production where necessary.'" Our tweet yesterday was "'I'm afraid we're going to have a food crisis' "want to say this loud & clear right now that we risk a very low crop in the next harvest" @yara CEO @stholsether. Record EU #NatGas prices = #Ammonia \$1,000/tn vs \$110 last summer. Thx @katherine_dunn #OOTT." Fortune reported "I want to say this loud and clear right now, that we risk a very low crop in the next harvest," said Svein Tore Holsether, the CEO and president of the Oslo-based company. "I'm afraid we're going to have a food crisis. Speaking to Fortune on the sidelines of the COP26 climate conference in Glasgow, Holsether said that the sharp rise in energy prices this summer and autumn had already resulted in fertilizer prices roughly tripling. In Europe, the natural-gas benchmark hit an all-time high in September, with the price more than tripling from June to October alone. Yara is a major producer of ammonia, a key ingredient in synthetic fertilizer, which increases crop yields. The process of creating ammonia currently relies on hydropower or natural gas. "To produce a ton of ammonia last summer was \$110," said Holsether. "And now it's \$1,000. So it's just incredible." Our Supplemental Documents package includes the Fortune report.

**Ammonia prices
thru the roof**

Natural Gas – Continuing Malaysian LNG supply problems

It looks like the supply problems at Petronas Bintulu LNG export facility are continuing. Our September 12, 2021 Energy Tidbits wrote "Petronas has reportedly said there is no LNG supply disruption at its Bintulu LNG export facility, but the reports have emerged that they have asked some clients to defer some LNG cargoes. Platts reported that Petronas warned customers on the possibility of more LNG cargoes being deferred for Nov-Jan from the Bintulu LNG export facility, according to Platts [\[LINK\]](#). The warnings come after reports that Petronas already delayed several August shipments to end-users in North Asia, as mercury was detected in upstream facilities which forced Petronas to curb gas flows to Train 9." More reports of Bintulu LNG supply problems. On Wednesday, Argus Media reported [\[LINK\]](#) that several Japanese buyers with offtake from the 3.95 bcf/d Bintulu LNG export facility in Malaysia are interested in winter deliveries from the spot market following requests by Petronas to reduce contractual deliveries. High mercury levels at the Pegaga gas fields are the reason for behind Petronas's cancellation request to term buyers. The article noted "Petronas late last week approached at least two term buyers from Bintulu LNG seeking their approval to cancel their January cargoes, marking what was at least the third time the firm has made cancellation requests to offtakes. It is unclear how many buyers agreed to Petronas' earlier two requests." Petronas is requesting the cancellations be through the downward quantity tolerance clause in its contracts which when exercised, gives the suppliers the right to decrease annual contracted quantities. The updated number of February and March cargoes that will be impacted is unclear. Our Supplemental Documents package includes the Argus Media article.

**Continued
Malaysia LNG
supply problems**

**India's LNG
regasification
capacity**

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Natural Gas – GlobalData forecasts India LNG regasification capacity +9.5 bcf/d to 2025

There was a very bullish India LNG forecast posted this week by Global Data on Wednesday “India to account for 21% of APAC LNG regasification capacity by 2025, forecasts GlobalData”. GlobalData forecasts India regasification capacity to increase by +9.5 bcf/d to 2025. This is regasification capacity and not LNG import volumes, just how much more LNG India could import. This is a big increase, but is in line with our Oct 2019 blog (see below) and the recent multiple Energy Tidbits items we have highlighted on India has been getting serious on building out natural gas infrastructure. And it is significant as this is to 2025 so we would assume they have drilled down on specific projects and timing. It’s a great reminder that India is only at the early stages of its growth in LNG imports as it move to have natural gas be 15% of its energy mix by 2030. Our Supplemental Documents package includes the GlobalData release.

Prior to pandemic, India was starting to move on natural gas infrastructure

This Global Data forecast shows a steep increase in natural gas consumption and LNG imports over the next few years to 2025. It shows that India’s seriousness about increasing its natural gas infrastructure is starting to have an impact. And that India was doing this pre-Covid. In fact, we featured this 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 is 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”. The blog noted comments from earlier on Oct, when India Oil Minister Dharmendra Pradhan said that there are \$60 billion of natural gas infrastructure and LNG import terminals that are “under execution”. He said “I am not talking about potential investment. This number relates to the project that are under execution”. In the blog, we said “Natural gas consumption in India is only now back to 2011 levels at 5.6 bcf/d and represents only 6.2% of its energy mix. If India hits its 15% target of its energy mix by 2030, it would add natural gas demand, on average, of >1.5 bcf/d per year. At the same time India’s domestic natural gas production peaked in 2010 at 4.6 bcf/d, but has been flat from 2014 thru 2018 at ~2.7 bcf/d, which means the big winner will be LNG. The most important factor driving this expectation for natural gas consumption growth is likely price. Asian LNG landed prices are down about 50% YoY and, more significantly, the expectation is for future Asian LNG prices to be at lower levels than prior cycles. India, by itself, may not be a LNG global game changer, but it is another positive support for why we believe LNG markets will rebalance sooner than expected ie. in 2022/2023”. We projected how much India’s natural gas consumption would increase if it can hit its target of 15% of total energy mix in 2030. BP data shows India’s natural gas consumption in 2018 was 5.6 bcf/d and natural gas was only 6.2% of total energy mix. BP also estimates India’s total energy consumption grew at a rate of 5.2% per year for the 2007 – 2017 period, but energy consumption growth increased to +7.9% in 2018 YoY vs 2017. But if we only assume a 5% growth in total energy mix to 2030, then if natural gas is 15% of India’s energy mix, it would be 18.8 bcf/d in 2025 and 24.0 bcf/d in 2030 ie. growth of +13.2 bcf/d to 2025 and +18.4 bcf/d to 2030. India may not be a global LNG game changer by itself like China, but it does support the call that LNG markets rebalance sooner than expected.” Our Supplemental Documents package has our India Oct 2019 blog.

Natural Gas – It's Nov 1 yet Japan utilities generate less electricity to conserve fuel

On Monday, we tweeted [LINK](#) "Its only Nov 1, Tokyo high 21c, low 15c ie. no heating or AC demand, yet some Japanese utilities are "purposefully producing less electricity" to conserve fuel & reduce spot #LNG purchases. Japan & others better hope its not a cold start to winter. Thx @shoko_oda #OOTT #NatGas." Temperatures are in range where it isn't cold enough at nights to need heat or hot enough during the day to need air conditioning. Bloomberg reports some Japanese utilities are purposefully reducing electricity output to avoid pricey fuel shipments from spot fuel markets. Japan's wholesale power price is at the highest levels since the January cold snap. LNG and coal prices are down from record highs last month but are still significantly high as demand outweighs supply in the market. Japan utility companies are purposefully producing less electricity to conserve fuel supplies and avoid the expensive spot market shipments. With a cold outlook for the winter, power prices are expected to increase through to February. Utility companies are forecasting losses for the first time in nearly a decade and adjusting shareholder dividends as the uncertainty continues to circulate the market. Japan's 24-hour average spot electricity price for next-day delivery settled at 19.495 yen a kilowatt-hour on Monday, up 27% from a week ago. Below is a chart depicting the wholesale Japanese power price. Our Supplemental Documents package includes the Bloomberg report.

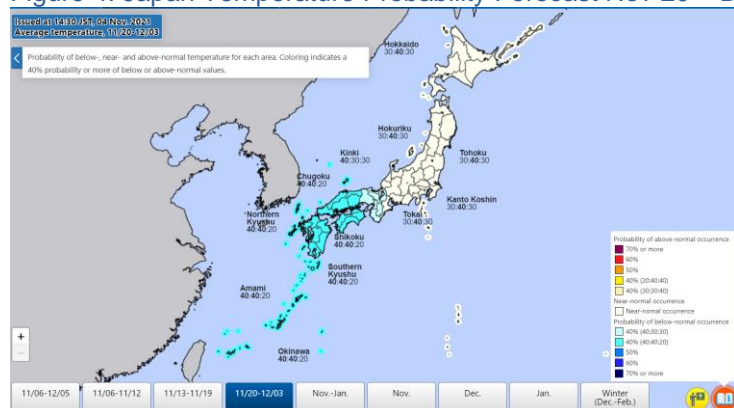
Japan producing less electricity to save fuel

Natural Gas – Japan forecasts warm start to November then turning colder mid month

The Japan Meteorological Agency posts its weekly temperature probability forecast for the next 4 weeks on Thursday mornings. [LINK](#). The new forecast is not much different than the last couple weeks – it calls for a warmer start to November before turn cold to end the month. Below is the JMA forecast for the last two weeks of the forecast period (Nov 20 thru Dec 3) and it expects to see colder than normal temperature to end November and start December.

Japan warm to start Nov

Figure 4: Japan Temperature Probability Forecast Nov 20 – Dec 3



Source: Japan Meteorological Agency

Natural Gas – China expects colder than normal winter in major population areas

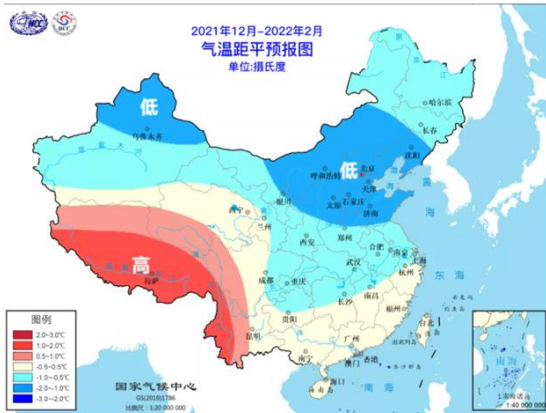
It looks like it is going to be a colder than normal Dec/Jan/Feb for major population areas within China, which should be supportive for natural gas demand especially in and around Beijing with the winter Olympics. On Wednesday, the National Climate Centre of China released their climate forecasts for winter and it indicated most of the major population areas should see normal to below normal temperatures from December to February. Cold air activity is expected to be significantly stronger from January to February 2022. The northern regions are expected to have phased cooling and snowfall processes with significantly lower than average temperatures, while the southwest region moving towards the Tibetan border is expected to have above average temperatures with mild rain, snow and freezing weather.

Cool winter forecast for China

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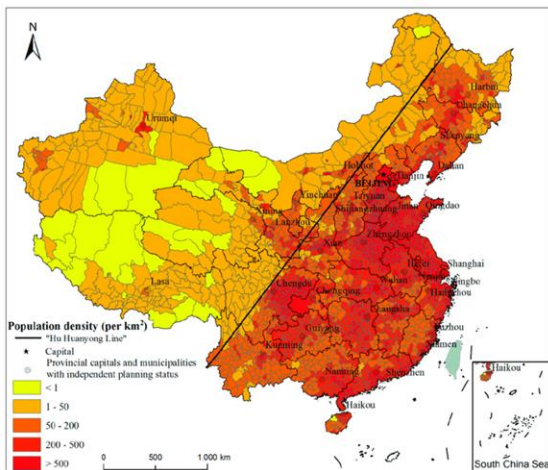
Central China is expected to have the largest fluctuations in temperature this winter. Note that the cooler temperatures for the winter are expected to be in China's most densely populated areas. Below we pasted the National Climate Center's DJF temperature map and a ResearchGate population density map. Our Supplemental Documents package includes the China National Climate Centre forecast.

Figure 5: Average Temperature Anomalies DJF



Source: National Climate Centre

Figure 6: China Population Density



Source: ResearchGate

Natural Gas – “First winter snow in northern China threatens to deepen energy crisis”

In our Sunday morning scan of Chinese news, one of the major stories was the cold weather came in as expected in the near term outlook. The South China Morning Post report was “First winter snow in northern China threatens to deepen energy crisis” [\[LINK\]](#). Beijing had its first snowfall, 23 days earlier than the average. More broadly, SCMP reported “Colder weather expected to head south after Beijing and other areas hit by early snow as a result of the La Niña climate phenomenon.” And “The country has already seen power cuts and surging energy prices and the cold spell is expected to put further pressure on supplies.” And don’t forget, it’s only the beginning of November. Beijing is like Canada and the coldest months are Dec/Jan/Feb.

1st snowfall in
Beijing

Sinopec signs
long term LNG
deal

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Natural Gas – China's Sinopec signs 20-yr LNG purchase deal with Venture Global

We continue to believe the best validation of a pending LNG supply gap in the 2020s is that more Asian LNG buyers are moving to lock up long term LNG supply thru the 2020s. The latest to do so is China's Sinopec in the new deal with Venture Global. Sinopec announced it signed a 20-year LNG contract with Venture Global LNG to purchase 0.53 bcf/d from Venture Global supplies tied to its proposed Plaquemines LNG facility in Louisiana. In addition, China International United Petroleum & Chemicals, a subsidiary of Sinopec, will purchase LNG resources totaling 0.51 bcf/d from Venture Global's Calcasieu Pass project, but this is for an undisclosed shorter period. On Thursday, we tweeted [\[LINK\]](#), *"#LNGSupplyGap in 2020s. Another Asian #LNG buyer locks up long term supply. #Sinopec 20-yr deal for 0.5 bcfd from #VentureGlobal. See SAF Group 8-pg July 14 blog, multiple deals since then. 2020s look very good for #LNG #NatGas. #OOTT"*. The agreement is made up of two long-term contracts with both representing the largest contract volume for US LNG signed by a single Chinese entity. We noted the announcement of this agreement previously in our October 24 Energy Tidbits. The article stated *"Sinopec has been vigorously promoting the high-quality development of the natural gas business and improving clean energy supply guarantee capabilities to continuously build a better life. The LNG contract with Venture Global LNG reflects the two companies' high consensus on supporting the global energy transformation and realizing the "dual carbon" goals of reaching peak carbon and achieving carbon neutrality."* Our Supplemental Documents package includes the Venture Global release. [\[LINK\]](#)

Natural Gas – China's Sinochem signs 17-yr LNG purchase deal with Cheniere

There was another long term China LNG buyer deal announced this week. On Friday, Cheniere announced it *"has entered into a binding liquefied natural gas ("LNG") sale and purchase agreement ("SPA") with Sinochem Group Co., Ltd ("Sinochem Group")*. Under the SPA, Sinochem Group has agreed to purchase an initial volume of approximately 0.12 billions cubic feet per day ("bcf/d") beginning in July 2022, which increases to 0.24 bcf/d. The SPA has a term of approximately 17.5 years and Sinochem Group will purchase the LNG volumes on a free-on-board basis. The purchase price for LNG under the SPA is indexed to the Henry Hub price, plus a fixed liquefaction fee." This deal continues is a binding long term sales LNG deal that will help move Cheniere ahead to FID on its Corpus Christi Stage 3 LNG. Cheniere wrote *"this SPA once again demonstrates Cheniere's ability to tailor solutions in order to meet the needs of LNG consumers worldwide, which is enabled by the scale of our platform and the reliability of our operations. In addition, the SPA further reinforces our commercial momentum, and once again confirms the strength of the global LNG market and the global call for investment in additional LNG capacity, including our Corpus Christi Stage 3 project."* Our Supplemental Documents package includes the Cheniere release. [\[LINK\]](#)

**Cheniere 17 yr
sales with
Sinochem**

Asian LNG buyers abruptly change and lock in long term supply

We have been highlighting that the best validation for a LNG supply gap in the 2020s is that Asian LNG buyers have made an abrupt change to their LNG contracting and pivoted to trying to lock in long term LNG supply. On July 14, 2021 we posted our 8-pg *"Asian LNG Buyers Abruptly Change and Lock in Long Term Supply – Validates Supply Gap, Provides Support For Brownfield LNG FIDs"*. Here is an excerpt from the blog *"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." Our Supplemental Documents package includes our July 14 blog.

Natural Gas – Ukraine gas storage down 36% YoY

As with the rest of Europe, Ukraine, gas storage is lower than last year's levels. Ukraine's gas storage operated reported [\[LINK\]](#) that Ukraine gas storage levels were 36% lower YoY in November, down from the 10-year record level of inventories in 2020. The Storage System Operator of Ukraine reported gas storage levels of 636 bcf, 13% higher than the average levels from 2011 through 2019. They report this confirms the readiness of the network of Ukrainian gas storage facilities for the winter, and the overall stability of energy balance in Ukraine. A draw of 25 bcf was made from reserves in October, 3.5 times higher than that of last year; the difference is attributed selection season beginning two weeks earlier than in 2020, and non-resident companies re-exporting parts of their sales on the EU gas market to capitalize on the peak prices. Our Supplemental Documents package includes the Storage System Operator of Ukraine's report.

**Ukraine gas
storage down
36% YoY**

Natural Gas – Algeria/Morocco dispute escalates, Spain gas imports decrease

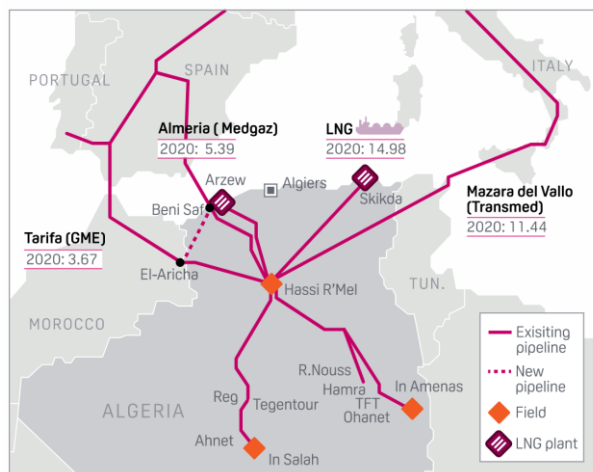
Spanish gas imports from the GME pipeline have officially ceased following the escalation of a diplomatic rift between Algeria and Morocco. Bloomberg reported on Monday [\[LINK\]](#), that the 25 year transit deal expired without renewal as the Algerian president ordered a halt to gas flowing through Morocco to Spain via the GME pipeline. Our July 11 Energy Tidbit noted the worsening relationship between the two North African nations, "*Morocco has reportedly opted to halt talks on the renewal of the transit deal due to worsening relations with both Algeria and Spain.*" Platts writes "*Algeria sends gas to Spain via two pipelines -- the GME pipeline via Morocco and the direct Medgaz link -- with volumes totaling 9.06 Bcm in 2020*". Platts reported on September 1 [\[LINK\]](#) that the transit agreement was set to expire at the end of October. Algeria has exported nearly 1.28 tcf of natural gas, or 52% of its total exports to Spain through the GME pipeline between 2016 and 2020. Platts expected a deal to be cut and for flows to continue to Spain through the GME pipeline. Spain continues to get gas from Algeria via the direct Medgaz pipeline that crosses the Mediterranean Sea, though flows are expected to decrease during November. This leaves Spain increasingly dependent on LNG imports in which they will have to compete with the high-priced bidders in Asia. Spain has increased delivery slots at LNG terminals in effort to bolster gas supplies for the heating

**Algeria and
Morocco gas
transit issues**

season, Spain leads Europe in gas storage with facilities 82% full. Our Supplemental Documents package includes the Bloomberg Report.

Figure 7: Algeria's EGPDF (El Aricha to Beni Saf) Pipeline Inaugurated May 7, 2021

ALGERIA COMMISSIONS NEW GME DIVERSION PIPELINE (Bcm)

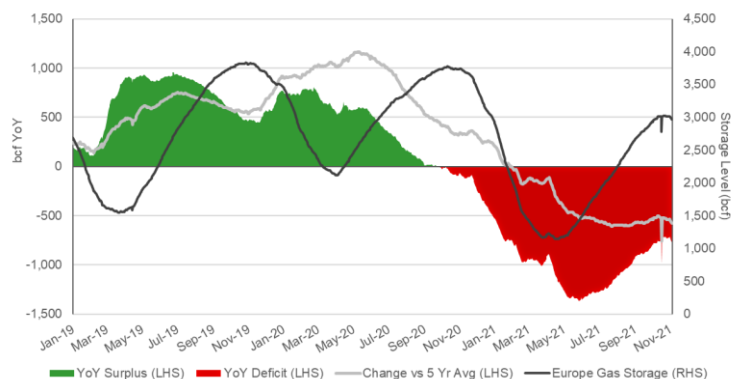


Source: Platts

Natural Gas – Europe storage 75.83% full vs 5 year average of 91.49%

It looks like the draws to the gas storage units are already beginning. It was a small draw but it marked the second consecutive week of draws, indicating the heating season is underway. Europe inventories are at their lowest level at this time of the year in more than a decade. The set up for winter natural gas prices continues to look bullish. Russian pipeline import variability continues to deliver uncertainties to European gas storages throughout the remainder of injection season. With the key indicator for winter Europe natural gas prices, and global LNG prices is Europe storage. Europe gas storage started the winter (Nov 1) at basically full levels at 94.66% and had dropped by 65.77% to be 28.89% at Apr 1. This 65.77% decline since Nov 1, compares to the 5 yr average that would be down 53.99% in the same period or to last winter that was only down 43.29% in the same period. Europe storage levels bottomed in late Apr at 29%, which was the lowest level since Apr 2018. Storage as of Nov 4 is 75.83%, which is -18.93% less than last year levels of 94.76% and are -15.66% below the 5-year average of 91.66%. Europe storage levels over the next few weeks will be the key item to watch for indications on LNG markets going into the winter. Below is our graph of Europe Gas Storage Level.

Figure 8: Europe Gas Storage Level



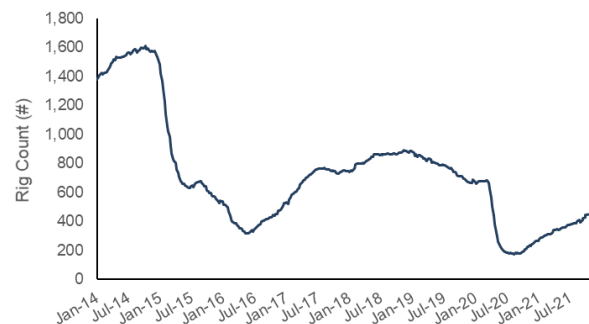
Source: Bloomberg

Oil – US oil +6 WoW at 450 oil rigs

Baker Hughes released its weekly North American drilling activity data at 11am Friday. This week US oil rigs were up +6 rigs WoW at 450 rigs. Oil rigs are +278 off the bottom of 172 in Aug14/2020 week. Permian was +5 this week and is the oil basin expected to drive growth. With oil prices up 69% so far this year and expectations that consumers will switch to oil products with high gas prices, producers are increasing active rigs to boost production to accommodate demand and to rebuild DUCs inventory. US oil rigs hit their 2020 peak at 683 on March 13 and have since fallen by 229 to 450 oil rigs (-34%). The biggest contributor to the decrease is the Permian being down 147 oil rigs from the March 13, 2020 peak (-35%), although we are seeing it continue to ramp up slightly. Below is our graph of US oil rigs since January 1, 2014.

**US oil rigs +6
WoW**

Figure 9: Baker Hughes Total US Oil Rigs



Source: Baker Hughes

Oil – Frac spreads flat WoW at 266 as of Nov 5

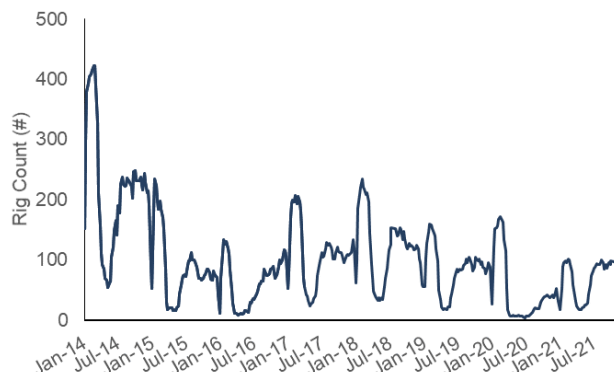
Mark Rossano (C6 Capital Holdings) provided his US frac spread recap for week ended Nov 5 on the Primary Vision network. The YouTube video is at [\[LINK\]](#). US frac spreads were flat at 266 for week ended Nov 5. There were some Haynesville declines but he sees this as just a case of frac spread moves. Permian had a nice spike, Appalachian also came up a bit, Anadarko as well. He still sees frac spreads on track to hit 275 frac spreads as we go into the middle of November. He didn't specifically mention this week, but he expects to see some pull back as move into Thanksgiving, but a lower percentage down than in the past

**Frac spreads flat
at 266**

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Oil – Total Cdn rigs -6 to 160 total rigs and +72 rigs YoY

Total Cdn rigs were +2 this week to 160 total rigs. Cdn oil rigs were -3 at 95 rigs. Cdn gas rigs were -3 to 68 gas rigs despite strong natural gas prices. Total rigs are now +149 since the June 26, 2020 all-time low. There has been a bit of pull back in the last two weeks despite very strong oil and natural gas prices. We would expect to see a ramp up over the next month before pulling back with the normal Christmas break. Cdn drilling has recovered YoY, a year ago Cdn oil rigs were 37 and Cdn gas rigs were 49 for a total Cdn rigs of 86, meaning total Cdn rigs are +74 YoY and total rigs are up +20 vs 2019.

Cdn rigs -6 WoW**Figure 10: Baker Hughes Total Canadian Oil Rigs**

Source: Baker Hughes

Oil – US weekly oil production up +0.2 to 11.5 mmb/d, back to pre Hurricane level

US oil production is now back to pre-Hurricane Ida levels. Weekly production in the US increased this week at 11.5 mmb/d for the week ended Oct 29. Lower 48 production was responsible for the WoW increase up 0.200 mmb/d at 11.1 mmb/d from 10.9 mmb/d last week. US oil production is up YoY at +1.0 mmb/d and is still down significantly at -1.6 mmb/d since the 2020 peak of 13.1 mmb/d on March 13. The EIA DPR has expectations of a slight increase for Oct/Nov for the major shale/tight oil plays.

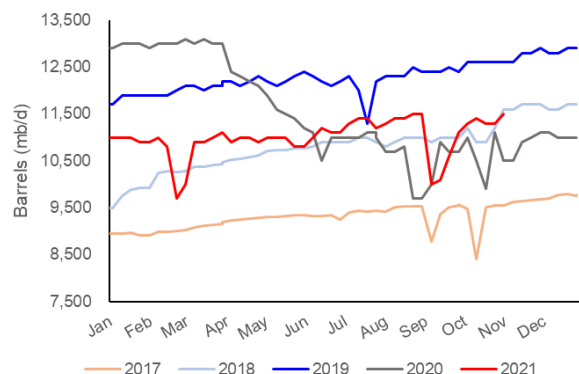
**US oil
production up
WoW**

Figure 11: EIA's Estimated Weekly US Oil Production

Year-Month	Week 1		Week 2		Week 3		Week 4		Week 5	
	End Date	Value	End Date	Value	End Date	Value	End Date	Value	End Date	Value
2019-Jan	01/04	11,700	01/11	11,900	01/18	11,900	01/25	11,900		
2019-Feb	02/01	11,900	02/08	11,900	02/15	12,000	02/22	12,100		
2019-Mar	03/01	12,100	03/08	12,000	03/15	12,100	03/22	12,100	03/29	12,200
2019-Apr	04/05	12,200	04/12	12,100	04/19	12,200	04/26	12,300		
2019-May	05/03	12,200	05/10	12,100	05/17	12,200	05/24	12,300	05/31	12,400
2019-Jun	06/07	12,300	06/14	12,200	06/21	12,100	06/28	12,200		
2019-Jul	07/05	12,300	07/12	12,000	07/19	11,300	07/26	12,200		
2019-Aug	08/02	12,300	08/09	12,300	08/16	12,300	08/23	12,500	08/30	12,400
2019-Sep	09/06	12,400	09/13	12,400	09/20	12,500	09/27	12,400		
2019-Oct	10/04	12,600	10/11	12,600	10/18	12,600	10/25	12,600		
2019-Nov	11/01	12,600	11/08	12,800	11/15	12,800	11/22	12,900	11/29	12,900
2019-Dec	12/06	12,800	12/13	12,800	12/20	12,900	12/27	12,900		
2020-Jan	01/03	12,900	01/10	13,000	01/17	13,000	01/24	13,000	01/31	12,900
2020-Feb	02/07	13,000	02/14	13,000	02/21	13,000	02/28	13,100		
2020-Mar	03/06	13,000	03/13	13,100	03/20	13,000	03/27	13,000		
2020-Apr	04/03	12,400	04/10	12,300	04/17	12,200	04/24	12,100		
2020-May	05/01	11,900	05/08	11,600	05/15	11,500	05/22	11,400	05/29	11,200
2020-Jun	06/05	11,100	06/12	10,500	06/19	11,000	06/26	11,000		
2020-Jul	07/03	11,000	07/10	11,000	07/17	11,100	07/24	11,100	07/31	11,000
2020-Aug	08/07	10,700	08/14	10,700	08/21	10,800	08/28	9,700		
2020-Sep	09/04	10,000	09/11	10,900	09/18	10,700	09/25	10,700		
2020-Oct	10/02	11,000	10/09	10,500	10/16	9,900	10/23	11,100	10/30	10,500
2020-Nov	11/06	10,500	11/13	10,900	11/20	11,000	11/27	11,100		
2020-Dec	12/04	11,100	12/11	11,000	12/18	11,000	12/25	11,000		
2021-Jan	01/01	11,000	01/08	11,000	01/15	11,000	01/22	10,900	01/29	10,900
2021-Feb	02/05	11,000	02/12	10,800	02/19	9,700	02/26	10,000		
2021-Mar	03/05	10,900	03/12	10,900	03/19	11,000	03/26	11,100		
2021-Apr	04/02	10,900	04/09	11,000	04/16	11,000	04/23	10,900	04/30	10,900
2021-May	05/07	11,000	05/14	11,000	05/21	11,000	05/28	10,800		
2021-Jun	06/04	11,000	06/11	11,200	06/18	11,100	06/25	11,100		
2021-Jul	07/02	11,300	07/09	11,400	07/16	11,400	07/23	11,200	07/30	11,200
2021-Aug	08/06	11,300	08/13	11,400	08/20	11,400	08/27	11,500		
2021-Sep	09/03	10,000	09/10	10,100	09/17	10,600	09/24	11,100		
2021-Oct	10/01	11,300	10/08	11,400	10/15	11,300	10/22	11,300	10/29	11,500

Source: EIA

Figure 12: US Weekly Oil Production



Source: EIA, SAF

Oil – Granholm says Biden's plan to increase US oil production is here in Glasgow

There were a number of oil insights from Bloomberg's Friday morning interview with Energy Secretary Granholm [\[LINK\]](#). It's a 7-min interview worth watching or reading the attached SAF created full transcript. (i) Biden doesn't have any plan or isn't trying to do anything to encourage or support higher US oil production despite its continued requests for OPEC and other major oil producing countries to increase oil supply. Bloomberg's first questions were on what is the Granholm plan to increase US oil production. The media pick up was on here laughing and saying "That is hilarious. Would that I had the magic wand on this". But we tweeted [\[LINK\]](#) out her reply to the second ask for the US plan. When asked again, Granholm said "Here's the Biden plan. I'm here in Glasgow. The Biden plan is to diversify and to make sure that we move in the direction of clean energy where we're not reliant upon cartels." (ii) US overlooks its own decisions in impacting oil supply in the US. We also

Granholm on US oil production

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tweeted [\[LINK\]](#) *"Granholm said need to make sure 'we're not reliant upon geopolitical adversaries who may be creating choke points for our ability and our people to be able access energy? #Biden nixed #KeystoneXL. #JonesAct waiver would see US #Oil going to US refineries & not export. #OOTT."* Everyone knows one of Biden's first moves was to cancel Keystone XL. But one other overlooked item is the Jones Act, which requires all tankers moving US oil to US refiners be US flagged and manned. This adds costs and is why US refiners will import foreign oil if the refinery isn't pipeline or crude by rail connected. (iii) Need to make sure *"we're not reliant upon cartels"*. This was one Granholm's statements. She was pressed by Bloomberg *"how reliant are we on OPEC+?"* But she didn't really answer the question. Rather gave a strange answer *"We are reliant on the global gas market. I mean, the global gas. We can't just produce oil for the United States. It is on a global market."* Its not clear what she meant here as the EIA data shows US is a net exporter of gasoline. And also the comment that they can just produce oil for the US? (iv) *"But if 80 plus dollars a barrel doesn't incentivize oil companies to get off the sidelines, I'm not sure what will."* This comment got a lot of headlines and she has used this \$80 line elsewhere. Granholm didn't bite when Bloomberg also said *"And in addition to that, you're talking about why they won't invest. We know why they won't invest. They won't invest because this administration is speaking so highly of this big energy transition that you're actively supporting."* (v) Granholm was asked twice about a Strategic Petroleum Reserve, and the last exchange was *"Ferro. 'Madam Secretary, when can we expect a decision with the SPR. Is that something you're thinking about imminently?"* Granholm. *"I know that the President is looking at it. He'll have more to say about it"*. (vi) Granholm seems to state the obvious, US isn't using less oil and gasoline and it is needed and demand is relatively inelastic. She is asked why not just let gasoline prices go higher so people will use less. Granholm replies *"'Because real people use fossil fuels and real people's wallets, livelihoods are at stake. The President does not want to see the price of fuel hurt and pinch real people. Poor communities have about, up to 30% of their monthly income is based upon fuels. It's not right to raise the price of fuels that would actually hurt real people. That is not in the President's plan and he doesn't want to see that."* Our Supplemental Documents package includes the transcript we made of the full interview.

Oil – White House finally says why they aren't trying to encourage US oil growth

It looks like the White House took advantage of temporary change in spokesperson to shift their message on why Biden doesn't look to US shale oil for more oil supply. White House Press Secretary Jen Psaki tested positive for Covid on Monday, fortunately only with reported mild symptoms. And that means Principal Deputy Press Secretary Karine Jean-Pierre has been stepped up. And with that substitution, it provided the opportunity for the White House to shift the messaging a little bit. Its very difficult for a spokesperson to say the same thing over and over and over, have nothing change and then change to a new message. So they took advantage of this temporary substitution to change the messaging on why Biden is only look at OPEC+ to increase oil supply and not the largest oil producing country in the world, the US, to step up to increase oil supply. It's a change from the perspective that, up until now, the White House has basically ignored any questions on why not get US oil producers to step up instead of begging OPEC. At Thursday's White House briefing, Jean-Pierre was asked *"And, separately, the OPEC members are saying the United States has plenty of spare capacity to increase oil supply to help keep the economy going. Why is he not doing that? Why is he not increasing oil supply?"* Instead of not answering the question, Jean-Pierre actually gave a reason *"So, the U.S. operates on a competitive free market system, as you know, Steve, and individual companies make their own decisions. OPEC Plus is a collection of countries that set supply levels themselves. They have the capacity and the power now to act and make sure this critical moment of global recovery is not impaired. And, you know, to*

**White House on
US oil production**

be -- to be clear, OPEC Plus production is what impacts global oil prices, which is what has an effect on gas prices at home."

Oil – Did Biden tease on potential oil supply from Alberta oil storage?

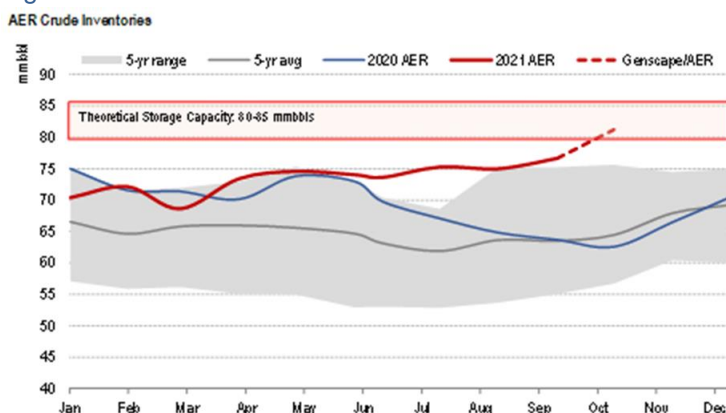
There was a big Biden tease at his press conference yesterday on the passage of the Bipartisan Infrastructure Deal. [\[LINK\]](#) but, no surprise, he was asked about OPEC "Mr. President. OPEC Plus has snubbed your call to pump more oil. When will you respond with an SPR release? Biden replied "Well, first of all, I'm not anticipating that OPEC would respond, that Russia and/or Saudi Arabia would respond. They're going to pump some more oil, whether they pump enough oil is a different thing. There are other — are — there other tools in the arsenal that we have to deal — and I'm dealing with other countries; at an appropriate time, I will talk about it — that we can get more energy in the — in the pipeline, figuratively and literally speaking." That was a different answer than we have seen from him or his administration. He seemed to link his dealing with other countries on helping him get more "in the pipeline, figuratively and literally speaking". Our second tweet [\[LINK\]](#) on this was "2/2. what countries can get #Oil into US pipelines beside Flag of Canada? is that #Biden's tease? Record high Alberta oil storage of 76.65 mmb at 09/30. Be a nice boost to Cdn diffs to reduce storage. Thx @nationalbank NBC Energy team Dave Nielen Kevin Striemer et al. #OOTT." There are only countries with oil pipelines into the US oil pipeline network. The US itself so the only reference here could be SPR releases into the US oil pipeline network. And then who else is there but Canada. Is this what Biden is teasing? Is he teasing on the increased Enbridge Line 3 capacity now that the replacement project is complete? Is he teasing on more volumes being able to move south with the Capline reversal? We guess there is always the option for more crude by rail to connect into US oil pipelines. It will be interesting to see what Biden decides and if he was truly teasing on Cdn pipelines yesterday. Our Supplemental Documents package includes excerpts from the White House transcript of Biden's Sat press conference.

Biden teases on oil supply

Alberta oil storage is getting close to being filled to the brim

The other reason why Biden's tease jumped out at us was that we had just seen the NBC Energy Team's Monday update that said "But, for now Alberta remains on its own island in terms of storage as AER data for September was released late-last week, posting a record high Alberta storage number of 76.65 MMb total. From what we can tell, this could be followed by another build so far in October – according to Genscape's weekly data – implying that crude stocks in Alberta continue to build closer to the brim." We attached this to our tweet. It just seemed to fit as a win/win. Alberta oil storage is pushing to the brim, and Biden wants to get some other oil supply. As our tweet noted, this would help Alberta oil differentials. Below is one of the NBC graphs. Our Supplemental Documents package includes the NBC Energy Team Monday comment.

Figure 13: Alberta AER Crude Oil Inventories



Source: Bloomberg, AER, Genscape, NBC

Source: National Bank of Canada, NBC Energy Team

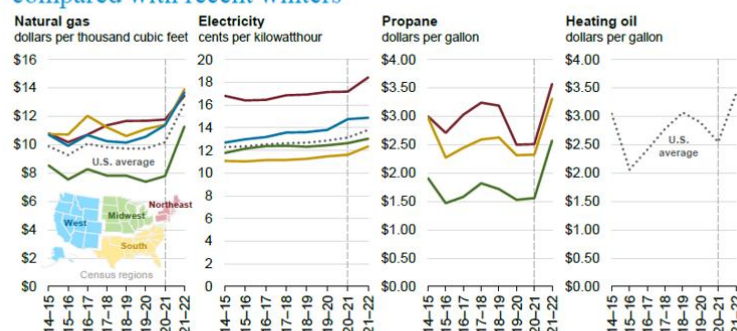
Oil – Biden reportedly analyzing if a Line 5 shut down would spike propane prices

We were surprised by the Politico Wednesday tweet [\[LINK\]](#) on one of its subscriber only reports “NEW: The Biden administration is gathering data on whether shutting down the Line 5 oil pipeline in Michigan would lead to fuel price shocks in the region, according to people familiar with the administration effort. w/@ziannlum.” We just don’t get it, does the Biden administration think a shut down of Enbridge Line 5 wouldn’t spike propane prices? Don’t they read the EIA analysis. We had to tweet [\[LINK\]](#) a reply “#Biden can refer to @SecGranholm’s @EIAgov winter fuels outlook already forecasts Midwest winter propane prices +65% YoY assuming \$ENB #Line5 is operating. Pre-Covid, #Line5 supplied 65% of Upper Peninsula #propane demand & 55% of Michigan statewide demand. Thx @bjlefebvre #OOTT.” We could have gone with more EIA analysis such as, in last week’s (Oct 31, 2021) Energy Tidbits memo, that highlighted the new EIA blog [\[LINK\]](#) on propane prices that are at their highest levels since 2011. The EIA wrote “This year, retail propane prices have risen with wholesale propane spot prices that reflect greater global demand and tight global supply. That tightness is reflected in inventory levels in the United States. U.S. propane and propylene inventories are starting this winter season lower than in recent years; weekly U.S. inventories are averaging 28% lower than the same time last year and 21% lower than their recent five-year (2015–2020) average.” Rather, our tweet included graphs from the EIA’s Oct winter fuels outlook and how the EIA forecasts this winter 2021/22 Midwest propane prices will be +65% YoY and that assumes Enbridge Line 5 is providing propane to Michigan. We do not have the EIA’s assumption on how the level of Michigan’s propane imports on Line 5 for this winter. But prior to Covid, Enbridge estimated Line 5 supplied 65% Michigan’s Upper Peninsula propane demand, and 55% of Michigan’s overall propane demand. Below is one of the EIA winter fuels graphs attached to our tweet. Our Supplemental Documents package includes more propane graphs from the winter fuels outlook and Enbridge’s brief “impact of a line 5 shutdown” brief. [\[LINK\]](#)

Biden looking at Line 5

Figure 14: EIA Winter Fuels Outlook Propane Forecast

Prices across all fuels and all regions in the forecast are higher compared with recent winters



Source: U.S. Energy Information Administration



Source: EIA

Oil – Did the Joly/Blinken call raise concerns on Liberals success on Line 5?

We are concerned that the Liberals aren't really trying very hard or having any success with the US on enforcing the 1977 treaty that covered existing pipelines like Enbridge Line 5. We know they aren't saying that but, they certainly raise this doubt when carefully review the different readouts of the Joly/Blinken call. The one thing that should never be overlooked is what politicians write in press releases. They are normally carefully worded so we look at them as more indicative of the formal position or, as we saw this week, possibly a hint of disagreement. Canada's new foreign minister, Melanie Joly, held a call with US Secretary of State Blinken on Wed. One last background item on the US perspective is that Energy Secretary Granholm is a former Michigan governor and current governor Whitmer was considered one of the frontrunners for Biden's VP slot. (i) Unfortunately, it reminds us of the Liberal political speak on Keystone XL. We hope not. We recap the Keystone XL political speak in the next item. (ii) There is a difference in political speak between an item discussed by both sides and an item mentioned by one side. Joly's release on the call [\[LINK\]](#) said "Minister Joly reiterated Canada's commitment to working constructively with the United States on the Line 5 issue under the auspices of the 1977 Treaty and stressed the importance of this infrastructure for Canada." There was no indication of a discussion like seen on Afghanistan. "Minister Joly and Secretary Blinken discussed the situation in Afghanistan." It so reminds me of Trudeau's first Biden call. I don't dispute she said something but I suspect it wasn't a big press. Rather its kind of like you know we would like you to get Michigan to back off on Line 5. And when Blinken says nothing, she moves on to something else. (iii) The US State Dept readout of the call made no specific mention, but also didn't specifically mention Afghanistan. We probably wouldn't be bringing this up if we hadn't seen the closing sentence "Secretary Blinken noted that he looks forward to working with Foreign Minister Joly to achieve our shared goals, as outlined by President Biden and Prime Minister Trudeau in the Roadmap for a Renewed U.S.-Canada Partnership". (iv) As soon as we saw Blinken link back to the Roadmap, it got our attention. We remember well the Roadmap in Feb because it was another example of Canada saying they highlighted something to give the oil patch some hope but only to find out it wasn't included or discussed. Our Feb 28, 2021 Energy Tidbits highlighted the roadmap. And we then noted the careful working. The Liberals issued a press release on the Roadmap that said "The Prime Minister also highlighted that our integrated energy infrastructure, including oil and gas, would remain essential during a transition to a net-zero emissions future". Sounded good, but then the key document (not the Liberals press release) is the Roadmap for a Renewed U.S.-Canada

Joly on Line 5

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Partnership for the items that are being worked and there isn't that same inclusion of highlighting oil and gas and the word essential. Rather the closest mention in the agreement is "*The leaders recognized the important economic and energy security benefits of the bilateral energy relationship and its highly integrated infrastructure*". We suspect the hope from the Liberals is that oil and gas people will link the press release and the word "energy" in the agreement. At that time, our view was sorry to disappoint, but these are carefully written and the omission is not an error, it is deliberate so basically the press release is a soundbite that doesn't have any lasting impact or quasi commitment. (v) If some somehow thought that the Liberals Feb release may have signaled anything on potentially on Line 5, just remember the Liberals did nothing on Line 5 for a half a year thereafter. That is our concern. As the Line 5 issue was accelerating at that time, we didn't see any position put forward by the Liberals that this was part of the agree Roadmap. (vi) Is it definitive? No, but releases are carefully written and the Joly/Blinken releases have to increase the risk assessment on how hard or successful the Liberals are being in their supposed pressing of the 1977 treaty with respect to Enbridge Line 5. Why did Blinken bring up the Roadmap? Is Line 5 only being "discussed" at junior levels or is it something the US is "discussing" at senior levels? We hope we are wrong. (vii) Our Supplemental Documents package includes the US and Canada readouts of the call.

The Joly/Blinken readouts remind of the Trudeau/Biden Keystone XL readouts

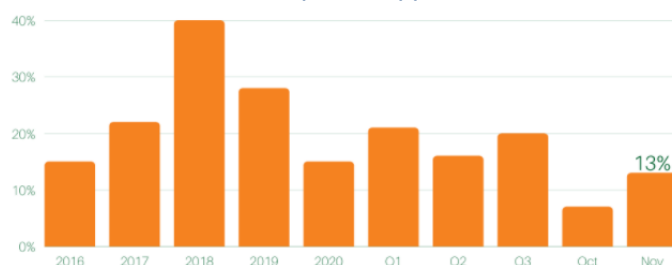
The reminder from Trudeau/Biden on Keystone XL is that these releases are carefully written and, unfortunately, the Joly/Biden readouts remind of what happened in January on Keystone XL. (i) Our Jan 24, 2021 Energy Tidbits highlighted the first Biden/Trudeau phone call post Biden taking over. Recall that Biden's first days included his executive order nixing Keystone XL. Part of what we wrote was "*Prior to the Biden/Trudeau Friday phone call, on Wed we tweeted [LINK](#) 'here is @POTUS executive order on pulling #KeystoneXL permits. Hard to see how he changes his mind. his Friday call with @JustinTrudeau will be sorry i had to cancel your pipeline on my first day at work. Luckily TMX and Line 3 can support growth.'*" And then we also wrote on the readouts on the Friday call the same careful language on raising vs discussion. We then wrote "Post the call, we tweeted [LINK](#) "*1/2. Big diff in political speak between raised vs discussed issues. @JustinTrudeau just 'raised' disappointment in #KeystoneXL decision (@POTUS says i hear you). but 'discussed' vaccines, sustainable recovery, diversity, working with indigenous parties ... #OOTT*" and [LINK](#) "*2/2 Good to see discussed the two michaels (lets et them home). @jkenney will note they 'agreed' to work together on CAN energy exports but was QC/NL growth potential in 'cross-border clean electricity transmission' no discuss/agree to support other pipelines ie Line 3 & 5 #OOTT*". (ii) Then 6 weeks later, Trudeau made it clear that he didn't fight Biden at all on trying to save Keystone XL. In our March 14, 2021 Energy Tidbits, we wrote "*Last week's (March 7) Energy Tidbits noted Trudeau's Feb 28 NBC Meet the Press interview. NBC posted a transcript of the interview [LINK](#) including 'Does this mean you're done asking for -- are you going to stop advocating for it here? Do you feel as if the Keystone Pipeline is now dead? PRIME MINISTER JUSTIN TRUDEAU: I think it's fairly clear that the U.S. administration has made its decision on that, and we're much more interested in ensuring that we're moving forward in ways that are good for both of our countries. I think there's so much we can do together that I don't spend too much time worrying about the tension points. It'll always come up in our relationship, but we'll work through them, particularly given the alignment on so many things that we're able to bring with this new administration.'*"

Oil – Trans Mountain apportioned by 16% for Sept

On Monday [\[LINK\]](#), Trans Mountain released an update on its capacity for the month of November. Total system nominations are apportioned by 13% for September, meaning 13% of demand for the pipeline exceeds its capacity. Trans Mountain reminds that it has been running at full capacity and has seen regular monthly apportionment for over a decade ie, the clear sign for a need for expansion. The Trans Mountain apportionment update also includes a bit of an apportionment 1010. Trans Mountain wrote *“When a pipeline experiences significant and prolonged apportionment like in the case of the existing Trans Mountain Pipeline, it’s one signal that more capacity is needed. Apportionment can bring with it a discounting of prices as producers compete to sell what they can through the pipeline before having to use another pipeline or other modes of transport to another, less profitable market. It can also mean the buyers at the end of the pipeline are forced to source their shortfall of supply from alternate, less desirable sources.”* Below is a chart which shows the average apportionment since 2016. Our Supplemental Documents package includes the Trans Mountain release.

Trans Mountain running at full capacity

Figure 15: Trans Mountain Pipeline Apportionment



Source: Trans Mountain Pipeline

Oil – No change to Covid outbreak areas in oil sands facilities

There is no change to the Covid outbreak areas in the oil sands. Alberta posts its Covid updates on Tuesdays and Fridays. Per Alberta's Friday November 5 update [\[LINK\]](#) the list of Covid outbreak areas is unchanged vs the Oct 29 update. There eight oil sands outbreak areas: Cenovus Foster Creek, CNRL Albion, CNRL Horizon, CNRL Kirby Jackfish, CNRL Primrose-Wolf Lake, MEG Christina Lake, Suncor Firebag and Suncor Fort Hills.

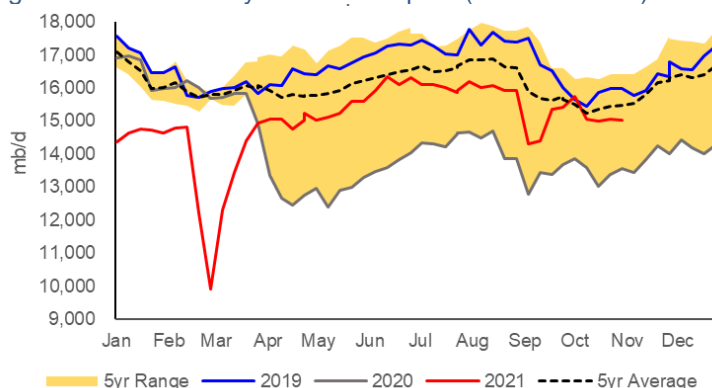
Covid in oil sands

Oil – Refinery inputs -0.025 mmb/d YoY at 15.023 mmb/d

Refineries continue to recover from the impacts of Covid and Hurricane Ida and normal seasonal maintenance; we observed inputs decline slightly as refineries progress through regularly scheduled seasonal maintenance. There was a slight decrease in refinery inputs as refineries across the US continue with their seasonal maintenance. Crude inputs to refineries were down -0.025 mmb/d this week to 15.023 mmb/d and are +1.471 mmb/d YoY. Refinery utilization was up +1.2% to 86.3%, which is still +9.3% YoY with the maintenance season coming to an end across the nation. Total products supplied (i.e., demand) was up +0.166 mmb/d to 19.997 mmb/d. Motor gasoline was up +0.181 at 9.504 mmb/d from 9.323 mmb/d last week. Gasoline supplied, a proxy for demand, was up last week. Gasoline stockpiles are at their lowest levels with demand for gasoline at a 4-week high. The four-week average of production supplied increased to 9.412 mmb/d, up from last year.

Refinery inputs down WoW

Figure 16: US Refinery Crude Oil Inputs (thousands b/d)



Source: EIA, SAF

Oil – Fire to delay Shell Norco refinery restart

Shell had some good news this week on the recovery of shut-in Gulf of Mexico production arising from Hurricane Ida. But, onshore, they are having some delays with the restart of their Norco Louisiana refinery, where a fire will delay the restart. On Tuesday [\[LINK\]](#), Reuters noted a fire at Shell's 230,611 b/d crude distillation unit will delay the planned restart. The CDU has been closed since August 28, the day before Hurricane Ida passed over the refinery, which led to months of repairs. Additionally, the CDU had planned to restart a 112,000-bpd gasoline-producing residual catalytic cracking unit (RCCU) and 40,000-bpd diesel-producing hydrocracker this week. Our Supplemental Documents package includes the Reuter article.

**Fire delays
refinery restart****Oil – US “net” oil imports down -0.221 mmb/d WoW at 3.247 mmb/d**

US “NET” imports were down -0.221 mmb/d to 3.247 mmb/d for the Oct 29 week. US imports were down -0.082 mmb/d to 6.172 mmb/d. US exports were up +0.138 mmb/d to 2.925 mmb/d. The WoW increase in US oil imports was driven by US's top 10 imports by country were down -0.022 mmb/d from Top 10. Some items to note on the by country data. (i) Canada was up this week by +0.213 mmb/d to 3.685 mmb/d, which is now ~0.015 mmb/d below the average levels in Jan/Feb of 2020. (ii) Saudi Arabia was up 61,000 b/d to 0.397 mmb/d this week. (iii) Colombia was down 0.07 mmb/d to 0.071 mmb/d. (iv) Ecuador decreased imports this week, down 0.130 mmb/d to 0.092 mmb/d. (v) Iraq was up +32,000 b/d to 187,000 b/d. (vi) Venezuela remained at 0 due to US sanctions. (vi) Mexico was down by -192,000 b/d to 0.439 mmb/d.

**US “net” oil
down WoW**

Figure 17: US Weekly Preliminary Oil Imports by Major Countries

	Aug 20/21	Aug 27/21	Sept 03/21	Sept 10/21	Sept 17/21	Sept 24/21	Oct 1/21	Oct 8/21	Oct 15/21	Oct 22/21	Oct 29/21	WoW
Canada	3,555	3,612	3,580	3,200	3,143	3,034	4,039	3,441	3,254	3,472	3,685	213
Saudi Arabia	286	345	296	369	399	561	622	304	319	336	397	61
Venezuela	0	0	0	0	0	0	0	0	0	0	0	0
Mexico	595	674	372	538	835	764	652	316	462	631	439	-192
Colombia	370	71	145	0	212	255	0	382	211	141	71	-70
Iraq	77	174	106	50	42	0	31	188	239	155	187	32
Ecuador	261	195	0	174	102	235	59	208	0	222	92	-130
Nigeria	95	43	116	82	95	64	133	211	137	0	64	64
Kuwait	0	0	0	0	0	0	0	0	0	0	0	0
Angola	0	0	0	0	0	0	0	0	0	0	0	0
Top 10	5,239	5,114	4,615	4,413	4,828	4,913	5,536	5,050	4,622	4,957	4,935	-22
Others	918	1,226	1,195	1,348	1,637	1,639	1,499	944	1,203	1,297	1,237	-60
Total US	6,157	6,340	5,810	5,761	6,465	6,552	7,035	5,994	5,825	6,254	6,172	-82

Source: EIA, SAF

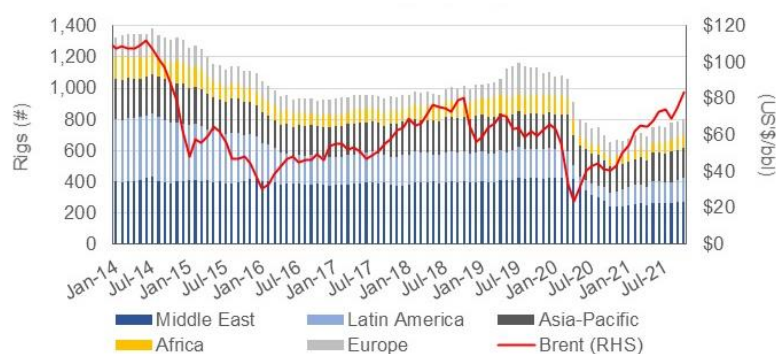
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Oil – Baker Hughes International rigs +13 MoM to 800 rigs in October

There were no major surprises as we continue to see international rigs increase. This is consistent from the industry outlooks from the recent oilfield service Q3 calls. One of the common themes from the calls was strong growth in Latin America and that shows up in the Baker Hughes updated international rig counts for October released on Friday. As expected Baker Hughes reported an increase from last month's count. International activity had been increasing with stronger oil and gas prices. October is up +21% YoY, but still down 29% vs October 2019. Total international rigs increase 13 MoM to 800 in October. The MoM rig count is as followed: Asia-Pacific -4, Africa +1, Europe -2, Latin America +12, and the Middle East +6. The rig count in Latin America was driven by +7 rig increase in Mexico, +2 increase for both Brazil and Colombia, bringing the respective nations back to their pre-Covid levels. Brazil, 11 rigs are focused in offshore operations. Iraq and Saudi Arabia drove Middle East increases +3 and +7 respectively. Below is our graph of international rigs by region and avg monthly Brent price.

**International
rigs +13 MoM**

Figure 18: Baker Hughes International Rig Count and Brent Price



Source: Baker Hughes, Bloomberg

Oil – Pemex existing refineries back to 2016 levels for oil processing

It may only be one month's data, but Pemex's Sept results were the first reversal in several years of declining crude oil being refined. On Monday, we tweeted [\[LINK\]](#) "AMLO's stop #Oil exports in H2/22 also sees increasing efficiencies at existing refineries. #Pemex is reversing 6-7 yrs of refinery declines. Refineries oil input up 0.1 mmb/d YoY in 2021 & expected to hit 1 mmb/d in 2022. Less MEX oil exports = positive for Cdn med/heavy. #OOTT." Our tweet included the below table of crude oil input into Pemex refineries. September was +16.6% YoY to 0.793 mmb/d, and now back to September 2016 levels. Pemex existing refineries processing more oil is critical to AMLO's view that Mexico will stop oil exports in H2/22 and that all Mexican oil production will be refined in Mexico. The other key factor is the construction of the new Dos Bocas refinery that is expected to be inaugurated in July 2022. We don't think Mexico will hit the zero oil exports in H2/22, but the reality is that its oil exports will be materially in H2/22.

**Increasing oil
thru Pemex
refineries**

Figure 19: Pemex Crude Input to Refineries

(Thousand b/d)	2013	2014	2015	2016	2017	2018	2019	2020	20/19	2021	21/20
Jan	1,253	1,194	1,022	1,079	916	594	507	558	10.0%	703	26.0%
Feb	1,234	1,102	1,054	1,068	930	544	601	464	-22.8%	710	53.1%
Mar	1,222	1,194	1,096	1,096	995	652	572	599	4.7%	824	37.6%
Apr	1,295	1,232	1,063	1,037	978	767	570	670	17.4%	647	-3.4%
May	1,300	1,168	1,068	1,008	916	685	570	640	12.3%	682	6.5%
June	1,298	1,197	1,043	1,018	820	662	645	584	-9.5%	668	14.3%
July	1,270	1,208	1,068	929	667	646	657	520	-20.8%	637	22.4%
Aug	1,233	1,147	1,057	849	734	670	659	616	-6.4%	657	6.6%
Sept	1,085	1,180	1,058	766	537	604	654	680	4.0%	793	16.6%
Oct	1,070	1,086	1,061	802	544	485	511	589	15.2%		
Nov	1,197	1,079	1,057	780	610	519	590	509	-13.7%		
Dec	1,231	1,073	1,124	769	569	511	571	653	14.3%		

Source: Pemex

Oil – Venezuela exports up to >700,000 b/d in Oct

We were surprised by the Reuters Tuesday report “Venezuela's oil exports bounce to over 700,000 bpd in Oct -data” [\[LINK\]](#). We tweeted [\[LINK\]](#) “Venezuela's exports average 711,193 b/d in Oct from “30 cargos of crude and refined products, mostly to Asia”. no split of #Oil vs products, but still much higher than most expect vs production >500,000 b/d. Thx @mariannaparraga @MircelyG.” We were surprised by the >700,000 b/d exports. Reuters did not report a split in exports between oil and petroleum products. Reuters reported that regular supplies of diluents from Iran boosted production and shipments according to PDVSA tracking data. October saw PDSVA and joint ventures ship 30 cargoes of crude and refined products, primarily to Asia; a 2mmbbl cargo of heavy crude was shipped to Iran as payment for the condensate. Exports in October were up 76% MoM and averaged 711,193 b/d, the third highest monthly average so far this year. September saw a lack of diluents restrict output and blending. Venezuela continues to be under US sanctions designed to limit sales and has observed significant declines since blacklisted by the US Treasury Department. Exports have stabilized this year at 633,000 b/d, up YoY from 626,000 in 2020. OPEC's Secondary Sources estimates have had Venezuela oil production at just over 500,000 b/d for the past year. Our Supplemental Documents package includes the Reuters report.

Venezuela
exports up in
Oct

Figure 20: OPEC Production per Secondary Sources, Monthly Oil Market Report October 2021

Table 5 - 7: OPEC crude oil production based on secondary sources, tb/d

Secondary sources	2019	2020	1Q21	2Q21	3Q21	Jul 21	Aug 21	Sep 21	Change Sep/Aug
Algeria	1,022	897	870	886	921	911	920	932	12
Angola	1,401	1,255	1,141	1,111	1,105	1,067	1,116	1,133	17
Congo	324	288	271	262	256	258	252	259	6
Equatorial Guinea	117	115	107	109	100	100	101	100	-1
Gabon	208	195	185	186	187	179	180	202	22
IR Iran	2,356	1,988	2,214	2,443	2,493	2,493	2,482	2,503	22
Iraq	4,678	4,049	3,881	3,940	4,052	3,965	4,056	4,139	84
Kuwait	2,687	2,432	2,328	2,356	2,445	2,424	2,442	2,468	26
Libya	1,097	367	1,175	1,151	1,153	1,158	1,153	1,148	-5
Nigeria	1,786	1,579	1,413	1,423	1,376	1,385	1,296	1,451	156
Saudi Arabia	9,794	9,182	8,445	8,503	9,544	9,420	9,539	9,678	139
UAE	3,094	2,802	2,610	2,644	2,761	2,722	2,774	2,789	14
Venezuela	796	500	517	511	528	526	533	527	-6
Total OPEC	29,361	25,650	25,156	25,526	26,922	26,609	26,842	27,328	486

Notes: Totals may not add up due to independent rounding, given available secondary sources to date. Source: OPEC.

Source: OPEC

Oil – Colombia Aug oil production was 0.744 mmb/d is -0.7% YoY, -0.68% MoM

Colombia oil production has rebounded after the blockades were lifted in June/July. On Tuesday, Colombia Ministry of Mines and Energy released its September oil and gas production data [\[LINK\]](#). The Colombian Ministry of Mines and Energy reported “Regarding oil production, in September 2021 it was relatively stable with a slight decrease of 0.48%,”

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registering a production of 744,173 barrels compared to those reported last August (747,772 bpd). Regarding the production of September 2020 (749,254 bpd), there was a decrease of 0.68%." Colombia highlighted scheduled maintenance and electrical failures at the Chichimene, Jacana and La Cira fields as the reason for the decline in production. Colombia also noted that YTD Sep 30 oil production averaged 0.734 mmb/d, down 7.05% YoY from 0.789 mmb/d in the same period 2020. Note that Colombia wants to attract more capital to its oil sector. Our Sept 26, 2021 Energy Tidbits highlighted that week's FT report [\[LINK\]](#), that Colombia's ANH is making changes to the production contracts for Colombia's 2021 licensing round to try to encourage more bidding. The changes are not viewed as material but are viewed as being small positives with minor changes to prequalification and contract terms. FT reported that the new tweaks include the rules for companies to prequalify and the contract terms have been reviewed to improve the 2021 process to attract new investments in both exploration and production. Below is our table of Colombia monthly oil production. Our Supplemental Documents package includes the Google Translate version of the Colombia release.

Figure 21: Colombia Oil Production

million b/d	2015	2016	2017	2018	2019	2020	20/19	2021	21/20
Jan	1.036	0.986	0.860	0.860	0.899	0.884	-1.7%	0.745	-15.7%
Feb	1.030	0.955	0.864	0.823	0.893	0.878	-1.6%	0.746	-15.1%
Mar	1.023	0.917	0.804	0.856	0.885	0.857	-3.1%	0.745	-13.0%
Apr	1.029	0.915	0.857	0.865	0.891	0.796	-10.6%	0.745	-6.4%
May	1.027	0.904	0.851	0.866	0.895	0.732	-18.2%	0.703	-3.9%
June	1.010	0.888	0.857	0.864	0.892	0.730	-18.2%	0.694	-4.9%
July	0.947	0.843	0.856	0.860	0.869	0.735	-15.4%	0.731	-0.5%
Aug	0.968	0.827	0.858	0.866	0.883	0.742	-15.9%	0.748	0.8%
Sept	1.009	0.859	0.851	0.869	0.879	0.749	-14.8%	0.744	-0.7%
Oct	1.005	0.846	0.864	0.879	0.883	0.751	-14.9%		
Nov	0.990	0.855	0.851	0.883	0.880	0.761	-13.5%		
Dec	0.999	0.837	0.870	0.889	0.882	0.759	-14.0%		

Source: Bloomberg, Colombia Ministry of Mines and Energy

Oil – Russia crude production ~120,000 b/d above their October quota

Russian October oil production increased for the second consecutive month with companies increasing output under the OPEC+ deal. On Tuesday, Bloomberg reported Russian crude and condensate production in October was about 10.843 mmb/d, up 127,000 b/d or 1.1% from September production. The official Russian data doesn't split out crude vs condensate, but if Russia's condensate production is in line with September, about 910,000 b/d, crude output would be 9.93 mmb/d, ~120,000 b/d above their October quota. Russia's compliance remained at 92% in September, lowering their rate among other OPEC+ producers. Russia has agreed to raise its output by 100,000 b/d each month starting in August, along with the rest of the alliance's agreement to return 400,000 b/d of supply to the market each month. Below is Russia's oil and condensate output recovery.

**Russia
production up
MoM**

Oil – OPEC+ reconfirms July 18 production plan to add 400,000 b/d in Dec

It was another short and sweet OPEC+ meeting this month. There was some speculation before the meeting that OPEC+ was actually going to discuss increasing oil production. But once we saw it was going to be short and sweet, before the start of the OPEC+ ministerial meeting, we tweeted [\[LINK\]](#) *"#OPEC+ press conference in 30 min, reports Reuters. if less than 90 min from start of JMMC to press conference, can it point to anything but a rubber stamp of existing +400,000 b/d schedule? will know shortly. #OOTT."* It was a short meeting and basically confirmed that they were sticking to the monthly production adjustment mechanism approved at the July 19 OPEC and Non-OPEC Ministerial Meeting. OPEC stated, "reconfirmed the production adjustment plan and the monthly production adjustment mechanism approved at the 19th OPEC and non-OPEC Ministerial Meeting and the decision

**OPEC+ sticks to
July 18 plan**

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to adjust upward the monthly overall production by 0.4 mb/d for the month of December 2021, as per the attached schedule.” [\[LINK\]](#). OPEC and allies led by Russia agreed in July to phase out record output cuts by adding 400,000 bp/d of oil a month (see our July 18, 2021 Energy Tidbit). The next OPEC+ meeting is scheduled to be held on November 4, 2021. Our Supplemental Documents package includes the OPEC+ Nov 4 release as well as the July 18 production plan.

Figure 22: OPEC+ Cut Schedule

OPEC (mmb/d)	Reference Level Production	March 2021	April 2021	May 2021	June 2021	July 2021	Aug 2021	Sept 2021	Oct 2021	Nov 2021	Dec 2021	May/22 per July/21 Agreement	Change in Ref. Level Post May/22	EIA STEO 2022E Production Avg
Algeria	1,057	876	876	887	898	912	922	932	942	952	962	1,057	-	n.a.
Angola	1,528	1,267	1,267	1,283	1,298	1,319	1,334	1,348	1,363	1,377	1,392	1,528	-	n.a.
Congo	325	269	269	273	276	281	284	287	290	293	296	325	-	n.a.
Equatorial G.	127	105	105	107	108	110	111	112	114	115	116	127	-	n.a.
Gabon	187	155	155	157	159	161	163	165	166	168	170	187	-	n.a.
Iran	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	-	n.a.
Iraq	4,653	3,857	3,857	3,905	3,954	4,016	4,060	4,104	4,149	4,193	4,237	4,803	-	150
Kuwait	2,809	2,329	2,329	2,358	2,387	2,425	2,478	2,505	2,532	2,558	2,585	2,959	-	150
Libya	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	-	n.a.
Nigeria	1,829	1,516	1,516	1,535	1,554	1,579	1,596	1,614	1,631	1,649	1,666	1,829	-	n.a.
Saudi Arabia*	11,000	8,119	8,119	9,232	9,347	9,495	9,600	9,704	9,809	9,913	10,018	11,500	-	n.a.
UAE	3,168	2,626	2,626	2,659	2,692	2,735	2,765	2,795	2,825	2,855	2,885	3,500	-	332
Venezuela	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	-	n.a.
Total OPEC	26,683	21,119	21,119	22,396	22,673	23,033	23,287	23,539	23,794	24,047	24,300	27,815	-	1,132
OPEC vs. ref.	0	-5,564	-5,564	-4,287	-4,010	-3,650	-3,396	-3,144	-2,889	-2,636	-2,383	0	0	-2,293
*Saudi Arabia quota for Feb-Apr 2021 includes voluntary 1mmb/d cut; May-July includes wind down of voluntary cut														
Non-OPEC	Reference Level Production	March 2021	April 2021	May 2021	June 2021	July 2021	August 2021	Sept 2021	Oct 2021	Nov 2021	Dec 2021	May/22 per July/21 Agreement	Change in Ref. Level Post May/22	EIA STEO 2022E Production Avg
Russia	11,000	9,249	9,379	9,418	9,457	9,495	9,495	9,495	9,495	9,913	10,018	11,500	-	500
Kazakhstan	1,709	1,437	1,457	1,463	1,469	1,475	1,475	1,475	1,475	1,540	1,556	1,709	-	n.a.
Oman	883	732	732	741	750	762	762	762	762	796	804	883	-	n.a.
Azerbaijan	718	595	595	603	610	620	620	620	620	647	654	718	-	n.a.
Malaysia	595	493	493	499	506	514	514	514	514	537	542	595	-	n.a.
Bahrain	205	170	170	172	174	177	177	177	177	185	187	205	-	n.a.
Sudan	75	62	62	63	64	65	65	65	65	68	69	75	-	n.a.
South Sudan	130	106	106	109	110	112	112	112	112	117	118	130	-	n.a.
Brunei	102	85	85	86	87	88	88	88	88	92	93	102	-	n.a.
Total Non-OPEC	15,417	12,931	13,061	13,154	13,227	13,308	13,308	13,308	13,308	13,895	14,041	15,917	-	500
Non-OPEC vs. ref.	0	-2,486	-2,336	-2,263	-2,190	-2,109	-2,109	-2,109	-2,109	-1,522	-1,376	0	0	n.a.
Total OPEC+	42,100	34,050	34,200	35,550	35,900	36,341	36,595	36,847	37,102	37,942	38,341	43,732	-	1,632
OPEC+ vs. ref.	0	-8,050	-7,900	-6,550	-6,200	-5,759	-5,505	-5,253	-4,998	-4,158	-3,759	0	0	n.a.

Source: OPEC

Oil – OPEC’s message to Biden was to focus on natural gas, coal, etc

The immediate market response to the OPEC+ decision was positive that OPEC+ did not make any change to their planned schedule to increase production by 400,000 b/d for December. However, we did our normal FED statement check process to see what had changed, we found a big addition to the opening paragraph compared to the OPEC statement at the October meeting. Our takeaway from the addition is that OPEC is making a point of saying the oil market is under control, but the problem is the rest of the energy markets ie. the non-oil markets. In the press conference, Saudi Energy Abdulaziz was more specific pointing to the natural gas, coal and LNG markets. We tweeted [\[LINK\]](#) “#OPEC’s message today to #Biden is we’re doing our job maintaining stable/balanced #Oil markets, but not sure about the rest of you on the rest of #NatGas #EnergyTransition etc. Check out the added long sentence to #OPEC’s release today vs Oct 4. #OOTT” Here is the opening paragraph of the Oct 4 meeting “In view of current oil market fundamentals and the consensus on its outlook, OPEC and participating non-OPEC oil producing countries:” Here is the opening paragraph today with the new lengthy opening sentence “Today’s OPEC release lead paragraph added the new lengthy opening sentence ““The meeting reaffirmed the continued commitment of the Participating Countries in the Declaration of Cooperation (DoC) to ensure a stable and a balanced oil market, the efficient and secure supply to consumers and to provide clarity to the market at times when other parts of the energy complex outside the boundaries of oil markets are experiencing extreme volatility and instability, and to continue to adopt a proactive and transparent approach which has provided stability to oil markets. In view of current oil market fundamentals and the consensus on its outlook, the Meeting resolved to:”

OPEC message to Biden

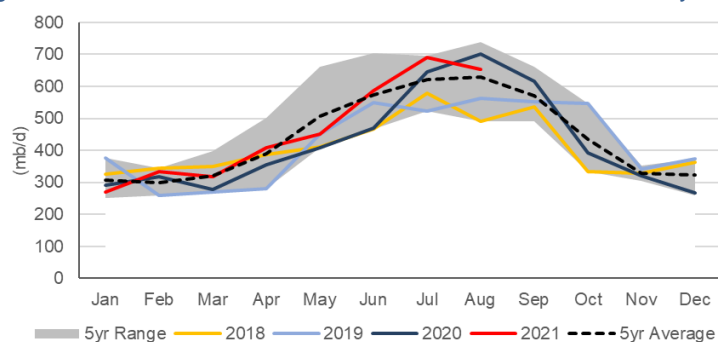
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Oil – Saudi Arabia has more export capacity with seasonal demand for oil down

We remind that the peak season for Saudi Arabia's use of oil for electricity is coming to an end. The typical decline from trough to peak during this reduced consumption is a swing of 400-500,000 b/d, which would be volumes that would be available for export without changing Saudi production levels. Two weeks ago, we tweeted [\[LINK\]](#), "Reminder, even before any production increases, Saudi will have more #Oil for export as it has started the normal seasonal decline in oil used for electricity. Summer peak to winter trough normally down 400-500,000 b/d. #OOTT." With that, we note that Saudi Arabia will have greater export capacity moving along into the start of winter. Below is our graphic depicting Saudi Arabia's use of crude for electricity generation.

Saudi Arabia seasonal use of oil to decrease

Figure 23: Saudi Arabia Direct Use of Crude Oil for Electricity



Source: JODI

Oil – Saudi Aramco raises official selling prices for Dec, +\$1.40/b to key Asia markets

TWe don't know if there is anything to read into the timing, but we didn't think Saudi Aramco normally comes out with its official selling prices in the middle of the weekend. On Friday, Saudi Aramco posted its official selling prices for all grades for December. Looking at the benchmark Arab Light, Aramco increased OSP MoM by +\$2.10/b to North West Europe, +\$2.00/b to the Mediterranean, +\$1.40/b to Far East, and +\$0.50 to US. Note our later comment on Vitol highlighting Chinese oil buyers haven't yet come to the January trading cycle so are faced with higher oil prices. Our Supplemental Documents package includes the Saudi Aramco OSP table.

Saudi Aramco OSP increased for Dec

Oil – JCPOA negotiations to resume on Nov 29, US thinks a deal can be quick

On Wednesday, Iran's chief negotiator, Bagheri Kani, tweeted [\[LINK\]](#) "In a phone call with @enriquemora_, we agreed to start the negotiations aiming at removal of unlawful & inhumane sanctions on 29 November in Vienna." Later on Wednesday, US State Department spokesperson Ned Price said the US believes it is still possible to quickly reach a return to mutual compliance under the JCPOA. The State Department transcript [\[LINK\]](#) quoted Price saying "Well, we understand that the European External Action Service, of course, has been coordinating with the Iranians on their stated intent to resume negotiations before the end of this month. This appears to have just taken place. But we do welcome the EU's announcement that they have coordinated with all participants and that talks on a mutual return to compliance with the JCPOA will resume for a 7th round on Monday, November 29th. Special Envoy Malley will, again, lead U.S. participation in these talks. We've said this many times before, but we believe it remains possible to quickly reach and implement an understanding on a mutual return to compliance with the JCPOA by closing the relatively small number of issues that remained outstanding at the end of June when the 6th round concluded. We believe that if the Iranians are serious, we can manage to do that in relatively short order. But we've also been clear, including as this pause has dragged on for

JCPOA restart Nov 29

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some time, that this window of opportunity will not be open forever and that – especially, if Iran continues to take provocative nuclear steps. Together with the IAEA, we've expressed our concern about a number of those steps in recent days and recent weeks. So we certainly hope that when the Iranian delegation returns to Vienna later this month, they do so ready to negotiate, they do so ready to negotiate quickly and in good faith as well."

Oil – Vitol head: China is very much in oil inventory building mode

Earlier this morning, we tweeted [\[LINK\]](#) on some excellent (and different) China oil insights from Vitol's Mike Muller (Head, Vitol Asia) on the today's Gulf Intelligence New Silk Road podcast [\[LINK\]](#). We don't believe we have heard other experts put forward his near term China oil views. Muller's comments certainly caught our attention. He had a number of points so worth reading the transcript we created of his answer. He looks at China's recent edits and policy and sees that they have successfully talked down oil markets. And says "so my personal view is that China is very much in an inventory building mode because they don't want to be caught short in a colder winter." And "And they very successfully talked this down by policy and by edict a couple weeks back such that the steam got taken out of the whole thing. But you cannot move markets by words, in the end its all about inventories and about behaviour at the spot end of the market. But yes. watch this space. China is very much in a state of flux on NDRC rhetoric and directives versus real demand. And as I said a few minutes ago, there is a bit of a standoff in crude markets where the Chinese buyers for the January trading cycle haven't come to the table yet and are now faced with offers that are \$1 or \$2 a barrel higher at differentials vs Brent and Dubai than they were a month ago. And the view on the street is they will buy it because they need to." There is much more in his answer. Our Supplemental Documents package includes the transcript we created of his China oil comments.

**Vitol has bullish
China oil view**

Oil – BP says oil demand is back over 100 mmb/d but not yet to pre-Covid levels

BP held its Q3 call on Tuesday and receives headlines for their view on oil demand. It was a little confusing as most linked BP's view that demand was above 100 mmb/d to also mean oil demand was back to pre-Covid levels. Most use 100 mmb/d as a general pre-Covid oil demand level. But, in BP's view, oil demand at 100 mmb/d is not yet back to pre-Covid levels. Regardless, at over 100 mmb/d, oil demand is higher than most expect and within inches of pre-Covid levels. In the Q&A to the Q3 call, mgmt said "Of course, if oil price is higher or lower than that, those -- that buyback potential can increase, obviously, if oil price is higher. And that's what you've seen happen with our third quarter results and the announcement of the \$1.25 billion of buybacks. On oil price itself, I think we've got a constructive outlook on oil price. Demand is up above 100 million a day. Again, we're not back to pre-COVID levels. We think we'll be there somewhere around -- somewhere next year, we think we'll be back to pre-COVID levels. And of course, OPEC+ is doing a good job managing the balance. So we remain constructive on oil price, and it doesn't really relate to the \$60. That's just a useful assumption for you to model our business."

**BP: oil demand
>100 mmb/d**

Oil – Pioneer CEO a "firm believer" in \$80-\$100 oil over next several years

Its interesting to see how the start of Net Zero leaders, both government and investors, finally realize that the set up for oil prices for 2020s is much stronger than they expected. Last week's (October 31, 2021) Energy Tidbits highlighted Macron saying "What is happening now is ironic, because we are building a system where in the medium and long term fossil energy will cost more and more, that's what we want [to fight climate change]," he said. "The problem is that industries and households will need to be accompanied in this transition . . . or it won't be sustainable." Its been obvious to oil players that squeezing supply and no change to demand means stronger for longer oil prices. One of the Q3 comments that got some

**Pioneer sees
\$80-100 for
several years**

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headlines was Pioneer CEO Sheffield view on oil prices. In the Q&A, Sheffield said “No. I did mention of always -- I did not mention anything about growing above 5%, so I've stated publicly that we're not going to grow above 5%. In regard to the macro, I do think that we're getting in a very tighter market over the next several years. Unused capacity in OPEC Plus is going to be used up in the next two years, there is no extra supply. I'm a firm believer that we're going to be in \$80 to \$100 scenario over the next several years.”

Oil – Vortexa est 91.53 mmb at Nov 5, note big revision to Oct 29 estimates

Note that we are referencing the Vortexa global crude oil floating storage data posted on the Bloomberg terminal as of 3:30pm MT yesterday and that these estimates often get revised over the weekend, and then again for the next week. Note we do not check daily for the revisions so our comments are compared to the Oct 22 and 29 estimates that were posted on Sat Oct 30 at 4pm MT. It was another week of significant revisions to the prior week estimates, but not as much as in the Oct 31, 2021 Energy Tidbits. However, if we look at the last few months, float oil storage looks rangebound. But it's the smaller part of the global oil storage outlook and, as noted in our Oct 31, 2021 Energy Tidbits, the Raymond James oil outlook showed onshore oil stocks has been in steep decline. As of 3:30pm MT Sat, Bloomberg has posted Vortexa crude oil floating storage as of Nov 5 is estimated at 91.53 mmb, which is -3.36 mmb WoW from a revised Oct 29 estimate of 94.89 mmb. Note these estimates often get revised over the weekend and into next week. There was a large upward revision to the Oct 29 estimate. Last Sat at 4pm MT, it was estimated at 84.07 mmb, which is 10.82 mmb lower than today's 3:30pm MT estimate of 94.89 mmb. Note there was a smaller upward revision to the Oct 22 estimate. Last Sat at 4pm MT, it was estimated at 113.88 mmb. Today at 3:30pm MT, it is estimated at 117.27 mmb. Nov 5 of 91.53 mmb is +14.81 mmb vs the recent June 25 trough of 76.72 mmb. Nov 5 of 91.53 mmb is down 130.73 mmb vs the June 26, 2020 peak of 222.26 mmb. There was small revision to the June 26, 2020 peak that was estimated last week at 220.79 mmb. Nov 5 of 91.53 mmb is up vs pre-Covid of 69.24 mmb as of Nov 4, 2019.

Vortexa floating storage

Figure 24: Vortexa Floating Storage Nov 5, Posted on Bloomberg 3:30pm MT Sat



Source: Bloomberg, Vortexa

Oil – Bloomberg Oil Demand Monitor, Asian roadway volumes increasing

We recommend reading the weekly Bloomberg terminal Oil Demand Monitor for a good recap of key oil demand indicators around the world. India's diesel demand increased back above 2019 levels at a time when other world leaders are focused on curbing greenhouse gas emissions. Diesel sales in the nation were 1.3% higher than the equivalent month in 2019 due to rising economic activity and seasonal festivities. The COP26 climate conference at

Bloomberg's Oil Demand Monitor

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Glasgow was held this week and Norway's environment minister indicated that demand for oil and gas was still strong in Europe. Congestion levels were down this week with London, Berlin and New York exhibiting the busiest roadway conditions. Berlin congestion was up 3% compared to 2019 levels and London was +2%; New York was just below at -2% of the 2019 equivalent week. Seasonal festivities following Halloween in Europe and South America saw many cities with negligible congestion levels. Restrictions to Chinese air travel now sees seat capacity 11.3% below 2019 levels with global seat capacity at 77.8 million seats, down 27% from 2019. The US seat capacity is down 11.7% from 2019. Positive demand signs from Thailand, who ended mandatory quarantines for vaccinated visitors from 60 countries around the world. Jet Fuel demand continues to be laggard relative to other fuels. Oil consumption, measured by crude input into refineries are nearing 2019 levels; PetroChina has announced demand for refined products is back at 2019 levels. US refinery utilization is 85.1%, just 2.6% below the equivalent week in 2019 as refineries come back online after seasonally scheduled maintenance. Our Supplemental Documents package includes the Bloomberg Oil Demand Monitor.

Figure 25: US and China Refinery Utilization



Source: Bloomberg

Oil – Caixin PMI for Oct is up at 50.6 after last month 50.0.

The increase in demand continues to be the key component of China's recovery in the manufacturing sector. Covid-19 cases were down in October and a resurgence in demand caused the Caixin China General Manufacturing PMI data to increase to 50.6 from 50.0 in September. This month noted the strongest increase in total work for four months. We recommend reading the short release as opposed to just seeing the headlines as there is more color on China. The press release said *"manufacturing recovered slightly in October from the previous month. But downward pressure on economic growth continued. We noticed that the pandemic's impact on manufacturing faded from late September to mid-October as the number of new Covid-19 cases dropped, which boosted demand. However, supply strains became the paramount factor affecting the economy. Shortages of raw materials and soaring commodity prices, combined with electricity supply problems, created strong constraints for manufacturers and disrupted supply chains. Input costs for manufacturers have risen much faster than output prices for several months, putting a lot of pressure on downstream enterprises."* Average lead times increased at the fastest rate since March of 2020. Our Supplement Documents package includes the Caixin release.

Caixin PMI up in Oct

Oil – Bloomberg NEF Global Aviation, Jet fuel demand down as China cuts flights

On Wednesday we tweeted [\[LINK\]](#), “Good update of airline (ex cargo) schedules, volume & #Oil #JetFuel impact from @BloombergNEF Covid-19 Indicators: Global Aviation report. Jet fuel demand continues to increase, albeit slowly #OOTT”. Globally flights around the world declined by just under 4%, this week, the largest decline since August. Jet fuel demand over the next four weeks is expected to average 4.3 mmb/d, though cancellations since last week are expected to remove 0.206 mmb/d. Cuts to the November schedule have removed 0.250 mmb/d of jet fuel demand. Jet fuel demand implied by current passenger flight schedules will reach 5.06 mmb/d for the 4 weeks from Dec 21; large cuts in Chinese demand accounted for a decline of 131,000 b/d. US passengers remained relatively flat at 1.75 million passengers per day, still down significantly from the equivalent week in 2019 of 2.3 mm passengers per day. China's departures decreased by 820 WoW, cancelling 20,000 flights over the next 11 weeks. Departures in the Eurocontrol area were down 60 WoW in line with seasonal expectations. Globally departures per day were down 3.9% on average WoW with India leading growth and China dropping significantly. Our Supplemental Documents package includes excerpts from the BloombergNEF report.

**Bloomberg NEF
Global Aviation**

Oil – US reopening should see Cdn snowbirds flocking to Florida, most by driving

With the announcement of border, the US Canadian border reopening to non-essential travel on Nov 8, we expect Canadians will once again begin travelling to Florida in attempt to escape the winter cold. The Tampa Bay Times reported last year [\[LINK\]](#), that the average winter typically sees 3.5 million Canadians descend to Florida each year, 500,000 of which are snowbirds spending up to 6 months in the state. Last year Florida's tourist market was hit hard by lockdowns preventing regular tourists from spending their time and money in the state; Canadians typically spend approximately \$6.5 bn in Florida each year. The article noted that snowbirds tend to drive down to have their cars with them on their several months stay. We tweeted [\[LINK\]](#) “#OOTT #Gasoline. [\[LRI\]](#)@gulf_intel[\[PDI\]](#) New Silk Road ca snowbird tidbit f/ guest Randall Mohammed say millions of Cdns to descend on FL w/ Nov 8 reopening. Pre-Covid, Cdn Snowbird Assoc est ~3.5 mm Cdns, incl ~0.5 mm snowbirds visit FL each year. Most by driving”.

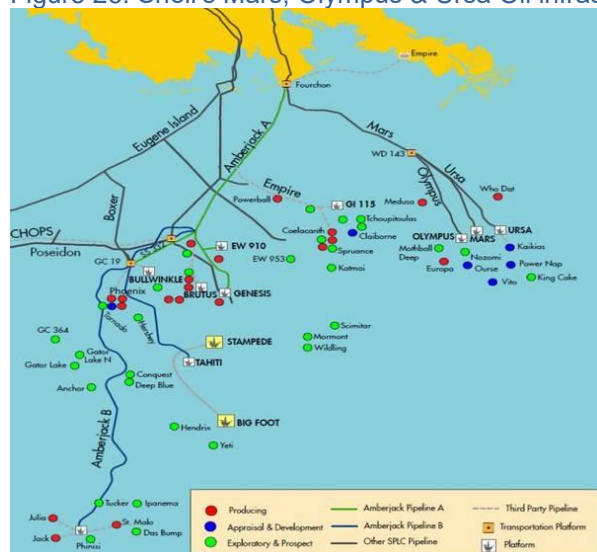
**Snowbirds
returning to
Florida**

Oil & Natural Gas – Shell restarts GoM Mars and Ursa assets ahead of schedule

On Friday, Shell released its 2021 Storm Season update regarding its WD-143 offshore facility [\[LINK\]](#). Shell announced that production has been restored to their Mars and Ursa assets in the Mars corridor. This development is 2 months ahead of schedule. Our October 10, 2021 Energy Tidbits memo noted their prior update was that restoration was not expected until Q1/22. Our Supplemental Documents package includes the Shell Storm update.

**Shell releases Ida
storm update**

Figure 26: Shell's Mars, Olympus & Ursa Oil infrastructure in Gulf of Mexico



Source: Offshore Engineer, Shell

Oil & Natural Gas – Oil & Gas Q3 cash flow will be very good, Q4 even better

The big oil and gas company story has been the great financial results for Q3/21 leading to lower debt, higher dividends and more share buybacks. Cdn oil and gas reporting will be to the most part over this week and it will be the same message. We have been retweeting [\[LINK\]](#) the reminder “as good as the Q3 reporting as been so far for the Cdn E&P, don't forget Q4 will be even better with prices so far in Q4 well above Q3 average prices. #Oil #NatGas #OOTT.” Our tweet included the below table that notes how October prices are much higher across the board than average Q3 prices. As we put in one of our original tweets on this, it means that we will hear more of the analysts saying “great quarter guys”.

Q4 cash flows will be even better

Figure 27: Oil and Natural Gas Prices

Quarter	Brent US\$	WTI US\$	EdPar US\$	WCS US\$	HH US\$	AECO C\$
Q1/18	\$67.00	\$62.86	\$57.19	\$37.11	\$3.09	\$2.06
Q2/18	\$74.41	\$67.83	\$60.78	\$49.88	\$2.84	\$1.23
Q3/18	\$75.27	\$69.69	\$59.81	\$42.32	\$2.92	\$1.25
Q4/18	\$68.18	\$59.41	\$36.53	\$25.63	\$3.78	\$1.62
Q1/19	\$62.91	\$54.49	\$50.28	\$43.79	\$2.92	\$2.55
Q2/19	\$68.58	\$59.96	\$54.41	\$47.46	\$2.55	\$1.13
Q3/19	\$61.95	\$56.48	\$52.43	\$43.91	\$2.37	\$1.00
Q4/19	\$62.51	\$56.83	\$50.61	\$37.98	\$2.36	\$2.46
Q1/20	\$51.28	\$46.73	\$39.75	\$28.55	\$1.91	\$2.04
Q2/20	\$31.14	\$27.67	\$21.84	\$18.02	\$1.70	\$2.00
Q3/20	\$42.70	\$40.87	\$36.83	\$31.13	\$1.98	\$2.26
Q4/20	\$44.47	\$42.67	\$37.92	\$31.34	\$2.47	\$2.65
Q1/21	\$60.51	\$57.75	\$54.17	\$45.83	\$3.39	\$3.13
Q2/21	\$68.44	\$65.90	\$61.94	\$53.11	\$2.89	\$2.95
Q3/21	\$72.95	\$70.57	\$66.90	\$57.65	\$4.28	\$3.41
Q4/21	\$83.40	\$80.92	\$78.44	\$66.95	\$5.48	\$5.04

Source: Bloomberg

Oil & Natural Gas – sector/play/market insights from Q3 calls

I did not get a chance to write up several Q3 calls on Friday and Saturday with the onslaught of other energy news. So only a couple of calls in this week's memo. This is our favorite time each time of each quarter as it is quarterly reporting and this is when we get the best insights into a range of oil and gas themes/trends, sectors and plays. This week saw the rest of the oilfield services and the a number of the supermajors. Cdn oil and gas reporting will pick up

Sector insights from Q3 calls

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this week. As a reminder, our Energy Tidbits memo does not get into the quarterly results, forecasts, or valuation. Rather the purpose of highlighting a company is to note themes/trends and plays that will help shape a reader's investment thesis to the energy sector. In the conference calls, we also tend to find the best insights from the Q&A portion as opposed to the prepared remarks. Plus, we tend to get the best E&P sector insights from services, pipelines, refineries and utilities and that was the case again this week.

BP – Some renewable companies are struggling to fund their growth

BP held its Q3 call on Tuesday. (i) Earlier, we noted their view oil demand was back to >100 mmb/d. (ii) Later in the memo, we note their comments on EV charging returns about 10% and how they enhance those returns. (iii) No change to view offshore wind is 8-10% returns “levered” for offshore wind. (iv) Re hydrogen “*I suspect the returns will be higher. The risk is quite a bit higher. Fuel is unlevered 15-20% “ meld it together to get 12-14%. “And I think as you look at that and you meld it together, you'll get to a business that returns somewhere in the 12% to 14% range. That's the best I can see right now. And I can't see why that won't be the case in the future as it has been in the past.”* (v) Sounds like another FLNG phase at Tortue (Mauritania) is coming. In the Q&A, “*We don't participate in Tanzania or Qatar. You'll need to -- that's not something that we participate in. And Tortue, we're going well with Phase one. And we're taking a look at Phase two and trying to come to agreement with partners, government and our own engineers on what is the right thing to do. So stay tuned.*”. (vi) No change to their 3-5% base decline. (vii) Not getting pressure to split up, their existing business is a cash machine. Existing oil and gas is big cash flow machine In the Q&A, mgmt said “*Third quarter in a row of good strong results. The balance sheet strengthening, 6th quarter in a row of net debt coming down. We're generating cash. I think -- I hope you'll have seen, I think we're a cash machine at these types of prices. And we're investing in the transition with discipline step-by-step. And from what we see, Christyan, shareholders increasingly like what we're doing. So we're encouraged. We chose the name of our strategy last year before these conversations for a reason. And it's called an integrated energy company. And we chose that name because we believe deeply in the premise of being an integrated energy company being the way to not alone help the world transition, but importantly, to create value from that transition. And the reason we say that, Christyan, is twofold. number one, we need cash flow to invest into the transition. And our existing businesses generate enormous cash flow. As you guys have done the math better than I do, adjusting for working capital, we're close to eight billion of operating cash in this quarter. When I look at some renewable companies out there, I see some of them struggling to fund their growth. That's not a problem that a company that is an integrated energy company will have. And it's not a problem that we have.*” (viii) Interesting the Q&A, they made a big point of highlighting they are not moving from oil to renewables. Mgmt replied “*On that one, I mean, I'd just say a couple of things, number one, and probably most importantly, I see the characterization in some media of BP as moving from oil to renewables, and that's not actually the case. Yes, we are focusing our oil and gas portfolio over the next decade In a volume sense. We actually believe we'll create more value, but we're doing that in a volume sense. Yes, we are building a renewables business. But we've always said, we're not building a renewables business just for renewables. We're building a renewables business to be part of an integrated energy value chain that goes all the way from the production of energy into, in some cases, people's cars in terms of electrons or into hydrogen or into whatever it is that you wish to do with it. So the first point is important, which is this is not an oil to renewable story. It's a*

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focusing of oil. It's a doubling of convenience, including EV charging, five billion to \$10 billion. And it's an investment in renewables. But not just renewables for renewables' sake, investing into the low carbon energy value chain."

Energy Transition – Biden also seems to realized the Energy Transition will take longer

Biden on oil demand

Last week's (October 31, 2021) Energy Tidbits highlighted Macron's comments on his warning for medium and long term fossil energy prices. We tweeted [\[LINK\]](#) "Oops, #Macron on #EnergyTransition "ironic, because we are building a system where in the medium & long term fossil energy will cost more & more, that's what we want to [to fight climate change]". 2020s will be very good for #Oil #NatGas prices. Great report @labboudles #OOTT." This week, it seemed like Biden is also acknowledging this longer life for oil and natural gas. Last Sunday, we tweeted [\[LINK\]](#) "Is #Biden following #Macron & finally realizing demand for #Oil #NatGas is going to be more for 2020s than in his #NetZero aspiration? Oops, cancel #KeystoneXL, do zero to support US oil supply growth, etc. 2020s will be very good for #Oil #NatGas prices & #OPEC+. #OOTT." Biden wasn't as direct as Macron on demand, but seems to be acknowledging demand for oil isn't going away as fast as he had planned. And, as everyone now knows, supply has been hurt by lack of oil investment so its sets up the tighter oil market for the 2020s. In his closing G20 press conference, Biden said "Well, on the surface, it seems like an irony, but the truth of the matter is — you've all known; everyone knows — that the idea we're going to be able to move to renewable energy overnight and not have — from this moment on, not use oil or not use gas or not use hydrogen is just not rational. Certain things we can wipe out and we don't have to do. We should be moving immediately to get rid of — as they've adopted here my proposal — to end methane, to deal with a whole range of things. But it does, on the surface, seem inconsistent, but it's not at all inconsistent in that no one has anticipated that this year we'd be in a position — or even next year — that we're not going to use any more oil or gas; that we're not going to be engaged in any fossil fuels. We're going to stop subsidizing those fossil fuels. We're going to be making significant changes. And it just makes the argument that we should move more rapidly to renewable energy — to wind and solar and other means of energy. But the idea that we're just going to end and somehow — but it does, on the surface, I admit to you. We're going to COP to deal with renewable energy, and I'm saying, "Why are you guys cutting off oil and raising the price just to make it look harder for us?" But it's a legitimate question. I think, though, that if anybody thinks about it, no one ever thought that tomorrow — for example, it's going to take us between now and 2030 to have half the vehicles in America electric vehicles. So, the idea we're not going to need gasoline for automobiles is just not realistic. But we will get to the point that, by 2050, we have zero emissions." Our Supplemental Documents package includes the Biden Rome press conference and the FT Macron report.

Energy Transition – US going after methane pollution and targeting oil and gas

US targets oil and gas

There was no surprise to see the US EPA, on Tuesday, announce "U.S. to Sharply Cut Methane Pollution that Threatens the Climate and Public Health" [\[LINK\]](#). (i) We have been highlighting methane reduction for several years knowing that some of the Cdn oil and gas companies have been focused on doing so for several years. Our view is unchanged, to the most part, the oil and gas companies know how to do so and that reducing methane emissions is relatively straight forward and most can be done by existing off the shelf equipment. So this isn't necessarily a huge technical challenge. (ii) However, there is something significant here. And its why we tweeted [\[LINK\]](#) "U.S. to Sharply Cut Methane Pollution that Threatens the Climate and Public Health". @EPA reducing methane from ALL #Oil #NatGas, minor AK excl. would be big impact on lower rate onshore/offshore wells, smaller operators. Only #Oil #NatGas in this methane reduction push. #OOTT." At least as proposed, the EPA is putting the same standards on a stripper well as a big Permian oil well.

And on the marginal offshore shallow natural gas well as a new offshore oil platform. Its not just the well rates, it's the type of operator. This means that every small operator is included in this. The reality is that adding costs or even the hassle of adding measurement or anything to low rate wells will add to some low rate wells just being shut in.' (iii) This will be open for comment. It will be interesting to see how Biden deals with the pushback from the comment period. It will be driven by small operators of low rate wells. And we have to believe the relative emissions from small wells per bbl are much higher than big new projects. The big supermajors will jump in line. (iv) This type of regulation will also be coming to Canada. There is no way Trudeau will want to be behind the US in items like methane. (v) Our Supplemental Documents includes the EPA release and excerpts from the EPA slide deck.

49% of US oil wells produce less than 2 b/d

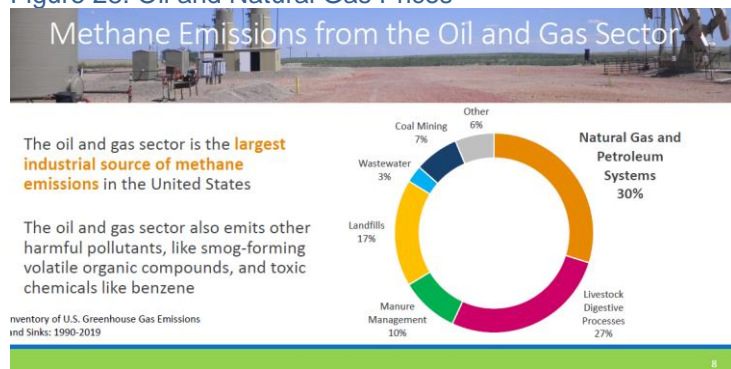
As noted above, if this EPA proposal ultimately gets enacted as announced, it will lead to shut in of low rate wells. To give some perspective on low rate wells, we tweeted [\[LINK\]](#) "164,309 (38%) of US #oil wells produce <1 b/d for total 46,300 b/d. Another 48,409 wells (11%) of US produce 1-2 b/d for total 61,400 b/d. look for a big chunk of these to become "inactive" ie. ready to be abandoned or orphaned if new @EPA #Methane proposals go thru. #OOTT." This EPA proposal will lead a big increase in what will first become "inactive" wells, which we call wells that either ready to abandoned or to be orphaned. As noted in our tweet, there were 164,309 US oil wells that produced less than 1 b/d and these produced a total of 46,300 b/d. Our Supplemental Documents package includes the EIA's detailed table of US oil and natural gas wells split by well rate.

Energy Transition – Oil/gas methane is less than livestock burps/farts/manure

We have to wonder who convinced the EPA to present their data in such a way to support the statement "*the oil and gas sector is the largest industrial source of methane emissions in the United States.*" Could you imagine if they hadn't take an all in oil and gas sector number and instead had smaller sectors or split out the emissions from production vs drilling vs pipelines? No way they would have done so. But it was interesting to see the EPA split out Manure Management from Livestock Digestive Processes. We assume they are talking about manure from livestock. Whereas the EPA is clear that they are including a broad "*Natural Gas and Petroleum Systems*", which we wonder what else is included in this beyond oil and gas production, transportation and refining? When we saw the title of the Biden methane push, we were curious if he would go after any other industry other than oil and gas. He didn't disappoint expectations and only went after oil and gas. There was no mention of the other big methane emissions industries in the EPA press release, but the EPA posted a slide deck that included the list of biggest methane emitters. It's why we tweeted [\[LINK\]](#) "*Did you know? #MethaneEmissions ranking by @EPA. #Oil #NatGas was most at 30% of US, just beat out livestock burps & farts at 27%. But oil & gas would be far behind the 37% of livestock if include manure mgmt at 10%. #OOTT #EnergyTransition #ClimateChange.*" Below is the EPA ranking of methane emissions.

Less oil/gas methane than livestock

Figure 28: Oil and Natural Gas Prices



Source: EPA

Energy Transition – Net Zero leaders will hold negative news until after COP26

One of the reality checks for COP26 is that Net Zero leaders will be doing all they can to make sure they don't announce bad news (from a pro Net Zero perspective) during COP26. This is especially so if they are attending COP26. The last thing they would want is to be one of the disappointers to be harassed or blockaded. But the key is that they don't want to do anything negative during COP26, which means we will see negative news (from a Net Zero perspective) right after COP26 ends next week.

Look for news flow after COP26

Energy Transition – EC may include nuclear & natural gas as climate friendly green

On Thursday, we saw a good example of a Net Zero leader pointing to a negative Net Zero announcement coming after COP26. We tweeted [LINK](#) "Did EC's 'Mr. Climate' @TimmermansEU just guide to the EC granting #NuclearPower & #NatGas a 'green' label under its sustainable finance taxonomy, its guide for climate friendly investments? Definitely not what EC wants to announce at #COP26. Great interview @F_Rohart . #OOTT." There was a good interview in Belgian news, L'Echo, with Frans Timmermans, VP of the European Commission, who L'Echo describe as the "Mr. Climate" of the European Executive ie. the key climate person on the EC executive. This is not unexpected but it is a big shifting of the EC position if they include both nuclear and natural gas as climate friendly investments. L'Echo quoted Timmermans "We will support any member state that decides to go nuclear, that is our job. I just hope people will make rational decisions." "Especially when you take into account that renewables are getting cheaper and cheaper, while nuclear power is likely to get a bit more expensive. We will support any Member State which decides to choose nuclear power, that is our task. I just hope people will make rational decisions. Do the math! This is my hope." And in response to a specific question if nuclear and natural gas are confirmed to be put on the taxonomy list, Timmermans said "We have not yet made a decision, we will do so in a few weeks. Nuclear power is by no means green in the sense that it would be sustainable: there is a necessary fuel and waste. The principle of green energy is that it does not need fuel and does not produce waste. As for natural gas, your country is a good example: if you want renewable energies, in the transition you may need natural gas. You need to define its importance as transitional equipment, and you also need to avoid being locked into natural gas forever." We think Timmermans is pointing to both being included on the list of climate friendly investments. Our Supplemental Documents package includes the L'Echo interview. [LINK](#)

EC on nuclear and natural gas

Energy Transition – I did not get a chance to write up multiple COP26 items

Week one of COP26 is in the books. The reporting is that the Net Zero drivers aren't getting to where they had hoped, but this is what the lowered expectations were coming into COP26.

Many COP26 items not written up

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However, we don't think the other side should be taking a victory lap as the Net Zero drivers are continuing to advance the push against fossil fuels. There has not been a change in direction of this movement. Arguably, we are seeing more Net Zero leaders recognize that the path to Net Zero/Energy Transition will take longer, be a bumpy road and lead to much higher energy costs. But the leaders are not backing away from the direction of travel. I ran out of time on Friday and Saturday to write up a number of key COP26 actions including the escalation of deforestation to climate change actions, the move to eliminate public financing for unabated international fossil fuels (not just unabated coal) deals, etc. I plan to write on both of these actions in upcoming Energy Tidbits memos.

Energy Transition – Liberals new climate actions in line with their election platform

On Monday, *"Prime Minister Trudeau announces enhanced and ambitious climate action to cut pollution at the COP26 summit"*. [\[LINK\]](#). The announcement looks to be in line with the Liberals Aug 29 announced climate plan in the election campaign. The release included *"Canada's ambitious and enhanced plans to support the global phase-out of thermal coal, help developing countries transition to clean fuel alternatives as quickly as possible, and reduce pollution in the oil and gas sector. Ending coal power emissions is one of the single most important steps the world must take in the fight against climate change. That is why the Prime Minister today announced that Canada is working toward ending exports of thermal coal by no later than 2030. The ban would follow action already taken, including accelerating the phasing out of conventional coal-fired electricity in our country by 2030, and putting in place investments of more than \$185 million to support coal workers and their communities through the transition to cleaner energy."* Also *"Canada is among the world's biggest oil and gas producers, and all Canadians have benefitted from the sector's contributions to our economy. As our country and the world move to clean energy alternatives, we need the sector to continue to adapt, which will spur innovation and help create the jobs of the future. The Prime Minister today announced that Canada is the first major oil-producing country moving to capping and reducing pollution from the oil and gas sector to net zero by 2050. To help do this at a pace and scale needed to achieve the shared goal of net zero by 2050, the government will set 5-year targets, and will also ensure that the sector makes a meaningful contribution to meeting Canada's 2030 climate goals. In a letter sent today from Ministers Guilbeault and Wilkinson, the government is seeking the advice of the Net-Zero Advisory Body on how best to move forward on this approach."* Our Supplemental Documents package include the Liberals announcement.

**Liberals new
climate actions**

Liberals confirm the big hit is still to come against oil and gas

After seeing the release, we tweeted [\[LINK\]](#) *"#Trudeau #COP26 looks like #Liberals platform & Sept climate plan. Big hit to come for Cdn #Oil #NatGas #OilSands w/ yet to be disclosed 2025 emissions reduction target. Note platform also has thermal #Coal halt "through CAN" See SAF Sept 5 Energy Tidbits #OOTT."* Our September 5, 2021 Energy Tidbits highlighted the Liberals Aug 29 release of their climate change plan in the election campaign. At that time, we said the big hit to Cdn oil and gas was still to be revealed, which was what is the 2025 emissions reduction hard target for oil and gas to meet. That specific target is still to be released. We still believe this is being overlooked. We recognize that the oil sands are committing to the same ultimate target of Net Zero in 2050. But the Liberals are planning to set the pace at which the oil and gas industry reduces emissions so they (the Cdn government) can ensure the oil and gas sector is on track to meet emissions reductions targets in 2025, 2030, etc. Our Sept 5, 2021 Energy Tidbits included *"Last Sunday, the Trudeau and the Liberals issued a press release and a separate backgrounder on their climate plan. (i) Please note you have to read the*

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backgrounder document as the press release forgets to include some key items. (ii) Note the concept, fits the theme that they want to “accelerate climate action”. (iii) We tweeted [\[LINK\]](#) on our warning that the big to Cdn oil, natural gas and oil sands is still to be disclosed. Trudeau said will have target overall emissions cut for the oil and gas sector to be reached by 2025 to keep on track to Net Zero by 2050. The target for 3.5 years away is yet to be revealed. This has been our big worry. It means action has to be taken now. The other big factor is the Liberals making it clear that the 2025 target is in “making sure” industry is on track for Net Zero by 2050.” And we also then wrote “(viii) Also for oil and gas, they are going to set emission reductions in 5 yr target to ensure the oil and gas reductions stay on track for net zero in 2050, the first target date is 2025. These are overall emissions targets that have to be hit for 2025. Not methane emissions. They haven’t said what this 5 year target is so this is a huge wildcard and risk. This means that reductions have to be immediately and companies better start figuring it out now for immediate actions. This is the big item we have been warning on, these interim targets mean actions have to be taken now.”

Energy Transition – Did Trudeau blame the Lytton BC fire disaster on climate change?

Trudeau use
Lytton disaster

We wish that politicians like Trudeau didn’t try to use personal tragedy as drama to try score points with the audience. We understand clearly that it helps to make the audience realize the gravity of a situation. But we don’t think Trudeau should have used the Lytton BC fire disaster from four months ago as his dramatic point. We [\[LINK\]](#) “Did #Trudeau just infer #Lytton 06/30/21 fire was because of #ClimateChange? Even #Liberals, and others like me who believe in climate change, can't be impressed using Lytton tragedy to add drama to his #COP26 global speech knowing #Lytton residents see a different reason.” (i) Trudeau speech opened “Hello. I am pleased to represent Canadians in this historic meeting. In Canada, there was a town called Lytton. I say “was” because on June 30, it burned to the ground. The day before, the temperature had hit 49.6 degrees Celsius, the hottest ever recorded in our country. Canada is warming, on average, twice as quickly as the rest of the world.” We have to believe the global audience linked the fire to climate change. (ii) Recall the views from the residents at that time was that it was a man-made cause, with most saying a spark from a train. (iii) The Transportation Safety Board of Canada announced on Oct 14 that their investigation was over. “Following the fire that destroyed the town of Lytton, BC on 30 June 2021, the Transportation Safety Board of Canada (TSB) conducted significant investigative work to determine if there was a definitive connection between railway operations through Lytton, BC and the fire that destroyed the town. Please see the investigation page for a full description of our investigation activities into this matter. The TSB investigation has not revealed any evidence to link railway operations to the fire. Therefore, unless new information establishes that a TSB reportable event occurred, no further work will be performed and no TSB investigation report will be produced. The wildfire remains under investigation by BC Wildfire Service and the RCMP.” [\[LINK\]](#) (iv) Note that the TSB Lytton page today notes why they got involved. “Based on additional information received from the Royal Canadian Mounted Police (RCMP) and British Columbia Wildfire Service (BCWS), and in light of the presence of rolling stock in the immediate vicinity of the fire within minutes of the fire first being reported, the TSB had reasonable grounds to believe that there was a situation or condition that could induce an accident or incident (i.e. a fire caused by rolling stock). The TSB deployed an investigator on 9 July 2021 to gather information, examine and photograph the area, and assess the circumstances to determine if the rolling stock that passed through Lytton could have caused or sustained a fire.” Interestingly, it was only 9 days later that they investigator was deployed. CFJC wrote [\[LINK\]](#) “The interviews that were conducted by the RCMP in the days following were probably going to be more valuable to us than to try and go out and get somebody to talk

about it after they've had two weeks to think about what happened, after they've been evacuated from their homes," said James Carmichael, regional senior investigator for the TSB. (v) Regardless, it seems pretty clear that the TSB written documentation sees no link to the railway, or doesn't raise any doubts on their conclusion. (vi) However, the lead TSB investigator is James Carmichael. On Oct 14, he and others were on a video on the Oct 14 report. We could not find the full video, only found clips on BC TV channels. There were some interesting things such as they didn't interview people, just relied on the RCMP interviews that happened soon after the fire. Recall he wasn't deployed until July 9. That struck us as not wanting to get into details as most people would have been in a state of shock in the early days. But what raised our antenna was the clip of Carmichael. CFJC posted a short clip [\[LINK\]](#). Surprisingly in their report they didn't hammer home or even write anywhere in their report what Carmichael said at the 2:50 min mark. We made a transcript and he says *"This is a very difficult one because you know we are looking for something concrete, tell us yes that it was started by the railway. We couldn't conclude either way that whether it was started by the railway or it wasn't started"*. The lead investigator just said this on a written report that doesn't say or suggest this. Wow. (vii) One interesting data point that isn't in the TSB Lytton page. Note we couldn't find where the TSB wrote this, but it was reported by a couple of BC TV stations. CITY News Vancouver report [\[LINK\]](#) included a tweet from one of their reporters *"Re: origin of fire, Carmichael confirms it was with five feet of the track"*. (viii) It doesn't sound like the RCMP believes it is climate change factor. Rather the RCMP investigation is not over. Following the TSB Oct 14 report, the RCMP released [\[LINK\]](#) *"Update – BC RCMP investigation into the Lytton fire remains active and ongoing Lytton, Major Crimes Unit."* *"The BC RCMP Investigation into the fire, that impacted the Village of Lytton and neighbouring Indigenous communities on June 30, 2021, remains active and is progressing. The police investigation continues to assess if there is possible criminality and we are mindful of the other investigations that are focussed on determining the cause and origin and looking at compliance or regulatory impacts. The RCMP is aware of the Transportation Safety Board's investigative findings (released on Thursday October 14, 2021) and we continue to advance our investigation, while also working closely with the BC Wildfire Service. Significant progress has been made in investigation with respect to witness statements, interviews and the collection of both physical and digital forensic evidence that continues to be analyzed. The RCMP does not have a timeline on how much longer the investigation will take, however it remains a priority and we continue to work on the outstanding tasks. The RCMP respects the importance of completing a thorough and comprehensive investigation, given the devastating impacts."* (ix) Back to Trudeau COP26 speech, we are just surprised he seemed to blame the cause of the Lytton fire on climate change. One last item, many in the town still believe it was caused by a train spark and have ongoing action in that regard. So we can't believe the impacted people were impressed he used Lytton in this way.

Energy Transition – Shell was early in VC investing in the Future of Energy

On Wednesday, Bloomberg posted a Houston Chronicle report *"Shell launches \$1.4B fund to back companies in energy transition"* *"The fund, dedicated to start-up and scale-up companies over the next six years, is part of the oil giant's efforts to reach a net-zero target. Those efforts also include investments in renewable energy, storage and utilization, mobility, transportation and logistics, circular economy, and nature-based solutions, the company said."* One sentence caught our eye *"As a company, we have invested and supported the start-up ecosystem for decades," Beurden said."* We have no idea how many decades they have been doing this, but we know they have been doing it in one form or another for at least a decade. Long term readers will know that we first jumped on the potential game changer for long duration electricity storage send out from one of the Shell people in Houston involved

Shell has been early in the future of energy

in this group. He was one of my very good friends that was part of the small team in Houston that was looking at (and investing in) anything that was energy but outside of oil and natural gas. He also told me then how Shell was predicting huge cost reduction in wind, solar battery storage, etc. This is why I have always looked at Shell as the leader in the future of energy. And they started to reduce higher emitting oil projects years before the other supermajors. Our Supplemental Documents package includes the Bloomberg report.

Energy Transition – BP: Why gas stations want fast but not too fast EV charging

Its probably fair to describe our Nov 2 tweet [\[LINK\]](#) as a tongue in cheek commentary but there is certainly an increasing returns truth to our comment that gas stations, especially along motorways, want fast but not too fast EV charging. As most of us know, filling an ICE vehicle doesn't take long, basically enough time to clean the windshields and lights and your done. And with almost all transaction done by pay at the pump, people don't generally go into the service station. The gas stations want charging fast enough that EV drivers will want use them much like ICE drivers, but they don't want it so fast that EV drivers, like ICE drivers, don't have at least a few minutes to kill. BP held its Q3 call on Tuesday morning and we tweeted "*Reminder why gas stations don't want EV charging too fast. @BP CFO notes fast EV charging can be double the ICE fill up time, 'hopefully, they come in, & they get a nice cup of Wild Bean coffee & a sandwich, & then that will certainly enhance those returns'. Thx @business #OOTT.*" In the Q&A, mgmt was asked "... And I was wondering if there are some key metrics you're looking at in terms of percentage of EV penetration or utilization of your charging points that really are key to achieve profitability in this rising and growing business. Thank you". CFO Auchincloss reply was "*And if you wanted to measure returns, the general stat we hold is if you get 10% utilization on a fast charger, you'll make a 10% return. That's just the pure electrons themselves. Of course, this is not just about the electrons. It's about the convenience as well. And when somebody goes to charge their car, they spend probably eight minutes as opposed to four minutes. And hopefully, they come in, and they get a nice cup of Wild Bean coffee and a sandwich, and then that will certainly enhance those returns*".

**BP on gas station
EV charging
returns**

Energy Transition – Zillow's Offers big miss reminds of Energy Transition miss

To be fair, every sector and commodity sees on a regular basis examples where some critical assumptions turn out to be wrong or late and it causes huge misses in the assessment of the future. Generally if its only one assumption (and even if it's a big one), it doesn't cause a total big miss. Rather its when two or three assumptions turn ot to be wrong. So what is happening to energy markets under the energy transition happens in other sectors and commodities. However, we couldn't help but think of the energy crisis in Europe when we saw the Zillow stock open down 15%on Monday. Zillow has nothing to do with our focus on the energy space, but when we saw the stock open down 15% on Monday we had to take a look at their shareholder letter on what they said about getting out of the Zillow Offers home sellers business. To be fair, they started this business only 3.5 yrs ago and the world has been hit by Covid. We don't know the details of why it didn't work but, it does remind of how we have seen and say there are many failed situations when people/companies look at a new opportunity or business and believe they can smoothly jump into something new. Things don't happen as quickly, as smoothly or as cheaply. It reminded us of all the converts to Energy Transition over the past year or two and how it isn't working out smoothly for them. There are multiple assumptions on the energy market that are not what the Net Zero people have assumed in their models ie. oil demand is back and growing, solar costs are increasing not decreasing, critical mineral prices were up way more than expected, etc. So when we read the Zillow shareholder statement, it just reminded us of the energy crisis. Zillow wrote "*When we decided to take a big swing on Zillow Offers three and a half years ago, our aim*

**Zillow Offers big
miss**

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was to become a market maker, not a market risk taker, underpinned by the need to forecast the price of homes accurately three to six months into the future". And "We have been unable to accurately forecast future home prices at different times in both directions by much more than we modeled as possible, with Zillow Offers unit economics swinging approximately 1,200 basis points from Q2 to an expected -500 to -700 basis points in Q4 2021." "Because of this price forecasting volatility, we have had to reconsider what the business might look like at a larger size. We have offered sellers a fair market price from the start of Zillow Offers, while also being clear that the business would only become consistently profitable at scale. We have determined this large scale would require too much equity capital, create too much volatility 2 | Q3 2021 in our earnings and balance sheet, and ultimately result in far lower return on equity than we imagined." "This home price forecasting volatility has also contributed to significant capacity and demand planning challenges, exacerbated by a difficult labor and supply chain environment, leading to our announcement 1 two weeks ago to suspend signing new contracts through the end of this year. We judge future significant volume volatility to be an impediment to ramp a scaled operation, and any interruptions in the supply chain like we've recently experienced could result in increased holding times, further increasing our exposure to volatility."

Energy Transition – Elon Musk announces Hertz will pay retail price for EVs

Last week's (October 31, 2021) Energy Tidbits noted the Hertz press release that it placed an order with Tesla to purchase 100,000 of their EVs in accordance with plans to electrify their fleet. Deliveries will rollout over the next 14 months with the Tesla-3 Model available for rent across North America and Europe beginning in November. Hertz stated *"with the current order, EVs will comprise more than 20 percent of Hertz global fleet and is expected to be supported by a combination of Level 2 and DC fast charging in approximately 65 markets by the end of 2022 and more than 100 markets by the end of 2023. Hertz said these ambitions could be affected by factors outside of Hertz's control, such as semiconductor chip shortages or other constraints."* We do not know what Hertz was saying to analysts and investors, but clearly Elon Musk didn't like the street chatter on the Hertz/Tesla deal. This week, he tweeted *"You're welcome! If any of this is based on Hertz, I'd like to emphasize that no contract has been signed yet. Tesla has far more demand than production, therefore we will only sell cars to Hertz for the same margin as to consumers. Hertz deal has zero effect on our economics."*

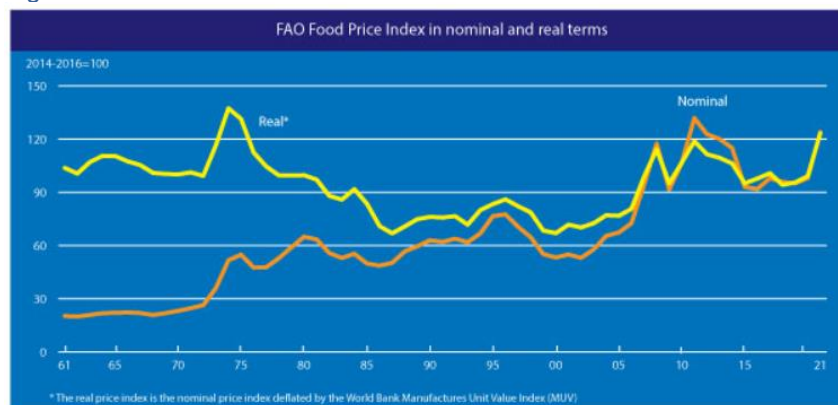
Elon didn't like the Hertz chatter

Capital Markets – UN FAO Food Price Index hits highest levels since July 2011

Earlier, we highlighted the Yara International CEO worries about a potential food crisis. His comments makes sense that next year's harvests will be worse than this year due to the massive escalation in ammonia prices. Our fear is that we could see all time record high food prices next year. On Thursday, the UN posted its monthly update of its FAO Food Price Index [\[LINK\]](#) titled *"The FAO Food Price Index at its highest since July 2011."* Note this is on a Real price basis. The FFPI averaged 133.2 points for Oct 2021, which was +3.0% MoM and +31.3% YoY. All food categories are up big YoY, but led by Vegetable Oil Price Index that was +9.6% MoM and +73.5% YoY. Below is the all time FFPI graph. Our Supplemental Documents package includes the UN FAO Food Price Index update.

Nearing record high food prices

Figure 29: UN FAO Food Price Index



Source: UN

Demographics – Calgary recognizes Top 7 over 70

Everyone has heard of recognition lists such as the Top 30 under 30, but we hadn't realized there was such a recognition list as "Calgary's Top 7 Over 70" until we saw the Calgary Herald Wed report "*Calgary's Top 7 Over 70 revealed, will receive award at May gala: Award recognizes seniors for work they had undertaken after they had turned 70.*" [\[LINK\]](#).

Calgarians will recognize many of the names: Murray McCann, Margaret Southern, , Miiksika'am (Elder Clarence Wolfleg), Sherali Saju, Louis B. Hobson, and Bonnie Kaplan. The likely two most recognizable names are Margaret Southern and Louis B. Hobson. The Calgary Herald wrote "*Meanwhile, Margaret Southern was selected for her work building sports opportunities in Calgary. Southern co-founded the Spruce Meadows equestrian park and recently helped bring Cavalry FC to Calgary to give soccer players a chance to play professionally in Alberta.*" The Southern name is one of the most recognizable in the Calgary business community as her deceased husband, Ron, was the founder of Calgary-based ATCO Group. Hobson was in the paper every week for his movie and theatre reviews. Our Supplemental Documents package includes the Calgary Herald report.

**Calgary's Top 7
over 70**

Twitter – Look for our first comments on energy items on Twitter every day

For new followers to our Twitter, we are trying to tweet on breaking news or early views on energy items, most of which are followed up in detail in the Energy Tidbits memo or in separate blogs. Our Twitter handle is @Energy_Tidbits and can be followed at [\[LINK\]](#). We wanted to use Energy Tidbits in our name since I have been writing Energy Tidbits memos for over 20 consecutive years. Please take a look thru our tweets and you can see we aren't just retweeting other tweets. Rather we are trying to use Twitter for early views on energy items. Our Supplemental Documents package includes our tweets this week.

**@Energy_Tidbits
on Twitter**

LinkedIn – Look for quick energy items from me on LinkedIn

I can also be reached on LinkedIn and plan to use it as another forum to pass on energy items in addition to our weekly Energy Tidbits memo and our blogs that are posted on the SAF Energy website [\[LINK\]](#).

**Look for energy
items on LinkedIn**

Misc Facts and Figures.

During our weekly review of items for Energy Tidbits, we come across a number of miscellaneous facts and figures that are more general in nature and often comment on sports.

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Nov 7, 2000, no clear winner that night in Bush vs Gore presidential election

I had the good fortune to live in the US in the 70's and remember getting hooked on the 1976 Jimmy Carter vs Gerald Ford election so never miss US election nights. One of the most riveting was the US Presidential election on Tues November 7, 2000 in the famous George Bush vs Al Gore race. Gore was VP under Clinton, who was finishing his maximum two terms and survived the 1999 impeachment for lying under oath and obstruction of justice. Bush was the Governor of Texas. There was no winner that night because Florida was so close and Florida state law required a recount. It took about a month to resolve and it ended with the famous Supreme Court 5-4 ruling that ended the recount and Bush was declared President. The reported margin of victory in Florida was 537 votes and, with Florida's 29 electoral college votes, Bush got to 271 electoral college votes vs Gore's 266 electoral college seats. It was also famous for the hanging chad debate on what was a vote or note. This was in the old days of voting where voters used the a pencil to punch out the the piece of paper ballot to signify their vote. Like the computer cards in the 60s. The debate became if a the piece of paper wasn't fully punched out and gone. Ultimate Florida counties had to give instructions on the intent ie. Palm Beach county said a Hanging Door Chad was when one corner was still attached to the ballot – it was counted as a vote.

CFL legend Hamilton Tiger Cats Angela Mosca passes away

We were sad to see yesterday's news that CFL legend, former defensive lineman Hamilton Tiger Cats Angela Mosca passed away. He was a CFL all star I the 60s and early 70s. And had a reputation of one of the toughest (and most say dirtiest) football players in an era where the rules weren't as protective for players. It was also an era when CFL players didn't make the big bucks so he also was a pro wrestler from 1960-66. I don't have the index of the Energy Tidbits items back in 2011, but I would have thought sometime after that, I would have included the September 2011 CFL Alumni function when then 74 yr old Mosca with his cane went up to the stage and he and then 73 yr old former BC Lion/Minnesota Viking QB Joe Kapp got into a fight. Kapp landed a great right punch to Mosca's chin and sent him down to the floor. For those that never saw this, a YouTube clip is available at [\[LINK\]](#).

Figure 30: Joe Kapp/Angela Mosca fight Sept 2011



Source: YouTube

Best NFL Halloween costume

We have a 7am MT news cut off so didn't get a chance to add in any of the pre-game NFL shows that highlighted some of the players arriving for the early 11am MT kickoff games in Halloween costumes. We have with the Chicago Bears video tweet [\[LINK\]](#) "@JuiceHerbert just won Halloween" referring to the video clip of Bears running back Khalil Herbert arriving for the game.

Figure 31: Bears running Back Khalil Herbert arriving for game



Source: Chicago Bears

Cleveland Browns OBJ's dad posts 11 min video of QB Mayfield's mistakes

We aren't sure if he fits into today's helicopter or lawnmower parent category but, given the timing of the video, he might have been trying to mow a path for the Cleveland Browns to trade his son, Odell Beckham Jr. About 14 hours before the NFL's Tuesday 4pm ET trade deadline, OBJ's dad, Odell Beckham Sr. posted an 11 minute Instagram video with the caption "*Generally Behind Da Scene, BUT NOT TODAY.*"... that showed 11 min of video clips showing where OBJ was wide open and Browns QB Baker Mayfield either badly threw to him or didn't see him. If OBS was doing so to force the Browns to trade OBJ, it didn't work as there was no trade. But perhaps, there was a different motive and that was to force the Browns to release OBJ, clear waivers and then be a free agent for the first time in his career. If that was the case, it worked as, on Thursday night, the Browns announced they were releasing OBJ on Friday. He doesn't clear waivers until Tuesday. As of our 7am MT news cut off, we haven't seen reports yet of any team claiming OBJ. You can get the flavor of the 11 min clip [\[LINK\]](#) by watching the first minute.

XPENG targets mass flying car production in 2024, target price ~US\$155,000

One of the many items we didn't get to last week was the XPENG 1024 Tech Day. It received a lot of attention for XPENG including its flying car and that it was "*targeting mass production in 2024*". As to price, XPENG said "*in the end, we want to control its final sales price within 1 million RMB. I think, only when we achieve this, can we call ourselves mass-producing this flying car. It is a difficult job but I believe it has a promising future. For the coming 5 years to the coming 20 years, flying cars will change our experience of mobility especially in the urban and suburbs of our environment. Maybe in 10, 20, 30 years, 10% or 20% of the population will be flying in the air.*" It an interesting section. there is English translation and transcript so easy to follow. The replay is at [\[LINK\]](#), the flying car section starts at 1 hr 8 min

mark, and runs for about 17 minutes. They actually walk thru the considerations and challenges. 1 million RMB is currently just over US\$155,000. At the start, he says why do this on October 24 and says “it ‘s also the birthday of my child”.

Figure 32: XPENG Flying Car Mock Up



Source: XPENG