Energy Tidbits

June 9, 2024

Produced by: Dan Tsubouchi

New Zealand needs to "*attract investment in exploration AND production*" to increase natural gas to keep economy running

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. My 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 the review of investor days, conferences and earnings calls focusing on sector developments that are relevant to the sector. My target is to write on 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. New Zealand reverses ban on exploration as it needs to stop natural gas supply decline as it is "*critical to keeping our lights on and our economy running, especially during peak electricity demand and when generation dips because of more intermittent sources like wind, solar and hydro."* [click here]

2. Germany to spend billions to support utilities to add natural gas power generation to stabilize the grid when renewables fall short. [click here]

3. Saudi Arabia Energy Minister on planned OPEC production additions starting Oct 1, 2024 "*we could pause or could reverse upon our choice to do that if we have to do that."* [click here]

4. Vortexa warns seeing onshore China oil inventories building when they should be drawing. [click here]

5. Huntsman warns of a pending electricity gap with the rapid increase in AI data center electricity demand happening faster than approvals can happen for new natural gas, wind, or solar power. [click here]

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

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

Dan Tsubouchi	**Ryan Dunfield**	**Aaron Bunting**	**Ian Charles**	**Ryan Haughn**
Chief Market Strategist	CEO	COO, CFO	Managing Director	Managing Director
dtsubouchi@safgroup.ca	rdunfield@safgroup.ca	abunting@safgroup.ca	icharles@safgroup.ca	rhaughn@safgroup.ca

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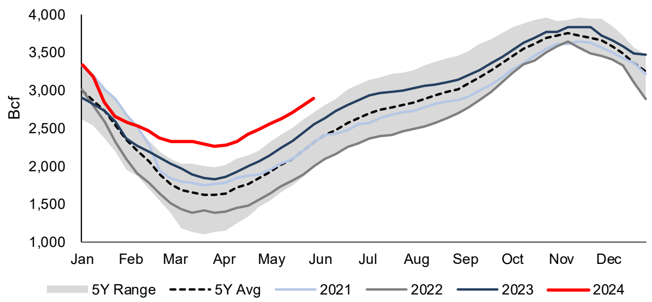
Natural Gas: Warning for risk US natural gas storage gets filled early

US natural gas storage to be filled early?

It's been really hot in the US for the last week or two and US natural gas production growth seems stalled, which has started to reduce the YoY surplus. But storage still up higher YoY US gas storage. And, with the forecast for Europe gas storage to be fill by Sept 30, we still see the risk for US gas storage to also be full before winter. And our concern is that if there is the visibility to US storage being full early, then there will be a hit to HH prices in Sept/Oct ahead of the winter. There may very well be items such as hurricane interruptions, a big spike up in natural gas for data centers, etc. that will change this outlook but when we see natural gas storage this much higher YoY and forecasts for Europe storge full by Sept 30, we still see the risk for an early fill to US natural gas storage. As noted below, US natural gas storage is now +373 bcf YoY, which is down WoW from +380 bcf YoY last week.

Figure 1: US Natural Gas Storage



Source: EIA

Natural Gas: +98 bcf build in US gas storage; now +373 bcf YoY

+98 bcf build in US gas storage

For the week ending May 31, the EIA reported a +98 bcf build. Total storage is now 2.893 tcf, representing a surplus of +373 bcf YoY compared to a surplus of +380 bcf last week. Since February, total storage has remained well above the top end of the 5-yr range. Total storage is +580 bcf above the 5-year average, slightly below last week's +587 bcf surplus. Below is the EIA's storage table from its Weekly Natural Gas Storage report [LINK].

Figure 2: US Natural Gas Storage

	Stocks billion cubic feet (Bcf)				Historical Comparisons			
					Year ago (05/31/23)		5-year average (2019-23)	
Region	05/31/24	05/24/24	net change	implied flow	Bcf	% change	Bcf	% change
East	575	538	37	37	543	5.9	458	25.5
Midwest	681	652	29	29	596	14.3	530	28.5
Mountain	218	210	8	8	134	62.7	130	67.7
Pacific	273	267	6	6	160	70.6	225	21.3
South Central	1,146	1,128	18	18	1,086	5.5	969	18.3
Salt	330	324	6	6	315	4.8	295	11.9
Nonsalt	817	804	13	13	772	5.8	674	21.2
Total	**2,893**	**2,795**	**98**	**98**	**2,520**	**14.8**	**2,312**	**25.1**

Source: EIA

Natural Gas: QatarEnergy signs LT LNG supply contract with Taiwan's CPC

QatarEnergy signs LT LNG contract with CPC

On Wednesday, QatarEnergy signed a 27-year long deal with CPC Corporation, Taiwan for the delivery of 4 mmtpa or 0.53 bcf/d [LINK]. They also signed a share sale and purchase agreement where QatarEnergy will transfer to CPC a 5% interest in the equivalent of one NFE (North Field East LNG expansion Project) train with a capacity of 8 mmtpa or 1.05 bcf/d. Chairman of CPC Corporation, Mr. Shun-Chin Lee, said, *"QatarEnergy, the world's leading LNG player, has been playing an important role in ensuring Taiwan's domestic gas market over the past decades. CPC's acquired equity in the NFE project and this new LNG SPA will further strengthen the cooperative relationship between our two companies",* and QatarEnergy's CEO and Chairman, His Excellency Mr. Saad Sherida Al-Kaabi, said "*We look forward to further enhancing our relationship with CPC, which extends for over three decades, and to further demonstrate our unwavering commitment to our customers and partners around the world."* Note the NFE project is supposed to start LNG production in 2025. Our Supplemental Documents Package includes the press release from QatarEnergy.

Natural Gas: TotalEnergies signs 2 new LNG supply contracts into Asia

TotalEnergies increases LNG deliveries to Asia

On Tuesday, France's TotalEnergies signed a 10-year long-term LNG deal with Indian Oil Corporation (IOCL) for 0.8mmtpa or 0.11 bcf/d starting in 2026, and a 5-year medium-term LNG deal with Korea South-East Power for the delivery of 0.5mmtpa or 0.07 bcf/d starting in 2027 [LINK]. These deals will allow TotalEnegies to increase their footprint in Asian markets while aligning with their commitment to support their customers in their decarbonization strategies. TotalEnergies' Senior VP Gregory Joffroy said, "*We are delighted to have been selected by IOCL and Korea South-East Power to supply LNG to India and Korea. These contracts enable us to contribute to the energy security and transition of these countries, to which we have an enduring commitment*." Our Supplemental Documents Package includes the press release from TotalEnergies.

There have been 22.86 bcf/d of long-term LNG supply deals since July 1, 2021

Here is what we wrote in May 12, 2024's Energy Tidbits memo. "*The big wave in buyers locking up long term supply started in July 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 22.33 bcf/d of long-term LNG deals since July 1, 2021. 64% 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. Note in our non-Asian LNG deals will major LNG players (ie. Chevron, Shell, etc) buying for their LNG portfolio supply. China has been particularly active in this space, accounting for 49% of all Asian LNG buyers in long term contracts since July 1, 2021. Note that following the item above, we have omitted the TotalEnergies / Korea South-East Power deal from the table as it is a 5-year medium-term deal, not a long-term deal. Below is our updated table of Asian and Europe LNG buyers new long-term supply deals since July 1, 2021.

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Figure 3: Long-Term LNG Buyer Deals Since July 1, 2021

Long-Term LNG Buyer Deals Since July 1, 2021							
Date	Buyer	Seller	Country Buyer / Seller	Volume (bcf/d)	Duration Years	Start	End
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	0.26	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
Nov 21, 2022	Sinopec	QatarEnergy	China / Qatar	0.53	27.0	2026	2053
Dec 26, 2022	INPEX	Venture Global LNG	Japan / US	0.13	20.0	n.a.	n.a.
Dec 27, 2022	JERA	Oman LNG	Japan / Oman	0.11	10.0	2025	2035
Jan 19, 2023	ITOCHU	NextDecade	Japan / US	0.13	15.0	n.a.	n.a.
Feb 7, 2023	Exxon Asia Pacific	Mexico Pacific Ltd	Singapore / Mexico	0.26	20.0	n.a.	n.a.
Feb 23, 2023	China Gas Holdings	Venture Global LNG	China / US	0.26	20.0	n.a.	n.a.
Mar 6, 2023	Gunvor Singapore Pte	Chesapeake Energy	Singapore / US	0.26	15.0	2027	2042
Apr 28, 2023	JERA	Venture Global LNG	Japan / US	0.13	20.0	n.a.	n.a.
May 16, 2023	KOSPO	Cheniere	Korea / US	0.05	19.0	2027	2046
Jun 1, 2023	Bangladesh Oil	QatarEnergy	Bangladesh / Qatar	0.24	15.0	2026	2031
Jun 21, 2023	Petro Bangle	Oman	Bangledesh / Oman	0.20	10.0	2026	2036
Jun 21, 2023	CNPC	QatarEnergy	China / Qatar	0.53	27.0	2027	2054
Jun 26, 2023	ENN LNG	Cheniere	Singapore / US	0.24	20.0	2026	2046
Jul 5, 2023	Zhejiang Energy	Mexico Pacific Ltd	China / Mexico	0.13	20.0	2027	2047
Aug 8, 2023	LNG Japan	Woodside	Japan / Australia	0.12	10.0	2026	2036
Sep 7, 2023	Petrochina	ADNOC	China / UAE	n.a.	n.a.	n.a.	n.a.
Nov 2, 2023	Foran	Cheniere	China / US	0.12	20.0	n.a.	n.a.
Nov 4, 2023	Sinopec	QatarEnergy	China/Qatar	0.39	27.0	2026	2053
Nov 27, 2023	Gunvor Singapore Pte	Delfin Midstream	Singapore / US	0.10	15.0	n.a.	n.a.
Dec 20, 2023	ENN	ADNOC	Singapore / UAE	0.13	15.0	2028	2043
Jan 5, 2024	GAIL	Vitol	India / Singapore	0.13	10.0	2026	2036
Jan 8, 2024	Shell	Ksi Lisims LNG	Singapore / Canada	0.26	20.0	2027	2047
Jan 16, 2024	ExxonMobil	Mexico Pacific Ltd	Singapore / Mexico	0.16	20.0	2024	2044
Jan 29, 2024	Excelerate	QatarEnergy	Bangladesh / Qatar	0.13	15.0	2026	2041
Jan 30, 2024	ADNOC	GAIL India	UAE / India	0.07	10.0	2024	2034
Feb 6, 2024	Petronet LNG	QatarEnergy	India / Qatar	0.99	20.0	2028	2048
Feb 19,2024	Deepak Fertilisers	Equinor	India / Norway	0.09	15.0	2026	2041
Feb 28, 2024	Kogas	Woodside	Korea / Australia	0.07	10.5	2026	2037
Feb 29, 2024	Sembcorp	TotalEnergies	Singapore / France	0.11	16.0	2027	2043
Apr 29, 2024	Kogas	BP	Korea / Singapore	0.12	11.0	2026	2037
May 26, 2024	AMNS	Shell	India / Canada	0.05	10.0	2027	2037
May 28, 2024	Hokkaido	Santos	Japan / Australia	0.05	10.0	2027	2037
Jun 4, 2024	IOCL	TotalEnergies	India / France	0.11	10.0	2026	2036
Jun 5, 2024	CPC	QatarEnergy	Taiwan / Qatar	0.53	27.0	2025	2052
Total Asian LNG Buyers New Long Term Contracts Since Jul/21				**14.60**			

Long-Term LNG Buyer Deals Since July 1, 2021							
Date	Buyer	Seller	Country Buyer / Seller	Volume (bcf/d)	Duration Years	Start	End
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	0.30	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	0.21	20.0	2027	2047
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	2042
Dec 6, 2022	ENGIE	Sempra Infrastructure	France / US	0.12	15.0	n.a.	n.a.
Dec 20, 2022	Galp	NextDecade	Portugal / US	0.13	20.0	n.a.	n.a.
Dec 20, 2022	Shell	Oman LNG	UK/Oman	0.11	10.0	2025	2035
Jan 25, 2023	PKN ORLEN	Sempra Infrastructure	EU//US	0.13	20.0	2027	2047
Jan 30, 2023	BOTAS	Oman	Turkey / Oman	0.13	10.0	2025	2035
Mar 27, 2023	Shell	Mexico Pacific Ltd	UK / Mexico	0.15	20.0	2026	2046
Apr 24, 2023	Hartree Partners LP	Delfin Midstream	US / US	0.08	20.0	n.a.	n.a.
Jun 21, 2023	Equinor	Cheniere	Norway / US	0.23	15.0	2027	2042
Jun 22, 2023	SEFE	Venture Global LNG	EU//US	0.30	20.0	2026	2046
Jul 14, 2023	ONEE (Morocco)	Shell	Africa/US	0.05	12.0	2024	2036
Jul 18, 2023	IOCL	Adnoc	India/UAE	0.16	14.0	2026	2040
Jul 28, 2023	OMV	BP	Austira/UK	0.13	10.0	2026	2036
Aug 4, 2023	ConocoPhillips	Mexico Pacific Ltd	US/Mexico	0.29	20.0	2025	2045
Aug 22, 2023	BASF	Cheniere	Germany / US	0.10	17.0	2026	2043
Aug 30, 2023	Shell	Oman LNG	US / Oman	0.11	10.0	2025	2035
Oct 11, 2023	TotalEnergies	QatarEnergy	France / Qatar	0.46	27.0	2026	2053
Oct 18, 2023	Shell	QatarEnergy	Netherlands / Qatar	0.46	27.0	2026	2053
Oct 23, 2023	ENI	QatarEnergy	Italy / Qatar	0.13	27.0	2026	2053
Oct 31, 2023	Vitol	Chesapeake Energy	Sweden / US	0.13	15.0	2028	2043
Nov 29, 2023	OMV	Cheniere	Netherlands / US	0.11	15.0	2029	2044
Dec 5, 2023	Woodside Energy	Mexico Pacific Ltd	Australia / Mexico	0.17	20.0	2024	2044
Mar 18, 2024	SEFE	ADNOC	Germany / UAE	0.13	20.0	2024	2044
Apr 17, 2024	Shell	Oman LNG	US / Oman	0.21	10.0	2025	2035
Apr 22, 2024	TotalEnergies	Oman LNG	France / Oman	0.11	10.0	2025	2035
May 8, 2024	EnBW	ADNOC	Germany / UAE	0.08	15.0	2028	2043
Total Non-Asian LNG Buyers New Long Term Contracts Since Jul/21				**8.26**			

Total New Long Term LNG Contracts since Jul/21	**22.86**

*Excludes Asian short term/spot deals
*on Dec 20, 2021 CNOOC 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/

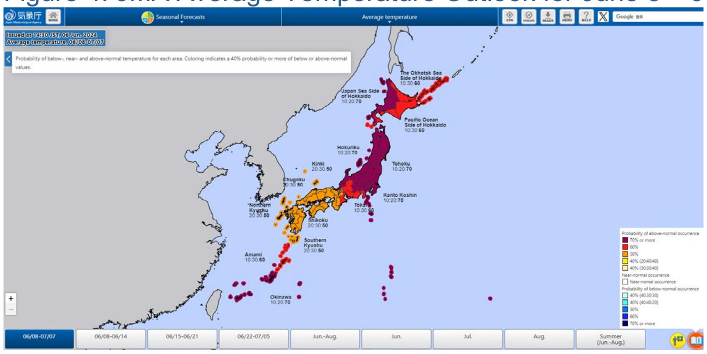
Source: SAF

Natural Gas: Japan expects warmer than normal temperature to end June & start July

JMA temperature forecast for the next 30 days

On Thursday, the Japan Meteorological Agency updated its forecast for the next 30 days in Japan [LINK]. There is no JMA commentary on the forecast. JMA is calling for above normal temperatures for the rest of June and to start July across all of Japan. In the forecast is warmer than normal temperatures concentrated mostly in Northern Japan for the next week before expanding to warmer than normal temperatures across the country over the last two weeks of June and the first week of July. We checked AccuWeather and they are forecasting daily highs in of 27-29C for the next 30 days, and then moving into the low 30's in the 2nd week of Japan. In Japan, that isn't normally a temperature that drives a lot of electricity demand as Japanese offices and houses tend to have air conditioning turned way higher than in North America. Below is the JMA temperature forecast for the next 30 days.

Figure 4: JMA Average Temperature Outlook for June 8 – July 7

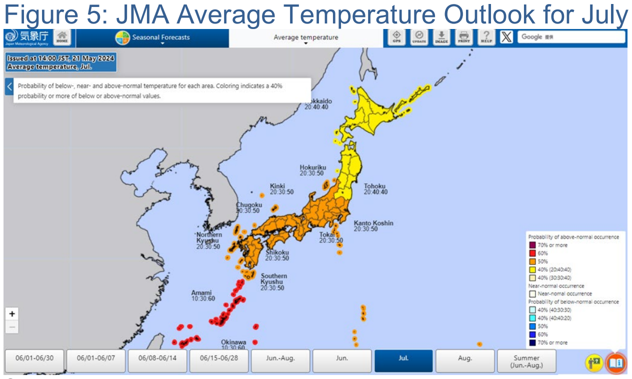


Source: Japan Meteorological Agency

Natural Gas: Japan expects much warmer than normal July and Aug

The JMA's updated 30-day temperature forecast is in line with what the JMA has been forecasting for the summer. Here is what we wrote in last week's (June 2, 2024) Energy Tidbits memo: *Last week, the Japan Meteorological Agency updated its forecast for July in Japan [LINK] and for August in Japan [LINK]. There is no JMA commentary on the forecast. JMA is calling for much warmer than normal temperatures for both July and August. This updated for July and August is in line with the JMA's first temperature forecast for July and Aug that was posed on Feb 20. Although the new JMA temperature forecast is for much warmer than normal whereas the JMA Feb 20 forecast was for very hot Jun/Jul/Aug. High temperatures in July tend to be over 30c and that should increase weather driven demand. Below is the JMA temperature forecast for July and August.*

Figure 5: JMA Average Temperature Outlook for July



Source: Japan Meteorological Agency

Figure 6: JMA Average Temperature Outlook for August

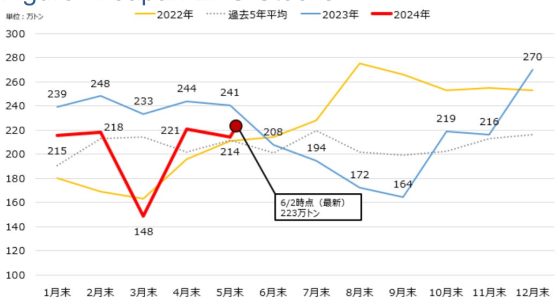
Source: Japan Meteorological Agency

Natural Gas: Japan LNG stocks up WoW, still down YoY

Japan LNG stocks up WoW

Japan's LNG stocks continue to be down YoY, but are up WoW and are above the 5-year average. On Wednesdays, Japan's METI releases its weekly LNG stocks data [LINK]. LNG stocks on June 2 were 107.1 bcf, up +8.3% WoW from May 26 of 98.9 bcf, and down -7.5% YoY from 115.7 bcf a year earlier. Stocks are up +5.7% above the 5-year average of 101.3 bcf. Below is the Japanese LNG stocks graph from the METI weekly report.

Figure 7: Japan LNG Stocks



Source: METI

Natural Gas: China prioritizes Russian pipeline gas as it is cheap

China gets cheap Russian natural gas

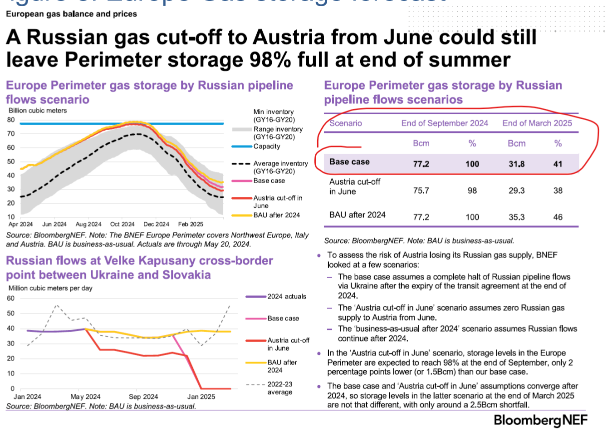
For years, we have warned that how Chinese natural gas pipeline imports from Russia would be prioritized over LNG imports due to the cheap cost of Russian pipeline gas. On Monday, we tweeted [LINK] "*It's way cheaper! And why China prioritizes imports of RUS #NatGas via pipeline vs #LNG imports. 2019-21: China only paid $4.40/mmbtu for RUS pipeline gas vs RUS charged Europe ~$10/mmbtu. See 👇 @maxseddon @NastyaStognei @HenryJFoy @leahyjoseph report. #OOTT.*" The FT report "*Russia-China gas pipeline deal stalls over Beijing's price demands*" was focused on China wanting too low a natural gas price for the next expansion of Russian pipeline natural gas to China. But what jumped out at us was the reminder that China is currently getting cheap natural gas from Russia. FT wrote "*China already pays Russia less for gas than to its other suppliers, with an average price of $4.4 per million British thermal units, compared with $10 for Myanmar and $5 for Uzbekistan, the CGEP researchers calculated from 2019-21 customs data. During the same years Russia* *exported gas to Europe at about $10 per million Btu, according to data published by the Russian central bank."* Our Supplemental Documents package includes the FT report.

Natural Gas: BloombergNEF forecast Europe gas storage full by end of Sept

EU industrial natural gas demand

Here is what we wrote in last week's (June 2, 2024) Energy Tidbits on the then new BloombergNEF forecast for Europe gas storage to be full by the end of Sept. "*On Friday, we tweeted [LINK] "ICYMI. @BloombergNEF base case forecasts Europe #NatGas storage full by Sept 30! If so, it won't just hurt Europe TTF prices but also push back on US #HH prices. #OOTT." BloombergNEF's European Gas Monthly also had its base case forecsat for Europe natural gas storage and they call for storage to be full by Sept 30. BloombergNEF also highlights that Eruope natural gas storage would still be 98% by Sept 30 if there is a cut off of any Russian natural gas to Austria in June. IF Europe natural ags storage is full by Sept 30, there should be some strong downward price pressure on Europe natural gas prices in Sept and Oct. And if so, there should also be some push back on US HH natural gas prices.* "

Figure 8: Europe Gas storage forecast



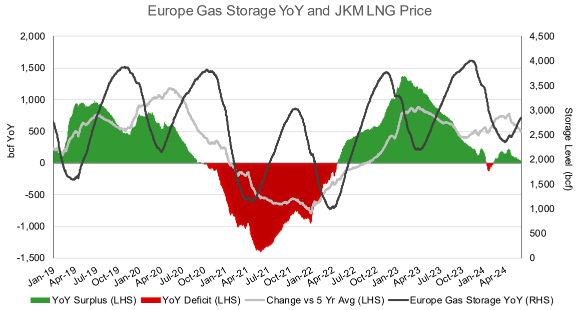
Source: BloombergNEF

Natural Gas: Europe storage builds WoW to 71.2%, up +0.5% YoY

Europe gas storage

This week, Europe storage increased by +1.5% Wow to 71.2% vs 69.7% on June 6. Storage is now +0.5% higher than last year's levels of 70.7% on June 6, 2023, and up huge vs the 5-year average of 60.0%. As noted above, BloombergNEF's updated forecast is for Europe gas storage to be full by Sept 30. This would be early and would bring low Europe gas prices in Sept/Oct. The big wildcard for Europe natural gas markets over the coming months will be if Russia can damage or put out of operation any Ukraine natural gas storage. Below is our graph of European Gas Storage Level.

Figure 9: European Gas Storage Level

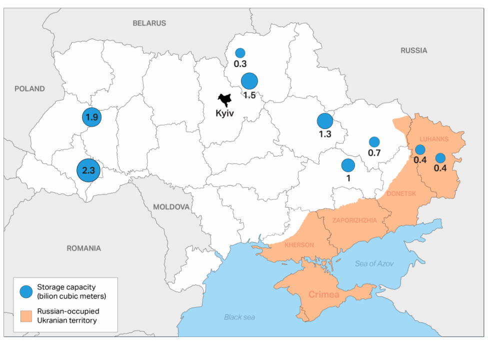


Source: Bloomberg, SAF

Ukraine storage is currently ~6% of total Europe gas storage volume

The reason why natural gas markets reacted to the Mar/Apr Russian bombing of the Ukraine natural gas storage was that Ukraine's natural gas storage is an important part of Europe natural gas storage. The good news was that the recent Russian bombing only affected above ground infrastructure. We broke out the Ukraine storage data from the above Europe data we monitor weekly from the GIE AGSI website [LINK], and we found that on June 6th natural gas in Ukraine storage was at 15.53% of its total capacity, up from 15.06% of its total capacity as of May 30th. Last year, Ukraine storage started the winter on Nov 1, 2023 at 39.38%. Right now, Ukraine makes up ~6% of Europe's natural gas in storage and, at the beginning of winter 2023/24, it was ~10% of Europe's natural gas in storage. Below is a map of Ukraine's major gas storage facilities.

Figure 10: Ukraine Gas Storage Facilities as of July 2023



Source: Bruegel

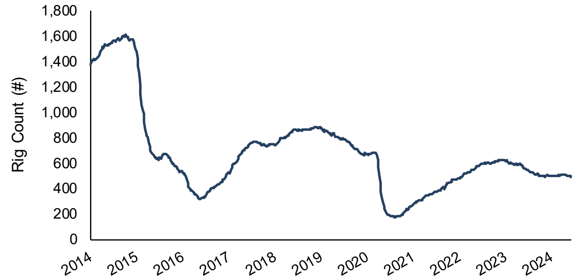
Oil: US oil rigs down -4 rigs WoW at 492 rigs, US gas rigs down -2 rigs WoW to 98 rigs

US oil and gas rigs down WoW

On Friday, Baker Hughes released its weekly North American drilling rig data. (i) Note, after we recently sent them an email, Baker Hughes confirmed they wouldn't be returning to the old format which previously allowed us to break out the basin changes by oil vs gas rig type. (ii) Total US oil rigs were down -4 rigs WoW to 492 oil rigs as of June 7. US oil rigs went below 520 rigs on Aug 25 and has been around 490-510 rigs for the past several months. (iii)

Note we are able to see the basin changes but not by type of rig. The major changes were Ardmore Woodford -1 rig WoW to 6 rigs, and Marcellus -2 rigs WoW to 25 rigs. It looks like we may be seeing a pull back with the WTI back down in the $70s. (iv) The overlooked US rig theme is the YoY declines. Total US rigs are -101 YoY to 594 rigs including US oil rigs -64 oil rigs YoY to 492 oil rigs. And for the key basins, the Permian is -36 rigs YoY, Haynesville is -15 rigs YoY and Marcellus -14 rigs YoY. (v) US gas rigs were down -2 rigs this week to 98 gas rigs.

Figure 11: Baker Hughes Total US Oil Rigs



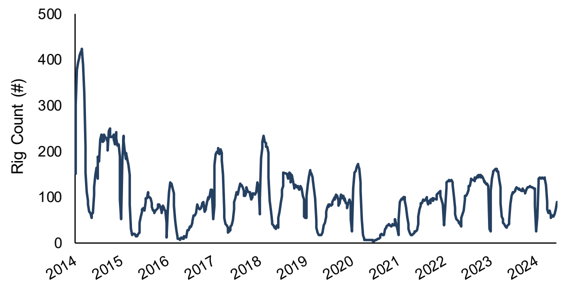
Source: Baker Hughes, SAF

Oil: Total Cdn rigs up +15 rigs WoW, ramping up post spring breakup

Cdn total rigs up WoW

As happens every year in Canada, the rig count drops dramatically from early March thru the end of April/beginning of May as winter drilling season ends and the industry moves into spring break up. Spring break up is the period when it warms up and road access becomes limited/restricted in many parts of Western Canada. Total Cdn rigs declined from 231 at the beginning of March to 114 three weeks ago. This week's increase in rigs looks to continue the ramp up we saw beginning last week that follows every spring break up. Cdn oil rigs were up +15 rigs WoW this week to 89 rigs and are up +4 rigs YoY. Gas rigs are flat WoW this week at 56 rigs and are up +3 rigs YoY. Baker Hughes did not update their old format report, so we weren't able to see the provincial breakouts.

Figure 12: Baker Hughes Total Cdn Oil Rigs



Source: Baker Hughes, SAF

SAF GROUP

Oil: US weekly oil production flat WoW at 13.100 mmb/d

It's worth noting that historically, the EIA weekly estimates have been off of the Form 914 actuals, which sometimes require re-benchmarking. Here's what the EIA wrote on their website last month with the April STEO: "*When we release the Short-Term Energy Outlook (STEO) each month, the weekly estimates of domestic crude oil production are reviewed to identify any differences between recent trends in survey-based domestic production reported in the Petroleum Supply Monthly (PSM) and other current data. If we find a large difference between the two series, we may re-benchmark the weekly production estimate on weeks when we release STEO. This week's domestic crude oil production estimate incorporates a re-benchmarking that decreased estimated volumes by 177,000 barrels per day, which is about 1.3% of this week's estimated production total".* On May 7, the EIA released its May STEO and they'd revised up Q1/24 production estimates to 12.96 mmb/d from 12.84 mmb/d in April's STEO, so this message is consistent. The latest Form 914 (with March actuals) was +0.062 mmb/d higher than the weekly estimates of 13.120 mmb/d. This week, the EIA's production estimates were flat WoW at 13.100 mmb/d for the week ended May 31. Alaska was up +0.004 mmb/d WoW to 0.426 mmb/d from 0.422 mmb/d last week. Below is a table of the EIA's weekly oil production estimates.

US oil production flat WoW

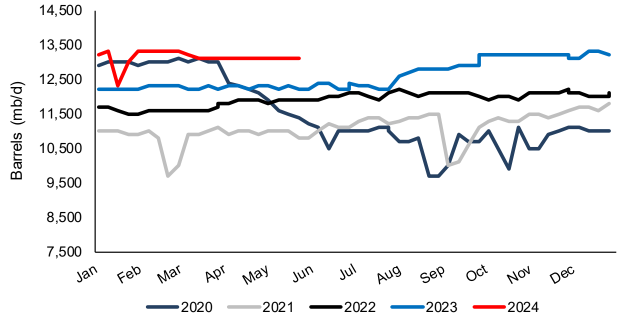
Figure 13: EIA's Estimated Weekly US Field Oil Production (mb/d)

Weekly U.S. Field Production of Crude Oil (Thousand Barrels per Day)

	Week 1		Week 2		Week 3		Week 4		Week 5	
Year-Month	End Date	Value	End Date	Value	End Date	Value	End Date	Value	End Date	Value
2023-Jan	01/06	12,200	01/13	12,200	01/20	12,200	01/27	12,200		
2023-Feb	02/03	12,300	02/10	12,300	02/17	12,300	02/24	12,300		
2023-Mar	03/03	12,200	03/10	12,200	03/17	12,300	03/24	12,200	03/31	12,200
2023-Apr	04/07	12,300	04/14	12,300	04/21	12,200	04/28	12,300		
2023-May	05/05	12,300	05/12	12,200	05/19	12,300	05/26	12,200		
2023-Jun	06/02	12,400	06/09	12,400	06/16	12,200	06/23	12,200	06/30	12,400
2023-Jul	07/07	12,300	07/14	12,300	07/21	12,200	07/28	12,200		
2023-Aug	08/04	12,600	08/11	12,700	08/18	12,800	08/25	12,800		
2023-Sep	09/01	12,800	09/08	12,900	09/15	12,900	09/22	12,900	09/29	12,900
2023-Oct	10/06	13,200	10/13	13,200	10/20	13,200	10/27	13,200		
2023-Nov	11/03	13,200	11/10	13,200	11/17	13,200	11/24	13,200		
2023-Dec	12/01	13,100	12/08	13,100	12/15	13,300	12/22	13,300	12/29	13,200
2024-Jan	01/05	13,200	01/12	13,300	01/19	12,300	01/26	13,000		
2024-Feb	02/02	13,300	02/09	13,300	02/16	13,300	02/23	13,300		
2024-Mar	03/01	13,200	03/08	13,100	03/15	13,100	03/22	13,100	03/29	13,100
2024-Apr	04/05	13,100	04/12	13,100	04/19	13,100	04/26	13,100		
2024-May	05/03	13,100	05/10	13,100	05/17	13,100	05/24	13,100	05/31	13,100

Source: EIA

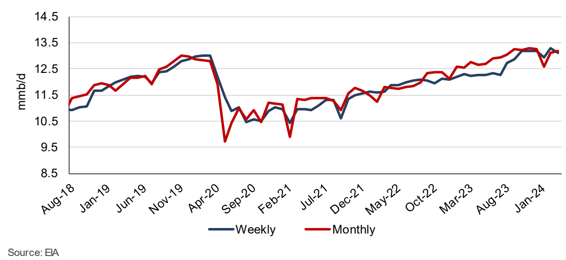
Figure 14: EIA's Estimated Weekly US Oil Production



Source: EIA, SAF

EIA Form 914 – US March oil actuals were +79,000 b/d vs weekly estimates
Last Friday, the EIA released its Form 914 data [LINK] , which is the EIA's "actuals" for March US oil and natural gas production. As noted previously, over the past four months the EIA has had to make big upward adjustments to their weekly oil supply estimates to bring them more in line with the Form 914 actuals. (i) This month, the EIA revised February down by -49,000 b/d from 13,154 mmb/d to 13,105 mmb/d. As a result, the February actuals were -174,000 b/d vs the weekly supply estimates of 13,279 mmb/d. (ii) The EIA Form 914 March "actuals" at 13,182 mmb/d, which was +79,000 b/d above the weekly supply estimates of 13,103 mmb/d. (iii) March "actuals of 13,182 mmb/d are +77,000 b/d MoM vs 13,105 mmb/d in Feb. And also +412,000 b/d YoY vs March 2023 of 12,770 mmb/d.. Below is a chart of monthly actuals vs. weekly estimates.

Figure 15: EIA Form 914 US Oil Production vs Weekly Estimates



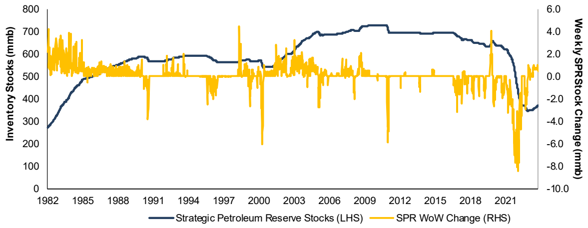
Source: EIA, SAF

Oil: US SPR less commercial reserve deficit widens, now -85.735 mmb

US SPR reserves

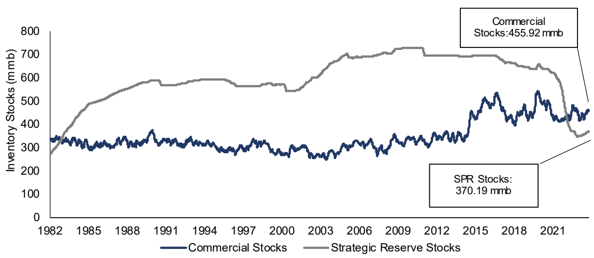
The US Strategic Petroleum Reserves (SPR) continues to be much lower than total US commercial crude oil reserves. The SPR went back below commercial for the first time since 1983 in the Sep 16, 2022 week. This week, we saw a build on the SPR side and on the commercial side. The EIA's weekly oil data for May 31 [LINK] saw the SPR reserves increase +0.898 mmb WoW to 370.187 mmb, while commercial crude oil reserves increased +1.233 mmb to 455.922 mmb. There is now a -85.735 mmb difference between SPR reserves and commercial crude oil reserves. The below graphs highlight the difference between commercial and SPR stockpiles, along with the weekly changes to SPR stockpiles.

Figure 16: Strategic Petroleum Reserve Stocks and SPR WoW Change



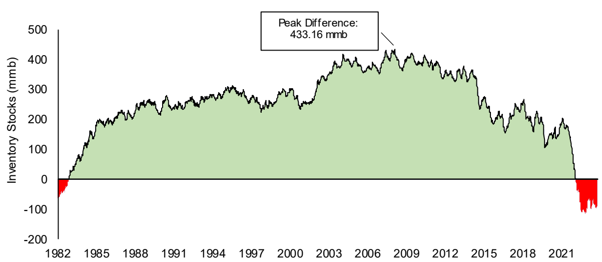
Source: EIA

Figure 17: US Oil Inventories: Commercial & SPR



Source: EIA

Figure 18: US Oil Inventories: SPR Less Commercial



Source: EIA

Oil: US national average gasoline prices -$0.08 WoW to $3.46

US gasoline prices

Yesterday, we tweeted [LINK] "*US gasoline prices keep drifting down. Jun 8 $3.46, -$0.08 WoW, $0.18 MoM & -$0.10 YoY. California below $5 to $4.94 is $0.12 WoW. See 👇 05/24 @GusBuddyGuy expects "progressive decreases between Memorial Day, July 7 & Labor Day". Thx @AAAnews #OOTT.*" Yesterday, AAA reported that US national average prices were $3.46 on June 8, which was -$0.08 WoW, -$0.18 MoM, and -$0.10 YoY. As of yesterday, the California average gasoline prices were -$0.12 WoW to $4.94, which is a $1.48 premium to the national average price of $3.46. California average gas prices are -$0.39 MoM and +$0.06 YoY.

GasBuddy forecasts US gasoline prices to decline thru Labor Day

Our tweet on AAA national average gas prices linked to our May 24 tweet on GasBuddy's forecast for US gasoline prices to decline thru Labor Day. Here is what we wrote in our May 26, 2024 Energy Tidbits memo. "*On Friday, we tweeted [LINK] "Biden hopes this forecast turns out true! US #Gasoline prices +$0.06 YoY BUT well followed @GasBuddyGuy expects "progressive decreases between Memorial Day, July 4 and Labor Day" subject to typical caveats ie. hurricanes. refinery issues. #OOTT @andrewrsorkin @SquawkCNBC". GasBuddy is Patrick De Haan and is well followed for his ground up market following and reap of US gasoline prices. This forecast, if it turns out accurate, will be a big plus for Biden's re-election hopes if US asoline prices are going lower and closer to $3 than $4. Our tweet included a clip of De Haan's comments. Here is a transcript we created of his reply on CNBC Squawk Box on Friday. "Prices [are] up modestly, just 6 cents from last year. It is interesting to watch the trends though, TSA predicting and already seeing some record number of travelers via air. Our week-to-date gasoline demand data showing that week to date through Thursday compared to last year, gasoline demand down about 7.7% so it looks like 2024 might be skewing towards air travel. Not necessarily on the road, but certainly there will still be millions of Americans out there, they will be paying about $3.61 a gallon as down from $3.69. The good news for anyone hitting the road this summer is we expect progressive decreases between Memorial Day, July 4, and then Labor Day. Of course there are the typical caveats, mother nature, hurricane season is a big wild card, and we have seen a rash of minor refinery issues in the great lakes. That is going to be something that could bother motorists this summer. If there are refinery outages, that could temporarily drive prices up locally."*

Oil: Crack spreads up $0.27 WoW to $24.31

Crack spreads closed at $24.31

On Friday, we tweeted [LINK] "*321 crack spreads up small +$0.27 WoW to $24.31 on Jun 7. But down $4.65 over past 6 weeks so no surprise WTI was -$1.46 WoW to $75.53 on Jun 7. $24.31 above historical $15-20 but not necessarily high enough to drive up WTI. Thx @business #OOTT.*" Crack spreads were up small this week to $24.31 but are down $4.65 over the past six weeks. We have always said crack spreads around $30 are a big incentive for refiners to buy as much crude as possible. But drifting lowering crack spreads and now at $24.31 may provide an okay margin for refiners but aren't high enough to point to higher WTI ahead. Crack spreads were +$0.27 WoW to close at $24.31 on Friday and WTI was -$1.46 WoW to close at $75.53. The drifting down of WTI was pointed to by the $4.65 decline in the crack spreads over the past six weeks. Crack spreads at $24.31 on June 7 followed $24.04 on May 31, $25.65 on May 24, $27.04 on May 17, $25.89 on May 10, $27.59 on May 3, $28.96 on Apr 26, $28.30 on Apr 19, $30.39 on Apr 12, and $29.45 on Apr 5. Crack spreads at $24.31 are still solidly above the high end of the more normal pre-Covid that was more like $15-$20 ie. still okay margins for refiners but likely to keep oil prices rangebound.

Crack spreads point to near term oil price moves, explaining 321 crack spread

We have focused on crack spreads for since the 90s as they are an unchanged fundamental of refineries – big crack spreads provide incentives for refineries to buy more crude because there are big profit margins to be made. People often just say "cracks", which refers to the 321 crack spread. This is the spread or margin that refiners make from buying crude at a certain price and then selling the finished petroleum products at their respective prices. The 321 crack spread is meant to represent what a typical US refinery produces. It assumes that for every three barrels of crude oil, the refinery will produce two barrels of gasoline and one barrel of distillates. So the crack spread is based on that formula and worked back to a crack spread per barrel. Below is the current 321 crack spread vs WTI that we put in our tweet where we marked the gaps where the crack spread normally drags up oil prices. The crack spread was $24.31 as of the Friday June 7, 2024 close.

Figure 19: Cushing Oil 321 Crack Spread & WTI June 7, 2014 to June 7, 2024

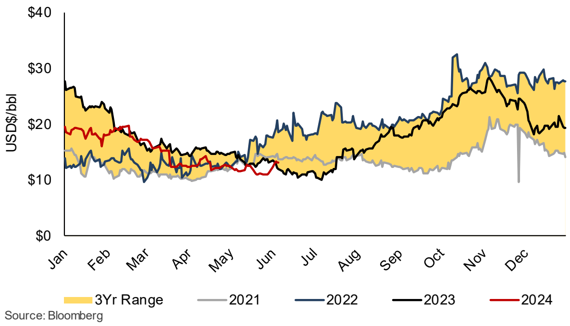
Source: Bloomberg

Oil: Cdn heavy oil differentials widen +$1.35 WoW to close at $13.10 on June 7

WCS differential widens

We believe the key test for how the startup of the 590,000 b/d TMX expansion will help Cdn WCS less WTI differentials is coming up in July/Aug /Sept to see if there will be less of the normal seasonal widening in WCS less WTI differentials. Right now, we are in the normal late Q1 and Q2 period that normally sees a narrowing of WCS less WTI differentials down to the low double digits as US refiners maximize production of asphalt for annual paving season and to maximize production of summer grade fuels as well as asphalt ahead of the annual summer driving and paving season. So it’s hard to determine how much of an impact TMX has had on WCS less WTI differentials although with the last two weeks have been below the bottom end of the 3-yr range. Below is graph showing WCS-WTI differentials that shows this normal seasonal trend of narrowing WCS-WTI differentials in late Q1 and Q2. The WCS less WTI differential closed on June 7 at $13.10, which was a widening of +$1.35/bbl WoW vs $11.75/bbl on May 31.

Figure 20: WCS less WTI oil differentials to June 7 close



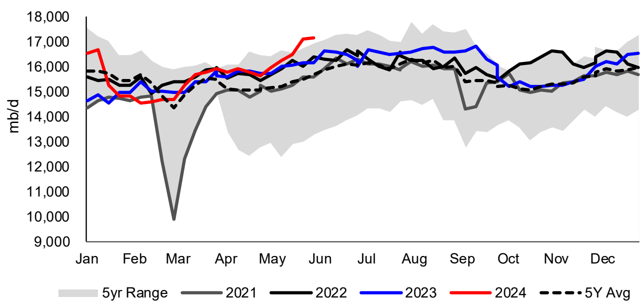
Source: Bloomberg

Oil: Refinery Inputs up +0.061 mmb/d WoW to 17.144 mmb/d

Refinery inputs +0.061 mmb/d WoW

There are always unplanned refinery items that impact crude oil inputs into refineries. And there are always different timing for refinery turnarounds. But, as a general rule, this is the normal seasonal ramp up in refinery runs for the summer that normally peaks in August. On Wednesday, the EIA released its estimated crude oil input to refinery data for the week ended May 31 [LINK]. The EIA reported crude inputs to refineries were up +0.061 mmb/d this week to 17.144 mmb/d and are up +0.498 mmb/d YoY. Refinery utilization was up +1.1% WoW to 95.4%, which is down -0.4% YoY.

Figure 21: US Refinery Crude Oil Inputs



Source: EIA, SAF

Oil: US net oil imports up +0.013 mmb/d WoW as oil exports up +0.276 mmb/d WoW

US net oil imports

The EIA reported US "NET" imports were up +0.013 mmb/d to 2.557 mmb/d for the May 31 week. US imports were up +0.289 mmb/d to 7.058 mmb/d, while exports were up +0.276 mmb/d WoW to 4.501 mmb/d. (i) Venezuela weekly imports. We know why the EIA doesn't have any data in the row for Venezuela weekly oil imports but we still don't know if the weekly oil imports are off or if Venezuela is included in the weekly oil imports in the Others number. But we do know the EIA monthly data shows Padd 3 imports from Venezuela around 150,000 b/d. Give the EIA credit for putting out weekly oil import estimates, but it's a reminder that we have to be careful about using the weekly oil import estimates. Rather we need to make sure we go to the monthly data for oil imports. Top 10 was up +0.290 mmb/d. Some items to note on the country data: (i) Canada was up +0.102 mmb/d to 3.768 mmb/d. (ii) Saudi Arabia was down -0.047 mmb/d to 0.375 mmb/d. (iii) Mexico was down -0.013 mmb/d to 0.538 mmb/d. (iv) Colombia was up +0.464 mmb/d to 0.496 mmb/d. (v) Iraq was down -0.107 mmb/d to 0.126 mmb/d. (vi) Ecuador was up +0.097 mmb/d to 0.200 mmb/d. (vii) Nigeria was down -0.071 mmb/d to 0.000 mmb/d.

Figure 22: US Weekly Preliminary Imports by Major Country

	Apr 5/24	Apr 12/24	Apr 19/24	Apr 26/24	May 3/24	May 10/24	May 17/24	May 24/24	May 31/24	WoW
Canada	3,546	3,458	3,423	3,847	3,659	3,812	3,495	3,666	3,768	102
Saudi Arabia	531	229	398	402	355	196	486	422	375	-47
Venezuela	0	0	0	0	0	0	0	0	0	0
Mexico	209	208	351	459	805	507	184	551	538	-13
Colombia	114	246	215	363	183	211	215	32	496	464
Iraq	142	308	309	307	326	123	239	233	126	-107
Ecuador	231	0	124	0	129	207	163	103	200	97
Nigeria	43	173	136	89	322	212	144	71	0	-71
Brazil	257	189	492	0	217	293	315	127	254	127
Libya	24	21	100	98	1	86	0	262	0	-262
Top 10	5,097	4,832	5,548	5,565	5,997	5,647	5,241	5,467	5,757	290
Others	1,337	1,629	949	1,207	972	1,097	1,422	1,302	1,301	-1
Total US	**6,434**	**6,461**	**6,497**	**6,772**	**6,969**	**6,744**	**6,663**	**6,769**	**7,058**	**289**

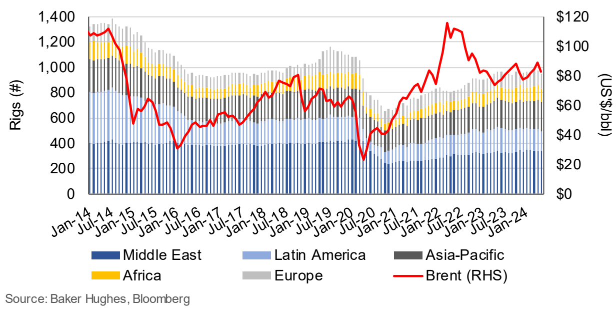
Source: EIA, SAF

Oil: Baker Hughes International -20 rigs MoM to 958 rigs in May

International rigs -20 MoM in May

On Friday, Baker Hughes posted its monthly update to international rigs, in total, that show rigs in April increased MoM. (i) Note that Baker Hughes has changed its report format which doesn't allow us to break out country-by-country information. (ii) Total international rigs decreased by -20 rigs MoM to 958 rigs in May, and total rigs are now up +152 rigs from the recent low of 806 in April 2022. The MoM rig count is as follows: Africa -6 rigs, Asia-Pacific -11 rigs, Europe +3 rigs, Latin America -9 rigs, and the Middle East -2 rigs. The YoY rig count is Africa +12 rigs, Asia-Pacific -7 rigs, Europe +14 rigs, Latin America -33 rigs, and the Middle East +2 rigs. (iii) We weren't able to summarize the MoM data by country due to Baker-Hughes' new format. (iv) May's count of 958 rigs was -1% YoY from 965 in May 2023, and down -12% vs pre-Covid February 2020 of 1,085 rigs (March 2020 is when the pandemic kicked off). Below is our graph of international rigs by region and avg monthly Brent price.

Figure 23: Baker Hughes International Rig Count and Brent Price



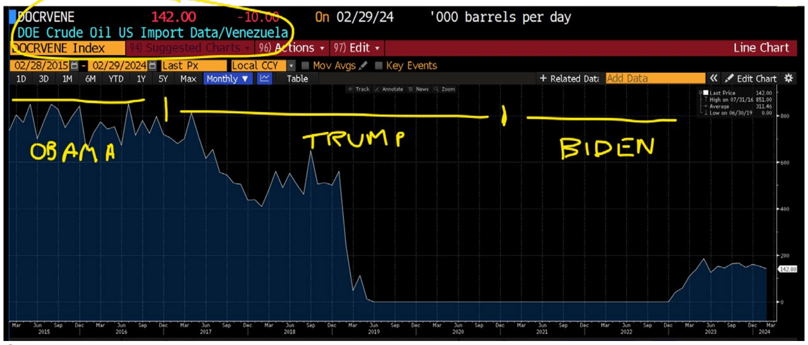
Source: Baker Hughes, Bloomberg, SAF

Oil: Venezuela oil loadings to US reach >200,000 b/d for 1st time since 2019

We have been of the view that Biden is going to do all he can to keep Venezuela oil flowing to global markets and, in particular, to the US Gulf Coast refineries to do what he can to help keep gasoline prices as low as possible in the run up to the election There is less than five months to the Nov 5 election and it's clear that Biden is pushing any levers he has to keep gasoline and groceries prices from rising. And one of his key levers is allowing as much Venezuela oil to hit global markets in the shortest time. And it's working as Venezuela oil exports/loadings to the US are hitting new highs since 2019. Reuters reports shipments to the US reached 205,000 b/d in April, which is the first time above 200,000 b/d since 2019. On Monday, we tweeted [LINK] "*Venezuela #Oil exports up to 708,900 b/d in May. Note, 205,000 b/d of VEN oil imported by Chevron to Gulf Coast PADD 3, 1st time over 200,000 b/d since 2019. Good timing for Biden, more VEN oil into PADD 3 ahead of Nov 5. Thx @mariannaparraga #OOTT.*" Reuters wrote "*A total of 50 vessels departed Venezuelan waters last month carrying an average 708,900 barrels per day (bpd) of crude and fuel, and 614,000 tons of petrochemicals and oil byproducts, according to internal PDVSA documents and shipping data from financial firm LSEG.*" And "*Over a third of total exports, or 250,000 bpd, were bound for Asia. The United States was the second largest recipient with an average of 205,000 bpd sent by U.S. oil major Chevron, opens new tab(CVX.N), opens new tab to its own refineries and others, followed by Europe with 129,000 bpd.*" Below is the Bloomberg data on US oil imports from Venezuela. Our Supplemental Documents package include the Reuters report.

205,000 b/d of Venezuela oil shipped to US

Figure 24: US oil imports from Venezuela



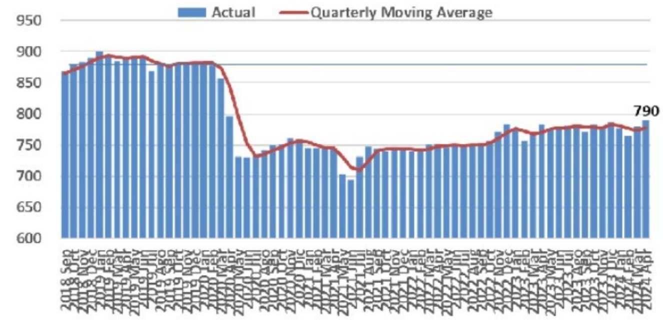
Source: Bloomberg

Oil: Colombia oil production still well below pre-Covid, April was 0.790 mmb/d

We continue to believe it's hard to see how Colombia oil production ever sustainably rallies anywhere back to 1 mmb/d or even 900,000 b/d. Despite stronger oil prices post Covid, Colombia oil production has been stuck below 800,000 b/d, however this month marks a new 4-year high. On Wednesday, Hydrocarbons Colombia updated their website to reflect the most recent data, which is for April 2024 [LINK]. Production in April was up +1.3% MoM to 0.790 mmb/d from 0.780 mmb/d. This puts April's production up +1.0% YoY vs 0.782 mmb/d in April 2023. Production is now -10.82% below pre-Covid levels of 0.886 mmb/d in 2019.

Colombia oil production stuck below 800,000 b/d

Figure 25: Colombia's Oil Production



Source: Hydrocarbons Colombia

Figure 26: Colombia's Oil Production by Month

mmb/d	2016	2017	2018	2019	2020	2021	2022	2023	2024	24/23
Jan	0.986	0.860	0.860	0.899	0.884	0.745	0.740	0.774	0.777	0.4%
Feb	0.955	0.864	0.823	0.893	0.878	0.746	0.740	0.759	0.764	0.7%
Mar	0.917	0.804	0.856	0.885	0.857	0.745	0.751	0.771	0.780	1.2%
Apr	0.915	0.857	0.865	0.891	0.796	0.745	0.751	0.782	0.790	1.0%
May	0.904	0.851	0.866	0.895	0.732	0.703	0.746	0.774		
June	0.888	0.857	0.864	0.892	0.730	0.694	0.752	0.778		
July	0.843	0.856	0.860	0.869	0.735	0.731	0.748	0.782		
Aug	0.827	0.858	0.866	0.883	0.742	0.748	0.749	0.782		
Sept	0.859	0.851	0.869	0.879	0.749	0.744	0.754	0.771		
Oct	0.846	0.864	0.879	0.883	0.751	0.740	0.757	0.778		
Nov	0.855	0.851	0.883	0.880	0.761	0.747	0.771	0.783		
Dec	0.837	0.870	0.889	0.882	0.759	0.745	0.784	0.787		

Source: Bloomberg, The National Hydrocarbons Agency

Oil: Russia's Novak says "All" agree oil demand +1.5 to 2 mmb/d in 2024

Novak on oil demand

Russia Deputy Prime Minister Novak spoke about oil demand growth in 2024 and 2025. On Thursday, we tweeted [LINK] "*What about IEA? ""All agree that 1.5 - 2 mln barrels a day for this year plus extra demand growth; estimates for the next year are about 1.5 mln barrels per day," Novak said." Looks like Novak forgot IEA who are at +1.1 mmb/d YoY in 2024 and +1.2 mmb/d YoY in 2025. #OOTT.*" TASS reported on Novak's comments at the St. Petersburg International Forum and he was making the point about how everyone sees strong oil demand growth of 1.5 to 2 mmb/d YoY in 2024 and about 1.5 mmb/d YoY in 2025. We reminded that the IEA is at +1.1 mmb/d YoY in 2024 and +1.2 mmb/d YoY in 2025 but we also believe that there are a fair amount of analysts who are at or below 1.5 mmb/d YoY in 2024.

Oil: Biden, Ukraine can't use US missiles to hit Moscow or 200 miles into Russia

Biden lets Ukraine use US missiles in Russia

We don't think anyone can predict what will happen in the Russia/Ukraine war. But one thing seems clear – the attacks are escalating and, if thee are escalating attacks, it raises the risk for something unpredictable to happen. On Thursday, we tweeted [LINK] "*How will Putin respond as US missiles "used in proximity to the border" ie. less than 200 miles inside Russia? "We're not authorizing strikes 200 miles into Russia and we're not authorizing strikes on Moscow, on the Kremlin." Biden to @DavidMuir. Thx @FritzFarrow #OOTT.*" Biden confirmed that the US said Ukraine can use US missiles to hit targets inside Russia but then said Ukraine can't use them 200 miles inside Russia and can't use them against Moscow. We don't think it makes a huge difference to Putin how far inside Russia. ABC News interviewed Biden and wrote "*Muir asked Biden if U.S.-made weapons have already been used in Russia since he signed off on their use, limiting use to areas near the Russian-occupied Kharkiv region. The president did not directly answer, but made clear they would not be authorized to be used to target Russia's capital city or seat of government. "They're authorized to be used in proximity to the border when they're being used on the other side of the border to attack specific targets in Ukraine," Biden told Muir of U.S. weapons. "We're not authorizing strikes 200 miles into Russia and we're not authorizing strikes on Moscow, on the Kremlin."* Our Supplemental Documents package includes the ABC News report.

Oil: Good Russian refinery & terminals map within Ukrainian drone range

Russia refinery map

Here is an item from our May 26, 2024 Energy Tidbits memo. "*On Tuesday, we tweeted [LINK] "Great map! 4.8 mmb/d refining capacity & 0.99 mmb/d of "gross capacity hit by drones to May 20 of Russian refineries within "current strike zone" of Ukrainian drones. Reminds UKR can also hit RUS major export terminals in Baltic & Black Seas. Thx @ncoleman100 @SPGCIOil #OOTT." The map shows the current proven range of Ukrainian drones and all the refineries and terminals with that range. It also notes the "gross capacity" of the Russian refineries that have been hit ie. it doesn't note how much of the gross capacity has been out and for how long."*

Figure 27: Russian refineries & terminals within Ukrainian drone reach

Source: Platts

Oil: More Russian refineries hit by drones

Russian refinery hit

Ukraine is not stopping their attacks on Russian refineries and it's like the US has given up on trying to convince them to not hit Russian refineries as they tried publicly to do so a month or so ago. (i) Novoshakhtinsk refinery. On Thursday, Bloomberg reported there was a Ukraine drone attack on Thursday on the Novoshakhtinsk oil refinery in Southern Russia, near the Ukraine border. The norm for drone attack hits is to not confirm any significant impact. However, in the case of Novoshakhtinsk, it appears there is admission of an impact. Bloomberg wrote "*Novoshakhtinsk refinery operations are significantly disrupted by yesterday's fire after drone attack, Rostov region Governor Vasily Golubev says, according to Interfax."* We were unable to find the original Interfax report. (ii) Separately, there was a fire at the Lukoil oil refinery in Komi on June 2 that was reported caused by a fire ignited inside a tank at the oil refinery during maintenance. We have not see reports of drone attacks on Komi. Our Supplemental Documents Package includes both the Bloomberg report.

Will Ukraine escalate its drones to target after Russia oil/LNG export terminals

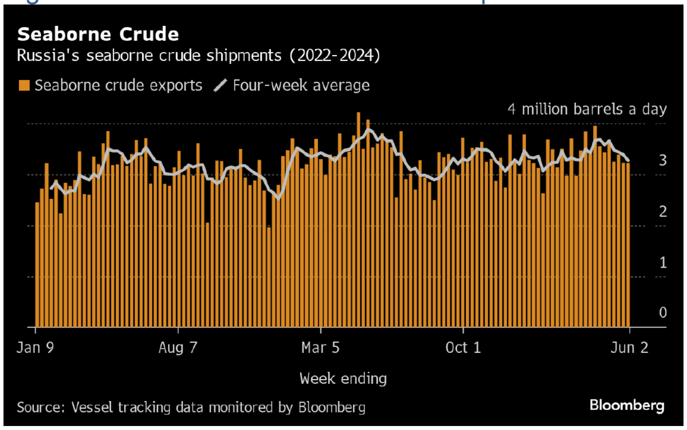
To date, Ukraine's drone attacks have been focused on oil refineries and trying to hurt Russia's ability to provide fuels to its people and military. They haven't focused on Russia oil export infrastructure, which would be the big impact on oil prices. Here is what we wrote on in May 19, 2024's Energy Tidbits memo: *Russia and Ukraine continue to escalate their attacks on each other. This continued escalation has to raise the risk as to what will Ukraine do next in their escalation. As noted previously, Ukraine keeps going after Russian refineries despite US preferences to not do so. So it is far from clear how or where Ukraine escalates, which is why we keep in mind RBC Helima Croft's recent comment on the increased geopolitical risks including the risk that Ukraine moves at some stage to target Russian oil/LNG export facilities. Our March 31, 2024 Energy Tidbits memo was titled "Helima Croft "closely watching whether Ukraine moves at some stage to target actual [Russian] export facilities." Here is what we wrote in our March 31, 2024 Energy Tidbits memo. " We couldn't help think of the above RBC Helima Croft comment this morning when start looking at overnight news and seeing more Russian escalating drone attacks on Ukraine energy/power infrastructure. Earlier this morning, we tweeted [LINK] "This 👇Must Read from @CroftHelima looks even more relevant with the last 4 days, incl last night, of escalating Russia drone attacks on Ukraine energy/power infra. Will Ukraine expand its drone attacks to target RUS oil export facilities? has to be at least a risk? #OOTT." The news of the last four days, including last night, was on escalating Russian drone attacks on Ukraine energy and power infrastructure. Bloomberg reported "Russia continues almost daily strikes at Ukraine's critical infrastructure, and hit energy facilities in the country's south and in the far western region of Lviv on Sunday, local authorities said. Kremlin forces targeted high-voltage electricity substations in the Odesa region, damaging equipment, which caused power to be cut off to more than 170,000 households in Ukraine's third largest city, according to electricity provider DTEK." Ukraine hasn't gone along with the reported US request to not go after Russian refineries and so we have to believe there is at least a risk they expand their drone attacks to go after Russian oil and LNG export facilities." Our Supplemental Documents package includes the cover page of the Helima Croft note.*

Oil: Russia's seaborne crude oil exports down ahead of OPEC+ meeting

Russia's seaborne crude exports

Information on the impacts on Russian oil infrastructure and its impact on moving crude is still a black hole. So it's far from clear how drone strikes reducing refinery capacity in Russia would free up crude for export assuming the crude oil volumes can be moved to export terminals. And as noted previously, Russia has also been moving more crude and products via rail. On Tuesday, Bloomberg reported *"Russia's four-week average crude exports fell for* *a fourth week, with shipments hitting the lowest level since mid-February before a meeting of the OPEC+ producer group that was held on Sunday."* In the week to June 2, Russia exported 3.22 mmb/d via tankers, flat WoW from the week to May 26, but the four-week average fell by ~ -115,000 b/d to 3.27 mmb/d, for the fourth straight decline. Russia has pledged to compensate for overproduction against its April target, which was attributed to "technicalities of making significant output cuts".. Our Supplemental Documents package includes the Bloomberg report.

Figure 28: Russia's Seaborne Crude Shipments



Source: Bloomberg

Russia oil exports to China continue down with lesser discounts

Russia oil shipments to China averaged 1.36 mmb/d for the first half of April. But they have been down since then the reports that Russia had cut its discounts to China. Note that later in the memo that to no surprise, China is importing more Iran oil. Bloomberg's above report this week highlighted Russia oil shipments to China were down to 1.09 mmb/d for the June 2 week, which brings the last six weeks average to 1.20 mmb/d. We were warned that China oil imports from Russia were being hit on April 22 by one of our favorites commentators on the Gulf Intelligence Daily Energy Podcasts is Victor Yang, Senior Analyst JLC Network Technology. He is based in China so we like hear his on-the-ground views on oil, natural gas and markets in China. Here is what we wrote in our April 28, 2024 Energy Tidbits memo referencing Yang's comments from our April 22, 2024 tweet [LINK] that included a transcript we made of Yang's comments. "*And for the second quarter, we see a lot of refinery maintenance, is imports will actually come down. And for now, the premium for Russian cargoes have strengthened this year, from -0.5 barrels to -0.3 barrels. And now it's flat to Brent, meaning 0 now. So this has dampened refiners, particularly independents, interest in Russian crude. Their margins for imported crude, including Russian crude, actually turned negative late last month and the beginning of this month. So it's now kind of [inaudible] slightly above the breakeven point. So the interest in this has been dampened too. So we are not expecting imports to grow much in the second quarter, yes."* Below is the table from Bloomberg's Russia oil exports report this week.

Figure 29: Russian Crude Exports to Asia

Crude Shipments to Asia
Shipments of Russian crude to Asian buyers in million barrels a day

4 weeks ending	China	India	Other	Unknown Asia	Other Unknown	Total
April 28, 2024	1.23	1.98	0.04	0.00	0.00	3.25
May 5, 2024	1.25	2.01	0.04	0.00	0.00	3.29
May 12, 2024	1.17	1.83	0.04	0.03	0.00	3.06
May 19, 2024	1.24	1.60	0.00	0.08	0.08	3.00
May 26, 2024	1.24	1.52	0.00	0.13	0.10	2.99
June 2, 2024	1.09	1.53	0.00	0.18	0.13	2.93

Source: Vessel tracking data compiled by Bloomberg

Bloomberg

Source: Bloomberg

Oil: OPEC's planned phase-in of production of voluntary cuts sent prices down.

OPEC+ planned phase-in of voluntary cuts

Last week's (June 2, 2024) Energy Tidbits memo had a 7am MT news cut off so we had the main OPEC press release on extending the group's cuts thru 2025 but we did not have the details for extending Nov 2023 voluntary cuts past June 30. So we did not see the detail that the voluntary cuts were extended from June 30 but only to Sept 30 and that there was a planned gradual phase-in that would start on Oct 1, 2024. The press release specifically said "*this monthly increase can be paused or reversed subject to market conditions*. Below is the OPEC table showing the planned monthly phase-in.Our Supplemental Documents package includes the OPEC press release.

Figure 30: Planned phase-out of Nov 2023 voluntary cuts starting Oct 2024

	2024				2025										Required Production Level as per 37th ONOMM
Country	Jun-Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct-Dec	
Algeria	908	912	917	921	925	929	934	938	942	946	951	955	959	959	**1,007** (1)
Iraq	4,000	4,018	4,037	4,055	4,073	4,092	4,110	4,128	4,147	4,165	4,183	4,202	4,220	4,220	**4,431** (1)
Kuwait	2,413	2,424	2,436	2,447	2,458	2,469	2,481	2,492	2,503	2,514	2,526	2,537	2,548	2,548	**2,676** (1)
KSA	8,978	9,061	9,145	9,228	9,311	9,395	9,478	9,561	9,645	9,728	9,811	9,895	9,978	9,978	**10,478** (1)
UAE	2,912	2,926	2,939	2,953	3,000	3,047	3,094	3,140	3,187	3,234	3,281	3,328	3,375	3,375	**3,519** (1) (2)
Kazakhstan	1,468	1,475	1,482	1,489	1,495	1,502	1,509	1,516	1,523	1,530	1,536	1,543	1,550	1,550	**1,628** (1)
Oman	759	763	766	770	773	777	780	784	787	791	794	798	801	801	**841** (1)
Russia	8,978	9,017	9,057	9,096	9,135	9,174	9,214	9,253	9,292	9,331	9,371	9,410	9,449	9,449	**9,949** (1)(3)

Source: OPEC

Oil: RBC Helima Croft on last Sunday's OPEC+ deal including its Q&A.

OPEC+ deal

Last Sunday's (June 2, 2024) Energy Tidbits memo had a 7am MT news cut off so we went to press without the second OPEC release on the details for the planned production adds of the voluntary cuts that are planned to start on Oct 1, 2024. That start of adding back production on Oct 1, 2024 was what led to the negative view of the OPEC+ deal. (i) On Tuesday, we tweeted [LINK] "*Oil market better in H2 than price reflecting? Always worth giving strong consideration to @CroftHelima views on OPEC. She is one of the small # "in the room" for Q&A with key players. Most of all, she has a direct relationship with The Man,* *Saudi Energy Minister Abdulaziz. #OOTT."* (i) We have read Croft's comments over the years and have seen her both positive and negative on oil prices. The key for why we like to hear her views on OPEC and Saudi Arabia is that she is always in the small group who are get to OPEC meetings, virtual and in-person and she also has direct relationships with key OPEC players, in particular Saudi Energy Minister Abdulaziz. (ii) Saudi will not add barrels back on the market unless the market is right. The negative reaction to the OPEC+ agreement is the scheduled potential add back of the voluntary cuts starting in Oct 2024. Croft reminds she spoke to some OPEC+ players over the weekend and Saudi will only be adding the barrels back if the market can support it. Croft wrote "*Our conversations over the weekend, on the other hand, have led us to conclude that the group's most consequential producer will hit the kill switch on a Q4 increase in the event of an oversupply/poor sentiment situation come September. The intention has always been to slow roll the barrels back in and not to send the market into a tailspin with a supply surge."* (iii) Advantage of being in the room. Anyone who has been in business knows that there is always an advantage to people who are in the room and able to hear/see a message and, most importantly, to have Q&A dialogue. Croft highlighted that those who were in the room had a different take than those who only had the press release. Croft wrote "*We see something of a divergence in the post-meeting analysis about the rigidity of the taper timeline between those accredited analysts and journalists that participated in the Sunday question and answer session and those that based their instant assessments almost exclusively on the written OPEC statement."* (iv) There are other points from the comment. Our Supplemental Documents package includes the 1-pg summary of Croft's comments.

Saudi Energy Minister says could pause or even reduce planned oil adds

As noted above, we did not see the video of the Q&A posted until Wed. In the Q&A, Saudi Energy Minister Abdulaziz highlighted that the planned production adds would only be if the market was there and theses planned adds could be paused or even reversed. This ties to RBC Helima Croft's Tuesday comment. We created a transcript of Abdulaziz's comments "*Regarding your first part of the question, we've always said that. Now in the previous occasions we said we can meet and to adjust, but in this one I think we are more affirmatively saying that we could pause or even reverse. Again, we want to make sure like what we did in the past is be cautiously optimistic and ensure that we give the market a guidance that although we hope that nothing happens to deter us from continuing this increase in production as we have put in the schedule, however we maintain the choice that we could pause or could reverse upon our choice to do that if we have to do that."*

Oil: Bloomberg OPEC production +60,000 b/d MoM to 26.960 mmb/d in May

OPEC+ May production +60,000 b/d

This week, Bloomberg posted its monthly survey of OPEC production. (i) The Bloomberg survey estimates OPEC production was up +60,000 b/d MoM to 26.960 mmb. (ii) April's estimates were revised up from 26.810 mmb/d to 26,900 mmb/d, with Iran being revised up +90,000 b/d to 3.220 mmb/d from 3.130 mmb/d. (iii) The largest MoM changes in May vs Apr were: Iran was down -20,000 b/d to 3.200 mmb/d MoM, Iraq was up +20,000 b/d to 4.240 mmb/d, Kuwait was up +30,000 b/d to 2.460 mmb/d, Libya was down -30,000 b/d MoM to 1.160 mmb/d. Nigeria saw a +40,000 b/d increase to 1.460 mmb/d after a -50,000 b/d setback last month. Venezuela was down -20,000 b/d MoM to 0.860 mmb/d. Below is the Bloomberg survey table.

Figure 31: Bloomberg Survey OPEC production in May (mmb/d)

Production ('000 b/d)	May	Apr	Chg	Capacity
Total OPEC	26,960	26,900	+60	33,460
Algeria	900	910	-10	1,060
Congo, Republic	240	250	-10	300
Equatorial Guinea	60	50	+10	120
Gabon	220	210	+10	220
Iran	3,200	3,220	-20	3,830
Iraq	4,240	4,220	+20	4,800
Kuwait	2,460	2,430	+30	2,820
Libya	1,160	1,190	-30	1,200
Nigeria	1,460	1,420	+40	1,600
Saudi Arabia	9,030	9,040	-10	12,000
U.A.E.	3,130	3,120	+10	4,650
Venezuela	860	840	+20	860

Source: Bloomberg

Oil: 58% of investors in Saudi Aramco $11.2b share issue were outside Saudi

Saudi Arabia $11.2b bond issue

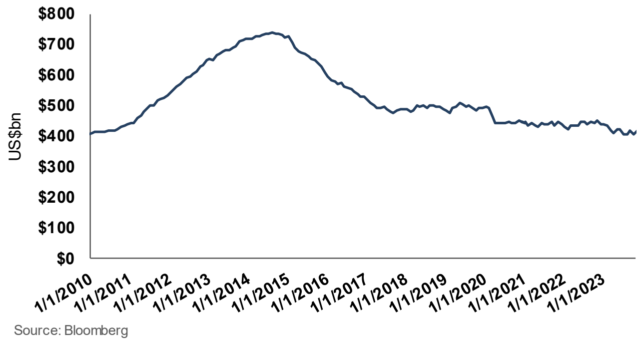
Last week's (June 2, 2024) Energy Tidbits memo noted last Sunday's Saudi Aramco announcement that it would be proceeding with marketing for a potential $11.5b secondary share issue. We highlighted that this, along with their $5b sukuk or Islamic bond issue on May 28, was a big week for what we have been calling the #1 financial theme for Saudi Arabia for the 2020s being the increasing access to Other People's Money to fund Vision 2030. Earlier this morning, Saudi Aramco announced that the deal had been closed and that "*the majority of the shares constituting the institutional tranche of the Offering was allocated to investors located outside of the Kingdom*." Separately, AFP reported sources indicate the allocation was 58%, whereas other major news agencies have been saying almost 60%. The issue raised $11.2b. Earlier this morning, we tweeted [LINK] "*Aramco 6.6% yield is attractive but foreign investors wouldn't have invested $6.5b unless they see strong #Oil prices continuing to support that yield. Nearly 60% of Aramco $11.2b issue was outside of Saudi vs only 23% in IPO. Thx @MattMartin128 @julia_fioretti #OOTT.*" Our tweet included the below Bloomberg chart showing the Aramco yield of 6.6% so it is a strong yield. But it also means there are over $6b of foreign investment in the deal that must believe in the strong oil prices staying longer to support this yield. Our tweet also noted how the foreign investors buying 58% of this issue is up significantly vs 23% in the IPO. Our Supplemental Documents package includes the Saudi Aramco release.

Figure 32: Saudi Aramco yield

Source: Bloomberg

Saudi nest egg, its net foreign assets were down -10.6b MoM in April
Here is what we wrote in last week's (June 2, 2024) Energy Tidbits memo., "*We continue to believe in our long stated view that the #1 financial theme for Saudi Arabia in the 2020s will be their continued, and increasing, use of Other People's Money as they try to transition their country to MBS's Vision 2030. We believe this has been obvious with how Saudi Arabia's net foreign assets dropped by ~37% or $256.2b over the last nine years (since March 2015). We are surprised that markets and oil watchers didn't seem to pay attention to the Saudi net foreign assets data i.e., what we call their nest egg to help them their push to MBS's Vision 2030. We are seeing much larger MoM changes, both up and down. There was a -$10.6b MoM decrease to Saudi Arabia's net foreign assets which are now $423.6 in April vs $434.2b in March. This followed a huge $22.1b MoM increase in March. We have to believe this was due to some timing issues or other external fund injections. But the thesis and big picture remains, Saudi net foreign assets as of April 30 of $423.6b is a decline of ~43% or $313.4 over the last 9 years from its peak of $737.0b on Aug 31, 2014. That is an average of $2.8b per month for the last 116 months since the peak. Saudi Arabia is far from going broke but there has been a huge decline in the last 9 years. This net foreign asset depletion is why we have been highlighting that the primary financial theme for Saudi Arabia in the 2020s is getting Other People's Money (OPM) to fund as much of their Vision 2030 as possible. And no question, accessing OPM has helped to slow down and temporarily pause the decline in net foreign assets. Our supplemental documents package includes an excerpt from the SAMA monthly bulletin. Below is our graph of Saudi Arabia net foreign assets updated for the April data.*"

Figure 33: Saudi Arabia Net Foreign Assets



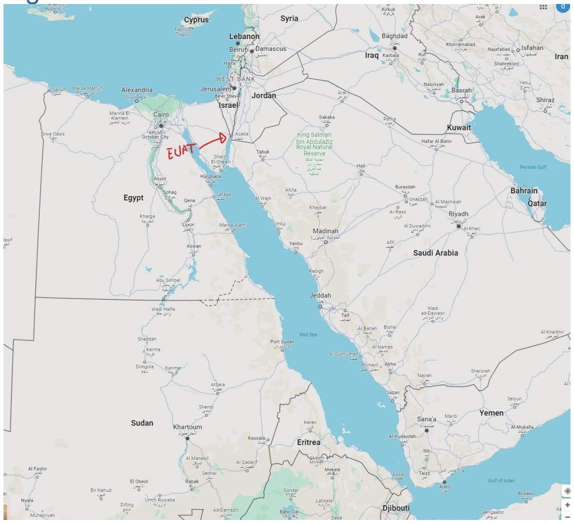
Source: Bloomberg

Oil: Israel says shot down Houthis missile targeting southern Israel

Houthis target southern Israel.

Israel confirmed that the Houthis had launched a missile targeting Eliat in southern Israel. On Monday, we tweeted [LINK] "*Israel IDF says intercepted Houthis ballistic missile targeting southern port city of Eliat. [LINK] Earlier Houthis claimed launched ballistic missile "Palestine" at Israel. [LINK] #OOTT.*" Early Monday, the Houthis claimed they launched a new ballistic missile, the Palestine, at Israel. Several hours later, the Israel IDF confirmed a Houthi ballistic missile was targeting Eliat in southern Israel but they shot it down. So it was a confirmation that the Houthis ballistic missile was long distance and going at Eliat. The IDF tweet said "*Air defense fighters successfully intercepted a surface-to-surface missile a short time ago using the "Hats" system that made its way towards Israel from the Red Sea. A warning of rocket and missile fire was activated in the Eilat area, there were no casualties.*"

Figure 34: Israel shoots down Houthi missile coming at Eliat in southern Israel



Source: Google Maps

Houthis and Iraq resistance team up

Oil: Houthis announced joint military operations with Iraq resistance against Israel
It's hard to tell how much the Houthis missile capability has been lost by the US/UK bombing of Houthis missile launch sites. This week, there were two big US/UK attacks on the Houthis missile/drone launch sites. But the Houthis are still launching drones at ships and this week their new ballistic missile, Palestine, at southern Israel. So, at least for now, the Houthis are here to stay in attacking ships and Israel. On Thursday, Saba (Houthi news) reported "*Revolutionary leader announces joint military operations of Yemeni armed forces, Iraqi resistance against Zionist Occupation.*" [LINK]. And "*Sayyed Abdulmalik Badr al-Din al-Houthi, the leader of the revolution, disclosed on Thursday the commencement of joint military operations between the Yemeni armed forces and the Islamic resistance in Iraq. These operations, initiated at dawn Thursday, culminated in a significant maneuver towards the port of Haifa on the Mediterranean Sea.*" Our Supplemental Documents package includes the Saba report.

Houthis keep attacking ships

Oil: Houthis keep shooting drones at merchant ships and US navy
We are not seeing any change to the market responding to Houthis drone/missile attacks against merchant and US navy ships with a no impact response. It doesn't matter if the Houthis hit a merchant ship as they did again yesterday or go after US navy ships like the aircraft carrier Eisenhower. There were multiple drones launched at ships and US navy this week. And this included two merchant vessel hit yesterday.   Yesterday at 5:39pm MT, the

UKMTO tweeted [LINK] on Incident 81. "*The Masters reports that the vessel was hit by an unknown projectile In the aft section, which resulted in a fire. Damage control is underway, the Master reports no casualties and the vessel is proceeding to its next port of call.'* Earlier this morning, we tweeted [LINK] "*Separate second merchant ship hit by the Houthis drones yesterday. #OOTT*." The UKMTO had tweeted [LINK] on Incident 80 "*The Mast reports that the vessel was hit by an unknown projectile, a small fire was contained in the mooring station and has now reported extinguished. All crew are reported safe and the vessel is proceeding to its next port of call".*

Oil: Risk to Iraq, Kurdistan & oil companies supposed to be meeting today

Iraq, Kurdistan and oil companies meeting at risk

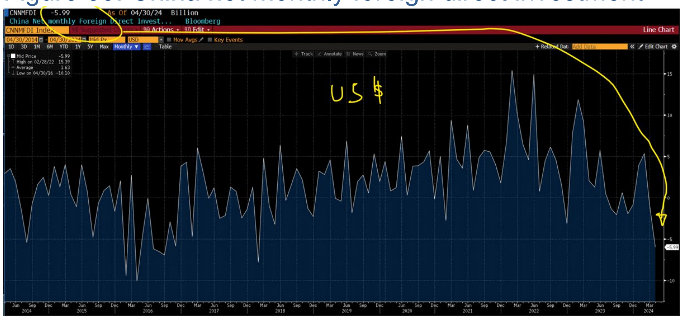
As of our 7am MT news cut off, we have not seen any updates in the last 15 hours from Rudaw (Kurdistan news) Iraqi News Agency and APIKUR (association for oil companies in Kurdistan) on the status of the planned meeting today, the first with Iraq, Kurdistan and the oil companies operating in Kurdistan. It isn't clear if it is going ahead and who will be there. Yesterday, we tweeted [LINK] "*No surprise. Iraq has late requirement for international Oil co's operating in Kurdistan to attend tomorrow's meeting in Baghdad. "The ultimatum could put the talks in jeopardy" reports @KarwanFaidhiDri #OOTT."* Rudaw reported on a last minute requirement from Iraq for the oil companies to attend this long awaited meeting and that this requirement put the talks in jeopardy. Rudaw wrote "*The Iraqi government has informed international oil companies (IOCs) operating in the Kurdistan Region that they must disclose their contracts with Erbil in order to attend Sunday's much-anticipated meeting in Baghdad about resuming Kurdish oil exports, a source told Rudaw on Friday. The ultimatum could put the talks in jeopardy. Iraq's ministry of oil "has made it a precondition that IOCs must provide a copy of our PSCs [production sharing contracts] in order for us to attend Sunday's meeting in Baghdad. This is illogical because the MOO [ministry of oil] filed cases against the very same contracts they are now requesting," a senior official from one of the oil companies working in the Kurdistan Region told Rudaw late Friday. "There is legal jeopardy for us to share our contract with existing court ruling against the same contracts in Baghdad," added the source, who spoke on the condition of anonymity due to the sensitivity of the subject. "They must withdraw the cases or give us legal guarantees and then we can share. Right now they have constructed a legal jeopardy for all the IOCs," the source said."* Our Supplemental Documents package includes the Rudaw report.

Oil: April sees 2nd Consecutive Negative Net Monthly FDI into China

Negative net monthly FDI into China

There was another negative indicator for China's recovery this week. On Tuesday, we tweeted [LINK] "*Negative indicator to China recovery 2nd mth of net monthly foreign direct investment negative flows. Apr: -$5.99b Mar: -$0.9b Feb: $5.3b Jan: $3.9b Dec: -$0.8b Nov: -$2.0b Only 7 worse mths in last decade. Apr 2024 is lowest since Feb 2018 -$7.83b Thx @business #OOTT."* Foreign direct investment has been a huge driver of China over the decades and that is, at least for now, not a strength. The negative net monthly Foreign Direct Investment into China was a negative $5.99b, which was the worst since -$7.8b in Feb 2018. Here is what we wrote in our May 12th, 2024 Energy Tidbits memo after the first negative net monthly FDI: *"This was a reversal of what happened to start 2024, which saw positive inflows during January and February. However, recall before that in the months to close 2023, four of the five months saw negative net monthly direct investment in China."* Our tweet included the below Bloomberg graph and we also included a table showing the actual net monthly foreign direct investment by month for the last two years. Below is the Bloomberg graph and the historical table, which we added the notation is in US$.

Figure 35: China net monthly foreign direct investment



Source: Bloomberg

Figure 36: Historical table of China's net monthly foreign direct investment

CNNMFDI -5.99 As Of 04/30/24 Billion
China Net monthly Foreign Direct Invest... Bloombe
CNNMFDI Index | 96) Actions | 97) Edit
04/30/2014 - 04/30/2024 Mid Px USD Mov Avgs
1D 3D 1M 6M YTD 1Y 5Y Max Monthly Chart

US$

Date	CNNMFDI In... Mid Px
04/30/2024	-5.99
03/31/2024	-.90
02/29/2024	5.33
01/31/2024	3.89
12/31/2023	-.84
11/30/2023	-1.96
10/31/2023	.59
09/30/2023	-2.07
08/31/2023	-1.35
07/31/2023	.51
06/30/2023	5.71
05/31/2023	1.26
04/30/2023	2.05
03/31/2023	9.25
02/28/2023	11.89
01/31/2023	7.86
12/31/2022	-3.14
11/30/2022	1.44
10/31/2022	4.53
09/30/2022	6.15
08/31/2022	4.44
07/31/2022	.75
06/30/2022	14.94
05/31/2022	4.58
04/30/2022	6.42

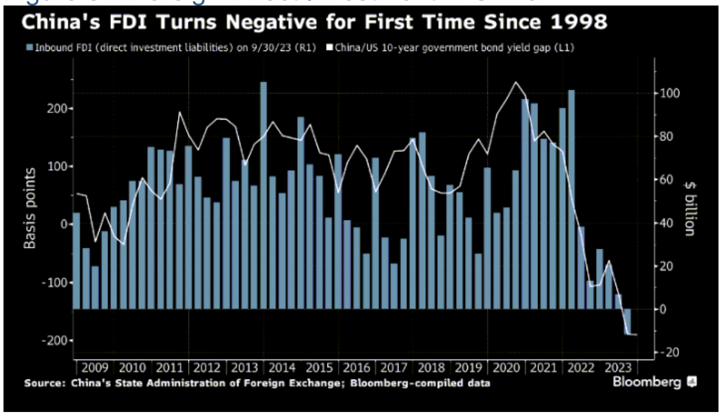
Source: Bloomberg

11/08/23: 1st net outflow of net foreign direct investment in China

Here is what we wrote in our Nov 12, 2023 Energy Tidbits memo. "*There is a big negative to the China recovery that we haven't been tracking – the net inflow or outflow of foreign direct investment in China. And likely because it never got much attention because there has always been a net inflow. FDI is significant as foreign companies disproportionately contribute to trade, generated more tax revenue and urban employment. But this week, we saw the first ever net outflow of FDI since records have been kept in 1998. On Wednesday, we tweeted [LINK] "Here's why China recovery is slow. Huge exodus in foreign direct investment in China & more*

FDI flowing out for 1st time. Q3/23 saw $11.8b outflow, vs recent $101b in Q1/22. Foreign co's drive disproportionate trade, tax revenue & urban employment. Thx @business #OOTT." Bloomberg wrote "China is struggling in its attempt to lure foreigners back as data shows more direct investment flowing out of the country than coming in, suggesting companies may be diversifying their supply chains to reduce risks. Direct investment liabilities in the country's balance of payments have been slowing in the last two years. After hitting a near-peak value of more than $101 billion in the first quarter of 2022, the gauge has weakened nearly every quarter since. It fell $11.8 billion in the July-to-September period, marking the first contraction since records started in 1998.""

Figure 37: Foreign Direct Investment in China



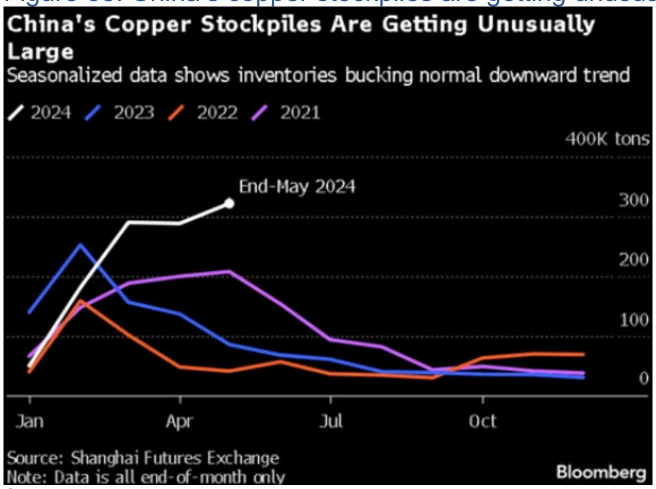
Source: Bloomberg

Oil: Chinese copper inventories increase when normally seasonally decrease

China copper inventories

We always try to be on the lookout for data points that confirm or question normal seasonal trends. In this case, we saw a couple good off trend indicators in oil stocks (inventories) and copper stocks (inventories). On Wednesday, we tweeted [LINK] "*China stalled recovery. China copper stocks "growing at exactly the time of yr when they should be shrinking fast" "Typically peak in Mar and slide lower as factories ramp up activity heading into the summer" reports @MartinShanghai. Like @Vortexa 👇Jun 4 on China onshore oil stocks. #OOTT.*" Bloomberg had the below graph and wrote "*China's copper inventories are growing at exactly the time of year when they should be shrinking fast — an anomaly that underscores concerns about demand in the world's biggest market. Stockpiles of the metal held in Shanghai Futures Exchange warehouses ended last week well above 300,000 tons. That's not the biggest volume ever, but it is the most for any end-of-May date on record. In China's highly seasonal economy, inventories typically peak in March and slide lower as factories ramp up activity heading into the summer.*" Our Supplemental Documents package includes the Bloomberg report.

Figure 38: China's copper stockpiles are getting unusually large



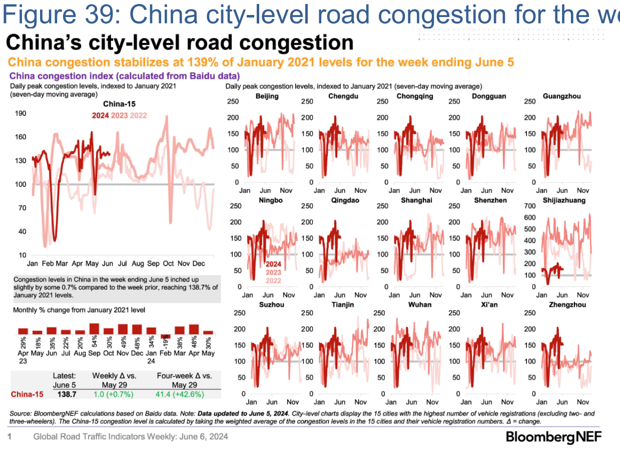
Source: Bloomberg

Oil: Baidu China city-level road congestion continued strong in June

China city-level traffic congestion

On Thursday, BloombergNEF posted its Global Road Traffic Indicators Weekly June 6 report, which includes the Baidu city-level road congestion for the week ended June 5. BloombergNEF's report was titled "*China congestion stabilizes at 139% of January 2021 levels for the week ending June 5".* Baidu city-level road congestion was up small by +1% WoW to 139% of Jan 2021 levels. It's only the first five days of June so BloombergNEF didn't provide a YoY comparison. But the positive for May was that China city-level road congestion was higher YoY in May. The top 15 cities were, in total, +10% YoY in May with 11 of the top 15 cities' road congestion up YoY. Below are the BloombergNEF key graphs.

Figure 39: China city-level road congestion for the week ended June 5



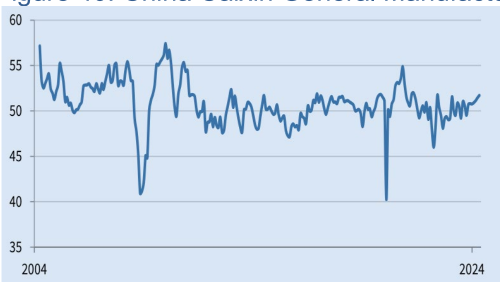
Source: Bloomberg

Oil: Caixin Manufacturing PMI at 51.7 in May, 7th straight month of expansion

Caixin Manufacturing May PMI 51.7

As a reminder, there are two China manufacturing PMI data reports that come out each month, the Official Manufacturing PMI that the National Bureau of Statistics publishes, and the Caixin Manufacturing PMI from S&P Global. The Caixin Manufacturing PMI is for more smaller, export-oriented companies. We have focused on the Caixin Manufacturing PMI as it is viewed as more of a leading indicator for how the China recovery is doing as it is a more of a smaller Chinese company who are export-oriented PMI and exports have been the big driver of China for the past 20 years. Commenting on the official manufacturing PMI on Sunday, we tweeted [LINK] "*7th straight mth of expansion for China smaller & export oriented firms. China Caixin Manufacturing PMI May 51.7 (est 51.6) Apr 51.4 Mar 51.1 Feb 50.9 Jan 50.8 Dec 50.8 Nov 50.7 "business conditions improve with fastest output growth in nearly 2 year" Thx @SPGlobalPMI. #OOTT".* The Caixin Manufacturing PMI for May was released at 7:45pm MT Sunday, June 2nd [LINK]. The seasonally adjusted headline Caixin PMI was 51.7 in May, up from April's 51.4 and May was the 7th consecutive month of expansion. Our Supplemental Documents package includes the Caixin Manufacturing PMI report.

Figure 40: China Caixin General Manufacturing PMI



Source: Caixin, S&P Global

Oil: Vortexa "*very high products at sea*", China oil stocks building not drawing down

Vortexa on products and China oil stocks

There were some reminders from Vortexa on Tuesday as to why oil prices are soft – there are very high products at sea and China oil stocks are building instead of being drawn down. (i) Munger highlighted the very high petroleum products at sea. We tweeted [LINK] ""*You see very high oil products at sea.... You see a big build-up of oil products at sea in addition to the additional time it is now taking to move around the Cape of Good Hope …" @Vortexa Pamela Munger. #OOTT @gulf_intel @sean_evers."* Here is the transcript we created of her comments. At 2:30 min mark, Evers "… *your thoughts what you can tell us what you see in the shipping lanes of the world that give us some sort of clues as to the scale of demand out there. We are seeing oil, crude and products spending a lot longer on the sea?"* Munger "*Yes, certainly. And what we're noticing, and just kind of bouncing off Neil for a moment, I agree with everything that he said in terms of the demand outlook. So not just at sea. But with our combined onshore inventories and our seaborne imports, we can create what we call implied refinery runs. So we get a really good idea of what's happening in China before it happens. And we've been noticing this very, essentially, core demand in China for crude, for refinery processing, which has resulted in what we see as announced run cuts and lower margins. They don't have much of an export market or they don't refine in order to export. You can also see their stocks building. And also just in general at sea, you see very high oil products at sea. So moving back to the clean products side, Russia is having a lot of trouble* *finding homes for its barrels after some of the newer, stricter sanctions on financial institutions, on ports, on specific vessels. You see a big build up of oil products at sea in addition to the additional time it is taking to move around the Cape of Good Hope instead of going thru the East of Suez for all those Middle Eastern clean products as well*." (ii) China oil stocks building and not drawing. We tweeted [LINK] "*China onshore oil stocks. @Vortexa's Pamela Munger "we're showing them reaching similar levels to last yr, which is above the seasonal range & above the 3-yr average" "you would expect, naturally, inventories to be drawing down, not building" #OOTT @gulf_intel @sean_evers."* Here is the transcript we created of her comments. At 12:30 min mark, Evers "… *in the context of China, lots of storage. What is Vortexa seeing from that point of view, in particularly from a China perspective*?" Munger "*Good question. So our Chinese onshore crude oil inventories, we're showing them reaching similar levels to last year, which is above the seasonal range and above the 3-year average. So, and stocks are building. Stocks are building at a time refineries are supposed to be coming off from maintenance. So they're supposed to be returning back on line, you would expect, naturally, inventories to be drawing down, not building. Shangdong onshore crude inventories, we track separately and those are well above the seasonal range for the last, for this particular last year. Those refineries are doing even more poor, shall we say, than kind of the main refineries*."

Vitol sees a little softer outlook for Asian oil demand in H2

Here is what we wrote in last week's (June 2, 2024) Energy Tidbits memo. "*Earlier this morning, we tweeted [LINK] ""And that's the sentiment right now, which is a little softer" Vitol's @michaelwmuller when asked on outlook for H2 Asian #Oil demand. See 👇SAF Group transcript for longer answer. #OOTT Thx @gulf_intel @vitolnews @ColumbiaUEnergy @sean_evers." Vitol's Head Asia, Mike Muller, was on the Gulf Intelligence energy podcast this morning and was asked about his outlook on Asian demand for H2. His ending comment was a little softer and he highlighted a number indicators. Our tweet included the transcript we made of his comments that noted these indicators such as Singapore gasoline cracks being at all-time lows. Here is the transcript we made of Muller's and Sean Evers (Gulf Intelligence) comments. Items in 'Italics" are SAF Group created transcript. At 19:27 min mark, Evers asks "… your thoughts as a whole. Asia's demand being a supporting pillar that could even grow further in the 2nd half of the year if China starts to come back stronger. The outlook for the 2nd half from an Asian demand point of view and what OPEC+ can think about that?" Muller "….. the situation is pretty much as outlined for July and August. We have adequate stocks on the water of refined products. We have slightly and I will emphasize slightly less pull on Atlantic imports from Asia. Maybe as a consequence of a little bit of over-purchasing that you refer to there in May. That said, the outlook in economies like India are and continue to be robust. I mean, you will have seen, not just the elections but the rccord weather temperatures. These, in advanced Asian nations, tend to lead to increased demands in air conditioning usage and therefore place extreme strain on the power grid. Sometimes necessitating uses of energies other than those obvious ones. Japan will go from burning LNG to maybe having to burn fuel in order to make up for local shortfalls. However, the heat is in India, of course. And there it could have different consequences. It could affect crops and harvests and mean less diesel that gets consumed by tractors if the fields aren't fertile. So there many many possible* *pathways this could take. But, I think on the whole, the outlook for gas feels very much buoyed by these heat events. But, if you want to look any further than what's happening on products, oil products in Asia, you look at refining margins. And look in particular at gasoline cracks and these are trading at multi-year lows if you strip out the Covid period of 2020/2021. Singapore gasoline has been generally trading at double digits per barrel premium to Brent. What we call the crack, a big component of the margin. And that's sunk to negligible single digits. So we're at all time lows on that particular front. And that doesn't bode particularly well even though there was a view that gasoline demand growth is particularly robust in places like China. Then you look at what that means for refinery behaviour. And refiners of course will be very quick to advertise that they might consider cutting runs in order to stopping the view of the crude oil sellers they are facing. And it is that time of month when we are, the beginning of the month, when programs get nominated and people call for how much OPEC oil they wish to see in their buying programs. So you generally hear a little bit more noise at this time of month from those refiners that have marginal capacity as to whether they will be running that capacity or not. And that's the sentiment right now, which is a little softer."*

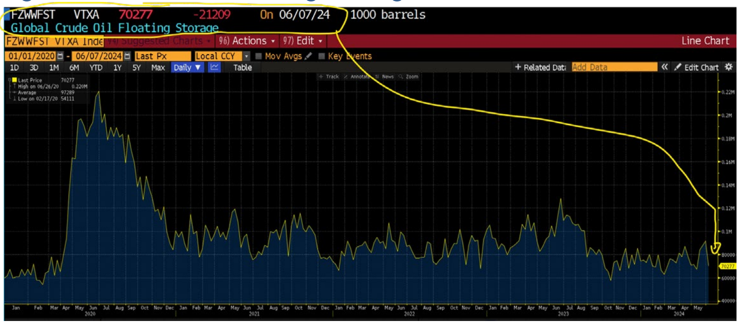
Vortexa floating storage

Oil: Vortexa crude oil floating storage est 70.28 mmb at June 7, -21.21 mmb WoW

We are referencing the Vortexa crude oil floating storage data posted on the Bloomberg terminal as of 9am 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 on the new estimates are compared to the prior week's Vortexa estimates posted on Bloomberg on June 1 at 9am MT. (i) Yesterday, we tweeted [LINK] "*Vortexa oil floating storage est 70.28 mmb at Jun 7. BUT negative as last 7 wks average, incl Jun 7, is up to 77.62 mmb as prior weeks were revised up with big upward revisions to May 24 & 31. Gulf Coast back to normal. Thx @vortexa @business #OOTT."* (ii) As of 9am MT yesterday, Bloomberg posted Vortexa crude oil floating storage estimate for June 7 at 70.28 mmb, which is -21.21 mmb WoW vs significantly revised up May 31 of 91.49 mmb. Note May 31 was revised +13.02 mmb to 91.49 mmb vs 78.47 mmb originally posted at 9am MT on June 1. (iii) As noted below, Gulf Coast floating storage was down -3.99 mmb WoW and is back to normal levels after hitting a post Covid high of 9.77 mmb on May 24 following the high winds in the Gulf Coast and power outages around Houston. (iv) Revisions. All of the prior seven weeks were revised up with big upward revisions for May 31 and May 24 weeks. Here are the revisions for the past seven weeks compared to the estimates originally posted on Bloomberg at 9am MT on June 1. May 31 revised +13.02 mmb. May 24 revised +7.99 mmb. May 17 revised +1.42 mmb. May 10 revised +3.81 mmb. May 3 revised +2.96 mmb. Apr 26 revised +0.61 mmb. Apr 19 revised +1.34 mmb. (v) There is a wide range of floating storage estimates for the past seven weeks, but a simple average for the prior seven weeks is 77.62 mmb vs last week's then prior seven-week average of 74.57 mmb. (vi) Also remember Vortexa revises these weekly storage estimates on a regular basis. For example, when most report on the Vortexa data on Monday morning, they will be reporting on different estimates. We do not track the revisions through the week. Rather we try to compare the first posted storage estimates on a consistent week over week timing comparison. Normally we download the Vortexa data as of Saturday mornings around 9am MT. (vii) Note the below graph goes back to Jan 1, 2020 to show the run up to Covid and then how Covid started to impact Covid in March/April 2020. (viii) June 7 estimate of 70.28 mmb is -58.08 mmb vs the last year peak

June 23, 2023 high of 128.36 mmb. Recall Saudi Arabia stepped in on July 1, 2023 for additional cuts. (ix) June 7 estimate of 70.28 mmb is -25.06 mmb YoY vs June 9, 2023 of 95.34 mmb. (x) Below are the last several weeks of estimates posted on Bloomberg as of 9am MT June 8, June 1, and May 25.

Figure 41: Vortexa Floating Storage Jan 1, 2000 – June 7, 2024, posted June 8 at 9am MT



Source: Bloomberg, Vortexa

Figure 42: Vortexa Estimates Posted 9am MT on June 8, June 1, and May 25

Posted June 8, 9am MT Date	Last Px	June 1, 9am MT Date	Last Px	May 25, 9am MT Date	Last Px
Fr 06/07/2024	70277	Fr 05/31/2024	78472	Fr 05/24/2024	73304
Fr 05/31/2024	91486	Fr 05/24/2024	79803	Fr 05/17/2024	81403
Fr 05/24/2024	87792	Fr 05/17/2024	82623	Fr 05/10/2024	67652
Fr 05/17/2024	84044	Fr 05/10/2024	63525	Fr 05/03/2024	73325
Fr 05/10/2024	67343	Fr 05/03/2024	68627	Fr 04/26/2024	71884
Fr 05/03/2024	71592	Fr 04/26/2024	70186	Fr 04/19/2024	78914
Fr 04/26/2024	70800	Fr 04/19/2024	77076	Fr 04/12/2024	90176
Fr 04/19/2024	78417	Fr 04/12/2024	85718	Fr 04/05/2024	80135
Fr 04/12/2024	87107	Fr 04/05/2024	77147	Fr 03/29/2024	83284
Fr 04/05/2024	78203	Fr 03/29/2024	81318	Fr 03/22/2024	74512
Fr 03/29/2024	81421	Fr 03/22/2024	72192	Fr 03/15/2024	76698
Fr 03/22/2024	72746	Fr 03/15/2024	74357	Fr 03/08/2024	77124

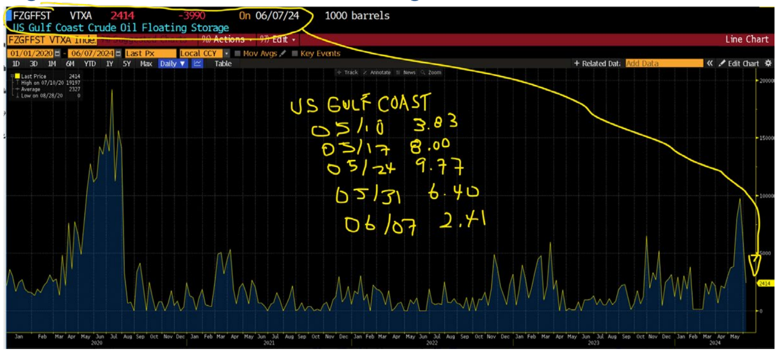
Source: Bloomberg, Vortexa

Oil: US Gulf Coast floating storage back down to normal type levels

Gulf Coast floating storage

It looks like the back up of floating oil storage in the US Gulf Coast has cleaned up and floating storage is back to more normal levels. The last three Energy Tidbits memos highlighted how high winds and Houston area power outages in mid-May led to Gulf Coast floating oil storage hitting the highest levels since the early days of Covid in 2020. But that was reduced the last couple weeks and now back to more normal type levels. Vortexa estimated Gulf Coast floating storage went from 3.83 mmb on May 10, to 8.00 mmb on May 17, then peaking at 9.77 mmb on May 24 before declining the last two weeks to 6.40 mmb on May 31 and now 2.41 mmb on June 7. Vortexa's June 7 estimate, posted as of 9am MT yesterday, Gulf Coast floating storage was -3.99 mmb WoW to 2.41 mmb.

Figure 43: Vortexa crude oil floating for US Gulf Coast



Source: Bloomberg, Vortexa

Oil: Vortexa crude oil floating storage WoW changes by regions

Vortexa floating storage by region

Bloomberg also posts the Vortexa crude oil floating storage in key regions, but not all regions of the world. The regions covered are Asia, North Sea, Europe, Middle East, West Africa and US Gulf Coast. We then back into the "Other" or rest of world. (i) As noted above, last week's May 31, in total, was significantly revised +13.02 mmb with the key revisions being Other revised +7.42 mmb and Middle Eat revised +2.69 mmb. (ii) Total floating storage was -21.21 mmb WoW vs the revised up May 31. The major WoW changes were Other -8.52 mmb WoW, US Gulf Coast -3.99 mmb WoW and Asia -3.83 mmb WoW. (iii) Above we highlight how US Gulf Coast floating storage was back to normal levels following the recent increase in May from the recent high winds and power outage. Gulf Coast was -3.99 mmb WoW to 2.41 mmb. (iv) June 7 estimate of 70.28 mmb is -58.08 mmb vs the last year June 23, 2023 high of 128.36 mmb. Recall Saudi Arabia started its voluntary 1 mmb/d production cuts on July 1, 2023. The major changes by region vs the last year June 23, 2023 peak are Asia -43.71 mmb, Other -25.77 mmb and Middle East +6.76 mmb. (v) Below is the table we created of the WoW changes by region posted on Bloomberg at of 9am MT yesterday. Our table also includes the "Original Posted" regional data for May 31 that was posted on Bloomberg at 9am MT on June 1.

Figure 44: Vortexa crude oil floating by region

				Original Posted	Recent Peak	
Region	Jun 7/24	May 31/24	WoW	May 31/24	Jun 23/23	Jun 7 vs Jun 23
Asia	29.05	32.88	-3.83	31.44	72.76	-43.71
North Sea	3.51	4.44	-0.93	4.44	5.42	-1.91
Europe	9.09	11.43	-2.34	11.72	6.21	2.88
Middle East	13.52	14.20	-0.68	11.51	6.76	6.76
West Africa	9.88	10.80	-0.92	8.95	7.62	2.26
US Gulf Coast	2.41	6.40	-3.99	6.49	1.00	1.41
Other	2.82	11.34	-8.52	3.92	28.59	-25.77
Global Total	70.28	91.49	-21.21	78.47	128.36	-58.08
Vortexa crude oil floating storage posted on Bloomberg 9am MT on Jun 8						

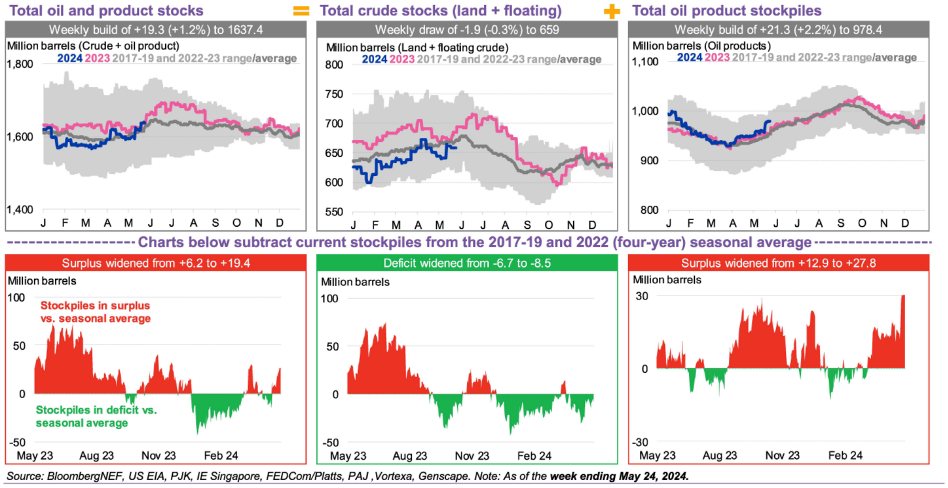
Source: Bloomberg, Vortexa

Oil: BNEF, global oil and product stocks surplus widens to +19.4 mmb from +6.2 mmb

Global oil and products stocks

On Monday, BloombergNEF posted its "*Oil Price Indicators*" weekly, which provides good charts depicting near-term global oil demand and supply indicators. (i) Note BloombergNEF uses different periods to determine the surplus/deficit, sometimes using a four-year average for 2017-2019 + 2022-2023, and other times using a five-year average 2017-2019 + 2022-2023. In both cases they do not include 2020 and 2021 in the averages. (ii) The global stockpile for crude oil and products widened from a surplus of +6.2 mmb for the week ending May 17 to a surplus of +19.4m mmb for the week ended May 24. (iii) Total crude inventories (incl. floating) decreased -0.3% WoW to 659 mmb, while the stockpile deficit widened from -6.7 mmb to -8.5 mmb. (iv) Land crude oil inventories fell -0.6% WoW to 575.4 mmb, widening their deficit from -15.8 mmb to -20.2 mmb against the five-year average (2017-2019 + 2022-23). (v) The gas, oil, and middle distillate stocks grew +1.0% WoW to 159.3 mmb, with the deficit against the four-year average narrowing from -1.7 mmb to -0.1 mmb. Jet fuel consumption by international departures in the week to June 10 is set to increase by +79,200 b/d WoW, while consumption by domestic passenger departures is forecast to increase by +39,500 b/d WoW. Below is a snapshot of aggregate global stockpiles.

Figure 45: Aggregate Global Oil and Product Stockpiles



Source: BloombergNEF

Oil: Spain Oil and Petroleum products consumption up YoY and up MoM in April

Looks like Spain is nowhere near hitting peak oil demand. On Wednesday, we tweeted [LINK] *"Peak Oil Demand? Not yet in Spain. Spain #Oil & #PetroleumProducts consumption continues up strong YoY in April. Oil: 1.537 mmb/d, +12.0% YoY, Jet Fuel: +10.0% YoY, Gasoline: +9.5% YoY, Diesel for roads: +8.1% YoY, Diesel for agriculture, etc: +14.7% YoY, #OOTT"*. On Monday, Cores reported Spain's monthly oil and petroleum consumption for the month of April [LINK], showing consumption for oil was up +8.4% YoY and +3.3% MoM for vehicular petroleum use, and the report contains a breakdown of growth by type of fuel. Below is a graph showing Spain's oil demand, and a table showing the breakdown of demand by fuel type. Our Supplemental Documents package includes the Spain data.

Spain's Oil consumption

Figure 46: Spain's 2024 Oil Demand Product Breakdown (thousand mt)

	Consumos			(YoY%) Tasas Variación (%) Interanuales		
Productos Petrolíferos	Abril 2024	Acumulado Anual	Año Móvil	Abril 2024	Acumulado Anual	Año Móvil
Gasolinas Automoción (Gasoline)	537	1.980	6.238	9,5%	9,6%	6,8%
Gasóleos Automoción (Car Diesel)	1.865	7.174	21.919	8,1%	3,9%	-0,2%
Combustibles de Automoción	**2.402**	**9.154**	**28.157**	**8,4%**	**5,1%**	**1,2%**
GLP	202	820	2.156	12,3%	7,8%	6,2%
Gasolinas*	537	1.982	6.242	9,5%	9,6%	6,8%
Querosenos (Jet Fuel)	599	2.125	6.878	10,0%	12,5%	11,4%
Gasóleos* (Diesel)	2.701	10.485	31.037	14,7%	5,0%	-0,7%
Fuelóleos	663	2.421	7.094	12,7%	2,6%	-6,6%

* Productos de automoción incluidos en el grupo de productos correspondiente

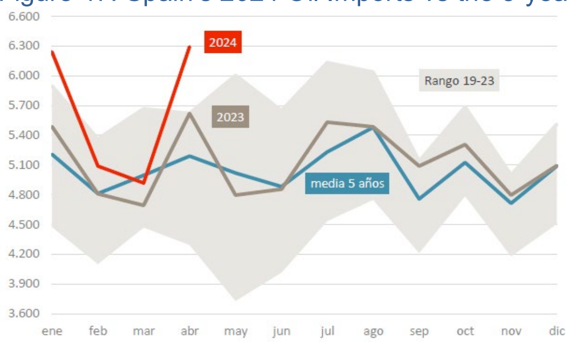
Source: Cores

Oil: Spain's Oil imports were up YoY and up MoM in April

Spain's Oil imports

On Wednesday, Cores reported Spain's oil imports for the month of April [LINK], showing that oil imports had increased +12.0% YoY and +27.9% MoM. Cores reported that 35.1% of imports YTD have been from OPEC ("OPEP" here) suppliers, and that April reached a new 5-year high for imports. Below is a graph showing Spain's oil imports, and a table showing the breakdown of imports by OPEC or Non-OPEC countries. Our Supplemental Documents package contains the official report by Cores.

Figure 47: Spain's 2024 Oil Imports vs the 5-year Range and 5-year Average



Source: Cores

Figure 48: Spain's 2024 oil demand product breakdown

	Abril 2024			Acumulado anual		Año móvil		
	Importaciones	TV (%)*	Estructura (%)	Importaciones	TV (%)*	Importaciones	TV (%)*	Estructura (%)
Total	**6.291**	**12,0**	**100,0**	**22.536**	**9,4**	**63.487**	**-0,4**	**100,0**
OPEP	2.284	-4,1	36,3	7.994	-1,2	26.777	-8,6	42,2
No-OPEP	4.008	23,8	63,7	14.543	16,1	36.710	6,5	57,8
OCDE	1.901	-18,4	30,2	8.027	7,2	22.299	9,6	35,1
No-OCDE	4.391	33,4	69,8	14.509	10,6	41.188	-5,1	64,9
UE	59	97,9	0,9	269	132,8	517	9,5	0,8

Source: Cores

Oil: IATA air passenger data for Apr continues to surpass pre-Covid levels

Apr air travel up YoY

On Thursday, May 30th, the International Air Transport Association (IATA) released air passenger data for April 2024 [LINK]. (i) The key message from the data was "*In April 2024, industry-wide air passenger traffic surged by 11.0% YoY, measured in RPK. Despite a* *slight slowdown from the previous two months, the annual growth rate remains in the double digits, with an impressive growth streak which began 36 months ago. Notably, the industry continues to surpass pre-Covid levels."* (ii) Total traffic in April, measured in revenue passenger kilometers (RPK), rose +11.0% YoY. Please note the IATA splits out total market air travel into international travel vs domestic travel. (iii) For April 2024, total global RPKs were +11.0% vs April 2023 levels, but that was split between International RPKs +15.8% vs April 2023 and Domestic RPKs +4.0% vs April 2023. (iv) Willie Walsh, IATA's Director General, commented *"Passenger demand has been growing for 36 consecutive months. As we enter the peak northern summer travel season, there is every reason to feel optimistic for a strong summer with airlines offering a wide range of travel options. 97% of passengers asked in our recent survey said they were satisfied with their last flight. Every part of the travel value chain needs to be focused on maintaining that….That's an important motivation as our members gather for the IATA Annual General Meeting and World Air Transport Summit in Dubai next week. This strong endorsement of the power of air connectivity to transform lives and boost economies brings with it a challenge that will also be on the minds of all attending. It is critically important that we achieve net zero carbon emissions by 2050 so that people can continue to rely on all the benefits of air travel".* Our Supplemental Documents package includes the IATA report.

Figure 49: April 2024 Air Passenger Market

	World share[1]	April 2024 (% year-on-year)				April 2024 (% year-to-date)			
		RPK	ASK	PLF (%-pt)	PLF (level)	RPK	ASK	PLF (%-pt)	PLF (level)
TOTAL MARKET	*100.0%*	**11.0%**	**9.6%**	**1.0%**	**82.4%**	**15.5%**	**13.5%**	**1.4%**	**81.3%**
International	*60.1%*	15.8%	14.8%	0.7%	82.2%	20.0%	19.6%	0.3%	80.8%
Domestic	*39.9%*	4.0%	2.1%	1.5%	82.6%	9.1%	4.9%	3.1%	82.1%

[1]% of industry RPKs in 2023

Source: IATA

Oil: IATA, global air cargo Apr was 5th consecutive month of double-digit YoY growth

Apr Air cargo +11.1 YoY

We look at international air cargo as the data that affirms the level of export orders and trade. On Wednesday, May 29th, the International Air Transport Association (IATA) announced cargo data for the month of April [LINK]. The IATA wrote *"In April, airlines recorded 21.7 billion CTKs globally, which represents a 6.5% reduction Month-on-Month (MoM) but also an 11.1% increase YoY…. Importantly, this reading marked the fifth consecutive month of double-digit annual growth. The largest contributors to this strong traffic performance in April were carriers from Asia Pacific and Europe, which together contributed two-thirds to the annual increase."* One other key factor for the increasing air cargo is increasing international passenger flight as the belly of air passenger planes will be used for air cargo in addition to passenger luggage. IATA wrote, "*Maintaining the trend of the past four years, last month's expansion in industry ACTKs* [Available Cargo Tonne-Kilometers] *was driven by a surge in belly-hold capacity, which recorded the 36th consecutive month of double-digit growth in April with 15.2% YoY. In comparison, capacity on dedicated freighters rose by only 5.0% YoY last month."* Our Supplemental Documents package includes the IATA report.

Figure 50: April 2024 Air Cargo Market

	World share[1]	April 2024 (% year-on-year)				April 2024 (% year-to-date)			
		CTK	ACTK	CLF (%-pt)	CLF (level)	CTK	ACTK	CLF (%-pt)	CLF (level)
TOTAL MARKET	100.0%	11.1%	7.1%	1.6%	43.9%	12.7%	10.3%	0.9%	45.5%
International	86.6%	11.6%	10.2%	0.6%	50.1%	13.5%	13.2%	0.3%	51.3%

Note 1: % of industry CTKs in 2023

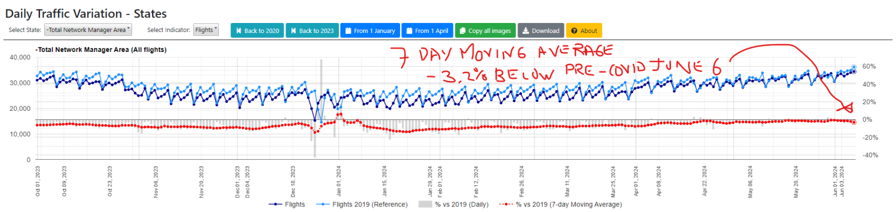
Source: IATA

Oil: Europe airports daily traffic 7-day average is -3.2% below pre-Covid levels

Europe airports daily traffic

Yesterday, we tweeted [LINK] "*Daily Europe air traffic -3.2% below pre-Covid. 7-day average as of: Jun 6: -3.2% below pre-Covid. May 30: -0.8%. May 23: -1.9%. May 16: -1.2%. May 9: -3.2%. May 2: -2.9%. Apr 25: -3.2%. Apr 22: -1.5%. Apr 18: -3.2%. Apr 11: -3.7%. Apr 4: -6.2%. Thx @eurocontrol #OOTT.*" Other than over Christmas, European daily traffic at airports has been below pre-Covid. The 7-day average has got close a few times including a week ago at only 0.8% below pre-Covid as of May 30, but that widened this week to the 7-day average being 3.2% below pre-Covid as of June 6. Eurocontrol updates this data daily and it is found at [LINK].

Figure 51: Europe Air Traffic: Daily Traffic Variation to end of June 6



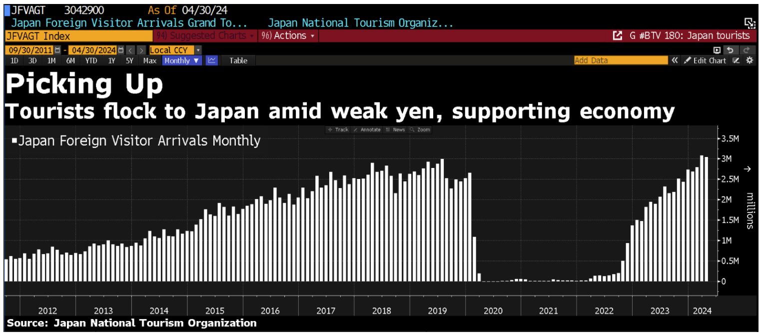
Source: Eurocontrol

Oil: Visitors to Japan continue to hit record highs in 2024

Weal yen drives record visitors to Japan

On Monday night, we tweeted [LINK] "*Tourists to Japan continue to hit new record driven by weak Yen. @SheryAhnNews just had 👇graph. Japan National Tourist data: 3,042,900 visitors in Apr, +4.0% vs pre-Covid 2019. Mar was all-time record at 3,081,600, +11.6% vs pre-Covid 2019. #OOTT.*" Bloomberg TV had just run the below chart of the Japan National Tourism Organization monthly Japan foreign visitor arrivals monthly data. Visitors to Japan are at record levels and well above 2019 levels. Our tweet included the JNTO data [LINK] that there were 3,042,900 visitor arrivals in April, which is +4.0% vs April 2019, and 11,601,200 visitors to YTD April 30, which is +5.7% vs the same period in 2019. Our Supplemental Documents package includes the JNTO data.

Figure 52: Tourists flock to Japan amid weak yen, supporting economy



Source: Bloomberg

Electricity: Huntsman, is an electricity supply gap inevitable with data center growth?

Electricity supply gap coming?

It's pretty amazing how AI and data center electricity needs has gone from a non-event to the largest variable to electricity consumption over the coming years. Our Energy Tidbits memos have been highlighting that the major issue is that this AI data centers growth in electricity consumption is happening right away. This is our concern – we are in a calm before the storm where data centers electricity consumption is being met but can the rapid large growth in electricity consumption be met on a timely basis with increased electricity generation? On Friday, we tweeted [LINK] "*Electricity Gap is coming! "a new data center takes a little over a yr to build, it takes 10 yrs to permit these new #NatGas burning power plants. It takes even longer for Wind & Solar. So that's a disconnect we have" Huntsman CEO. Higher power costs ahead! #OOTT @SquawkCNBC."* Huntsman CEO Peter Huntsman was on CNBC Squawk Box on Thursday morning. There is an electricity gap coming and it is coming faster than expected because there is no way new supply can keep up with projected electricity growth coming from data centers. This was a great reminder from Huntsman. The other part that Huntsman didn't specifically address is the big problem is transmission approval, which is even harder than getting approvals for new natural gas plants and for solar/wind projects. Our tweet included an mobile clip, where Huntsman said "… *AI coming on, we're building data centers, a new data center takes a little over a year to build. It takes 10 years to permit these new gas burning power plants . it takes even longer for wind and solar. So that's the disconnect we have."* It was a great point by Huntsman, data centers are being ramped up quickly but approvals take way longer to get new natural gas power generation and even more for wind and solar power generation. We also note how an even longer timeline is power transmissions lines.

Energy Transition: New Zealand, natural gas is needed to keep the lights on

Europe airports daily traffic

New Zealand continues under its Feb 8, 2023 major shift to prioritize energy security and cost of living and not the energy transition away from oil and natural gas. (i) Earlier this morning, we tweeted [LINK] "*Big Reality Check! "Natural gas is critical to keeping our lights on and our economy running, especially during peak electricity demand and when generation dips because of more intermittent sources like wind, solar and hydro" NZ @mangonui08. NZ reverses ban on #Oil #NatGas exploration to try halt production decline. Big admission that banning exploration "also shrank investment in further development of know gas fields which sustain our current levels of use" Note NZ recognizes need to do more than removing ban,* *need "further changes" to "attract investment in exploration AND production". #NatGas was ~15% of energy use mix in 2022. #OOTT."* (ii) Earlier this morning New Zealand issued the release announcing the removal of the ban on oil and gas exploration. Our tweet included the key quotes on how natural gas is critical to keep the lights. (iii) There was an important admission from New Zealand when they realize that banning exploration also meant that oil and gas companies would cut back on development and other oi and gas investment. It really shows the reality of politicians who thought in New Zealand, and think elsewhere, that if they only ban new exploration, it won't impact any other oil and gas spending on near field development and other oil and gas investment. Reality is that if oil and gas companies don't see potential to explore and add new fields, they are going to look carefully at all other capex. New Zealand admitted this. (iv) The other significant admission from New Zealand is that they recognize they need to do more than reverse the ban is they are convince oil and gas companies they are serious about setting up an investment environment for oil and gas companies. (v) What is also significant is that New Zealand has cut natural gas consumption from 0.48 bcf/d in 2017 (the ban went on in 2018) to ~0.35 bcf/d and natural gas is only ~15% of the energy fuel supply mix. But they can't get rid of natural gas, and actually need more. This is a big reality check on the need for natural gas. (vi) This is under Prime Minister Christopher Luxon (The National Party), who won the most seats but not a majority in the Oct 14, 2023 election and assumed office on Nov 27, 2023. Our Supplemental Documents package includes the New Zealand release.

02/08/23: New Zealand new priority is cost of living, not energy transition

Prior to the Oct 14, 2023 election, the Labour party had a solid majority but it was looking brutal for them in the year before, then PM Jacinda Ardern abruptly resigned in Jan 2023 and Chris Hipkins took over as Labour party leader and PM. Hipkins was facing a crisis to try to change voter support for the Labour party and one of his first major steps was to try to convince people that the Labour party was changing away from the energy transition and its related high costs to a focus on cost of living. It didn't save the election. But Hipkins did start the abrupt shift. Here is what we wrote in our Feb 12, 2023 Energy Tidbits memo. "*There was a pretty clear new priority for New Zealand – the priority to focus on the cost of living, which, no surprise, means a major energy transition policy was cancelled as it would just add to the cost of living. On Wednesday, the new New Zealand Prime Minister Chris Hipkins made his first big policy statement after their first cabinet meeting. The announcement was titled "Government takes new direction with policy refocus" and "Prime Minister Chris Hipkins has announced a suite of programmes that are being cancelled or delayed in order to put the Government's focus on the cost of living. "The Government is refocusing its priorities to put the cost of living front and centre of our new direction," Chris Hipkins said. "I said the Government is doing too much too fast, and that we need to focus on the cost of living. Today we deliver on that commitment." It was a very clear message that he is cancelling or delaying a number of former PM Jacinda Ardern's policies. Ardern surprised with an abrupt resignation on Jan 20. Her Labour party had fallen behind the opposition National party in the polls with the election set for Oct 14. On Wednesday, we tweeted [LINK] "Reality hits! @chrishipkins NZ new direction, refocus priorities to put cost-of-living front & centre. #biofuels mandate will not proceed. The mandate would have increased the price of fuel and given the pressure on households that's not something I'm prepared to do.*

#OOTT." One of cancelled policies was Ardern's "Powering NZ's future with biofuels" announced on Dec 15, 2021 [LINK] that would seen "From 1 April 2023, fuel wholesalers will be required to cut the total greenhouse gas emissions for transport fuels they sell by a set percentage each year, by deploying biofuels as a part of their fuel supply." Hipkins new direction cancelled this ""Cabinet also agreed that the biofuels mandate will not proceed. The mandate would have increased the price of fuel, and given the pressure on households that's not something I'm prepared to do."

Fits our 2022 Prediction, leaders admit energy transition isn't working
Here is another item from our Feb 12, 2023 Energy Tidbits memo. "*New Zealand PM Hipkins didn't blame the energy transition on New Zealand's cost of living crisis. But his admitting that the biofuels mandate was only going top hurt New Zealand is a good example of what we called our #1 prediction for 2022. Here is what we wrote in our Dec 12, 2021 Energy Tidbits memo. "Its December and so analysts will soon be coming out with 2022 predictions, so we thought we would beat them with one of our main 2022 predictions. On Thursday, we tweeted [LINK] "Time for #2022Predictions. My #1 is more #EnergyTransition #NetZero leaders come out of closet, have a #MacronMoment ie. have "transition" not self inflicted shortage so 2021 energy crisis isn't every year. A return to #EnergySecurity = #Oil #NatGas #LNG strong thru 2030. #OOTT." This should not surprise readers as we have been noting the start of energy transition leaders starting to admit, in a politician's manner, that the energy transition isn't working as per aspirations and energy costs will be a lot higher than aspired. We have said for years that the energy transition will happen, but it will take longer, be bumpy road and cost more than the aspirations. Last week's (Dec 5, 2021) Energy Tidbits wrote on the ADNOC CEO speech There was much more in the speech, which is why we tweeted [LINK] "If more leaders have a "Macron Moment" in 2022, maybe COP28 UAE in 2023 can be catalyst for getting down to work on practical, commercial, sustainable energy solutions: pro climate/pro growth? See SAF Group transcript of @SultanAhmedalj8 #ADIPEC keynote. #EnergyTransition #OOTT." We do wonder if we will see more world leaders accept that the energy transition isn't working according to their aspirations and that there is an increasing risk of a decade of energy crisis like seen in Europe in H2/21 unless the world puts in an achievable energy transition plan." We think COP26 will turn out to be turning point, but a turning point to force energy transition leaders into changing their plan. It why we think we will more of the energy transition leaders come out of the closet and admit this in 2022. But what got us to tweet this week was after seeing Saudi Aramco CEO Nasser speech at the WPC in Houston. Nasser said "There is one more thing that can no longer remain unsaid. A majority of key stakeholders agree with these realities as much as they believe in addressing climate change. We know this, because they say so in private. They should say it publicly too. I understand their dilemma. Publicly admitting that oil and gas will play an essential and significant role, during the transition and beyond, will be hard for some." So our #1 2022 Prediction is that we will see leaders come out of the close and admit, in a politician's way, that the energy transition plan needs to be changed. The key result will be that fossil fuels are needed for way longer and the outlook for oil, natural gas and LNG will be stronger thru 2030 and beyond."*

Energy Transition: NVIDIA, AI data centers increase power consumption by 3x

NVIDIA on increased power needs

Every night we try to watch the Bloomberg and CNBC Asian shows on the opening of trading in Asian markets and so saw the reports of NVIDIA CEO Jensen Huang's speech in Taipei. On Monday morning in Asia (Sunday night in Alberta), Nvidia posted a report on CEO Jensen Huang's address in Taipei titled "*Accelerate Everything, NVIDIA CEO says Ahead of COMPUTEX*". The headlines were on how the future of computing was accelerating as everyone was looking to see if their NVIDIA stock call was right. And the market loved his speech as NVIDIA as the shares were up 4.9% on Monday and 10.3% on the week. When we saw the NVIDIA release on his comments, we saw the Huang comments, it reinforced the energy link to computing acceleration – there is a massive increase in electricity consumption from accelerating computing. Last Sunday night, we tweeted [LINK] "*More AI data centers = more #NatGas. "Accelerated computing .... only increasing power consumption by a factor of three" #Nvidia Jensen Huang keynote today." "AI increases power consumption by 3x and, IF it wants 24/7 power, it means #NatGas should be the big winner." #OOTT."* NVIDIA wrote "*NVIDIA is driving down the cost of turning data into intelligence, Huang explained as he began his talk. "Accelerated computing is sustainable computing," he emphasized, outlining how the combination of GPUs and CPUs can deliver up to a 100x speedup while only increasing power consumption by a factor of three, achieving 25x more performance per Watt over CPUs alone. "The more you buy, the more you save," Huang noted, highlighting this approach's significant cost and energy savings."* Our Supplemental Documents package includes the NVIDIA report.

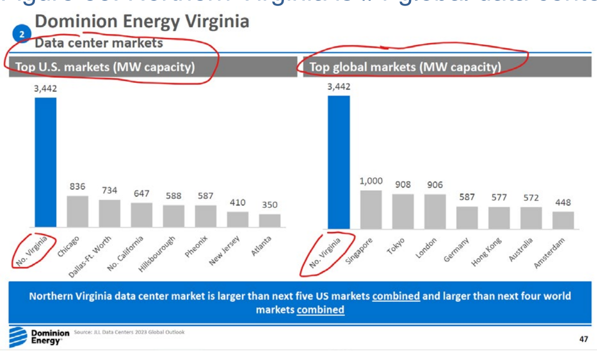
Energy Transition: Huntsman, data centers can't be run on renewables

Data centers need fossil fuels

There was another reminder about AI data centers fundamentals from Huntsman CEO Peter Huntsman on CNBC Squawk Box on Thursday – they need fossil fuels to provide 24/7 reliable, affordable power. On Friday, we tweeted [LINK] "*Data center reality check. "if the projected amount of electricity that is going to be needed to power all this .....the capacity that will be built will have to be hydrocarbon based. You cannot have reliable wind that is going to running 100% of the time" Huntsman CEO. Also why he expects power costs are going way higher. #OOTT #NatGas @SquawkCNBC @BeckyQuick."* Huntsman was highlighting his view that energy costs are going way higher and linked in his view that data centers need fossil fuels for power. Here is the transcript we made of his comments with CNBC's Becky Quick. CNBC's Becky Quick asks "*electricity prices you think will go up 30% because we won't be able to meet demand?*" Huntsman "*There's a 30%. The last electron available electricity, how much is that going to be worth? It's not going to be 30% up, it's going to be multiple times up. And when we have consumers and utilities, they're competing against these multi-trillion dollar high tech companies*". Quick "*for the data centers.*" Huntsman "*for the data centers and so forth. They want to buy it, the reliable and affordable electricity. And I have no problem with them doing it. It's a free market, heaven bless them. But on one hand, we're out here saying we don't want hydrocarbons and we're willing to fund that. On the other hand, that's, we're extending the life of coal, we're extending*" Quick " *it's not a free market though, you have regulators who say you can't raise prices. Does that mean we will have shortages?"* Huntsman "*if that's the case, Yes. You are not building the capacity. It's been projected, these are not Huntsman's numbers. These are New York Times and Wall Street Journal. If the projected amount of electricity that is going to be needed to power all this, if that indeed comes on, we are not building the electrical capacity today. The capacity* *that will be built will have bo be hydrocarbon based. You cannot have reliable wind that is going to be running 100% of the time.*”,

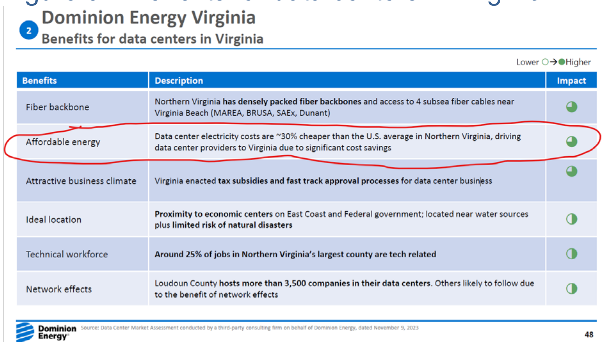
Dominion Energy: renewables 14% of capacity but only 5% of actual power
Dominion Energy is the #1 power provider for data centers in the world so provide a good reminder of why renewables can't be the key power provider for data centers. Renewables are 14% of Dominion's electricity capacity but only provide 5% of the actual power. Here is what we wrote in our Mar 10, 2024 Energy Tidbits memo. "*We were watching CNBC Squawk on the Street on Monday morning and the hosts opening banter highlighted how data centers were the hot discussion point among their contacts and how the huge ramp up in their electricity requirements would be driven by solar power. They highlighted how the data center owners were only going to go solar due to their environmental views. We were surprised that there was zero discussion on the fundamental need for 24/7 reliable, affordable power. We just don't see the solar power call. Yes solar will be used as much as possible but there is no solar power at night. So we tweeted [LINK] "Data Centers 101; Need 24/7 available, affordable power, not intermittent solar/wind. $D: Northern Virginia is #1 for data centers in US & the world. Why? Affordable energy from #NatGas, #Nuclear & #Coal. Vs Clean energy is 14% of capacity but 5% of actual energy. #OOTT." We have been highlighting the recent Dominion Energy investor day and how northern Virgina is the global leader in data centers. And how Dominion's Virgina power generation is basically driven by natural gas, nuclear and coal. Whereas renewable energy was 14% of capacity but only provided 5% of actual power. The Dominion Energy data on power for data centers is the Data Center 101 – they need 24/7 reliable affordable power. Below are the Dominion Energy slides/data from our tweet."*

Figure 53: Northern Virginia is #1 global data center market



Source: Dominion Energy

Figure 54: Benefits for data centers in Virginia


Dominion Energy Virginia
Benefits for data centers in Virginia

Lower → Higher

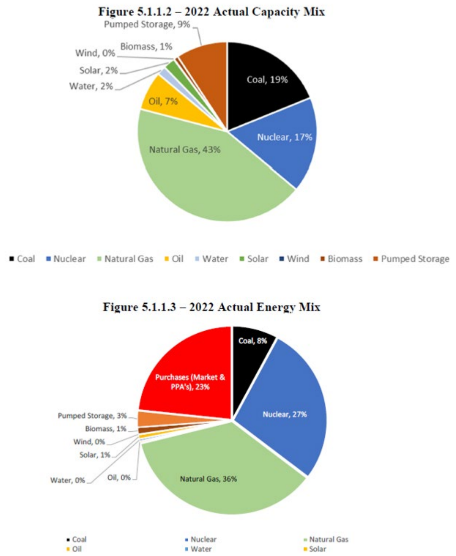
Benefits	Description	Impact
Fiber backbone	Northern Virginia **has densely packed fiber backbones** and access to 4 subsea fiber cables near Virginia Beach (MAREA, BRUSA, SAEx, Dunant)	
Affordable energy	Data center electricity costs are ~30% cheaper than the U.S. average in Northern Virginia, driving data center providers to Virginia due to significant cost savings	
Attractive business climate	Virginia enacted **tax subsidies and fast track approval processes** for data center business	
Ideal location	**Proximity to economic centers** on East Coast and Federal government; located near water sources plus **limited risk of natural disasters**	
Technical workforce	**Around 25% of jobs in Northern Virginia's largest county are tech related**	
Network effects	Loudoun County **hosts more than 3,500 companies in their data centers**. Others likely to follow due to the benefit of network effects	

Dominion Energy Source: Data Center Market Assessment conducted by a third-party consulting firm on behalf of Dominion Energy, dated November 9, 2023

48

Source: Dominion Energy

Figure 55: Dominion's Virginia 2022 actual energy capacity mix and actual energy mix



Source: Dominion Energy

Energy Transition: Trafigura, AI electricity consumption to be more than for EVs

Trafigura insights on EVs, copper and more

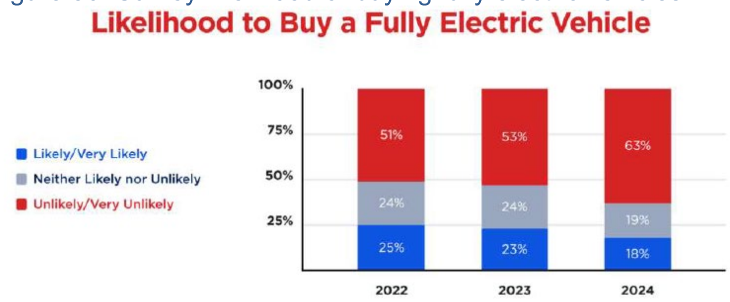
Trafigura posted its H1/24 results on Thursday and it included their Chief Economist Saad Rahim commodity recap and outlook. It's a good overview of Trafigura's view on the full range of commodities and markets. (i) On Thursday, we tweeted [LINK!] "*Usual good read @trafigura @saadrahim commodity recap/outlook. Headline will be copper prices moved higher than fundamentals in spot market BUT also reminds of disappointing supply. Normal seasonal demand trend for #Oil is key to tighter markets. India is big for future copper, steel, oil demand. Electricity consumption for AI likely to be more than for EVs. [He didn't say it, but i think this is one of the bullish themes for #NatGas]. Plus more. #OOTT.*" (ii) AI electricity consumption to be more than for EVs. Rahim wrote "*New sources of demand also continue* *to emerge, with the latest being in the form of the need of datacentres and AI. These were not a factor in most forecasts when we began our fiscal year, but increasingly are becoming a major driver. We estimate power consumption requirements in AI alone are likely to overtake those for electric vehicles*." (iii) The headlines were on his copper views that price have moved higher than fundamentals but he also highlighted supply issues. Rahim said "*The result is that prices of non-ferrous metals have moved much higher than fundamentals in the physical spot market might indicate or justify, especially for copper. In March 2024, copper broke out of its tight trading range to hit USD9,500 per tonne before moving to an all-time high of USD11,100 per tonne before retreating to just below USD10,000 at the time of writing."* And "*Mine supply for both copper and zinc has been disappointing since October 2023, including unforeseen issues such as the sudden closure of a very large copper mine in Panama. That, in turn, has led to a significant concentrates shortage, resulting in smelters having to cut production, and pointing to tighter inventories of refined metal even if demand is lacklustre."* (iv) Normal summer increase in oil demand is the key. Rahim said "*However, demand is holding up and product inventories remain relatively low. As such, if demand accelerates in line with normal seasonal trends it could result in tighter markets going forward."* (v) India is the key for future. Rahim wrote "*Regardless of the short-term moves, long-term demand for commodities remains intact. India continues to emerge as a larger force in commodities demand, and if its per capita demand mirrors the trajectory of any other major economy as it develops, then the potential additions to demand will be world-scale, whether it is copper, steel or oil."* There are other items. Our Supplemental Documents package includes Rahim's commodity recap and outlook.

Energy Transition: AAA Finds Interest in EVs Declining as Americans Turn to Hybrids

Hybrids gain more traction as EV interest declines

No question EVs sales continue to increase but the growth rate is declining and falling further behind the aspirations that lead agencies like the IEA to forecast the world reaches peak oil demand before 2030. On Friday, we tweeted [LINK] "*Time for Biden to pivot to hybrids vs EV?. Only 18% of Americans likely/very likely to buy an EV as early adopters have EVs, remaining see "practicality cost, convenience, and ownership experience ....from making the jump.." Vs 31% likely/very likely to buy a Hybrid. @AAAnews Fits with 05/22 tweet, increasing average age of an ICE is now 12.6 yrs! Gasoline/Oil will be needed for longer. #OOTT*". On Thursday, the AAA Newsroom posted an article on the decrease in momentum behind the interest in purchasing EVs [LINK]. The survey says 63% are unlikely or very unlikely to buy an EV for their next car purchase and only 18% likely or very likely to buy an EV for their next car purchase. AAA said *"AAA believes there may be a near-term ceiling related to consumer adoption of battery electric vehicles due to their costs, charging accessibility, and range anxiety. However, hybrid options could bridge these gaps, broadening consumer interest in owning an EV."* Our Supplemental Documents Package contains the article from AAA. Below is a graph showing the decreasing interest in buying fully electric vehicles. Our Supplemental Documents package includes the AAA report.

Figure 56: Survey likelihood of buying fully electric vehicles



Source: AAA Newsroom

Energy Transition: Germany wants ~1.7 bcf/d new natural gas generation

Germany to add ~1.7 bcf/d of natural gas power

More renewables = more natural gas power generation. On Friday, we tweeted [LINK] "*More Renewables = More Natural Gas Electricity Generation. Germany to support utilities to add #NatGas powered generation to stabilize the grid when renewables fall short reports @Reuters Markus Wacket. More #NatGas is needed for more intermittent power generation. #OOTT.*" On Friday, Reuters reported that Germany is going to pay billions to support utilities to add 10 GW of new natural gas generation. Using a heat rate of 7,000 btu/kWh gets to ~1.7 bcf/d. Reuters said the new natural gas generation "*to be able to stabilise the grid when unsteady renewable energy supplies fall short, people familiar with the negotiations told Reuters on Friday.*" And "*Germany is transitioning to renewables, having switched off nuclear power and seeking to phase out coal-powered electricity, but wants to give state support for natural-gas powered plants that underpin the grid during demand peaks and lows in unsteady supply from wind and solar power*." It looks like Germany is having another reality check it needs more natural gas. Although they are couching in that the natural gas will be able to be converted to hydrogen power with Reuters expecting in 2035 to 2040. Our Supplemental Documents package includes the Reuters report.

Capital Markets: WSJ "*Behind closed doors, Biden shows signs of slipping*"

WSJ on Biden behind closed doors

The big US politics story this week wasn't about Trump but about Biden and the WSJ Tuesday report "*Behind Closed Doors, Biden Shows Signs of Slipping. Participants in meetings said the 81-year-old president performed poorly at times. The White House said Biden is sharp and his critics are playing partisan politics.*" [LINK] The WSJ said ""*This article is based on interviews with more than 45 people over several months. The interviews were with Republicans and Democrats who either participated in meetings with Biden or were briefed on them contemporaneously, including administration officials and other Democrats who found no fault in the president's handling of the meetings. Most of those who said Biden performed poorly were Republicans, but some Democrats said that he showed his age in several of the exchanges. The White House kept close tabs on some of The Wall Street Journal's interviews with Democratic lawmakers. After the offices of several Democrats shared with the White House either a recording of an interview or details about what was asked, some of those lawmakers spoke to the Journal a second time and once again emphasized Biden's strengths. "They just, you know, said that I should give you a call back," said Rep. Gregory Meeks, a New York Democrat, referring to the White House.*" Needless to say, the WSJ report was called a hit job on Biden's mental sharpness. The reality is that

Biden's age and concerns on his mental sharpness are a major factor for voter perceptions. Our Supplemental Documents package include the WSJ report.

Late Q2/early Q2 is when we wondered if Biden might step down
We are surprised that Biden agreed to the June 27 debate with Trump instead of the normal debate in late Sept and Oct in the closing last several weeks of the election. But assuming the rules allow for an actual debate, this debate could bring a key decision for Biden. If Biden does okay, we this will put to bed concerns on his age and mental acuity. However, it he does poorly, we think it could force him to change his mind about running and rather get the party behind who he would support to continue is legacy. We had actually thought late Q2 or early Q3 is when we might see a surprise announcement Biden wouldn't run. Here is what we wrote in our Nov 19, 2023 Energy Tidbits memo. "*Capital Markets: Can Biden orchestrate a passing of the torch to who he anoints?It's a few weeks early for 2024 predictions but one of my top predictions for 2024 will be that Biden tries to orchestrate a passing of the torch to who he anoints. Just not clear if its Newsom or Harris or someone else, but right now I favor Newsom. Biden turns 81 tomorrow so his age will keep raising as a question mark for him and the Democrats in the 2024 elections. Everyone has their view if Biden will or will not run even though he is saying over and over he is running. I am just surprised that I don't see the political pundits with my view of Biden. With all the political pundits in the world, it must be that I am out in left field. So that is why I thought I would put it out there as one of my top prediction. Maybe it's because I believe he is fundamentally a decent guy is why I don't think he will do something really stupid. But I also believe he is underrated for his wanting to control politics. He is a President and, perhaps other than Jimmy Carter, all Presidents want to control politics. So my prediction is Biden wants to orchestrate who will be the next Democratic nominee. He doesn't want chaos and an unpredictable Democratic nominee, which is why he isn't going to say he isn't running. Rather he keeps running in the primaries, gets the nomination effectively locked up in March given the primary schedule. And sometime in late Q2 or early Q3. I think the timing will depend upon Trump's legal situation. But sometime ahead of the convention in late Aug. he announces he isn't going to run and is throwing his support behind someone who is his anointed candidate asking the Biden delegates to switch to his anointed one. This is as opposed to him saying he won't run soon and therefore taking control away from him as to who is his successor. If Biden runs, gets all the delegates, he more or less controls who will be the nominee even if the delegates won't be bound to vote for his anointed one. Maybe Prediction isn't the right word, but I just think Biden knows he runs a big risk of losing so the best thing for him in controlling politics is to set it up so the Democrats effectively have to go with his anointed pick. If so, will it be Newsom? Or Harris? Or someone else.*"

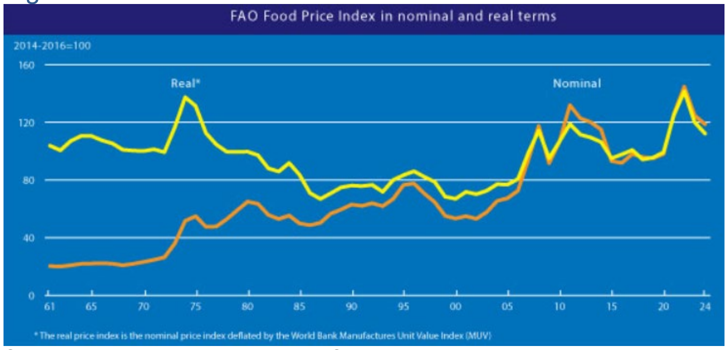
Capital Markets: UN FAO Food Price Index +0.9% MoM in May, -3.4% YoY

UN food price index up MoM

The UN Food Price Index is a monthly food commodities measure and not an index of consumer food prices or food prices in grocery stores. However, increases or decreases in food commodity prices should eventually work their way into grocery prices. The UN Food Price index has been gradually decreasing since the middle of 2023, but was up in May 2024 after being flat in April. On Friday, the UN posted its monthly update of its FAO Food Price

Index [LINK] titled "*FAO Food Price Index slightly up in May: higher cereal and dairy prices offset easing sugar and vegetable oil quotations". *Note that the index is calculated on a Real Price basis. The FFPI averaged 120.4 points in May, up +1.1 point MoM from 119.3 points in April (revised), and is down -3.4% YoY. The FFPI reported categories were mixed in their index movements over May. The Vegetable Oil Index was down -2.4% MoM after April's 13-month high and is up +7.7% YoY. The Dairy Price Index was up +1.8% MoM and up +3.5% YoY. The Cereal Price Index was up +6.3% MoM which is -8.2% YoY. The monthly rise was largely due to increasing concerns about unfavourable crop conditions for the 2024 harvest season, possibly constraining yields in some producing areas of major exporting countries, including in parts of Europe, Northern America and the Black Sea region. The Meat Price Index was down -0.2% MoM and -1.3% YoY. The Sugar Price Index was down -7.5% MoM and down -25.5% YoY. The monthly drop was driven by the positive start of the new harvest season in Brazil as conducive weather conditions contributed to an improved global supply outlook, larger export availabilities from Brazil, and lower international crude oil prices.

Figure 57: UN FAO Food Price Index



Source: UN Food and Agricultural Organization

Capital Markets: Boeing CEO global isolation "*are going to bring down economies*"

Boeing warns on global isolation

There was a broad Bloomberg TV interview with Boeing CEO Calhoun on Tuesday, which focused on Boeing items such as the succession planning. But it also included his concern for world economies in the face of the movement to the world's move to global isolation policies. Calhoun sees a clear path from continuing isolationist policies to bringing down economies and impacting many people that leads to disenchantment and then political turnover. We tweeted [LINK] "*Boeing CEO. "I am worried about the ramifications of isolation are gonna, I don't want to overstate the word, but they are going to bring down economies" "Isolation then brings disenchantment and disenchantment ultimately brings political turnover" Thx @GuyJohnsonTV #OOTT."* The mor fulsome quote was *"I am worried that the ramifications of isolation are gonna, I don't want to overstate the word, but they are going to bring down economies. They just are. ….. I worry about isolation with respect to the economic ramifications for lots of countries and lots of people. And Isolation then brings disenchantment and disenchantment ultimately brings political turnover … "*

09/05/22: A must read Deutsche Bank CEO keynote speech

The concerns or the unknown impact of the West's move to isolate China have been getting increased commentary in the last six months. There was a good warning on this two years ago from Deutsche Bank CEO. Here is what we wrote in our Sept 11, 2022 Energy Tidbits memo. "*We weren't certain where to put this item, but we believe the Deutsche Bank CEO Christian Sewing views of the world, if correct, will be positive for oil and natural gas thru the 2020s. The headlines on his Wednesday comments were all about his warning a recession is coming for Germany. (i) We tweeted [LINK] "1/2. Must Read @DeutscheBank CEO. RUS/UKR "destroyed a number of certainties on which we build our economic system over the past decades". NEXT UP, "awkward question on how to deal with China" in light of increasing CN/US isolation/tension, reducing China dependency will .. #OOTT", and [LINK] "2/2.."require a change no less fundamental than decoupling from RUS energy". Globalization gone, labor a global bottleneck. Extremely expensive #Electricity #NatGas s a threat to economy. the longer inflation remains high the higher the potential for social unrest, etc. #OOTT.". (ii) As you can see from our tweets, there are many thoughts. We tend to agree with a lot of what he is saying unless there is a social revolt to say enough is enough. (iii) The real theme of his theme of his speech is excellent – the world has changed for the foreseeable future. The norms of the past decades are gone. Globalization gone. China dependency must be reduced. Global value and supply chains disrupted. Workforce a worldwide bottleneck. Electricity/natural gas will be expensive in EU for a long time.. The truth is that 30 years of presumed calm will now be followed by a period of heightened volatility with economic uncertainty, regular crises and geopolitical conflicts that are also likely to drag on for decades. Trouble spots are not cut off from the rest of the world; they impact other regions in a number of ways. (iv) And he doesn't say much about it, but says "But the longer inflation remains high, the greater the strain and the higher the potential for social conflict." We still wonder about social conflict and if there will be Arab Spring type revolt within Germany and other European countries to how people feel they are getting hit by the Russian sanctions. (v) His views are relevant to longer term capital allocation. It's not just Germany has a terrible economic outlook. He raises issues like we have noted about China is the next Russia type target even if they don't invade Taiwan. Germany affects more than itself. And think about it, if Germany can hold the line on Russian sanctions on energy, then it probably says most of Europe can hold the line other than a handful like Hungary, etc. (vi) There is much more in this short viewpoint. Our Supplemental Documents package includes the CEO viewpoint."*

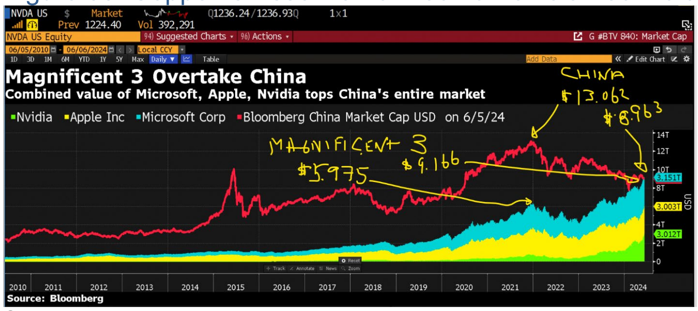
Capital Markets: Apple + Microsoft + Nvidia market cap now larger than China

Apple + Microsoft + Nvidia now >$39 trillion

It's pretty amazing that the combined market capitalization of Apple, Microsoft and Nvidia are more than anyone country's stock market capitalization other than the US. They just passed China. On Thursday, we tweeted [LINK] *"Apple + Microsoft + Nvidia market cap is now #2 market cap country in the world. Just passed China driven by Nvidia quadruple in last 2.5 yrs AND China's 40% drop in market cap. Good thing these aren't #Oil co's as they would be taxed like crazy. Thx @business #OOTT."* Our tweet included the below Bloomberg graph titled "*Magnificent 3 Overtake China: Combined value of Microsoft, Apple, Nvidia tops China's entire market*". The change has really been driven by the crash in China's stock markets and the massive increase in market cap at Nvidia. We marked the graph to note Dec 16, 2021, which is when China market cap was the highest and included a table of the market caps on Dec 16, 2021 vs June 5, 2024. Since then, China market cap is down $4.099 trillion to $8.963

trillion and, on the other side, Nvidia is up $2.302 trillion to $3.012 trillion, Apple is up $0.177 trillion to $3.003 trillion, and Microsoft is up $0.712 trillion to $3.151 trillion. Our first reaction when we see the market caps over $3 trillion, we couldn't help thinking that there would be some big new taxes if they were oil companies.

Figure 58: Copper is Essential to Electric Vehicle Technology



Source: Bloomberg

Twitter: Thank you for getting me to 11,000 followers

@Energy_Tidbits on Twitter

Last week, I went over 11,000 followers on Twitter/X. I really appreciate the support and, more importantly, some excellent insights and items to look at from Twitter followers. It helps me do a better job. 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.

LinkedIn: Look for quick energy items from me on LinkedIn

Look for energy items 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].

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.

Cdn golf star Adam Hadwin in the hunt again, T2 in the final round

It will be another day to watch golf although past practice suggests Cdn golf star Adam Hadwin won't get much TV coverage unless he can take the lead in the Memorial Tournament. Hadwin is at -6, sitting T2 four stroke behind leader Scottie Scheffler. But if TV coverage is like yesterday's 3rd round when Hadwin was in the final group and playing steady, the coverage today for the chasers will be more on Collin Morikawa (T2), Xander Schauffele (T5), Rory McIlroy (T11) and Viktor Hovland (T14). One disappointing TV coverage item today is no TV coverage of the final round of the LPGA Shoprite where Canada's Alena Sharp is sitting T7, only three strokes off the lead. Sharp was 67 and 68 in the first two rounds and would be great to see how she will do in the final round.

Massive upset in cricket, US stuns Pakistan in group stage at World Cup

It got so little coverage in the US TV sports coverage, but there was a massive upset in cricket when the US beat Pakistan in the group stage at the World Cup. Too bad it wasn't a medal game because maybe then it would have got the coverage. It is a bigger upset than when the Americans beat Russia in the Miracle on Ice at the 1980 Lake Placid Olympics in the medal round, when the US won 4-3 that put them in the gold medal game that they won 4-2 for the gold. But we had basically zero coverage on the US beating Pakistan until watching Bloomberg Surveillance on Friday morning when Bloomberg's Jonathan Ferro didn't let it go to commercial, he said "*Pause! That is like Pakistan beating America at basketball. That is how ridiculous the outcome of that is*". Then Bloomberg's Lisa Abramowicz, an admitted not a big sports person says "*That is insane. Even I know that is insane*."

China's tank man in Tiananmen Square was 35 yrs ago

Anyone who is probably mid 50's or older will remember the Tiananmen Square massacre where the army killed hundreds/thousands? of protestors. And then two days later, the June 4, 1989 news clip of the man with his plastic grocery bags walking in front of four tanks and stopping them from proceeding. On Tuesday, we tweeted [LINK] "*Doesn't seem like 35 yrs ago the tank man stopped tanks in Tiananmen Square. Great @CNN video at [LINK]. Don't forget, It was the day after June 4, 1989 Tiananmen Square massacre that saw hundreds/thousands(?) killed/injured when the army cleared out protesters.*" Our tweet included the link to the CNN video of the tank man.

Figure 59: Man stands in front of tanks in Tiananmen Square June 4, 1989

Source: CNN

National Donut Day was Friday

Friday was one of our favorite food holidays – it was National Donut Day. So in celebration of the holiday, we had two of the classics – Sour Cream Glazed and Boston Cream donuts. It's an interesting history and all the reports on the history are the same. CNN wrote "*The first Friday in June, June 5 this year, is National Donut Day. Started by the Salvation Army in Chicago in 1938, the day honors the group's* *"donut lassies," who served treats and provided assistance to soldiers on the front lines during World War I. (And this isn't to be confused with National Doughnut Day, which is in November and celebrates the actual food.)*

Figure 60: Sour cream glazed and Boston cream donuts

Source: SAF Group