

# Energy Tidbits

July 4, 2021

Produced by: Dan Tsubouchi

## Vitol: Whatever OPEC+ Agrees Mon For Increase "Will Surely" "Be a Fraction of the Amount Needed to Meet" Rising Demand

**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. Vitol says whatever OPEC+ agrees on Monday for an increase will surely be a fraction of the amount needed to meet rising demand. ([Click Here](#))
2. UAE energy minister clear states UAE supports production increases but no extension past Apr 2022 based on current baselines. ([Click Here](#))
3. Bad news for Cdn oil and gas sector, its now the law that the Liberals must stay on track to meet 2030 emissions reductions targets so it can meet Net Zero. ([Click Here](#))
4. PBO says "extraordinary measures" needed if the Liberals are to hit their April announced emissions reductions targets to be 40-45% below 2005 levels. ([Click Here](#))
5. Big change in Australia LNG outlook from surplus thru 2026 to LNG market may tighten beyond 2023 ([Click Here](#))
6. A big celebration week in North America, Happy Canada Day and Happy Independence Day!
7. 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.
8. 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 76 bcf, storage now -510 bcf YoY deficit

The EIA reported a 76 bcf injection for the June 25 week, which was below the 5-yr average injection of 108 bcf, and above last year's injection of 65 bcf. Storage is 2.558 tcf as of June 25, decreasing the YoY deficit to 510 bcf from 513 bcf last week and storage is 32 bcf below the 5 year average vs 10 bcf below last week. The significant YoY deficit along with the forecasted hot summer will help support natural gas prices during the injection season. Below is the EIA's storage table from its Weekly Natural Gas Storage Report. [\[LINK\]](#)

**YoY storage at  
-513 bcf YoY  
deficit**

Figure 1: US Natural Gas Storage

Region	Stocks billion cubic feet (Bcf)				Historical Comparisons			
	06/25/21	06/18/21	net change	implied flow	Year ago (06/25/20)		5-year average (2016-20)	
					Bcf	% change	Bcf	% change
East	513	488	25	25	636	-19.3	555	-7.6
Midwest	623	595	28	28	737	-15.5	631	-1.3
Mountain	173	169	4	4	172	0.6	164	5.5
Pacific	244	239	5	5	303	-19.5	281	-13.2
South Central	1,005	991	14	14	1,221	-17.7	1,070	-6.1
Salt	296	295	1	1	369	-19.8	315	-6.0
Nonsalt	709	697	12	12	852	-16.8	755	-6.1
Total	2,558	2,482	76	76	3,068	-16.6	2,701	-5.3

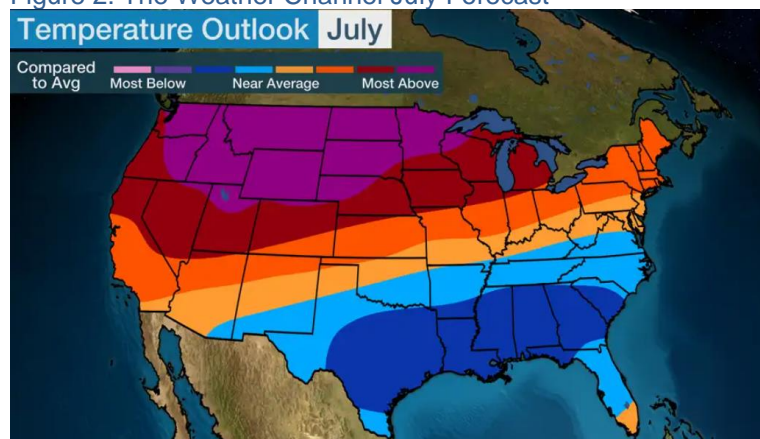
Source: EIA

### Natural Gas – July temp outlook looking similar to June, warm but not as hot as 2020

We continue to see near term US weather forecasts that are supportive of the current very strong HH gas prices. On Tuesday, The Weather Channel posted an updated forecast for July temperatures [\[LINK\]](#). They said look for July to be much like June ie. hot in Northern and Western US, and normal temperatures in the South. While July is expected to be warmer than normal, it likely will not be as hot as July 2020, which was the 11<sup>th</sup> hottest in the last 126 years [\[LINK\]](#).

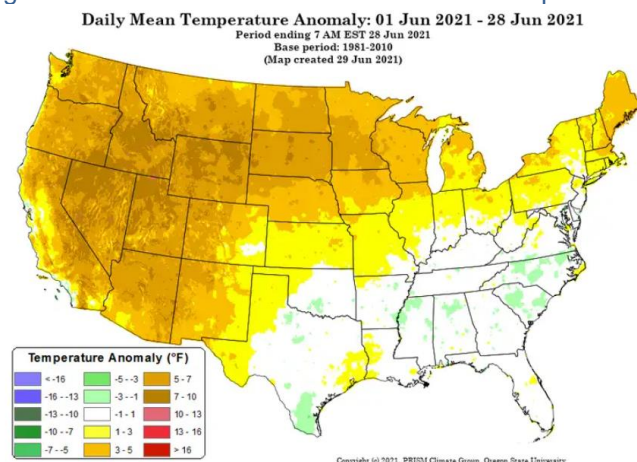
**July expected  
to be warmer  
than normal**

Figure 2: The Weather Channel July Forecast



Source: The Weather Channel

Figure 3: The Weather Channel June 1-28 Temperatures



Source: The Weather Channel

**Natural Gas – US Apr gas production up 0.49 bcf/d YoY, -0.4 bcf/d MoM**

US gas production has fully recovered since the Feb freeze-off. Natural gas will get helped by >\$3 HH prices and pick up in oil plays with associated natural gas. EIA released its Natural Gas Monthly on Wednesday [\[LINK\]](#), which includes its estimates for “actuals” for April gas production. US gas production in Apr was 92.5 bcf/d, up 0.49 bcf/d MoM from March of 92.0 bcf/d which represents a full recovery back to Jan levels from the Feb freeze off. Natural gas is down only 0.4 bcf/d YoY. The big YoY declines had been falling pre-Feb (ie. Jan was down 2.6 bcf/d YoY vs Oct being down 6.4 bcf/d YoY) but Feb saw a YoY decline of -8.8 bcf/d with the extreme weather. March’s YoY decline of 2.5 bcf/d restarted the declining trend in the deficit, and April continued with only a -0.4 bcf/d deficit. These YoY declines should be gone next month, and then flip to YoY increases thru the summer. While the price support from YoY declines in production is being eroded, some level of support thru injection season remains with lower YoY stocks. April production is down 3.9 bcf/d since the Nov/19 peak of 96.4 bcf/d and still 2.0 bcf/d below March 2020 of 94.6 bcf. Below is our running table of US dry natural gas production. Our Supplemental Documents package include excerpts from the EIA Natural Gas Monthly.

**US Apr gas  
production down  
0.4 bcf/d YoY**

Figure 4: US Dry Natural Gas Production

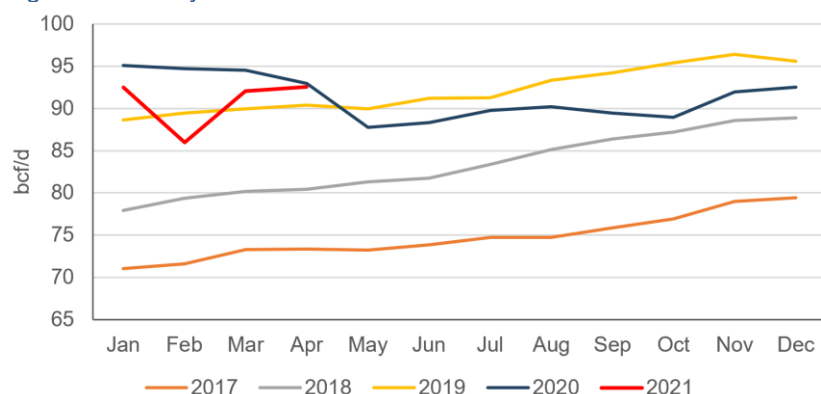
bcf/d	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Jan	56.0	60.0	65.9	65.3	67.8	72.6	73.8	71.0	77.9	88.6	95.1	92.5
Feb	57.3	58.8	65.2	65.9	67.5	73.7	74.7	71.6	79.4	89.4	94.7	86.0
March	57.3	61.5	65.1	65.4	68.2	74.1	74.0	73.3	80.2	89.9	94.6	92.0
Apr	57.6	62.3	65.4	66.0	68.6	75.0	73.8	73.4	80.4	90.4	92.9	92.5
May	58.0	62.4	65.6	66.3	69.5	74.2	73.5	73.3	81.3	89.9	87.8	
June	57.2	62.1	65.4	66.3	69.8	74.3	72.5	73.8	81.8	91.2	88.4	
July	58.3	62.5	65.8	67.0	70.6	74.3	73.1	74.7	83.4	91.3	89.8	
Aug	58.9	63.2	65.4	67.0	71.6	74.3	72.3	74.7	85.2	93.3	90.2	
Sept	59.1	63.1	66.2	67.2	71.7	75.0	71.9	75.8	86.4	94.2	89.5	
Oct	60.1	65.1	66.5	67.6	72.2	74.1	71.4	76.9	87.2	95.4	88.9	
Nov	60.1	65.9	66.6	68.6	73.1	74.1	72.1	79.0	88.6	96.4	92.0	
Dec	61.0	65.6	65.8	66.6	74.7	74.0	71.2	79.5	88.9	95.6	92.5	
Average	58.4	62.7	65.7	66.7	70.4	74.1	72.8	74.8	83.4	92.2	91.4	

Source: EIA

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Figure 5: US Dry Natural Gas Production



Source: EIA

**Natural Gas – US LNG exports flat MoM at 10.2 bcf/d in Apr**

The other big support for US gas prices, other than the Feb freeze, has been stronger YoY US LNG exports. The EIA Natural Gas Monthly also reported “actuals” for US LNG exports, which were 10.2 bcf/d in Apr, which is +3.2 bcf/d YoY and was basically flat from March of 10.2 bcf/d. Note our table rounds to one decimal and the actual is 10.227 bcf/d for Apr. Below is our table of EIA’s monthly LNG exports.

**US Apr LNG exports +3.2 bcf/d YoY**

Figure 6: US LNG Exports (bcf/d)

(bcf/d)	2016	2017	2018	2019	2020	2021
Jan	0.0	1.7	2.3	4.1	8.1	9.8
Feb	0.1	1.9	2.6	3.7	7.8	7.6
March	0.3	1.4	3.0	4.2	7.9	10.2
Apr	0.3	1.7	2.9	4.2	7.0	10.2
May	0.3	2.0	3.1	4.7	5.9	
June	0.5	1.7	2.5	4.7	3.6	
July	0.5	1.7	3.2	5.1	2.7	
Aug	0.9	1.5	3.0	4.5	3.6	
Sept	0.6	1.8	2.7	5.4	5.0	
Oct	0.1	2.6	2.9	5.7	7.2	
Nov	1.1	2.7	3.6	6.3	9.4	
Dec	1.3	2.7	4.0	7.1	9.8	
Full Year	0.5	1.9	3.0	5.0	6.5	
Full Year bcf	186	708	1,084	1,817	2,390	

Source: EIA

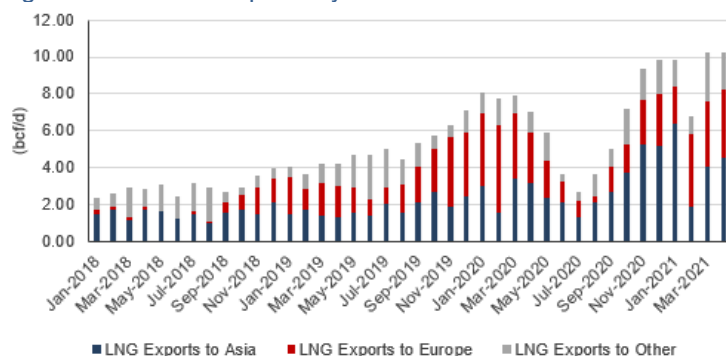
**Natural Gas – US Apr LNG exports top destinations favoured Asia**

The US Dept of Energy also posts a DOE LNG Monthly report [\[LINK\]](#) that has more details on LNG exports by cargo. Increasing US LNG exports has been a significant driver of HH strength in 2021 with exports reaching record highs. LNG exports reached 10.2 bcf/d in April, +45.8% over 7.0 bcf/d in April 2020. LNG exports to Asia dominated the top 5 with China receiving the most at 1.56 bcf/d, Japan the third most at 0.96 bcf/d, and South Korea the fifth most at 0.72 bcf/d. Within the top 5 was also France at 1.20 bcf/d and Spain at 0.77 bcf/d. Our Supplemental Documents package includes excerpts from the DOE LNG Monthly.

**April export volumes reach record of 10.2 bcf/d**



Figure 7: US LNG Exports by Destination



Source: EIA

### Natural Gas – US pipeline exports to Mexico +0.1 bcf/d MoM to 6.0 bcf/d in Apr

Once again, we saw a complete recovery from the Feb freeze off in the Apr pipeline exports to Mexico. The EIA Natural Gas Monthly also provides its “actuals” for gas pipeline exports to Mexico, which were 6.0 bcf/d in April, +1.4 bcf/d YoY and up 0.1 bcf/d MoM from 5.9 bcf/d in March. We are starting to see the beginning of increasing US pipeline exports to Mexico post the Texas big freeze impact. Mexico natural gas production remains stuck below 5 bcf/d and the completion of new pipeline infrastructure such as the Wahalajara system [\[LINK\]](#) increases US penetration further into Mexico. Below is our table of the EIA’s monthly gas exports to Mexico.

**US Apr pipeline exports to Mexico +0.1 bcf/d MoM**

Figure 8: US Pipeline Gas Exports To Mexico (bcf/d)

bcf/d	2014	2015	2016	2017	2018	2019	2020	2021
Jan	1.7	2.2	3.2	3.9	4.4	4.9	5.2	5.6
Feb	1.8	2.3	3.4	4.1	4.5	4.8	5.2	4.4
March	1.9	2.4	3.3	4.2	4.3	4.8	5.4	5.9
Apr	1.9	2.6	3.5	3.9	4.4	4.7	4.6	6.0
May	2.0	2.8	3.7	4.2	4.4	5.0	4.7	
June	2.2	3.0	3.9	4.5	4.6	5.2	5.4	
July	2.2	3.3	4.0	4.4	4.9	5.4	5.8	
Aug	2.1	3.3	4.3	4.4	5.0	5.4	6.0	
Sept	2.2	3.3	4.1	4.2	5.0	5.4	6.0	
Oct	1.9	3.2	4.2	4.3	4.9	5.5	6.0	
Nov	1.9	3.0	4.0	4.5	4.7	5.3	5.5	
Dec	2.1	3.2	3.7	4.4	4.5	4.9	5.3	
Full Year	2.0	2.9	3.8	4.2	4.6	5.1	5.4	

Source: EIA

### Natural Gas – Cheniere stops playing stupid on strengthening LNG markets

It looks like Cheniere has stopped playing stupid and trying naïve little tricks like they did on the Q1 call on May 4 with respect to the strengthening LNG market in 2021. We just didn’t get it and still don’t as we just don’t know who they thought they were fooling. It just seemed silly. This week, they came out talking about how commercial discussions have picked up in 2021 and its boosted their hope for a Texas (Corpus Christi) LNG expansion. On Wednesday, Platts reported “*Pickup in commercial talks boosts Cheniere's hopes on mid-scale LNG project*” [\[LINK\]](#) Platts wrote “*Cheniere Energy expects to make a "substantial dent" by the end of 2022 in building sufficient buyer support for a proposed mid-scale expansion at the site of its Texas liquefaction facility, Chief Commercial Officer Anatol Feygin said June 30 in an interview.*” “*As a result, he said, "The commercial engagement, I think it is very fair to say, has really picked up steam, and we are quite optimistic over the coming 12-18 months to make a substantial dent in that Stage 3 commercialization."* Platts also

**Cheniere notes pickup in commercial discussions**

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reported Cheniere noted this has been a tightening market all year (ie would have been know by the May 4 Q1 call). Platts wrote *"We obviously find ourselves at the beginning of this year and throughout in a very tight market where prices today into Asia and into Europe are at levels that we frankly haven't seen in a decade-plus," Feygin said. "We've surpassed the economics that the industry saw post the Fukushima tragedy in March 2011, and that's happened in the shoulder period."* The bottom line is that these were another LNG leader changing their public stance to a more bullish LNG outlook. Our Supplemental Documents package includes the Platts report.

#### **Cheniere's Q1 call comments that made us chuckle**

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

#### **Natural Gas – Brazil's LNG imports hit record high amid drought**

One of the other support items for LNG prices this summer is South American weather, in this case drought conditions. On Thursday, Bloomberg reported that Brazil's LNG imports had record highs. In June, the nation imported 1.1 bcf/d, beating December's previous record of 0.98 bcf/d. The large quantity of LNG imports is due to a drought sweeping Latin America, which has cut hydro output from dams. The increasing amount of imports from Brazil is worsening the market tightness and boosting concerns of inflation. Meanwhile, Argentina has been stocking up supplies for its summer in December, and has purchased 4 partial LNG cargoes for August and September delivery. There is already a slim supply of LNG from Latin American gas producers due to maintenance work in Peru and a drop in domestic production in Trinidad. While this will likely not have a huge impact on the overall market, it's one more support factor for strong LNG prices this summer. Our Supplemental Documents package includes the Bloomberg report.

**Drought causing  
Brazil LNG  
imports to reach  
record highs**

### Natural Gas – Algeria's Skikda LNG 0.5 bcf/d being shut down since June 11

As of 7am MT news cut off, we still have not seen any official estimate of how long Algeria's 0.5 bcf/d Skikda LNG Plant will be off. It has been shut down since June 11. Last week's (June 27, 2021) Energy Tidbits memo noted the Sonatrach, the operator at Skikda, release on June 19 [\[LINK\]](#) "A technical incident occurred on June 11 at the Skikda LNG Complex and led to the shutdown of this complex. The technical incident was caused by a sudden failure of a gas turbine control mechanism. No other damage is to be deplored thanks to the operation of the automatic safety devices of the machine and the plant...Sonatrach has decided to carry out a thorough inspection in order to carry out the necessary repairs." We have not seen any official update since then from Sonatrach. Skikda had problems in 2020 also due to a turbine, it was previously closed for 6 months in 2020 due to extended maintenance as a result of necessary repairs to a turbine. Sonatrach attempted to compensate for the loss by increasing exports from Arzew, but Algerian LNG exports were constrained that year to 523.5 bcf. So far in 2021, Algeria has exported 298.7 bcf of gas, or around 50% of its technical nameplate capacity. The amount lost due to the shutdown is not a huge quantity, but helps provide more support for Europe natural gas prices, in turn providing support for LNG prices and US LNG exports this summer.

**Algeria 0.5 bcf/d  
Skikda LNG down  
since June 11**

### Natural Gas – Australia now sees tighter LNG market post 2023 due to Mozambique

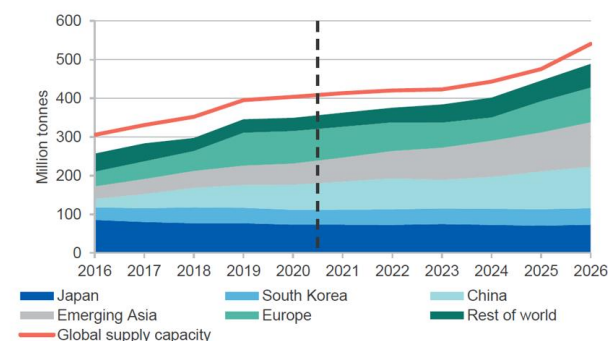
No surprise, we are starting to see more groups calling for tighter LNG markets. On Monday, we tweeted [\[LINK\]](#) on Australia's Resources and Energy Quarterly released on Monday [\[LINK\]](#) because there was a major change to their LNG outlook versus their March forecast. We tweeted "#LNGSupplyGap. AU June fcast now sees #LNG mkt tighten post 2023 vs Mar fcast excess supply thru 2026. Why? \$TOT Mozambique delays. See below SAF Apr 28 blog. Means brownfield LNG FID needed ie. like #LNGCanada Phase 2. #OOTT #NatGas". Australia no longer sees supply exceeding demand thru 2026. In their March forecast, Australia said "Nonetheless, given the large scale expansion of global LNG capacity in recent years, demand is expected to remain short of total supply throughout the projection period." Note this is thru 2026 ie. a LNG supply surplus thru 2026.. But on Monday, Australia changed that LNG outlook and now says the LNG market may tighten beyond 2023. Interestingly, the June forecast only goes to 2023 and not to 2026 as in March. Hmmm! On Monday, they said "Given the large scale expansion of global LNG capacity in recent years, import demand is expected to remain short of export capacity throughout the outlook period. Beyond 2023, the global LNG market may tighten, due to the April 2021 decision to indefinitely suspend the Mozambique LNG project, in response to rising security issues. This project has an annual nameplate capacity of 13 million tonnes, and was previously expected to start exporting LNG in 2024." 13 million tonnes is 1.7 bcf/d so they are only talking about Total Mozambique LNG Phase 1. So no surprise the change is Mozambique LNG driven but we have to believe the reason why they cut their forecast off this time at 2023 is that they are looking at didn't forecast beyond 2023 is that they are figuring this out. And, importantly, there is likely more they are changing such as increasing their India LNG import forecast (see below item). They didn't say anything else specific on Mozambique, But surely, they have to be delaying Total Phase 2 of 1.3 bcf/d and Exxon Rozuma of 2.0 bcf/d. This is the 5 bcf/d delay that I put 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?" Below are the Australia LNG outlook graphs from the March and June forecasts. Our Supplemental Documents package includes the Australia June LNG write up.

**Australia sees  
tighter LNG post  
2023**

Figure 9: Australia's LNG Outlook

**March 2021 LNG Outlook**

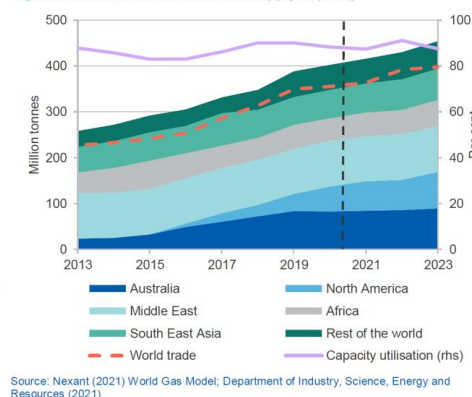
Figure 7.1: LNG demand and world supply capacity



Source: Australia Resources and Energy Quarterly

**June 2021 LNG Outlook**

Figure 7.1: LNG demand and world supply capacity

**We expect Australia will also be increasing its India LNG demand forecast**

There is clearly more to the story than Total Mozambique LNG Phase 1 as to why Australia didn't want to reveal their post 2023 LNG outlook in the new June forecast. It would have been easy to adjust their model for Mozambique delays. We have to wonder if they are also taking a harder look at India and that is apparent by what they omitted from the March forecast in their June forecast – their India LNG import growth assumptions. In June forecast: *“Beyond the outlook period, the Indian government has ambitions to lift the share of gas in its energy mix from about 6% in 2020 to 15% in 2030. Its success will depend on a range of factors, including gas market reforms, infrastructure development, and higher domestic gas output”*. On the surface, it sounds like they are reflecting their assessment of India's 15% target in their forecast. However, March Forecast includes the exact same above sentence, but includes specifics that were not in the June forecast. In March, Australia said *“India's LNG imports increased by 14% to 35 million tonnes in 2020, and are forecast to increase further to 36 million tonnes in 2021. Growth in 2021 is likely to be moderated by the recent rally in LNG spot prices, since India is an extremely price sensitive buyer of LNG. Over the projection period, Indian imports are expected to rise, increasing by an average 2.9% annually between 2022 and 2026.”* This assumption would increase India LNG imports by 10 bcf/d to 2030, and less than the +13 bcf/d Petronet forecast (see below item). We know that an additional 3 bcf/d may not sound huge that change in forecasts would eat up ¾ of Qatar's 4.3 bcf/d major expansion. Our Supplemental Documents package includes the Petronet CEO forecast comments.

**We expect more will follow Australia and last week's Qatar's LNG forecast**

We know there is much more to LNG forecasts than a few items, but these few items provide the basis for others to follow Australia and Qatar to view of much tighter LNG markets around 2025. Qatar's 4.3 bcf/d expansion is huge but when they look beyond that expansion and still a supply shortage – that is telling. Last week's (June 27, 2021) Energy Tidbits highlighted Qatar Petroleum's LNG expansion announcement [\[LINK\]](#) and how that announcement included the Qatar warning of a LNG supply shortfall after commenting on the Qatar 4.3 bcf/d expansion that had double the level of bids. That was positive, but we thought there was a more



significant comment from QPC's CEO and, don't forget, this is after accounting for the supply they are adding from their LNG expansion. Qatar sees a LNG supply gap and higher prices ahead due to the lack of investment in LNG supply projects. We had a 3 part tweet. Our first tweet [\[LINK\]](#) "1/3. #LNGSupplyGap coming. big support for @qatarpetroleum expansion to add 4.3 bcf/d LNG. but also say "there is a lack of investments that could cause a significant shortage in gas between 2025-2030" #NatGas #LNG". Our Supplemental Documents package includes the Qatar Petroleum announcement.

### **We see a new LNG supply gap with delay of 5 bcf/d of Mozambique LNG**

Whether its Australia, or Qatar or anyone else, the increasing views for an LNG supply gap and higher LNG prices in the 2025-2030 period is right in line with our stated views. On April 28, 2021, we posted a 7-pg blog "[Multiple Brownfield LNG FIDs Now Needed To Fill New LNG Supply Gap From Mozambique Chaos? How About LNG Canada Phase 2?](#)" [\[LINK\]](#) The more people expect to see a LNG supply gap around 2025, the more the focus will be on brownfield LNG that could go FID ie. the quickest possible new LNG supply. We thought, and still think, there has been a major change to the outlook for LNG supply in the 2020s and one that is still being overlooked – there is a big new LNG supply gap starting around 2025 that is hitting faster and bigger than anyone expects. We saw Total's April 27, 2021 announcement of force majeure at its Mozambique Phase 1 LNG of 1.7 bcf/d was much more significant that viewed. We just didn't see market focused on the fact that this situation backs up an additional 3.3 bcf/d of LNG supply that is also being counted on in all LNG supply forecasts. Total's Phase 2 of 1.3 bcf/d was to follow, and Exxon's Rozuma Phase 1 of 2.0 bcf/d was originally expected to go FID in 2019 but is now not expected to have a FID decision until 2022. Mozambique is considered a premium LNG supply region for Asia and is in LNG supply forecasts. Total's original in service for Phase 1 is 2024. We had been warning that Mozambique has a major LNG market impact and its why we posted the April 28 blog. Our blog reminds that even if Total makes a restart development decision in 12 months, it will take months just to get back to where they left off including rehiring services so any return to where they were in the construction process is at least more likely 18 months at a minimum. This is going to create a bigger and sooner LNG supply gap and the reality is that the only projects that can step up in any reasonable time frame will be brownfield LNG projects. Its why we also said what about LNG Canada Phase 2. There is much more in the 7-pg blog. Our Supplemental Documents package includes our blog.

### **Natural Gas – High summer LNG prices mean Korea betting on a mild winter ahead**

One of the other big energy stories has been the stronger than expected summer LNG markets and prices. The high spot LNG prices are having an impact on Asian buyers, who clearly did not expect to be paying \$14 for July/Aug deliveries. These high spot LNG prices are forcing some Asian buyers to pass on spot LNG cargoes, in this case Korea end users of LNG - Korea Gas Corp. and Posco. On Thursday, Bloomberg reported that, according to traders who have knowledge of their plans, they will not be buying any more cargos until the end of summer due to the high spot LNG prices. These Korea buyers are waiting until the end of summer market, using existing inventories, and expecting spot LNG prices to weaken so they can then replenish inventory ahead of the winter. Their strategy is certainly a gamble. If Korea is hit by a colder than expected winter, they may be caught understocked. Our Supplemental Documents package includes the Bloomberg report.

**High spot LNG  
prices impact  
Korea**

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### Natural Gas – Japan LNG gets help from cloudy/rainy weather

We have regularly seen how weather issues are causing renewable (solar and wind) reliability issues in the US and Europe but not so much in Asia despite our reviewing China, Japan and Korea news every week. But Bloomberg did note a weather issue this week in Japan. We tweeted [\[LINK\]](#) “Cloudy/Rain = Less #Solar = More #LNG Imports in Japan. Continuing to keep more LNG cargoes in Asia & not going to refill Europe storage. Helping keep much higher than expected LNG summer prices & positive for summer US LNG exports. #NatGas Thx @SStapczynski @TheTerminal” Stapczynski reported “Fears that utilities will be caught without enough fuel this summer have re-emerged as thermal power generation jumps and rainy weather curbs solar output. Kansai Electric Power Co., one of the nation’s biggest power generators, recently purchased a shipment of liquefied natural gas for August and is seeking another cargo for the same month, according to traders with knowledge of the matter. This is a stark reversal to just a few weeks ago, when Kansai had said it wouldn’t buy spot cargoes due to sufficient supply from long-term contracts. Rainy or cloudy weather is forecast to continue across most of the country through July 4, according to the Japan Meteorological Agency. Available gas-fired power capacity is expected to top 70 gigawatts by the end of this week, a more than 50% increase from the start of June, according to data from the Japan Electric Power Exchange.” Our Supplemental Documents package includes the Bloomberg report.

**Cloudy/Rain- Less  
Solar = More LNG  
in Japan**

### Reminds that Japan wants to keep its LNG tanks topped up this summer

Notwithstanding that the return of some nuclear has increased the summer reserve power margin, it is still very tight and that is being reinforced by Japan’s power actions. The Bloomberg report this week was a good reminder on one of our highlighted items in our May 16, 2021 Energy Tidbits – Japan will want to keep its LNG tanks topped up this summer and we saw this as a positive support for LNG prices this summer especially if its hot summer. On May 11, we tweeted [\[LINK\]](#) “Japan will want to keep #LNG tanks topped up until worst is over. Japan summer peak power reserve only 3.7-3.8%. Positive for LNG & US LNG, less cargoes redirected to refill EU storage. Imagine the AC bill if they had 0.5 mm visitors for olympics. Thx @SStapczynski #NatGas #OOT.” The tweet was driven by the Bloomberg report that “Japan’s power supply is expected to be the tightest in “several years” this summer amid an outlook for warmer-than-normal weather and lower electricity output as some thermal facilities are shut, Minister of Economy, Trade and Industry Hiroshi Kajiyama said to press on Friday”, and “Japan’s nationwide peak power reserve rate, excluding Okinawa and Hokkaido, is expected to be 3.7%-3.8% this summer, according to NHK, citing the Organization for Cross-regional Coordination of Transmission Operators \*\* NOTE: The minimum level required by the Japanese government during peak demand times is 3%.” After our May 11 tweet, we saw the Platts report [\[LINK\]](#) on the METI press comments that reinforced our LNG comment writing “Among possible measures, METI intends to request Japanese utilities to report their LNG as well as other fuel procurement plans for summer in June to scrutinize them, a METI source told S&P Global Platts.” Note that if any US areas have reserve margins below 10%, its generally considered some sort of critical situation. As we put in our tweet, it just means that Japan is likely to be having more LNG imports this summer to keep their LNG tanks full.

### Natural Gas – Japan July forecast turning to more normal temperatures

The global weather story for June was that it was warm in many places around the world including in Asia. Hot global weather has been a support for summer LNG prices. However, the updated July forecast has turned to more near-normal temperatures. The Japan

**Above normal  
temperatures for  
the rest of Japan  
summer**

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Meteorological Agency issued an updated weather forecast for July 3<sup>rd</sup> - August 2<sup>nd</sup> average temperatures on Thursday [\[LINK\]](#). The JMA is calling for temperatures that are near-normal temperatures in all regions of the country for July. There is a low probability of an above-normal temperature occurrence. This will likely not lend support for LNG prices. Below is the current JMA forecast for July.

Figure 10: JMA Temperature Probability Forecast for July 3 – Aug 2



Source: Japan Meteorological Agency

### Natural Gas – Nord Stream annual maintenance planned for July

Nord Stream announced [\[LINK\]](#) that it would be doing maintenance from July 13 to July 23. During that time, the 5.3 bcf/d pipeline will be shut down. The maintenance took 12 days last year, from July 14-26, 2020. Last year, Nord Stream's Managing Director, Alexey Zaytsev said *"Since the start of Nord Stream Pipelines operation, we have continuously transported natural gas to the European market. Regular testing and maintenance of mechanical components and automation systems built to the highest industry standards are essential for ensuring the reliable, safe and efficient functioning of the twin pipeline."*

**Nord Stream  
annual  
maintenance for  
10 days**

### Natural Gas – Europe storage 47.64% full vs 5 year average of 62.97%

We continue to see the set up for strong summer LNG price, which should support strong US LNG exports to Europe. It was a colder spring, which delayed the refill push in Europe and this is setting up support for summer prices. Additionally, the continued significant YoY deficit in Europe gas storage indicates that there will be strong demand for European LNG imports during the refill push especially since Russia, at least so far in Q2, looks like it only plans to ship contract volumes via Ukraine to Europe ie. not sending above contract levels. This is a big positive indicator for US LNG exports this summer. 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. So massive draw vs last year and the last 5 years. Storage at Apr 1 of 28.90% had looked to be the bottom for withdrawal season as the storage level subsequently increased 2.06% to 30.96% on April 6. However, cold weather continuing into the second half of April had further delayed the refill push as flows switch from injections between April 1-6, to draws once again. This had resulted in the longest withdrawal season in history, supporting Europe LNG cargo prices. We are now seeing storage starting to build, with storage as of June 3 being up

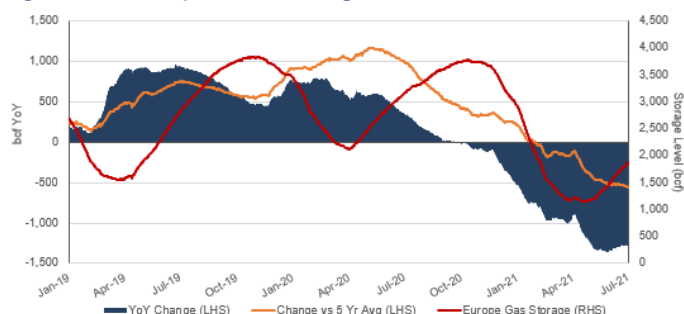
**Europe gas  
storage 47.64%  
full**

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9.64% since April 19, which looks to be the bottom. Storage as of July 1 is 47.64%, 32.9% less than last year of 80.53% and 15.33% below the 5 yr average of 62.97%. Europe storage levels this summer will be the key item to watch for indications on LNG markets going into the winter. Below is our graph of YoY change in net LNG flows to NW Europe.

Figure 11: Europe Gas Storage Level



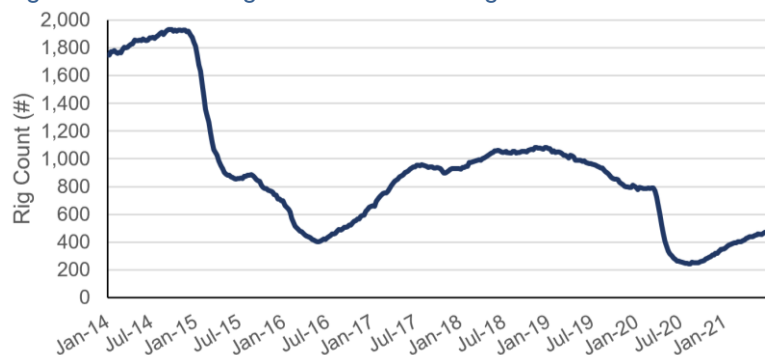
Source: Bloomberg

### Oil – US oil +4 WoW at 376 oil rigs

Baker Hughes reported its weekly rig data on Friday. This week US oil rigs were up +4 rigs WoW at 376 rigs. Oil rigs are +204 off the bottom of 172 in the Aug 14 week. Permian was +1 at 237 rigs. Increases came from Permian, Bakken, DJ-Niobrara and Marcellus. There were no decreases this week. Oil rigs have been on a strong recovery path and are +204 off the bottom of 172 in the Aug 14 week. US oil rigs hit their 2020 peak at 683 on March 13 and have since fallen by 307 to 376 oil rigs (-44.95%). Below is our graph of Baker Hughes US oil rigs.

**US oil rigs +4  
WoW**

Figure 12: Baker Hughes Total US Oil Rigs



Source: Baker Hughes

### Oil – Frac spreads +2 to 234 for week ending July 2

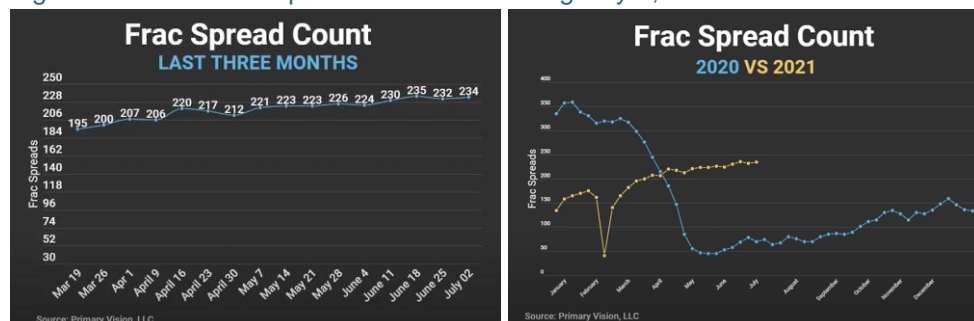
Every week, Mark Rossano (C6 Capital Holdings) posts a YouTube recap of frac spreads for the week on the Primary Vision Network [\[LINK\]](#). Frac spreads were +2 to 234 for the week ending July 2, 2021. There was +1 in the Permian and +1 in one of the smaller basins. The primary focus remains oil. The 234 is right in line with his expectations to end quarter at 230 to 235 active spreads. And still expects to see what he calls a slow grind up. Labor remains the #1 issue, its getting more expensive to get people back. Rossano thinks can get to maybe 250-255 without much work, but to get to 275 will need labor, equipment. Still

**Frac spreads +2  
to 235**

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expects US oil production to exit 2021 at 11.5 to 11.7 mmb/d. Below are his two key frac spread graphs.

Figure 13 Active Frac Spreads for Week Ending July 2, 2021



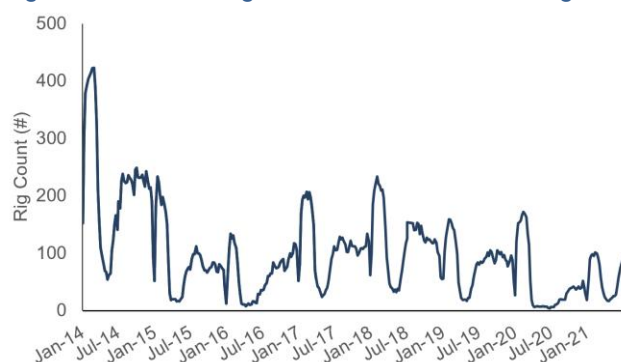
Source: Primary Vision

### Oil – Total Cdn rigs +8 to 134 total rigs and up 116 YoY

We are continuing to see Cdn rigs ramp up as spring breakup is over and we are moving into summer. Baker Hughes reported total Cdn rigs were up +8 this week to 134 total rigs. We expect Cdn rigs to continue to ramp up faster this month. Cdn oil rigs were up 5 to 87 rigs. Cdn gas rigs were up 3 to 47 gas rigs. Cdn drilling has recovered YoY, a year ago Cdn oil rigs were 6 and Cdn gas rigs were 12 for a total Cdn rigs of 18, meaning total Cdn rigs are +116 YoY and total rigs are up 10 vs 2019. Below is our graph of Baker Hughes Cdn oil rigs.

**Cdn rigs +8 this week**

Figure 14: Baker Hughes Total Canadian Oil Rigs



Source: Baker Hughes

### Oil – US weekly oil production flat WoW at 11.1 mmb/d

US oil production was flat at 11.1 mmb/d for the June 25 week. Lower 48 flat at 10.7 mmb/d. This puts US oil production up 0.1 mmb/d YoY, and is down 2.0 mmb/d since the 2020 peak of 13.1 mmb/d on March 13. The June STEO slightly raised its US crude expectations thru 2021, however it is still not returning anywhere near the Q4/19 peak of 12.78 mmb/d, with Q4/21 US crude of 11.38 mmb/d (down 1.40 mmb/d from peak). In the US oil production commentary, the EIA wrote "U.S. crude oil production averaged 11.2 million b/d in March 2021, an increase of 1.4 million b/d from February. The March rise indicates that the production outages caused by the February winter freeze were temporary and that production came back online quickly. Because prices of West Texas Intermediate crude oil remain above \$60/b during 2021 in the current forecast, we expect that producers will drill

**US oil production flat WoW**

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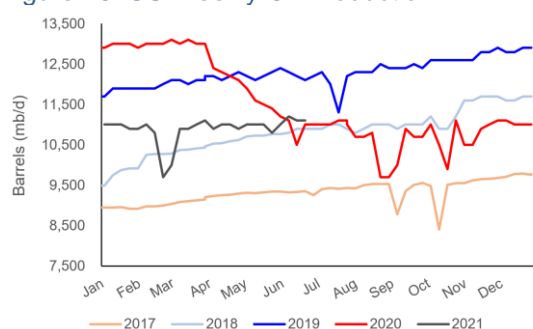
and complete enough wells to raise 2022 production from 2021 levels. We estimate that 2022 production will average 11.8 million b/d, up from a forecast average of 11.1 million b/d in 2021.” Additionally, on US rig counts, the EIA wrote “However, our crude oil production forecast is lower than in recent STEOs because of relatively fewer rig deployments at existing price levels, particularly in the Permian”. The EIA DPR has the expectation of slight MoM increases in June and July. The EIA forecasts July at 84.301 bcf/d which is +0.050 bcf/d MoM. The EIA Form 914 Actuals for April have come in 219,000 b/d higher than the weekly estimates that are noted in our Energy Tidbits memos. The actuals are also 0.202 mmb/d higher than the EIA STEO May had for April. This means they will be increasing their forecast, at least for the near term.

Figure 15: 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		

Source: EIA

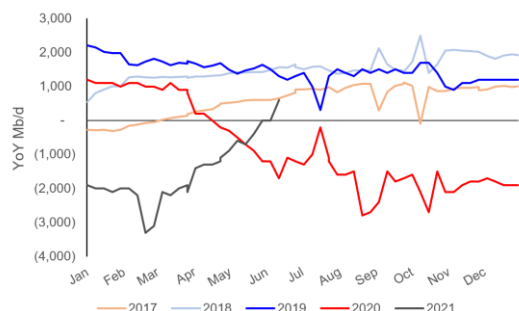
Figure 16: US Weekly Oil Production



Source: EIA, SAF

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Figure 17: YoY Change in US Weekly Oil Production



Source: EIA, SAF

### Oil – EIA Form 914 Apr actuals 219,000 b/d higher than weekly production estimates

The EIA released its Form 914 data [\[LINK\]](#) on Wednesday, which is the EIA's "actuals" for April US oil and natural gas production. Form 914 shows total US April oil production of 11.169 mmb/d, down slightly MoM by 0.019 mmb/d from Mar of 11.188, and down 0.841 mmb/d YoY from April 2020 of 12.010 mmb/d. Three key items to highlight. (i) The actual for April have come in 219,000 b/d higher than the weekly estimates that are noted in our Energy Tidbits memos. The actuals are also 0.202 mmb/d higher than the EIA STEO May had for April. This means they will be increasing their forecast, at least for the near term. (ii) Oil for March and April went back to and above the Jan 11.056 mmb/d ie. they have more than recovered from the Feb freeze impact. (iii) April was also starting to show the impact of the strengthening oil prices. Not necessarily from new drilling, although drilling has been increasing because it takes time to translate increasing rigs into actual oil production.

Rather, the impact that is showing up is completing DUCs and bringing back shut in oil wells with higher oil prices. We have noted this return of shut in in the North Dakota # of producing wells data. Other specific state info is: (i) Colorado had the largest MoM increase and was +31,000, which had been practically flat for the past 3 months. We don't have Colorado producing well data, but wouldn't be surprised to see there being an impact of returning of some shut in wells with higher prices. (ii) Texas was up +28,000 to 4.791 mmb/d, which further solidifies its recovery since the February freeze-out. We haven't yet seen any Texas RRC data that shows there is any return of shut in impact. (iii) New Mexico was also up +17,000 b/d MoM to 1.172 mmb/d. (iv) North Dakota was only up slightly MoM, +6,000 b/d to 1.172 and its production levels have been eclipsed by New Mexico for two consecutive months. ND is still 65,000 b/d below Jan levels, meaning it has still not fully recovered from the February freeze-out. The Form 914 actuals were slightly lower than the North Dakota Industrial Commission having North Dakota at 1.121 mmb/d in Apr. Note completions were only 31 in Apr, below the ~48 completions needed to keep ND production flat at ~1 mmb/d meaning North Dakota oil production should continue to slightly decline. Note, we believe a large portion of the MoM increase in ND had come from returning shut-in wells due to the higher oil prices, so if this trend continues we may continue to see small upticks in production despite the low level of completions. The April actuals were 219,000 mb/d above the weekly estimates average of 10.950 mmb/d for Apr, follow a similar trend from March's +213,000 mmb/d underestimate. Below is the EIA Form 914 data for oil, and our graph of EIA actuals oil production data vs the weekly estimates.

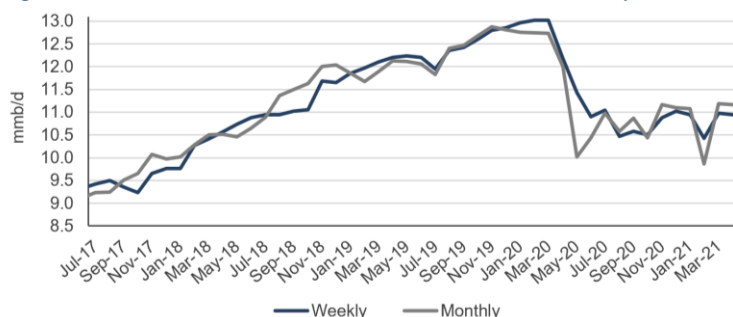
### EIA Form 914 April

Figure 18: EIA Form 914 US Oil Production

thousand barrels per day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2021	11,056	9,773	11,188	11,169								
2020	12,755	12,746	12,737	12,010	10,019	10,442	10,973	10,584	10,870	10,439	11,168	11,088
2019	11,865	11,679	11,937	12,135	12,163	12,088	11,819	12,425	12,495	12,673	12,860	12,802
2018	9,998	10,261	10,489	10,496	10,457	10,605	10,903	11,384	11,463	11,554	11,907	12,004
2017	8,874	9,108	9,192	9,115	9,208	9,134	9,266	9,264	9,534	9,668	10,088	9,993
2016	9,203	9,065	9,089	8,871	8,834	8,671	8,664	8,686	8,544	8,841	8,906	8,846
2015	9,388	9,510	9,585	9,661	9,481	9,362	9,447	9,416	9,491	9,406	9,337	9,281

Source: EIA

Figure 19: EIA Form 914 US Oil Production vs Weekly Estimates



Source: EIA

### Oil – “Real” DUCs actually a lot less than EIA forecast

On Tuesday, the EIA posted a new blog “EIA estimates drilled but uncompleted wells for key oil and natural gas basins” [\[LINK\]](#). The EIA estimates DUCs at the end of May were 6,521 DUCs. And then says “We estimate that the U.S. DUC inventory peaked at 8,874 DUCs in June 2020. From June 2020 through May 2021, we estimate that DUCs declined by 27%, or by 2,353 DUCs.” But, we wanted to caution everyone about DUCs. We realize its impossible to know the exact number but estimates for DUCs such as the new one from the EIA do not try to adjust for DUCs that are never going to be completed as they drilled into sub-economic pay to justify a completion or as Rystad calls them, waiting to be abandoned. And by not trying to have waiting to be abandoned percentage of DUCs, there is a hugely overestimated number of real DUCs. Ie, the DUCs picture is a bigger positive to oil than expected. We first highlighted this in our Jan 31 Tidbits on a Rystad blog, which split DUCs into “live” vs other, basically a split between DUCs that they expect will be completed vs those that are DUCs that are really just waiting to be abandoned. In Jan, the EIA estimated there were 830 DUCs frac, but Rystad estimated it was really 2,172 DUCs that are waiting to be abandoned. Following the same logic, what if we took 2,200 DUCs off the EIA’s May/June estimates. Peak DUCs in June 2020 would have been 6,700 DUCs, May 2021 DUCs would be 3,300 DUCs, which means the YoY decline would be a 51% YoY decrease. Our Supplemental Documents package includes the EIA and the Rystad Jan blog.

**EIA vastly overestimating number of DUCs**

### Oil – No change this week to oil sands facilities on Covid outbreaks list

The Fort McMurray area may still be one of the relative hotspots for Covid in Alberta, but similar to all of Alberta case numbers are going down at a very fast rate. The last Wood Buffalo Covid update is as of June 29 [\[LINK\]](#). There was no change to the oil sands outbreak list, which followed three weeks of going down 1 each week. We would have expected to see some sort of continued reduction in the outbreak list. but it was only a 5 day period and we suspect we will a reduction this week. To date, there have been three oil sands facilities removed from the outbreak list - Suncor Mackay River, CNRL Jackfish property and the

**No change to oil sands covid**

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Oilsands Industrial Lodge – Fort McKay. Below, we pasted the oil sands facilities listed in June 18, 21, 24 and 29 updates.

Figure 20: Oil Sands Facilities With Covid Outbreaks at June 18, 21, 24 and 29

June 29	June 24	June 21	June 18
<b>Outbreaks in RMWB Industrial:</b>	<b>Outbreaks in RMWB Industrial:</b>	<b>Outbreaks in RMWB Industrial:</b>	<b>Outbreaks in RMWB Industrial:</b>
MEG Energy - ongoing	MEG Energy - ongoing	MEG Energy - ongoing	MEG Energy - ongoing
CNRL Horizon - ongoing	CNRL Horizon - ongoing	CNRL Horizon - ongoing	CNRL Horizon - ongoing
CNRL Albion - ongoing	CNRL Albion - ongoing	CNRL Albion - ongoing	CNRL Albion - ongoing
Kearl Lake - ongoing	Kearl Lake - ongoing	Kearl Lake - ongoing	Kearl Lake - ongoing
Civeo McClelland Lake - ongoing	Civeo McClelland Lake - ongoing	Civeo McClelland Lake - ongoing	Civeo McClelland Lake - ongoing
Wapasu Creek Lodge - ongoing	Wapasu Creek Lodge - ongoing	Wapasu Creek Lodge - ongoing	Wapasu Creek Lodge - ongoing
Civeo Athabasca - ongoing	Civeo Athabasca - ongoing	Civeo Athabasca - ongoing	Civeo Athabasca - ongoing
Cenovus Sunrise Lodge - ongoing	Cenovus Sunrise Lodge - ongoing	Cenovus Sunrise Lodge - ongoing	Cenovus Sunrise Lodge - ongoing
Suncor Base Plant - ongoing	Suncor Base Plant - ongoing	Suncor Base Plant - ongoing	Suncor Base Plant - ongoing
Suncor Firebag - ongoing	Suncor Firebag - ongoing	Suncor Firebag - ongoing	Suncor Firebag - ongoing
Suncor Fort Hills - ongoing	Suncor Fort Hills - ongoing	Suncor Fort Hills - ongoing	Suncor Fort Hills - ongoing
Syncrude Mildred Lake - ongoing	Syncrude Mildred Lake - ongoing	Syncrude Mildred Lake - ongoing	Suncor Mackay River - removed
Syncrude Aurora - ongoing	Syncrude Aurora - ongoing	Syncrude Aurora - ongoing	Syncrude Mildred Lake - ongoing
CNOOC Long Lake - ongoing	CNOOC Long Lake - ongoing	CNOOC Long Lake - ongoing	Syncrude Aurora - ongoing
			CNOOC Long Lake - ongoing

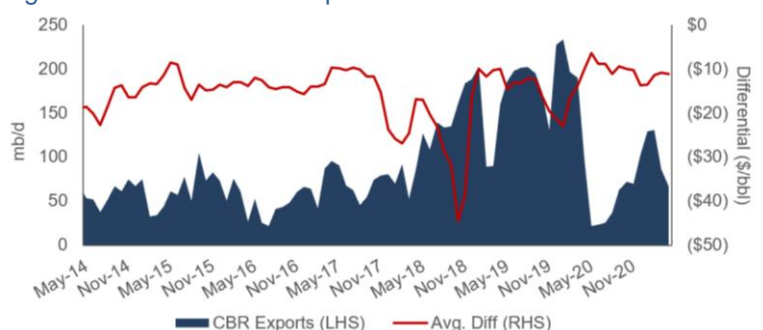
Source: Wood Buffalo

### Oil – Cdn crude by rail imports to Gulf Coast down 29,000 b/d YoY in Apr to 67,000 b/d

The EIA posted its monthly “U.S. Movements of Crude Oil by Rail” [\[LINK\]](#) on Wednesday, which also had good insights on Cdn crude by rail. Canadian CBR volumes to PADD 3 (Gulf Coast) were 67,000 b/d in Apr, which is down 19,000 b/d MoM from March, and is still down YoY being -29,000 b/d vs Apr 2020. March volumes were revised downward by 7,000 b/d from 93,000 b/d reported last month. Tighter YoY WCS to WTI differentials were the key factor in the low crude by rail volumes since December, however it came as a surprise to us that with widening differentials in April vs 2020 the CBR exports were so low. Below is our graph of Cdn CBR exports to the Gulf Coast.

**Cdn crude by rail imports to Gulf Coast**

Figure 21: Canada CBR Exports to US Gulf Coast vs WCS Differential



Source: EIA

### Oil – Refinery inputs +2.266 mmb/d YoY to 16.299 mmb/d, down 0.991 mmb/d vs 2019

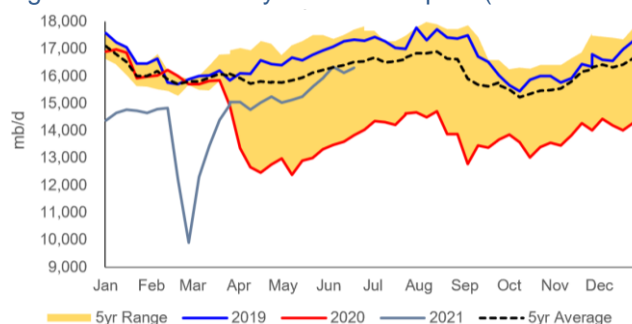
Crude inputs to refineries were up for the week ended June 25 and were +0.187 mmb/d to 16.299 mmb/d, are +2.266 mmb/d YoY, but still down 0.991 mmb/d vs week ended June 28, 2019. Refineries have added 702,000 barrels of oil processing this month alone, which is due in large part to the reopening of California. Refinery utilization was up 0.7% this week at 92.9%, which is +17.4% YoY. Total products supplied (ie. demand) increased this week, with

**Refinery crude oil input just below the 5-yr avg**

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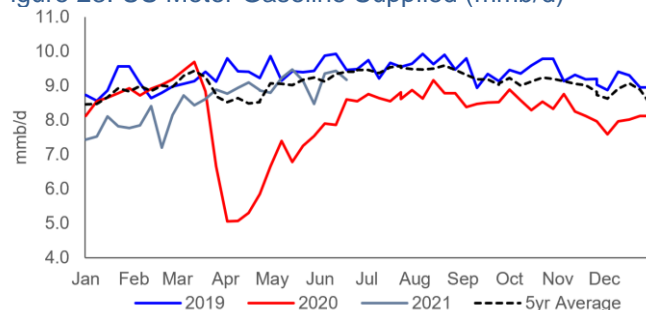
a 0.152 mmb/d increase to 20.902 mmb/d, and motor gasoline supplied was down being - 0.267 mmb/d to 9.173 mmb/d. The drop in gasoline demand could be due to rainy weather across the country this week keeping drivers off the road. Gasoline consumption in the US is expected to rise, with the EIA writing in their 2021 Summer Fuels Outlook [LINK](#) "We forecast that gasoline consumption in 2021 will peak in August at 9.1 million b/d, which is up from 8.5 million b/d in August 2020 but down from the 9.8 million b/d in August 2019. We forecast that 2021 summertime gasoline consumption will average almost 8.8 million b/d, a 1.0 million b/d (13%) increase from 2020 but a 0.7 million b/d (7%) decrease from summer 2019". Below is our graph of crude inputs to US refineries and our graph of US motor gasoline supplied.

Figure 22: US Refinery Crude Oil Inputs (thousands b/d)



Source: EIA, SAF

Figure 23: US Motor Gasoline Supplied (mmb/d)



Source: EIA, SAF

### Oil – US “net” oil imports down 0.602 mmb/d to 2.689 mmb/d

US “NET” imports were down 0.602 mmb/d to 2.689 mmb/d for the June 25 week. US imports were down 0.536 mmb/d to 6.406 mmb/d. US exports were up, being +0.066 mmb/d to 3.717 mmb/d. The WoW decrease in US oil imports was driven by decreases in Canada, Mexico, Colombia and Nigeria. Some items to note on the by country data. (i) Canada was down this week, and was -0.153 mmb/d to 3.282 mmb/d for the June 25 week, which is now ~0.4 mmb/d below the average levels in Jan/Feb of 2020. Note that PADD 2 imports are -0.144 this week and this is the largest importer from Canada in the US. (ii) Saudi Arabia was up 10,000 b/d to 0.565 mmb/d this week, the highest level seen in almost a year. (iii) Colombia was down by 0.201 mmb/d to 0.139 mmb/d this week. (iv) Ecuador was up 231,000 b/d to 260,000 b/d. (v) Iraq was down 9,000 b/d to 142,000 b/d. (v) Venezuela remained at 0 due to US sanctions. (vi) Mexico decreased 131,000 b/d to 0.747 mmb/d.

**US “net” oil imports  
-0.602 mmb/d  
WoW**



Figure 24: US Weekly Preliminary Oil Imports By Major Countries

	Apr 30/21	May 07/21	May 14/21	May 21/21	May 28/21	June 04/21	June 11/21	June 18/21	June 25/21	WoW
Canada	3,232	2,924	3,806	3,549	3,147	3,971	3,644	3,435	3,282	-153
Saudi Arabia	178	224	424	277	188	144	381	555	565	10
Venezuela	0	0	0	0	0	0	0	0	0	0
Mexico	467	434	692	661	702	423	764	878	747	-131
Colombia	307	278	325	71	185	137	143	340	139	-201
Iraq	41	235	199	184	163	173	305	151	142	-9
Ecuador	318	257	80	229	226	122	96	29	260	231
Nigeria	95	157	73	29	169	264	169	183	33	-150
Kuwait	0	0	0	0	0	0	0	0	0	0
Angola	0	0	0	0	0	0	0	0	0	0
Top 10	4,638	4,509	5,599	5,000	4,780	5,234	5,502	5,571	5,168	-403
Others	813	979	812	1,273	851	1,404	1,244	1,372	1,238	-134
Total US	5,451	5,488	6,411	6,273	5,631	6,638	6,746	6,943	6,406	-537

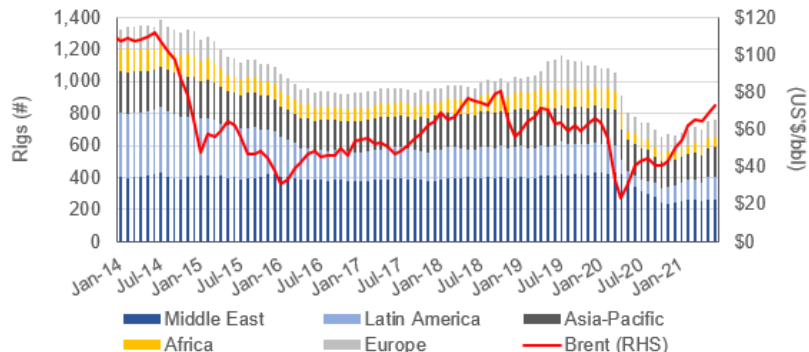
Source: EIA, SAF

**Oil – Baker Hughes International rigs +8 MoM to 758 rigs in June**

Baker Hughes released its updated international rig counts for June on Friday which showed a modest increase from last month's count. International activity had been increasing modestly but May showed a large increase. June is only down 3% YoY, but still down 33% vs June 2019. Total international rigs increased 8 MoM to 758 in June. The MoM increase was mainly driven by a 9 rig increase in Latin America and Europe +6. We are seeing Lat Am continue to pickup over the past two months. The largest increase in Latin America was Mexico which was +5, followed by Ecuador and Colombia, both +2. Within Europe, Norway had the largest increase at +2 followed by Austria at +1 and Germany at +1 MoM. APAC showed a -4 decrease, with Thailand (-2) and Indonesia (-2) driving the decrease. Below is our graph of international rigs by region and avg monthly Brent price.

Lat Am and Europe drove increase

Figure 25: Baker Hughes International Rig Count and Brent Price



Source: Baker Hughes, Bloomberg

**Oil – Pemex says restoring normal operations post offshore fire**

There was certainly spectacular video of the Friday morning fire in a gas line at Pemex's offshore operations. Reuters reported [\[LINK\]](#) "The fire began in an underwater pipeline that connects to a platform at Pemex's flagship Ku Maloob Zaap oil development, the company's most important, four sources told Reuters earlier.... Ku Maloob Zaap is located just up from the southern rim of the Gulf of Mexico. Ku Maloob Zaap is Pemex's biggest crude oil producer, accounting for more than 40% of its nearly 1.7 million barrels of daily output." Pemex's Friday release [\[LINK\]](#) said "05:15 am today a gas leak was registered in the 12-inch submarine pipeline and the presence of fire in the sea, 150 meters from the KU-C satellite platform, located in the Campeche Sonda belonging to the Ku-Maloob-Zaap Production Asset, attached to the Northeast Offshore Region Production Sub-Directorate of PEMEX

Spectacular Pemex fire offshore

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*Exploración y Producción”, and “In addition, the interconnection valves in the pipeline were closed, extinguishing the fire and the gas release, ending the contingency around 10:45 am and restoring normal operating conditions. No injuries or evacuees are reported.” First and foremost, it was good to see no injuries. We tweeted [\[LINK\]](#) “#Pemex says “restoring normal operating conditions”. does this mean fire out so crisis is over or are they saying, as being inferred, that no interruption or ongoing impact on production other than during the fire? Would have thought losing the gas line would impact oil #OOTT.” We don’t know the exact percentage, but we understand that the production feeding the Ku Maloob Zaap is oil + associated natural gas offshore block for Pemex. And not just separate natural gas only wells. Its why we would have thought there would be an impact on oil if there are going to be issues impacting moving the separated associated natural gas? Our Supplemental Documents package includes the Reuters report and the Pemex release.*

Figure 26: Pemex offshore fire from gas line



Source: Televisa Veracruz

### Oil – Russia crude production ~95,000 b/d above their June quota

Russian oil output reduced in June despite increased quotas from the OPEC+ alliance. On Friday, Bloomberg reported Russian crude and condensate production in June was about 10.419 mmb/d, down 34,000 b/d from May production. The official Russian data doesn’t split out crude vs condensate, but if Russia’s condensate production is in line with May, about 930,000 b/d, crude output would be 9.489 mmb/d, ~32,000 b/d above their 9.457 quota. Russia has been allowed to add back a small amount of production each month since Jan, but output was actually down between May and June. Russia’s quota will increase by 116,000 b/d by July reaching 9.495 mmb/d. Ron Smith, senior oil and gas analyst at BCS Global Markets said *“This output drop may be because Russia is still trying to get back in line with its compliance and the Energy Ministry is trying to enforce some discipline”*. Their compliance this month increased to 94%, up from 91% in May. Our Supplemental Documents package includes the Bloomberg report.

**Russia  
production  
increases**

### Oil – Bloomberg OPEC survey data, up 370,000 b/d to 26.465 mmb/d

The Bloomberg survey of OPEC June oil production was released this week, which showed a MoM increase in production, mainly due to Saudi Arabia returning some of their 1 mmb/d voluntary cut. There were no major surprises in the production levels. Total production increased 370,000 b/d MoM in June to 26.465 mmb/d. The increases were primarily driven by Saudi Arabia, which was up 490,000 b/d this month. This was no surprise as the Kingdom had moved to a higher production target and reversed 490,000 b/d of its voluntary cut it had made previously in support of the market. Saudi Arabia is still 0.887 mmb/d below its June quota of 9.347 mmb/d. Iran was up 30,000 b/d in June, to 2.490 mmb/d. Venezuela was up 40,000 MoM at 540,000 b/d. Venezuela is up 200,000 b/d since their June 2020 low. Below is our table of the Bloomberg survey data.

**Bloomberg  
OPEC survey for  
June**

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Figure 27: Bloomberg Survey Of OPEC Production

thousand b/d	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	MoM	YoY	June QtoQ
Algeria	810	810	870	870	870	860	860	880	880	880	880	890	900	10	-800	898
Angola	1,240	1,180	1,250	1,270	1,230	1,180	1,180	1,180	1,100	1,200	1,150	1,120	1,120	0	-1,240	1,298
Congo	300	280	290	310	260	290	270	270	260	290	270	270	280	10	-290	276
Equatorial G.	130	120	120	100	110	110	130	130	100	120	120	100	120	20	-110	108
Gabon	220	160	160	180	200	190	190	170	190	180	190	180	200	20	-200	159
Iran	1,940	1,960	1,920	1,950	1,930	1,970	2,020	2,140	2,180	2,350	2,410	2,460	2,490	30	-1,910	
Iraq	3,910	3,790	3,690	3,710	3,870	3,810	3,880	3,870	3,910	3,940	3,950	3,960	4,000	40	-3,870	3,954
Kuwait	2,150	2,220	2,270	2,310	2,300	2,240	2,270	2,330	2,350	2,320	2,320	2,350	2,380	30	-2,120	2,387
Libya	110	100	80	150	450	1,090	1,210	1,160	1,150	1,220	1,140	1,140	1,170	30	-80	
Nigeria	1,510	1,510	1,520	1,490	1,610	1,540	1,520	1,470	1,600	1,550	1,590	1,530	1,570	40	-1,470	1,554
Saudi Arabia	7,530	8,450	8,920	8,940	8,990	8,990	9,000	9,120	8,210	8,150	8,110	8,460	8,950	490	-7,040	9,347
UAE	2,430	2,450	2,990	2,680	2,490	2,560	2,540	2,610	2,630	2,630	2,620	2,650	2,745	95	-2,335	2,692
Venezuela	340	360	310	310	340	430	410	460	470	490	490	500	540	40	-300	
Total OPEC	22,620	23,390	24,390	24,270	24,650	25,260	25,480	25,790	25,030	25,320	25,240	25,610	26,465	855	-21,765	22,673

Source: Bloomberg

**Oil – OPEC+ no deal yet, expect production increase but no DOC extension yet**

OPEC+ resumes at 7am MT tomorrow. We expect to see an agreement of some sort as we just don't think OPEC+ will give up all they have done to throw it away and create oil market chaos. Especially since there seems to be a consensus on the key item to drive spot prices – everyone seems to agree on the need to increase production right away. Rather it seems like the major decision will be if there is an extension to the Declaration of Cooperation past April 2022, or some other longer term agreement, rather than whether OPEC+ agrees to increase oil production in the Aug thru Dec. There was a big surprise in the OPEC+ meetings this week – they were pushed back a day, then continued an extra day and, finally on Friday, they were adjourned to continue on Monday. The reason has been well reported – UAE wants its baseline for cuts adjusted if it is to agree with any Declaration of Cooperation extension past April 2022 or any other new agreement. Note the later item in the memo on the CNBC UAE interview this morning. This differs from what the rest of OPEC+ apparently was prepared to sign off on – increases of 400,000 b/d per month starting Aug thru the end of 2021 that would add 2 mmb/d, and an extension of the Declaration of Cooperation (DOC) past April 2022. The expectation and signaling going into the meeting was for increases of +400,000 per month thru year end. As of our 7am MT news cut off, the only official word from OPEC is they will reconvene at 7am MT on Monday [\[LINK\]](#). We don't think anyone knows what will be resolved on Monday or if more time will be needed to get to a deal. However, we find it hard to believe Saudi Energy Minister Abdulaziz won't get to some sort of deal and not just no new deal, stick with the existing deal. Abdulaziz has proven to be "The Man" in understanding oil supply/demand and how to manage. The reminder is that there is an existing deal, we don't hear UAE saying they won't honor the existing deal. One of our favorite OPEC watchers is RBC's Helima Croft and she had two excellent perspectives. She wrote "Crafting a compromise will probably prove quite challenging if Abu Dhabi continues to hold the line on the benchmark revision. Key OPEC+ players such as Russia will likely resist calls to sit down their barrels to make room for UAE and keep the proposed 2 mb/d August-December increase intact. Iraqi officials are already insisting they will seek a benchmark revision if UAE is granted one. • As we noted yesterday, how the deal dies will matter for markets. An unambiguously bullish outcome would be if the group simply opts to stick with the original tapering timeline and signal its intent to keep 5.8 mb/d off the market until April 2022. Of course, in practice, the monthly meeting structure means that decisions can be reversed quickly and that no condition is permanent. On the flip side, if the talks end in utter discord, there is a risk of a return to an every-man-for-himself production scenario that could cause a reversal of this year's oil price rally. We do not see this as the likely outcome, but cannot dismiss it entirely either. Certainly, it is not a black swan scenario." Below is our table of the current schedules OPEC+ production increases following the OPEC+ June 1 meeting.

**OPEC+ resuming Monday**

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Figure 28: OPEC+ Quotas Post June 1 Meeting

OPEC (mmb/d)	Reference Level	Production May-July 2020	Aug-Dec 2020	Jan 2021	Feb 2021	March 2021	April 2021	May 2021	June 2021	July 2021	Jan/21 - Apr/22 per Apr/22 Agreement
Algeria	1,057	816	864	876	876	876	876	887	898	912	912
Angola	1,528	1,179	1,249	1,267	1,267	1,267	1,267	1,283	1,298	1,319	1,318
Congo	325	251	266	269	269	269	269	273	276	281	281
Equatorial G.	127	98	104	105	105	105	105	107	108	110	110
Gabon	187	144	153	155	155	155	155	157	159	161	161
Iran	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	3,592	3,804	3,857	3,857	3,857	3,857	3,905	3,954	4,016	4,016
Kuwait	2,809	2,168	2,297	2,329	2,329	2,329	2,329	2,358	2,387	2,425	2,424
Libya	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	1,412	1,495	1,516	1,516	1,516	1,516	1,535	1,554	1,579	1,579
Saudi Arabia*	11,000	8,492	8,993	9,119	8,119	8,119	8,119	9,232	9,347	9,495	9,495
UAE	3,168	2,446	2,590	2,626	2,626	2,626	2,626	2,659	2,692	2,735	2,735
Venezuela	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	20,598	21,815	22,119	21,119	21,119	21,119	22,396	22,673	23,033	23,031
OPEC vs. ref.	0	-6,085	-4,868	-4,564	-5,564	-5,564	-5,564	-4,287	-4,010	-3,650	-3,652

\*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 May-July 2020	Aug-Dec 2020	Jan 2021	Feb 2021	March 2021	April 2021	May 2021	June 2021	July 2021	Jan/21 - Apr/22 per Apr/22 Agreement
Russia	11,000	8,600	8,993	9,119	9,184	9,249	9,379	9,418	9,457	9,495	9,495
Kazakhstan	1,709	1,319	1,397	1,417	1,427	1,437	1,457	1,463	1,469	1,475	1,475
Oman	883	682	722	732	732	732	732	741	750	762	762
Azerbaijan	718	554	587	595	595	595	595	603	610	620	620
Malaysia	595	459	486	493	493	493	493	499	506	514	513
Bahrain	205	158	168	170	170	170	170	172	174	177	177
Sudan	75	58	61	62	62	62	62	63	64	65	65
South Sudan	130	100	106	108	108	108	108	109	110	112	112
Brunei	102	79	83	85	85	85	85	86	87	88	88
Total Non-OPEC	15,417	12,009	12,603	12,781	12,856	12,931	13,081	13,154	13,227	13,308	13,307
Non-OPEC vs. ref.	0	-3,408	-2,814	-2,638	-2,561	-2,486	-2,336	-2,263	-2,190	-2,109	-2,110
Total OPEC+	42,100	32,607	34,418	34,900	33,975	34,050	34,200	35,550	35,900	36,341	36,338
OPEC+ vs. ref.	0	-9,493	-7,682	-7,200	-8,125	-8,050	-7,900	-6,550	-6,200	-5,759	-5,762

Source: Bloomberg, OPEC, SAF Group

**Oil – UAE onside with production increase, but not extension on current baselines**

Earlier this morning, we tweeted [\[LINK\]](#) on an excellent CNBC interview with UAE Minister of Energy and Infrastructure Suhail Al Mazrouei [\[LINK\]](#) wherein Mazrouei clearly laid out UAE's position on OPEC+ and the reasons for these positions. It seems like Mazrouei is being firm in the UAE view that need a change in baseline. He is smart enough to know that if he doesn't get a change in baseline, there is always the risk that baseline impacts production for a longer period. (i) UAE is in favor of near term production increases. Mazrouei said "We are meeting on Monday, and I think we are all in agreement that we need to do something regarding the increase in production". "It's not wise nor a target for anyone to raise prices to a level that the world economy cannot handle," and "We think we need to do it and we need to do it for August". (ii) But will not extend the Declaration of Cooperation or any new agreement unless there is an adjustment to the baseline volumes. Mazrouei said "we cannot extend the agreement or make a new agreement under the same conditions. We have the sovereign right to negotiate that" and "Now we think that linking the extension of the agreement for a reference that goes back to 2018, and for a period that starts from 2022, is just not realistic, because this is four years". (iii) No need to talk about an extension now. Mazrouei said "We have plenty of time to meet and discuss the terms of the extension with justification that can involve independent bodies to review it" and "I'm still hopeful that by Monday we will segregate the two decisions". Our Supplemental Documents package includes the CNBC report.

**UAE clearly lays out OPEC+ position**

**Oil – Its worth watching the Saudi/UAE relationship beyond the OPEC+ dealings**

It was interesting to read the 2<sup>nd</sup> last sentence in the CNBC interview with Mazrouei. CNBC wrote "In what could perhaps be another sign of strain in the relationship, Saudi Arabia moved to restrict travel to the UAE late Friday, citing the pandemic." This type of event isn't generally coincidental and most will assume its because Saudi Arabia wasn't pleased to have UAE cause this issue with the OPEC+ deal. But we have to wonder if there is more at work impacting the Saudi Arabia/UAE relationship because this type of action seems like a petty, almost immature action if its because of UAE holding up any OPEC+ deal. And if it was because of the UAE stance on OPEC+ deal, surely Saudi Arabia can't believe this helps get UAE to change their stance. But doing something petty just doesn't seem like Abdulaziz

**Worth watching Saudi/UAE relationship**

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style, which is why we have to wonder if there is more at play to their relationship ie. Yemen, Iran?

### Oil – Saudi nest egg, its net foreign assets -3.7b MoM in May, new 11-yr record low

We look at Net Foreign Assets for someone like Saudi Arabia as their nest egg to help them thru the Energy Transition. Saudi is far from going broke, but the data supports that their nest egg has been depleted at a faster rate than most expect, which is why we continue to believe the primary financial theme for Saudi Arabia in the 2020s is getting Other People's Money to fund as much as possible. Saudi Arabia saw a significant decline in their net foreign assets in 2020, but also since the peak in 2014. The decline in 2020 was fueled by low oil prices along with higher spending. This is a driving factor for the Saudi's want/need for higher oil prices and, perhaps just as significantly, the increasing of OPM in funding the future of Saudi Arabia. April and May saw Brent average \$64 and \$68 respectively, but this failed to stabilize Saudi Net Foreign Assets. In fact, Saudi net foreign assets declined in May despite the better oil prices. May 31/21 net foreign assets were \$432.6b, down YoY vs \$444.3b at May 31/20. The peak was \$737.0b on Aug 31/14, which means the decline is \$304.4b, a massive decline (average of \$3.8bn a month). Saudi net foreign assets had increased off the 11-year bottom seen in Feb, but with the MoM decline in April, it has set a new 11 year low and in May has continued lower. Our thesis is unchanged, there is a bottom level. They likely don't want to go below \$400b, which is why there has been this huge and increasing push to use OPM across the Saudi industry and government. This fits what we call the #1 financial theme for Saudi Arabia in the 2020s – the increasing use of Other People's Money. And not just in Saudi Aramco, although we do expect to see more equity and bond sales from Aramco. The decline in Saudi net foreign assets is a positive to oil markets. We highlighted this in our June 2 tweet [\[LINK\]](#), reminding that the decline is not just an increasing use of Other People's Money, its also a reason why Saudi will keep being disciplined to maintain high oil price. Below is our graph of Saudi Arabia net foreign assets.

**Saudi net foreign assets hit new 11-year low**

Figure 29: Saudi Arabia Net Foreign Assets



Source: Bloomberg

### Oil – More Aramco Other People's Money – minority interest sale in its gas pipelines

Lets be clear, we are more bullish than others on the 2020s outlook for both oil and natural gas so we believe Aramco has quality oil and gas assets with significant useful life. This week, we tweeted [\[LINK\]](#) on what looks will be another high profile Saudi Aramco access of Other People's Money. We tweeted "#OPM. #Reuters report #Aramco looking at copy/paste of its \$12.4b sale of minority interest in #Oil pipelines, this time in #NatGas pipelines. Reminds key KSA 2020s financial theme - increasing use of Other People's Money. Avoid burning Nest Egg. #OOTT". This reinforces our view that the key 2020s financial theme for Saudi Arabia is its increasing use of OPM. On Tuesday, Reuters reported [\[LINK\]](#) "Saudi Aramco has invited banks to pitch for an advisory role to help finance the sale of a significant

**Another big Saudi OPM deal**

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minority stake in its gas pipelines, the oil giant's second major midstream deal after a \$12.4 billion deal for oil pipelines, three sources said. Aramco has already hired Morgan Stanley ([MS.N](#)) as an M&A advisor and the financing advisory role is up for grabs among banks, two of the sources said. The gas pipeline stake sale will be a "copy paste" of the oil pipeline deal, one of the sources said. Aramco has used a lease and lease-back agreement to sell a 49% stake of newly formed Aramco Oil Pipelines Co to the buyer and rights to 25 years of tariff payments for oil carried on its pipelines." There is no change to our view, noted above, that Saudi Arabia has a huge nest egg and isn't going broke, but there is probably some minimum level of Net Foreign Assets ie. \$400 billion, so it makes sense that Saudi Arabia is aggressively using OPM to not even get to close to that level. Imagine what markets would view Saudi Arabia if they don't see them putting to an end to the steady decline in Net Foreign Assets? Our Supplemental Documents package includes the Reuters report.

### Oil – Shout out to Saudi Energy Minister Abdulaziz

We had to tweet [\[LINK\]](#) after seeing the video of Saudi Energy Minister Abdulaziz's heartfelt tribute to outgoing Iran oil minister Bijan Zanganeh. CNBC's Dan Murphy posted the 90 second video and its worth a listen [\[LINK\]](#). We tweeted that it is a reminder of Abdulaziz's quality as a person. We tweeted "If you could invite 3 people for dinner? #SaudiEnergyMinister Abdulaziz should be on everyone's list, he is on mine! "The Man" who saved the #Oil market and shows he is just a good person with a heartfelt tribute. #OOTT Thx @dan\_murphy for video." But there is more to it than Abdulaziz showing his quality as a person. There is also a major diplomatic reminder that people can have relationships with others despite their respective countries not being the best of friends. And also the importance that there always has to be channels of communication and trust at some levels. So huge kudos to Abdulaziz for being "The Man" to fix oil markets, huge kudos for showing his quality and also for reminding of the need to have relationships. Who wouldn't want to have dinner with Abdulaziz!

**Abdulaziz is "The Man"**

### Oil – Vitol expects OPEC+ supply increase will only be a fraction of increasing demand

Earlier this morning, we tweeted [\[LINK\]](#) on Mike Muller (Head, Vitol Asia) comments on this morning's Gulf Intelligence New Silk Road "Live" July 4 podcast moderated by Sean Evers Managing Partner [\[LINK\]](#). As usual, we love the traders perspective and Muller reminds that long term items do not really impact the near term Brent spot price. Rather the near term spot price is all about OPEC+ and he expects that whatever deal OPEC+ reaches tomorrow to increase production, it will only be a fraction of the oil demand ramp up. We created a transcript of some of Muller's comments. At 1:15 min mark. Muller said "... fundamentals at the front end of the market are very different because everything we are talking about here is longer term like when Iranian volumes will come back to the market once there is an agreement. Not so much an if, it's a once I think. when is intercontinental business travel going to resume and allow people to consume that 2, 3 million barrel a day jet that is still missing from the global demand mix. how soon the US shale sector will start to produce marketably above the 11 point something million barrels a day we are seeing today. None of that is really going to influence the spot price of August Brent, which is the numbers I just spoke about. what's going to influence the price, of course, is OPEC. and that's why you had a very choppy price action last week when the total change on week was only 18 cents a barrel up when we spent time trading in a \$3 a barrel range. But as I said it was very choppy, very volatile. So I mean, I think, let's first say a number of things. these ministerial delegations and their political superiors are very sophisticated organizations who have done this and who have proven to us since April 2020 that they have a purpose about of what they are doing. And I think there is going to be very little doubt that whatever OPEC+ agree with regard to

**Vitol's near term oil view**

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*reinstatement of production, a lessening of cutbacks, it will surely, whatever the outcome on Monday at 3 o'clock Vienna time, be a fraction of the amount needed to meet growing demand, which many observers and experts put at 2, 3 million barrels a day or more for summer period."*

#### **Oil – India expects fuel demand back to pre-pandemic level by end of 2021**

On Thursday, Bloomberg reported that Pradhan, India's Oil Minister, expects demand to rebound to pre-Covid levels by the end of 2021. India's gasoline consumption has already recovered to 90% of pre-virus levels post restrictions easing and cars getting back on the road. Although demand was hurt in April and May by lockdowns due to the Covid outbreak in the nation, sales of diesel were +13% MoM in June showing a recovery but are still -19% vs the equivalent 2019 period. On Tuesday, at Bloomberg NEF's summit Oil Minister Pradhan said *"There are signs of demand resurgence due to lifting of lockdowns and gradual pickup in economy. We are confident by the end of the year, we will be in a very robust position to restore our original consumption behavior."* This is much more bullish than the predictions from the IEA and OPEC, which do not see India's fuel demand at normal levels by the end of this year. Our Supplemental Documents package includes the Bloomberg report.

**India fuel demand back by end of 2021**

#### **Oil – Oil demand forecasts likely lowered for H2/21 in upcoming monthlies**

We are seeing increasing concerns on the Delta variant, at least from the perspective that more countries want to stop travel to keep the threat. It's not just small countries, Merkel is trying to get the EU to prevent travel from the UK. On Wednesday, we tweeted [\[LINK\]](#) on an item from the June 30 Gulf Intelligence Daily Silk Road "Live" podcast. Gulf Intelligence Managing Director Sean Evers hosts the call and had a good reminder on how the Delta variant is having a bigger impact on demand relative to expectations. Evers' last comments on the podcast were *"My second half of the year I think is going to be the European summer is not coming. I think that's what's transpiring now. That whatever aviation volumes that were going to be consumed with Europeans travelling to their holiday destinations is looking increasingly very doubtful with all these various restrictions coming back in due to this Delta variant. So I think you have, not going to be quite that second half of the year demand recovery that is forecast. To what extent that is built into the price, we're going to wait and see."*

**Delta variant to hit Europe travel**

#### **Oil – Crude oil storage in Korea dropped to half of 2020 peak**

Everyone can see the steep backwardation in oil futures is leading to a big disincentive for oil to be put in storage and that is being reflected in the storage draws. We also saw another good example in South Korea oil inventory data. On Thursday, Bloomberg reported that crude oil stored in onshore tanks in South Korea was ~20 mmb at its peak last year when the pandemic severely hurt demand, and since has dropped to less than half to under ~10 mmb. Bloomberg reported traders are hoarding less oil because of the current bullish market structure. Due to the backwardation in the market currently and the energy demand recovery, there is much less of an incentive to store crude. In contrast, last year in April, South Korea ran out of lease-able storage, as Brent September contracts were a \$2 discount to a March 2022 settlement. Our Supplemental Documents package includes the Bloomberg report.

**Korean crude oil in storage falls below 10 mmb**

#### **Oil – Vortexa floating storage -9.6% WoW, down 57.8% YoY**

We won't be surprised to see revisions and unexpected weekly changes in floating oil storage over the next two months. The strong backwardation in the market provides a big disincentive for oil to go into any mid term storage. The peak of crude oil in floating storage almost one year ago. Bloomberg reported on Vortexa floating oil data that showed a WoW

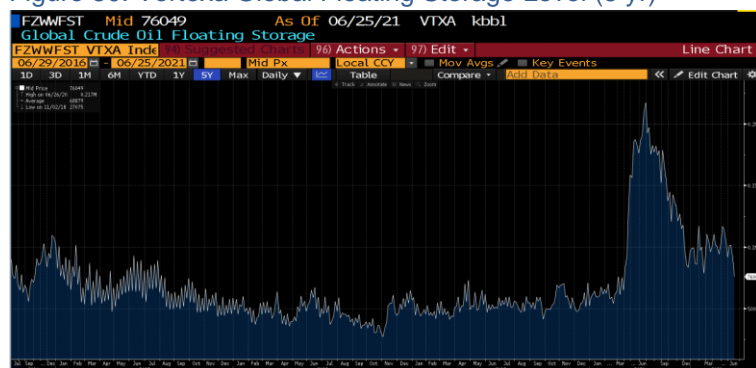
**Vortexa floating storage**

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decrease of 15.09 mmb or -17% WoW to 76.05 mmb on June 28 from 91.14 mmb on June 18. This is the lowest amount of crude in storage since April 2020. Note there was a significant revision to the June 18 numbers as they were adjusted upwards from 88.11 mmb. Floating storage is down -64.86% since the June 26, 2020 peak of 216.42 mmb, exactly one year ago. While the amount of crude in floating storage has declined significantly from its peak last year, it has still not returned to normal levels. For reference, Jan 24, 2019 was 50.35 mmb, and the Q1/20 trough was at 54.11 mmb on Feb 17. The average amount of floating storage over 2019-2017 for the equivalent week is 63.1 mmb. Below is a graph of the Vortexa Global Floating Storage Level over the past 5 years and a table of the past 4 years' levels of floating storage during the same week and the price of Brent that week. Our Supplemental Documents package includes the Bloomberg Vortexa report.

Figure 30: Vortexa Global Floating Storage Level (5 yr)



Source: Bloomberg, Vortexa

Figure 31: Crude Oil Floating Storage & Brent Price

Date	Vortexa Crude Oil Floating Storage (million barrels)	Brent \$/b
06/25/21	76.0	\$76.18
06/26/20	217.2	\$41.02
06/28/19	58.8	\$66.55
06/29/18	49.9	\$79.44
06/30/17	80.7	\$47.92

Source: Bloomberg, Vortexa

### Oil – Bloomberg Oil Demand Monitor, European air travel taking off

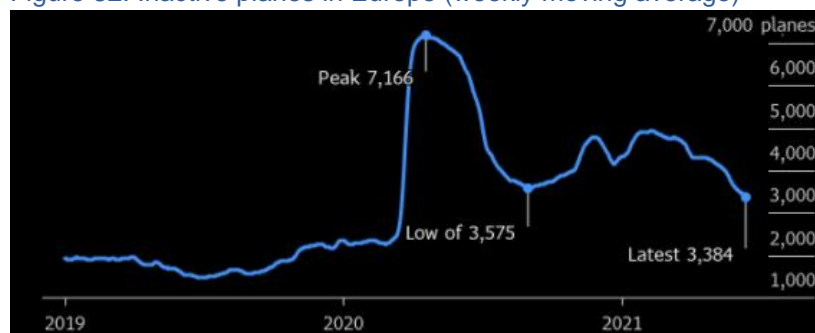
We recommend reading the weekly Bloomberg terminal Oil Demand Monitor for a good recap of key oil demand indicators around the world. Their update provides more support that oil demand is moving into the demand surge period. Air travel continues to be the big demand story, and flight numbers and seat capacity data in Europe have been showing recovery: last week flight levels were at 53% of 2019 levels. This is the second consecutive week the deficit between 2019 flight levels has been less than 50%, aside from a brief period just before Christmas. Another key indicator of European air travel's rebound is the number of inactive planes (planes that are parked for more than 7 days). At the peak of the pandemic decimation of demand in April 2020, there were almost 7,200 inactive planes. Now, that number has been reduced to 3,384, while the typical number of inactive planes is ~1,500 to 2,000. Eurocontrol said *"As summer 2021 gets under way, the gentle recovery in flights is seeing more aircraft brought back into service: more than 800 since the start of May, leaving our airports with the fewest inactive aircraft since the pandemic began... A good sign for the*

### Bloomberg's Oil Demand Monitor

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*summer ahead.*” The U.K., while still showing seat capacity that is 74% below the equivalent 2019 week, has started to show signs of recovery; capacity has finally hit above 1 million for the week ended June 28. Another strong oil demand indicator is refining. All three of China’s most important refining regions, and 2/3 key areas in the US are using more capacity than they were pre-pandemic. Fuel-makers’ refinery runs have drawn down oil stockpiles in China to 974.2 mmb, the lowest this year. Car usage in the UK and the US is back to normal – the UK’s gasoline and diesel sales were only 7% lower vs pre-pandemic, and 0.2% more miles were travelled this week in the US than the equivalent 2019 week. Our Supplemental Documents package includes the Bloomberg Oil Demand Monitor.

Figure 32: Inactive planes in Europe (weekly moving average)



Source: Bloomberg, Eurocontrol

### Oil – Caixin General Manufacturing PMI down to three-month low in June

The big positive for oil to start 2021 (aside from vaccine news) was the strong and timely recovery out of Covid in China and its related recovery in oil/products demand. The China growth story was showing accelerated recovery in manufacturing in 2021 with the PMI showing the strongest increase in new work for five months in May. However, the recent uptick in COVID-19 cases coupled with supply chain difficulties have caused the Caixin China General Manufacturing PMI data [\[LINK\]](#) to edge down to a three-month low in June, down from 52.0 in May to 51.3 in June. The index still remains in expansionary territory. We recommend reading the short release as opposed to just seeing the headlines as there is more color on China. The press release said *“The Chinese manufacturing sector expanded at a softer pace in June, with firms recording slower increases in both output and new orders. Companies indicated that the recent uptick in COVID-19 cases and supply chain difficulties weighed on output, while the pandemic dampened demand both at home and abroad. Companies continued to add to their staff numbers, however, as capacity pressures persisted. At the same time, input cost inflation eased notably on the month, which led to a slower rise in prices charged.”* Our Supplemental Documents package includes the Caixin release.

**Caixin PMI hits 3-month low**

### Oil – Independence Day holiday travel only 2.5% less than 2019

The AAA Travel released their 2021 Independence Day Holiday Travel Forecast [\[LINK\]](#) on June 22. They expect *“More than 47.7 million Americans will take to the nation’s roadways and skies this Independence Day (July 1–5), as travel volumes are expected to nearly fully recover to pre-pandemic levels. In fact, this will be the second-highest Independence Day travel volume on record, trailing only 2019. Overall, just 2.5% fewer Americans are expected to travel this year compared to Independence Day in 2019. This represents an increase of nearly 40% compared to last year, when total travel fell to 34.2 million.”* Our Supplemental Documents package includes the AAA forecast.

**4<sup>th</sup> of July travel just shy of 2019**

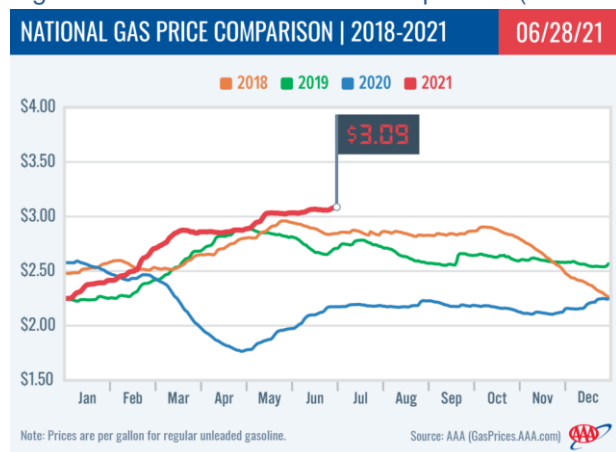
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### Oil – Independence Day Holiday travelers to pay the highest gas prices since 2014

As noted above, the AAA expects US holiday travel to be almost back to 2019 levels. It must be that Americans are so relieved to be able to get back out and do things that we aren't seeing the huge uproar on >\$3 gas prices. Normally, we would have seen this be a huge headline going into a major long weekend like 4<sup>th</sup> of July, but it seems to be more a grumbling. AAA did its normal gasoline price recap before a long weekend "No Freedom from High Gas Prices for the Independence Day Holiday Weekend" [\[LINK\]](#), which highlighted "At \$3.09, the national gas price average is at its highest of the year and not stopping."

Highest gas prices since 2014

Figure 33: National Gas Price Comparison (2018-2021) as at June 28, 2021



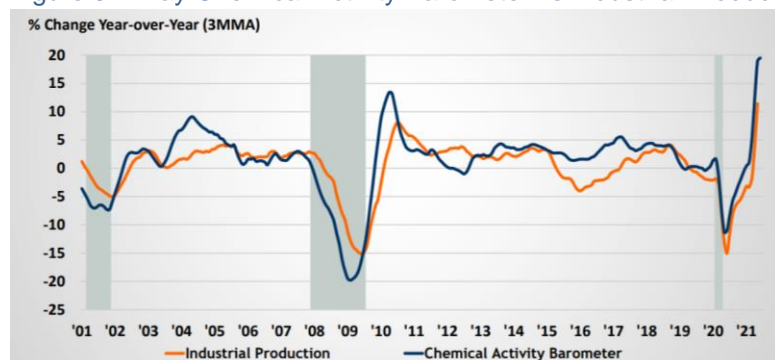
Source: AAA

### Oil – ACC Chemical Activity Barometer rose 19.5% YoY in June

US manufacturing and industrial activity had recovered well and quickly and was one of the first positive indicators for the US economy in early/mid 2020. And it continues to remain positive. We always look at an excellent forward indicator on this from the monthly American Chemistry Council's April "Chemical Activity Barometer" (CAB) [\[LINK\]](#) for the indicators on industrial and manufacturing in the US. The CAB has had a pretty good track record as a leading indicator of a recession in the US economy with an average lead time of 8 months as a prior indicator, but lead time ranging from 2 to 14 months. The June reading continues to show a strong trend, continuing upwards from May's rounding out of one year of consecutive increases. The June CAB "rose 0.8% in June on a three-month moving average (3MMA) basis following a 1.3% gain in May. On a year-over-year (Y/Y) basis, the barometer rose 19.5% in June (3MMA). The unadjusted data show a 0.1% decline in June, primarily due to weakness in equities, following a 1.3% gain in May. The diffusion index reached 85% in June. The diffusion index marks the number of positive contributors relative to the total number of indicators monitored. The CAB reading for May was revised upward by 0.73 points and that for April was revised upward by 0.35 points." Note that Kevin Swift, chief economist at ACC said "The year-over-year gains have likely peaked, suggesting a potentially slower pace of expansion." This will be key data to watch going forward.

ACC Chemical Activity Barometer

Figure 34: May Chemical Activity Barometer vs Industrial Production



Source: American Chemistry Council

**Oil & Natural Gas – Should be great Q2 oil & gas, even better in Q3**

Following the close on Wednesday, we tweeted [\[LINK\]](#) “Going to be a great Q2 reporting for Cdn #Oil #NatGas sector. Note June 30 closing prices WTI \$73.52, EdPar \$71.67, WCS \$59.52, HH \$3.74, AECO \$3.43. ~>10% higher than Q2 average. Q3 should be an even better quarter. #OOTT”. As good as Q2 will be, the set up for Q3 reporting looks even better.

**Very strong Q2 oil and gas prices**

Figure 35: Oil &amp; Natural Gas Average Quarterly Prices Thru Q2/21

Quarter	Brent	WTI	EdPar	WCS	HH	AECO
Q1/18	\$67.00	\$62.90	\$57.26	\$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	\$68.43	\$65.89	\$61.93	\$53.11	\$2.76	\$2.95

Source: Bloomberg

**Oil & Natural Gas – Tropical Storm Elsa staying east of GoM oil and gas**

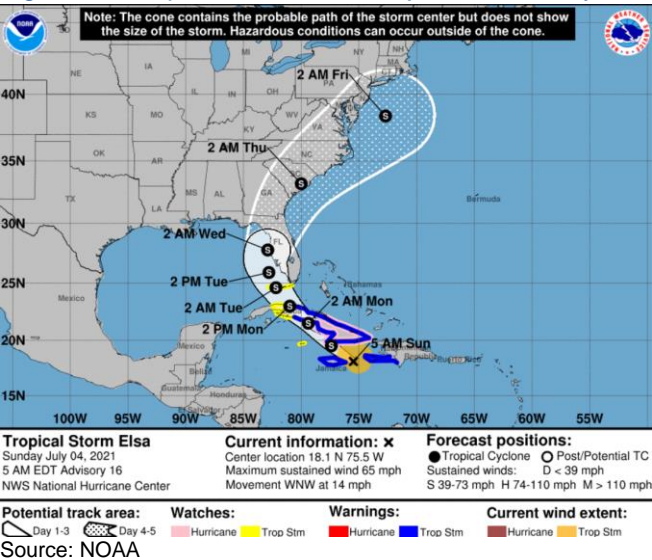
Tropical Storm Elsa’s projected path continues to be east of the major Gulf of Mexico offshore oil and platforms and east of the New Orleans refinery row. As of our 7am MT news cut off, Elsa is still at Tropical Storm strength and its path has been relatively unchanged still expected to turn north with landfall at Tropical Storm strength (~60 mph) on the Gulf Coast side of Florida. Earlier in the week, there were some (not many) projected paths that had the Elsa potentially going towards New Orleans. But the general expectation was to turn north and make landfall on the west side of Florida. One difference in Elsa versus most Tropical Storms/Hurricanes is that, up until today, it was an extremely fast moving storm at over 30 mph on Friday and still at 29 mph yesterday. This morning, it is down to more normal speed of 14 mph. Below is NOAA’s latest (3am MT) projected flight path for Elsa. [\[LINK\]](#)

**Tropical Storm Elsa**

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Figure 36: Tropical Storm Elsa Projected Path July 7 @3am MT



Oil & Natural Gas – Saffir-Simpson for hurricane strength ranking

The scale for rating a hurricane strength is the Saffir Simpson scale. This week, we saw Enrique briefly touch Hurricane 2 status off the southwest coast of Mexico before dropping to a Tropical Storm level wind of ~45 mph when it hit San Jose del Cabo, Mexico, where I happened to be. I was watching Enrique and would have called off my first trip to Mexico in some time since Covid if it stayed at hurricane winds. I have been in San Jose del Cabo before at Tropical Storm winds of 60 mph. Its far from pleasant but the real issue is how rain it dumps. It wasn't too bad this week. I certainly don't recommend travelling during a Tropical Storm and wouldn't have done so if we lived in a low lying area as rain/flooding would be a real risk. But this was likely the only time I would have to check on our place before November since Covid stopped our travels. Below is the National Hurricane Center's description of the Saffir Simpson scale [\[LINK\]](#).

Hurricane strength ratings

Figure 37: Saffir-Simpson hurricane strength ranking

Category	Sustained Winds	Types of Damage Due to Hurricane Winds
1	74-95 mph 64-82 kt 119-153 km/h	<b>Very dangerous winds will produce some damage:</b> Well-constructed frame homes could have damage to roof, shingles, vinyl siding and gutters. Large branches of trees will snap and shallowly rooted trees may be toppled. Extensive damage to power lines and poles likely will result in power outages that could last a few to several days.
2	96-110 mph 83-95 kt 154-177 km/h	<b>Extremely dangerous winds will cause extensive damage:</b> Well-constructed frame homes could sustain major roof and siding damage. Many shallowly rooted trees will be snapped or uprooted and block numerous roads. Near-total power loss is expected with outages that could last from several days to weeks.
3 (major)	111-129 mph 96-112 kt 178-208 km/h	<b>Devastating damage will occur:</b> Well-built framed homes may incur major damage or removal of roof decking and gable ends. Many trees will be snapped or uprooted, blocking numerous roads. Electricity and water will be unavailable for several days to weeks after the storm passes.
4 (major)	130-156 mph 113-136 kt 209-251 km/h	<b>Catastrophic damage will occur:</b> Well-built framed homes can sustain severe damage with loss of most of the roof structure and/or some exterior walls. Most trees will be snapped or uprooted and power poles downed. Fallen trees and power poles will isolate residential areas. Power outages will last weeks to possibly months. Most of the area will be uninhabitable for weeks or months.
5 (major)	157 mph or higher 137 kt or higher 252 km/h or higher	<b>Catastrophic damage will occur:</b> A high percentage of framed homes will be destroyed, with total roof failure and wall collapse. Fallen trees and power poles will isolate residential areas. Power outages will last for weeks to possibly months. Most of the area will be uninhabitable for weeks or months.

Source: NOAA

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### Oil & Natural Gas – Why is Chevron reportedly cleaning up oil wells long since sold?

#### Chevron cleaning up Permian leaks

There was a good food for thought Bloomberg story this week that raised a question why is Chevron reportedly cleaning up old oil wells that may have been long since sold? The current owner of any oil and gas property is responsible for the future abandonment and reclamation costs of their owned oil and gas assets. And they provide for these future liabilities for their owned oil and assets. But after reading the Bloomberg report, it makes us at least wonder if some US oil and gas companies will be thinking about adding some contingent liabilities to reflect potential future reclamation costs for some of their sold oil and gas properties that were sold? (i) On Monday, Bloomberg Sergio Chapa's report "*Crisis on a Texas Ranch Shows the Toxic Legacy of Old Oil Wells*" uses an example of one ranch in the Permian to highlight a big issue. Chapa notes the leaks from old oil wells in the Permian (some are old Chevron oil wells that Chevron has long sold) and highlights the effort and cost that Chevron is putting into fixing and cleaning up the problem. For this example in the one ranch, Chapa wrote "*For its part, Chevron said in a statement that its priorities on Watt's property 'are protecting people — including Ms. Watt and our workforce onsite, protecting the environment, plugging the well and remediating impacts.'*" Industry experts estimated the cleanup is costing Chevron more than \$250,000 a day, though the company has declined to disclose its expenses. The company also helped Watt relocate 500 cows and trucked in fresh drinking water for her family and ranch workers." (ii) The Bloomberg report only shows part of the Chevron statement. The Permian is one of Chevron's key oil assets and that is likely a significant part of why Chevron looks to be going out of their way to be a very good corporate citizen in this area. But even to a supermajor, this is not a cheap operation and Chevron has to realize that, with the publicity here at a minimum by doing this effort here, they are raising the bar of expectations that they will do it everywhere, or at least in the Permian if prior Chevron oil wells have similar issues. It seems from the outside that Chevron, at a minimum, set themselves up for "me too" in any other situations? So we have to wonder if Chevron is also doing so because they believe they could have some liability exposure for abandonment and reclamation costs for these wells even if sold, even if decades ago? (iii) This gets back to the question, why is Chevron reportedly cleaning up old oil wells long since sold? Its not a bigger potential issue if Chevron is only doing so to be a good corporate citizen to this one specific ranch. (iv) This issue on who will pay or making sure someone will pay for future reclamation costs is only increasing in political spotlight. And, after reading the Bloomberg report, we can see how companies like Chevron would want to have a better system of oil company financial commitments to abandonment/reclamation so the costs couldn't fall back on any prior owners. This type of report could help spur industry support for initiatives in New Mexico and Colorado. Our Supplemental Documents package includes the Bloomberg report.

### Good thing Alberta has its Orphan Well program

In speaking with some experienced directors for Cdn oil and gas companies, their first comment was it's a good thing we have the Alberta orphan well fund for these situations. And they reminded that every year, the Orphan Well program comes back to industry with a new funding requirement to reflect the actuals of the prior year so the fund stays on track with the pace of orphan well issues.

### Electricity – World's largest uranium mine, Cigar Lake, temporarily halted from wildfire

#### Cigar Lake uranium mine

Its not an issue for electricity markets in the short term and, at least for now, not expected to be a mid term electricity issue but its worth following as wildfires are unpredictable. On Thursday, Cameco announced [LINK](#) that it "*made the decision to evacuate all non-essential personnel from the Cigar Lake uranium mine in northern Saskatchewan. The action is being taken as a precaution due to the proximity of a northern wildfire that is currently burning in the*

vicinity of the operation. The situation is complicated by extremely warm, dry weather, resulting from the heat dome that has settled over western Canada in recent days, along with variable wind and smoke conditions. Production at Cigar Lake has been temporarily suspended.” As our 7am MT news cut off, we have not seen any announcement that production has been resumed. It is important to note that the wildfire is nearby and not on the Cigar Lake site. This is an event to watch to make sure the wildfire doesn't directly threaten the mine, which is why we tweeted [\[LINK\]](#) “#Cameco announced largest producing #Uranium mine at 13% of world production, #CigarLake, temporarily suspended production suspended with nearby by major wildfire. My SAF Group commodities partner @CnkGt reminded of its #1 status”. Cigar Lake is the world's largest producing uranium mine with 13% of the world's uranium production, more than double the % of the next largest mines. Our Supplemental Documents package includes the Cameco release and the World Nuclear Association recap of world uranium mining production [\[LINK\]](#).

Figure 38: The largest-producing uranium mines in 2019

Mine	Country	Main owner	Type	Production (tonnes U)	% of world
Cigar Lake	Canada	Cameco/Orano	underground	6924	13
Husab	Namibia	Swakop Uranium (CGN)	open pit	3400	6
Olympic Dam	Australia	BHP Billiton	by-product/ underground	3364	6
Moinkum & Tortkuduk	Kazakhstan	Orano/Kazatomprom	ISL	3252	6
Inkai, sites 1-3	Kazakhstan	Kazatomprom/Cameco	ISL	3209	6
Budenovskoye 2	Kazakhstan	Uranium One/Kazatomprom	ISL	2600	5
Rössing	Namibia	Rio Tinto	open pit	2076	4
SOMAIR	Niger	Orano	open pit	1912	4
Central Mynkuduk	Kazakhstan	Kazatomprom	ISL	1964	3
South Inkai (Block 4)	Kazakhstan	Uranium One/Kazatomprom	ISL	1601	3
Top 10 total				30,032	55%

Source: World Nuclear Association

### Energy Transition – Negative to Cdn oil & gas, its now the law to hit climate targets

Its official, there is now no turning back from a major Liberals negative to the Cdn oil and gas sector. Its now the law for the Cdn government to be on track to meet 2030 emissions targets. We are surprised that this Bloomberg report received no headlines. On Wednesday, Bloomberg reported the Canadian Net-Zero Emissions Accountability Act received Royal Assent, which means the bill is now law. We have warned on this bill since last year because it is now the law for the government (Liberals) to lay out the specific plans to meet emissions reduction targets by 2030 so they can ensure Canada is on track for Net Zero 2050. Our concern is that this means the Liberals have to take big emissions reduction actions right now. And the bill obligates them to have 2023, 2025 and 2027 progress reports so they can see where they are and adjust the emissions reduction plan. As we have been warning, it means the Liberals will be taking more aggressive action and their defence is “it's the law” “we have to do it”, “we are following the law, we have to stay on track or get back on track”. We have been warning that the oil and gas sector have to be prepared for more aggressive emissions reduction hitting them as part of the Liberals upcoming election platform. Our Supplemental Documents package includes the Bloomberg report.

**Negative to Cdn oil & gas**

### Energy Transition – PBO, extraordinary measures to get to Liberals emissions target

We were surprised that there was very little coverage of the Parliamentary Budget Officer's June 23 report “Beyond Paris: Reducing Canada's GHG Emissions by 2030” [\[LINK\]](#). It's worth a read. It is the updated PBO analysis on the effective required carbon tax to get to Liberals emissions targets. (i) We were surprised the updated PBO analysis looks very different from their October analysis in our Oct 11, 2021 Energy Tidbits. The PBO estimated

**PBO estimated carbon taxes for Liberal promises**

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the additional carbon tax that would be needed for Canada to catch up to and meet its Paris climate goals by 2030 [\[LINK\]](#). The report states that with the current carbon price policies, Canada will not meet its commitments on emissions reductions under the Paris Accord, and that GHG emissions would likely be 77 Mt above its target by 2030. The report then estimates the additional carbon tax that would be required to help the Liberals reach the Paris Accord commitments. The report stated *“Combined with the \$50 per tonne federal fuel charge, households and non-OBPS firms could face an explicit carbon price ranging from \$117 per tonne to \$289 per tonne in 2030”*. It looks like the PBO updated analysis is lower.

(ii) We like the format of their analysis but have not gone back to try to reconcile what they did differently to make what looks like such as substantial change to their effective carbon tax estimates. (iii) The analysis is formatted to step thru the effective carbon tax cost to get to Paris, then what they put out in Dec 2020, and then what they said in the Budget 2021. But, it is important to note that the PBO does not put (and they say so) the remaining effective carbon tax to get to what the Liberals have promised in April. In other words, the PBO effective carbon tax is low compared to what the Liberals have last promised. And that is before any of this round of promises in the election. (iv) The PBO notes that the Liberals Budget 2021 has a target to reduce Canada's GHG emissions to 468 Mt by 2030. They included the below table that estimates an additional carbon price of \$211 is needed. Note that this is below the Oct estimate and that is to meet the Budget 2021 emissions target, whereas the Oct estimate was based on a lesser emissions target. (v) It is important to note that the new PBO analysis says the Liberals have already promised more than their analysis, which ties to the Budget 2021. The PBO wrote *“This report does not provide detailed analysis of the Government's April announcement to further reduce emissions to between 40 and 45 per cent below 2005 levels (that is, 438 Mt and 402 Mt, respectively). While technologies to achieve this reduction are currently available, the scale and speed of the changes will make it challenging to achieve.”* Like any cost or other reduction plan, we would expect that taking the emission reductions from Budget 2021 to a further 40 to 45% reduction below 2005 levels will be more than incremental costs. It's always easier to do the first cuts. It's the last cuts, the last mile that cut the deepest and hurt the most. The PBO even warns on this saying to get to the 40% extra, not the 45% is tough and to get to the 45% will take extraordinary measures. Its worth noting these extraordinary measures, one example is *“oil sands improve emission efficiency by an additional 50 per cent over what is already achieved in the reference case”*.

(vi) The bottom line is that carbon taxes have to go way higher to achieve the Liberals targets and we suspect the true accounting will put the number well over \$300/tonne. (vii) The PBO also estimates the sectors that get hit the hardest, no surprise its oil and gas. Our Supplemental Documents package includes excerpts from the PBO report.

#### **Liberals: new EV sales restrictions are to help meet the April 40-45% target**

The acceleration of additional emissions reductions items has started. On Tuesday, the Liberals announced [\[LINK\]](#) Canada *“is setting a mandatory target for all new light-duty cars and passenger trucks sales to be zero-emission by 2035, accelerating Canada's previous goal of 100 percent sales by 2040*. This action is directly linked to the Liberals April latest promise to get to 40-45% below 2005 levels. In the release, Canada said *“Canada's accelerated zero-emission vehicle sales target will support the new 2030 climate reduction targets, which are 40 percent to 45 percent below 2005 levels.”* Our Supplemental Documents package includes the Canada EV announcement.

#### **It all fits ie. why Trudeau wouldn't acknowledge oil sands Net Zero plan**

No one can say the Liberals don't have a plan because their actions have clearly pointed to a plan on how they plan to fight the upcoming election. As noted above,

the PBO report is not govt policy but a clear reminder to the Liberals they need to take extraordinary measures if they hope to hit the 45% targets ie. *“oil sands improve emission efficiency by an additional 50 per cent over what is already achieved in the reference case.* It also fits to our June 20, 2021 Energy Tidbits on why Trudeau wouldn't even acknowledge the oil sands Net Zero commitments. We noted Trudeau's post G7 press conference and why that is foretelling bad news to come for the oil sands from the Liberals. On June 13, 2021, we tweeted [\[LINK\]](#) *“#OilSands. Note #Trudeau wouldn't even acknowledge the oil sands pathways to net zero, or say positive move but need to do more or move faster. not a good sign. have to worry it links to prior tweet #G7 May 21 warning re stranded assets risk. #OTT”* Trudeau was asked point blank on the new oil sands Net Zero by 2050 pathway and is it good enough as a lot it is based on technology not yet available in scale and on sequestration. Trudeau gives a lengthy answer that doesn't even acknowledge the oil sands pathway, let alone whether it is good enough or realistic. No question he is ducking even any acknowledgement that it exists, which would seem to signal that he is not interesting in trying to work with that plan in any way. This seems to signal something tougher is coming. Politicians never miss an opportunity to take credit for driving change. In reality, this was a lay up question for Trudeau. He could have easily said I am glad the oil sands listened to what I am trying to build for Canada, they have jumped on board committing to a pathway to Net Zero by 2050, it's a good start but they need to move even faster and my government will be working with them to get them to be even more ambitious. But he didn't, rather he refused to even acknowledge any pathway to Net Zero existed. Clearly not a good sign.

### Energy Transition – Looking like a Canada election will be mid-October

Early Monday morning, we tweeted [\[LINK\]](#) how the political signals are pointing to the Liberals making an election call right after Labor Day, which would be a mid-October election. There were the rumors of Environment Minister Catherine McKenna not going to run in the next election. She was a lock to regain her seat in an election where the Liberals are likely to regain a majority government and she is one of the favored Trudeau cabinet ministers. It is important to remember McKenna represents the Ottawa Centre, considered a very safe Liberal seat. Anyone who follows politics knows that this signaled two events: one that an election was coming and two that she is likely giving up a very safe seat for someone important ie. Mark Carney. Surely Mark Carney isn't going to run where he grew up – Edmonton. If an election is coming, then why mid-October? In speaking with political people, most do not believe Trudeau would call a summer election, especially this summer where many parts of Canada are just now starting to see removal of Covid restrictions. The political view is that there would be some negatives against the Liberals if people have to deal with political fundraising and door knocking in this first relaxed Covid period. There is a minimum 36-day election period, Labor Day is Sept 6, which would put a potential election right around mid-October. Later on Monday, McKenna confirmed she wasn't going to run and tweeted [\[LINK\]](#) *“After a lot of reflection, I decided I wanted to spend more time on the two things that matter most to me: my kids & the climate. Huge thanks to the people of Ottawa Centre & Canadians. It's been such an honour”.*

**Canada election  
mid October?**

### Energy Transition – United to cut emissions replacing old with new planes

We continue to highlight that the underappreciated aspect of Net Zero commitments is that it sets interim emissions reduction targets and that action is needed to be taken starting right now. And the related reality check is that its hard to make any significant immediate emissions reductions from basic changes in operations. Rather any significant immediate reduction comes from asset sales. Our Apr 25 Tidbits highlighted this, *“Alaska Airlines*

**Emissions cuts  
are often just  
passed on to  
others**

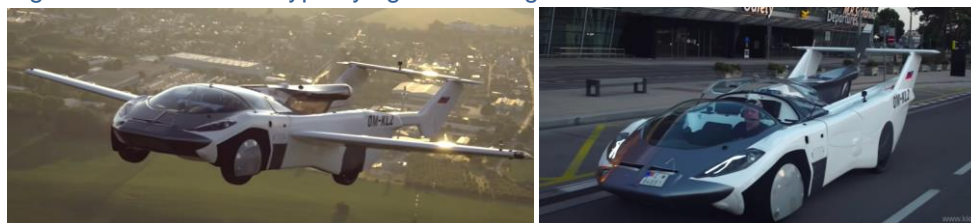
*commits to carbon, waste and water goals for 2025, announces path to net zero by 2040"* [\[LINK\]](#) fit exactly this concept. Alaska commits to reduce its "carbon emissions to net-zero by 2040, and commitments across carbon, waste, and water impacts by 2025." No surprise that the road map includes fleet renewal. Its why we tweeted [\[LINK\]](#) "#NetZero. Reality check on how one company makes near term sizeable cuts in emissions - pass emissions to others. #BigOil sells #Oil production. Unless \$ALK scraps a young fleet, replacing older planes w/ fuel efficient planes will mean a sale #OOTT." On Tuesday we saw another example of this trend, with United announcing [\[LINK\]](#) its "United Next" plan, which includes the addition of 200 Boeing 737 MAX and 70 Airbus A321neo aircrafts to their fleet. This is the largest combined order in both United's history and any individual carrier in the last 10 years. In 2023 alone, it plans to add about one narrow-body aircraft every three days. The new order is expected to create 25,000 new unionized jobs by 2026 and increase its total seats per departure for North American flights by almost 30% by 2026. United clearly is bullish on air travel recovery, its CEO Scott Kirby saying "Our United Next vision will revolutionize the experience of flying United as we accelerate our business to meet a resurgence in air travel. At the same time, this move underscores the critical role United plays in fueling the broader U.S. economy – we expect the addition of these new aircraft will have a significant economic impact on the communities we serve in terms of job creation, traveler spending and commerce." By adding 270 new planes, United wrote "by 2026, United expects its use of aircraft in this new order alone will lower the airline's total carbon emissions per seat up to 15%." Once again we are seeing fleet renewal being utilized to reduce emissions, which will inevitably pass on emissions to the buyers of its older planes. Our Supplemental Documents package includes the United announcement

### Energy Transition – First flying car runs on gasoline

Klein Vision's prototype AirCar successfully completed its first inter-city flight between the Nitra and Bratislava airports [\[LINK\]](#), tucking in its wings after landing on the tarmac and driving off as a car. The prototype was developed with only €1.7 mm of investment capital and has completed 142 successful landings so far. Another interesting aspect to note is that the vehicle runs completely on regular gasoline pump fuel. One downside is that unlike a VTOL vehicle (vertical take-off and landing), it requires a runway to become airborne and land. The other downside is the prototype is slows at 40 mph. However, this shows that flying cars are not only fantasy – it can be done. Here is a link to a good video report [\[LINK\]](#).

**AirCar completes first successful inter-city flight**

Figure 39: AirCar Prototype flying and driving



Source: CBS News

### Energy Transition – What changes will happen at Exxon post the lobbyist scandal?

We put this item here but could have put in a Governance item. But the latest to hit Exxon was this week's revelation of a secret recording of Exxon's "a current and former member of our government affairs team" were extremely negative to Exxon's credibility on climate. The attached New York Times report detailed the lobbyists key comments. Subsequent to the reports, Exxon CEO Darren Woods issued a blog [\[LINK\]](#) "Our position on climate policy and carbon pricing". It's a short statement, but a good read and it looks like a well crafted

**Exxon CEO on the lobbyist scandal**

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release. Woods wrote *"The past few days have been disappointing for everyone at ExxonMobil and for me personally. A current and former member of our government affairs team were secretly recorded making disturbing and inaccurate comments about our positions on a variety of issues, including climate change policy, and our interaction with elected officials. Their comments are entirely inconsistent with our commitment to the environment, transparency and what our employees and management team have worked toward since I became CEO four years ago. I want to make our position clear."* Woods note how their comments were inaccurate on "a variety of issues" and then he says their comments are "entirely inconsistent with our commitment to the environment". We wish he had been clearer and used "entirely" in the first part ie. their comments were entirely inaccurate on all the issues, and not just a variety of issues. The reality check is that no one will believe Woods just wrote this blog and posted it, rather everyone will assume there was significant input on the drafting. No wonder its been disappointing for Exxon, the last thing they want is for their people to get busted. Its hard to see how Exxon's credibility on what they believes and are doing on climate will be shot for some time. Non-denial denial aside, we have seen the politicians pile on and that will bring more life to this issue. Unfortunately, we have to assume that all this means is that there will be increasing pressure on Exxon's board to figure out what changes to make. Our Supplemental Documents package includes the New York Times report and the Exxon Darren Woods blog.

#### 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.

#### Chevron logo golf balls are Calloway and not Titleist

I am like many Canadians and couldn't wait to book a trip as soon as the Liberals removed the mandatory hotel stay upon return for fully vaccinated people. No surprise in my post Covid golf game, I drove into someone's back yard on Ocean 5 at the Palmilla Golf Club, reached into my bag for another ball and pulled out this one. So instead of using it, I took it home and so I could tweet [\[LINK\]](#) "Reached into the golf bag for the first time since Covid and pulled out this #Chevron golf ball. Found it pre Covid when golfing at @PalmillaGolf. Wonder with #WTI \$73 will the 2021 version be Titleist?" Its July 4<sup>th</sup> weekend so there are also a lot of American neighbours are in residence. But there are clearly more Americans and Canadians travelling to Los Cabos. The starter was telling me that it was brutal in early June with maybe only 20 to 30 golfers a day, but that picked up to 90 to 100 this week. This is a

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direct correlation to tourism because at most there are only probably 10 members playing right now, most are back in the US or Canada. I think I will try to take pictures of all the US/Canada logo balls I see in Mexico in this 2021-2022 golf season.

Figure 40: Chevron Logo Golf Ball

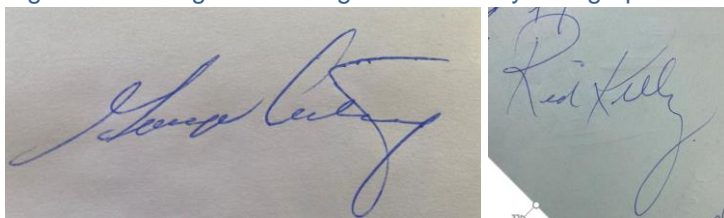


Source: SAF Group

### Toronto Maple Leafs greats – George Armstrong and Red Kelly

I know the Habs are down to the Lightning in the Stanley Cup finals (we still think they will pull it out), but its been interesting to hear hear the pundits talk about some of the “old” veterans like Carey Price, who is xx. No surprise, it shows how the game has changed in the last 50 years. When we hear age, we can’t help think of the Toronto Maple Leafs 1967 Stanley Cup win and the ages of many of their key plays: Goalies were Johnny Bower (43) and Terry Sawchuk (38), and key defensemen were Allan Stanley (41), Tim Horton (37) and Marcel Pronovost (37). A special note to key forwards Red Kelly (39) and George Armstrong (37), both of whom were born this week: Red Kelly on July 9, 1927 (passed away May 2, 2019) and George Armstrong on July 6, 1930 (passed away earlier this year on Jan 24, 2021). Below are their autographs from the 1967 Stanley Cup season. In the 60s, when the Maple Leaf Gardens was busy, the Leafs would practice at the Tam O’Shanter ice rink at Kennedy Road and Sheppard Avenue. My mom would take us there to watch them practice at lunchtime and we would get their autographs.

Figure 41: George Armstrong and Red Kelly Autographs 1966-67 Season



Source: SAF Group

### Alberta lifted all Covid restrictions on July 1

I was travelling out of country for the first post Covid time so didn’t see the big Alberta news [\[LINK\]](#) until Friday that Alberta reached Stage 3 in its Covid vaccinations where 2 weeks after 70% of Albertans 12+ have received at least one dose. The two weeks meant that basically all Covid restrictions were lifted on July 1. This includes the lifting of the ban on indoor social gatherings. Isolation requirements for confirmed cases of COVID-19 and some protective measures in continuing care settings remain. That 70% was reached over two weeks ago now, and Alberta is now >80%.



**Can Habs be the 5<sup>th</sup> team in history to win the Stanley Cup after being down 3?**

The Montreal Canadiens will have to somehow figure out a way to score more on Tampa Bay Lightning goalie Andrei Vasilevsky if they want to join a very small group of 4 teams in NHL history who have the Stanley Cup after starting the finals losing the first three games. Notwithstanding its pretty rare, two of these have been in the last 11 years. The four times have been the 1942 Toronto Maple Leafs, the 1975 New York Islanders, the 2010 Philadelphia Flyers and the 2014 Los Angeles Kings.