Energy Tidbits

Oct 9, 2022

Produced by: Dan Tsubouchi

Vitol Asia Head Mike Muller Warns "*I Don't Think We're Going to See Any Snap in China [Oil] 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. Our target is to write on 48 to 50 weekends per year and to post by noon MT on Sunday. The Sunday noon timing was because PMs said they didn't have research to read on Sundays and Sundays are a day when they start to think about the investing week ahead.

This week's memo highlights:

1. Vitol Asia Head Mike Muller warned this morning on near term China oil demand, doesn't see any snap back in demand. (Click Here)

2. White House says "we're not there yet" on loosening Venezuela oil sanctions, but the desired end game looks clear (Click Here)

3. OPEC Secretary General says OPEC+ "net effective cut is let's say closer to 1 mmb/d" vs headline 2 mmb/d cut. (Click Here)

4. Russia warns it will oil supply off the global market rather than sell oil under any US/EU price cap. (Click Here)

5. New Alberta Premier Danielle Smith plans to ensure Federal laws or policies don't violate the jurisdictional rights of Alberta. (Click Here)

6. Pease follow us on Twitter at [LINK] for breaking news that ultimately ends up in the weekly Energy Tidbits memo that doesn't get posted until Sunday noon MT.

7. For new readers to our Energy Tidbits and our blogs, you will need to sign up at our blog sign up to receive future Energy Tidbits memos. The sign up is available at [LINK].

Dan Tsubouchi
Chief Market Strategist
dtsubouchi@safgroup.ca

Ryan Dunfield
CEO
rdunfield@safgroup.ca

Aaron Bunting
COO, CFO
abunting@safgroup.ca

Ryan Haughn
Managing Director
rhaughn@safgroup.ca

SAF GROUP

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Natural Gas – Natural gas injection of +129 bcf, storage now -165 bcf YoY deficit

YoY storage at -165 bcf YoY deficit

It's shoulder season, which means no significant weather-related demand. For an example, daytime highs in most of the US are in the mid to high 60s, which means it's leave the windows weather. The YoY storage deficit started the winter at -282 bcf YoY at Oct 31 and is now -165 bcf YoY. The EIA reported a +129 bcf build (vs +123 bcf expectations) for the Sep 30 week, which was above the 5-yr average build of +87 bcf, and above last year's injection of +118 bcf. Storage is 3.106 tcf as of Sep 30, decreasing the YoY deficit to -165 bcf, from -180 bcf last week and storage is -264 bcf below the 5-year average vs -306 bcf below last week. Below is the EIA's storage table from its Weekly Natural Gas Storage Report [LINK].

Figure 1: US Natural Gas Storage

	Stocks billion cubic feet (Bcf)				Historical Comparisons: Year ago (09/30/21)		Historical Comparisons: 5-year average (2017-21)	
Region	09/30/22	09/23/22	net change	implied flow	Bcf	% change	Bcf	% change
East	756	721	35	35	806	-6.2	833	-9.2
Midwest	916	879	37	37	966	-5.2	970	-5.6
Mountain	184	176	8	8	205	-10.2	208	-11.5
Pacific	247	243	4	4	247	0.0	286	-13.6
South Central	1,003	958	45	45	1,048	-4.3	1,074	-6.6
Salt	225	204	21	21	256	-12.1	266	-15.4
Nonsalt	778	754	24	24	792	-1.8	808	-3.7
Total	**3,106**	**2,977**	**129**	**129**	**3,271**	**-5.0**	**3,370**	**-7.8**

Source: EIA

Natural Gas – LNG Canada not tempering down enthusiasm for Phase 2 FID

LNG Canada 1.8 bcf/d Phase 2

We have to believe if LNG Canada CEO Jason Klein would try to temper down or squash the enthusiasm in media reports and also not give encouraging comments about LNG Canada if he didn't expect Shell to FID LNG Canada 1.8 bcf/d Phase 2. LNG Canada is not a public company, but we don't recall ever seeing a CEO not trying to tone down enthusiasm for something that wasn't going to happen. On Tuesday, the Financial Post's report [LINK] "*LNG Canada, country's $40-billion 'second chance' at becoming a global LNG leader, takes shape"* focused on the potential for LNG Canada to move on Phase 2. They wrote "*Now, those same oilpatch veterans are urging Shell and its partners to quickly green-light a second phase of the project, effectively doubling the export capacity of the plant from 14 million tonnes of LNG per year in the first phase, to 28 million tonnes a year. "We had an opportunity that required us getting after these projects 10 to 15 years ago. We didn't for all kinds of reasons," said Tourmaline Oil Corp. chief executive and founder Mike Rose. "Fortunately, we have a second crack at it. So I'd like to see more than just LNG Canada phase one — we'd like to see both phases of LNG Canada and more projects on the West Coast."* The Financial Post report closes with comments from Klein who, had to have known the focus of the story. It would have been a good opportunity for Klein to try to temper enthusiasm for the future. Rather he showcased a key advantage of LNG Canada over other global LNG projects – it's the cleanest LNG in the world. No question, it doesn't mean that FID on LNG Canada Phase 2 is a given, but, if not, it is not what most CEOs would do. The Financial Post report closed "*Pointing to the company's 40-year permit to operate in Kitimat, Klein said he believes there is starting to be an acknowledgement that not all LNG projects are created equal. "The cleanest molecule is going to be the last molecule standing," Klein said. "That's one of the reasons why I feel so good about LNG Canada, because we are that clean* *molecule. And when people start getting really picky, whether driven by carbon price or otherwise, the cleanest LNG will be the last LNG — which right now, in the world, that's right here*." Our Supplemental Documents package includes the Financial Post report.

Shell showcased LNG Canada lowest carbon intensity in Feb

Our Feb 27, 2022 Energy Tidbits highlighted Shell's LNG Outlook 2022 and its Integrated Business Deep Dive webcast. We then wrote "*We tweeted [LINK] "Was #Shell showcasing #LNGCanada or just highlighting its positives today? @Shell expects average IRR of 14-18% for its pre-FID projects, which includes LNGCanada Phase 2. #LNGCanada "is set to deliver the lowest carbon intensity in the entire industry". #OOTT #NatGas #LNG". (i) Just like we have been highlighted over the past months, this week, Shell seemed to showcase LNG Canada on multiple fronts (i) Shell now plans assuming there is an LNG supply gap in mid 2020s and that this "focuses attention" on the need for more LNG supply FIDs. So they are saying there is a clear market need for someone to step forward. (ii) In the Integrated Gas comments, mgmt said they are making good progress on LNG Canada Phase 1 construction and first LNG cargos are on track for by the middle of this decade. (iii) LNG Canada is the lowest emissions LNG project in industry. This is making the case that if there is any LNG to be done in a world of reducing emissions, it is the lowest emissions and Shell says LNG Canada is the best. Mgmt said "But the long term role of gas depends on efforts to abate emissions and develop cleaner pathways for gas. This is why we continually try to reduce the carbon intensity of our new projects. Take LNG Canada currently under construction. It will run on hydropower and is set to deliver the lowest carbon intensity in the entire industry.*

Natural Gas – Long-term LNG deal, Venture Global/EnBW expand their deal

Germany locks up long term LNG

There haven't been many long-term LNG deals over the past month because most capacity seems to be getting contracted. On Thursday, EnBW and Venture Global LNG announced the expansion of their existing LNG partnership to 0.26 bcf/d [LINK]. The two parties first signed a 20-year Sales and Purchase Agreement in June 2022 and since the original signature EnBW has increased the quantity of its long-term LNG offtake by an additional 0.065 bcf/d. This new agreement adds 0.065 bcf/d to take the existing deal up to 0.263 bcf/d. EnBW COO Georg Stamatelopoulos explains the expansion allows Germany *"to become less dependent on Russian natural gas and to strengthen diversification and security of supply, EnBW is supporting the German government by increasing further access to LNG supplies. For this reason, we have stepped up our procurement volumes from Venture Global"*. Venture Global CEO Mike Sable also commented on the expansion stating "w*ith the help of LNG, we can secure Germany's gas supply to enable the energy transition, while not losing sight of our climate neutrality targets".* Venture Global is a provider of U.S. LNG sourced from North American natural gas basins located on the Mississippi River and Gulf of Mexico. Venture Global's first facility, Calcasieu Pass, commenced producing LNG in January 2022. The company is also constructing or developing an additional 7.90 bcf/d of production capacity in Louisiana. The company is developing Carbon Capture and Sequestration projects at all four of its LNG facilities. EnBW is one of the largest energy companies in Germany and Europe. It supplies around 5.5 million customers with electricity, gas, water as well as services and products in the areas of infrastructure and energy. By the end of 2025, more than half of the generation portfolio is to consist of renewable energies.

EnBW is aiming for climate neutrality by 2035. Our Supplemental Documents package includes the Venture Global release.

Asia is still well in front of Europe in securing long term LNG supply

Our March 13, 2022 Energy Tidbits memo noted that Europe LNG buyers were starting 9 months behind the wave of Asian LNG buyers who started to lock up long term LNG supply starting in July 2021. The LNG supply crunch is not a 2022 development. Rather, it was clear in H1/21 that there was a major sea change in LNG outlook. We turned very bullish on LNG outlook for the 2020s once TotalEnergies went force majeure on its Mozambique LNG in April 2021. We posted our April 28, 2021 blog *"Multiple Brownfield LNG FIDs Now Needed To Fill New LNG Supply Gap From Mozambique Chaos? How About LNG Canada Phase 2?"* as we thought the market had overlooked that this force majeure backed up 5.0 bcf/d of Mozambique LNG that was originally planned to start in phases in 2024. And that this would create an earlier and larger LNG supply gap in the mid 2020s. Then we started to see validation of this view when Asian LNG buyers in July made an abrupt change to their LNG contracting and pivoted to trying to lock in long term LNG supply. On July 14, 2021 we posted our 8-pg "*Asian LNG Buyers Abruptly Change and Lock in Long Term Supply – Validates Supply Gap, Provides Support For Brownfield LNG FIDs".* Here is an excerpt from the blog "*The last 7 days has shown there is a sea change as Asian LNG buyers have made an abrupt change in their LNG contracting and are moving to lock in long term LNG supply. This is the complete opposite of what they were doing pre-Covid when they were trying to renegotiate Qatar LNG long term deals lower and moving away from long term deals to spot/short term sales. Why? We think they did the same math we did in our April 28 blog "Multiple Brownfield LNG FIDs Now Needed To Fill New LNG Supply Gap From Mozambique Chaos? How About LNG Canada Phase 2?" and saw a much bigger and sooner LNG supply gap driven by the delay of 5 bcf/d of Mozambique LNG that was built into most, if not all LNG supply forecasts. Asian LNG buyers are committing real dollars to long term LNG deals, which we believe is the best validation for the LNG supply gap. Another validation, Shell, Total and others are aggressively competing to invest long term capital to partner in Qatar Petroleum's massive 4.3 bcf/d LNG expansion despite plans to reduce fossil fuels production in the 2020s. And even more importantly to LNG suppliers, the return to long term LNG contracts provides the financing capacity to commit to brownfield LNG FIDs. The abrupt change by Asian LNG buyers to long term contracts is a game changer for LNG markets and sets the stage for brownfield LNG FIDs likely as soon as before year end 2021. It has to be brownfield LNG FIDs if the gap is coming bigger and sooner. And we return to our April 28 blog point, if brownfield LNG is needed, what about Shell looking at 1.8 bcf/d brownfield LNG Canada Phase 2? LNG Canada Phase 1 at 1.8 bcf/d capacity is already a material positive for Cdn natural gas producers. A FID on LNG Canada Phase 2 would be huge, meaning 3.6 bcf/d of Cdn natural gas will be tied to Asian LNG markets and not competing in the US against Henry Hub. And with a much shorter distance to Asian LNG markets. This is why we focus on global LNG markets for our views on the future value of Canadian natural gas."* Our Supplemental Documents package includes our April and July blogs.

There have been 12.03 bcf/d of long-term LNG supply deals since July 1, 2021

We first highlighted this abrupt shift to long term LNG supply deals in our July 14, 2021 8-pg "*Asian LNG Buyers Abruptly Change and Lock in Long Term Supply – Validates Supply Gap, Provides Support For Brownfield LNG FIDs".* We included a table of the deals done in that short two week period. We continue to update that table, which now shows 12.03 bcf/d of long term LNG deals since July 1, 2021. 63% of the deals have been by Asian LNG buyers, but we are now seeing rest of world locking up long term supply deals post Russia/Ukraine. And as seen in the Venture Global deal this week, major LNG supply companies like Chevron, Equinor, Exxon, Shell and Vitol are locking up long term LNG supply to add to their portfolios for LNG supply to others. Below is our updated table of Asian and Europe LNG buyers new long term supply deals since July 1, 2021.

Figure 2: Long Term LNG Supply Deals since July 1, 2021

Long-Term LNG Buyer Deals Since July 1, 2021							
Date	Buyer	Seller	Country	Volume	Duration	Start	End
			Buyer / Seller	(bcf/d)	Years		
Asian LNG Deals							
Jul 7, 2021	CNOOC	Petronas	China / Canada	0.30	10.0	2022	2032
Jul 9, 2021	CPC	QatarEnergy	Taiwan / Qatar	0.16	15.0	2022	2037
Jul 9, 2021	Guangzhou Gas	BP	China / US	0.13	12.0	2022	2034
Jul 12, 2021	Korea Gas	QatarEnergy	Korea / Qatar	0.25	20.0	2025	2045
Sep 29, 2021	CNOOC	QatarEnergy	China / Qatar	0.50	15.0	2022	2037
Oct 7, 2021	Shenzhen	BP	China / US	0.04	10.0	2023	2032
Oct 11, 2021	ENN	Cheniere	China / US	0.12	13.0	2022	2035
Nov 4, 2021	Unipec	Venture Global LNG	China / US	0.46	20.0	2023	2043
Nov 4, 2021	Sinopec	Venture Global LNG	China / US	0.53	20.0	2023	2043
Nov 5, 2021	Sinochem	Cheniere	China / US	0.12	17.5	2022	2040
Nov 22, 2021	Foran	Cheniere	China / US	0.04	20.0	2023	2043
Dec 6, 2021	Guangdong Energy	QatarEnergy	China / Qatar	0.13	10.0	2024	2034
Dec 8, 2021	S&T International	QatarEnergy	China / Qatar	0.13	15.0	2022	2037
Dec 10, 2021	Suntien Green Energy	QatarEnergy	China / Qatar	0.13	15.0	2022	2037
Dec 15, 2021	SPIC Guangdong	BP	China / US	0.03	10.0	2023	2033
Dec 20, 2021	CNOOC Gas & Power	Venture Global LNG	China / US	0.26	20.0	2023	2043
Dec 29, 2021	Foran	BP	China / US	0.01	10.0	2023	2032
Jan 11, 2022	ENN	Novatek	China / Russia	0.08	11.0	2024	2035
Jan 11, 2022	Zhejiang Energy	Novatek	China / Russia	0.13	15.0	2024	2039
Feb 4, 2022	CNPC	Gazprom	China / Russia	0.98	30.0	2023	2053
Mar 24, 2022	Guangdong Energy	NextDecade	China / US	0.20	20.0	2026	2046
Mar 29, 2022	ENN	Energy Transfer	China / US	0.36	20.0	2026	2046
Apr 1, 2022	Guangzhou Gas	Mexico Pacific Ltd	China / Mexico	0.26	20.0	n.a.	n.a.
Apr 6, 2022	ENN	NextDecade	China / US	0.20	20.0	2026	2026
Apr 22, 2022	Kogas	BP	Korea / US	0.20	18.0	2025	2043
May 2, 2022	Gunvor Singapore Pte	Energy Transfer LNG	Singapore / US	0.26	20.0	2026	2046
May 3, 2022	SK Gas Trading LLC	Energy Transfer LNG	Korea / US	0.05	18.0	2026	2042
May 10, 2022	Exxon Asia Pacific	Venture Global LNG	Singapore / US	0.26	n.a.	n.a.	n.a.
May 11, 2022	Petronas LNG	Venture Global LNG	Malaysia / US	0.13	20.0	n.a.	n.a.
May 24, 2022	Hanwha Energy	TotalEnergies	Korea / France	0.08	15.0	2024	2039
May 25, 2022	POSCO International	Cheniere	Korea / US	0.05	20.0	2026	2036
June 5, 2022	China Gas Holdings	Energy Transfer	China / US	0.09	25.0	2026	2051
Jul 5, 2022	China Gas Holdings	NextDecade	China / US	0.13	20.0	2027	2047
Jul 20, 2022	PetroChina	Cheniere	China / US	0.24	24.0	2026	2050
Jul 26, 2022	PTT Global	Cheniere	Thailand / US	0.13	20.0	2026	2046
Jul 27, 2022	Exxon Asia Pacific	NextDecade	Singapore / US	0.13	20.0	2026	2046
Sep 2, 2022	Woodside Singapore	Commonwealth	Singapore / US	0.33	20.0	2026	2046
Total Asian LNG Buyers New Long Term Contracts Since Jul/21				**7.63**			
Non-Asian LNG Deals							
Jul 28, 2021	PGNiG	Venture Global LNG	Poland / US	0.26	20.0	2023	2043
Nov 12, 2021	Engie	Cheniere	France / US	0.11	20.0	2021	2041
Mar 7, 2022	Shell	Venture Global LNG	US / US	0.26	20.0	2024	2044
Mar 16, 2022	NFE	Venture Global LNG	US / US	0.13	20.0	2023	2043
Mar 16, 2022	NFE	Venture Global LNG	US / US	0.13	20.0	2023	2043
May 2, 2022	Engie	NextDecade	France / US	0.23	15.0	2026	2041
May 17, 2022	PGNiG	Sempra Infrastructure	Poland / US	0.40	20.0	n.a.	n.a.
May 25, 2022	RWE Supply & Trading	Sempra Infrastructure	Germany / US	0.67	15.0	n.a.	n.a.
Jun 9, 2022	Equinor	Cheniere	Norway / US	0.23	15.0	2026	2041
Jun 21, 2022	EnBW	Venture Global LNG	Germany / US	0.20	20.0	2026	2046
Jun 22, 2022	INEOS Energy	Sempra Infrastructure	UK / US	0.18	20.0	n.a.	n.a.
Jun 22, 2022	Chevron	Venture Global LNG	US / US	0.26	20.0	n.a.	n.a.
Jun 22, 2022	Chevron	Cheniere	US / US	0.26	15.0	2027	2042
Jul 12, 2022	Shell	Mexico Pacific Ltd	US / Mexico	0.34	20.0	2026	2046
Jul 13, 2022	Vitol	Delfin Midstream	US / US	0.07	15.0	n.a.	n.a.
Aug 9, 2022	Centrica	Delfin Midstream	UK / US	0.13	15.0	2026	2041
Aug 24, 2022	Shell	Energy Transfer	US / US	0.28	20.0	2026	2046
Oct 6, 2022	EnBW	Venture Global LNG	Germany / US	0.26	20.0	2022	2040
Total Non-Asian LNG Buyers New Long Term Contracts Since Jul/21				**4.40**			
Total New Long Term LNG Contracts since Jul/21				**12.03**			
*Excludes Asian short term/spot deals							
*on Dec 20, CNOOC also agreed to buy an additional 0.13 bcf/d from Venture Global for an undisclosed shorter period							
Source: Bloomberg, Company Reports							
Prepared by SAF Group https://safgroup.ca/news-insights/							

Source: Company reports, SAF Group

Natural Gas – Looks like Oct should see 1st LNG from Eni's Mozambique Coral FLNG

ENI FLNG offshore Mozambique

At least for now, it looks like the 1st LNG cargoes from Eni's Mozambique Coral FLNG should sail in October. LNG production has started at Coral and BP's LNG tankers are enroute to

Mozambique for loading. Recall that the 1st LNG cargoes were all set to go in late August. BP has the right to take all the LNG from Coral. BP's LNG tanker, British Mentor, had arrived by Coral FLNG on Aug 26, held its position there but, then suddenly sailed away without loading its cargo on Aug 28 and sailed for Oman. On Aug 28, Energy Intelligence reported [LINK] "*Mozambique's Coral South floating LNG plant is understood to have suffered technical issues, which could delay the start-up of the project, potentially further squeezing an already tight global LNG market. "Serious issues [were] reported at Coral FLNG with one critical distillation column (demethanizer) suspected of having internal damage. Shutdown is required for inspection and repair, which will delay the start-up schedule by several days, if not weeks," a source told Energy Intelligence."* Last Sunday, Bloomberg reported "*Eni Produces First LNG at Coral-Sul, Off Mozambique's Coast. Coral-Sul FLNG has begun LNG production in the framework of the ongoing commissioning activities, a spokesperson of Eni says in text message."* On Thursday, Argus reported [LINK] "*Two LNG tankers owned by BP are declaring for arrival in Mozambique later this month, suggesting that they could be set to load the first cargoes from the country's 3.4mn t/yr Coral floating liquefaction (FLNG) facility. The 173,600m³ British Listener and the same-sized British Sponsor were declaring for arrival at Mozambique's Pemba port — located a few hundred kilometres southwest of the Coral FLNG project and the capital of the country's Cabo Delgado province — on 13 and 15 October, respectively. The first carrier was sailing south in the Red Sea, while the latter was heading northwest in the Malacca Strait today*."

Eni hopes to FID in 2023 a 2nd FLNG for offshore Mozambique

Eni is focusing on small scale FLNG like Coral South FLNG as a key to their LNG supply strategy with short times to get to first LNG cargos. So unless there is a fundamental design flaw with the FLNG, we wouldn't expect to see this delay cause any change to this small scale FLNG strategy. Here is what we wrote in or Aug 7, 2022 Energy Tidbits. "*On Tuesday, Bloomberg interviewed Eni COO Guido Brusco, who advised that Eni is looking to move ahead with its second FLNG vessel offshore Mozambique as a way to develop more of the massive offshore Mozambique natural gas. This is in the Exxon operated block that has had its massive Rozuma LNG 2.0 bcf/d Phase 1 delayed due to the onshore violence that delayed TotalEnergies Mozambique LNG. Eni and Exxon are in the process of having 1st LNG cargos in Q4/22 from the Eni operated Coral FLN G in the Rozuma block. Bloomberg reported "If Eni decides to proceed by early 2023, output could begin even before TotalEnergies SE's $20-billion onshore project that abruptly halted construction last year due to security issues." Eni made it clear that, before any FID, they would need to have to have agreement with their partners – Exxon, CNPC and Mozambique state owned Empresa Nacional de Hidrocarbonetos. Eni looks at FLNG as an addition to develop the natural gas. Bloomberg wrote ""I believe that to fully develop Mozambique's considerable gas resources, the right decision is to move toward both an onshore concept and an offshore concept," Brusco said."*

Eni highlighted a 2nd Mozambique FLNG in the Q2 call

Here is what we wrote in our July 31, 2022 Energy Tidbits on this FLNG potential offshore Mozambique. "*There was an interesting Eni comment in the Q&A of the Q2 call on Friday with respect to their proposal to Exxon to move to or include small scale floating LNG (FLNG) in the offshore Mozambique lands. Eni is a partner in the* *big offshore Exxon Rozuma LNG 2.0 bcf/d Phase 1 that has been held up by the violence onshore Mozambique. Rozuma is to follow TotalEnergies Mozambique LNG, which put its project on hold in April 2021 due to the security situation. Eni's operated Coral FLNG, offshore Mozambique, has not been impacted by the onshore violence and is on track for its first cargo in late 2022. In the Q2 Q&A, Eni suggested moving to small scale FLNG with each FLNG capacity of 2.5 to 3.0 mtpa or 0.33 to 0.39 bcf/d ie. each about 1/5 the size of the Rozuma LNG Phase 1. In the Q&A, mgmt. said "So we are discussing, you know that we are working on the onshore, and in our joint venture, in our Company's with Exxon and the other company in charge of the upstream, and the offshore. Clearly, we are discussing, we are proposing a possible additional offshore development through LNG. The same fast LNG that we are developing in Congo's, so something that is very fast, as more size that we can replicate size that can range between 2.5 million ton and 3 million ton per year. So that is something that is on the table we are discussing. I can say that among our partners, there is a positive view, but we have to wait for final approval but that clearly an easy way to go faster and develop LNG in Mozambique. We have a huge amount of reserves there, its in our block we have about 80 test, so you can imagine that is the moment. So we are really focused and determined to go through these developments. For onshore, onshore is not in our hand, clearly is in the hand of Exxon, the big train, all the engineering and everything has been done. I think that is just a question to understand if we find a reasonable security condition to develop this activity. But if we think about small size, I seen that the offshore, we demonstrate*

Natural Gas – More support why TotalEnergies puts 1st Mozambique LNG after 2027

TotalEnergies Mozambique LNG

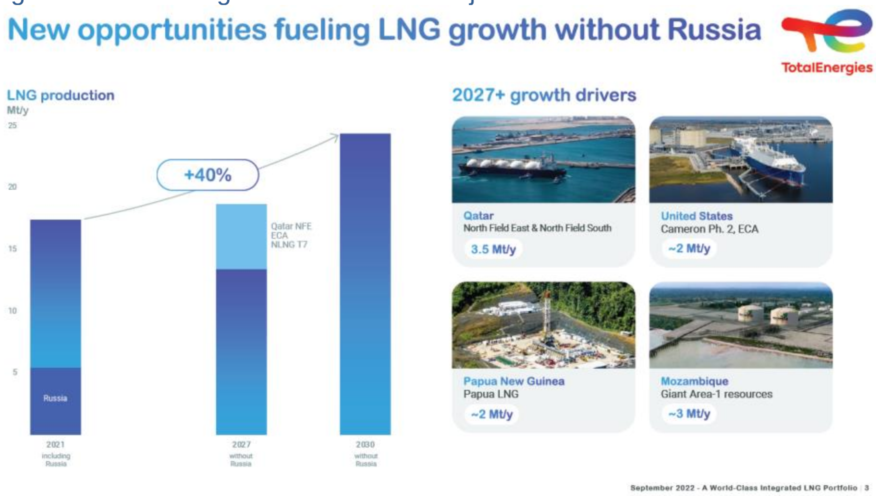
It looks like TotalEnergies is resisting the urging from Mozambique to restart its flagship Mozambique LNG around year end TotalEnergies does not estimate any time frame to make a restart decision, but they don't point to a restart in early 2023. TotalEnergies CEO Patrick Pouyanne presented at the Energy Intelligence Group forum in London. On Thursday, we tweeted [LINK] "*More support for why @TotalEnergies doesn't include #MozambiqueLNG until after 2027. @EI_Forum "we will think to restart" the Mozambique #LNG project only on the day Pouyanne himself can visit without a military escort, says Pouyanne. #EIForum". #NatGas. [LINK].*" Assuming Pouyanne is serious that this is the test, it's relatively high bar and one that we have trouble believing will be met within the next year.

TotalEnergies forecasts do not include Mozambique LNG until after 2027

Here is what we wrote in our Oct 2, 2022 Energy Tidbits. "*TotalEnergies held its investor day on Wednesday and did not give any expected restart to its Mozambique LNG. Circumstances can change, but, on the call, mgmt gave no indication or inference that they might be close to a restart around year end. Rather they just said a normal type line "And in Mozambique, I will come back on it. Of course, security is today improving, but yet to have to improve before we can restarted to project, but the project is there, and we are working to see how we can relaunch it." But it looks like TotalEnergies is not assuming any early 2023 restart at Mozambique LNG. We tweeted [LINK] "#TotalEnergies just posted #LNG slides for today's investor day. Not planning a quick restart to Mozambique LNG as NO volumes are included in LNG growth until AFTER 2027. #OOTT #NatGas." TotalEnergies includes Mozambique LNG in their forecast for sometime after 2027. Last week's (Sept 25, 2022) Energy*

Tidbits memo noted comments from TotalEnergies country manager. We then wrote "The latest Cabo Ligado Weekly: 12-18 September 2022 was posted on Tuesday. [LINK] The weekly highlighted Nyusi's comments from last week. But interestingly, the weekly also had comments from TotalEnergies Mozambique country manager. Cabo Ligado Weekly wrote "This recognition that there is still much work to be done was echoed by her colleague Stéphane Le Galles, Director of TotalEnergies' Mozambique liquefied natural gas (LNG) project, who said there are "visible signs of people coming back to the region but we are not there yet." "The journey is long but the direction is very good," he concluded."

Figure 3: TotalEnergies LNG Growth Projects



Source: TotalEnergies

A TotalEnergies restart will set in motion 5 bcf/d of Mozambique LNG

It is important to remember that a restart of TotalEnergies Mozambique Phase 1 is more than a restart of the 1.7 bcf/d for Phase 1 – it's really sets in motion 5.0 bcf/d of Mozambique LNG. This is why we have highlighting TotalEnergies force majeure on its Mozambique LNG Phase 1 for the past 17 months as the game changing event for LNG markets. TotalEnergies Mozambique Phase 1 at 1.7 bcf/d is significant, but our view has been because TotalEnergies delaying Phase 1 of 1.7 bcf/d is actually leading to a delay of 5.0 bcf/d. This was the reason why, 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] 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 at the earliest. 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. Its also why earlier we said that this is starting the clock running for other LNG projects wanting to go FID to make their mind up ie. like LNG Canada Phase 2. Our Supplemental Documents package includes our 7-pg April 28, 2021 blog.

Natural Gas – Petronas force majeure at Bintulu LNG plant

Petronas Bintulu LNG plant

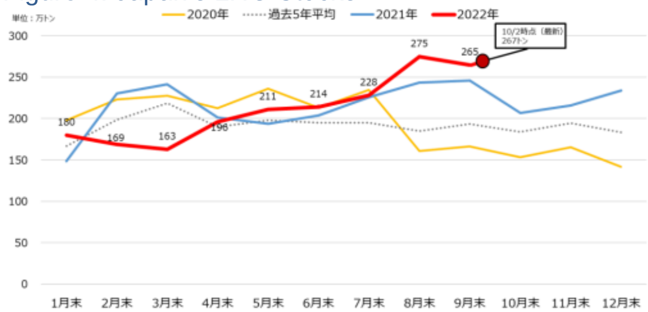
We haven't yet seen any Petronas comment on the impact on its Bintulu LNG output from the landslide that damaged the feeder natural gas pipeline. The Petronas Bintulu LNG plant has been one of the most hit LNG plants for force majeure, but at least this time, the force majeure is a result a feedstock pipeline lead from a landslide and not a problem at the LNG plant. We have not seen reports on the extent of the landslide and how that physically impacted the pipeline. On Thursday, Argus reported [LINK] "*Malaysia's Petronas informs LNG buyers of force majeure." "Malaysia's state-owned Petronas has informed some of its Japanese term LNG offtakers and trading houses of a force majeure following a landslide last month that may have resulted in a leak on the Sabah-Sarawak Gas Pipeline. The landslide in September near Sarawak occurred near the pipeline that supplies gas to Petronas' 30mn t/yr Bintulu LNG complex. Some term offtakers, including Japanese buyers Tokyo Gas and Toho Gas and possibly some trading houses, have received the force majeure notice. But no other details were provided by Petronas, offtakers said. Petronas did not respond to Argus' requests for comment. Not all offtakers have been issued with the force majeure declaration. But buyers that received the notice will likely see their deliveries between October and December affected, a source with knowledge of the matter said. But disruptions may extend to deliveries in the first quarter of next year depending on the situation. Market participants project that up to 10 cargoes may be affected."* Our Supplemental Documents package includes the Argus report.

Natural Gas – Japan's LNG stocks down -1.5% from last week

Japan LNG stocks -1.5% WoW

The risk for Japan in the winter is that they need full storage and continued LNG imports to avoid natural gas outages. That's because Japan's LNG stockpiles are not huge relative to LNG imports that have ranged from 7 to 14 bcf/d since Jan 1, 2021. A cold winter or interruption in LNG imports could easily lead to a shortage. LNG stockpiles held by Japanese power producers have exceeded both last year's level and the 4-year average. Japan's METI weekly LNG stocks data was released on Wednesday [LINK]. LNG stocks at Oct 2 were ~128 bcf, -1.5% WoW from 129 bcf and up from the 5-yr average of 118 bcf. Below is the LNG stocks graph from the METI weekly report.

Figure 4: Japan’s LNG Stocks



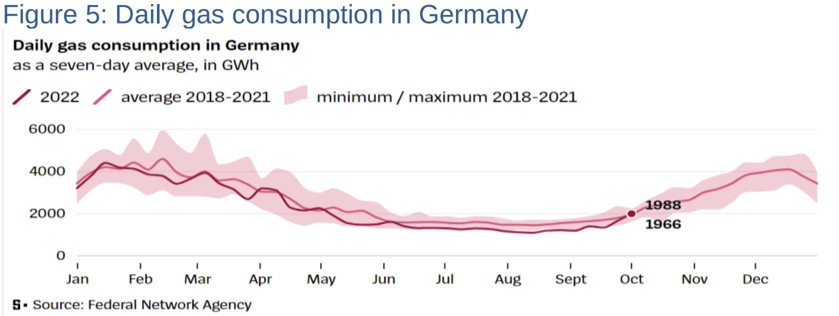
Source: METI

Natural Gas – Der Spiegel’s real time stats on EU’s gas dependency on Russia

EU’s gas dependency on Russia data

We always like good reference sources especially ones like Der Spiegel that link to real time data. On Friday, we tweeted [LINK] “*Excellent @derspiegel Real-Time Statistics on Europe's Gas Supplies ie. Europe's dependency on Russia. Includes great maps, graphs and data. #NatGas #OOTT*.” The Der Spiegel “*Energy Crisis Tracker Real-Time Statistics on Europe's Gas Supplies”* includes data/graphs/maps on “*European natural gas imports by origin, deliveries to Europe by country, origin and volumes of natural gas demand, hourly gas flow through Nord Stream 1 pipeline, main pipelines that supply gas to Europe, deliveries from Russia by route, how full are Germany’s gas storage facilities, daily gas consumption in Germany, and seven-day average value of daily Russian gas exports to the EU.”* Here is the Der Spiegel [LINK]. Below is one of their graphs. Our Supplemental Documents package includes the Der Spiegel update as of Friday.

Figure 5: Daily gas consumption in Germany



Source: Der Spiegel

Natural Gas – Still can’t prove who blew up Nord Stream pipeline

Waiting on proof for Nord Stream

On Thursday morning, we tweeted [LINK] “*Will anyone be able to prove who blew up #NordStream? No surprise, Swedish security services @SAPOsverige concludes there were detonations. Will analyze fittings to see "whether anyone can be served with suspicion and later prosecuted". #NatGas #OOTT*”. The Swedish Security Services had just posted its report [LINK] *“After completing the crime scene investigation, the Swedish Security Police can conclude that there have been detonations at Nord Stream 1 and 2 in the Swedish economic zone, which have caused extensive damage to the gas pipelines. During the crime* *scene investigation, there have been some seizures. Within the framework of the preliminary investigation, the Security Police continuously takes various investigative measures. As part of the work, the fittings will now be reviewed and analyzed. The continued preliminary investigation must show whether anyone can be served with suspicion and later prosecuted*." Basically, they confirmed what everyone expected – it was detonations that blew up the Nord Stream gas pipeline. And they hope their analysis of the fittings will give some indication of who to charge for the detonations. Our Supplemental Documents package includes the Swedish Securities Service report.

Germany infra attack, its railway shut down for a few hours with sabotage
We didn't put this item here because it was linked to the Nord Stream pipeline explosions. But more from a general Germany/EU question. Earlier this morning, we tweeted [LINK] "*Let's hope the German railway sabotage (cable cutting, not cyber) was a one-off. Has to be coordinated to some degree as Berlin is ~500 km from Herne. EU does not need infra attacks that hurt economy temporarily or longer term like Nord Stream explosions. #OOTT."* Yesterday morning, German rails came to a standstill for a few hours due to sabotage. Key cables were cut in Berlin and Herne, which are ~500 km apart. Upon hearing of the rail shut down, we were surprised by two items – it wasn't a cyber attack and Russia wasn't immediately targeted as the suspect. But, even if Russia wasn't targeted as the suspect, we will want to watch to see if there are more attacks on German infrastructure. Our Supplemental Documents package includes the Frankfurter Allgemeine report. [LINK]

Natural Gas – Qatar sending 2 bcf/d to Europe in 2022 and 2023

2 bcf/d Qatar LNG to Europe

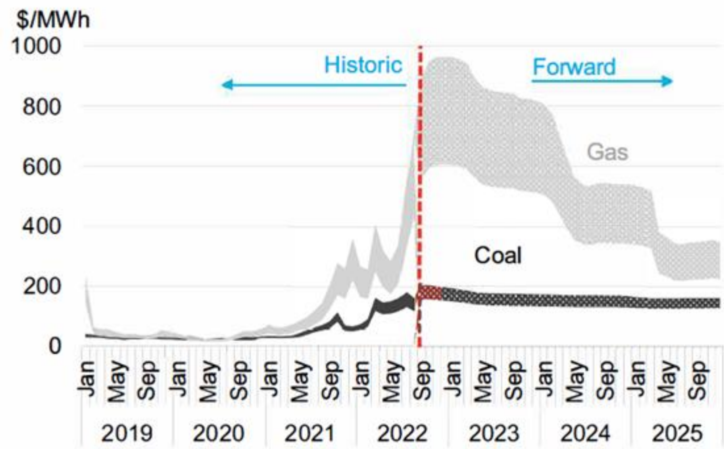
Qatar Energy CEO Saad Sherida al-Kaabi spoke at the Energy Intelligence Group conference in London on Wed. There was no public webcast but EIG's Casey Merriman tweeted out some of al-Kaabi's comments. On Thursday, we tweeted [][LINK] "*#QatarEnergy taking advantage of sky-high Europe #NatGas prices to send as much LNG as possible to EU. Sending ~2 bcf/d to EU in 2022 & 2023, Other #LNG tidbits in this @cm_energyintel thread on Qatar Energy. #OOTT*." No one should be surprised that Qatar is sending and will try to send as much LNG as possible to Europe – it shows they can help but the reality is that the prices have been way higher so there is a lot more money to make. Merriman had tweeted al-Kaabi's comments that "*~15mn tons/yr out of Qatar's 77mn of LNG capacity is heading to Europe this year. Expect roughly the same next year*." 15 mtpa is 1.97 bcf/d, 77 mtpa is 10.13 bcf/d.

Natural Gas – Sky high LNG prices force more EU switching to coal

EU natural gas to coal switching

On Tuesday, we tweeted [LINK] "*Good thing #EU still has some switching #Coal generation to fill in for #NatGas. Emissions get hammered, but huge cost savings. Also reminds EU #NatGas crisis started in H2/21 ie. before RUS/UKR. Thx @BloombergNEF @ali_poona Antoine Vagneur-Jones. #OOTT."* The sky-high prices of Europe natural gas prices has forced industrial users to cut natural gas consumption. The other theme is that, where possible, Europe natural gas consumers are switching to fuel oils or coal. Bloomberg released its European Energy Crisis Indicators this week, which highlighted the rising LNG prices have made burning gas for power vastly more expensive, leading European utilities to use more coal for power. Coal power generation in Europe from January to August 2022 was up 17.3TWh YoY. This increase comes even as thermal coal prices reached record highs this summer due to logistical supply snags, and robust demand in Europe and Asia. As demand for thermal coal remains high over the coming months, this demand should continue as government green-lights plans to reopen coal plants in preparation for winter. The consumption of coal in Europe is set to rise over the next two months due to growing power demand, uncertainty over pipeline gas supplies from Russia, and low hydro and nuclear generation. The global supply of seaborne coal is expected to tighten as European sanctions limit companies from financing and insuring Russian coal. These factors will continue to prop up prices of coal, especially for higher-grade variants from Australia and South Africa and add yet another pain point for Europe.

Figure 6: Short-Run Costs of Thermal Coal and LNG-Based Power in Europe



Source: BloombergNEF

Natural Gas – Gemany calls out US for "moon prices" on LNG

Germany calls out US on LNG prices

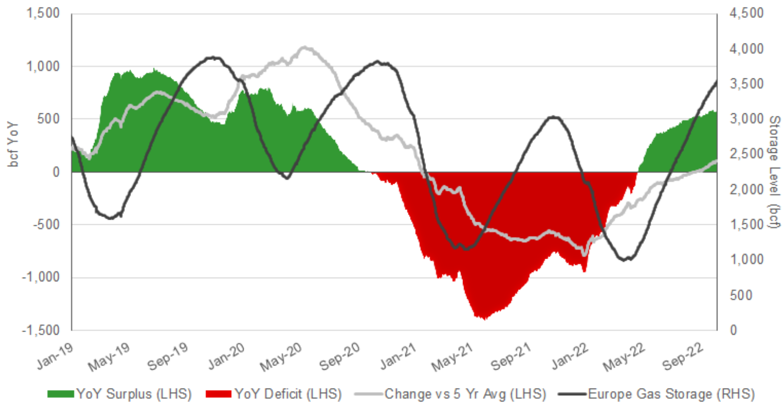
Winter hasn't started, but we have to believe crunch time is about to come for Europe, especially for countries like Germany, to hold the line against Russia. We would have thought Germany was most at risk of giving in on Russian natural gas, but it has held firm. Germany is in a tough spot, can they take a chance it will be a mild winter? If it's a normal or cold winter, there could be some bad body blows to their economy and people. The next federal German election isn't until oct 2025, so they have time to recover. But it was interesting to see Vice Chancellor Robert Habeck's comments this week. Habeck called out the US for "moon prices" of natural gas/LNG. NOZ (Germany media) wrote "*Federal Economics Minister Robert Habeck has accused the US and other friendly gas suppliers of "excessive" prices with which they profited from the consequences of the Ukraine war. "Some countries, including friendly ones, sometimes achieve moon prices. Of course, this brings with it problems that we have to talk about," Habeck said in an interview with our editors. He is counting on "the EU Commission to talk about this with the friendly states". "Such solidarity would be good". Habeck has his sights set on the USA in particular: "The USA turned to us when oil prices shot up, and then the national oil reserves in Europe were tapped as well. I think such solidarity would also be good for dampening gas prices," the Green politician appealed to Washington."* Our Supplemental Documents package includes the NOZ report.

Natural Gas – Europe storage is now +14.27% YoY ie. 90.13% full vs 75.86%

Europe storage now 90.13% full

It was a successful natural gas storage refill season in Europe with the continued strong LNG imports and massive industrial demand response to sky-high natural gas prices. Even with Nord Stream volumes down to zero, Europe storage continues to have increasing YoY levels. Europe gas storage began the year in a YoY deficit, but the YoY Europe storage deficit changed to a YoY storage surplus, and it continues to build this week. Europe gas storage started the winter down 18.52% YoY and is now a YoY surplus of 14.27%. Inventories are rising all across Europe, as is normal during spring and early summer. Europe gas storage started 2020 winter (Nov 1/20) at basically full levels at 94.66% and had dropped by 65.77% to be 28.89% at Apr/21. Europe storage levels bottomed in late Apr/22 at 29%, which was the lowest level since Apr 2018. This winter began (Nov 1/21) with gas storage at 77.14% capacity, down 18.52% YoY. The YoY deficit has turned to surplus after months of the deficit tightening. Thanks to the warm weather and US LNG, storage as of Oct 5 is at 90.13%, which is +14.27% greater than last year levels of 75.86% and are +2.83% above the 5-year average of 87.30%. Below is our graph of Europe Gas Storage Level.

Figure 7: Europe Gas Storage Level



Source: Bloomberg

Natural Gas – Denmark orders coal & oil plants to provide power thru June 2024

Denmark keeps coal & oil plants running

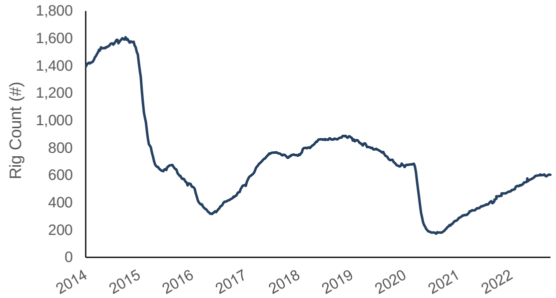
It looks like Denmark realizes that Europe's big energy/natural gas test is coming winter 2023/24 and that it will need all possible power generation for that period. Orsted issued a Oct 1 press release that said "*Danish authorities order Ørsted's oil- and coal-fired power stations into operation", "In order to ensure the security of the electricity supply in Denmark, the Danish authorities have decided to order Ørsted to continue and resume operations of three of its power station units which use oil and coal as fuel." ""In order to ensure the security of the electricity supply, the Danish authorities have today ordered us to continue as well as resume operations at some of our oil- and coal-fired power stations. We will, of course, comply with the Danish authorities' order, and we'll now begin preparing and maintaining the units as well as securing the staffing necessary to operate them."* Our Supplemental Documents package includes the Orsted release.

Oil – US oil rigs down -2 to 602 oil rigs at Oct 7

US oil rigs -2 WoW

Baker Hughes released its weekly North American drilling activity data this morning. This week US oil rigs were -2 to 602 oil rigs. US oil rigs have been more or less rangebound for the past 16 weeks from 591 to 605 oil rigs. US oil rigs hit a 14-week low of 591 four weeks ago. US oil rigs are now +423 oil rigs since the Covid Sept 17, 2020 oil rigs of 179 oil rigs. And US oil rigs are +169 oil rigs YoY. US gas rigs were -1 WoW to 158 gas rigs with the declines coming in offshore rigs with no real change in any of the major basins.

Figure 8: Baker Hughes Total US Oil Rigs



Source: Baker Hughes

Oil – US frac spreads +1 to 291 spreads for the week ending Oct 7

Frac spreads +1 to 291

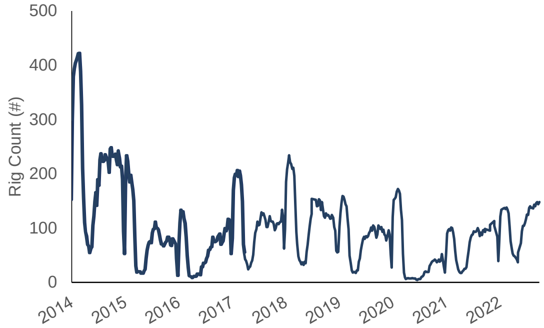
Mark Rossano (C6 Capital Holdings) held his weekly US frac spread recap for the week ending Oct 7 on the Primary Vision network. YouTube video is at [LINK]. For the week ending Oct 7, US frac spreads at the high point in the week were +1 to 291 spreads. Here are some of his comments on the week. It's one of the few times that he has seen all areas except three with frac activity. Reinforces that one of the items he sees as moving frac spreads up to the 300 level are the smaller basins. He reminded that they track many pieces, his competitors are way below his estimates, and the reason is he follows the mom & pops that may only have 1 or 2 spreads, and the smaller basins. Based on what he sees on the ground, he does not see any indications of a shift to a slowdown. He used the San Juan Basin as an example of a smaller basin with increasing spreads

Oil – Total Cdn rigs up +2 WoW to 215 total rigs, +48 rigs YoY

Cdn rigs up WoW

Total Cdn rigs were +2 to 215 rigs as of Oct 7, 2022. Cdn oil rigs were +4 to 148 oil rigs. Cdn gas rigs were -2 to 67 rigs. The recent softness in oil prices has led to a continued flattish rig count until the ramp up in winter drilling season. Total rigs are now +140 vs the comparable Covid period of 75 rigs on Oct 1, 2020. Cdn drilling has recovered YoY, a year ago Cdn oil rigs were 95 and Cdn gas rigs were 72 for a total Cdn rigs of 167, meaning total Cdn oil rigs are +53 YoY to 148 oil rigs and Cdn gas rigs are -5 to 67 gas rigs.

Figure 9: Baker Hughes Total Canadian Oil Rigs



Source: Baker Hughes

Oil – US weekly oil production stays flat at 12.0 mmb/d

US oil production flat WoW

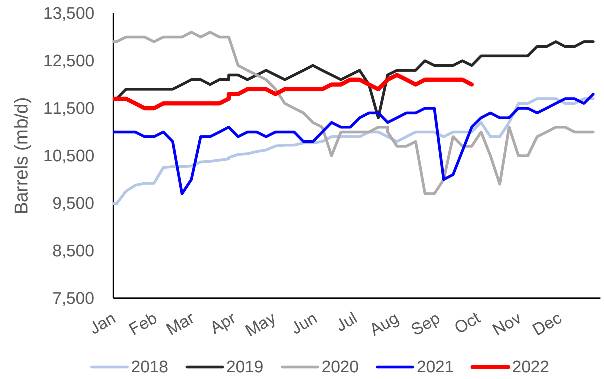
Please note the below comment that was in our Oct 2, 2022 Energy Tidbits on the EIA Form 914 actuals for oil production in July. The EIA provides weekly estimates of US oil production, which stayed flat at 12.0 mmb/d for the week ended Sept 30. The EIA weekly oil estimates show US oil production has been range bound between 11.9 to 12.1 mmb/d for the past 21 weeks. Lower 48 production was flat WoW at 11.6 mmb/d last week and Alaska saw an immaterial increase WoW of 0.001 mmb/d to 0.435 mmb/d from 0.434 mmb/d. US oil production is up YoY at +0.7 mmb/d, a smaller YoY increase than we have seen in the recent weeks as at this time last year Gulf operations resumed following Hurricane Ida. Production is still down significantly at -1.1 mmb/d since the 2020 peak of 13.1 mmb/d on March 13.

Figure 10: EIA's Estimated Weekly US Oil Production

	Week 1		Week 2		Week 3		Week 4		Week 5	
Year-Month	End Date	Value	End Date	Value	End Date	Value	End Date			
2020-Jan	01/03	12,900	01/10	13,000	01/17	13,000	01/24	13,000	01/31	12,900
2020-Feb	02/07	13,000	02/14	13,000	02/21	13,000	02/28	13,100		
2020-Mar	03/06	13,000	03/13	13,100	03/20	13,000	03/27	13,000		
2020-Apr	04/03	12,400	04/10	12,300	04/17	12,200	04/24	12,100		
2020-May	05/01	11,900	05/08	11,600	05/15	11,500	05/22	11,400	05/29	11,200
2020-Jun	06/05	11,100	06/12	10,500	06/19	11,000	06/26	11,000		
2020-Jul	07/03	11,000	07/10	11,000	07/17	11,100	07/24	11,100	07/31	11,000
2020-Aug	08/07	10,700	08/14	10,700	08/21	10,800	08/28	9,700		
2020-Sep	09/04	10,000	09/11	10,900	09/18	10,700	09/25	10,700		
2020-Oct	10/02	11,000	10/09	10,500	10/16	9,900	10/23	11,100	10/30	10,500
2020-Nov	11/06	10,500	11/13	10,900	11/20	11,000	11/27	11,100		
2020-Dec	12/04	11,100	12/11	11,000	12/18	11,000	12/25	11,000		
2021-Jan	01/01	11,000	01/08	11,000	01/15	11,000	01/22	10,900	01/29	10,900
2021-Feb	02/05	11,000	02/12	10,800	02/19	9,700	02/26	10,000		
2021-Mar	03/05	10,900	03/12	10,900	03/19	11,000	03/26	11,100		
2021-Apr	04/02	10,900	04/09	11,000	04/16	11,000	04/23	10,900	04/30	10,900
2021-May	05/07	11,000	05/14	11,000	05/21	11,000	05/28	10,800		
2021-Jun	06/04	11,000	06/11	11,200	06/18	11,100	06/25	11,100		
2021-Jul	07/02	11,300	07/09	11,400	07/16	11,400	07/23	11,200	07/30	11,200
2021-Aug	08/06	11,300	08/13	11,400	08/20	11,400	08/27	11,500		
2021-Sep	09/03	10,000	09/10	10,100	09/17	10,600	09/24	11,100		
2021-Oct	10/01	11,300	10/08	11,400	10/15	11,300	10/22	11,300	10/29	11,500
2021-Nov	11/05	11,500	11/12	11,400	11/19	11,500	11/26	11,600		
2021-Dec	12/03	11,700	12/10	11,700	12/17	11,600	12/24	11,800	12/31	11,800
2022-Jan	01/07	11,700	01/14	11,700	01/21	11,600	01/28	11,500		
2022-Feb	02/04	11,600	02/11	11,600	02/18	11,600	02/25	11,600		
2022-Mar	03/04	11,600	03/11	11,600	03/18	11,600	03/25	11,700		
2022-Apr	04/01	11,800	04/08	11,800	04/15	11,900	04/22	11,900	04/29	11,900
2022-May	05/06	11,800	05/13	11,900	05/20	11,900	05/27	11,900		
2022-Jun	06/03	11,900	06/10	12,000	06/17	12,000	06/24	12,100		
2022-Jul	07/01	12,100	07/08	12,000	07/15	11,900	07/22	12,100	07/29	12,100
2022-Aug	08/05	12,200	08/12	12,100	08/19	12,000	08/26	12,100		
2022-Sep	09/02	12,100	09/09	12,100	09/16	12,100	09/23	12,000	09/30	12,000

Source: EIA

Figure 11: US Weekly Oil Production



Source: EIA, SAF

EIA Form 914 July oil production is only +166,000 b/d vs Dec 2021 exit

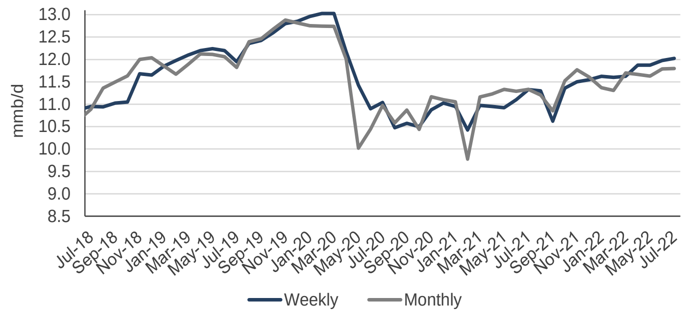
Here is what we wrote in our Oct 2, 2022 Energy Tidbits. "*US oil production is viewed as a key global oil supply growth, but to date, the growth in 2022 has been less than expected. There are two key takeaways from the EIA's look back at July actual oil production – July is only +166,000 b/d vs the Dec 2021 exit and was -230,000 b/d below the weekly estimates. The EIA released its Form 914 data [LINK] on Friday, which is the EIA's "actuals" for July US oil and natural gas production. (i) Form 914 estimates total US oil production is up 0.022 mmb/d MoM to 11.800 mmb/d in July. The actuals for July were >200,000 b/d lower than the EIA's weekly estimates that worked out to just over 12.030 mmb/d. (ii) One of the growing questions has been how much US oil will grow in 2022. July actuals at 11.800 mmb/d is only +166,000 b/d more than the year end Dec 2021 average of 11.634 mmb/d.*"

Figure 12: EIA Form 914 US Oil Production

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022	11,369	11,316	11,701	11,668	11,629	11,788	11,800					
2021	11,124	9,925	11,326	11,305	11,356	11,356	11,347	11,277	10,918	11,569	11,790	11,634
2020	12,852	12,842	12,797	11,914	9,713	10,442	11,006	10,577	10,921	10,457	11,196	11,168
2019	11,869	11,673	11,913	12,149	12,154	12,218	11,902	12,486	12,590	12,809	13,000	12,978
2018	10,001	10,281	10,467	10,500	10,435	10,641	10,897	11,392	11,443	11,509	11,886	11,945
2017	8,875	9,110	9,166	9,101	9,185	9,111	9,247	9,250	9,517	9,669	10,085	9,983
2016	9,202	9,066	9,101	8,874	8,835	8,676	8,662	8,690	8,544	8,804	8,903	8,816

Source: EIA

Figure 13: EIA Form 914 US Oil Production vs Weekly Estimate



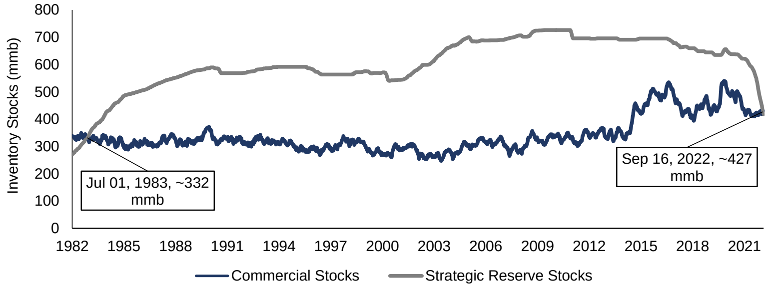
Source: EIA

Oil – US SPR reserves continue to go lower than commercial crude oil reserves

SPR reserves keep going lower

Oil in US Strategic Petroleum Reserves (SPR) stayed below total US commercial crude oil reserves in the Sept 30 week and the deficit widened this week. The below graph notes SPR reserves on Sept 16 were 427 mmb and fell below commercial crude oil reserves for the first time since July 1, 1983. The EIA's new weekly oil data for Sept 30 has SPR reserves at 416.39 mmb vs commercial crude oil reserves at 429.20 mmb.

Figure 14: US Oil Inventories: Commercial & SPR



Source: EIA

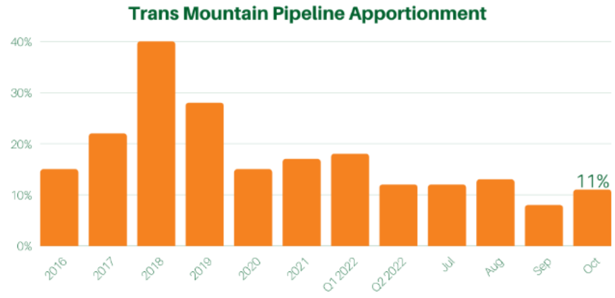
Oil – Trans Mountain apportioned by 11% for Oct

Trans Mountain apportionment

On Thursday, Trans Mountain released an update [LINK] on its capacity for the month of October. Total system nominations are apportioned by 11% for Oct (Sep was 8%), meaning 11% of demand for the pipeline exceeds its capacity. Trans Mountain reminds that it has been running at full capacity and has seen regular monthly apportionment for over a decade ie, the clear sign for a need for expansion. The Trans Mountain apportionment update also includes a bit of an apportionment 101. Trans Mountain wrote "*When a pipeline experiences significant and prolonged apportionment like in the case of the existing Trans Mountain Pipeline, it's one signal that more capacity is needed. Apportionment can bring with it a discounting of prices as producers compete to sell what they can through the pipeline before having to use another pipeline or other modes of transport to another, less profitable market.*

It can also mean the buyers at the end of the pipeline are forced to source their shortfall of supply from alternate, less desirable sources." Below is a chart which shows the average apportionment since 2016. Our Supplemental Documents package includes the Trans Mountain release.

Figure 15: Trans Mountain Pipeline Apportionment



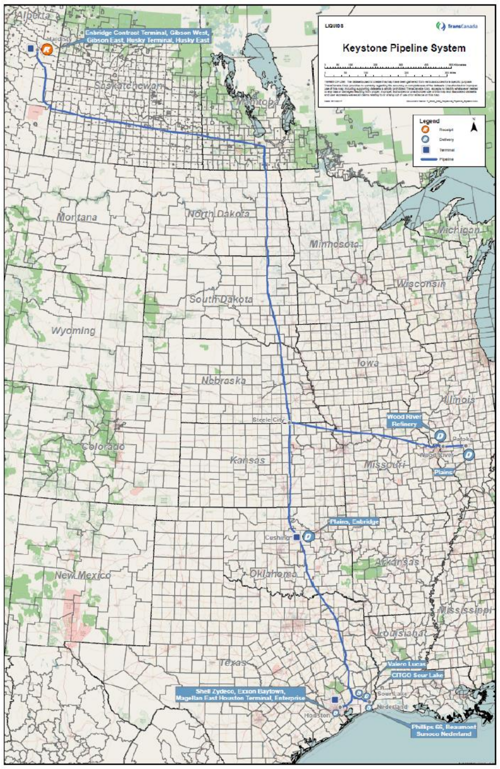
Source: Trans Mountain Pipeline

Oil – Keystone to boost capacity, at least temporarily, by 110,000 b/d in Nov

Keystone adding 110,000 b/d capacity in Nov

It looks like an overlooked tidbit from TC Energy Q2 release/call on July 28 is coming true – Keystone is add capacity in Nov, reportedly increasing capacity by 110,000 b/d to take capacity to ~720,000 b/d. Hopefully, this temporary boost to capacity can withstand any tests such that it could turn into a permanent capacity addition. We just do not know at this time if it will be permanent. But we don't think TC Energy would test to this level if they didn't think it could be a permanent change. On Thursday, Argus reported [LINK] "*TC Energy's Keystone Pipeline system will be able to handle up to an additional 110,000 b/d of crude starting in early November, according to a notification sent to shippers. The notification seen by Argus indicates shippers will have room to ship as much as 720,000 b/d of crude on the system starting around 7 November, up from the 610,000 b/d reported in July. The Keystone pipeline system originates in Hardisty, Alberta, and includes more than 2,600 miles (4,184km) of pipe delivering mostly heavy crude to key market hubs including Patoka, Illinois; Cushing, Oklahoma; and Port Arthur, Texas*." Our July 31, 2022 Energy Tidbits highlighted TC Energy's Q2/2022 reporting ""*Additionally, during the quarter the Keystone Pipeline System safely delivered nearly 610,000 Bbl/d as we placed approximately 30 per cent of the 2019 Open Season contracts into service effective April 1, 2022 with additional volumes anticipated through year end*." In the Q2 call, mgmt. did not give any indication of how many b/d would be in the additional volumes anticipated through year end. Argus is reporting that is an additional 110,000 b/d. These additional volumes will be needed to help reduce the WCS/WTI differential that has been hit with the BP 430,000 b/d Whiting refinery down until sometime in 2023 and the BP 160,000 b/d Toledo refinery down for some yet to be disclosed period. Both refineries primarily run on Cdn crude. Our Supplemental Documents package includes a full page blow up of the detailed Keystone Pipeline map.

Figure 16: Keystone Pipeline System



Source: TC Energy

Oil – Cdn oil differentials widened this week

No surprise, Cdn WCS oil prices have underperformed, which means there has been a widening of the WCS/WTI differential. BP's 430,000 b/d Whiting refinery and BP's 160,000 b/d Toledo refinery going down have led to a widening of the WCS/WTI differential. The differential widened this week from $22.00 to close Friday at $24.85. And almost exactly double year ago differential of $12.45 on Oct 7, 2021.

Cdn oil differentials hit this week

Figure 17: WCS/WTI oil differential

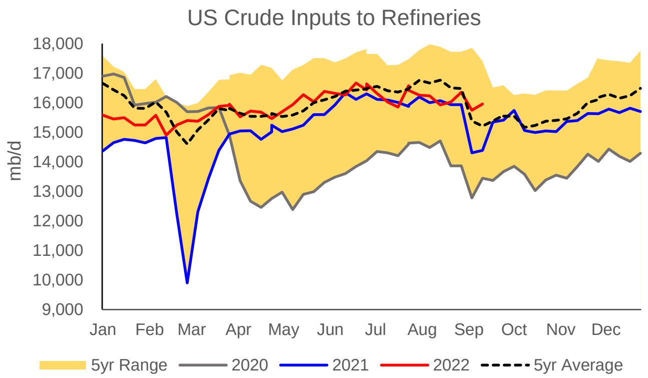
Source: EIA, Bloomberg

Oil – Refinery inputs up +0.210 mmb/d WoW to 15.961 mmb/d

Refinery inputs up WoW

September and October are normally turnaround months so, in October, we will typically see a mix of turnarounds starting and turnarounds ending. It will be a mix. The EIA crude oil input to refinery data is for the week ended Sep 30. The EIA reported crude oil inputs to refineries up +0.210 mmb/d to 15.961 mmb/d for the week ended Sep 30 and are up +1.084 mmb/d YoY. But as noted the below item, we some major new turnarounds. Refinery utilization was at 91.3%, which is +0.7% YoY. Total products supplied (i.e., demand) increased WoW, up 0.061 mmb/d to 20.831 mmb/d, and Motor gasoline was up 0.640 mmb/d at 9.465 mmb/d from 8.825 mmb/d last week. Motor gasoline now sits above the 5-year average of 9.081 mmb/d. The 4-week average for Motor Gasoline was down -0.376 mmb/d YoY to 8.777 mmb/d. The 4-week average of Total demand was down -0.780 mmb/d YoY to 19,963 mmb/d.

Figure 18: US Refinery Crude Oil Inputs (thousands b/d)



Source: EIA

Oil – More Gulf Coast refinery turnarounds

More Gulf Coast refinery turnarounds

September/October are typically big months for refinery turnaround season. We don't track all the refinery turnarounds, but a couple of higher profile refinery turnarounds were noted this week. (I) Exxon's Beaumont refinery on the Texas Gulf Coast has shut in its Crude Unit A and companion Vacuum Distillation Unit for maintenance. This is expected to last about three weeks. Bloomberg wrote "**The 119.4k b/d CDU A and the 46.8k b/d VDU A were shut Sunday morning, according to Wood Mackenzie's Genscape * CDU A is the smaller of 2 crude units and processes light, sweet crude * Exxon doesn't comment on specific units, spokeswoman Julie King said * Beaumont can process 269k b/d of crude a day*". (ii) Pemex 312,000 b/d Deer Park. On Tuesday, Bloomberg reported "P*emex Shuts Deer Park FCC for About 6 Weeks of Maintenance. Mexico's state-owned oil company Petroleos Mexicanos, or Pemex, has begun a turnaround on the sole fluid catalytic cracker at its refinery on the Houston Ship Channel that will last about six weeks, people familiar with operations say. * The 75.1k b/d FCC was shut Saturday for planned work that will extend into the second week of November, after which restoring normal operations to the gasoline-making unit will take several days to a week".*

Oil – US "net" oil imports down -0.407 mmb/d WoW at 1.396 mmb/d

US "NET" imports were down -0.407 mmb/d to 1.396 mmb/d for the Sep 30 week. US imports were down -0.502 mmb/d to 5.947 mmb/d. US exports were down -0.095 mmb/d to 4.551 mmb/d. The WoW increase in US oil imports was driven by US's Top 10 imports by country which were down by 0.187 mmb/d from Top 10. In addition, countries outside the Top 10 contributed to a -0.315 mmb/d decrease in exports. Some items to note on the by country data. (i) Canada was down this week by -0.477 mmb/d to 3.298 mmb/d, in part due BP Toledo 160,000 b/d refinery being down. (ii) Saudi Arabia was down -0.024 mmb/d to 0.398 mmb/d this week. (iii) Colombia was up 0.288 at 0.360 mmb/d. (iv) Ecuador was up 0.012 mmb/d at 0.203 mmb/d. (v) Iraq was up 0.073 mmb/d to 0.275 mmb/d. (vi) Mexico was down -0.059 mmb/d to 0.539 mmb/d.

US "net" oil imports down WoW

Figure 19: US Weekly Preliminary Oil Imports by Major Countries

(thousand b/d)	July 29/22	Aug 5/22	Aug 12/22	Aug 19/22	Aug 26/22	Sep 2/22	Sep 9/22	Sep 16/22	Sep 23/22	Sep 30/22	WoW
Canada	3,673	3,351	3,455	3,834	3,093	3,538	2,937	3,868	3,775	3,298	-477
Saudi Arabia	500	412	244	247	330	423	425	489	422	398	-24
Venezuela	0	0	0	0	0	0	0	0	0	0	0
Mexico	815	710	661	503	440	965	484	855	598	539	-59
Colombia	328	174	214	143	289	261	288	212	72	360	288
Iraq	369	181	163	225	401	222	343	120	202	275	73
Ecuador	243	212	36	278	231	144	199	319	191	203	12
Nigeria	57	161	253	72	137	2	232	0	0	0	0
Kuwait	0	0	0	0	0	0	0	0	0	0	0
Angola	0	0	0	0	0	0	0	0	0	0	0
Top 10	5,985	5,201	5,026	5,302	4,921	5,555	4,908	5,863	5,260	5,073	-187
Others	1,357	970	1,106	869	1,035	1,224	884	1,084	1,189	874	-315
Total US	7,342	6,171	6,132	6,171	5,956	6,779	5,792	6,947	6,449	5,947	-502

Source: EIA

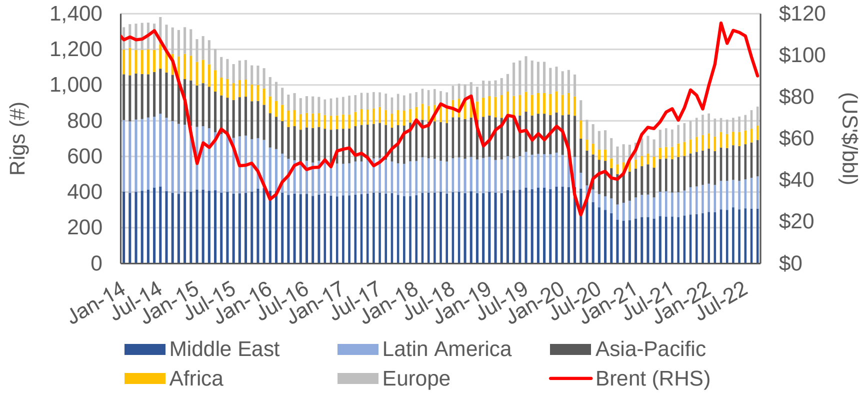
Oil – Baker Hughes International rigs +19 MoM to 879 rigs in September

Baker Hughes posted its monthly update to international rigs on Friday, which showed a fifth consecutive month of increasing rig count. (i) Total international rigs were +19 rigs MoM to 879 rigs in September, which is up from the recent bottom of 806 in April. Sept 2022 rigs are +92 rigs YoY from 787 in Sept 2021. (ii) Ukraine is +4 rigs from 23 active rigs in August and is almost back to year ago levels. This comes from being at a low of 5 in May with a big pivot in momentum on the Ukraine war. Saudi Arabia increased by +4 rigs MoM to erase the -4 rig decrease in August. Pakistan was down -5, while Indonesia was -1 MoM. Mozambique rig activity was down -3 rigs to reach the lowest level since January. Libya's rig activity has been

International rigs +19 MoM

hit by internal conflict and uncertainty recently, but added +2 rigs totaling 4 in September, from a low of 2 in August. Australia added +3 rigs to be at 23 active rigs, the highest level in a year. Russia has been hit in the major project area, Sakhalin, with rigs dropping to zero in May and June after maintaining a steady 5 rigs for 17 months. (iii) September of 879 rigs were +12% YoY from 787 in September 2021, but still down 17% vs pre-Covid March 2020 of 1,059 rigs. The YoY rig count is as followed: Asia-Pacific +11, Africa +2, Europe +0, Latin America +40, and the Middle East +39. North Sea rigs dropped MoM with the UK and Norway up -2 and -1 rigs respectively. Lain America continues to be strong with Columbia and Argentina both up YoY at +13 and +11 respectively. Middle East is the key YoY increase region led by Iraq +12 rigs YoY, UAE +11 rigs YoY, and Saudi Arabia +11 rigs YoY. Below is our graph of international rigs by region and avg monthly Brent price.

Figure 20: Baker Hughes International Rig Count and Brent Price



Source: Baker Hughes, Bloomberg

Big ramp up in Ukraine drilling rigs with change in war momentum

The country that jumped out in the new Baker Hughes international rig count for September was Ukraine. Ukraine rigs have jumped up in the last two months. On Friday morning, we tweeted [LINK] "*Hope drilling rigs are a good forward indicator for Ukraine. Big jump in Ukraine drilling rigs in last 2 mths with the momentum shift in war. Pre-invasion Jan: 39 rigs. Apr/May: 5 rigs. June: 9 rigs. July : 10 rigs. Aug: 23 rigs. Sept: 27 rigs. Thx @bakerhughesco. #OOTT #NatGas.*

Oil – WSJ says Biden looking to loosen sanctions on Venezuela oil

US may loosen Venezuela oil sanctions

It looks like Biden wants to loosen sanctions on Venezuela oil so more oil can be exported to US and Europe refineries. On Wednesday, we tweeted [LINK] "*Negative to Cdn #Oil differentials if Biden reduces sanctions & VEN increases oil exports to EU & US. Gulf Coast refineries started to take Cdn oil as VEN, MEX production & exports declined. #Chevron 369,000 Pascagoula MS refinery could take VEN oil. Thx @GaripChile #OOTT.*" This would be a significant move to start to reopen Venezuela oil to export markets in the US and Europe. (i) WSJ posted an exclusive [LINK] *"The Biden administration is preparing to scale down sanctions on Venezuela's authoritarian regime to allow Chevron Corp. to resume pumping oil there, paving the way for a potential reopening of U.S. and European markets to* *oil exports from Venezuela, according to people familiar with the proposal."* But the WSJ also noted "*U.S. officials cautioned that the deal could fall through, because it is contingent on Mr. Maduro's top aides resuming talks with the opposition in good faith."* (ii) It looks like Chevron confirmed these discussions were happening. On Thursday morning, we tweeted [LINK] "*Will US reduce sanctions on VEN #oil? @SullyCNBC spoke to Chevron "they would not confirm the entire story [WSJ below] to me, but I got the sense, I'm not confirming it, but I will say it was directionally correct. How about this, Chevron did not deny the story to me". #OOTT*." CNBC's Brian Sullivan spoke to Chevron on Wed night and also noted that the easing of sanctions in Venezuela so that we could buy more, produce more oil there to import to the US. We made a transcript of Sullivan's comments ""*Wall Street Journal, late last night, with an exclusive saying that the US is looking to ease sanctions on Venezuela so that Chevron, not so that, but in part Chevron will then be able to keep drilling and producing oil in Venezuela. I was in touch with Chevron last night, it was 2 in the morning here, 5 whatever pm there, they would not confirm the entire story to me, but I got the sense, I'm not confirming it, but I will say it was directionally correct. How about this, Chevron did not deny the story to me. Obviously, they don't want to get into the politics of it but Joe that would be an easing of sanctions in Venezuela so that we could buy more, produce more oil there to import to the United States. Kind of maybe trading OPEC and Russian oil for Venezuelan oil."* (iii) Biden Administration confirmed some talks were going on but that they weren't there yet. On Thursday, we tweeted [LINK] "*Great follow up question by @BeckyQuick on to @amoshochstein on #WSJ report US looking to loosen sanctions on VEN #Oil. "we're not there yet" says Hochstein when Becky pressed what was wrong with WSJ report. Not there yet but the desired end game looks clear. #OOTT*." Amos Hochstein is Senior Advisor for Energy Security for the Biden Administration. He was asked about the WSJ report, said "*there's a lot left to be desired by that article".* Becky Quick quickly asked what's wrong with the article, it says you are preparing to loosen sanctions, is that it or not the case?" Watching the interview, it didn't seem Hochstein was expecting the follow up, and said "*I think, we're, its just very, we're not there yet. And I think we will continue to, I'm sure I will have something to update you if something changes. But frankly, there is nothing for me to report to you at this point."* Our Supplemental Documents package includes the WSJ report, the transcripts we made of the CNBC Brian Sullivan comments and the CNBC interview with Amos Hochstein.

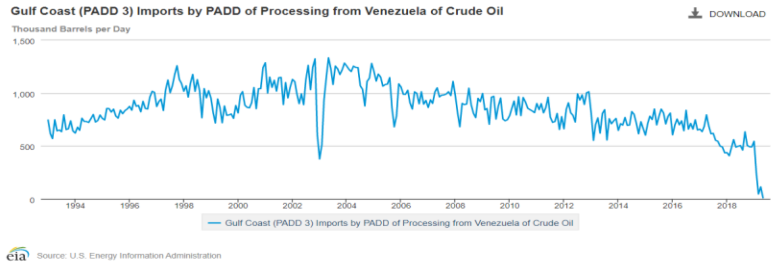
Chevron reportedly said could double Venezuela's 800,000 b/d in months

Here is what we wrote in our March 27, 2022 Energy Tidbits memo. "*On Tuesday, we tweeted [LINK] on the WSJ report "Chevron, Waiting It Out in Venezuela, Tells U.S. Now Is the Time to Pump Oil Company pledges to make up for fall in Russian exports". [LINK]. Chevron reportedly is telling the administration they can double Venezuela's oil production within months. The WSJ wrote "For months, Biden administration officials snubbed top executives and lobbyists for Chevron Corp. who had pressed officials in Washington to ease sanctions so the company could boost production in Venezuela, where the U.S. has banned such activities since 2019. Then Vladimir Putin invaded Ukraine. Now the Biden administration is listening closely to Chevron, say people familiar with the conversations, which says it can help double Venezuela's 800,000 barrels-a-day production within months. That could replace the loss of roughly 700,000 barrels a day the U.S. was importing from Russia before it attacked Ukraine. And it could help lower gasoline prices—a major concern* *for the Biden administration in a tough election year." Our Supplemental Documents package includes the WSJ report.*

Is it doable for Venezuela do double production? We think likely yes
Here is another excerpt from our March 27, 2022 Energy Tidbits memo. "*We saw a number of doubts that Venezuela could double oil production with months. The WSJ report doesn't say or speculate how Chevron plans to accomplish this. But our feeling is that it likely doable if we just think about the stories we have heard over the past few years. One of the key reasons for the recent increase in production is Iran reportedly getting tankers to Venezuela of diluent that can be blended with Venezuela extra heavy to make it movable. A steady access to diluent would likely be a key factor for added near term oil production. Venezuela has been short equipment and tool. Recall the reports from a couple years ago on how some PDVSA oil workers were selling their tools so they could put food on the table. We suspect there are hundreds of wells that are shut-in because of a pump jack went down and there are no replacement parts. We suspect there are hundreds of wells that could use workovers. Reliable power, oil and gas operations need power and Venezuela has been hit for several years with power outages and unreliable power. These are a just a few of the likely reasons why it's likely that Venezuela could double its oil productio."*

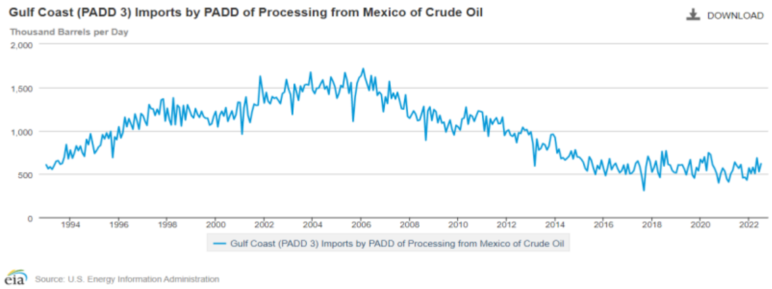
A return of Venezuela would be negative for Cdn heavy/medium oil
Our Thursday tweet also started off "*Negative to Cdn #Oil differentials if Biden reduces sanctions & VEN increases oil exports to EU & US. Gulf Coast refineries started to take Cdn oil as VEN, MEX production & exports declined."* We have highlighted this point for years – Cdn oil to the Gulf Coast refineries only really started as Mexico and Venezuela production and exports declined. Our tweet included the below EIA crude oil imports in PADD 3 (Gulf Coast) graphs, which remind how Cdn heavy/medium crude was able to penetrate PADD 3 (Gulf Coast) because there was a need with declining Mexico and Venezuela crude oil. Conversely, if Venezuela increases, it will mean more crude to the Gulf Coast especially. Please note the below EIA graphs all have different scales.

Figure 21: Gulf Coast PADD 3 Crude Oil Imports From Venezuela



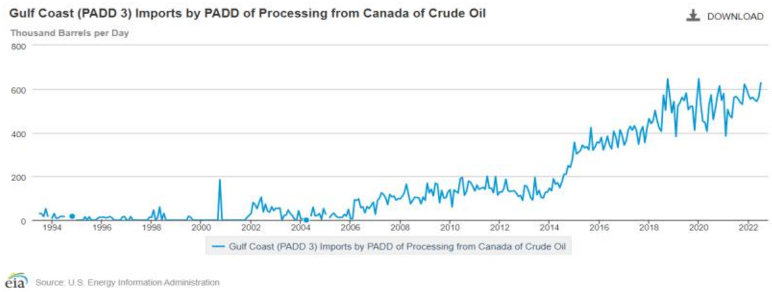
Source: EIA

Figure 22: Gulf Coast PADD 3 Crude Oil Imports From Mexico



Source: EIA

Figure 23: Gulf Coast PADD 3 Crude Oil Imports From Canada



Source: EIA

Oil – Russia reminds US/EU it will not cooperate with their oil price cap

Russia won't cooperate with oil price cap

Earlier this morning, we tweeted [LINK] on an overlooked story this week – Russia effectively challenging the US/EU to go ahead on their price cap on Russian oil as it will only lead to higher oil prices to consumers. Russia has clearly set its challenge to the US and EU on their objective to set a price cap on Russian oil. The US and EU believe that, by doing so, they can force Russia to sell oil at a discounted price and keep Russian oil flowing so global oil markets aren't undersupplied. The assumption being Russia will go along with this concept. On Tuesday, Russian's energy minister Novak reiterated Russia's position they won't supply oil to countries that will use the price cap. And, by the way, warned that by doing so, the US/EU price cap will lead to an undersupplied oil market and oil prices going higher. On Tuesday, TASS reported [LINK] "*Russia does not intend to supply oil to consumers using the oil price cap, Deputy Prime Minister Alexander Novak told reporters on Wednesday. "We are against such nonmarket instruments; such precedents are very harmful for the energy market. This leads only to a deficit, to a price hike; consumers will pay for that, if they want to introduce such a mechanism," the official said. "It is not feasible for us to support deliveries if such a tool is introduced to consumers that will use the price cap. We will supply oil only to those supporting market-based pricing mechanisms," Novak noted*."

Oil – OPEC+ decreases quotas for November production -2.0 mmb/d

OPEC+ decreases November production

OPEC+ had it's 33rd ministerial meeting on Wednesday [LINK] which was also the first in-person meeting since Covid hit. This was a last minute change to an in-person meeting and that brought high expectations and OPEC+ did so with a larger cut of 2 mmb/d to quota starting in November. (i) Notwithstanding the west calling OPEC+ decision political and one that shows Saudi Arabia is siding with Russia, OPEC+, especially in the post -meeting press conference highlighted that this cut was due to the uncertainty in the global economic and oil markets. OPEC went thru a number of their slides at the press conference that noted the global consensus on concerns for the economy. (ii) OPEC stated, "*Reaffirm the decision of the 10th OPEC and non-OPEC Ministerial Meeting on 12 April 2020 and further endorsed in subsequent meetings, including the 19th OPEC and non-OPEC Ministerial Meeting on 18 July 2021..*" (ii) In addition, OPEC+ stated, "*Adjust downward the overall production by 2 mb/d from the August 2022 required production levels, starting November 2022 for OPEC and non-OPEC Participating Countries.*" (iii) *"Extend the compensation period to 31 March 2023. Compensation plans should be submitted in accordance with the statement of the 15th OPEC and non-OPEC Ministerial Meeting."* Our Supplemental Documents package includes the OPEC+ release.

Figure 24: OPEC+ November Required Production

November 2022-December 2023

	August 2022 Required Production	Voluntary Adjustment	Voluntary Production
Algeria	1,055	-48	1,007
Angola	1,525	-70	1,455
Congo	325	-15	310
Equatorial Guinea	127	-6	121
Gabon	186	-9	177
Iraq	4,651	-220	4,431
Kuwait	2,811	-135	2,676
Nigeria	1,826	-84	1,742
Saudi Arabia	11,004	-526	10,478
UAE	3,179	-160	3,019
Azerbaijan	717	-33	684
Bahrain	205	-9	196
Brunei	102	-5	97
Kazakhstan	1,706	-78	1,628
Malaysia	594	-27	567
Mexico	1753	0	1,753
Oman	881	-40	841
Russia	11,004	-526	10,478
Sudan	75	-3	72
South Sudan	130	-6	124
OPEC 10	26,689	-1,273	25,416
Non-OPEC	17,167	-727	16,440
OPEC+	43,856	-2,000	41,856

Source: OPEC

Oil – We were surprised OPEC+ is moving away from monthly meetings

OPEC+ monthly meetings ended

OPEC+ 2 mmb/d cut to November quotas wasn't a surprise, but we were surprised to see OPEC state "*Adjust the frequency of the monthly meetings to become every two months for the Joint Ministerial Monitoring Committee (JMMC).*" In addition, OPEC+ is moving the full ministerial meetings to its old twice a year schedule. We realize it's unrealistic to have full OPEC+ monthly meetings in-person, but we were surprised to see OPEC+ return to full ministerial meetings twice a year, and even reduce the JMMC meetings to once every two months. In-person meetings are too tough once-a-month, but they did prove that video meetings can work on that frequency. We were surprised that they didn't keep some sort of monthly video meetings in between in-person meetings. Saudi Energy Minister Abdulaziz highlighted how OPEC will continue to be attentive to the market, but we have always believed the advantage of monthly meetings was such that allowed OPEC to ensure that the market never ran away from them. Rather they could quickly adjust to any changing views, as evidenced by this month's changes. There is still too much uncertainty in the world from items like China recovering from Covid, global recession or not, rising interesting rates, etc, which is why we are surprised they are moving away from some form of monthly meetings.

Oil – OPEC Secretary General, net effective OPEC cut is closer to 1 mmb/d

OPEC Secretary General comments

On Friday, Energy Intelligence Group posted Amena Bakr's interview with OPEC Secretary General Haitham al-Ghais. [LINK] There were a number of good insights from al-Ghais. We tweeted [LINK] on three of the key insights. (i) The effective cut is closer to 1 mmb/d. al-Ghais said ""*Well first of all, we said 2 million b/d. That's the agreement. That's what it stipulates. But as you know, some countries are already having issues with meeting their current production targets, so the net effective cut is let's say closer to 1 million b/d*." (ii) See an overhang of up to 2 mmb/d. al-Ghais said "*And this then leads to a number where we see that there is a serious potential for an overhang, a surplus in the market and Q4 of this year … and leading into early next year." "We have several scenarios. It depends which scenario you look at. We have a base-case scenario, high-case and low-case scenario. But this is the internal mechanics of how we do analysis. With that in mind, our modelers have developed a scenario where we see an overhang of up to 2 million b/d*.". (iii) Next week's OPEC Monthly Oil Market Report is released on Oct 12 and OPEC should be be lowering its oil demand forecast for 2022 and 2023. Al-Ghais said "*but our monthly report next month is going to be issued next week and I think we will be showing a reduction in our demand growth forecast for 2022 and 2023. This is in line with the views ... [of] a potential global slowdown in the economy*." (iv) One that we didn't have space for in our tweet was al-Ghais reminding of the need for investment. Al-Ghais said "*That's what we've always done in Opec. And now with Opec-plus, since 2016, we have tried to make sure that there's adequate capacity, but that requires two things. Again, investment, investment, investment, these are the key words or key word. I keep saying it. What we are doing here is to try and prevent an unstable market. We are trying to make sure that the market is stable in order to encourage investors, as we believe investments are essential*." Our Supplemental Documents package includes the Energy Intelligence Group interview.

Oil – Next OPEC and non-OPEC ministerial meeting (ONOMM) is December 4

OPEC+ meeting December 4

The short press release said that the next meeting, the 34th OPEC and non-OPEC Ministerial Meeting, will be on Sunday December 4, 2022. We assume it will be an in-person meeting again.

Oil – Saudi MBS "simply, I do not care" if Biden misunderstands something about him

MBS "simply, I do not care" re Biden

We couldn't help remember The Atlantic's posted interview with MBS on March 3 and his comments on Biden and the US when hearing the outrage and shock from Biden and fellow Democrats that Saudi Arabia would lead the charge and side with Russia in driving forward the big OPEC+ production cut. We couldn't help think of MBS prior comments from early March. On Friday, we tweeted [LINK] "*ICYMI. @gcaw asked #MBS whether Biden misunderstands something about him. "Simply, I do not care," he replied. Alienating the Saudi monarchy, he suggested, would harm Biden's position. "It's up to him to think about the interests of America." He gave a shrug. "Go for it." #OOTT."* Perhaps the most relevant part of MBS comments were saying "Go for it" if Biden wants to alienate the Saudi monarchy.

The Atlantic's MBS interview on March 3

Here is what we wrote in our March 6, 2022 Energy Tidbits memo. "*The Atlantic's March 3 report "Absolute Power" [LINK] based on its interviews Saudi crown prince Mohammed bin Salman got some good headlines. MBS says their "aim is to keep it and strengthen it" talking about their long historical relationship with the US. The headlines were on his Biden comments and warning to not interfere in Saudi domestic issues. The Atlantic wrote "We asked whether Biden misunderstands something about him. "Simply, I do not care," he replied. Alienating the Saudi monarchy, he suggested, would harm Biden's position. "It's up to him to think about the interests of America." He gave a shrug. "Go for it." For now, MBS's main request to the outside world, and especially the United States, is the usual request of misbehaving autocrats—namely, to stay out of his internal affairs. "We don't have the right to lecture you in America," he said. "The same goes the other way." Saudi affairs are for Saudis. "You don't have the right to interfere in our interior issues." It reminds that no one should expect the Saudi's to bend over in anyway to the US on oil. The problem for Biden and the Democrats is that it's difficult to reverse their view on MBS. We look at it as another of the situations where Biden and the Democrats like to have a villain to make sure they can get people onside their views. But by doing so, it makes it difficult for Biden to back track in a public way. It's like now with the oil companies, they really can't say anything positive about them or ask them to help without looking very weak. They made the oil companies the villains to sell energy transition for so long. How can they go back and say something good. They made MBS out to be a huge villain, Biden's team making it clear that Biden wouldn't meet or talk with MBS, only the King, they pulled out a Patriot missile defense system from Saudi Arabia, and have supposedly not given in to Saudi's request for more Patriot missiles to replace the shot missiles. So no surprise by the MBS comments on US. And unfortunately for the US, it means that Saudi isn't likely to help the US unless it helps them. We will be watching to see if there are reports on restocking Patriot missiles and any potential MBS/Biden meeting. Our Supplemental Documents package includes The Atlantic report."*

Saudi King told Biden OPEC+ is managing oil markets just fine

Here is another item from our March 6, 2022 Energy Tidbits memo. "*MBS comments in The Atlantic remind of the recent Biden call to King Salman on potential Saudi help to produce more oil to help relieve oil and gasoline prices. In our Feb 13, 2022 Energy Tidbits, we wrote "There was a good reminder this week to look at two leaders separately report on one conversation. On Wednesday, Biden called Saudi King Salman and one of the topics was oil and Saudi Arabia's ability to help Biden in his move to get more oil in the market. The White House wrote [LINK] "Both leaders further reiterated the United States' and Saudi Arabia's commitment to ensuring the stability of global energy supplies." It was interesting to see that most of the western media made it sound like Saudi was going to work with Biden. But that isn't what the Saudis said. King Salman basically told Biden OPEC+ is doing the right thing with their agreement ie. thanks but no thanks. This is why we tweeted [LINK] "Note @WhiteHouse didn't mention #KingSalman "stressed the importance of maintaining balance and stability in the oil markets, highlighting the role of the historic #OPEC+*

agreement in this regard, and the importance of maintaining the agreement" to #Biden on #Oil. #OOTT. The Saudi Press Agency (official news from Saudi Arabia) wrote [LINK] "Regarding energy and oil markets, the Custodian of the Two Holy Mosques stressed the importance of maintaining balance and stability in the oil markets, highlighting the role of the historic OPEC Plus agreement in this regard, and the importance of maintaining the agreement."

Oil – Aramco CEO warns space capacity will be eroded if China opens up a little bit

Aramco CEO warning

Saudi Aramco CEO Nasser's comments at the Energy Intelligence Forum in London on Tuesday hit the oil headlines because of his warning on the lack of surplus oil capacity. These are not new, but seemed to get more attention given they were made the day before the OPEC+ meeting. On Tuesday morning, we tweeted [LINK] "*#Aramco CEO "the world should be worried" "this is where we are heading. If China opens up a little bit, you will find out that spare capacity will be eroded completed" reports @MathisWilliam. #OOTT".* These comments were made before OPEC+ made their 2 mmb/d cut. Bloomberg wrote "The world's biggest oil company reiterated its warning that producers' spare capacity is running low and said there wouldn't be any left once China ends its Covid Zero strategy. "*The world should be worried,*" Saudi Aramco's Chief Executive Office Amin Nasser said at a conference in London. "*This is where we are heading. If China opens up a little bit you will find out that spare capacity will be eroded completely*."

Oil – Aramco CEO says can get to 12 mmb/d MSC in 30 days

Saudi can get to 12 mmb/d in 30 days

Energy Intelligence Group posted transcript of Saudi Aramco CEO Nasser's comments at the Energy Intelligence Forum in London on Tuesday. Nasser answered part of the question, but not all of the question. Nasser said that Aramco could get to its 12 mmb/d maximum sustainable capacity in 30 days, but ignored the part of the question as to how long Aramco could sustain 12 mmb/d. He was asked "*I am sure you've been asked this question a million times, but given the current market tightness, how fast could Aramco reach the 12 million b/d, and how long could you sustain it for*?" Nasser replied "*You know, based on our maximum sustained capacity policy, it's 90 days to bring that capacity. But in 2020, we were asked by the Ministry of Energy... [and] we brought it in 30 days. But I said it before and I'm going to say it again, we should be really concerned if we reach that level, because it means you are running in the world with no spare capacity. You will have volatility and prices will escalate so fast."*

Arab News July 25 report raised questions on Saudi's 12 mmb/d MSC

Our July 31, 2022 Energy Tidbits memo was titled "*What Does It Mean To Saudi's ~12 mmb/d Maximum Sustainable Capacity If Super Giant Ghawar Oilfield Is In Decline?"* There was a surprising Arab News July 25 report that raised questions on Saud Arabia's 12 mmb/d maximum sustainable capacity. Here is what we wrote in or July 31 memo. "*On Monday, we were surprised to see the Arab News report "Secret or reality: can Aramco produce 15 million barrels a day?" [LINK] (i) We tweeted [LINK] "Must read. Hard not to be very bullish #Oil on reality for #Aramco to MAINTAIN & increase production. Yes can produce 11-12 mmb/d but need massive investments & above all more reservoir management, Ghawar 3.8 mmbd of MSC is in decline, economics not there for new fields #OOTT." Our tweet did not do justice to the fact that there was so much more in the report including a number of frank* *statements that question the economics and potential for added oil production barrels. (ii) This is very bullish for oil. We think it reinforces that the view that markets shouldn't expect Saudi Arabia to produce on a sustainable basis much more than 11 mmb/d. This will be their quota in August. Their current maximum sustainable capacity is `12 mmb/d. (iii) It reminds Saudi Arabia always wants to keep 1 to 2 mmb/d of spare capacity. So if the current MSP is ~12 mmb/d, it is telling the market the most they will produce is ~11 mm/d, or basically the August quota. Mahdi writes "The Kingdom took on its shoulders the responsibility of keeping between 1 and 2 million barrels a day of oil as spare capacity". (iv) We were surprised by this comment on just maintaining the spare capacity as I don't' recall seeing it before. But it is normal oil operations. It costs money to maintain capacity. Mahdi writes "This idle capacity isn't free. It comes at a cost. There is an economic cost of not selling that oil, and there is a financial cost in the form of capex and opex to keep these wells and the surface facilities ready to pump this crude at any time." (v) It was very surprising to see the admission that the massive Ghawar oil field is in decline. This is what many oil watchers believe but it isn't something we have heard from Saudi Arabia. And this alone brings into question Saudi's ~12 mmb/d MSC. Mahdi wrote ""I think the world now can say goodbye to the 15-million-barrels-a-day scenario. Many of these increments have already been developed to maintain Aramco's 12 million MSC. Khurais 300,000 and 250,000 are history now. As for Berri's increment, it is coming online over the next two years. Now we will rely on Zuluf and Safaniyah to hit the 13 million barrels a day target and to compensate for the declines in older fields such as Abqaiq and Ghawar." (vi) And to get to produce 11 or 12 mmb/d requires massive investments. We are concerned that many assume that Saudi Aramco's stated MSC of ~12 mmb/d is there ready to be called up. But that isn't reality and Mahdi reminds that this requires massive investments. Mahdi writes "I don't doubt the ability of Aramco to produce at 11 or 12 million barrels a day because I didn't get my information from the officials who smile at the media but from those who were against seeing the company producing at that level. Aramco can do it but it will require more work for petroleum engineers who don't want to walk the extra mile and it will need massive investments and above all more reservoir management." As an aside, we have to believe there will be changes at some levels in Aramco with the multiple digs at Aramco. (vii) For the increase from ~12 mmb/d to 13 mmb/d MSC, this was surprising as he basically says that the key oil fields that have been assumed to add production aren't economic to bring on. This is another surprising statement. "First, there are tens of fields that are still not developed. There are more than 100 discovered fields but the majority if not all of production is coming from less than 25 of them. Yes all these undeveloped fields are giant but when combined can add something between 500,000 and 1 million barrels a day extra. However, the economics for bringing them online is still not there, not until the big fields are on decline." (viii) Note the part of the new fields that does look solid is the 250,000 b/d from the Neutral Zone fields. These are 500,000 b/d split 50/50 Saudi/Kuwait. Mahdi wrote "Second, observers tend to forget that Saudi Arabia shares massive resources in the partitioned zone with Kuwait. Khafji network of offshore fields can produce up to 300,000 barrels a day, while onshore fields in Wafra are able to add 200,000 barrels a day. Saudi Arabia was trying for years through Chevron to implement a steam flooding program that can unlock at least 5 billion barrels extra of heavy oil* *from Wafra. The steam injection project was undergoing until the two countries halted production from the entire zone between 2014 and 2015. With operations resuming normally in the zone, the prospect for seeing more oil from Wafra and Khafji is high." (ix) This is supposed to be a reassuring comment, but we have trouble buying into the thesis that Saudi can free up 1 mmb/d of oil for export markets by 2030 by substituting natural gas for oil in its power plants and by adding renewables. Maybe so, but it won't be cheap given it will be driven by renewable that has been so far behind and unconventional natural gas. (x) This is an excellent report to read and one that we believe is very bullish for oil for the 2020s. Our Supplemental Documents package includes the Arab News report."*

Can Saudi have ~12 mmb/d MSC if Ghawar is in decline?

Here is another excerpt from the July 31, 2022 Energy Tidbits memo. "*Long time oil followers remember the peak oil supply focus of the early 2000's that was made famous by Matt Simmons and his book Twilight in the Desert referring to his analysis that Saudi Arabia's big oil fields, in particular Ghawar, was in decline. The Arab News admission that Ghawar is declining is not a surprise to many oil watchers, but nothing we have seen admitted by Saudi Aramco. This is huge because if Ghawar is declining, we have to wonder how can Saudi Aramco have ~12 mmb/d MSC? Our tweet included the below table from the Saudi Aramco IPO registration document that showed 2018 data splitting out Saudi Aramco's 12 mmb/d of MSC. Ghawar is the largest component at 3.8 mmb/d or 32% of Saudi Aramco's 12 mmb/d MSC. We checked their 2021 financial disclosure and could not see an updated split of the 12 mmb/d MSC by oil field."*

Figure 25: Saudi Aramco MSC by oil field

Table 14: Key characteristics of certain of the Company's principal oil fields by reserves listed as at 31 December 2018G

	Liquids Reserves[1] (mmbbl)	Combined Reserves (mmboe)	MSC (mmbpd)
Ghawar	48,254	58,319	3.800
Khurais	20,100	21,402	1.450
Safaniyah	33,664	34,029	1.300
Shaybah	13,617	14,864	1.000
Zuluf	30,417	31,313	0.825
Other	80,718	96,963	3.625
Total	**226,770**	**256,890**	**12.000**

Source: Company.

Source: Saudi Aramco

Arab News is owned by MBS brother

Here is another excerpt from the July 31, 2022 Energy Tidbits memo. "*One of the reasons why we believe people should pay attention to the Arab News report is its ownership – it is reportedly owned by a brother of MBS and we do not believe this report, given its controversy, would not be published if MBS wasn't onside. We tweeted [LINK] "what makes the #Aramco story even more interesting. Note ownership of Arab News. @Wikipedia "At least as of May 2019, Arab News was* *owned by Prince Turki bin Salman Al Saud, the brother of the ruling Crown Prince of Saudi Arabia Muhammad bin Salman (aka MBS)." #OOTT."* Wikipedia writes [LINK] *"Arab News is an English-language daily newspaper published in Saudi Arabia. It is published from Riyadh. The target audiences of the paper which is published in broadsheet are businessmen, executives and diplomats.[4][5] At least as of May 2019, Arab News was owned by Prince Turki bin Salman Al Saud, the brother of the ruling Crown Prince of Saudi Arabia Muhammad bin Salman (aka MBS)."*

Oil – Oil risk from Houthis back on radar with end of /Saudi backed Yemen truce

Houthi/Yemen truce ended

It looks like potential oil risk from the Houthis is back on the radar. Last week's (Oct 2, 2022) Energy Tidbits news cut off was 7am MT (4pm Yemen local time) and, at that time, it sounded like the truce between the Houthis and the Saudi backed Yemen govt was ending last Sunday night. Later Sunday, we tweeted [LINK] *"#Houthis back on #Oil watch. 6-mth truce ended Oct 2 and UN announces no deal to extend. #OOTT."* The UN announced [LINK] "*The UN Special Envoy regrets that an agreement has not been reached today, as an extended and expanded truce would provide additional critical benefits to the population. "I am grateful for the constructive engagement at the leadership level from both sides over the past weeks. And I appreciate the position of the Government of Yemen on engaging positively with my proposal. I will continue to work with both sides to try and find solutions." As negotiations continue, the UN Special Envoy calls on the parties to maintain calm and refrain from provocations or any actions that could lead to an escalation of violence. "I urge them to fulfill their obligation to the Yemeni people to pursue every avenue for peace. Ultimately, Yemenis need an end to the conflict through an inclusive political process and a negotiated settlement. I will continue my relentless efforts to engage with the parties to quickly reach an agreement on a way forward."*

Right away, Houthis warned oil companies to leave Saudi Arabia/UAE "fast"

The first order of business for the Houthis with the truce over was to warn oil companies to leave Saudi Arabia and UAE and to do it fast. Last Sunday afternoon, IFP, and many others similarly, reported [LINK] "*Yemen's Armed Forces have put oil companies operating in Saudi Arabia and the United Arab Emirates on notice. Yemen is warning that the firms could be targeted as long as Riyadh and its allies fail to live up to their commitments under a UN-brokered ceasefire. Tweeting on Sunday, the Yemen's Armed Forces' spokesman Brigadier General Yahya Saree said Yemeni troops were providing the oil companies with a window of opportunity to leave the Saudi and Emirati soils "fast."* Our Supplemental Documents package includes the IFP report.

Oil – Vitol Mike Muller "*don't think we're going to see any snap in China [oil] demand*"

Vitol Asia Head Mike Muiller

Earlier this morning, we tweeted [LINK] *"#Vitol warns China demand. "CN demand is really down, petrochemicals in particular" "don't think we're going to see any snap in CN demand" 10/16 congress, "don't see any fundamental changes, certainly not affecting oil demand. Thx @michaelwmuller @sean_evers @CrystolEnergy. #OOTT."* Mike Muller is Head, Vitol Asia. We created a transcript of Muller's China oil demand comments from the Gulf Intelligence Daily Energy Markets podcast this morning. [LINK]. Muller was asked for his views Coming out of China's national congress that starts on Oct 16 regarding the typical increase in Chinese oil demand that happens in the run up to Chinese new year. Muller warned that on near term China oil demand. The feedback from Chinese business people who were in Singapore last week was that easing of Covid restrictions would be gradual. But he is more concerned about the weak economic and productivity data, and that China isn't seeing any lift as Germany heaving industries are being shut down, which he says "*it's clearly not happening in China where it should be happening. So that tells you that Chinese demand is really down, petrochemicals in particular. So, I think China is going to take quite some time to deleverage its property problem, the evergrand issue and all that. And I don't think we're going to see any snap in Chinese demand. There may be some headlines coming out of next Sunday which give the market reasons to buy the market, but I don't' see any huge fundamental changes, certainly not affecting oil demand."* Our Supplemental Documents package includes the transcript we made of Muller's china oil demand comments.

Oil – India will buy oil from anyone as its priority is energy security & affordability

India priority is energy security & affordability

It got very little press but US Energy Secretary Jennifer Granholm met in Washington with India oil minister Hardeep Singh Puri. The US Dept of Energy released a joint ministerial statement from the ministers that does not even note their names or quotes. Not the norm. And, to no surprise, it made zero mention of oil, LNG or Russia. We did see the photo-op but didn't see a joint press conference as is normally the case. No surprise why it looks like they didn't have a joint press conference based Puri's comments at a subsequent press conference in Washington. We watched multiple ANI (Indian news) video clips and their posted stories hit the highlights. (i) Russian oil. We tweeted [LINK] "*1/3. Great @ANI reporting on clear India energy position from @HardeepSPuri post @SecGranholm meeting. "Have I been told by anyone to stop buying Russian oil? The answer is a categorical No". #OOTT #NatGas #LNG".* (ii) India will buy oil from anyone. We tweeted [LINK] "2/3. *"India will buy oil from wherever it has to for the simple reason that this kind of a discussion cannot be taken to the consuming population of India" says @HardeepSPuri. #OOTT @ANI*." (iii) Priority is energy security/affordability. We tweeted [LINK] *"3/3. ""If you are clear about your policy, which means you believe in energy security, energy affordability you will buy from wherever you have to. Our energy purchases from sources hitherto unheard of, we are in discussion with them." @HardeepSPuri. Thx @ANI. #OOTT."* (iv) India has been able to keep prices down. Puri also noted that they have been able to keep oil price impact low. ANI wrote "**"***In terms of petrol and diesel, if the increases in North America are 43-46 per cent, in India we allow prices to go up by only 2 per cent or so. In terms of gas, global benchmarks went up by 260-280 per cent and our own ability to contain gas price increases was something around 70 per cent," Puri told reporters in Washington DC."* (v) There are other items n the ANI reports. Our Supplemental Documents package includes three ANI reports.

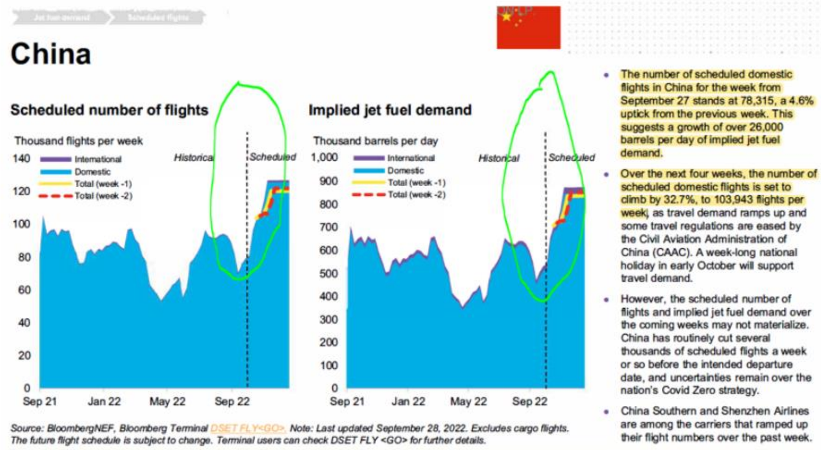
Oil – Chinese scheduled airflights +4.6% WoW, following +7% WoW from Sep 20

Continued jump up in Chinese scheduled air flights

We will have to watch China over the coming days to see if the increase in Covid cases over the past few days changes the recent increasing in China air flights. Prior to the last few days, it looked like China air flights were opening, at least for now. There is a risk the implied jet fuel demand does not materialize due to a rapid change in policy. But for the second week in a row BloombergNEF was showing there was a big increase in Chinese air flights last week, which was in line with the scheduled air flights. On Tues, we tweeted [LINK] "*China air flights +4.6% WoW for 09/27 wk, followed 7% WoW for 09/20 wk. Scheduled to reach 103,943 flights/wk, which would add ~300,000 b/d #JetFuel demand. See 👇09/20 tweet, China airlines knew something. Thx @BloombergNEF. #OOTT."* BloombergNEF's Aviation

Indicators Weekly includes weekly graphs of China scheduled flights and implied jet fuel demand. The Oct 3 weekly wrote "*The number of scheduled domestic flights in China for the week from September 27 stands at 78,315, a 4.6% uptick from the previous week. This suggests a growth of over 26,000 b/d of implied jet fuel demand. Over the next four weeks, the number of scheduled domestic flights is set to climb by 32.7% to 103,943 flights per week."* Last week's (Oct 2, 2022 Energy Tidbits) memo wrote "*It looking like China is at the early stages of opening up, which would be in line with our expectations that this would happen in and around the big national congress in mid October. It's only one week, but, as BloombergNEF was showing, there was a big increase in Chinese air flights last week, which was in line with the scheduled air flights. On Wed, we tweeted [LINK] "China air flights +7% WoW to 74,870 flts in Sept 20 week. # of scheduled flts set to climb +40.5% to 105,190 flts over next 4 weeks. Incl 09/20 wk, would add ~300,000 b/d #JetFuel demand. See 👇09/20 tweet, China airlines maybe knew something! Thx @BloombergNEF. #OOTT." BloombergNEF's Aviation Indicators Weekly includes weekly graphs of China scheduled flights and implied jet fuel demand. The Sept 26 weekly wrote "The number of scheduled domestic flights in China for the week of September 20 stands at 74,870, a 7% uptick from the previous week. This suggests a growth of over 36,000 barrels per day of implied jet fuel demand. Over the next four weeks, the number of scheduled domestic flights is set to climb by 40.5% to 105,190 flights per week".* Below is this week's chart.

Figure 26: China scheduled flights & implied jet fuel demand



Source: BloombergNEF

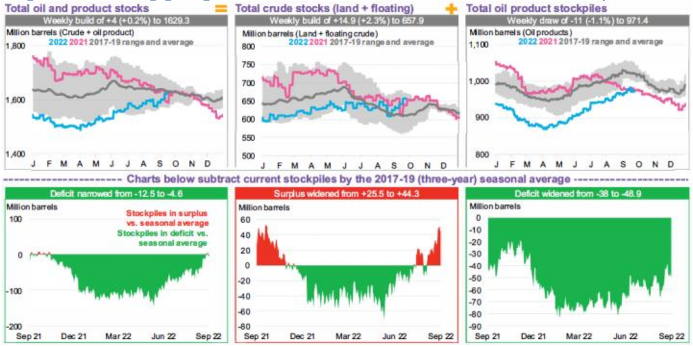
Oil - BNEF: global oil and product stocks deficit widened

For those with a Bloomberg terminal we recommend flipping thru BloombergNEF's "Oil Price Indicators" weekly that came out on Tuesday as it provides good charts depicting near-term global oil demand and supply indicators. The global oil and products stockpile deficit widened for crude and products from 25.5 mmb to 44.3 mmb. The stockpile deficit against the five-year average (2015-19) narrowed from 29.5 mmb to 28.5 mmb. Total crude inventories increased by 2.3% to 657.9 mmb, including global floating inventories. Product stocks were down 1.1% WoW with the stockpile deficit against the 3-year average widening from 38.0 to 48.9 mmb. Gas oil and middle distillate stocks have widened against their three-

BNEF's global oil inventories

year average deficit (2017-2019) from 30.1 mmb to 30.8 mmb. Jet fuel consumption by international departures increased by 11,800 b/d WoW while consumption by domestic passenger departures increased by 15,900 b/d. The global mobility index increased over the past week, up 0.5% in the week to Sep 29. Below is a snapshot of aggregate global stockpiles. Our Supplemental Documents package includes excerpts from the BloombergNEF report.

Figure 27: Aggregate Global Oil and Product Stockpiles



Source: BloombergNEF

Oil – Vortexa crude oil floating storage 80.06 mmb as of Oct 7, -11.57 mmb WoW

Vortexa crude oil floating storage

We are referencing the Vortexa global crude oil floating storage data posted on the Bloomberg terminal as of noon MT yesterday. Note that these estimates get revised over the course of the week and the revisions can go back months. We do not check daily for the revisions, so our comments today on the new estimates are compared to the prior weeks Vortexa estimates posted on Bloomberg on Oct 1 at 1pm MT. (i) As of noon MT yesterday, Bloomberg has posted Vortexa crude oil floating storage estimate for Oct 7 at 80.06 mmb, which is -11.57 mmb WoW vs basically unchanged Sept 30 of 91.63 mmb. Note Sept 30 was immaterially revised vs 91.25 mmb posted on Bloomberg as of 1pm MT on Oct 1. (ii) Note that the revisions over the last several weeks were mostly revised down, but here were some weeks with immaterial upward revisions. The revisions posted today vs the estimates posted on Bloomberg at 1pm on Oct 1 were: Sept 30 revised +0.38 mmb. Sept 23 revised +0.76 mmb. Sept 16 revised -4.,86 mmb. Sept 9 revised -6.35 mmb. Sept 2 revised -4.23 mmb. Aug 26 revised +1.02 mmb. Aug 19 revised -6.03 mmb. Aug 12 revised -5.46 mmb. (iii) With the revisions, other than the Sept 23 week, the last seven weeks were generally +/- 85 mmb, as opposed to generally +/- 90 mmb in last week's estimates. (iv) Also remember Vortexa revises these weekly storage estimates on a regular basis and we do not track the revisions through the week. (v) Oct 7 estimate of 80.06 mmb is -144.72 mmb vs the post-Covid peak on June 26, 2020 of 224.78 mmb. (vi) Note that the below graph goes back 3 years and not just 2 years as floating oil storage was in the big ramp up period in Q2/20 as Covid started to have a huge impact. Oct 7 estimate of 80.06 mmb is -32.29 mmb vs 112.35 mmb on Oct 8, 2021. (vii) Below are the last several weeks of estimates made as of yesterday at noon MT, Oct 1 at 1pm MT, and Sept 25 at 1pm MT.

Figure 28: Vortexa Floating Storage posted on Bloomberg Oct 8 at noon MT

Source: Bloomberg, Vortexa

Figure 29: Vortexa Estimates Posted Oct 8 noon MT, Oct 1 1pm MT, Sept 24 1pm MT

Posted Oct 8, noon MT			Oct 1, 1pm MT			Sept 24, 1pm MT		
FZWWFST VTXA Inde 10/06/2019 - 10/07/2022			FZWWFST VTXA Inde 09/29/2019 - 09/30/2022			FZWWFST VTXA Inde 09/22/2019 - 09/23/2022		
	Date	FZWWFST VT... Last Px		Date	FZWWFST VT... Last Px		Date	FZWWFST VT... Last Px
Fr	10/07/2022	80058	Fr	09/30/2022	91246	Fr	09/23/2022	105.366k
Fr	09/30/2022	91626	Fr	09/23/2022	107.516k	Fr	09/16/2022	95328
Fr	09/23/2022	108.283k	Fr	09/16/2022	93751	Fr	09/09/2022	96979
Fr	09/16/2022	88888	Fr	09/09/2022	93139	Fr	09/02/2022	86287
Fr	09/09/2022	86788	Fr	09/02/2022	86098	Fr	08/26/2022	82484
Fr	09/02/2022	81871	Fr	08/26/2022	83843	Fr	08/19/2022	104.557k
Fr	08/26/2022	84858	Fr	08/19/2022	107.837k	Fr	08/12/2022	109.8k
Fr	08/19/2022	101.811k	Fr	08/12/2022	111.844k	Fr	08/05/2022	89171
Fr	08/12/2022	106.383k	Fr	08/05/2022	90967	Fr	07/29/2022	89908
Fr	08/05/2022	85899	Fr	07/29/2022	91221	Fr	07/22/2022	85072
Fr	07/29/2022	87983	Fr	07/22/2022	86950	Fr	07/15/2022	85720

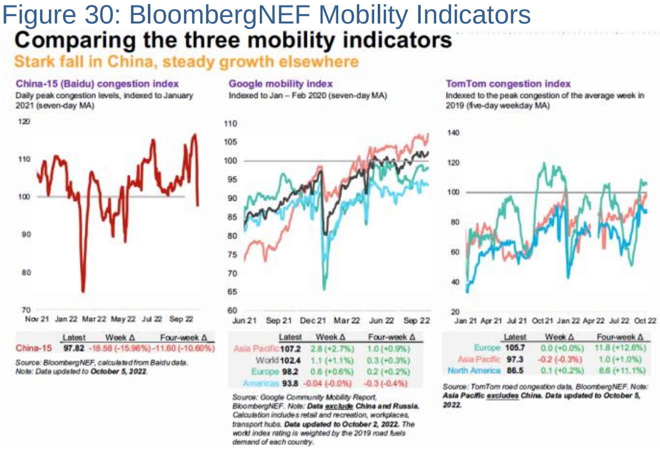
Source: Bloomberg, Vortexa

Oil – BNEF, Global mobility flat WoW, while China drops due to National Day

Mobility flat globally, China drops

We will have to watch China to see if the increasing Covid cases over the past few days, post the National Holiday, will lead to any change in mobility momentum. On Thursday, BloomergNEF posted its Global Road Traffic Indicators which highlighted that globally mobility was relatively flat WoW, however China was the odd one out and posted a decline. China's drop in mobility can be attributed to the National Holiday. A drop for the National Holiday was expected and follows the prior two weeks of increasing road mobility indicators. TomTom congestion index showed Europe flat, Asia Pacific down 0.3%, China down -16%, and North America up +0.2% from last week. Europe and North America are relatively unchanged and are still subject to drivers responding to rising cost, including high gasoline prices. China's mobility data highlights the decrease in congestion due to National Day taking place from Oct 1 – 7. Our Supplemental Documents package includes excerpts from the BNEF Global Road Traffic Indicators report.

Figure 30: BloombergNEF Mobility Indicators



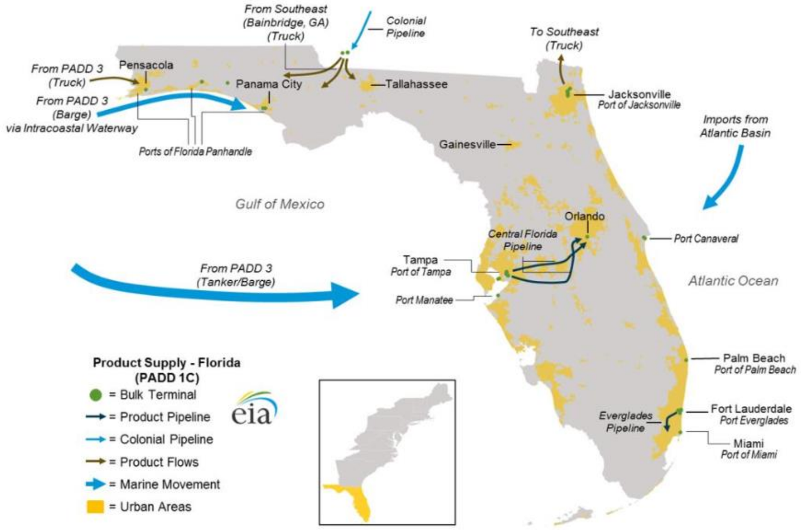
Source: BloombergNEF

Oil & Natural Gas – Hurricane Ian temporarily disrupts Florida's gasoline supply chain

Many of Florida's ports closed due to Ian

Rightly so, there has been a lot of news coverage and footage on the devastation in parts of Florida from Hurricane Ian. Anyone who seen some sort of flood, hurricane, tornado or other sudden weather crisis realizes these Floridians have got a big job ahead of them to clean up, repair and restore. That also applies to all supply chains including oil and natural gas. On Monday, the EIA posted a blog 'Hurricane Ian temporarily disrupts Florida's gasoline supply chain". [LINK] Note that this blog is focused on the gasoline supply chain disruptions, but there will be other energy disruptions such as natural gas or electricity that will lead to increased short term diesel for power demand. For gasoline, the EIA blog notes "*Florida does not have any refineries or gasoline pipelines that connect it to states with excess supply. Florida's gasoline is delivered by ship from domestic and international sources. Because of the storm, several ports were temporarily closed, and the remaining ports were open with restrictions."* Most of the delivered oil and petroleum products arriving at ports is trucked with some pipeline to Central Florida from Tampa ie. some significant re-routing is required. The EIA also wrote "*Some gasoline shipments arrive in Florida by both pipeline and truck. At a terminal in Bainbridge, Georgia, gasoline is transferred from the Colonial Pipeline system to a long-distance tanker truck for delivery to the Florida panhandle. Trucks and barges (moving by the Intracoastal Waterway) from nearby refineries in Alabama and Mississippi supply the rest of western Florida. Shipments from domestic refineries along the Gulf Coast, supplemented with imports from abroad, supply most of Florida. In the first half of 2022, tanker and barge movements of gasoline from the Gulf Coast to the Lower Atlantic region (Florida, Georgia, North Carolina, South Carolina, Virginia, and West Virginia) averaged 414,000 barrels per day."* Below is the EIA graphic of Florida petroleum product supply movements. Our Supplemental Documents package includes the EIA blog.

Figure 31: Florida Petroleum Supply Movements



Source: EIA

Oil & Natural Gas – New Alberta Premier Smith puts the Liberals on notice

New Alberta Premier

On Thursday night, Danielle Smith won the leadership race for Alberta's United Conservative Party, which means she became the Alberta Premier designate. She won on the 6th and final round with 53.3% of the vote vs 46.7% for former finance minister Travis Toews. There were approx. 85,000 UCP party members voting, or ~69% of the party's 124,000 eligible members. We hadn't weighed in on the leadership race, but have been most interested in what was her feature platform item, her Alberta Sovereignty Act. [LINK]. On Friday morning, we tweeted [LINK] "*Attention to details. Think new Allberta Premier @ABDanielleSmith recognized that it's federal minister's POLICIES & and department regulations that can violate provincial jurisdiction and have a big negative impact ie. policies/regulations re #ClimateChange. #OOTT.*" Smith is putting the Liberals on notice that Alberta is going to pay attention to details. She realizes how it's all the policy initiatives and regulatory changes that end up having a huge impact. And she has clearly warned the Liberals, she will make sure that Alberta will make sure none of these cross jurisdictional authorities. Two excerpts from her description of the Alberta Sovereignty Act are "*What is the Alberta Sovereignty Act? A proposed law that would affirm the authority of the Provincial Legislature to refuse provincial enforcement of specific Federal laws or policies that violate the jurisdictional rights of Alberta under Sections 92 – 95 of the Constitution or that breaches the Charter Rights of Albertans. How would the Legislation work? Prior to being introduced in the Legislature for debate and vote this Fall, I will work with Cabinet and Caucus to draft the Alberta Sovereignty Act in accordance with sound constitutional language and principles. However, as a starting point for discussion, this proposed legislation is intended to function as follows: When the Federal Government institutes a law or policy that appears to violate Alberta's jurisdictional rights under the Canadian Constitution or Albertans' Charter rights, the Government of Alberta may introduce a Special Motion for a free vote of all MLAs in the Legislature. Each such Special*

Motion would need to include the following detailed information:". Our Supplemental Documents package includes more excerpts on her proposed Alberta Sovereignty Act.

Energy Transition – RWE, massive $$$ required if Germany want to phase out coal

Phasing out coal in Germany

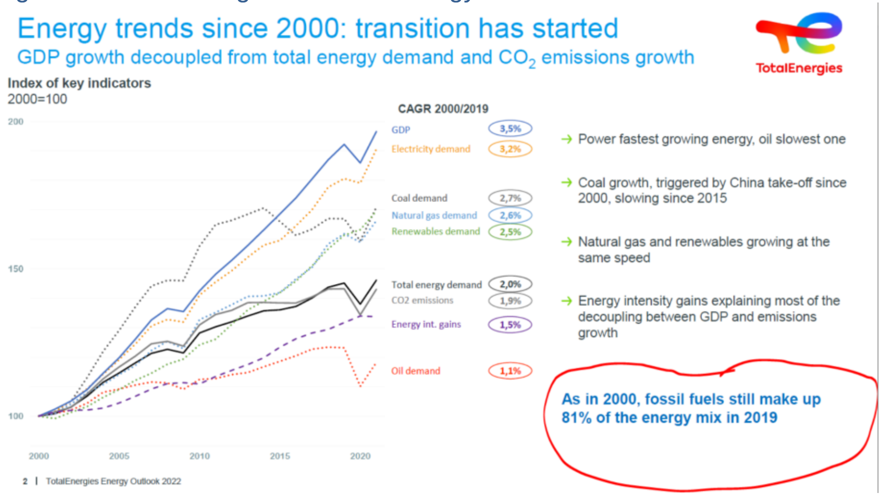
We don't think the RWE announcement this week was a perspective toss up of glass half-full or glass half-empty. How even though pro-climate change supporters jumped on RWE saying they are "*investing billions of euros to accelerate the energy transition and are ready to phase out lignite by 2030*". However, a read of the full release [LINK] shows a huge warning that it will be very costly and will take a lot of time if Germany wants to eliminate coal from its energy mix. And Germany needs coal if its to have a secure energy system. We tweeted [LINK] "*1/2. Huge reality check & massive $$$ required if DE wants to phase out #Coal under #EnergyTransition. @RWE_AG. "In order for the coal phase-out to be possible, the energy transition must be so far advanced by 2030 that Germany's security of supply is not at risk..." #OOTT*", and [LINK] "*2/2. "This requires a massive expansion of wind and solar power plants, storage facilities and additional secured capacity in the form of state-of-the-art gas-fired power plants that can be operated with hydrogen in the future." DE Ridding RU #NatGas is a huge challenge. #OOTT."* Surely anyone reading this warning has to believe Germany's energy costs are going up big time and that any energy transition is going to take a lot longer than expected. Our Supplemental Documents package includes the RWE release.

Energy Transition – Fossil fuels % share of energy mix is unchanged since 2000

Fossil fuels share of energy mix

It doesn't seem to make any difference to western leaders on how tough an energy picture, all we hear is that they need to accelerate the transition to renewable energy because of the impact of Russia's invasion of Ukraine. We have noted numerous times that the energy issue was in place before Russia. But politicians have all pivoted to using Russia as the reason for the energy problems. Regardless, there will be data that western leaders use to say they need to accelerate the use of renewables because fossil fuels aren't going away as fast as hoped. Last week's (Oct 2, 2022) Energy Tidbits featured numerous macro energy items from TotalEnergies two-day investor presentations. On Monday, we tweeted [LINK] "*"ICYMI. @TotalEnergies 09.27 webcast "share of fossil fuels in the overall energy mix has barely moved in 20 years. It's still above 80%". #EnergyTransition is happening but will be a bumpy road, take longer & cost way more than expected. #Oil #NatGas needed for longer. #OOTT."* Our tweet included the below TotalEnergies graph. Then on Friday, we tweeted [LINK] "*Buckle Up! If western leaders use 👇data to more aggressively regulate/penalize #FossilFuels, incl #NatGas, to try to faster reduce their % share of energy mix, then the west seems destined for a very rocky, very expensive and very long #EnergyTransition. #OOTT*."

Figure 32: TotalEnergies share of energy mix 2000 to 2022



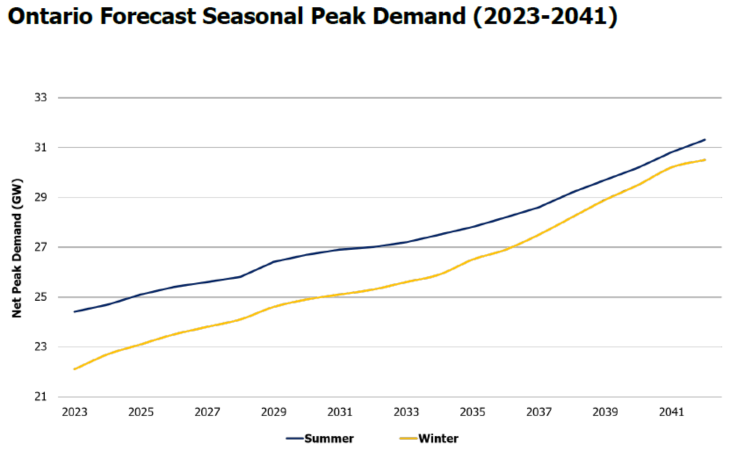
Source: TotalEnergies

Energy Transition –Ontario needs more natural gas or risks California power outages

Ontario needs more natural gas power

There was a clear warning from Ontario's Independent Electricity System Operator (IESO) that Ontario needs more natural gas generation and needs it soon. Or else it risks having California's power outage issues. On Friday, we tweeted [LINK] "*1/2. Ontario needs more #NatGas generation and soon or risk having CAL power outages. @IESO_Tweets ONT needs up to 1,500 MW of new #NatGas generation. Then a big warning that without more #NatGas in near term, "the IESO would be reliant on emergency actions, such as .. #OOTT.*" And [LINK] "*2/2. ".. conservation appeals and rotating blackouts to stabilize the grid. Failure to mitigate these risks, if combined with extreme weather, could create conditions similar to those seen in California where shortfalls resulted in rotating blackouts". #NatGas is needed. #OOTT*." On Friday, IESO posted its Resource Eligibility Interim Report. [LINK]. Most will probably just read the two-paragraph summary. "*After years of having surplus electricity supply, Ontario is entering a period of need. This is primarily being driven by economic growth, retirements and refurbishments of power plants and increased electrification of the transportation and manufacturing sectors. To meet these growing needs, Ontario requires an additional 4,000 MW of electricity supply between 2025 and 2027, which is the equivalent of adding a city the size of Toronto to the electricity grid. The IESO recommends pursuing a diverse portfolio of supply options. The procurement will target new capacity from a variety of resources including approximately 2,500 MW of storage, contributions from other non-emitting resources such as hybrids and biofuel resources, and up to 1,500 MW of natural gas. These investments could create one of the largest battery storage fleets in North America, while providing assurance that Ontario's electricity system will continue to be reliable and affordable as it transitions to a decarbonized future.*" But if you stop there, you will miss the clear natural gas IESO warning on the critical need for natural gas "*To mitigate these risks, the IESO recommends pursuing a diverse portfolio of supply options. The procurement will target 4,000 MW of new capacity from a variety of resources including approximately 2,500 MW of storage, contributions from other non-emitting resources such as hybrids and biofuel resources, and up to 1,500 MW of natural gas. Without a limited amount* *of new natural gas in the near term, the IESO would be reliant on emergency actions such as conservation appeals and rotating blackouts to stabilize the grid. Failure to mitigate these risks, if combined with extreme weather, could create conditions similar to those seen in California where shortfalls resulted in rotating blackouts."* Our Supplemental Documents package includes the IESO report.

Figure 33: Ontario Forecast Seasonal Peak Demand (2023-2041)



Source: IESO

Energy Transition – Shell: oil and gas returns needed to fund the energy transition

Shell on oil and gas returns

No one should be surprised to hear Shell CEO van Beurden say highlight oil and gas returns are the key and have to fund the dividend and the energy transformation. Shell CEO van Beurden spoke at the Energy Intelligence Group forum in London on Tuesday. We tweeted [LINK] *"#Shell CEO: remember #Oil #NatGas returns have to cover all the investments that don't pan out. #EnergyTransition is endurance game, not like phones replacing cameras. some investors ask for more #Oil #NatGas investments. Great thx @cm_energyintel! #OOTT."* EIG's Casey Merriman tweeted [LINK] "*Shell's van Beurden: just remember that oil and gas returns have to cover all the investments that don't pan out. I'm not going to build wind farms where there isn't wind. Returns needs are different. @EI_Forum."*

Shell Apr 2021: Upstream funds the dividends and the energy transformation

The Shell CEO comments this week are not new. Yesterday, we tweeted [LINK] "*#Oil #NatGas is critical to #Shell's 04/15/21 Energy Transition Strategy "Our Upstream pillar delivers the cash and returns needed to fund our shareholder distributions and the transformation of our company". See 👇SAF Group 04/18/21 Energy Tidbits memo excerpt. #OOTT*". Here is what we wrote in our April 18, 2021 Energy Tidbits. "*This is not a surprise, rather a reminder that Upstream is crucial to both fund dividends and provide the capital to fund an energy transition. Shell doesn't say it specifically, but it is also a reminds of the relative cash flow generation of each sector and raises the challenge that Transition and Growth pillars have to get to much higher returns and cash flow generation if they are to fund dividends in the future.*

The dividends are funded from Upstream. Shell wrote "Our business has three pillars: Growth, Transition and Upstream. Within each pillar, we expect the underlying businesses to evolve and transform as demand for our products changes, driven through our sector-based businesses. Our Upstream pillar delivers the cash and returns needed to fund our shareholder distributions and the transformation of our company, and provides vital supplies of oil and natural gas which the world needs today. Our Transition pillar comprises Integrated Gas, and our Chemicals and Products business, and it makes the products needed to enable the energy transition. It produces sustainable cash flow and gives us the asset infrastructure to support our investments in our Growth business. Our Growth pillar includes our service stations, fuels for business customers, power, hydrogen, biofuels, charging for electric vehicles, nature-based solutions, and carbon capture and storage. It focuses on working with our customers to accelerate the transition to net zero and is the foundation for the future businesses in Shell."

Energy Transition – COP 27 "taking into account different national circumstances"

COP27 starts Nov 7

The lack of media coverage and leaders statements is a good indicator that the expectations are low for COP27 in Egypt that starts on Nov 7. We expect to see many statements that, will on the surface, look to be big successes. However, just like we noted posted COP26, we expect to see these statements with the big qualifier "taking into account different national circumstances:. We were reminded of this by the joint US/India ministerial statement post the Granholm/Puri meeting. Yesterday, we tweeted [LINK] "*Key caveat in joint @SecGranholm @HardeepSPuri #CleanEnergy statement "taking into account different national circumstances." No one can deny India wants to reduce emissions, etc, but will do so in the way, pace and cost impact to India consumers that is best for them. #OOTT."* The joint statement had a number of strong clean energy joint efforts. It says "*As climate and clean energy leaders, the United States and India share a common vision to deploy clean energy at scale during this critical decade to reduce emissions and achieve climate change mitigation goals, taking into account different national circumstances."* We don't doubt that reducing emissions is a priority for India, but the joint statement using "*taking into account different national circumstances*". This caveat is what India and other countries will use to remind they will go on emissions at their own pace and cost. Our Supplemental Documents package includes the joint statement. [LINK]

Energy Transition – BBC expose UK firm clearing Cdn forest for wood pellets

UK wood pellets from clearing Cdn forests

On Monday, we tweeted [LINK] "*Inconvenient Truth! Burning wood pellets fits into a clean energy plan, gets UK green subsidies to add higher emissions power. No wonder companies don't want to talk about it, especially if wood pellets come from clearing Cdn forest. Thx @joe_crowley @TimRobinsonTV #OOTT,"* We are surprised that the BBC's Oct 3 report didn't raise outrage from the Liberals in Canada. We didn't see any coverage of the Liberals saying they would get to the bottom of this BBC expose. BBC Panorama posted a video report [LINK] "*Drax is chopping down trees and taking logs from some of the world's most precious forests to burn at its Yorkshire power station, which provides 12% of the UK's renewable energy The Green Energy Scandal Exposed is on @BBCOne at 8pm and on @BBCiPlayer [LINK]"* Perhaps the tweet headline didn't say Canada, but the BBC's posted report [LNK] "*Drax: UK power station owner cuts down primary forests in Canada. Drax, Britain's biggest power station, generates electricity by burning millions of tonnes of imported* *wood pellets. A company that has received billions of pounds in green energy subsidies from UK taxpayers is cutting down environmentally-important forests, a BBC Panorama investigation has found. Drax runs Britain's biggest power station, which burns millions of tonnes of imported wood pellets - which is classed as renewable energy. The BBC has discovered some of the wood comes from primary forests in Canada. The company says it only uses sawdust and waste wood."* Our Supplemental Documents includes the BBC report.

Figure 34: BBC The Green Energy Scandal Exposed

Source: BBC

BBC reminds cutting primary forests is not good

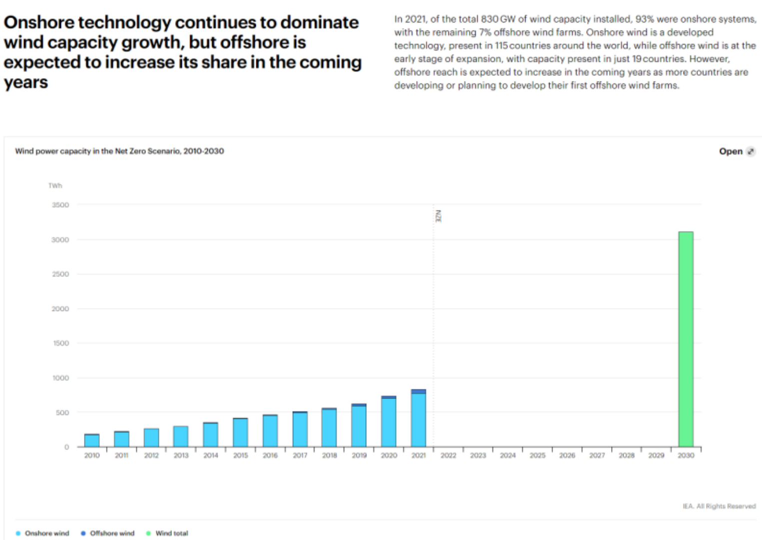
The BBC investigation said this was a primary forest. The BBC report also noted why primary forests shouldn't be cut. The BBC wrote "*How green is burning wood? Burning wood produces more greenhouse gases than burning coal. The electricity is classed as renewable because new trees are planted to replace the old ones and these new trees should recapture the carbon emitted by burning wood pellets. But recapturing the carbon takes decades and the off-setting can only work if the pellets are made with wood from sustainable sources. Primary forests, which have never been logged before and store vast quantities of carbon, are not considered a sustainable source. It is highly unlikely that replanted trees will ever hold as much carbon as the old forest."*

Energy Transition – Will onshore lead to overall wind growth be slower than expected?

Onshore vs offshore wind

It was only two indicators (not wind capacity data points) this week, but it makes us wonder if overall wind growth will be slower than expected? (i) Offshore wind indicator. We don't think many will debate that the big growth in wind generation will be driven by offshore wind. There was a good indicator from BP that it sees offshore wind as its big growth area. On Friday, Bloomberg reported "*BP Plc plans to triple its number of offshore wind-farm workers as it expands the business to reach its green goals. Scaling up wind power is key to the UK oil giant's plans to produce more renewable energy in the coming years to hit net-zero emissions by the middle of the century. BP aims to next year reach about 800 employees focused on its nascent business to build and operate wind farms at sea, up from about 220* *now."* (ii) Onshore wind indicator. On Wednesday, Reuters reported "*General Electric Co is laying off workers at its onshore wind unit as part of a plan to restructure and resize the business, which is grappling with weak demand, rising costs and supply-chain delays, four sources familiar with the move said. The sources said the company on Wednesday notified employees in North America, Latin America, the Middle-East and Africa about the cuts. It also has plans to cut its onshore wind workforce at a later date in Europe and Asia Pacific. The cuts are expected to affect 20% of the onshore wind unit's workforce in the United States, they added. This would equate to hundreds of workers, one of the sources said. GE confirmed to Reuters it was "streamlining" its onshore wind business in response to market realities but did not comment directly on any workforce cuts."* (iii) The Reuters source noted the onshore wind business was "*grappling with weak demand, rising costs and supply-chain delays".* It's not clear GE meant by "*market realities*", but they mustn't be making the returns and mustn't see the onshore market changing in the near to mid term. Not said in the report, but we suspect a factor for onshore wind market realities is NIMBY and the challenge to land close to get land close to demand centres and, for longer distances, the NIMBY challenge for long haul high voltage transmission lines. (iv) These are both only indicators and not data points, but the concern is that if onshore wind growth will be less, it should point to a slower ramp up in overall wind generations. To date, the growth n wind generation has been almost all driven by onshore wind capacity. Offshore wind has really just started to ramp up and is the major growth area for the future. But if onshore wind growth is less, it should point to a slower ramp up in overall wind growth. The IEA notes [LINK] that onshore wind is over 93% of the global wind capacity installed to date.

Figure 35: Offshore vs onshore wind capacity



Source: IEA

Will copper be a key limiting factor for offshore wind, and soon?

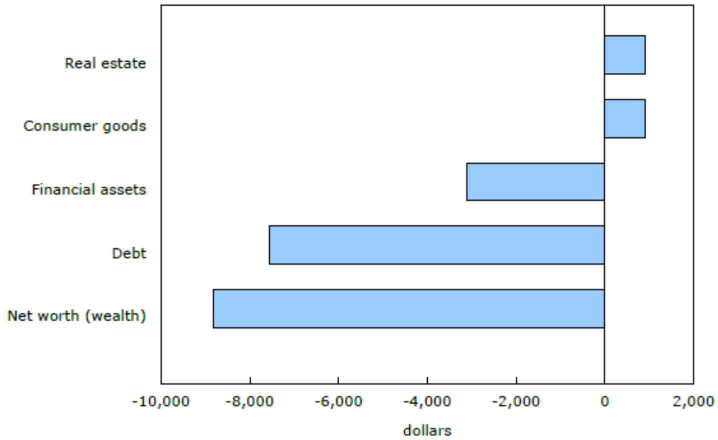
Here is an item from last week's (Oct 2, 2022) Energy Tidbits from the TotalEnergies investor days on copper and offshore wind. We wrote "*A good simple reminder from TotalEnergies on offshore wind – copper is needed in the cables to bring the offshore electricity to markets. Every clean energy plan depends on the rapid, accelerated growth in offshore wind to be the major contributor to renewable power generation servicing the vast majority of the developed world that doesn't have big available land mass like Canada and the US. TotalEnergies reminded that a key risk to this assumption is copper. We tweeted [LINK] "Exponential growth in offshore #Wind is in all #CleanEnergy plans. @PPouyanne reminds a lot of #Copper needed for electric cables from offshore #Wind, some suppliers already warned might be facing copper shortage for offshore wind. #NatGas will be needed for longer. #OOTT." Our tweet included the transcript we made of Pouyanne's reply in the Q&A. At 7:22am MT, Pouyanne "… your question on copper is more interesting because it could affect not only EVs by the way, but we know electric cables when you make offshore wind farms, you need a lot of copper. And I begin to have some suppliers who told us, be careful we have, we might face a shortage of copper to make all these wind farms that you are ready to invest around the world. So that's something on which I will be frank with you. TotalEnergies, we need to to invest, to better understand each of these materials but it is very possible that the world, the planet will go from one dependency, which is oil and gas, gas in particular this year with Russian gas, to another dependency which is another type of materials. You know the planet is round, so in the end everything is limited on the planet".*

Demographics – Average household wealth broadly decreased in Q2 2022

Distribution of household economic wealth

On Monday, Statistic Canada released its report *"Distributions of household economic accounts for wealth of Canadian households, second quarter 2022"* [LINK]. The latest estimates reveal that net worth decreased for a broad range of households in the second quarter, but especially for the most vulnerable, including the least wealthy (-12.0%) and households younger than 45 years (-8.2%). During the quarter the wealthiest households (top 20%) held more than two-thirds (67.1%) of all net worth in Canada, while the least wealthy households (bottom 40%) held 2.8%. The household wealth gap, which is a measure of economic activity defined as the difference between the share of net worth for households in the highest wealth quintile (top 20%) and that for the lowest wealth quintiles (bottom 40%), widened for the first time since the start of the pandemic. Although wealth did decline across households in all age groups, younger households were affected the most. The overall value of real estate declined by 5.2% in the second quarter, the first time such a reduction has occurred since 2018. The debt-to-income ratio remained stable or declined for most households by age group relative to the first quarter, as growth in average income tended to outweigh growth in average debt. The only exception was for households in the 55-to-64 age group, which increased their debt-to-income ratio by 7.4 percentage points, reaching 176.7%.

Figure 36: Change in Avg. Wealth in the Lowest Two Quintiles QoQ 2022



Source: Statistics Canada

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.

Putin turned 70 on Friday

It was interesting to see there wasn't a big deal made for Putin's 70th birthday on Friday. And there didn't seem to be any encouragement of big public displays of affection. Rather Putin seemed to have a low key working day, which included what TASS called an "informal CIS summit". CIS is the Commonwealth of Independent States. The interesting part of the CIS summit is that one CIS leader. Krygyzstan President Sadyr Japarov wasn't able to attend due to his work schedule. But we suspect most believe it is because of recent making Putin wait for a meeting. Putin likes to make almost everyone wait for him for a meeting, but that wasn't the case on his Sept 15 meeting with Japarov.

Cdn Mackenzie Hughes wins PGA Sanderson Farms Championship

Last Sunday was a nail biting afternoon of watching the final round of the Sanderson Farms Championship. Cdn Mackenzie Hughes won his 2nd career PGA victory with a 8-foot birdie putt on the second playoff hole. Hughes was solo second going into the final round so almost every one of his shots was shown as he was in the lead or just off the lead all day. He saved par on the 72nd hole, with a 100-foot putt from just off the green to end up tied for the lead with Sepp Straka. With the win Hughes moved to #51 on the Official World Golf Ranking. Other top ranked Cdn golfers are Corey Connors #28, Adam Hadwin #86, and Taylor Pendrith #99.

New Jersey vs Florida state income taxes helped push Tyreek Hill to Dolphins

It's not just capital markets companies and professionals moving to Florida from New Jersey and New York, it's also pro athletes where they have a choice of location. The New York Jets are at home today vs the Miami Dolphins. The Dolphins big off-season acquisition was the trade for Tyreek Hill who had starred for the Kansas City Chiefs. Hill is off to a great with 31 receptions for 477 yards for an average of huge average of 15.9 yards per reception. Hill acknowledged it was neck-and-neck between the Dolphins and Jets to where he wanted to go but a key deciding factor was the high New Jersey state income taxes. The New York Post wrote [LINK] "*Tyreek Hill had his money on his mind when he made his decision. The speedy wideout was traded from the Chiefs to the Dolphins this past offseason, but this was a case where he had some control of the destination on the basis of agreeing to a contract extension with his new team before the deal was complete. With the Jets hosting the Dolphins this Sunday, the question of why Hill picked Miami resurfaced, and he gave a blunt answer. "It was very close to happening," Hill told reporters on Monday, about nearly playing for the Jets. "Just those state taxes man. I had to make a grown-up decision." Florida has no state income taxes. New Jersey has a marginal income tax of 10.75 percent for individuals making more than $5 million per year. Hill is slated to make $30 million per year on his contract, and his state income taxes if he played for the Jets would total about $3 million per year."*