Energy Tidbits

May 19, 2024

Produced by: Dan Tsubouchi

EIA Forecasts US Shale/Tight Oil for June, Including in the Permian, to Stay Basically Flat for 5th Consecutive Month

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. EIA's updated shale/tight oil forecast for June is for basically flat production for the 5th consecutive month. [click here]
2. IEA May OMR increased its lookback at 2023 oil demand and made no change to 2024 and 2025 oil demand. [click here]
3. IEA's Bloomberg interview seems to shift its peak oil demand by 2030 & then decline thereafter to a view for a long term oil demand plateau. [click here]
4. Biden reportedly trying to get more Venezuelan oil on the market. [click here]
5. Qatar Energy and TotalEnergies CEOs are both bullish on LNG demand growth but recognize there could be a LNG surplus in late 2020s until rebalanced post 2030. [click here]
6. Please follow us on Twitter at [LINK] for breaking news that ultimately ends up in the weekly Energy Tidbits memo that doesn't get posted until Sunday noon MT.
7. For new readers to our Energy Tidbits and our blogs, you will need to sign up at our blog sign up to receive future Energy Tidbits memos. The sign up is available at [LINK].

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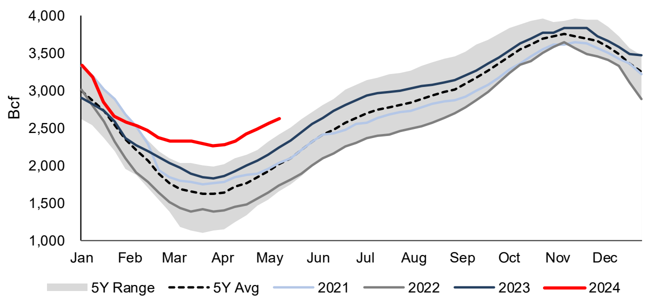
Natural Gas: Warning for risk US natural gas storage gets filled early

US natural gas storage to be filled early?

We repeat and update our warning from our Apr 28, 2024 Energy Tidbits memo. US storage is well above 5-yr highs. US natural gas storage season has just started but we warn it is pointing to full storage being hit early unless there are some big changes to the storage outlook. The latest EIA Form 914 is for February data and it shows Feb 2024 +4.6 bcf/d YoY. Europe gas storage is looking to be full early so may have some push back on US LNG cargoes in the fall. And Jul/Aug/Sept was the 3rd hottest summer in the last 129 years. 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, we think it is at least time to get people focused on the risk for an early fill to US natural gas storage. And if this path continues over the next couple months, we should see analysts reflecting in their natural gas price forecasts, more producers shutting-in supply and low Q3 prices. As noted below, US natural gas storage is now +421 bcf YoY, which is down WoW from +444 bcf YoY last week.

Figure 1: US Natural Gas Storage



Source: EIA

Natural Gas: +70 bcf build in US gas storage; now +421 bcf YoY

+70 bcf build in US gas storage

For the week ending May 10, the EIA reported a +70 bcf build. Total storage is now 2.633 tcf, representing a surplus of +421 bcf YoY compared to a surplus of +444 bcf last week. For this week, and the past few, total storage is above the top end of the 5-yr range. Total storage is +620 bcf above the 5-year average, slightly lower than last week's +640 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 (05/10/23)		5-year average (2019-23)	
Region	05/10/24	05/03/24	net change	implied flow	Bcf	% change	Bcf	% change
East	482	454	28	28	448	7.6	375	28.5
Midwest	606	584	22	22	513	18.1	446	35.9
Mountain	196	191	5	5	110	78.2	109	79.8
Pacific	252	246	6	6	123	104.9	193	30.6
South Central	1,097	1,087	10	10	1,017	7.9	890	23.3
Salt	313	314	-1	-1	289	8.3	278	12.6
Nonsalt	784	773	11	11	729	7.5	612	28.1
Total	2,633	2,563	70	70	2,212	19.0	2,013	30.8

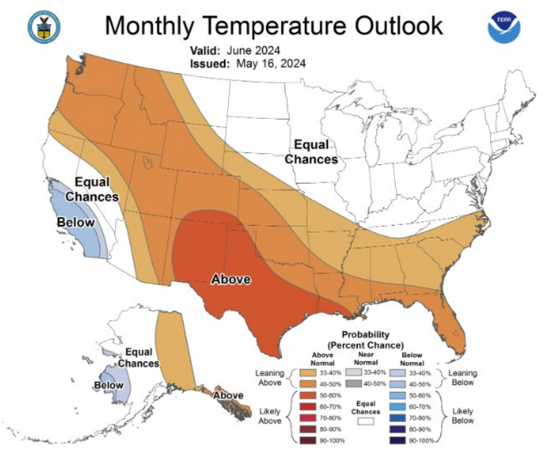
Source: EIA

Natural Gas: NOAA forecasts warmer than normal temps in June for Southern US

NOAA monthly temp outlook

On Thursday, NOAA posted its 30-day outlook, which is its Monthly Temperature Outlook for the June. NOAA's temperature forecast for shows above average odds for above-normal monthly average temperatures for a region from the Pacific Northwest and northern Rockies south and east to the Southwest CONUS and eastward to include the southern Plains and Southeast, with a higher probability for above average temperatures in Texas and New Mexico. Below-normal monthly temperatures are expected for coastal-central California and for parts of southwest Alaska. Aside from that, pretty much normal temps for the rest of the US. Below is NOAA's temperature forecast for June.

Figure 3: NOAA Monthly Temperature Outlook for June



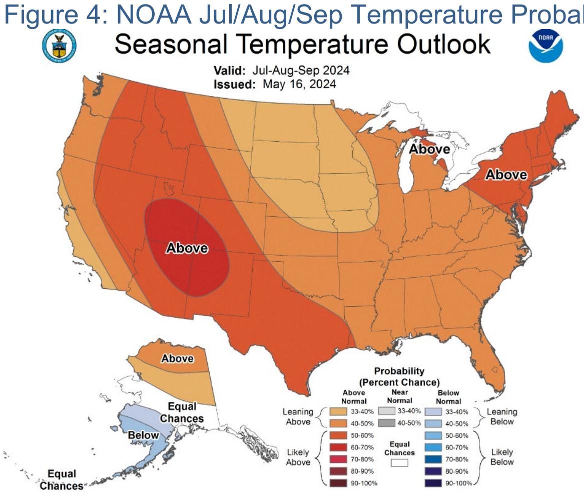
Source: NOAA

Natural Gas: NOAA's updated summer forecast is still for a hot July, Aug, Sept

NOAA forecasts hot summer in the US

We recognize that weather forecasts, even near term, are far from 100%, but, on Thursday, NOAA released its monthly update to its seasonal temperature forecast for summer – July, Aug and Sept. And we tweeted [LINK] "*Positive support for #NatGas. @NOAA updated Jul/Aug/Sept calls for another hot summer. Summer 2023 was 3rd hottest in last 129 yrs and helped provide some strengthening to HH prices last summer. #OOTT.*" NOAA's updated temperature outlook for the summer JAS [LINK] still calls for warmer than normal temperatures across almost all of the US, predominantly in the south west and in a small section in north east. There is no bigger variable for natural gas price than winter temperatures but a hot summer, as seen last summer, normally provides support for natural gas prices. Below is NOAA's May 16 temperature probability map for JAS.

Figure 4: NOAA Jul/Aug/Sep Temperature Probability Forecast

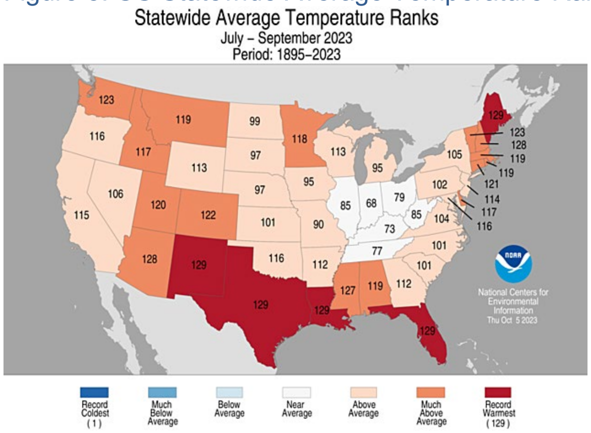


Source: NOAA

But July/Aug/Sept 2023 was 3rd hottest in the last 129 years

If NOAA's early look at JAS 2024 is right, it will be well above normal but cooler than last summer's JAS 2023. Our Oct 15, 2023 Energy Tidbits wrote "*September [[LINK]. September was the 7th hottest in the last 129 yerars. It was record heat in Texas and New Mexico, and really hot in Plains, Midwest, Great Lakes NE and south. NOAA also posted its recap of summer July/Aug/Sept [LINK] and it was near record heat as the 3rd hottest in the last 129 years. It was record heat in a number of states and near record in many others. Below is NOAA's by state ranking for September and July/Aug/Sept temperature*s."

Figure 5: US Statewide Average Temperature Ranks July/Aug/Sept 2023



Source: NOAA

Natural Gas: EIA, US shale/tight natural gas fcast down for 4th consecutive month

Shale/tight gas production

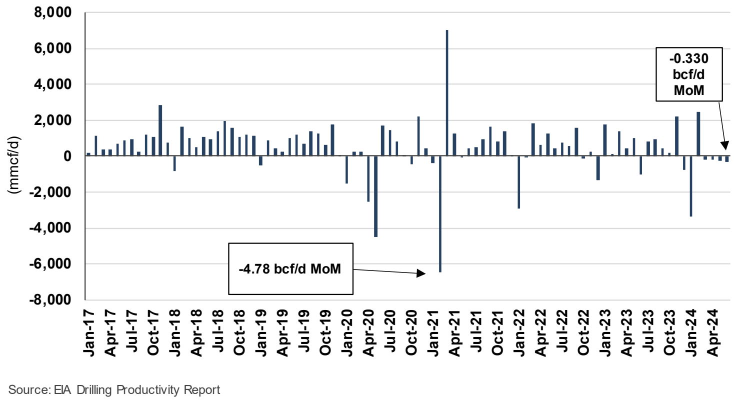
The EIA forecasts US shale/tight natural gas plays for June to be 99.195 bcf/d, which would be the 4th consecutive monthly decline. (i) The caveat to the forecast numbers is that they are far from 100% and subject to revisions. The EIA warned on this in Dec, when they wrote "*The Drilling Productivity Report (DPR) rig productivity metric new-well oil/natural gas production per rig can become unstable during periods of rapid decreases or increases in the number of active rigs and well completions. The metric uses a fixed ratio of estimated total production from new wells divided by the region's monthly rig count, lagged by two months. The metric does not represent new-well oil/natural gas production per newly completed well. The DPR metric legacy oil/natural gas production change can become unstable during periods of rapid decreases or increases in the volume of well production curtailments or shut-ins. This effect has been observed during winter weather freeze-offs, extreme flooding events, and the 2020 global oil demand contraction. The DPR methodology involves applying smoothing techniques to most of the data series because of inherent noise in the data*". (ii) On Monday, the EIA released its monthly Drilling Productivity Report for May 2024 [LINK], which is the EIA's forecast for oil and natural gas production from the major shale/tight oil and gas basins for the current month (in this case May) and next month (June). (iii) The EIA forecasts US shale/tight natural gas for May at 99.525 bcf/d (revised down vs last month's May estimate of 99.944 bcf/d) and June natural gas production is forecast to be 99.195 bcf/d. The below table shows June is the 4th consecutive monthly decline. (iv) The Permian is up for the 5th consecutive month, climbing steadily from 23,996 bcf/d in January 2024 to an expected 25,393 in June 2024. (v) Haynesville has been falling gradually for the past 4 months; from 16.040 bcf/d in February to an expected 15.339 bcf/d in June. (vi) Remember US shale/tight gas is ~90% of total US natural gas production. So, whatever the trends are for shale/tight gas are the trends for US natural gas in total. Below is our running table showing the EIA DPR data for the shale/tight gas plays, and the MoM changes in major shale/tight natural gas production. Our Supplemental Documents package includes the EIA DPR.

Figure 6: EIA Major Shale/Tight Natural Gas Production

	2023							2024								Apr DPR	May DPR	
mmcf/d	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	June YoY%	June MoM%	May	May	Change
Anadarko	6,545	6,566	6,495	6,719	6,854	6,788	6,729	6,451	6,592	6,567	6,544	6,528	6,518	0%	0%	6,518	6,528	9
Appalachia	35,816	35,905	36,364	35,835	35,904	37,083	37,161	36,412	36,437	36,239	36,097	35,967	35,791	0%	0%	36,062	35,967	-95
Bakken	3,301	3,356	3,388	3,512	3,471	3,522	3,584	3,054	3,419	3,437	3,454	3,471	3,487	6%	0%	3,418	3,471	52
Eagle Ford	7,375	7,452	7,330	7,632	7,645	7,651	7,555	7,322	7,458	7,417	7,373	7,344	7,323	-1%	0%	7,337	7,344	7
Haynesville	16,469	16,615	16,620	16,535	16,380	16,692	15,467	15,190	16,040	15,966	15,816	15,606	15,339	-7%	-2%	15,997	15,606	-391
Niobrara	5,167	5,192	5,312	5,276	5,378	5,444	5,429	5,292	5,377	5,380	5,369	5,359	5,344	3%	0%	5,369	5,359	-11
Permian	22,682	23,115	23,604	24,010	24,036	24,671	25,157	23,996	24,852	24,977	25,111	25,250	25,393	12%	1%	25,243	25,250	8
Total	97,357	98,202	99,112	99,518	99,669	101,851	101,083	97,717	100,174	99,983	99,765	99,525	99,195	2%	0%	99,944	99,525	-420

Source: EIA, SAF

Figure 7: MoM Change – Major Shale/Tight Natural Gas Production



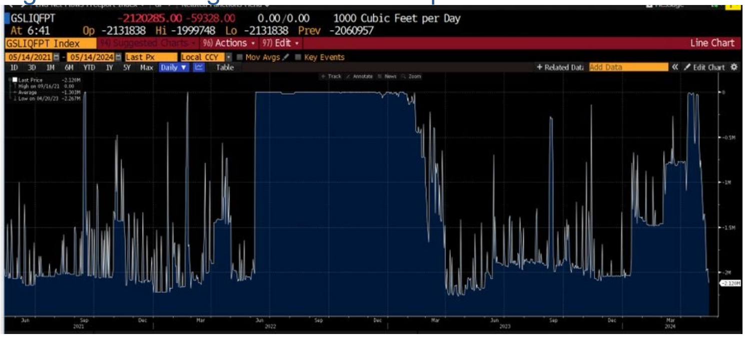
Source: EIA, SAF

Natural Gas: Freeport LNG back to running at 2.1 bdf/d capacity

Freeport LNG back to 2.1 bcf/d

On Tuesday, we tweeted [LINK] "*Freeport LNG is back! #NatGas supplying Freeport LNG is back to its capacity of ~2.1 bcf/d. Thx @ruthcoverslng #OOTT.* Bloomberg reported that repairs and maintenance were completed and natural gas flows had returned to full capacity of 2.1 bcf/d. Our tweet included the below Bloomberg graph of natural as flows into Freeport LNG.

Figure 8: Natural gas inflows to Freeport LNG



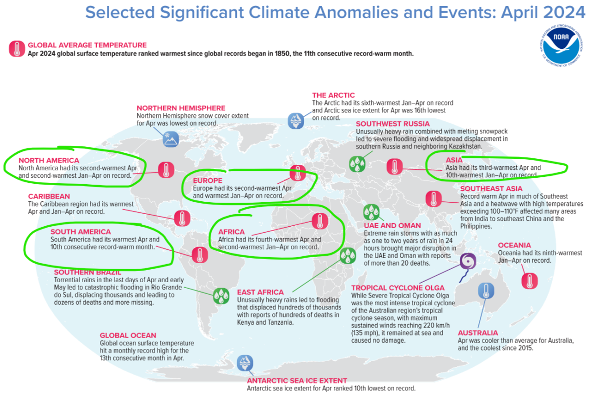
Source: Bloomberg

Natural Gas: April 2024 had the hottest average global temperature on record

Hottest April on record globally

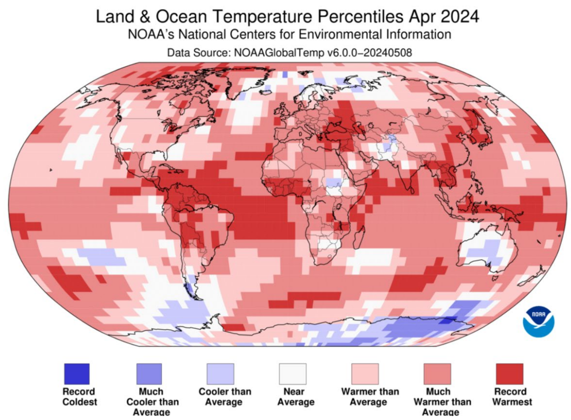
Earlier this week, NOAA posted its global climate recap for April [LINK] and it was another month of the hottest on record. And importantly, it was warm around the world. It was the warmest on record in North and South America, 2nd warmest on record in Europe, 3rd warmest on record in Asia and 4th warmest on record in Africa. Overall, NOAA wrote "*April 2024 was the warmest April on record for the globe in NOAA's 175-year record. The April global surface temperature was 1.32°C (2.38°F) above the 20th-century average of 13.7°C (56.7°F). This is 0.18°C (0.32°F) warmer than the previous April record set most recently in 2020, and the eleventh consecutive month of record-high global temperatures. April 2024* *marked the 48th consecutive April with global temperatures, at least nominally, above the 20th-century average."* Below are the NOAA graphics for April.

Figure 9: Selected Significant Climate Anomalies and Events: April 2024



Source: NOAA

Figure 10: Land & Ocean Temperature Percentiles for April 2024



Source: NOAA

Natural Gas: TotalEnergies progressing to restart of its Mozambique LNG project

TotalEnergies CEO in Mozambique

TotalEnergies CEO Patrick Pouyanne met with Mozambique President Nyusi in Mozambique on Friday and keeps pointing to a near-term restart of its Mozambique LNG Phase 1 that has a planned capacity of 1.7 bcf/d. Poyanne noted that they are ready resume the project from a security perspective, a contractor perspective and progressing well on their discussions with the funders on financing the project. Recall there have been a few issues. First was to have the security under control and lift to return to normal in and around Palma (the hub of the onshore LNG facilities). Club of Mozambique [LINK] wrote ""*We think that the situation in the north of Cabo Delgado is well-controlled. Life in Palma has returned to normal. We are a little worried about what is happening in the south of Cabo Delgado – there were some incidents in Macomia recently. […] We are sharing information to put forward the best possible options," Pouyanné concluded.*" Second was to get a deal done with the contractors on the restart and the third is to get finance funding onside. Club of Mozambique wrote "*We discussed the conditions for resuming the project in Cabo Delgado. I believe we have made positive progress with all contractors, and from that point of view we are ready to resume. We are also working with all funders to resume financing the project, and this is progressing well," he added*." Our Supplemental Documents package includes the Club of Mozambique report.

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

TotalEnergies stopping its 1.7 bcf/d Mozambique Phase 1 was the most significant LNG event in the past several years as it put a halt to 5.0 bcf/d of Mozambique LNG that was, in early 2021, on track to deliver a series of tree phases starting around now that would add 5.0 bcf/d in the 2020s. There were TotalEnergies Phase 1 of 1.7 bcf/d and its follow on Phase 2 of 1.3 bcf/d, and then Exxon's Rozuma Phase 1 of 2.0 bcf/d. So a restart of Mozambique LNG Phase 1 really sets in motion 5.0 bcf/d of new Mozambique LNG supply, not just the 1.7 bcf/d from Phase 1.

There have been 22.13 bcf/d of long-term LNG supply deals since July 1, 2021

The TotalEnergies force majeure stopping Mozambique LNG Phase 1 in spring 2021 set in motion a rush for LNG buyers to lock up long-term LNG. This is because the stopping of Mozambique LNG meant 5.0 bcf/d of LNG supply wasn't coming on the market in the 2020s. As a result, Asian LNG buyers who hadn't been committing to long-term LNG deals in early 2021 were forced to switch to long-term LNG deals. It was a scramble and why we wrote two major blogs in 2021: Our April 28, 2021 blog "*Multiple Brownfield LNG FIDs Now Needed To Fill New LNG Supply Gap From Mozambique Chaos? How About LNG Canada Phase 2?".* Our July 14, 2021 blog "*Asian LNG Buyers Abruptly Change and Lock in Long Term Supply – Validates Supply Gap, Provides Support For Brownfield LNG FIDs",* which showed Asia LNG buyers had quickly pivoted to long-term LNG deals to lock up supply. Since 2021, we have been highlighting the rush to long-term LNG deals that started when TotalEnergies halted the Mozambique LNG. Here is what we wrote in last week's (May 12, 2024) 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 22.13 bcf/d of long-term LNG deals since July 1, 2021. 63% of the deals have been by Asian LNG buyers, but we are now seeing rest of world locking up long term supply deals post Russia/Ukraine. 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 52% of all Asian LNG buyers in long term contracts since July 1, 2021. Below is our updated table of Asian and Europe LNG buyers new long-term supply deals since July 1, 2021*."

Figure 11: 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
Total Asian LNG Buyers New Long Term Contracts Since Jul/21				**13.87**			

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 / Qata	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	**22.13**

*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: Qatar & TotalEnergies see oversupply in the late 2020s

Oversupply LNG in late 2020s?

Yesterday, we tweeted [LINK] "*LNG oversupply to end 2020s? Qatar Energy & TotalEnergies CEOs sees strong & growing long-term demand but wave of supply projects point to #LNG oversupply to end 2020s before rebalancing post 2030. See 👇SAF Group created transcript. Great @flacqua interview. #NatGas #OOTT.* Bloomberg's Francine Lacqua moderated a panel discussion with Darren Woods, Chairman and CEO of Exxon Mobil, Patrick Pouyanne, CEO of TotalEnergies, and Saad Sherida Al-Kaabi, Qatari Energy Minister & Qatar Energy CEO. One of the insights were from Al-Kaabi and Pouyanne on the LNG supply/demand outlook. Both were bullish and see growing long-term LNG demand but both also see the wave of LNG supply to come will see oversupply in the late 2020s. Our tweet included the transcript we made of Al-Kaabi and Pouyanne comments. Al-Kaabi said "*And as mentioned by my colleagues, that is going to be need for gas in the future…… So we think there is a big demand in the future and we're going to expand to meet that demand…. And as I mentioned, there is going to be a glut, if you will, of a lot of projects coming mainly* *from Qatar and our project in Golden Pass and some from my colleagues here, Mozambique and other areas. And there is going to be additional demand. But I think if economic growth, everybody is trying to get the, you know, inflation down and so. If we have a reasonable economic growth going forward, I think you'll see that all the supply and demand will catch up and you'll need another phase of development of gas in the 2030 plus. I don't think gas is going away anytime soon*." CEO Pouyanne said "*So there's a market there for gas, for LNG. Of course it's a commodity, so you don't ever match supply and demand. So probably we will have by 27, 30 quite a lot of supply. But you know, when there is plenty of supply, when the price is going down so it attracts new customers*."

Natural Gas: India April natural gas production down MoM but up YoY

India natural gas production down MoM, up YoY

India domestic natural gas production peaked in 2010 at 4.6 bcf/d, and then ultimately declined to average 2.8 bcf/d in 2020-2021. India returned to modest growth in 2021/2022, which was followed by several months of basically flat production but modest production growth returned in 2023. On Friday, India's Petroleum Planning and Analysis Cell released their monthly report for April's natural gas and oil statistics [LINK]. India's domestic natural gas production for April was 3.48 bcf/d, which was down -2.6% MoM from 3.57 bcf/d in March. On a YoY basis, natural gas production was up +7.76% from 3.23 bcf/d in April 2023. Our Supplemental Documents package includes excerpts from the PPAC monthly.

Natural Gas: India LNG imports up MoM to 3.07 bcf/d in April, up +16.58% YoY

India LNG imports up YoY

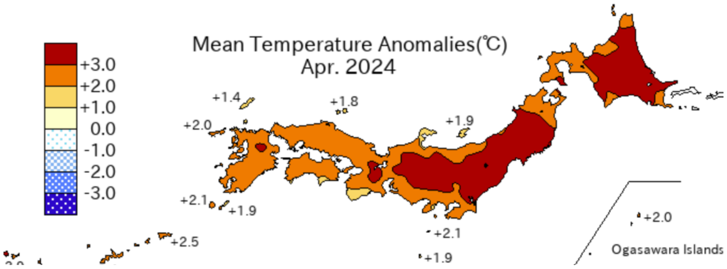
For the past several years, India has increased LNG imports whenever domestic natural gas production was flat or decreased. But the overriding factor for India tends to be price. If price is high, India pulls back on LNG imports and will normally turn to coal. If prices are low, like was seen this winter, then India tends to pick up spot cargoes. India is an opportunistic LNG spot buyer. On Friday, India's Petroleum Planning and Analysis Cell released their monthly report for April's natural gas and oil statistics [LINK]. Over the past 3 years, India's LNG imports declined from a 2020-2021 peak of 3.84 bcf/d in Oct 2020 to just 2.85 bcf/d in Jan 2021 and lower in 2022. Additionally, April's 2024's LNG imports were 3.07 bcf/d, which is up +6.86% MoM from 2.87 bcf/d in March. LNG imports are now up +16.58% YoY from 2.63 bcf/d in April 2023.

Natural Gas: Warmest April in Japan since 1946

Warmest April in Japan since 1946

On Thursday, the Japan Meteorological Agency posted its climate recap for April [LINK]. It included the below mean temperature anomalies map. It was a very hot April, but a hot April doesn't drive any significant weather driven demand for natural gas. The JMA wrote *"Monthly mean temperatures were significantly above normal nationwide with the highest April record since 1946 in northern/eastern Japan and Okinawa/Amami, because the regions were covered by warm-air and were affected by warm-air inflow. The monthly anomaly of the average temperature over Japan was +2.76°C (the warmest for April since 1898). Monthly precipitation amounts were significantly above normal in Okinawa/Amami and were above normal on the Pacific side of eastern/western Japan and on the Sea of Japan side of western Japan. Monthly sunshine durations were significantly below normal on the Sea of Japan side and the Pacific side of western Japan. They were below normal on the Pacific side of eastern Japan. These regions were well affected by low-pressure systems and fronts. Monthly precipitation amounts were below normal on the Sea of Japan side of northern Japan. Monthly sunshine durations were significantly above normal on the Sea of Japan side of* *northern Japan and were above normal on the Pacific side of northern Japan and the Sea of Japan side of eastern Japan. These regions were less affected by low-pressure systems and were frequently covered by high-pressure systems."* Below is a temperature map of Japan for April.

Figure 12: JMA Mean Temperature Anomalies April 2024



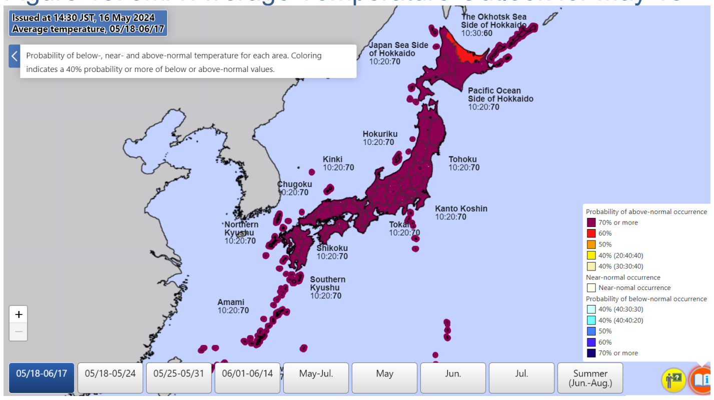
Source: Japan Meteorological Agency

Natural Gas: Japan expects warm start to June, ties to call for hot summer

JMA temperature forecast for June

On Thursday, the Japan Meteorological Agency updated its 4-week forecast for Japan [LINK], which is May 18 - June 17. There is no JMA commentary on the forecast. JMA is calling for warmer than normal temperatures for May 18 – June 17. We checked AccuWeather and they are forecasting daily highs in the 23-27C range thru mid June. In Japan, that isn't normally a temperature that drives a lot of electricity demand as Japanese offices and house tend to have air conditioning turned way higher than in North America. But a warm early June is fitting to the JMA's current call for a warmer than normal summer. A warm start to summer may not move natural gas/LNG prices up too much but it's better than seeing a cool start to summer to hit prices. Below is the JMA temperature forecast for May 18 – June 17.

Figure 13: JMA Average Temperature Outlook for May 18 – June 17



Source: Japan Meteorological Agency

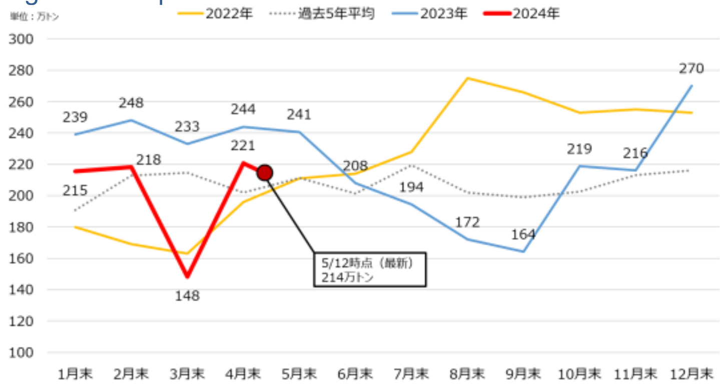
Natural Gas: Japan LNG stocks up WoW, still down YoY

Japan LNG stocks up WoW

Japan's LNG stocks are below 2023 levels and just above the 5-year average. On Wednesdays, Japan's METI releases its weekly LNG stocks data [LINK]. LNG stocks on May

12 were 102.8 bcf, up +6.47% WoW from May 5 of 96.5 bcf, and down -11.2% YoY from 115.7 bcf a year earlier. Stocks are just above below the 5-year average for the end of May of 101.3 bcf. The recent build was helped by Japan shutting in some natural gas generation in March to conserve natural gas use and drain on LNG stocks, combined with significant weather driven demand. Below is the Japanese LNG stocks graph from the METI weekly report.

Figure 14: Japan LNG Stocks



Source: METI

Natural Gas: China natural gas production 23.31 bcf/d in April, up +4.5% YoY

China natural gas production

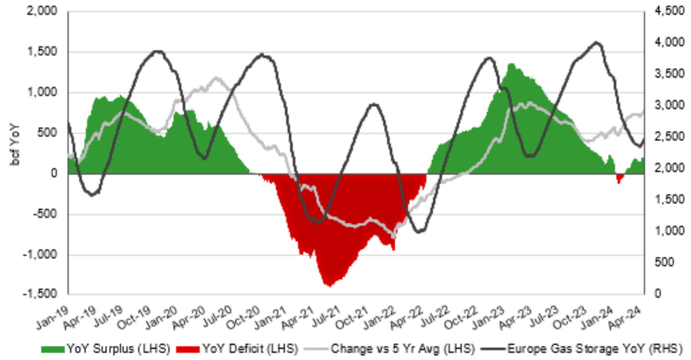
Well before Covid, our concern in 2019 was that China's LNG imports were going to change from strong YoY growth in LNG imports to a period of zero to very low growth in LNG imports. The reason was primarily the startup of the big Power of Siberia natural gas pipeline from Russia and a return in the 2020s to modest growth in China domestic natural gas production. And since LNG is the most expensive natural gas, it would be and is the marginal natural gas/LNG supply. That concern has played out over the past few years and increasing domestic natural gas production and increasing cheaper natural gas pipeline imports from Russia squeezed out LNG imports in 2022 and 2023. On Friday, Bloomberg's CHENNGAS Index showed (using data from the National Bureau of Statistics) that China natural gas production in April was 23.31 bcf/d, down -5.2% MoM from 24.60 bcf/d in March but +4.5% YoY from 22.30 bcf/d in April 2023. Recall the Chinese government website [LINK] also noted that over 2023, China's average natural gas production was 22.3 bcf/d, up +1.0 bcf/d from 2022, which is the 7th annual YoY increase.

Natural Gas: Europe storage builds WoW to 66.29%, YoY surplus widens

Europe gas storage

This week, Europe storage increased by +2.11% WoW to 66.29% on May 16 vs 64.18% on May 9. Storage is now +1.87% higher than last year's levels of 64.42% on May 16, 2023, and up huge vs the 5-year average of 52.15%. The expectation is still that Europe storage should be full by the start of the winter natural gas season. Even though the YoY surplus is modest, up until the recent Russia bombing of Ukraine natural gas storage facility, there weren't fears for natural gas and LNG supply over the summer months. 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 Europe Gas Storage Level.

Figure 15: European Gas Storage Level

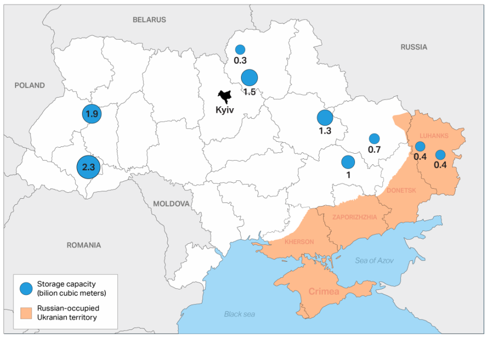


Source: Bloomberg, SAF

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

The reason why natural gas markets reacted to the Russian bombing of the Ukraine natural gas storage was that Ukraine's natural gas storage is an important part of Europe natural gas storage. We broke out the Ukraine storage data from the below Europe data we monitor weekly from the GIE AGSI website [LINK], and we found that on May 16th natural gas in Ukraine storage was at 13.87% of its total capacity, up from 13.37% on May 2nd and 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 the winter, it was ~10% of Europe's natural gas in storage. So not an unnoticeable portion at risk of being destroyed if the Russians target their facilities well. We don't know how deep down are the Ukraine storage caverns so are unable to assess the potential for underground natural gas in storage to be blown up. But, as seen this week, Russia bombs can damage or destroy above ground infrastructure for the natural gas storage operations. Below is a map of Ukraine's major gas storage facilities.

Figure 16: Ukraine Gas Storage Facilities as of July 2023



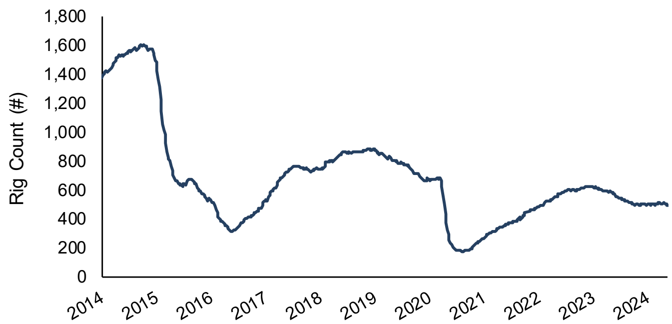
Source: Bruegel

Oil: US oil rigs up +1 WoW to 497 rigs, US gas rigs flat WoW to 103 rigs

US oil rigs up WoW

On Friday, Baker Hughes released its weekly North American drilling rig data. (i) Note, after we 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 rig type. (ii) Total US oil rigs were up +1 rig WoW to 497 oil rigs as of May 17. 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 +2 rigs WoW to 4 total rigs, Eagle Ford -1 rig WoW to 51 rigs, Granite Wash -2 rigs WoW to 4 rigs, Mississippian -1 rig WoW to 0 rigs, and Permian -2 rigs WoW to 312 total rigs. (iv) US gas rigs were up +1 rig this week to 103 gas rigs.

Figure 17: Baker Hughes Total US Oil Rigs



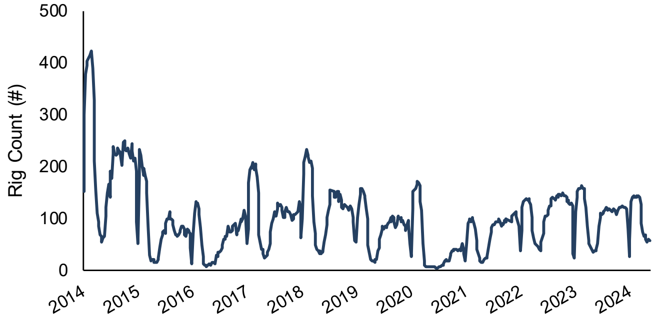
Source: Baker Hughes, SAF

Oil: Total Cdn rigs down -2 WoW, no consistent post spring breakup ramp as of yet

Cdn total rigs down 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. The last several weeks have seen total Cdn rigs decline drop from 231 at the beginning of March to 114 this week. Cdn rigs have been up or down very small over the past few weeks so we haven't yet seen the rapid ramp in Cdn rigs post the normal spring break up; There was some rain and now we have some wildfires that are likely impacting the rig count, albeit small at this point. Note the earliest trough in the past 7 years was April 30th, as usually it bottoms out in the 1st or 2nd week of May. Cdn oil rigs were down -3 rigs WoW this week to 57 rigs and are up +18 rigs YoY. Gas rigs are up +1 rig WoW and up +11 YoY. Baker Hughes did not update their old format report, so we weren't able to see the provincial breakouts.

Figure 18: Baker Hughes Total Cdn Oil Rigs



Source: Baker Hughes, SAF

US oil production flat WoW

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

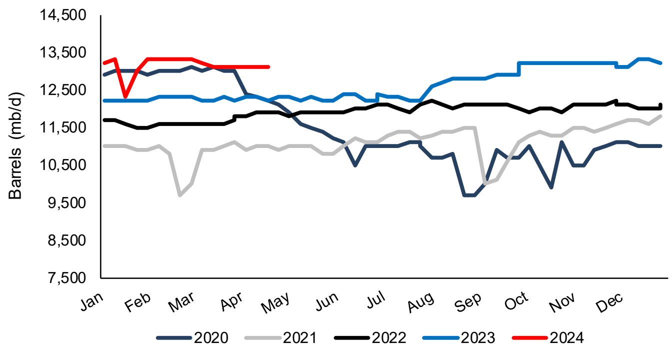
It's worth noting that historically, the EIA weekly estimates have been off of the Form 914 actuals, which sometimes require re-benchmarking. Here's what the EIA wrote on their website last month with the April STEO: "*When we release the Short-Term Energy Outlook (STEO) each month, the weekly estimates 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".* This week, 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 February actuals) was -0.146 mmb/d lower than the weekly estimates of 13.300 mmb/d. This week, the EIA's production estimates were flat WoW at 13.100 mmb/d for the week ended May 10. Alaska was down -0.004 mmb/d WoW to 0.417 mmb/d. Below is a table of the EIA's weekly oil production estimates.

Figure 19: EIA's Estimated Weekly US Field Oil Production (mb/d)

	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						

Source: EIA

Figure 20: EIA's Estimated Weekly US Oil Production



Source: EIA, SAF

Oil: North Dakota March oil down MoM to 1.229 mmb/d

North Dakota March oil production down small MoM

On Friday, the North Dakota Industrial Commission posted its monthly Director's Cut, which includes March's oil and natural gas production data as well as other data such as well completions, DUCs, number of producing wells, etc. [LINK] North Dakota's oil production in March was down MoM -22,946 b/d from February to 1.229 mmb/d, and is now up +9.5% YoY against 1.123 mmb/d in March 2023. We always listen to the monthly webcast of the North Dakota monthly oil and gas production data for insights as we look forward to the next month or two. Last month's (Apr 12, 2024) webcast provided the warning that we highlighted in our Apr 14, 2024 Energy Tidbits memo on how North Dakota was expecting a pause in oil production growth due to weather restrictions. Our Supplemental Documents package includes NDIC Director's Cut.

Figure 21: North Dakota Oil Production by Month

(b/d)	2018	2019	2020	2021	2022	2023	2024	24/23
Jan	1,179,564	1,403,808	1,430,511	1,147,377	1,088,613	1,060,708	1,102,976	4.0%
Feb	1,175,316	1,335,591	1,451,681	1,083,554	1,089,091	1,158,837	1,252,102	8.0%
Mar	1,162,134	1,391,760	1,430,107	1,108,906	1,122,640	1,122,693	1,229,156	9.5%
Apr	1,225,391	1,392,485	1,221,019	1,123,166	900,597	1,133,435		
May	1,246,355	1,394,648	859,362	1,128,042	1,059,060	1,135,009		
June	1,227,320	1,425,230	893,591	1,133,498	1,096,783	1,166,604		
July	1,269,290	1,445,934	1,042,081	1,076,594	1,072,632	1,180,611		
Aug	1,292,505	1,480,475	1,165,371	1,107,359	1,075,307	1,223,617		
Sept	1,359,282	1,443,980	1,223,107	1,114,020	1,121,063	1,280,052		
Oct	1,392,369	1,517,936	1,231,048	1,111,910	1,121,754	1,254,475		
Nov	1,375,803	1,519,037	1,227,138	1,158,622	1,098,389	1,278,909		
Dec	1,402,741	1,476,777	1,191,429	1,144,999	957,864	1,274,869		

Source: NDIC, NDPA

04/12/24: North Dakota warned on potential pause in production in March/April
As usual there was good insight on North Dakota oil production from last month's (Apr 12, 2024) monthly webcast on the North Dakota data. Here is what we wrote in our Apr 14, 2024 Energy Tidbits memo. "*North Dakota oil industry gets impacted much like Saskatchewan in terms of road bans/restrictions as snow melts as temperatures warm up leaving the winter. The melting snow/warming temperatures puts secondary and rural roads at risk so North Dakota will put weight restrictions on roads and this impacts the ability to move any heavy road equipment on these non-primary roads. Every month North Dakota Industrial Commission holds a webcast to discuss the just issued Director's Cut and there are always good insights. The call was on Friday afternoon. Yesterday, we tweeted [LINK] "It's temporary but North Dakota warns Mar road restrictions should impact #Oil production in Mar/Apr. "March completions fell off pretty dramatically …. 92 completions in Feb and only 56 in Mar., That's not enough to sustain and grow production" NDIC's Lynn Helms. #OOTT." Our tweet included the transcript we made of Helms' comments. SAF Group created transcript of comments by North Dakota Director of Mineral Resources, Lynn Helms on the monthly Director's Cut webcast on April 12, 2024. Items in "italics" are SAF Group created transcript. At 3:10 min mark, Helms "March completions fell off pretty dramatically. So we had 92 completions in February and only 56 in March. That's not enough to sustain and grow production. We think again that is a temporary thing. The weather in March was not really very conducive to a lot of truck traffic and movements. Particularly in late March when we had the return of winter weather. My grandmother used to say in like a lamb, out like a lion. That's what we experienced this year. " At 4:46 min mark, Helms "down to 12 frack crews today. So again, as we are coming out of winter weather, we're looking at road restrictions, weight restrictions on the road." Note, there were 102 well completions in Jan.*"

Oil: North Dakota crude by rail down MoM to 137,562 b/d in March

North Dakota CBR down MoM in March

On Friday, the North Dakota Pipeline Authority posted its Monthly Update "*May 2024 Production & Transportation*" [LINK]. Please note that we always go to the backup excel sheets from the North Dakota Pipeline Authority that provide low and high estimates for Williston crude by rail exports. While the NDPA's chart shows a high and low estimate by month, we always take the midpoint when summarizing the update. In the backup excel, the NDPA estimates crude by rail in March from a low of 122,562 b/d and a high of 152,562 b/d for an average of 137,562 b/d. There was an upward revision to February's numbers which used to have an average of 136,650 b/d, but is now 147,559 b/d. Because of this, the MoM export volumes have decreased. The NDPA did not comment on the MoM changes. Below is a chart showing the crude by rail volumes since 2014. Our Supplemental Documents package includes excerpts from the NDPA Monthly Update.

Figure 22: Estimated North Dakota Rail Export Volumes

Source: NDPA

Oil: US shale/tight oil production flat for 5th consecutive month in June

Shale/tight oil production

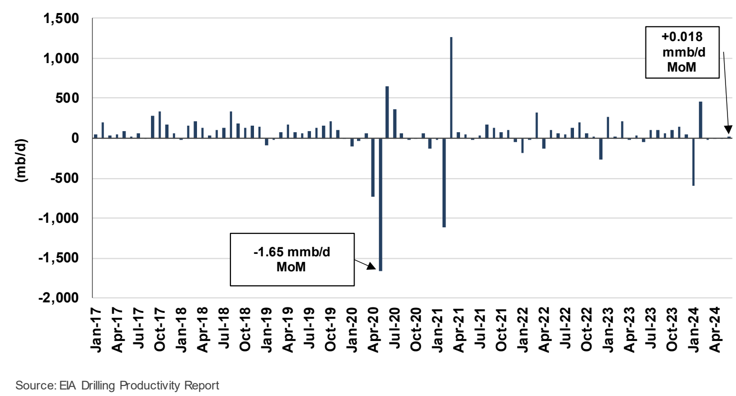
On Monday, the EIA released its monthly Drilling Productivity Report for May 2024 [LINK], which is the EIA's forecast for oil and natural gas production from the major shale/tight oil and gas basins for the current month (in this case May) and the next month (in this case June). (i) Recall in January, there were notices posted on the EIA website about changes in methodology and the impact of cold weather on production estimates. In the Feb DPR's data, the shut-in was properly reflected by a January estimate of 9.279 mmb/d vs the estimate from January's DPR estimate which had the month at 9.681 mmb/d. (ii) The EIA forecasts US shale/tight oil with June estimates continues the now 5-month trend (since the January shut-in effect) of being flat around 9.8 mmb/d. (iii) May's 9.836 mmb/d figure was revised downwards by -0.028 mmb/d compared to April's DPR, which had May at 9.863 mmb/d. (iv) Permian shale/tight oil production continues the 5-month trend of fairly flat production just below 6.2 mmb/d with June at 6.187 mmb/d. But June 2024 is also up 430,000 b/d YoY vs 5.757 mmb/d in June 2023. (v) US shale/tight oil production is +5% YoY in June 2024. The major change areas are Permian up +7% YoY, Bakken +9% YoY, Niobrara +7% YoY, Appalachia -9% YoY, and Eagle Ford -7% YoY. (vi) The EIA DPR forecasts flat Bakken shale oil production will stay flat at 1.313 mmb/d in April, May, and June. Below, we pasted in our comments from April 14, 2024's Energy Tidbits memo on North Dakota warning that production will be hit in March/April ie. the EIA DPR Bakken forecast is likely too high. (vii) Note that shale/tight oil is approx. ~75% of total US production, so whatever the trends are for shale/tight oil are normally the trends for US oil in total. Below is our table of running DPR estimates of shale/tight oil production and our graph of MoM changes in major shale/tight oil production.

Figure 23: US Major Shale/Tight Oil Production

	2023							2024								Apr DPR	May DPR	
Thousand b/d	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	June YoY%	June MoM%	May	May	Change
Anadarko	405	406	399	394	406	403	402	372	382	381	381	382	383	-5%	0%	385	382	-4
Appalachia	148	137	139	144	157	161	152	150	138	137	136	136	135	-9%	-1%	152	136	-16
Bakken	1,208	1,220	1,254	1,333	1,299	1,323	1,333	1,167	1,310	1,312	1,313	1,313	1,313	9%	0%	1,249	1,313	64
Eagle Ford	1,186	1,190	1,167	1,176	1,152	1,142	1,115	1,053	1,102	1,102	1,100	1,102	1,106	-7%	0%	1,164	1,102	-62
Haynesville	31	32	32	31	33	33	34	32	33	33	33	32	32	3%	-1%	35	32	-2
Niobrara	679	670	688	677	688	708	728	637	708	708	705	702	697	3%	-1%	711	702	-9
Permian	5,757	5,852	5,937	5,927	6,060	6,175	6,216	5,978	6,158	6,152	6,157	6,169	6,187	7%	0%	6,167	6,169	1
Total	9,414	9,508	9,616	9,683	9,603	9,944	9,980	9,389	9,830	9,825	9,825	9,836	9,853	5%	0%	9,863	9,836	-28

Source: EIA, SAF

Figure 24: MoM Changes in US Major Shale/Tight Oil Production



Source: EIA, SAF

DUCs flat MoM in April

Oil: EIA DUCs flat MoM in April, DUCs down -15% YoY, Mar and Feb revised down

We have been warning that we see a key risk to how much US oil production can sustainably grow in 2024 and 2025 is the need to increase rig counts (not have less frac spreads) to replenish the inventory of Drilled Uncompleted wells at higher levels and the challenge for oilfield services to add capacity to increase frac spreads and completions. The biggest problem in the past with the EIA's Drilling Productivity Report [LINK] estimate of Drilled Uncompleted wells was that the data had been constantly revised and sometimes significantly. (i) The EIA estimates DUCs were essentially flat MoM (-15% YoY) in April at 4,510 DUCs. Note that February's data had a net downwards revision of -19 DUCs to 4,494 DUCs, and March's data had a net downwards revision of -18 DUCs to 4,504 DUCs. (ii) To put in perspective, there were 8,809 DUCs in the height of the Covid slowdown in June 2020, 6,669 DUCs in April 2021, 5,247 DUCs in April 2022, 5,323 in April 2023, and now 4,510 DUCs in April 2024. (iii) It looks like DUCs have steadily decreased over the past 14 months from the 5,407 in Feb 2023, diving below 5,000 DUCs by Sep with 4,873 DUCs, and now 4,510 DUCs in April. (iv) We still believe there is still the need for drilling rigs to pick up to replenish the DUC inventory if the US is to have sustained strong oil growth in 2024 and beyond. (v) The largest YoY April DUCs declines are the Bakken (-42% YoY), Eagle Ford (-42% YoY), and Niobrara (-26% YoY). (vi) Note that shale/tight oil is approx. ~70% of total US production, so whatever the trends are for shale/tight oil are normally the trends for US oil in total. Below is our table of running DPR estimates of shale/tight oil production.

Figure 25: Estimated Drilled Uncomplete Wells in 2023/24

						2024						Apr DPR	May DPR	
DUCs	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	Apr YoY%	Apr MoM%	Mar	Mar	Change
Anadarko	732	722	712	703	696	695	695	697	701	-9%	1%	703	697	-6
Appalachia	873	846	833	823	822	816	811	819	824	-5%	1%	820	819	-1
Bakken	405	374	361	335	316	319	318	322	328	-42%	2%	328	322	-6
Eagle Ford	445	419	397	378	380	365	349	347	345	-42%	-1%	352	347	-5
Haynesville	778	776	772	764	765	770	778	784	791	8%	1%	784	784	0
Niobrara	813	768	741	712	684	668	655	644	628	-26%	-2%	649	644	-5
Permian	977	968	909	898	891	888	888	891	893	-5%	0%	886	891	5
Total	5,023	4,873	4,725	4,613	4,554	4,521	4,494	4,504	4,510	-15%	0%	4,522	4,504	-18

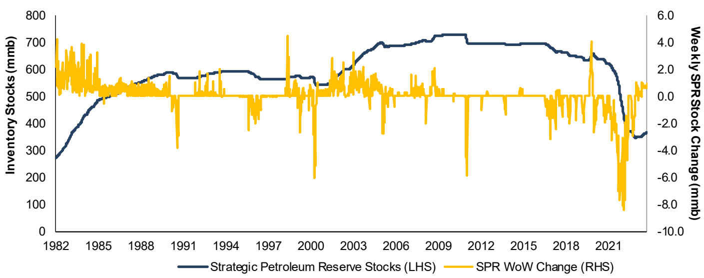
Source: EIA, SAF

US SPR reserves

Oil: US SPR less commercial reserve deficit narrows, now -89.209 mmb

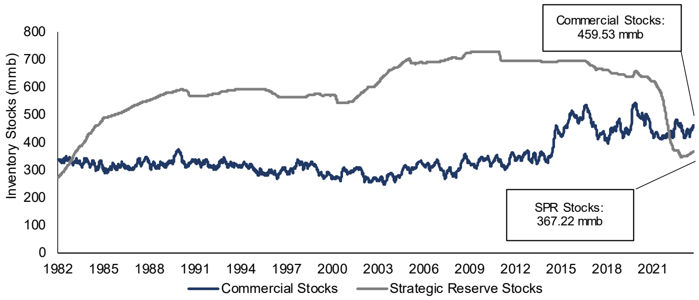
The US Strategic Petroleum Reserves (SPR) continues to be much lower than total US commercial crude oil reserves. The SPR went back below commercial for the first time since 1983 in the Sep 16, 2022 week. This week, we saw a build on the SPR side, but the commercial side saw a draw. The EIA's weekly oil data for May 10 [LINK] saw the SPR reserves increase +0.593 mmb WoW to 367.811 mmb, while commercial crude oil reserves decreased -2.508 mmb to 457.020 mmb. There is now a -89.209 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 26: Strategic Petroleum Reserve Stocks and SPR WoW Change



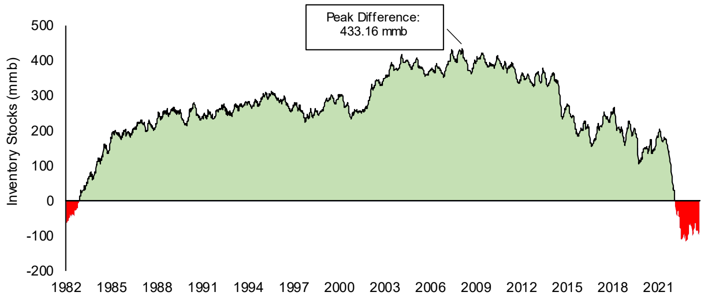
Source: EIA

Figure 27 US Oil Inventories: Commercial & SPR



Source: EIA

Figure 28: US Oil Inventories: SPR Less Commercial



Source: EIA

Oil: US national average gasolines prices -$0.04 WoW to $3.59

US gasoline prices

Yesterday, we tweeted [LINK] "*US gasoline prices -$0.04 WoW to $3.59. Now -$0.08 MoM and $0.05 YoY. California at $5.21 is -$0.08 WoW, -$0.24 MoM. 6 or last 10 Mays have seasonally increased into June. 2 were flat, 2 decreased. Biden doesn't want $4 gas in election year. Thx @AAAnews #OOTT.* Yesterday, AAA reported that US national average prices were $3.59 on May 18, which was -$0.04 WoW, -$0.08 MoM, and +$0.05 YoY. As of yesterday, the California average gasoline prices were down $0.08 WoW to $5.21, which is a $1.62 premium to the national average gasoline price of $3.59. California gas prices are -$0.24 MoM and +$0.42 YoY.

Oil: Crack spreads +$1.15 WoW to $27.04

Crack spreads closed at $25.89

On Friday, we tweeted [LINK] "*321 crack spreads reverse past 2 weeks down trend, and +$1.15 WoW to $27.04 & WTI +$1.80 WoW to $80.06 at May 17. $27.04 crack provide good margins for refineries and should provide support to near term oil price. Thx @business #OOTT.*" Crack spreads were down a few dollars the prior two weeks before increasing this week to $27.04. We always crack spreads around $30 are a big incentive for refiners to buy as much crude as possible. So crack spreads at $27.04 provide solid margins for refiners and should help provide support to near term oil price. Crack spreads were +$1.15 WoW to close at $27.04 on Friday and WTI was +$1.80 WoW to close at $80.06 on Friday. Crack spreads followed $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, $29.45 on Apr 5, $29.73 on Mar 29, $32.20 on Mar 22, and $33.00 on Mar 15. Crack spreads at $27.04 are still well above the high end of the more normal pre-Covid that was more like $15-$20 ie. still solid margins for refiners. Our concern is that spreads are declining and that normally points to softer WTI to follow.

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 $27.04 as of the Friday May 17, 2024 close.

Figure 29: Cushing Oil 321 Crack Spread & WTI May 17, 2014 to May 17, 2024

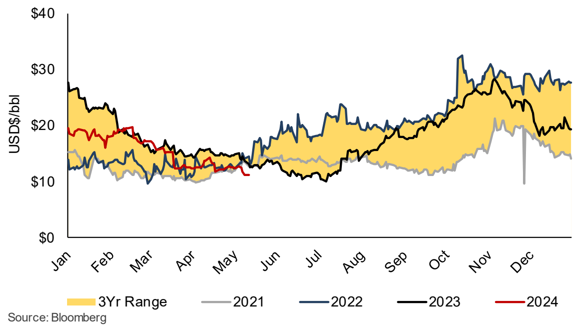
Source: Bloomberg

Oil: Cdn heavy oil differentials narrows -$1.65 WoW to close at $11.15 on May 17

WCS differential narrows

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 Feb thru May period that normally sees a narrowing of WCS less WTI differentials 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 is hard to determine how much of an impact TMX has had on WCS less WTI differentials although with this week's dip to $11.15 would point to some sort of impact. Below is graph showing WCS-WTI differentials that shows this normal seasonal trend of narrowing WCS-WTI differentials from Feb thru May. The seasonal narrowing is in motion. The WCS less WTI differential closed on May 17 at $11.15, which was a narrowing of $1.65/bbl WoW vs $12.80/b on May 10. These are both well below the Feb peak of $19.75, and $11.15/bbl is a new 3 year low for this week.

Figure 30: WCS less WTI oil differentials to May 3 close



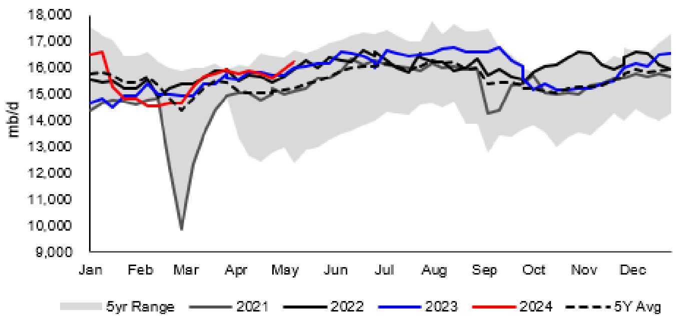
Source: Bloomberg

Oil: Refinery Inputs up +0.307 mmb/d WoW to 16.255 mmb/d

Refinery inputs +0.307 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 10 [LINK]. The EIA reported crude inputs to refineries were up +0.307 mmb/d this week to 16.255 mmb/d and are up +0.265 mmb/d YoY. Refinery utilization was up +1.9% WoW to 90.4%, which is -1.6% YoY.

Figure 31: US Refinery Crude Oil Inputs



wee

Source: EIA, SAF

Oil: US net oil imports +0.107 mmb/d WoW as oil exports down -0.333 mmb/d WoW

US net oil imports

The EIA reported US "NET" imports were up +0.107 mmb/d to 2.609 mmb/d for the May 10 week. US imports were down -0.226 mmb/d to 6.744 mmb/d, while exports were down -0.333 mmb/d WoW to 4.135 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 >100,000 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 down -0.350 mmb/d. Some items to note on the country data: (i) Canada was up +0.153 mmb/d to 3.812 mmb/d. (ii) Saudi Arabia was down -0.159 mmb/d to 0.196 mmb/d. (iii) Mexico was down -0.298 mmb/d to 0.507 mmb/d. (iv) Colombia was up +0.028 mmb/d to 0.211 mmb/d. (v) Iraq was down -0.203 mmb/d to 0.123 mmb/d. (vi) Ecuador was up +0.078 mmb/d to 0.207 mmb/d. (vii) Nigeria was down -0.110 mmb/d to 0.212 mmb/d.

Figure 32: US Weekly Preliminary Imports by Major Country

	Mar 15/24	Mar 22/24	Mar 29/24	Apr 5/24	Apr 12/24	Apr 19/24	Apr 26/24	May 3/24	May 10/24	WoW
Canada	3,735	3,652	3,874	3,546	3,458	3,423	3,847	3,659	3,812	153
Saudi Arabia	254	338	321	531	229	398	402	355	196	-159
Venezuela	0	0	0	0	0	0	0	0	0	0
Mexico	353	525	263	209	208	351	459	805	507	-298
Colombia	289	143	316	114	246	215	363	183	211	28
Iraq	252	244	91	142	308	309	307	326	123	-203
Ecuador	147	9	146	231	0	124	0	129	207	78
Nigeria	57	215	136	43	173	136	89	322	212	-110
Brazil	114	230	147	257	189	492	0	217	293	76
Libya	0	88	117	24	21	100	98	1	86	85
Top 10	5,201	5,444	5,411	5,097	4,832	5,548	5,565	5,997	5,647	-350
Others	1,077	1,258	1,207	1,337	1,629	949	1,207	972	1,097	125
Total US	**6,278**	**6,702**	**6,618**	**6,434**	**6,461**	**6,497**	**6,772**	**6,969**	**6,744**	**-225**

Source: EIA, SAF

Oil: Biden to keep pushing to get more Venezuela oil on the market as fast as possible

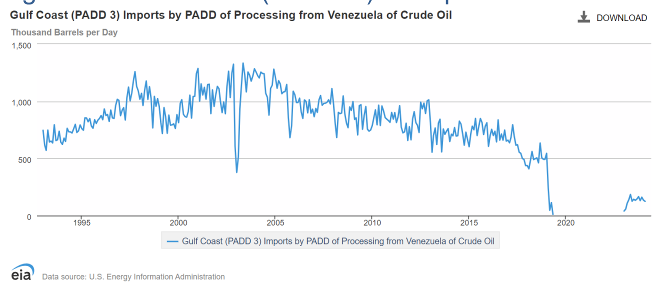
Biden wants more Venezuela oil

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 six 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. On Thursday morning, we tweeted [LINK] "*Biden push to keep oil & gasoline prices lower ahead of election. US preparing to prioritize issuing limited licenses to operate in Venezuela to co's with existing oil production/assets ie. quicker to restore existing assets than start new. @mariannaparraga @DPsaledakis #OOTT.*" Reuters had just posted it's exclusive "*Exclusive: US to favor existing investors for Venezuela oil licenses, say sources*". [LINK]. It seems like his best move to get Venezuela oil as quickly as possible onto markets – get oil companies with existing assets and production in Venezuela a license so they can crank up on their existing assets. It's faster than giving a license for a new field. Although it isn't clear how much oil could come onto markets in the next six months. But every little bit will help Biden. Reuters wrote "T*he U.S. is preparing to prioritize issuing limited licenses to operate in Venezuela to companies with existing oil production and assets over those seeking to enter the sanctioned OPEC nation for the first time, two people close to the discussions said. The move appears designed to encourage companies that have projects frozen because of U.S. sanctions, such as Italy's Eni (ENI.MI), opens new tab and Spain's Repsol (REP.MC), opens new tab, to expand operations, recoup pending debt and add oil to global markets. It will, however, avoid licensing firms with no prior investments in the country, putting a cap on how much revenue Venezuela could collect from its oil industry.*" Our Supplemental Documents package includes the Reuters report.

Pre-Trump, Gulf Coast refineries imported ~700,000 b/d of Venezuela oil

We have no idea how much more Venezuela oil could come to the Gulf Coast but if we use Chevron as an example, there could be 100,000 to 200,000 b/d in relatively short period after oil producers can get back at their assets. One big wildcard is how much of the potential Venezuela production is just waiting for diluent to blend with the extra heavy oil. Gulf Coast oil imports from Venezuela have come back to ~150,000 b/d. And we remind that, prior to Trump clamping down with sanctions, Gulf Coast refineries were importing about 700,000 b/d of Venezuela crude.

Figure 33: Gulf Coast (PADD 3) oil imports from Venezuela



Source: EIA

Oil: Ukraine hits Russian refineries the on Thursday night and last night

Two more Russian refineries hit

Ukraine is not stopping their attacks on Russian refineries even if the US has publicly said they would prefer Ukraine not do so. And they did so on Thursday and Saturday nights. (i) Tuapse refinery. There was a massive Ukraine drone attack Thursday night/Friday morning that were on ports and oil refineries. Bloomberg and others reported on the drone attack that hit the Tuapse refinery on the Black Sea. As per the norm, it is still not clear what damage was done and how refinery operations will be impacted. (ii) Last night/early this morning, Interfax reported "*The Slavyansk Oil Refinery, based in Russia's Krasnodar Territory and owned by Slavyansk ECO LLC, has halted operations following last night's drone attack, Slavyansk ECO Director for Comprehensive Security Eduard Trudnev told Interfax. "There were hits. The refinery's operations are now halted. We're assessing the damage, and law enforcement services are working," he said. It is yet unclear where the refinery would resume operations, he said.*"

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

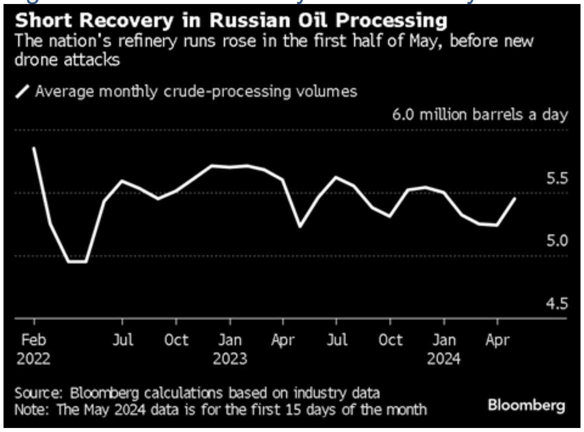
Russia and Ukraine continue to escalate their attacks on each other. This continued escalation has to raise the risk as to what will Ukraine do next in their escalation. As noted previously, Ukraine keeps going after Russian refineries despite US preferences to not do so. So it is far from clear how 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: Russian refinery runs up in weeks prior to Friday's Tuapse refinery strike

Russia refinery runs

Note the referenced Bloomberg Friday morning report in this item was before the Tuapse refinery being hut by Ukraine drones. Ukraine drone attacks have had an impact on Russian refineries over the past three months but now the question is how much Russian refinery capacity is offline and for how long. Then there is another question on much of the crude oil that normally flows to these disrupted refineries can be moved to other refineries or to export terminals. Russia is doing all they can to move these oil volumes to export terminals as evidenced by the reports of increasing oil and products being moved by rail and the increasing Russia oil shipments noted in the following item. On Friday, Bloomberg reported "*Russia's crude-oil processing rates climbed in the first half of May as some of Rosneft PJSC's refineries recovered from Ukrainian drone strikes earlier in the year, before another flurry of attacks on Friday. The country processed 5.45 million barrels of crude in the first 15 days of the month, according to a person with knowledge of industry data".* Runs at Rosneft's 3 refineries (Tuapse, Kuibyshev, Ryazan) hit by drones averaged 1.4 mmb/d in the 2 weeks leading up to May 15. The Tuapse refinery that was idle for 3 months following a drone strike in January came back online with 213,000 b/d during the first half of May, but just got hit again on Friday by another drone and it's not clear how throughput will be impacted. The Neftekhim Salavat facility that was hit last week grew rates 7% against the April average to 144,000 b/d, so evidently the drone strike wasn't crippling. One of Russia's mega refineries in Volgograd was struck last week and had to reduce output by 30% down to 230,000 b/d. Our Supplemental documents package includes the Bloomberg report.

Figure 34: Russia refinery runs thru May 15 week



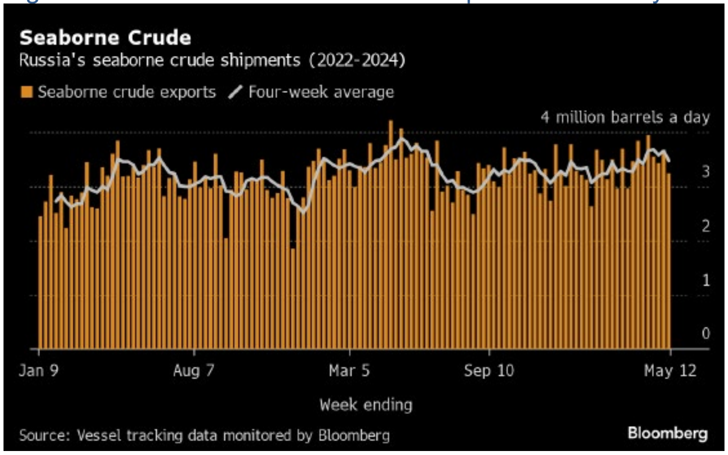
Source: Bloomberg

Oil: Russian crude exports hit two-month low

Russia crude oil shipments

Information on the impacts on Russian oil infrastructure and its impact on moving crude is still a black hole. So its 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, there are reports of Russia moving more crude and products via rail. On Tuesday, Bloomberg reported "*Russia's crude flows dropped to an eight-week low in the seven days to May 12, with fewer vessels leaving the major ports of Primorsk and Ust-Luga on the Baltic coast and from Murmansk on the Arctic. The four-week average also fell, dropping by the most in 10 weeks. Shipments from the Baltic terminals, which were in line with a partial loading program for May seen by Bloomberg, may reflect deeper output cuts promised by Moscow to its partners in the OPEC+ group of oil producers*". In the week to May 12, Russia exported 3.24 mmb/d of crude via tankers, down -440,000 b/d WoW and -270,000 b/d below the May target. Remember that Russia has shifted towards a production-based cut rather than export control for their OPEC+ commitments this quarter. 1.11 mmb/d bound for China was loaded, down ~-40,000 b/d WoW. Recall the comments we heard on Gulf Intelligence's podcast [LINK] made by Victor Yang (JLC Network Technology Snr Analyst) which noted the discount on Russian oil to Brent has evaporated recently, which removes the incentive for Chinese refiners to keep up the pace of imports. The second chart below shows Russia's Asian customers. Our Supplemental Documents package includes the Bloomberg report.

Figure 35: Russia's seaborne crude shipments thru May 5 week



Source: Bloomberg

Figure 36: Russian crude export figures

Crude Shipments
Russian crude shipments in million barrels a day

	To May 12	To May 5
Weekly shipments	3.242	3.678
Four-week average shipments	3.476	3.652
May-June 2023 average shipments	3.583	3.583
April target to meet OPEC+ commitment	3.462	3.462
May target to meet OPEC+ commitment	3.512	3.512
Weekly shipments versus OPEC+ target	**-0.270**	**0.166**
Four-week shipments versus OPEC+ target	**-0.011**	**0.178**

Source: Vessel tracking data compiled by Bloomberg
Note: Positive numbers in the last two rows reflect exports above target. For the calculation in the final row, the four-week average target is calculated as two weeks at the April target and two at the May target.
Bloomberg

Source: Bloomberg

OPEC Monthly Oil Market Report

Oil: OPEC MOMR, demand growth unchanged, oil stocks and product stocks up

On Tuesday at 4:00am MT, OPEC released its May Monthly Oil Market Report. (i) We thought it was neutral based on the numbers vs the April MOMR. OPEC's demand and non-OPEC supply forecasts were basically unchanged. So neutral on the forecast. For those looking for negative, OPEC production was down small MoM but Iraq is still high so negative sill point to that as they won't believe Iraq will deliver on the planned schedule of cuts it agreed to with OPEC two weeks ago. Global oil + products stocks are still below the 2015-2019 average to Mar 31 ie. after the seasonally lower Q1 demand period. But the negatives will point to the deficit to the 2015-2019 average is decreasing. (ii) There was no change to oil demand forecasts for 2024 and 2025. 2024 still shows a +2.25 mmb/d YoY growth to 104.46 mmb/d, and 2025 is up +1.85 mmb/d YoY to 106.31 mmb/d. May MOMR increased China's oil demand lookback for 2023 by +0.04 mmb/d to 16.26 mmb/d and increased 2024's demand by +0.71 mmb/d YoY to 16.97 mmb/d (previously +0.68 mmb/d YoY to 16.90 mmb/d). OPEC's 2025 demand forecasts for China have also been adjusted to reflect an increase of +0.41 mmb/d YoY to 17.38 mmb/d (previously +0.41 mmb/d YoY to 17.31 mmb/d). (iii) Note that there is a change in how OPEC reports oil supply. Up until this week, they reported the global oil supply by major countries and regions to provide a non-OPEC supply total. This month it is changed, so we are not able to see the breakdown. They are now reporting on a non-Declaration of Cooperation ("non-DoC") country/region basis (the countries not participating in OPEC+). For example, there is no split out of Russia in the forecasts, meaning they do not have a call on OPEC but have a call on DoC oil. Due to the change are unable to do a complete comparison for May vs April MOMR by country. May MOMR has non-DoC supply at 47.7 mb/d for 2021, 49.30 mmb/d for 2022, and 51.73 mmb/d for 2023. For 2024, May MOMR has non-DoC up +1.23 mmb/d YoY to 52.96 mmb/d. The major growth areas are the U.S. at +0.44 mmb/d YoY to 21.34 mmb/d which is flat from last month, Latin America +0.39 mmb/d YoY to 7.35 mmb/d, and Canada which is flat from last month at +0.24 mmb/d YoY. May MOMR has Canada at 5.69 mmb/d in 2023, +0.24 mmb/d YoY to 5.94 mmb/d in 2024, and +0.16 mmb/d YoY to 6.10 mmb/d in 2025. (iv) There were a few items to note on what countries directly reported vs Secondary Sources estimates: MOMR only has direct communications for OPEC, not for the countries in non-DoC. Direct communications are the production reported by the OPEC members. Iraq does its norm and says it produced less at 3.891 mmb/d in April vs. Secondary Sources of 4.181 mmb/d, Venezuela does its norm and says it produced more at 878,000 b/d vs. Secondary Sources of 809,000 b/d, Libya did not provide direct communications for April, but Secondary Sources reported production of 1.179 mmb/d, and Nigeria does its norm and claims less production than Secondary Sources, at 1.281 mmb/d in April vs 1.354 mmb/d from Secondary Sources. (v) May MOMR says demand for DoC for 2024 is unchanged at 43.2 mmb/d, which is +0.9 mmb/d from 2023, and demand for DoC for 2025 is unchanged at 44.0 mmb/d, which is up +0.8 mmb/d from 2024. Crude oil stocks and product stocks were up MoM in April. May MOMR reports a small increase in supply from non-DoC countries of 1.20 mb/d in 2024, unchanged from April's assessment in non-OPEC supply, and OPEC production was flat MoM. Crude only oil stocks are up +6.8 mmb MoM to 1,369 mmb, which is -93 mmb below the 2015-2019 average. Product only stocks were up +13.5 mmb to 1,424 mmb, which is -27 mmb below the 2015-2019 average. (vi) Our Supplemental Documents package includes excerpts from the OPEC May MOMR.

Oil: IEA OMR does not change its 2024 & 2025 oil demand forecasts

IEA Oil Market Report

On Wednesday, the IEA released its monthly Oil Market Report for May at 2am MT. And they did the same thing as last month, where they made no change to their 2024 oil demand forecast but their math says they lowered their 2024 oil demand growth because, in the press release, they forgot to mention they increased their 2023 oil demand forecast. (i) They only release very limited public info, but Bloomberg provided tables and added colour from the report. (ii) On Wednesday, we tweeted [LINK]: "*Rinse & repeat? IEA Apr OMR cuts 2024 YoY oil demand growth by 120 kb/d Today IEA May OMR cuts 2024 YoY #Oil demand growth by 140 kb/d But each increased lookback at 2023 demand such that no change to 2024 demand of 103.2 mb/d in Apr & May OMRS vs Mar OMR. #OOTT*". (iii) We thought the takeaway from the IEA May OMR vs Apr OMR was neutral to slightly positive based on the numbers. There was no change to IEA's oil demand forecast for 2024 and 2025 and slightly lower non-OPEC supply led to slightly higher call on OPEC crude for 2024 and 2025. (iv) 2024 demand was unchanged at 103.2 mmb/d, but YoY demand growth was lowered to +1.1 mmb/d from +1.2 mmb/d, but that was due to the IEA raising the 2023 starting point by +0.1 mmb/d to 102.1 mmb/d. Note the IEA did the same thing in April, and 2024 oil demand of 103.2 mmb/d is unchanged from Mar to Apr to May OMRs. (v) Oil demand for 2025 is unchanged at 104.3 mmb/d, which means a +1.1 mmb/d YoY demand growth. (vi) Non-OPEC supply for 2024 is set to decrease to 70.2 mmb/d from last month's forecast of 70.4 mmb/d.. The IEA forecasts non-OPEC supply growth at +1.3 mmb/d to 71.8 mmb/d, a decrease from last month's at +1.4 mmb/d to 71.9 mmb/d. (v) There was a slight increase to IEA's calls on OPEC for 2024 and 2025, Bloomberg wrote *"Call on OPEC crude 2024 was revised to 27.4 m b/d from 27.3m b/d, Call on OPEC crude 2025 was revised to 26.9m b/d from 26.8m b/d"* (vi) Global oil inventories were up in Mar +34.6 mmb, while land stocks fell to their lowest since 2016: "*Global oil inventories surged by 34.6 mb in March, as oil on water swelled to a fresh post-pandemic high. On land stocks fell by 5.1 mb to their lowest level since at least 2016, as total OECD stocks declined by 8.8 mb to a 20-year low while non-OECD inventories built for the first time since November. According to preliminary data, global oil stocks rose further in April.*" Our Supplemental documents package includes the IEA release and the Bloomberg tables and reports.

SAF GROUP

Figure 37: IEA Global Demand Forecast by OMR Report

mmb/d	2023	23-22	Q1/24	Q2/24	Q3/24	Q4/24	2024	24-23	Q1/25	Q2/25	Q3/25	Q4/25	2025	25-24
May 24	**102.1**	*2.5*	101.7	102.9	104.1	103.9	**103.2**	*1.1*	102.8	104.1	105.3	105.1	**104.3**	*1.1*
Apr 24	**102.0**	*2.4*	102.0	103.0	103.9	103.8	**103.2**	*1.2*	103.1	104.0	105.1	105.0	**104.3**	*1.1*
Mar 24	**101.8**	*2.2*	102.0	103.0	104.0	103.7	**103.2**	*1.4*						
Feb 24	**101.8**	*2.2*	101.7	102.8	103.8	103.7	**103.0**	*1.2*						
Jan 24	**101.7**	*2.1*	101.7	102.7	103.7	103.8	**103.0**	*1.3*						
Dec 23	**101.7**	*2.1*	101.4	102.4	103.4	103.9	**102.8**	*1.1*						
Nov 23	**102**	*2.4*	101.5	102.4	103.5	104.1	**102.9**	*0.9*						
Oct 23	**101.9**	*2.3*	101.3	102.2	103.5	103.9	**102.7**	*0.8*						
Sep 23	**101.8**	*2.2*	101.1	102.6	104.0	103.5	**102.8**	*1.0*						
Aug 23	**102.2**	*2.2*	101.5	102.6	104.2	104.3	**103.2**	*1*						
July 23	**102.1**	*2.2*	101.4	102.6	104.3	104.5	**103.2**	*1.1*						
June 23	**102.3**	*2.4*	101.5	102.5	104.1	104.4	**103.1**	*0.8*						

Source: IEA, Bloomberg, SAF

IEA success – media messaging was on diverging oil demand growth vs OPEC

Even the oil industry has to give some kudos to the IEA for accomplishing what it wanted in having the media all report that there was an increasing divergence in what the IEA forecasts for oil demand growth vs OPEC's forecast for oil demand growth in 2024. The reports were all how the IEA, once again, lowered its oil demand growth for 2024 by 140,000 b/d, which followed its April lowering of its oil demand growth for 2024 by 120,000 b/d. The IEA increased its forecast for 2023 oil demand for each of the last two monthly reports ,which allows them to have lower YoY growth So the IEA got the message across of lower oil demand growth BUT they forgot to mention that oil demand in absolute terms as unchanged in 2024 at 103.2 mb/d. OPEC did not change its oil demand growth of +2.2 mmb/d YoY in 2024 but the IEA success is how the gap in their oil demand growth was increased by 260,000 b/d vs OPEC despite IEA not changing its oil demand forecast for 2024. So give the IEA credit for knowing how to increase their historical data to get their message of lower oil demand growth in 2024.

Once again, IEA revised 2023 oil demand to support its messaging

As noted above, the IEA repeated its approach from the Apr OMR in that it's highlighted message was all on lowering oil demand growth rate but forget to mention there was no change to its 2024 and 2025 oil demand forecasts. Here is what we wrote in our April 21, 2024 Energy Tidbits Memo "*We haven't seen comments from Saudi Arabia energy minister Abdulaziz on the IEA OMR forecast but he, along with others, have previously noted how agencies will revised their historical numbers (starting point) to help their messaging. That was the case once again with the IEA Apr OMR to fit the messaging of lower oil demand growth and higher non-OPEC supply in 2024. The beauty of making revisions to history is that they never have to explain it or build it into the messaging. We don't think the IEA would want to say there is no change to our demand forecast for 2024 but, because we increased the historical demand numbers, we can say there is lower growth in oil demand. (i) Demand. On Friday morning, we tweeted [LINK] "Two things can be true. @IEA Apr OMR "oil demand growth has nevertheless been revised down by roughly 100 kb/d since last month's Report, to 1.2 mb/d". Yet no change to 2024 oil demand of 103.2 mmbd vs Mar OMR. Why? IEA increased it 2023 oil demand starting point so lower YoY growth rate vs Mar OMR. Thx @business Kristian Siedenburg #OOTT." No one can disagree that the tone of the writing on demand is negative. But the reality is that there was no change to the 2024 oil demand forecast of 103.2 mmb/d.*

However, the IEA increased its 2023 starting point, which then allowed them to state they were lowering their growth in oil demand in 2024. (ii) Non-OPEC supply. On Friday morning, we tweeted [LINK] "IEA Non-OPEC supply. Apr OMR has no change to non-OPEC supply of 70.4 mmbd for 2024. BUT IEA lowered 2023 starting point to 68.8 mmbd vs Mar OMR of 69.1. So higher growth rate +1.6 YoY vs +1.3 YoY despite no change to 70.4 mmbd. Thx @business Kristian Siedenburg #OOTT." The other negative messaging from the Apr OMR was the increasing non-OPEC supply. There was no change to the IEA's forecast of 70.4 mmb/d for 2024 non-OPEC supply,. But the IEA revised down its 2023 starting point by 0.3 mmb/d to 68.8 mmb/d vs 69.1 mmb/d in Mar OMR, which meant the YoY growth in non-OPEC supply in 2024 was +0.3 mmb/d higher in the Apr OMR despite no change to the 70.4 mmb/d forecast for 2024."

Oil: Is IEA shifting its peak oil demand by 2030 & then decline to a long plateau

IEA shifting to a plateau for oil demand?

Last month, we said we were surprised to see the IEA not change their forecast for peak oil demand by 2030 and decline thereafter. But, on Wednesday morning, IEA's Toril Bosoni (Head of Oil Industry and Markets Division) was on Bloomberg TV and her comments made us wonder if the IEA is changing their view. (i) We always say the IEA are like politicians so are careful with words and how they describe oil outlook and, even more importantly, what words they no longer use when talking about peak oil demand timing and the decline thereafter. (ii) On Wednesday, we tweeted [LINK] "*Is IEA shifting its peak #Oil demand by 2030 & then decline to a call for long term oil demand plateau? "we will see a [oil demand] plateau rather than a steep peak towards the end of the decade based on our current assumptions" IEA's Bosoni to @flacqua. #OOTT."* That is a different description than in their prior clear peak oil demand statements. (iii) We compared the IEA statements. In Oct 2023 World Energy Outlook 2023, the IEA said Oct 2023: "*oil demand peaks before 2030*" and demand begins to decline therefrom "*although the rates of post-peak decline vary widely*". On Apr 12, 2024, Bosoni posed a blog "*Oil demand growing at a slower pace as post-Covid rebound runs its course".* The IEA didn't change its peak oil demand by 2030 but, it seemed like a hint that a change in peak oil demand messaging might be coming. Bosoni wrote " "*to generate an overall peak in demand by the turn of the decade*' and "*demand following the peak will not be a steep one, leaving demand close to current levels for some time*". It seemed like the hint for the new plateau oil demand messaging. On Wed (May 15, Bosoni said ""*So that's clearly signs of a slowdown in oil demand growth. And in our projections, that slowdown, we will see a plateau rather than a steep peak towards the end of the decade based on our current assumptions".* Part of this seemed like false messaging as the IEA has never forecast a steep peak in oil demand towards 2030, rather they have been calling for a slowdown in oil demand growth each year. But what Bosoni didn't say was if oil demand is peaking by 2030, how much more oil demand growth is there before oil demand plateaus towards the end o the decade, when does the plateau hit and how long does it last before oil demand starts to decline therefrom. It may have only been a sentence but, if there wasn't a change in the IEA peak oil demand by 2030 and decline thereafter, they would have said that same clear statement and not some vague oil demand plateau theory. Below is the transcript we made of Bosoni's comments on Wednesday. Our Supplemental Documents package includes Bosoni April 12, 2024 blog and excerpts from the IEA World Energy Outlook 2023 posted in Oct 2023.

IEA's Toril Bosoni comments on Bloomberg TV on May 15, 2204
Here is the SAF Group created transcript of comments by Toril Bosoni (IEA Head of Oil Industry and Markets Division) with Bloomberg's Francine Lacqua on Bloomberg's The Pulse on May 15, 2024. [LINK] Items in "*italics*" are SAF Group created transcript. At 6:50 min mark, Lacqua ".. *I just got off stage and was speaking to the chief executives of Exxon and Total, and also the Qatari Energy Minister and they were really pushing back against this idea of peak oil. Given this oil supply/demand equation you are looking at, do you see that peak fossil fuel demand being pushed beyond the end of the decade?*" Bosoni "*Thank you Francine and good to see you. So what we're seeing, now with oil demand growth continues thru this year, next year, and thru this decade. But the pace of growth is slowing. That's what we're seeing. We're seeing that with 1.1 mmb/d demand growth this year, we're back to trend. So the pre-pandemic trend. 2021, 2022, 2023 was really boosted by the post pandemic rebound. And we're seeing now that it's really the petrochemicals sectors that is driving demand. We're seeing declines in Europe, for instance, gas/oil demand was declining for a second year running now. Without China, global oil demand growth in Feb and March were down year-on-year. So that's clearly signs of a slowdown in oil demand growth. And in our projections, that slowdown, we will see a plateau rather than a steep peak towards the end of the decade based on our current assumptions*."

Oil: Houthis hit a tanker by Bab el-Mandeb

Houthis hit a tanker

One of the stories about the Houthis early this week was how the US had made a big dent in the Houthis missile/drone capability and that is the reason why the Houthis have had less missile/drone attacks lately. It looks like the Houthis wanted to make a point that they are still actively launching drones/missiles and stepped up attacks from mid-week. The latest was on Friday night/Saturday morning when the Houthis reported hit two vessels, one being a tanker. Early Saturday morning, we tweeted [LINK] "*Two Houthi hits in Red sea. #Oil tanker hit off coast of Mokha, north of Bab el Mandeb reports @AFP @arabnews. Unknown type of ship in Red Sea northwest of Al Hudaydah reports @UK_MTO. #OOTT.*" Later on Saturday morning, US CENTCOM tweeted [LINK] confirmed it was an oil tanker that was hit. CENTCOM tweeted" *Houthis strike M/T Wind in Red Sea. At approximately 1 a.m. (Sanaa time) May 18, Iranian-backed Houthis launched one anti-ship ballistic missile (ASBM) into the Red Sea and struck M/T Wind, a Panamanian-flagged, Greek owned and operated oil tanker. M/T Wind most recently docked in Russia and was bound for China. The impact of the ASBM caused flooding which resulted in the of loss propulsion and steering. A coalition vessel immediately responded to the distress call by M/T Wind, but no assistance was needed. The crew of M/T Wind was able to restore propulsion and steering, and no casualties were reported. M/T Wind resumed its course under its own power. This continued malign and reckless behavior by the Iranian-backed Houthis threatens regional stability and endangers the lives of mariners across the Red Sea and Gulf of Aden".* Mokha is about 50-60 km just north of the Bab el Mandeb. Our tweet also included the UKMTO tweet "*UKMTO has received a report of an incident 76NM northwest of Al Hudaydah, Yemen. The Master has confirmed sustaining slight damage after eing struck by an unknown object on his port quarter. The vessel and crew are safe and continuing to its next port of call."*

Figure 38: Mokha and Bab el Mandeb

Source: Google Maps

Oil: Houthi Leader claims they have attacked in the Mediterranean Sea

On Friday, Saba (Houthi news) reported on the Houthis Leader speech on Thursday, where he claimed the Houthis have launched attacks in the Mediterranean Sea. He has been pretty decent in backing up his claims but, we could not find any confirmation of Houthi missile/drone attacks in the Mediterranean Sea. Saba reported "*The leader confirmed that Yemen carried out 40 operations against the Zionist enemy with 211 rockets. This week alone saw 7 operations in the Red Sea, Gulf of Aden, and Indian Ocean, with additional operations in the Mediterranean. Over 100 attacks targeted American ships using missiles and drones, causing a shift in US, Israeli, and British routes eastward.*" Our Supplemental Documents package includes the Saba report.

Houthis leader

Oil: Trump's big impact on oil will be from what he does on Iran and Venezuela

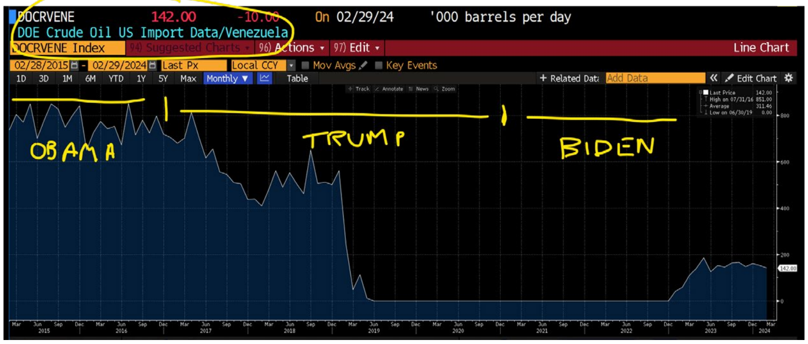
There were a number of comments on Trump reportedly promising to work with the oil industry, but we believe the bigger impact that Trump will have on oil prices is he moves back to enforcing sanctions on Iran and Venezuela sanctions If he goes back to what he did, he will be knocking a million b/d or Ifan oil exports off global oil markets and likely at least 150,000 b/d of Venezuela oil out of US oil imports.

xxxx

Figure 39: Iran oil exports

Source: Bloomberg

Figure 40: US oil imports from Venezuela



Source: Bloomberg

Oil: Iraq will adhere to and agree with any decisions made by OPEC

Iraq oil minister

It didn't surprise many to see the Iraq oil minister come out on Sunday afternoon (North America time) to clarify his Saturday remarks prior to the open of oil trading in Asia to try to ensure oil markets didn't get the impression that Iraq wanted to leave OPEC+ group decisions. Reuters reported [LINK] "*Iraq is committed to voluntary oil production cuts agreed by the Organization of the Petroleum Exporting Countries (OPEC) and is keen to cooperate with member countries on efforts to achieve more stability in global oil markets, Iraq's oil minister told the state news agency on Sunday. The minister's comments followed his suggestion on Saturday that Iraq had made enough voluntary reductions and would not agree to any additional cuts proposed by the wider OPEC+ producer group at its meeting in early June. "The oil ministry is keen on the cooperation of member states and working to achieve more stability in the global oil market by agreeing on voluntary reduction programmes," the state news agency quoted Hayan Abdul Ghani as saying. Abdul Ghani told reporters on the sidelines of an oil and gas licensing round in Baghdad that OPEC's voluntary cuts are subject to agreement by its members, adding that Iraq is part of OPEC and would commit to its decisions. "It is necessary that we adhere to and agree with any decisions made by the organization," he said."*

05/11/24: "*Iraq has reduced (output) enough and will not agree to any new cut.*"
Here is what we wrote in last week's (May 12, 2024) Energy Tidbits memo on Iraq Oil Minister's comments last Saturday that got some attention. *"It will be interesting to see if oil markets tonight reflect any concern that Iraq might not stick to the OPEC+ group position. Yesterday there were some reports suggesting Iraq doesn't intend to carry on with voluntary cuts. We are in the camp of Vitol that we find it hard to see that especially in light of the earlier noted OPEC press release on how Iraq has a schedule to compensate for prior over production, and that the oil minister was saying they won't make any additional NEW cuts. Regardless, there were a number of reports warning on the Iraq ris. Reuters did not raise that risk in their report yesterday on Iraq oil minister. [LINK]. "Iraq won't agree to new OPEC+ oil production cuts, oil minister says. Iraq's oil minister said on Saturday Iraq had made enough voluntary oil production reductions and would not agree to any additional cuts taken by OPEC+ at its next meeting early next month. Sources with the knowledge of the matter have told Reuters that OPEC+, which includes the Organization of the Petroleum Exporting Countries, Russia and other non-OPEC producers, could extend some voluntary output cuts should demand fail to pick up. Asked by a reporter whether Iraq would agree to extend the OPEC+ voluntary cuts at the meeting scheduled for June 1, Hayan Abdul Ghani said: "Iraq has reduced (output) enough and will not agree to any new cut. It was not immediately clear if Abdul Ghani meant he opposed an extension of the voluntary cuts - a statement that would fly in the face of widespread expectations that cuts would be rolled over - or was simply against any additional cuts."*

Vitol didn't see Iraq departing from OPEC+ group approach
Here is what we wrote in last week's (May 12, 2024) Energy Tidbits memo on Vitol's comments on Iraq. "*Earlier this morning, we tweeted [LINK] ""I think the smart money in trading circles will assume he [Iraq] did not mean to say he was going to depart from the group & start opening the taps", also doesn't Iraq is opposed to extending voluntary cuts in place. @vitolnews @michaelwmuller #OOTT @sean_evers @CrystolEnergy." Mike Muller (Head, Vitol Asia) was clear in his view that he doesn't see Iraq breaking away from the group but Iraq was referring to the potential for any additional new cuts. Here is the transcript we attached to our tweet. SAF Group created transcript of comments by Mike Muller (Head, Vitol Asia), Christof Ruhl (Senior Research Scholar, center on Global Energy Policy Columbia University with host Sean Evers (Founder & Managing Partner Gulf Intelligence) on Gulf Intelligence Daily Energy Markets Podcast on May 12, 2024. Items in "italics" are SAF Group created transcript. At 19:00 min mark, Evers asks about some of the reports of a throwaway comment from the Iraq oil minister on the sidelines of a conference that Iraq won't roll over OPEC+ cuts for the second half and if OPEC+ has the luxury to start to unravel its cuts. Muller "The market has always felt that OPEC+ but Saudi in particular, would have the luxury of a market that was going to call for extra production and therefore there was a possible scenario where an easing of the voluntary Saudi cut was possible. However, I think , now that your participants have had enough time to, I didn't want to spoil the question butting in any earlier. We have to be very careful with the reporting of the comments by Hayan Abdul Ghani, the Iraqi oil minister. Because while he did say we've reduced output enough, we will not*

agree to any new cuts. What he did not say, I don't think, is whether he was opposed to an extension of the voluntary cuts that are in place. I think the smart money in trading circles will assume he did not mean to say he was going to depart from the group and start opening the taps. Far from it. I think that would be a move that wouldn't just make him unpopular with his peers. But I think it almost goes without saying that should OPEC+ see fit to maintain a rollover, I think that's the expectation of Iraq. So I mean the statement, I'm just looking it up myself here. This is on the sidelines of a conference in Baghdad. What he said was they will not agree to any new cut. But I think by that, you can drive a bus through the interpretations but my interpretation of it is further cuts are off the table. He thinks that the market is sufficiently balanced for them to just continue, that was my interpretation of it."

Oil: Seems like no progress to resuming Kurdistan oil via Turkey pipeline

No visibility to restart Kurdistan oil

No surprise, there is still no visibility to when Kurdistan oil will resume oil exports via Turkey. On Wednesday, APIKUR (the oil industry association) posted its latest update "*APIKUR statement on U.S. Assistant Secretary for Energy Resources visit to Iraq*." [LINK] There was nothing in the statement that indicated there was any progress to a resolution that will see a resumption of Kurdistan oil exports via Turkey. APIKUR wrote "*APIKUR welcomes the visit of Ambassador Geoffrey R. Pyatt, U.S. Assistant Secretary of State for Energy Resources, to Iraq as another strong signal about the imperative for governmental leaders in Baghdad and Erbil to follow-through with their stated goal of restoring oil exports through the Iraq-Türkiye pipeline. We understand that Ambassador Pyatt's meetings with Iraqi Prime Minister Mohammad Shia Al-Sudani and Kurdistan Regional Government Prime Minister Masrour Barzani are a continuation of recent discussions held in Washington, DC and the Munich Security Conference. As the Iraq Ministry of Oil recently completed two oil field licensing rounds, APIKUR notes there is already underutilized oil production and export capacity from Kurdistan Region that will help Iraq immediately achieve its short-term and long-term export goals. APIKUR member companies reiterate that they are prepared to resume exports, contingent upon reaching agreements which provide for payment surety for past and future exports and preservation of commercial and economic terms. This resumption will benefit all Iraqi citizens and our stakeholders. "Ambassador Pyatt's visits to both, Baghdad and Erbil underscore the importance of immediate and cooperative action by all stakeholders to restore exports through the Iraq-Türkiye pipeline," said Myles B. Caggins III, spokesman, Association of the Petroleum Industry of Kurdistan. "APIKUR's member companies remain eager to resolve the export impasse and would welcome an invitation to participate in the process."*

Will oil companies take a lesser deal to get Kurdistan oil flowing?

Here is what we wrote in our May 5, 2024 Energy Tidbits memo. "*At least it looks like it is clear what the issue is that is holding up the restart of Kurdistan oil via the pipeline in Turkey – it looks like it is up to the international oil companies to accept the tougher terms in moving from production sharing contracts with Kurdistan to the form of oil agreements and royalties consistent with Iraq oil deals. Yesterday, Rudaw (Kurdistan news) reported that Erbil and Baghdad agreed to the formation of two joint committees to resolve the contract situation. Rudaw reported "Iraqi Oil Minister Hayyan Abdul Ghani told reporters on Thursday that two joint Baghdad-Erbil committees have been formed to resolve the contract situation between Erbil and the international oil companies (IOCs) as they are production-sharing contracts -*

agreements he said are incompatible with the Iraqi constitution." And ""There has not yet been an agreement with the Kurdistan Regional Government on handing over the oil produced in the Region to the federal oil ministry," the Iraqi oil minister said on Thursday, adding that there are "differences regarding contracts signed with the international companies." Our Supplemental Documents package includes the Rudaw report."

Oil: No production update from Libya NOC since Mar 21

No Libya oil production update

As of our 7am MT news cut off, we still haven't seen any oil production updates from the Libya National Oil Corporation since their Mar 21 update that oil production was 1.241 mmb/d. Other than the short protest that briefly shut in Sharara oil field in Q1/24, Libya's oil production has been stable at ~1.2 mmb/d for the past several months. Our March 31, 2024 Energy Tidbits memo highlighted the suspension of then Libya Oil Minister Aoun for undisclosed reasons and the subsequent accusation of Libya NOC Chair Bengdara of conflict of interest. Our Apr 14, 2024 Energy Tidbits memo highlighted the appointment a new Libyan oil minister Khalifa Abdul Sadiq, who was previously Deputy Oil Minister. But we still haven't seen any production update.

Oil: Libya Oil Minister Aoun has his suspension lifted

Libya Oil Minister Aoun

It will be interesting to watch the internal politics within Libya's oil minister given the Tuesday reports that the suspension was lifted for Libya Oil Minister Aoun. He was suspended from his role on March 25. On Tuesday, Libya Observer reported [LINK] "*Administrative Control Authority lifts Oil Minister Mohamed Aoun's suspension. The head of the Administrative Control Authority, Abdullah Qadirbuh, has issued a decision to lift the suspension on the Minister of Oil and Gas of the Government of National Unity, Mohamed Aoun."* We haven't seen any formal report on Aoun officially resuming his duties.

Oil: China new and used home prices losing value, worst MoM decline to date in Apr

China houses keep losing value

Last week's (May 12, 2024) Energy Tidbits memo highlighted how Chinese stocks have had a good run over the past few months and that any Chinese invested in the stock market have made good profits. However, the other more important wealth indicator for the Chinese is home values and they keep going down. On Thursday, we tweeted [LINK] "*A key to getting Chinese consumers back to spending is still a big negative. April was worst month for China home owners. New homes -0.58% MoM, largest MOM decline to date. Used homes -0.94% MoM, largest MoM decline to date. Thx @business. #OOTT*". We have been seeing positive indicators on China economy over the past month but one area that is still in the negative are China new and used home prices. On Thursday, China's National Bureau of Statistics posted its new and used home prices for April and both posted the largest MoM declines. New home prices in April were -0.58% MoM vs -0.34% MoM in March, and -3.51% YoY in April vs. -2.65% in March. Used home prices were -0.94% MoM in April vs -0.53% MoM in March. Used home prices in April were -6.79% YoY vs -5.90% YoY in March.

Figure 41: China new and used home prices incl April 2024

Source: Bloomberg, National Bureau of Statistics

Oil: China provides incentives to boost property market

China trying to boost property markets

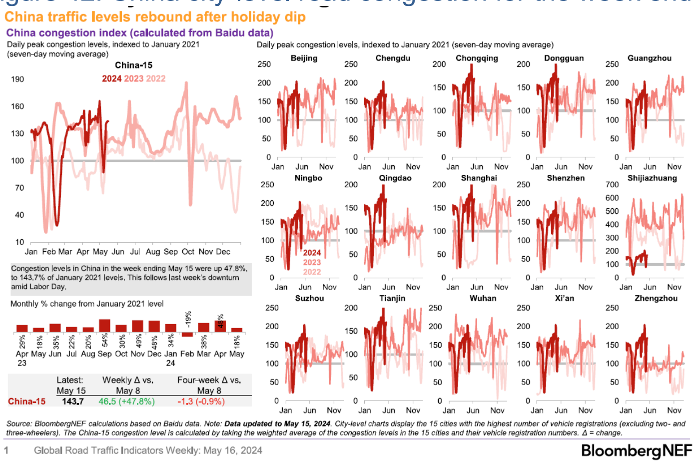
China knows its real estate market is a big drag on consumers and so keeps trying to add incentives to eliminated some of the home/condo property overhang and provide a floor to home prices. We aren't certain how much of an impact these incentives will be but every little bit helps. The measure that got the most attention was allowing local governments to buy up houses at low prices, The latest was on Friday, when Xinhua (state media) reported [LINK] "*China on Friday cut the minimum down payment ratios for individuals' commercial housing mortgages and abolished mortgage floor rates nationwide as the country moves to boost the property market. The People's Bank of China (PBOC) and the National Financial Regulatory Administration announced that the minimum down payment ratios for individuals' commercial housing mortgages will be lowered to 15 percent for first-home purchases and 25 percent for second-home purchases. The PBOC said in a separate statement on its website that the floor level of commercial mortgage rates for first and second homes will be canceled across the country. Central bank branches can determine the lower limits of commercial mortgage rates in accordance with local conditions, and financial institutions should set the floor lending rates based on their business conditions and borrower risks, the central bank said. According to the PBOC, the country will also cut the loan rates of the individual housing provident fund, a long-term housing savings plan made up of compulsory monthly deposits by both employers and employees, by 0.25 percentage points from May 18."* And "*Local governments of regions with commercial housing stock are allowed to buy some homes at reasonable prices and provide them as affordable housing, He said at a teleconference about ensuring the delivery of housing projects."*

Oil: Baidu China city-level road congestion rebounds after Labour Day Holiday dip

China city-level traffic congestion

On Thursday, BloombergNEF posted its Global Road Traffic Indicators Weekly May 16 report, which includes the Baidu city-level road congestion for the week ended May 15. BloombergNEF's report was titled "*China traffic jumps after reaching two-month low*" and its key slide was titled "*China traffic levels rebound after holiday dip*". Baidu city-level road congestion was up +47.8% WoW to 143.7% of Jan 2021 levels. It doesn't come out in the numbers unless you compare to last week but it seems like China city-level road congestion is tracking high YoY in May. We will need to see the data over the next two weeks to confirm that but we note why we think so in the below item. Below is the BloombergNEF key graph.

Figure 42: China city-level road congestion for the week ended May 15

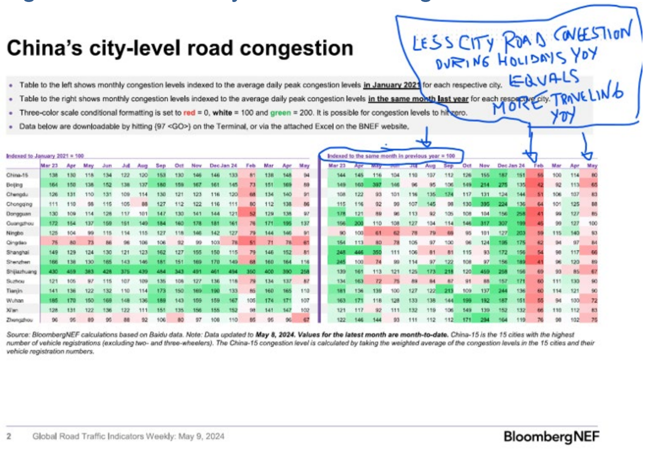


Source: BloombergNEF

Big jump in city traffic supports more Chinese travelled during holiday

As noted above, there was a big jump in China city-level road congestion in the May 15 week and we think this is pointing to more Chinese traveled during the recent May Day holiday. Last week's city-level road congestion for the top 15 cities for up to May 8 had the overall at 80% of May 2023. This week's report has the top 15 cities for up to May 15 to 99% of May 2023. So a big narrowing of 80% of a year ago to 99% of a year ago by adding one week of data. The test comes in the next two weeks data and if it shows the 99% going over 100%. April 2024 was 114% of year ago April 2023. But, even still, the May 15 data reinforces the thesis that more Chinese travelled during the May Day holiday. Here is what we wrote in last week's (May 12, 2024) Energy Tidbits memo. "*On Friday, we tweeted [LINK] "Positive indicator for more Chinese are travelling in 2024. China Baidu city-level road congestion down YoY in New Year and Labor Day holidays points to more Chinese travelling YoY. Thx @BloombergNEF #OOTT." BloombergNEF also posts the data for the top 15 cities and what jumped out at us was how 2024 was down YoY during New Year and again for the first week of May led to our tweet. This is not like Covid when low city-level road congestion meant low business/economic activity. Post Covid is different so when we saw the YoY city level road congestion was down during the key holiday* *periods meant that more people lef the cities during these holidays. Below is the BloombergNEF table of top 15 cities.*"

Figure 43: China city-level road congestion thru the week ended May 8



China's city-level road congestion

- Table to the left shows monthly congestion levels indexed to the average daily peak congestion levels **in January 2021** for each respective city.
- Table to the right shows monthly congestion levels indexed to the average daily peak congestion levels **in the same month last year** for each respective city.
- Three-color scale conditional formatting is set to red = 0, **white** = 100 and green = 200. It is possible for congestion levels to hit zero.
- Data below are downloadable by hitting {97 <GO>} on the Terminal, or via the attached Excel on the BNEF website.

Indexed to January 2021 = 100

	Mar 23	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan 24	Feb	Mar	Apr	May
China-15	138	130	118	134	122	120	153	130	146	146	133	81	138	148	94
Beijing	164	150	138	152	138	137	180	159	167	161	145	73	151	169	89
Chengdu	126	131	110	131	109	114	130	121	123	116	120	68	134	140	91
Chongqing	111	110	98	115	105	88	127	112	122	116	111	80	112	138	86
Dongguan	130	109	114	128	117	101	147	130	141	144	121	52	129	138	97
Guangzhou	172	154	137	159	151	149	184	160	178	181	161	76	171	195	137
Ningbo	125	104	99	115	114	115	127	118	146	142	127	79	144	146	91
Qingdao	75	80	73	86	96	106	106	92	99	103	78	51	71	78	61
Shanghai	149	129	124	130	121	123	162	127	155	150	115	79	146	152	81
Shenzhen	166	138	130	165	143	146	181	151	169	170	149	68	160	164	116
Shijiazhuang	430	459	383	428	375	439	484	343	491	461	494	350	400	390	258
Suzhou	121	105	97	115	107	109	135	108	127	136	118	79	134	137	87
Tianjin	141	136	122	132	110	114	173	150	169	190	133	85	160	165	110
Wuhan	185	170	150	169	148	136	189	143	159	159	167	105	174	171	107
Xi'an	128	131	122	136	122	111	151	135	156	155	152	98	141	147	102
Zhengzhou	96	95	89	95	88	92	106	80	97	108	110	85	95	96	67

Indexed to the same month in previous year = 100

	Mar 23	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan 24	Feb	Mar	Apr	May
China-15	144	145	116	104	110	107	112	126	155	187	151	55	100	114	80
Beijing	149	160	397	146	96	95	106	149	214	275	135	42	92	113	65
Chengdu	108	122	93	101	116	135	174	117	131	124	144	51	106	107	83
Chongqing	115	116	92	99	107	145	98	130	395	224	136	64	101	125	88
Dongguan	178	121	89	96	113	92	105	108	104	156	258	41	99	127	85
Guangzhou	156	200	110	108	127	104	114	146	317	307	199	45	99	127	100
Ningbo	90	100	61	62	78	79	69	95	101	127	203	59	115	140	93
Qingdao	154	113	80	78	105	97	100	96	124	195	175	62	94	97	84
Shanghai	248	446	350	111	106	81	81	115	93	172	156	54	98	117	66
Shenzhen	245	100	74	99	114	97	122	108	97	156	189	41	96	120	89
Shijiazhuang	139	161	113	121	125	173	218	120	459	258	156	69	93	85	67
Suzhou	134	163	72	75	89	84	87	91	88	157	171	60	111	130	90
Tianjin	181	136	139	100	127	122	213	109	137	244	136	60	114	121	90
Wuhan	163	171	118	128	133	138	144	199	192	187	151	55	94	100	72
Xi'an	121	117	92	111	132	119	106	149	139	152	132	66	110	112	83
Zhengzhou	122	146	144	93	111	112	112	171	294	164	119	76	98	102	75

Source: BloombergNEF calculations based on Baidu data. Note: Data updated to ***May 8, 2024. Values for the latest month are month-to-date.*** *China-15 is the 15 cities with the highest number of vehicle registrations (excluding two- and three-wheelers). The China-15 congestion level is calculated by taking the weighted average of the congestion levels in the 15 cities and their vehicle registration numbers.*

2 Global Road Traffic Indicators Weekly: May 9, 2024 BloombergNEF

Source: BloombergNEF

Figure 44: China city-level road congestion thru the week ended May 15

China's city-level road congestion

- Table to the left shows monthly congestion levels indexed to the average daily peak congestion levels **in January 2021** for each respective city.
- Table to the right shows monthly congestion levels indexed to the average daily peak congestion levels **in the same month last year** for each respective city.
- Three-color scale conditional formatting is set to red = 0, **white** = 100 and green = 200. It is possible for congestion levels to hit zero.
- Data below are downloadable by hitting {97 <GO>} on the Terminal, or via the attached Excel on the BNEF website.

Indexed to January 2021 = 100

	Mar 23	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan 24	Feb	Mar	Apr	May
China-15	138	130	118	134	122	120	153	130	146	146	133	81	138	148	117
Beijing	164	150	138	152	138	137	180	159	167	161	145	73	151	169	126
Chengdu	126	131	110	131	109	114	130	121	123	116	120	68	134	140	113
Chongqing	111	110	98	115	105	88	127	112	122	116	111	80	112	138	105
Dongguan	130	109	114	128	117	101	147	130	141	144	121	52	129	138	120
Guangzhou	172	154	137	159	151	149	184	160	178	181	161	76	171	195	155
Ningbo	125	104	99	115	114	115	127	118	146	142	127	79	144	146	110
Qingdao	75	80	73	86	96	106	106	92	99	103	78	51	71	78	72
Shanghai	149	129	124	130	121	123	162	127	155	150	115	79	146	152	114
Shenzhen	166	138	130	165	143	146	181	151	169	170	149	68	160	164	149
Shijiazhuang	430	459	383	428	375	439	484	343	491	461	494	350	400	390	295
Suzhou	121	105	97	115	107	109	135	108	127	136	118	79	134	137	106
Tianjin	141	136	122	132	110	114	173	150	169	190	133	85	160	165	139
Wuhan	185	170	150	169	148	136	189	143	159	159	167	105	174	171	130
Xi'an	128	131	122	136	122	111	151	135	156	155	152	98	141	147	121
Zhengzhou	96	95	89	95	88	92	106	80	97	108	110	85	95	96	77

Indexed to the same month in previous year = 100

	Mar 23	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan 24	Feb	Mar	Apr	May
China-15	144	145	116	104	110	107	112	126	155	187	151	55	100	114	99
Beijing	149	160	397	146	96	95	106	149	214	275	135	42	92	113	91
Chengdu	108	122	93	101	116	135	174	117	131	124	144	51	106	107	103
Chongqing	115	116	92	99	107	145	98	130	395	224	136	64	101	125	108
Dongguan	178	121	89	96	113	92	105	108	104	156	258	41	99	127	105
Guangzhou	156	200	110	108	127	104	114	146	317	307	199	45	99	127	113
Ningbo	90	100	61	62	78	79	69	95	101	127	203	59	115	140	112
Qingdao	154	113	80	78	105	97	100	96	124	195	175	62	94	97	98
Shanghai	248	446	350	111	106	81	81	115	93	172	156	54	98	117	92
Shenzhen	245	100	74	99	114	97	122	108	97	156	189	41	96	120	115
Shijiazhuang	139	161	113	121	125	173	218	120	459	258	156	69	93	85	77
Suzhou	134	163	72	75	89	84	87	91	88	157	171	60	111	130	110
Tianjin	181	136	139	100	127	122	213	109	137	244	136	60	114	121	114
Wuhan	163	171	118	128	133	138	144	199	192	187	151	55	94	100	87
Xi'an	121	117	92	111	132	119	106	149	139	152	132	66	110	112	99
Zhengzhou	122	146	144	93	111	112	112	171	294	164	119	76	98	102	86

Source: BloombergNEF calculations based on Baidu data. Note: Data updated to ***May 15, 2024. Values for the latest month are month-to-date.*** *China-15 is the 15 cities with the highest number of vehicle registrations (excluding two- and three-wheelers). The China-15 congestion level is calculated by taking the weighted average of the congestion levels in the 15 cities and their vehicle registration numbers.*

2 Global Road Traffic Indicators Weekly: May 16, 2024 BloombergNEF

Source: BloombergNEF

China Oil Production

Oil: China oil production +1.1% YoY in April to 4.27 mmb/d

A similar theme to natural gas has been playing out for China oil imports in that increasing China domestic oil production reduces the amount of China oil imports. What is often overlooked is the fact that China is one of the world's top producers of crude oil, just behind Iraq in 2022, according to the EIA [LINK]. On Friday, Bloomberg's CHENCOIL index (data pulled from National Bureau of Stastics) that China crude oil production was +1.1% YoY in April to 4.27 mmb/d, up from 4.22 mmb/d in April 2023. The government of China noted [LINK] on January 9th that average crude production over 2023 was 4.25 mmb/d, which is +0.06 mmb/d YoY from 2022.

China oil imports April

Oil: China oil imports 10.88 mmb/d in April, down -6.2% MoM but up +5.5% YoY

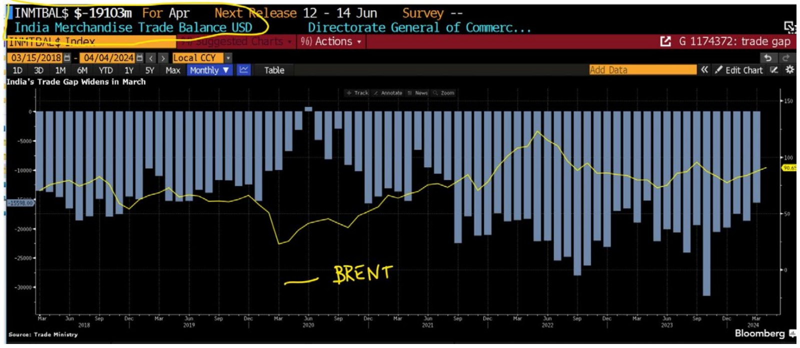
On Friday, China's General Administration for Customs (GACC) reported on the summary data of China's oil and natural gas imports for April [LINK]. We weren't able to see the updated numbers on their website but luckily Bloomberg reported on their data. China's imports of crude oil in March were 44.72 million tons, or 10.88 mmb/d, a -6.2% decrease from 11.60 mmb/d in March, but up +5.5% YoY from 10.40 mmb/d in April 2023. Our Supplemental Documents Package includes the Bloomberg Report.

Iran wants cheap oil

Oil: India will keep buying discounted Iran and Russian oil

On Wednesday, we tweeted [LINK] "*Here's why India will take as much discounted Russia and Iran #OIl as possible. India trade deficit in Apr was $19.1b. #Oil #PetroleumProducts #LNG imports stood at $16.46b in Apr" reports @shruti838. Added Brent $ to the @business India trade deficit graph. #OOTT.*" We were watching Bloomberg TV and they were talking about the Indian trade deficit for April and we took their graph and added Brent oil price to the graph because oil imports are probably the #1 monthly import cost for India. So the price of oil is the key wildcard each month to India imports and reinforces why India will continue to buy as much discounted oil as possible from Iran and Russia. Below is the Bloomberg TV graph that we modified to add Brent oil price.

Figure 45: India trade deficit and Brent oil



Source: Bloomberg

Vortexa floating storage

Oil: Vortexa crude oil floating storage est 69.21 mmb at May17, +9.27 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 May 11 at 9am MT. (i) Yesterday, we tweeted [LINK] "*Vortexa oil floating storage +9.27 mmb WoW to 69.21 mmb. US Gulf Coast +4.67 WoW to 8.67 mmb, highest since 2020. Storm/power outage related? Lots of crude on water with long tanker trips avoiding Red Sea BUT floating storage is still below 70 mmb. Thx @vortexa @business #OOTT.*" (ii) As of 9am MT yesterday, Bloomberg posted Vortexa crude oil floating storage estimate for May 17 at 69.29 mmb, which is +9.27 mmb WoW vs basically unrevised May 10 of 59.94 mmb. Note May 10 was revised +0.15 mmb to 59.94 mmb vs 59.79 mmb originally posted at 9am MT on May 11. (iii) It isn't clear if the major wind storms that led to power outage in Texas on Thursday was the reason for US Gulf Coast floating storage hitting the highest level since 2020. Gulf Coast storage was +4.67 mmb WoW to 8.39 mmb at May 17. It's a large increase for the Gulf Coast so we will want to see what commentary out this week. (iv) Revisions. There were two revised up weeks >4 mmb but the rest of the last seven weeks were small. Here are the revisions for the past seven weeks compared to the estimates originally posted on Bloomberg at 9am MT on May 11. May 10 revised +0.15 mmb. May 3 revised +4.45 mmb. Apr 26 revised +4.26 mmb. Apr 19 revised +1.94 mmb. Apr 12 revised -0.84 mmb. Apr 5 revised -0.42 mmb. March 29 revised -0.87 mmb. (v) There is a wide range of floating storage estimates for the past seven weeks, but a simple average for the past seven weeks is 72.57 mmb vs last week's then seven-week average of 73,22 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 Covid started to impact Covid in March/April 2020. (viii) May 17 estimate of 69.21 mmb is 59.14 mmb vs the last year peak June 23, 2023 high of 128.35 mmb. Recall Saudi Arabia stepped in on July 1, 2023 for additional cuts. (ix) May 17 estimate of 69.21 mmb is -23.68 mmb YoY vs May 19, 2023 of 92.89 mmb. (x) Below are the last several weeks of estimates posted on Bloomberg as of 9am MT May 18, 9am MT May 11, and 9am MT May 4.

Figure 46: Vortexa Floating Storage Jan 1, 2000 – May 17, 2024, posted May 18 at 9am MT

Source: Bloomberg, Vortexa

Figure 47: Vortexa Estimates Posted 9am MT on May 18, May 11, and May 4

Posted May 18, 9am MT

FZWWFST VTXA Index — 01/01/2020 - 05/17/2024

	Date	FZWWFST VT... Last Px
Fr	05/17/2024	69209
Fr	05/10/2024	59937
Fr	05/03/2024	66556
Fr	04/26/2024	68256
Fr	04/19/2024	75770
Fr	04/12/2024	88967
Fr	04/05/2024	79280
Fr	03/29/2024	82459
Fr	03/22/2024	74554
Fr	03/15/2024	77036
Fr	03/08/2024	76494
Fr	03/01/2024	69929

May 11, 9am MT

FZWWFST VTXA Index — 01/01/2020 - 05/10/2024

	Date	FZWWFST VT... Last Px
Fr	05/10/2024	59787
Fr	05/03/2024	62109
Fr	04/26/2024	63996
Fr	04/19/2024	73829
Fr	04/12/2024	89841
Fr	04/05/2024	79699
Fr	03/29/2024	83332
Fr	03/22/2024	74836
Fr	03/15/2024	77271
Fr	03/08/2024	76856
Fr	03/01/2024	70150
Fr	02/23/2024	63409

May 4, 9am MT

FZWWFST VTXA Index — 01/01/2020 - 05/03/2024

	Date	FZWWFST VT... Last Px
Fr	05/03/2024	57777
Fr	04/26/2024	66623
Fr	04/19/2024	75328
Fr	04/12/2024	92765
Fr	04/05/2024	79913
Fr	03/29/2024	83948
Fr	03/22/2024	73442
Fr	03/15/2024	75464
Fr	03/08/2024	76969
Fr	03/01/2024	69521
Fr	02/23/2024	62997
Fr	02/16/2024	65681

Source: Bloomberg, Vortexa

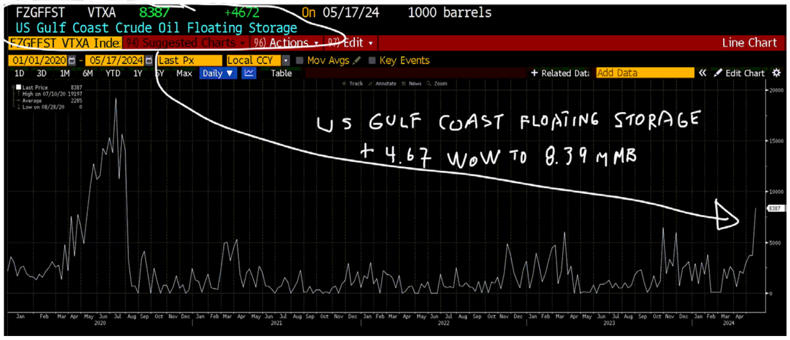
Source: Bloomberg, Vortexa

Oil: US Gulf Coast floating storage +4.67 mmb WoW to 8.39 mmb, highest since 2020

Gulf Coast storage at highest since 2020

Earlier, we noted US Gulf Coast storage was +4.67 mmb WoW to 8.39 mmb, which is the highest since the high floating storage in 2020 once Covid hit. What isn't clear is why Gulf Coast "floating storage" is up. This is "floating storage" and not oil on water/oil in tankers in transit. The big power outage hit the Houston area on Thursday and Houston area is home to several refineries and their linked oil terminals. Our first thought was that if the power outage stopped ships from going into the US refineries on Thurs and Friday, it would be considered oil on water ie. oil in tankers in transit that is temporarily delayed. But the reports yesterday were on ow the power outage impact could last days. So we don't know if the ramp up is due to the power or the other likely explanation is that there have been high wind conditions in the parts of the Gulf of Mexico causing tanker backlogs.

Figure 48: Vortexa crude oil floating by region



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) Note that prior to this week, we hadn't split North Sea out of Other. (ii) As noted above, last week's May 10, in total, was revised +4.33 mmb with the key revisions being Asia revised +3.13 mmb, and US Gulf Coast revised +2.15 mmb. (iii) As noted above, May 10 of 59.79 mmb was immaterially revised +0.15 mmb in total. But there were two revisions to note with Middle East revised -3.62 mmb, and Asia revised +3.49 mmb. (iv) The major WoW changes were Other +6.23 mmb WoW, US Gulf Coast +4.67 mm WoW, West Africa +3.25 mmb WoW and Europe -2.40 mmb WoW. (v) Above we highlight US Gulf Coast storage was +4.67 mmb WoW to 8.39 mmb, which is the highest since the high floating storage in 2020 once Covid hit. It just so happens it coincides with the big power outage around Houston where there are several refineries. (vi) May 17 estimate of 69.21 mmb is 59.14 mmb vs the last year peak June 23, 2023 high of 128.35 mmb. Recall Saudi Arabia started its voluntary 1 mmb/d production cuts on July 1, 2023. The major changes by region vs the summer June 23 peak are Asia -46.72 mmb and Other -19.21 mmb.. (iv) 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 10 that was posted on Bloomberg at 9am MT on May 11.

Figure 49: Vortexa crude oil floating by region

				Original Posted	Recent Peak	
Region	May 17/24	May 10/24	WoW	May 10/24	Jun 23/23	May 17 vs Jun 23
Asia	26.12	27.92	-1.80	24.43	72.84	-46.72
North Sea	3.11	3.24	-0.13	3.81	5.42	-2.31
Europe	5.19	7.59	-2.40	8.08	6.13	-0.94
Middle East	7.51	8.16	-0.65	11.78	6.76	0.75
West Africa	9.52	6.27	3.25	4.69	7.62	1.90
US Gulf Coast	8.39	3.72	4.67	3.71	1.00	7.39
Other	9.37	3.04	6.33	3.29	28.58	-19.21
Global Total	69.21	59.94	9.27	59.79	128.35	-59.14
Vortexa crude oil floating storage posted on Bloomberg 9am MT on May 18						
Source: Vortexa, Bloomberg						

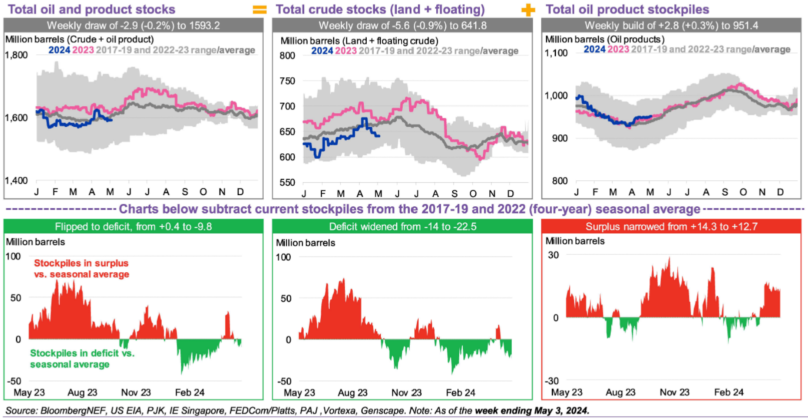
Source: Bloomberg, Vortexa

Oil: BNEF – global oil and product stocks deficit narrows to -9.8 mmb

Global oil and products stocks

Please note that the BloombergNEF global oil and products stocks estimate are for the week ending May 3, which is a week earlier than the normal EIA US oil inventory data that is for the week ending May 10 which was a draw of -6.37 mmb. On Thursday, 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 flipped from a surplus of +0.4 mmb to a deficit of -9.8 mmb for the week ending May 3. (iii) Total crude inventories (incl. floating) decreased -0.9% WoW to 641.8 mmb, while the stockpile deficit widened from -14.0 m bbl to -22.5m bbl.(iv) Land crude oil inventories fell -0.7% WoW to 575.7 mmb, widening the deficit from -15.9 mmb to -21.5 mmb against the five-year average (2017-2019 + 2022-23). (v) The gas, oil, and middle distillate stocks grew +0.6% WoW to 156.6 mmb, with the deficit against the four-year average narrowing from -3.8 mmb to -1.8 mmb. Jet fuel consumption by international departures in the week to May 20 is set to decrease by -20,100 b/d WoW, while consumption by domestic passenger departures is forecast to decrease by -56,800 b/d WoW. Below is a snapshot of aggregate global stockpiles.

Figure 50: Aggregate Global Oil and Product Stockpiles



Source: BloombergNEF

Bloomberg oil demand monitor

Oil: Bloomberg Oil Demand Monitor "Diesel Woes Linger; Travel Boost Beckons"

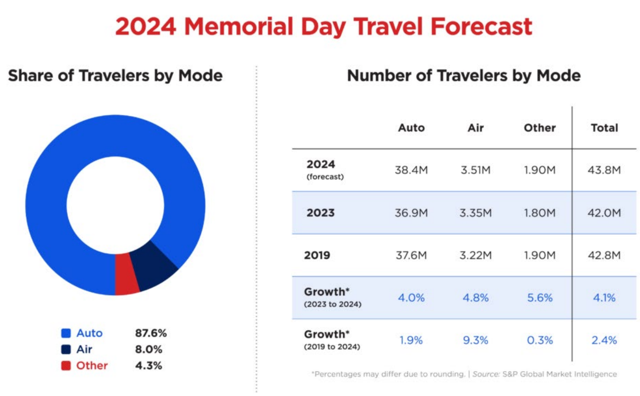
The Bloomberg Oil Demand Monitor is a good recap of key oil demand indicators around the world. This week's report reflects concern as distress signals are appearing in different markets globally, however the report mentions key reasons to be optimistic going into the summer months and latter half of 2024. As a reminder, the IEA and OPEC are way out of whack with each other on their 2024 demand forecasts – Since their January MOMR, OPEC has forecasted +2.25 mmb/d oil demand growth, while the IEA has taken it down from +1.24 mmb/d to +1.03 mmb/d in the same period. Oil imports into China fell in April as refineries closed for seasonal repairs, which could crimp demand and worries the market. Asia as a whole is showing signs of slowing diesel consumption, with a drop in returns from fuel production causing some refiners to cut run rates, and the European industrial and road fuel market is also showing signs of slowing. In the US, the four-week average for supply increased slightly over the last week but remains at a 10-year seasonal low (with the exception of 2020), leading to an uninspiring outlook. Bloomberg writes *"JPMorgan Chase & Co. analysts cited lackluster US consumption of the auto fuel — dragged down by high retail prices — as the primary reason for lower-than-expected global oil demand last month."* Bloomberg counters the negative sentiment by highlighting strong demand in India, the third-largest oil-product consumer, where overall oil-product consumption increased by + 6% YoY in April. Bloomberg notes Energy Pathway's Chief Strategy Officer saying "[The third-quarter bull story remains] "intact, driven by fundamentals even without any geopolitical risk priced in." With the summer months coming in the Northern Hemisphere, demand for gasoline and jet fuel will soon increase seasonally, beginning with the May 27 Memorial Day holiday. Bloomberg writes "*The critical determinant for this year's global balance will be the June 1 meeting of the OPEC+ alliance. Most traders and analysts predict the producers' group will extend output cuts of roughly 2 million barrels a day."* . Looking at consumption indicators, the demand monitor showed that global flights continued to track comfortably above both 2023 and 2022 levels during the week of May 13, up +13% and +24% respectively, and up +34% on a MoM basis. Diesel and gasoline sales in India were up +1.4% and +14% YoY, respectively, and, compared to the first two weeks of April, were -1.4% and -1.2% MoM, respectively. Refinery utilization in the US for the week leading up to May 10 was at 90.4%, which is up 1.9% WoW and down -1.6% YoY. Keep in mind the 250,000 b/d Joliet refinery is still down for turnaround. Below is a chart summarizing the commercial passenger jet fuel demand by region and a chart describing China's road traffic congestion. Our Supplemental Documents package includes the Bloomberg Oil Demand Monitor.

Oil: Memorial Day travel expected to be up 4% YoY, 2nd highest since 2005's 44 million

Memorial Day Record Travel

The AAA released their 2024 Memorial Day Holiday Travel Forecast [LINK] on May 13. On Tuesday, we tweeted [LINK] *"1st stress test coming up for airlines & FAA. Most crowded Memorial Day weekend at airports since 2005! Record # of road trips. Traveler patience will be required! Thx @AixaDiazNews @AAAnews #OOTT".* The AAA expects 43.8mm Americans in total will travel 50+ miles from home over the Memorial Day travel period, which is a YoY increase of 4%, bringing volumes higher than pre-pandemic levels and signalling a busy travel season ahead. AAA projects 38.4 mm people to travel by car over the holiday weekend, the highest number of road travel since the AAA began tracking in 2000. The number of drivers is up +4% YoY and up +1.9% from 2019. The AAA is expecting 3.51mm air travelers over the holiday weekend, reflecting an increase of +4.8% YoY and a +9% increase from 2019. This will be the busiest Memorial Day weekend at airports since 2005, when 3.64 million flew for the holiday as travel rebounded post 9/11. The AAA is projecting 1.9mm people to travel by other modes of transportation over the holiday weekend including buses, cruises, and trains, which is an increase of +5.6% compared to last year. Our Supplemental Documents package includes the AAA release.

Figure 51: AAA Holiday Travel Mode Forecast



	Auto	Air	Other	Total
2024 (forecast)	38.4M	3.51M	1.90M	43.8M
2023	36.9M	3.35M	1.80M	42.0M
2019	37.6M	3.22M	1.90M	42.8M
Growth* (2023 to 2024)	4.0%	4.8%	5.6%	4.1%
Growth* (2019 to 2024)	1.9%	9.3%	0.3%	2.4%

*Percentages may differ due to rounding. | Source: S&P Global Market Intelligence

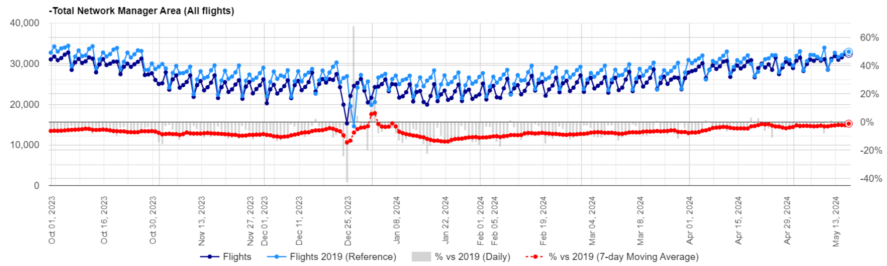
Source: AAA

Oil: Europe airports daily traffic 7-day average is -1.2% below pre-Covid levels

Europe airports daily traffic

Yesterday, we tweeted [LINK] "*Daily Europe air traffic just below pre-Covid. 7-day average as of: May 16: 1.2% below pre-Covid. May 9: 3.2% below. May 2: 2.9% below. Apr 25: 3.2% below. Apr 22: 1.5% below. Apr 18: 3.2% below. Apr 11: 3.7% below. Apr 4: 6.2% below. Thx @eurocontrol. #OOTT."* Other than over Christmas, European daily traffic at airports has been below pre-Covid. However, it has been staying just a little below over the past five weeks and even got to only 1.5% below pre-Covid as of Apr 22 before falling back. But it has strengthened this week to just 1.2% below pre-Covid as of the 7-day average on May 16. As of our 7am MT news cut off, the latest Eurocontrol daily traffic at Europe airports shows the 7-day rolling average to the end of May 16, which was up to only 1.2% below pre-Covid levels. This is the closest to pre-Covid since Apr 22. Eurocontrol updates this data daily and it is found at [LINK]

Figure 52: Europe Air Traffic: Daily Traffic Variation to end of May 16



Source: Eurocontrol

Oil: is Ryanair pointing to air travel getting to a pause in the recovery?

We missed this Ryanair comment from May 7, which makes us wonder if Ryanair is pointing to EU air travel getting to some sort of pause in its recovery. Ryanair CEO Michael O'Leary pulled back on his prior comments and now doesn't see airfares rising as fast as they had previously assumed. On May 7, Reuters reported [LINK] "*Summer ticket fares will rise less than expected, Ryanair CEO says. Ticket fare prices this summer are likely going to be lower than previously expected, Ryanair Chief Executive Michael O'Leary said on Tuesday, despite previous warnings that rising costs would get passed on to airline customers. Aviation executives and analysts have said ticket prices were set to go up even more this year as capacity constraints and slower aircraft deliveries limit the amount of planes in the sky despite robust travel demand. However, O'Leary said that prices were not rising as fast as previously assumed. Ryanair shares were down 6.4% at 1354 GMT, with easyJet (EZJ.L), opens new tab and Lufthansa (LHAG.DE), opens new tab shares also down after O'Leary's comments. "Looking at summer ... We thought pricing would be up 5-10%. We're heading to flat (pricing year-on-year) to 5% up, which is surprising with a lot of the Airbus (AIR.PA), opens new tab fleet grounded for maintenance," he told Reporters in Brussels.*"

Sector insights from Q1 calls

Oil & Natural Gas: sector/play/market/global insights from Q1 calls

Please note that this is under Oil & Natural Gas but we include other sectors in our recap of earnings calls. Q1 reporting is over. We ran out of time this weekend so only included a couple of catch up items from the Q1 calls from the past two weeks. We find we get the best insights into a range of oil and gas themes/trends, sectors and plays form the conference calls. As a reminder, our Energy Tidbits memo does not get into the quarterly results, forecasts, or valuation. Rather the purpose of highlighting a company is to note themes/trends and plays that will help shape a reader's investment thesis to the energy sector. In the conference calls, we also tend to find the best insights from the Q&A portion as opposed to the prepared remarks.

Sector insights from Q1 calls

Home Depot: slowdown in large ticket items

Home Depot held its Q1 call on Tuesday. Their Q1 call comments reinforce the theme of US consumers slowing down on big ticket items, much like is happening with car sale. It was dealt with a few times in the Q&A on how the slowdown in house sales is a key reason for the US consumer slowdown in their business as people don't have to fix up a house for resale or redo some items in a house after a home purchase. There was also the cycle nature of large ticket items – they aren't purchased every year. Home Depot also highlighted how interest rates are leading to a slowdown in large ticket items or large projects. And that also included trading down on items like countertops. Our Supplemental Documents package includes excerpts from the Home Depot call.

Walmart: higher income consumer has been the growth driver

Walmart held its Q1 call on Thursday. (i) One item that was different is that Walmart didn't highlight increasing stress on lower income households. Rather when they were asked about what they saw with lower-end consumers, mgmt replied "*In terms of the consumer, it's been pretty consistent, I think is the best word we would use, consistent spending across income groups. We've had more growth, as we mentioned in the earlier remarks, on the high-end consumer. That remains true. We're very focused on value, flexibility, and convenience, and that's working across income segments*." (ii) Higher income consumes drove the growth. In the Q1 call, Walmart highlighted the higher income consumer. In their prepared remarks, mgmt said "*We're seeing higher engagement across income cohorts, with upper-income households continuing to account for the majority of the share gates. Sam's U.S. comp sales, ex fuel,were also strong at 4.4%.*" (iii) 1/3 of their customers are high income or over $100,000. In the Q&A, mgmt said '*Yes, this is John David, I'll start. So we define where we stratify the income groups roughly as $50,000 and below, $50,000 to $100,000, and then $100,000 and above And as a general rule, our customer base breaks down about a third in each group. And so in terms of what we're doing to, be more attractive to that higher income household. I think this is the, really the story or the word we've been using here is convenience. We are not just a play for value anymore. We talked about the number of units that we've shipped in the last 12 months, which is on par with any eCommerce player in the world. That shows that customers are coming to us, and we're a consideration where we haven't been before. And convenience matters to someone irrespective of what your paycheck is, irrespective of what your income level is. And we expect that to be durable. We don't expect that to change.*"

Oil & Natural Gas: Fort McMurray residents allowed to return home

Evacuation notice lifted

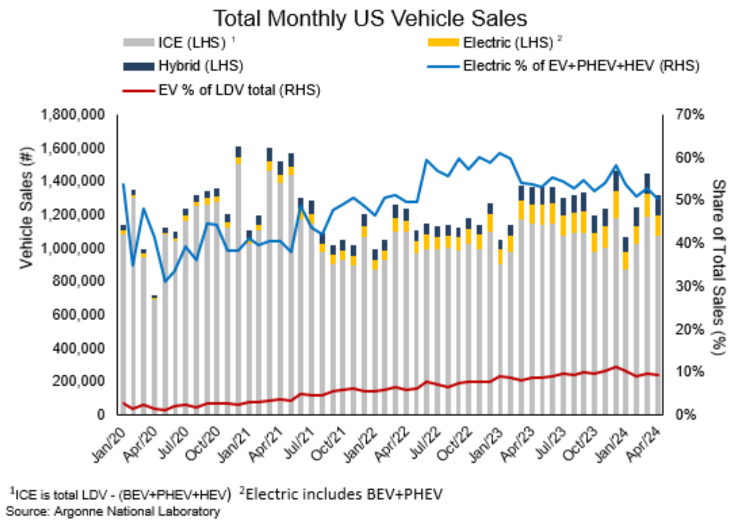
There was good news for the residents of Fort McMurray who evacuated earlier this week were given the go ahead to return to their homes yesterday morning. The evacuation notice for areas residents from the neighbourhoods of Abasand, Beacon Hill, Grayling Terrace and Prairie Creek. The wildfire south of Fort McMurray is still classified as Out of Control but the firefights have made progress in reducing the wildfire to ~19,000 ha.

Energy Transition: Big MoM drop in total US car sale, Hybrids take share from EVs

xxx
US car sales down big MoM in Apr

Argonne National Laboratory posted its monthly US sales data for Light Duty Vehicles (LDVs) broken out into Battery Electric Vehicles (BEVs), Plug-in Electric Hybrids (PHEVs) and Hybrid Electric Vehicles (HEVs) for April, which then allows us to back into ICE sales. (i) On Monday, we tweeted [LINK] "*US consumer weakness? Big =131.1k MoM drop in US car* *sales to 1.31 mm in Apr. Hybrids now 50.3% of EV + PHEV + Hybrid. BEV: -7.7% MoM to 93,598, 7.1% share. PHEV: -26.8% MoM to 26,476, 2.0% share. HEV: -4.3% MoM to 118,435, 9.0% share. ICE: -9.2% MoM to 1,075,003, 81.9% share Thx @argonne #OOTT*". (ii) What jumped out at us was the overall MoM drop in total US car sales. We looked back and it isn't a normal March to April drop. And this was the largest MoM drop in US car sales since Covid. And with the commentary we have seen from some retailers, like Home Depot, on larger purchase items, we asked the question is this a sign of consumer weakness? At Lest on larger ticket items. (iii) For EVs and hybrids, two recent trends have been the slowing growth rate in EVs and Hybrids taking more share from EVs. (iv). Hybrids are still showing the strongest growth and taking share from EVs. Hybrids are now 50.3% of total EV + PHEV + Hybrid, whereas it was ~60% in Jan 2023. (v) In a bad MoM sales for US cars, hybrids had the smallest MoM declines. Total US car sales in Apr were -131,074 cars or -9.1% MoM to 1,313,512 total car sales in Apr vs 1,444,589 in March. The largest MoM drop in US car sales since Covid. BEV: -7,779 or -7.7% MoM to 93,598 and 7.1% of total US. PHEV: -8,711 or -26.8% MoM to 26,476 and 2.0% of total US. HEV: -5,316 or -4.3% MoM to 118,435 and total 9.0% of total US. ICE: -108,271 or -9.2% MoM to 1,075,003 and 81.9% of total US. (vi) It was a big MoM drop in ICE but the reminder is ICE are still 82% of total US car sales. Our Supplemental Documents package includes the data from Argonne.

Figure 53: US total monthly hybrid and electric vehicle sales vs LDV total



Source: Argonne National Laboratory

Energy Transition: Qatar & Exxon CEOs aren't surprised energy transition isn't working

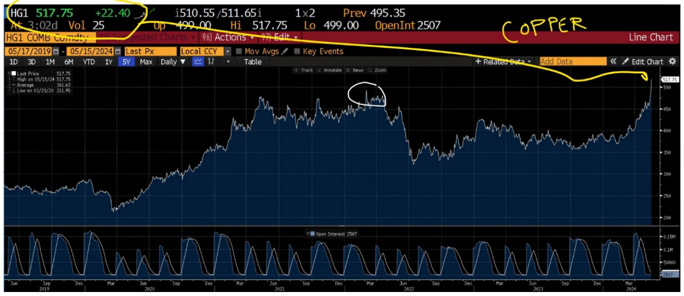
Qatar Energy & Exxon on energy transition

Yesterday we tweeted [LINK] ""*Reality kicks in" for Energy Transition. "majority of the [energy transition] promises were made by officials that are politicians that really don't understand the details of how you can achieve these transitions" Qatar Energy CEO to @flacqua. 👇SAF transcript. #OOTT."* Bloomberg's Francine Lacqua moderated a panel discussion with Darren Woods, Chairman and CEO of Exxon Mobil, Patrick Pouyanne, CEO of TotalEnergies, and Saad Sherida Al-Kaabi, Qatari Energy Minister. Al-Kaabi and Woods reminded of the reality check for energy transition and the key reason why the energy transition reality isn't delivering on the aspirations – the aspirations were set by politicians who don't understand how the energy system works and what was needed to reduce emissions. Our tweet included the transcript we made of the Al-Kaabi and Woods comments. Al-Kaabi said 'Al-Kaabi: *"if I can just add to what my colleagues were saying on the transition, I think the promises were made, but the majority of the promises were made by officials that are politicians that really don't understand the details of how you can achieve these transitions. And it was driven to a to a point where it became in vogue, if you will, for everybody to say Net Zero and environmental and green. And that's what got you elected. And now, when reality came in to actually implement the plans that they were talking about in COP26, let's say, okay, you know, five, six years later, they're saying we can't achieve what we're talking about. So reality kicks in. And now you're saying that what do you actually back off some of the targets? I think the targets were overstretch targets that you can't reach anyway."* Woods said "*Yeah, I think there's a more fundamental issue here, which is the approach that policymakers and politicians around the world are taking to drive the outcomes that they're looking for and the policies are put in place to achieve those outcomes. If you look at what's happening in Europe, our perspective is good. We have quite a large business in Europe is the policy being put in place is very prescriptive and very focused on how to achieve an outcome. So you're relying on politicians and policymakers, to his Excellency's point, that don't have a true understanding of how things actually get done within certain industries to prescribe how to then conduct business."*

Energy Transition: Copper's latest move higher seems pushed by electricity fever

Copper has been on a huge run in 2024 and in listening to the market commentators trying to justify why Copper is going higher and higher seem to be focusing on the increasing forecasts for electricity growth. Our approach has been simple – the more electricity surprises to the upside is a positive for natural gas. On Wednesday, we tweeted [LINK] "*Positive for #NatGas. Record Coper prices! Is this driven by realization that electricity demand is going to be way higher for longer than forecast ie. adding in AI/data centers? If so, what can supply the way more & way sooner power generation other than #NatGas? #OOTT."* **xxxx**

Figure 54: Copper price



Source: Bloomberg

Capital Markets: Biden adds/increases tariffs on China EV, solars, etc

Biden increases tariffs on China

Last week, Bloomberg broke the news that Biden was going to increase tariffs on China EVs, solar panels, etc. That came true and, early Tuesday morning, the White House issued its "*FACT SHEET: President Biden Takes Action to Protect American Workers and Businesses from China's Unfair Trade Practices*" [LINK] and "*To encourage China to eliminate its unfair trade practices regarding technology transfer, intellectual property, and innovation, the President is directing increases in tariffs across strategic sectors such as steel and aluminum, semiconductors, electric vehicles, batteries, critical minerals, solar cells, ship-to-shore cranes, and medical products.* We tweeted [LINK] "*How will China respond? Biden increases tariffs on $18b of China imports. Steel & Aluminum: 0-7.5% to 25%. Semi's 25% to 50%. EVs 25% to 100%. EV batteries 7.5% to 25%. Batteries, Battery components & critical minerals 0-7.5% to 25%. Solar Cells 25% to 50%. Ship-to-Shore cranes 0% to25%. Medical products. #OOTT.*" The White House said the tariffs were on $18 billion of imports from China. We don't think many were surprised that China hasn't come out with any detailed response. It doesn't seem their style to do so, rather they tend to take a more measured approach. On Tuesday, Xinhua (state media) reported [LINK] "*China firmly opposes and lodges solemn representations over the further increase of additional tariffs on some Chinese goods by the United States, and will take resolute measures to safeguard its own rights and interests, the country's Ministry of Commerce said on Tuesday.*" The "resolute measures" were the highlighted words by western media. Our Supplemental Documents package includes the White House Fact Sheet.

Anti-China actions are accelerating with the US election now <6 mths away

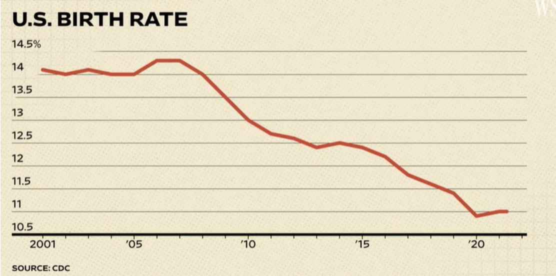
Here is what we wrote in last week's (May 12, 2024) Energy Tidbits memo when Bloomberg first reported China tariffs were coming. *"One of the few thing Democrats and Republicans agree on is an anti -China stance so, in the run up to the Nov 5 Presidential election, we only see more anti-China actions. What isn't clear is how much this will impact China's recovery. On Thursday, we tweeted [LINK] "Expect new tariffs on China to accelerate with US election <6 mths away. Next week, Biden "administration is set to impose new, targeted tariffs on some key sectors including electric vehicles, batteries and solar equipment". @josh_wingrove @JenniferJJacobs @EMPosts #OOTT." Bloomberg broke the story that Biden is expected to announce new tariffs on EV, batteries, solar equipment. We saw the lead Bloomberg reporter on BloombergTV and he said the tariffs would be higher than existing tariffs. "President Joe Biden's administration is poised to unveil a sweeping decision on China tariffs as soon as next week, one that's expected to target key strategic sectors with new levies while rejecting the kind of across-the-board hikes sought by Donald Trump, people familiar with the matter said. The decision is the culmination of a review of so-called Section 301 tariffs first imposed under Trump. The administration is set to impose new, targeted tariffs on some key sectors including electric vehicles, batteries and solar equipment. The full announcement is expected to also largely maintain existing levies. An announcement is scheduled for Tuesday, two of the people said."*

Capital Markets: Does US have labor force for a big ramp up in manufacturing?

Declining high school grads

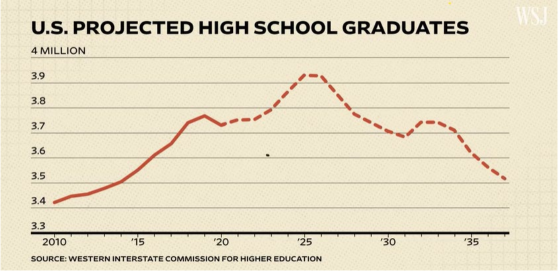
One of Biden's major themes has been bringing manufacturing, especially high end manufacturing, back to the US and that was reinforced by Biden's new and/or increased tariffs on China. One item that didn't get talked about wit the new tariffs was US oncoming labor shortage for factories. The lower US birth rates are now working their way into reducing high school grads and less young people coming into the workforce. On Tuesday, we tweeted [LINK] "*Does US have labor force for the big ramp up in manufacturing jobs? or other sectors traditionally dependent upon high school grads? Recent @WSJ reminders decreasing birth rates 10-15 yrs ago is about to hit available pool of high school grads. Or will AI fill the gap? #OOTT.*" Our tweet included two WSJ graphs from our May 5, 2024 Energy Tidbits memo, when we highlighted how declining US birth rates are now showing up in declining high school grads and therefore less young people coming into the workforce.

Figure 55: US Projected High School Graduates



Source: WSJ

Figure 56: US Projected High School Graduates



Source: WSJ

Twitter: Thank you for getting me to 10,000 followers

In January, I went over 10,000 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.

@Energy_Tidbits on Twitter

LinkedIn: Look for quick energy items from me on LinkedIn

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

Look for energy items on LinkedIn

Misc Facts and Figures.

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

National Chocolate Chip Cookie Day was May 15

National Chocolate Chip Cookie Day was on Wed May 15. As with many recipes there are always different histories of who did first but the most famous (and generally recognized) creator was Ruth Wakefield. The National Sugar Association wrote "*Believe it or not, everyone's favorite chocolate chip cookie is now over 80 years old! The original recipe was created in the late 1930s by Ruth Wakefield who famously ran the Toll House restaurant in Whitman, Massachusetts. The delicious mix of crispy cookie and melted chocolate chunks first appeared in her 1938 cookbook "Tried and True," and was intended to accompany ice cream. The recipe became so popular that it showed up on Betty Crocker's influential radio program, further cementing its reputation as America's go-to cookie. In 1939, Wakefield sold the rights to use her recipe and the Toll House name to Nestle. While there are numerous apocryphal stories about the cookie recipe's origins, from chocolate accidentally falling into cookie batter to a rushed last-minute replacement ingredient miracle, the truth is a bit more practical."* Here is the chocolate chip cookie we ate on May 15. It was good with big chunks of chocolate.

Figure 57: Chocolate Chip Cookie

Source: SAF Group

Ronald Regan's classic line "*There you go again*"

When we tweeted on the IEA's increasing its look back at oil demand for 2023 so it could message lower oil demand growth in 2024, we used the term Rinse and Repeat. But we originally going to use Ronald Regan's classic line from this debate against then incumbent President Jimmy Carter during the 1980 election. Regan's line against Carter was "*there you go again*". It became the key phrase during the 1980 election that Regan won in a landslide capturing 489 electoral votes to Carter's

49 electoral votes Regain only got 50.8% of the vote but Carter was hurt badly by John Anderson, who ran as an Independent, and captured 6.6% of the vote.

Replacing a small carry-on on airplanes with a fishing vest

I fly at least once a month generally on 4+ hour flights but haven't yet seen what the WSJ says is happening – people wearing loaded up fishing vests with items that they wear on instead of a small carry-on to avoid the charge. The WSJ [LINK] wrote *"Hate Baggage Fees? Wear a Fishing Vest on the Plane. Travelers jam their clothes in all the pockets. 'It allows me to have really cheap vacations.' Peter Barnett was galled by increasing airline baggage fees, both for checked and carry-on luggage. He went fishing for a solution. Barnett, a personal assistant to a film director, bought a multi-pocketed vest fit for a day out catching bass. In went his rolled-up trousers, shirts, hat, tie, shoes and charger cables. There was a pocket big enough for his laptop. "I just carry it on, 'this is my jacket.' They don't know what's in there," he says. Once on board he sticks it in an overhead bin. "It allows me to have really cheap vacations." Americans are facing stubbornly high prices, pesky fees, and confusing surge pricing and airline rules. Some of them are rebelling."*

Figure 58: Fishing vest stuffed with travel items

Source: WSJ

Bloomberg saying "*I need to listen well, so that I hear what is not said*"

We always like seeing the quotes as you turn on your Bloomberg terminal. On Tuesday, the saying was "*I need to listen well, so that I hear what is not said"* Thulisile N Madonsela "Thuli". This is something we believe in when we compare statements/reports to prior reports and look for what is said differently, what is said new and what has now been omitted from being said.