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Energy Tidbits

Aug 25, 2024

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Libya Watch: UN Says Headed to Greater Domestic & Regional Instability, House Speaker Warns of Risk for Oil Shut-down

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. Libya domestic tension/conflict continues. UN warns Libya headed to greater domestic & regional instability and Speak of the House warns potential oil shutdown if Tripoli changes Central Bank leadership. [click here]

2. Cdn rail stoppage averted as Canada Industrial Relations Board can't overrule Minister's directive for resuming operations during binding operations. [click here]

3. Vortexa crude oil floating storage had a big upward revision but last 4-week average is still only 63 mmb and there have only been 18 weeks below 70 mmb since Covid. [click here]

4. There are other factors impacting WTI, but 321 crack spreads down $3.65 WoW to 17.10 which would point to drifting WTI as won't incentivize refiners to take more oil. [click here]

5. Norway continues to forecast Norway oil production will peak in 2025 and then decline. [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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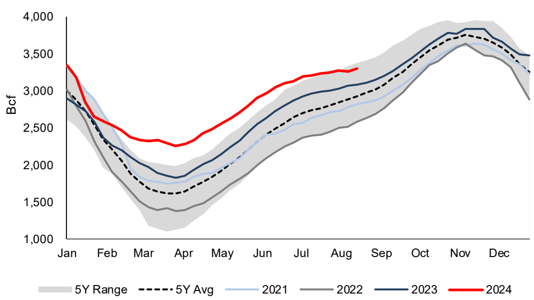
Natural Gas: Really hot summer = less risk US gas storage gets filled early

Less risk for US gas storage to be filled early

HH continues to be weak with US natural gas storage at or near the high end of the 5-yr range. The hot June, July & start to Aug in the Lower 48 helped to narrow the YoY gas storage surplus from looking like a strong probability to storage being filled early to a lesser but still potential probability to do so. The YoY gas storage surplus has dropped from +444 bcf YoY on May 3 to +221 bcf YoY. There may very well be items such as hurricane interruptions, a big spike up in natural gas for data centers, etc. that can change the outlook either up or down but the really hot June and July has lessened the risk to storage being filled early. As noted below, US natural gas storage is now +221 bcf YoY, which is up WoW from +209 bcf YoY last week. And, as noted below, storage could be a lot worse.

Figure 1: US Natural Gas Storage



Source: EIA

Natural Gas: Storage would be way worse if EQT, Coterra, etc didn't curtail production

Storage could be worse

The big holdback to Henry Hub prices this summer, despite the hot June and July, was that higher YoY storage would have been way worse if producers didn't shut-in production or hold back on planned completions. On Tuesday, we tweeted [LINK] "*Risk continues HH #NatGas is stuck in show-me state until Nov & theoretical start to winter withdraw from gas storage season. Hold back remains 👇@NOAA Nov/Dec still looking warmer than normal. Especially with EQT ~0.5 bcfd and Coterra 0.275 bcf/d shut-in production. #OOTT.*" We reminded that gas storage would be a lot worse than it is if key producers hadn't shut-in natural gas production due to low prices. We highlighted US natural gas production leader, EQT, and their Q2 report disclosure of continuing to shut-in production due to prices, which is about 90 bcf for H2/24. Note for our tweet, we wrote ~0.5 bcf/d, which is the 90 bcf over the last six months but we would assume EQT is assuming it could restore the natural gas before Dec 31. Our tweet also noted Coterra's announced shut-in of 0.275 bcf/d for H2/24.

Natural Gas: +35 bcf build in US gas storage; now +221 bcf YoY

+35 bcf build in US gas storage

For the week ending August 16, the EIA reported a +35 bcf build. Total storage is now 3.299 tcf, representing a surplus of +221 bcf YoY compared to a surplus of +209 bcf last week. Since February, total storage had remained above the top end of the 5-yr range, until 3 weeks ago when storage dipped into the 5-yr range. This week's data shows that storage is now -76 bcf below the 5-yr maximum of 3.375 bcf. Last week there was a contra seasonal -6 bcf draw from storage and a big -39 bcf narrowing of the YoY surplus but it didn't really move HH prices. Total storage is now +369 bcf above the 5-year average, below last week's +375 bcf surplus. Below is the EIA's storage table from its Weekly Natural Gas Storage report [LINK] and a table showing the US gas storage over the last 8 weeks.

Figure 2: US Natural Gas Storage

	Stocks billion cubic feet (Bcf)				Historical Comparisons: Year ago (08/16/23)		5-year average (2019-23)	
Region	08/16/24	08/09/24	net change	implied flow	Bcf	% change	Bcf	% change
East	735	723	12	12	727	1.1	676	8.7
Midwest	888	869	19	19	826	7.5	790	12.4
Mountain	263	260	3	3	205	28.3	185	42.2
Pacific	288	287	1	1	241	19.5	262	9.9
South Central	1,125	1,125	0	0	1,078	4.4	1,017	10.6
Salt	280	286	-6	-6	263	6.5	245	14.3
Nonsalt	845	839	6	6	815	3.7	772	9.5
Total	3,299	3,264	35	35	3,078	7.2	2,930	12.6

Source: EIA

Figure 3: Previous US Natural Gas Storage

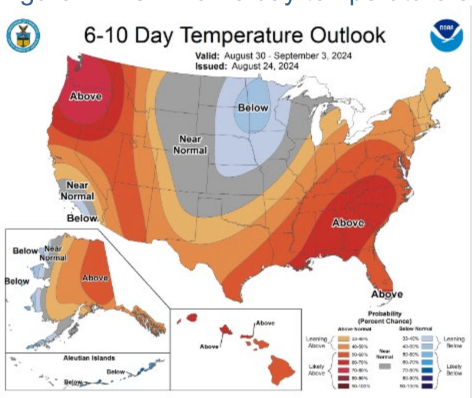
Previous 8 weeks (Bcf)				
Week Ended	Gas in Storage	Weekly Change	Y/Y Diff	Diff to 5 yr Avg
Jun/28	3,134	32	275	496
Jul/05	3,199	65	283	504
Jul/12	3,209	10	250	465
Jul/19	3,231	22	249	456
Jul/26	3,249	18	252	441
Aug/02	3,270	21	248	424
Aug/09	3,264	-6	209	375
Aug/16	3,299	35	221	369

Source: EIA, SAF

Natural Gas: NOAA forecasts mixed temps across Lower 48 to start Sept

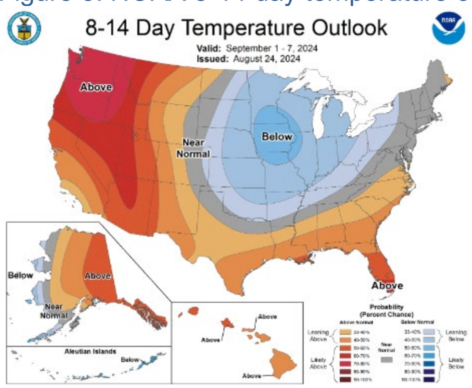
HH prices closed at $2.02 on Friday and our concern is that HH stays stuck around this level or a little weaker until the start of the winter unless there are some supply interruptions. Yesterday, we tweeted [LINK] "*Updated @NOAA 6-10 & 8-14 day temperature outlook. Normal to below normal temp to start Sept in Midwest & NE US. Absent unusual events, HH #NatGas price likely stuck ~$2 with storage +221 bcf YoY, which would be way higher if EQT, Coterra, etc hadn't shut-in production. #OOTT.*" We have been highlighting how it's been a hot June, July and early Aug and that has done nothing to strengthen HH prices. Rather HH was over $3 in mid-June and closed at $2.02 on Friday. This is because storage is still +221 bcf YoY and above the high-end of the 5-yr range and would be way worse (higher) if producers like EQT and Coterra hadn't shut-in natural gas production due to low natural gas prices. Below are NOAA's updated, as of yesterday, 6-10 day and 8-14 day temperature outlook maps covering Aug 30-Sept 7.

Figure 4: NOAA 6-10 day temperature outlook for Aug 30-Sept 3



Source: NOAA

Figure 5: NOAA 8-14 day temperature outlook for Sept 1-7



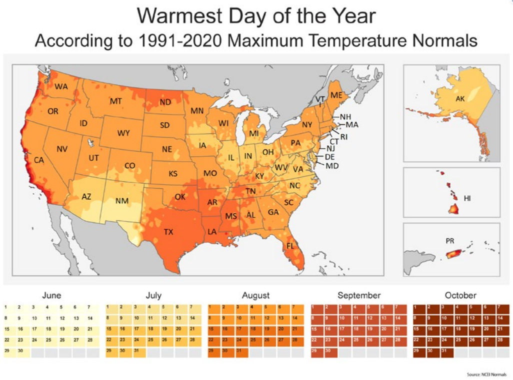
Source: NOAA

Natural Gas: Past the NOAA's normal warmest day of the year for most of Lower 48S

Normal warmest day of the year across the US

August is almost over and that means is past the warmest day of the year for almost of the Lower 48. Here is where we wrote in our July 2, 2023 Energy Tidbits memo. "*Yesterday, we tweeted [LINK] "Here's why temperature watch gets important in July ie. don't want below normal temps when it is supposed to be the hottest. @NOAA map when to expect Warmest Day of the Year. Mid July starts to see hottest day of the year in states like IL, IN, OH, WV, VA, NC. And current @NOAA 8-14 day expects below normal temps in some of these states. #OOTT #NatGas." On Thursday, NOAA posted "When to expect the Warmest Day of the Year" [LINK]. Our tweet included the NOAA map, which reminds that mid-July is when we start to see the hottest day of the year in many states. It's why the temperatures are important in July as we don't' want to see below normal temps when it is supposed to be peak heat and peak summer electricity/natural gas residential/commercial demand.*" We checked the link and it still works.

Figure 6: NOAA Warmest Day of the Year

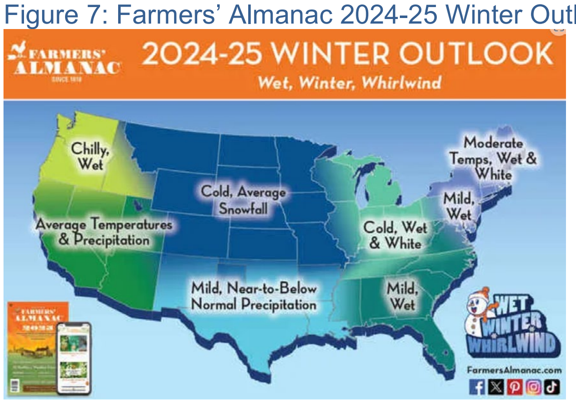


Source: NOAA

Natural Gas: Farmers' Almanac forecasts normal or little colder than normal winter

We always caveat early winter temperature forecasts as they are far from 100%. But, it's the end of August, which means we are starting to see forecasts for winter temperatures in the US. On Wednesday, the Farmers' Almanac released its 2024-25 Winter Outlook [LINK]. They wrote "*The astronomical start of winter begins with the winter solstice on Saturday, December 21, 2024. This winter, La Niña, which refers to the periodic cooling of ocean surface temperatures in the central and eastern equatorial Pacific, is expected to develop and hang on through the season. Taking into account the effect La Niña has on the weather, along with our long-standing formula, we anticipate the winter of 2024-25 will be wet and cold for most locations. The season's coldest temperatures will be found from the Northern Plains to the Great Lakes region. But areas east of the Rockies into the Appalachians will also experience many periods of cold conditions. The coldest outbreak of the season will come during the final week of January into the beginning of February, when frigid Arctic air brings a sharp plunge in temperatures almost nationwide, but especially across the Northern Plains. As this very cold air blows across the Great Lakes, heavy snow showers and snow squalls will bring intense bursts of snow to the lee (east) of the Lakes."* Below is the Farmers' Almanac winter outlook map.

Figure 7: Farmers' Almanac 2024-25 Winter Outlook



Source: Farmers' Almanac

Last year's Farmers' Almanac forecast was a 180 degree miss

Last year's Farmer's Almanac forecast is a good example that winter forecasts are far from 100%. And it turns out the Dec/Jan/Feb 2023/24 was the hottest on record in the US. A year ago, our Aug 27, 2023 Energy Tidbits memo included the Farmers' Almanac 2023-24 winter outlook. Here is part of what we then wrote "Our normal comment at this time of year is that it's still early so long-term winter forecasts don't have much of an impact on natural gas markets going into Labor Day. And that forecasts out a few months are far from 100% success. On Aug 1, Farmers' Almanac issued their 2023-24 Winter Outlook. [LINK]. The Farmers' Almanac describes the winter as '*The BRRR Is Back! Winter weather is making a comeback. After a warm winter anomaly last year, traditional cool temperatures and snowy weather conditions will return to the contiguous United States."* Farmers' Almanac's calls for "*for below-average temperatures and lots of snowstorms, sleet, ice, rain for much of the Great Lakes and Midwest areas of the country, as well as central and northern New England, especially in January and February. (Brrr…)"*

Figure 8: Farmer's Almanac 2023-24 Winter Outlook

Source: Farmer's Almanac

Sounds like Farmers is using a different formula for its winter forecast

Maybe it was because last winter was a huge miss, but it looks like the Farmers' Almanac is using a different formula for forecasting winter temperatures. (i) Winter 2024/25 approach. Here is what Farmer's Almanac wrote "*About Farmers' Almanac Forecasts. For over 200 years, the Farmers' Almanac has been predicting long-range weather forecasts to help you plan ahead. These forecasts are created using a tried-and-true formula that adapts to the mysteries of nature and the ever-changing world in which we live. The basis of our prediction method was developed by our founding editor according to correlations between celestial events and various meteorological conditions. Today this formula uses some of the original rules set forth back in 1818, but also accounts for fluctuations in the environment on Earth, as well as sunspots, the motion of the Moon, and other proprietary factors. Yes, nature throws us a curveball from time to time, but it doesn't stop us from going out on a limb to not only predict what the weather may bring up to a year in advance, but to also put it in print."*

(ii) Winter 2023 approach highlighted a mathematical and astronomical formula. Here is what we wrote in our Aug 27, 2023 Energy Tidbits memo. "*Something jumped out at us when we read the Farmers' Almanac 2023-24 Winter Outlook, who wrote "Our extended weather forecast, which is based on a mathematical and astronomical formula". We checked last year's winter outlook and this was not included, and we have never seen others says this about their winter forecasts. But it also explains why Farmers' Almanac issues its winter outlook well before others. Farmers' Almanac explained it [LINK] as "The editors of the Farmers' Almanac firmly deny using any type of computer satellite tracking equipment, weather lore, or groundhogs. What they will admit to is using a specific and reliable set of rules that were developed back in 1818 by astronomer and mathemetician, David Young, the Almanac's first editor. These rules have been altered slightly and turned into a formula that is both mathematical and astronomical. The Formula. The Farmers' Almanac weather prognosticator, known as Caleb Weatherbee, possesses an exclusive formula that incorporates various elements such as sunspot activity, tidal action of the Moon, the position of the planets, and more. To safeguard this valuable formula, the editors of the Farmers' Almanac keep both Caleb's true identity and the formula as closely guarded secrets."*

Natural Gas: Matterhorn 2.5 bcf/d pipeline should get Waha spot prices above zero

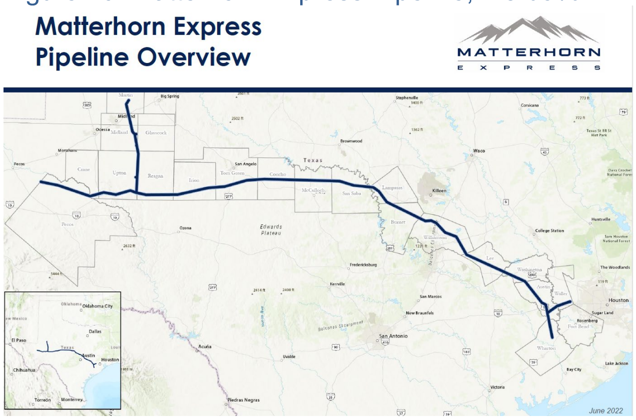
Waha spot prices still negative

We have been highlighting how Waha (Permian) spot natural gas prices have been negative and that is impacting Permian oil rig levels given all Permian "oil" wells produce natural gas and NGLs. It looks like the negative Waha prices should be getting some relief in a few weeks. On Friday, we tweeted [LINK] "*Another week of negative Waha (Permian) spot #NatGas prices, closed at -$1.93. But help is on the way. EnLink CEO 2.5 bcfd Matterhorn Express expected in-service around mid-Sept. Should get Waha back to normal & small Permian players back to drilling. @DallasFed #OOTT.*" Waha spot natural gas prices were once again negative all week and closed at -$1.93 on Friday. Our tweet noted that the 2.5 bcf/d Matterhorn Express pipeline was supposed to start up at the end of Aug is now looking like mid-September. That should provide the relief for Waha natural gas prices to get out of negative. Below is the Waha spot natural gas price as of Friday close and the Whitewater Midstream (operator) Matterhorn Express pipeline map. Our Supplemental Documents package includes the Matterhorn Express pipeline project sheet.

Figure 9: Waha Natural Gas Prices to Aug 23 close

Source: Bloomberg

Figure 10: Matterhorn Express Pipeline, 2.5 bcf/d



Source: Matterhorn Express

Natural Gas: Mexico's natural gas production stuck below 5 bcf/d

On Friday afternoon, Pemex posted its natural gas production data for July [LINK]. The story for Pemex natural gas production is unchanged for the last several years – it is stuck right around 5 bcf/d. Pemex reported July 2024 natural gas production of 4.566 bcf/d, which is down is down -7.5% YoY from 4.936 bcf/d in July 2023 and down -0.9% MoM from 4.606 bcf/d in June 2024. The big picture story for Mexico natural gas for the past six years has been that Mexico natural gas production has been stuck at or below 5 bcf/d, and that means any increased domestic natural gas consumption has been met by US natural gas imports. . Below is our ongoing table of Pemex reported monthly natural gas production.

Figure 11: Mexico Natural Gas Production

Natural Gas Production bcf/d	2017	2018	2019	2020	2021	2022	2023	2024	24/23
Jan	5.326	4.910	4.648	5.005	4.848	4.713	4.955	4.780	-3.5%
Feb	5.299	4.853	4.869	4.942	4.854	4.646	4.979	4.777	-4.1%
Mar	5.383	4.646	4.857	4.946	4.839	4.766	5.035	4.768	-5.3%
Apr	5.334	4.869	4.816	4.827	4.671	4.740	5.095	4.500	-11.7%
May	5.299	4.827	4.841	4.460	4.730	4.702	5.034	4.488	-10.8%
June	5.253	4.840	4.843	4.754	4.727	4.744	5.035	4.606	-8.5%
July	5.216	4.856	4.892	4.902	4.725	4.815	4.936	4.566	-7.5%
Aug	5.035	4.898	4.939	4.920	4.656	4.796	4.947		
Sept	4.302	4.913	5.017	4.926	4.746	4.798	4.969		
Oct	4.759	4.895	4.971	4.928	4.718	4.795	4.950		
Nov	4.803	4.776	5.015	4.769	4.751	4.845	4.888		
Dec	4.811	4.881	5.024	4.846	4.697	4.845	4.786		

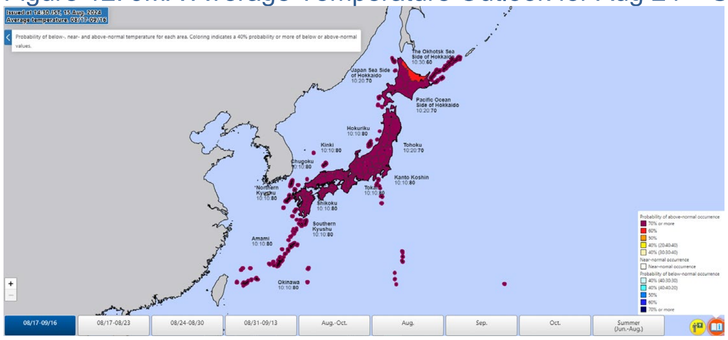
Source: Pemex, SAF

Natural Gas: Japan expects hot temperatures to continue thru at least mid Sept

It's been a hot summer in Japan and the hot weather is expected to continue for the next 30 days. On Thursday, the Japan Meteorological Agency updated its forecast for the next 30 days, Aug 24 thru Sept 23, in Japan [LINK]. There is no JMA commentary on the forecast. JMA is calling for well above normal temperatures for the rest of August and the first three weeks of September, with a +70% probability of above normal temperature occurrence. We checked AccuWeather and they are forecasting daily highs in of 28-30C for the next 30 days. Anyone who has been to Tokyo in August/September knows that it is humid so we should see temperature driven demand for electricity incl natural gas. Below is the JMA temperature forecast for the next 30 days.

JMA temperature forecast for the next 30 days

Figure 12: JMA Average Temperature Outlook for Aug 24 – Sept 23



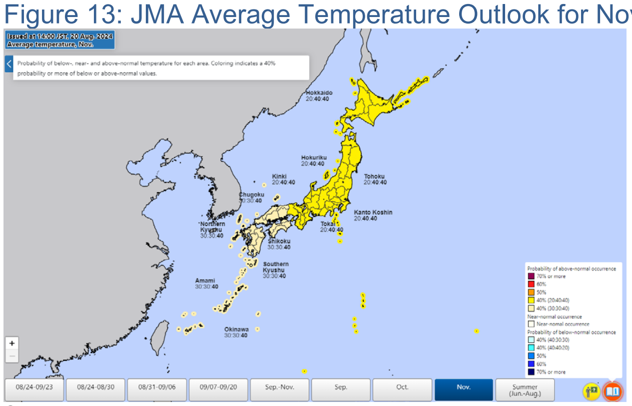
Source: Japan Meteorological Agency

JMA temperature forecast for November

Natural Gas: JMA forecasts warmer than normal November for Japan

It's been a hot summer in Japan and it looks like the warmer than normal weather will continue at least thru November. On Tuesday, the Japan Meteorological Agency updated its forecast for November in Japan [LINK]. There is no JMA commentary on the forecast. JMA is calling for above normal temperatures in the northern part of Japan with a 40% probability of above normal temperature occurrence, and near-normal temperatures for the southern part of Japan. We checked AccuWeather and they are forecasting daily highs in the 17-20C range, and nighttime lows of around 12C. This shouldn't generate much natural gas demand for air conditioning. Rather it's what we call "leave the windows open" weather. Below is the JMA temperature forecast for November.

Figure 13: JMA Average Temperature Outlook for November



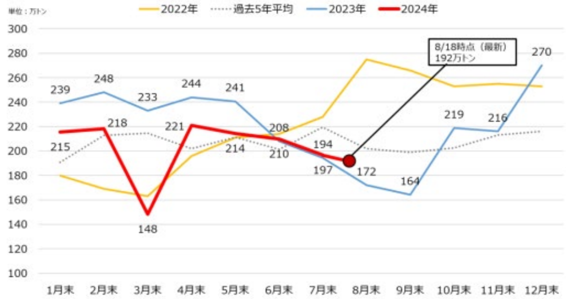
Source: Japan Meteorological Agency

Japan LNG stocks down WoW

Natural Gas: Japan LNG stocks down WoW, up YoY

Japan's LNG stocks were down WoW, are up YoY and are down from the 5-year average. On Wednesdays, Japan's METI releases its weekly LNG stocks data [LINK]. LNG stocks on August 18 were 92.2 bcf, down -3.0% WoW from August 11 of 95.1 bcf, and up +11.6% from 82.6 bcf from a year ago. Stocks are down -5.0% from the 5-year average of 97.0 bcf. Below is the Japanese LNG stocks graph from the METI weekly report.

Figure 14: Japan LNG Stocks



Source: METI

Natural Gas: Japan LNG imports up big MoM and up YoY in July

Japan LNG imports in July

On Thursday, Japan's Ministry of Finance posted its import data for July [LINK]. The MOF reported Japan's July LNG imports were 8.70 bcf/d, up +19.1% MoM from June which was 7.31 bcf/d, and up +10.4% YoY from 7.88 bcf/d in July 2023. Japan's thermal coal imports in July were +10.9% YoY and Petroleum Products imports were -3.7% YoY. Below is our table that tracks Japan LNG import data.

Figure 15: Japan Monthly LNG Imports

bcf/d	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	24/23
Jan	12.66	13.06	11.22	12.85	12.79	11.69	11.63	12.48	10.51	10.56	9.46	-10.5%
Feb	12.88	13.26	12.30	13.36	14.23	12.61	10.99	13.84	12.19	10.98	9.97	-9.2%
Mar	12.46	12.60	12.62	12.61	12.28	11.30	11.16	11.04	10.07	8.86	8.59	-3.0%
Apr	11.54	10.56	10.21	10.52	8.97	9.00	8.31	7.96	8.92	7.25	8.46	16.6%
May	10.06	8.91	8.55	9.66	9.92	8.62	7.09	7.67	8.92	7.14	7.54	5.6%
June	10.91	10.61	10.02	9.90	8.88	8.32	8.42	9.13	9.29	7.25	7.31	0.8%
July	12.14	10.77	10.19	10.19	10.55	10.56	9.35	9.58	9.54	7.88	8.70	10.4%
Aug	10.92	10.93	11.96	11.24	11.73	9.45	9.04	9.75	9.71	8.78		
Sept	11.64	11.06	10.67	9.31	10.04	10.30	10.41	8.66	8.52	8.84		
Oct	10.75	9.38	9.73	9.50	10.12	9.75	9.20	7.17	7.88	8.38		
Nov	11.00	10.71	12.07	10.26	10.15	10.03	9.63	9.38	8.88	8.53		
Dec	12.79	12.51	11.69	12.31	11.23	10.54	11.96	10.89	9.39	10.06		

Source: Japan Ministry of Finance, SAF

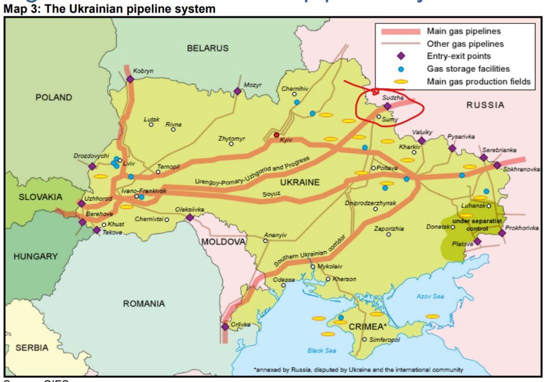
Natural Gas: Russia continues to ship NatGas despite Ukraine control of Sudzha

Ukraine captures key Russian gas infrastructure

It's now been 18 days since Ukraine invaded the Russian region of Kursk and took over control of the Sudzha natural gas intake station in Russia for transport on the last remaining open natural gas intake station in Russia for transport on the last remaining open natural gas pipeline allowed to export Russian natural gas to central European countries. Europe TTF gas prices were up 5% when Ukraine took over Sudzha on fears of supply interruption. However, since then Gazprom has confirmed almost daily, if not daily, that there has been no interruption in natural gas supplies. The latest confirmation we saw the Friday confirmation on Bloomberg that Gazprom continues to ship the same volume of natural gas via Sudzha. That shouldn't surprise because if Gazprom stops natural gas from entering the pipeline at Sudzha, they will be forsaking any export natural gas revenues and Russia needs every dollar it can get. And, at the same time, Ukraine continues to take the transit fees revenue. So, for now at least, it looks like a reminder from Ukraine to Russia that they can cut off Russian natural gas at any time. Below is a 2018 map from Oxford Institute for Energy Studies showing Sudzha.

Figure 16: The Ukrainian pipeline system

Map 3: The Ukrainian pipeline system



Source: OIES

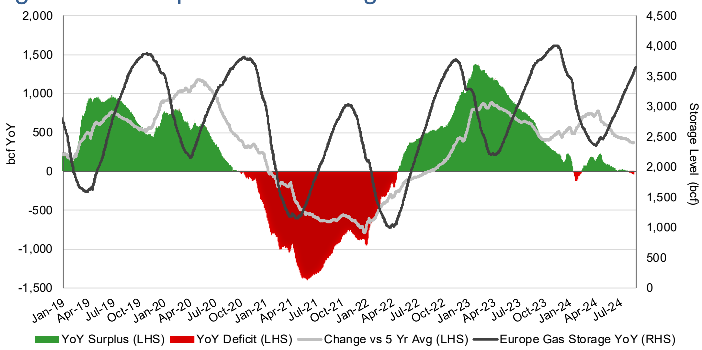
Source: Oxford Institute for Energy Studies

Natural Gas: Europe storage builds WoW to 90.8%, down -0.8% YoY

Europe gas storage

As expected, European natural gas storage has slowed down in filling up as LNG cargoes have been redirected for the past couple months away from NW Europe as it looked like Europe gas storage would be full early. But even still, it is now over 90% full. We remind that we don't necessarily expect Europe gas to get to 100% full. It's not like going to a gas station where you fill up your car to the limit. Rather, getting to mid 90%s would be considered full. This week, Europe storage increased by +2.0% WoW to 90.8% vs 88.8% on August 15. Storage is now down -0.8% from last year's levels of 91.6% on Aug 22, 2023 but up huge vs the 5-year average of 64.33%. As noted above, Europe gas storage has now reached the low 90%'s, which is about where most will consider full ahead of winter. Below is our graph of European Gas Storage Level.

Figure 17: European Gas Storage Level



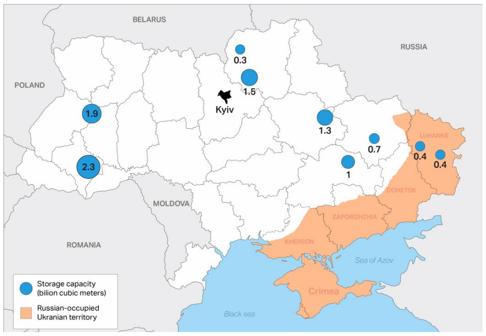
Source: Bloomberg, SAF

Ukraine storage is currently ~7% of total Europe gas storage volume

We have been breaking out Ukraine gas storage levels since the Mar/Apr Russian bombing of the Ukraine natural gas storage, which only impacted some above ground natural gas infrastructure. But it also reminded that of the risk to Europe gas storage from Russia attacks. We broke out the Ukraine storage data from the above

Europe data we monitor weekly from the GIE AGSI website [LINK], and, on August 22nd, natural gas in Ukraine storage was at 22.5% of its total capacity, up from 21.7% of its total capacity on August 15th. Last year, Ukraine storage started the winter on Nov 1, 2023 at 39.38%. Right now, Ukraine makes up ~7% of Europe's natural gas in storage and, at the beginning of winter 2023/24, it was ~10% of Europe's natural gas in storage. Below is a map of Ukraine's major gas storage facilities.

Figure 18: Ukraine Gas Storage Facilities as of July 2023



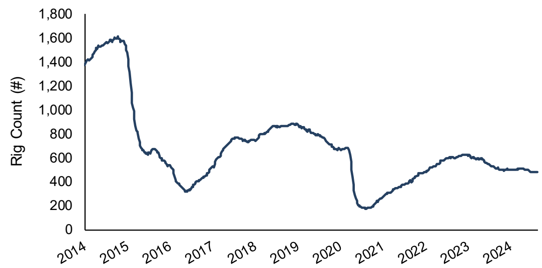
Source: Bruegel

Oil: US oil rigs flat WoW and down -29 rigs YoY to 483 rigs

US oil rigs down -29 YoY

On Friday, Baker Hughes released its weekly North American drilling rig data. (i) Note Baker Hughes no longer breaks out the basin changes by oil vs gas rig type. (ii) Total US oil rigs were flat WoW at 483 oil rigs as of August 23rd. US oil rigs went below 520 rigs on Aug 25, 2023 and has been around 490-510 rigs for the past several months, however, July 19th's 477 rigs marks the lowest oil rig count since December 2021. (iii) Note we are able to see the basin changes but not by type of rig. The major basin changes were Arkoma Woodford -1 rig WoW to 1 rig, Cana Woodford +2 rigs WoW to 18 rigs, Eagle Ford -1 rig WoW to 47 rigs, Granite Wash -1 rig WoW to 4 rigs, Mississippian -2 rigs WoW to 0 rigs, Permian +3 rigs WoW to 306 rigs, and Williston -2 rigs WoW to 34 rigs. (iv) The overlooked US rig theme is the YoY declines. Total US rigs are -47 rigs YoY to 585 rigs including US oil rigs -29 oil rigs YoY to 483 oil rigs. And for the key basins, the Permian is -14 rigs YoY, Haynesville is -8 rigs YoY and Marcellus -6 rigs YoY. (v) US gas rigs were down -1 rig this week to 97 gas rigs.

Figure 19: Baker Hughes Total US Oil Rigs



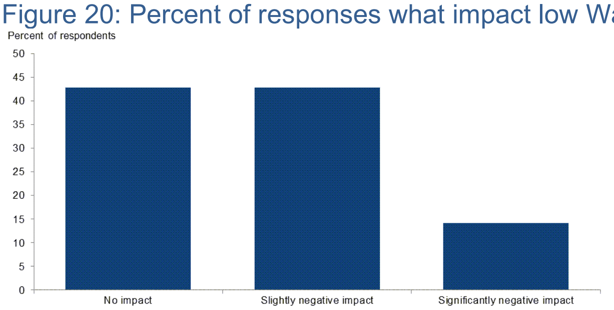
Source: Baker Hughes, SAF

Waha gas prices closed at -$3.55

Oil: Permian oil rigs to be impacted by Waha natgas prices staying low till mid Sept

Earlier in the memo, we highlighted the how Waha spot natural gas prices continue to be negative but there is a sign of a relief with the 2.5 bcf/d Matterhorn Express pipeline now expected to start up in mid-Sept instead of the end of Aug. Hopefully that brings Waha back to positive for some extended period. Waha spot can still move around big time as there will be other interruptions or hurricane impacts, but the norm should move away from negative prices. And that should be enough to get some of the smaller players back to looking at drilling in the Permian. The natural gas from the Permian is the associated natural gas that is produced from Permian oil wells. So if there is near term concerns on Waha natural gas prices, it will impact oil drilling from smaller Permian players. Our tweet yesterday on Waha prices included an excerpt from the Dallas Fed quarterly energy survey that was posted in July. [LINK] One of their special questions was "*What impact will low Waha Hub natural gas prices likely have on your firm's drilling and completion plans in the Permian for the rest of 2024?* " Dallas Fed summarized the responses "*The Waha Hub is a gathering location for natural gas in the Permian Basin that connects to major pipelines. Of the executives surveyed, 43 percent said low Waha Hub natural gas prices won't likely affect their firm's drilling and completion plans in the Permian for the rest of 2024. Meanwhile, 43 percent expect a slightly negative impact, and an additional 14 percent said the low Waha Hub prices will have a significantly negative impact on drilling and completion plans for the rest of this year in the Permian. Small E&P firms were more likely to expect negative impacts.*"

Figure 20: Percent of responses what impact low Waha prices on rest of 2024 drilling plans



NOTES: Executives from 28 exploration and production firms answered this question during the survey collection period, June 12–20, 2024. This question was posed only to executives who said their firm drilled or completed a horizontal well in the Permian Basin in the past two years.
SOURCE: Federal Reserve Bank of Dallas.

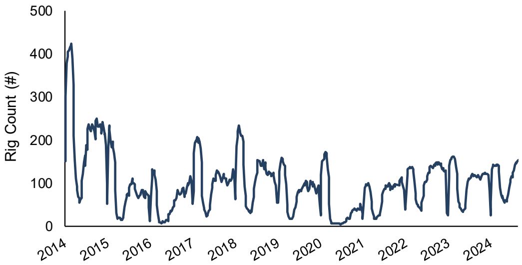
Source: Dallas Fed

Oil: Total Cdn rigs up +2 rigs WoW,

Waha gas prices closed at -$3.55

As happens every year in Canada, rigs start a strong seasonal ramp up after Spring breakup. Spring break up is when melting snow leads to road access being limited/restricted in many parts of Alberta and BC and rigs dramatically decrease from peak winter drilling levels. Then after spring break-up (normally in early June), Cdn rigs start their steady ramp up. Total Cdn rigs declined from 231 at the beginning of March to 114 in early June. This week's rig count was up +2 rigs WoW to 219 rigs. The increasing wildfires and soft natural gas prices are likely slowing the rate of increasing rigs that we typically see as part the seasonal ramp up. Cdn oil rigs were up +2 rigs WoW this week to 153 rigs and are up +37 rigs YoY. Gas rigs are flat WoW this week at 66 rigs and are down -8 rigs YoY, and miscellaneous rigs are flat WoW at 0 rigs total and are flat YoY. Baker Hughes did not update their old format report, so we weren't able to see the provincial breakouts.

Figure 21: Baker Hughes Total Cdn Oil Rigs



Source: Baker Hughes, SAF

Oil: US weekly oil production up +0.100 mmb/d WoW to 13.400 mmb/d

US weekly oil production

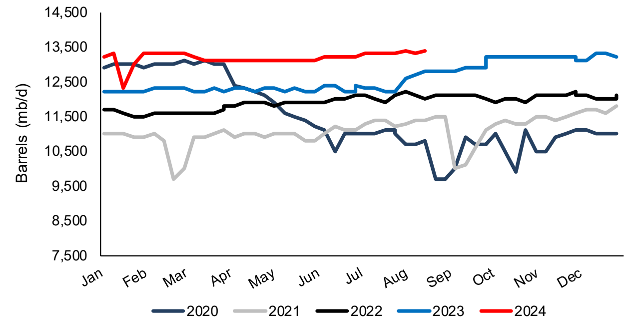
We don't place as much in the EIA weekly oil supply estimates as others do because we recognize the near impossibility for anyone to post an accurate estimate on a Wednesday for the totality of US oil production for the week ended the prior Friday. We have to give the EIA credit for putting out weekly oil supply estimates for the prior week. That can't be easy so no one should be surprised that the EIA weekly oil supply estimates, based on the Form 914 actuals, will regularly require re-benchmarking. And sometimes the re-benchmarking can be significant and other times, it is relatively small. The EIA's weekly oil supply estimates had been essentially unchanged for the last nine months ranging from 13.1 to 13.3 mmb/d with the weekly estimates in July all at 13.3 mmb/d. However, this week marks the second time this month that US oil has reached a 41-year high of 13.4 mmb/d. This week's estimate is up +0.100 mmb/d WoW to 13.4 mmb/d for the week ending Aug 16. On Tuesday August 6th, the EIA released its August STEO and the EIA provides the backup monthly estimates for US oil production and they are more or less in line with July at 13.33 mmb/d and Aug also at 13.33 mmb/d. This week, the EIA's production estimates were up +0.100 mmb/d to 13.400 mmb/d for the week ended August 16. Alaska was up +0.023 mmb/d WoW to 0.410 from 0.387 mmb/d last week. Below is a table of the EIA's weekly oil production estimates.

Figure 22: 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	05/17	13,100	05/24	13,100	05/31	13,100
2024-Jun	06/07	13,200	06/14	13,200	06/21	13,200	06/28	13,200		
2024-Jul	07/05	13,300	07/12	13,300	07/19	13,300	07/26	13,300		
2024-Aug	08/02	13,400	08/09	13,300	08/16	13,400				

Source: EIA

Figure 23: EIA's Estimated Weekly US Oil Production



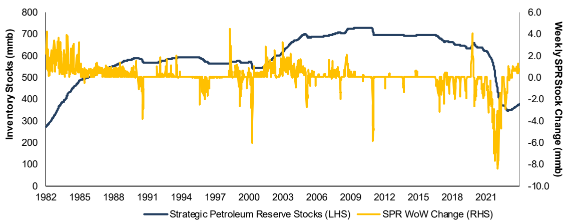
Source: EIA

Oil: US SPR less commercial reserve deficit narrows, now -48.866 mmb

US SPR reserves

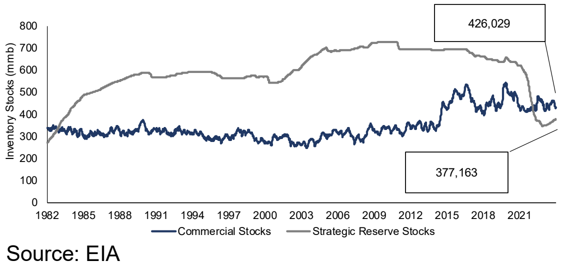
The US Strategic Petroleum Reserves (SPR) continues to be much lower than total US commercial crude oil reserves. The SPR went back below commercial for the first time since 1983 in the Sep 16, 2022 week. This week, we saw a build on the SPR side and a draw on the commercial side. The EIA's weekly oil data for August 16 [LINK] saw the SPR reserves increased +0.636 mmb WoW to 377.163 mmb, while commercial crude oil reserves decreased -4.649 mmb to 426.029 mmb. There is now a -48.866 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 24: Strategic Petroleum Reserve Stocks and SPR WoW Change



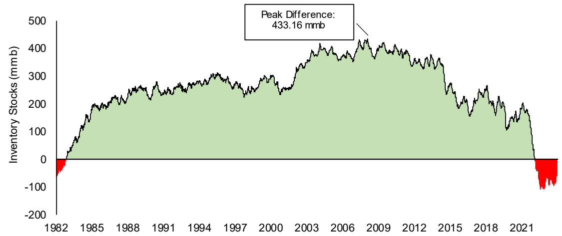
Source: EIA

Figure 25: US Oil Inventories: Commercial & SPR



Source: EIA

Figure 26: US Oil Inventories: SPR Less Commercial



Source: EIA

Oil: US national average gasoline price -$0.06 WoW to $3.36

US gasoline prices

Yesterday, we tweeted [LINK] "*US gasoline prices keep drifting lower as summer driving season is ending. AAA National average prices -$0.06 WoW to $3.36 on Aug 24, -$0.15 MoM and -$0.48 YoY. California at $4.60 on Aug 24, which was flat WoW, -$0.06 MoM & -$0.66 YoY. Thx @AAAnews #OOTT.*" Yesterday, AAA reported that US national average prices were $3.36 on Aug 24, which was -$0.06 WoW, -$0.15 MoM, and -$0.48 YoY. Yesterday, AAA also reported California average gasoline prices were $4.60 on Aug 24, which was flat WoW, -$0.06 MoM, and -$0.66 YoY.

Oil: Crack spreads -$3.65 WoW to $17.10, WTI -$1.82 WoW to $74.83

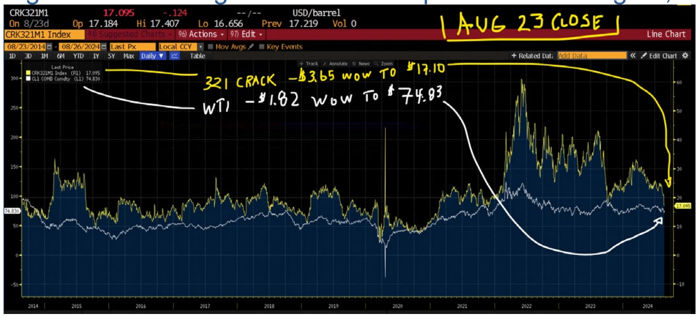
Crack spreads closed at $17.10

On Friday, we tweeted [LINK] "*Big WoW drop in 321 crack spreads being -$3.65 WoW to $17.10 on Aug 23. WTI -$1.82 WoW to $74.83. There are other factors but $17.10 crack spread points to drifting WTI as won't incentivize refiners to take more crude. Thx @business #OOTT.*" It seemed like this week was a return to normal where WTI and 321 crack spreads moved more or less together but that changed late in the week as WTI strengthened ahead of and with Powell's speech. Crack spreads were -$3.65 WoW to $17.10 and WTI was -$1.82 WoW to $74.83. Crack spreads of $17.10 on Aug 23 followed $20.75 on Aug 16, $22.92 on Aug 9, $23.77 on Aug 2, $24.91 on July 26, $22.43 on July 19. $23.22 on July 12, $25.38 on July 5, $24.36 on June 28, $24.36 on June 21, $23.45 on June 14, $24.31 on June 7, $24.04 on May 31, and $25.65 on May 24. Crack spreads at $17.10 are more in line with the more normal pre-Covid ranges of $15-$20. And our tweet noted, there are other factors besides crack spreads that impact WTI, but crack spreads of $17.10 point to drifting WTI prices as they do not incentivize refineries to take more crude.

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

As we saw to close the week, it was another reminder week that WTI prices are affected by much bigger factors than 321 crack spreads. For the last two weeks, WTI oil has outperformed negative 321 cracks. There are global oil items but we think the bigger factor has been the lessening worries that global markets and economies would be weak. So the last two weeks, 321 crack spreads have not been a good indicator for WTI oil prices. Whereas 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 $17.10 as of the Friday Aug 23, 2024 close.

Figure 27: Cushing Oil 321 Crack Spread & WTI Aug 23, 2014 to Aug 23, 2024



Source: Bloomberg

Oil: Canada orders Teamsters/CN/CPKC resume operations, no rail stoppage for now

No rail stoppage for now

The breaking news last night was no rail stoppage for now. Earlier this morning, we tweeted [LINK] "*No rail stoppage at CN/CPKC for now. See 👇 CIRB. Didn't have authority to not follow Ministers direction. So order resume operations, impose binding arbitrations, extend existing collective agreements until new one determined by arbitrator. @TeamstersRail will comply but will challenge in court. #OOTT.*" Our tweet included an excerpt from the Canada Industrial Relations Board order. First, the CIRB said they did not have the authority to go against the Liberals Minister's directive for this decision. CIRB said "*After hearing from the parties and considering their fulsome and helpful submissions, the Board has determined that it does not have authority to review the Minister's directions or to assess their validity.* Second any challenge to the Minister's direction must be in the court. CIRB said "*In the Board's view, the Federal Court has the exclusive jurisdiction to review the Minister's directions pursuant to section 18(1) of the Federal Court Act.*" Third, parties are to go into binding arbitration, resume operations under an extension of the existing collective agreement until the arbitrator decides on a new one. No surprise, the Teamsters said they would challenge in court but its members will be complying with the back to work order. Our Supplemental Documents package includes the CIRB directive.

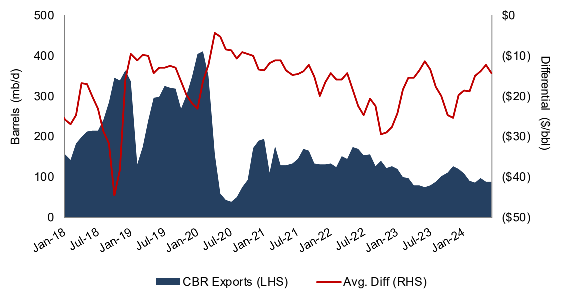
Oil: CER reports Cdn crude by rail exports at 89,204 b/d in June, up +19.1% YoY

Cdn crude by rail up YoY in June

It looks like Cdn crude by rail will be continuing for now and, in theory, should be uninterrupted based on the CIRB ruling that operations are to continue under the current collective agreement until a new collective agreement is deciding by the arbitrator under the binding arbitration. As a reminder, the CER reports crude by rail exports to the US but the CER volumes are always greater than the EIA reported crude by rail imports from Canada. That is because the EIA excludes Cdn crude by rail that is exported down to the Gulf Coast for immediate loading onto tankers for export ie. the EIA doesn't include crude by rail from

Canada that doesn't stay in the US. On Tuesday, the CER released their Canadian crude exports by rail figures for June [LINK]. On Thursday, we tweeted [LINK], *"CN/CPKC rail lockout. Cdn crude #Oil by rail exports. @CER_REC: 89,204 b/d in June 2024. flat MoM. +19.1% YoY vs 74,910 b/d in June 2023 These are likely most oil railed thru US for export loading in Gulf Coast. Excludes propane by rail to west coast. #OOTT"* June crude exports by rail were 89,204 b/d, immaterially changed MoM from 89,141 b/d in May and up +19.1% YoY from 74.910 b/d in June 2023. The CER doesn't provide any explanation for the MoM changes. Below is our graph of Cdn crude by rail exports compared to the WCS–WTI differential.

Figure 28: Cdn Crude By Rail Exports vs WCS Differential



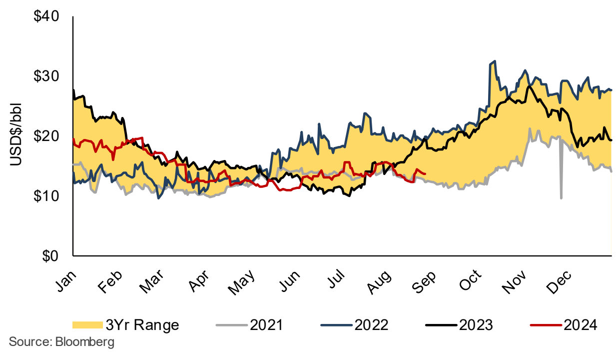
Source: Canadian Energy Regulator, Bloomberg

Oil: Cdn heavy oil differentials narrow $0.10 WoW to close at $13.65 on Aug 23

WCS differential narrows

Please note that, as our 7am MT news cut off, it looks like there will be strike on CN and CPKC railways starting on Tuesday, which could lead to some widening in the WCS less WTI differentials. WCS less WTI differentials have been moving up and down and this week were down $0.10 WoW to close at $13.65. This was despite the continued shutdown at the Exxon Joliet refinery. The WCS less WTI spread narrowed $0.10 WoW to $13.65 on Aug 23. As we look ahead through August, we should start to see the real test of how much the startup of the 590,000 b/d TMX expansion will impact WCS less WTI differentials. Aug is normally when we normally see a widening of the WCS less WTI differentials. And we will see if TMX will lessen that widening. But even with the TMX startup, there will always be the unexpected impact on WCS less WTI differentials from items like refineries up and downs, wildfires, etc. Below is graph showing WCS-WTI differentials that shows this normal seasonal trend of narrowing WCS-WTI differentials that normally start to widen in Aug. The WCS less WTI differential closed on Aug 23 at $13.65 which was a narrowing of $0.10 WoW vs $13.75 on Aug 16.

Figure 29: WCS less WTI oil differentials to August 23 close



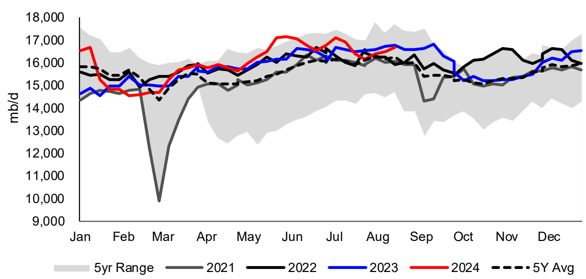
Source: Bloomberg

Oil: Refinery Inputs up +0.222 mmb/d WoW to 16.689 mmb/d

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, August normally has a seasonal ramp up in refinery runs, which means that refineries should soon start their fall turnarounds. On Wednesday, the EIA released its estimated crude oil input to refinery data for the week ended August 16 [LINK]. The EIA reported crude inputs to refineries were up +0.222 mmb/d this week to 16.689 mmb/d and are down -0.087 mmb/d YoY. There were some refineries returning to production. Refinery utilization was up +0.8% WoW to 92.3% and was down -2.2% YoY.

Refinery inputs +0.222 mmb/d WoW

Figure 30: US Refinery Crude Oil Inputs



Source: EIA, SAF

Oil: US net oil imports up +0.077 mmb/d WoW as oil exports up +0.289 mmb/d WoW

The EIA reported US "NET" imports were up +0.077 mmb/d to 2.607 mmb/d for the August 16 week. US imports were up +0.366 mmb/d to 6.552 mmb/d, while exports were up +0.289 mmb/d to 4.045 mmb/d. Top 10 was down -0.171 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 were 224,000 b/d for May. 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

US net oil imports

import estimates. Rather we need to make sure we go to the monthly data for oil imports. (i) Canada was up +0.298 mmb/d to 4.083 mmb/d, which we expect was due to the restart of refineries in Ohio and Illinois. Weekly imports have been higher of late with the increased Cdn crude coming off TMX and hitting west coast US refineries. (ii) Saudi Arabia was up +0.024 mmb/d to 0.207 mmb/d. (iii) Mexico was down -0.547 mmb/d to 0.167 mmb/d. Oil imports from Mexico lately have been significantly lower than prior year's levels with the new Olmeca (Dos Bocas) refinery ramping up and Pemex's other refineries increasing crude oil processing. (iv) Colombia was up +0.142 mmb/d to 0.213 mmb/d. (v) Iraq was down -0.028 mmb/d to 0.166 mmb/d. (vi) Ecuador was up +0.026 mmb/d to 0.163 mmb/d. (vii) Nigeria was up +0.081 mmb/d to 0.190 mmb/d.

Figure 31: US Weekly Preliminary Imports by Major Country

	Jun 28/24	Jul 5/24	Jul 12/24	Jul 19/24	Jul 26/24	Aug 2/24	Aug 9/24	Aug 16/24	WoW
Canada	3,918	3,611	4,418	4,364	4,033	3,478	3,785	4,083	298
Saudi Arabia	146	275	394	221	144	353	183	207	24
Venezuela	0	0	0	0	0	0	0	0	0
Mexico	332	619	388	355	504	224	714	167	-547
Colombia	276	237	79	314	207	215	71	213	142
Iraq	191	317	220	150	178	143	194	166	-28
Ecuador	152	87	50	102	160	235	137	163	26
Nigeria	222	315	164	197	113	170	109	190	81
Brazil	74	251	331	271	71	267	428	177	-251
Libya	89	0	0	0	144	115	2	86	84
Top 10	5,400	5,712	6,044	5,974	5,554	5,200	5,623	5,452	-171
Others	1,147	1,048	993	897	1,399	1,024	662	1,200	538
Total US	**6,547**	**6,760**	**7,037**	**6,871**	**6,953**	**6,224**	**6,285**	**6,652**	**367**

Source: EIA, SAF

Oil: Venezuela Supreme Court ratifies election of Maduro

Venezuela Supreme Court

No one was surprised to see the Thursday news that Venezuela Supreme Justice Tribunal ratified the election results of Maduro as President. And no one is surprised to see the international community still want to see the voting data. So status quo and the key remains if the military stays loyal to Maduro to keep him in power. Reuters wrote "*The supreme tribunal has reviewed material from the electoral authority and agrees that Maduro won the election, court president Caryslia Rodriguez said, adding the decision cannot be appealed. "The results of the presidential election of July 28 released by the national electoral council, where Nicolas Maduro was elected president of the republic, are validated," said Rodriguez."*

Oil: Norway July oil production of 1.826 mmb/d is up MoM but down YoY

Norway July oil production

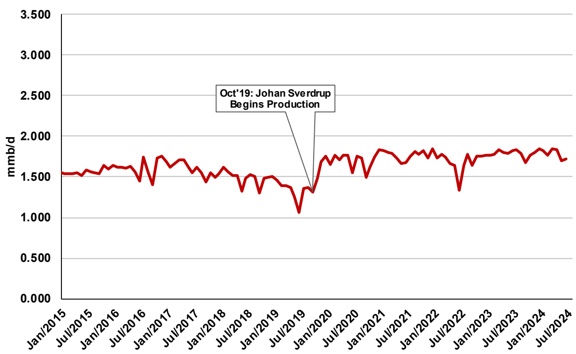
On Tuesday, the Norwegian Offshore Directorate released its July production figures [LINK]. It reported oil production of 1.826 mmb/d, up +6.3% from revised June figures of 1.718 mmb/d and down -0.5% YoY from 1.836 mmb/d in July 2023. July's production actuals came in +6.3% (+0.108 mmb/d) over the forecast volumes of 1.718 mmb/d. The NOD does not provide any explanation for any MoM changes so we don't know if the MoM increases are temporary. But, as we have been highlighting, there will be an increasing watch on Norway oil production will intensify as Norway expects Norway oil production to reach peak oil production in 2025. Note that, prior to 2024, the Norwegian Offshore Directorate was called the Norwegian Petroleum Directorate.

Figure 32: Norway July 2024 Production

		Oil mill bbl/day	Sum liquid mill bbl/day	Gas MSm³/day	Total MSm³ o.e/day
Production	**July 2024**	**1.826**	**2.079**	**360**	**0.691**
Forecast for	July 2024	1.724	1.957	320.8	0.632
Deviation from forecast		0.102	0.122	39.3	0.059
Deviation from forecaset in %		5.9 %	6.2 %	12.3 %	9.3 %
Production	June 2024	1.718	1.961	345.8	0.658
Deviation from	June 2024	0.108	0.118	14.3	0.033
Deviation in % from	June 2024	6.3 %	6 %	4.1 %	5 %
Production	July 2023	1.836	2.059	324.6	0.652
Deviation from	July 2023	-0.010	0.020	35.4	0.039
Deviation in % from	July 2023	-0.5 %	1 %	10.9 %	6 %

Source: Norwegian Offshore Directorate

Figure 33: Norway Monthly Oil Production 2015-2024



Source: Norwegian Offshore Directorate

Oil: Norway still forecasts reaching peak oil production in 2025, then declining

Norway forecasts peak oil supply in 2025

On Wednesday, Norway posted its "*Resource report 2024*", which is a report encouraging an increase in exploration. And it starts with their unchanged long-term oil production forecast from March that forecasts Norway' s peak oil production is in 2025 and then decline under current levels of exploration ie. include ongoing new field discoveries. Early Wednesday morning, we tweeted [LINK]: "*Norway still forecasts peak #Oil production in 2025 & then decline. EVEN WITH "multiple discoveries are made and brought on stream, accompanied by investments aimed at increasing recovery from existing fields. Despite this, resource growth will not be sufficient to offset the overall gradual decline, due to diminishing production from the major, mature fields." See 👇 03/11/24 & 02/08/24 tweet, can't make up for giant Johan Sverdrup hitting peak oil in six mths. #OOTT"* Norway is warning that, even with new discoveries and production enhancement, peak oil supply is in 2025. Norway wrote that even with ""*multiple discoveries are made and brought on stream, accompanied by investments aimed at increasing recovery from existing fields. Despite this, resource growth will not be sufficient to offset the overall gradual decline, due to diminishing production from the major, mature fields." Despite this, resource growth will not be sufficient to offset the overall gradual decline, due to diminishing production from the major, mature fields."* Norway is highlighting the reality that has been seen in other global basins that have a giant oil field – when the giant oilfield starts to decline, it normally points to decline in a country production. Andt hat is the case in Norway with the giant Joahn Sverdrup expected to start to decline in late 2024 or early 2025. Norway does says that a big increase in exploration and oil and gas spending could lead to some modest growth and push back in oil decline. Our Supplemental Documents package includes excerpts from the Norway resource report.

Figure 34: Norway forecast long term Norway oil production

NORWEGIAN OFFSHORE DIRECTORATE AUG 21/24

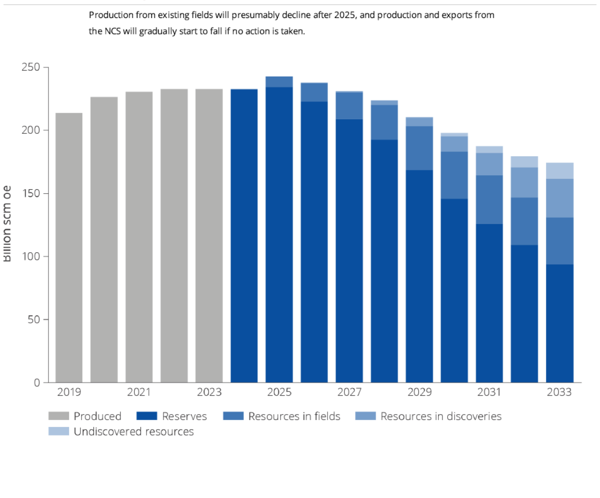


Figure 3.6 Production history and forecasts by resource class (Resource Accounts as of 31 December 2023(7) RNB 2024).

Source: Norwegian Offshore Directorate

03/11/24: Norway forecasts reaching peak oil production in 2025, then decline
Norway's new forecast to reach peak oil production in 2025 is unchanged from what they posted on March 11, 2024. Here is what we wrote in our March 17, 2024 Energy Tidbits memo. "*Norway forecasts Norway reaching peak oil production in 2025, then to decline. No one should be surprised to see Norway forecast that ill hit peak oil production in 2025 and then begin to decline. That conclusion was obvious on Feb 8 when Aker BP, a partner in the giant Johan Sverdrup oilfield, told investors that Johan Sverdrup was going to reach peak production level around year-end 2024 and then begin to decline. Our thesis on Norway oil production has been that we expect Norway oil production to peak around end of 2024 or early 2025 based on the recent Aker BP comments that Norway's giant Johan Sverdrup oil field will start to decline in late 2024, which we believe would likely lead to Norway hitting peak oil production and then begin to decline. It looks like that these is supported by Norway's energy agency (the Norwegian Offshore Directorate) blog on Monday. On Tuesday we tweeted [LINK] "ICYMI. Norway forecasts it will hit peak #Oil production in 2025 & then decline therefrom. Jan 2024 was 1.8 mmb/d. See 👇Feb 8 tweet. Giant oil field Johan Sverdrup to hit peak & begin decline ~yr-end 2024. Start of decline in giant*

oilfield = decline in oil for Norway. #OOTT." On Monday, we tweeted [LINK] "Norway #Oil production peak in 2025 and in decline says @sokkeldir. Makes sense, see 👇Feb 8 tweet. massive Johan Sverdrup oil field led to a return to Norway oil growth. But it starts to decline in late 2024/early 2025. Positive for #Oil post 2024. #OOTT." Norway's Mar 11 blog was "High price to pay for halting exploration for oil and gas" [LINK] Their blog was a big picture warning that Norway shouldn't stop further exploration, production development activity as it will be a big hit to Norway. It's worth a read as it sounds like the Norway Climate committee is saying they want to stop all new exploration but also production, installation and operation. So that means an ever earlier end of life for oil and gas production and facilities. Ie. no more tie-in of smaller satellite fields to an existing platform. But included in the blog is a sente3nce that fits our Feb thesis – Norway oil production will peak in 2025 and then start to decline. They write "Production is declining on its own. The Committee presumes that activity in the oil and gas industry on the Norwegian shelf is too high leading up to 2050, which means that measures must be implemented to cut production. On the other hand, the Norwegian Offshore Directorate expects activity in the industry to naturally decline following a production peak in 2025. The production decline towards 2050 is within what the Intergovernmental Panel on Climate Change and the IEA have projected is in line with successfully following up the Paris Agreement." Norway is forecasting reaching peak oil production in 2025 and then beginning a decline therefrom. Our Supplemental Documents package includes the Norwegian Offshore Directorate blog."

07/14/24: Aker BP giant Johan Sverdrup oilfield to start decline late 24/early 25
Our tweet this week reminded that Norway's giant Johan Sverdrup oilfield is forecast to start to decline in late 2024 or early 2025 by the operators in the field. Here is what we we wrote in our July 14, 2024 Energy Tidbits memo. "*Norway produces ~1.7 mmb/d of oil but Norway forecasts its country production will begin to decline in 2025. This is driven by the start of decline from Norway's largest oilfield, Johan Sverdrup, in late 24/early 25. It's only math. If Norway's giant oilfield starts to decline, it likely means Norway's oil production begins to decline. On Friday, we tweeted [LINK] "Positive for #Oil in 2025. Norway produces ~1.7 mmb/d, on track to hit peak oil in 2025 & then decline therefrom. Why? Giant ~750,000 b/d Johan Sverdrup Aker field. Aker BP Q2. JS continues to produce at elevated plateau, drilling "will help to maintain this level until late 24 or early 25" ie. then moves into decline. In line with 👇03/12 tweet on Norway forecast for country to hit peak oil production in 2025 & then decline therefrom. #OOTT." Aker BP is a non-operating partner in Johan Sverdrup and held its Q2 call on Friday. Mgmt reiterated the Johan Sverdrup partners expectation that its elevated plateau of 750,000 b/d of oil can only be maintained until late 24/early 25, which means production declines therefrom. Mgmt also noted the fundamental reason for decline is no different than any other conventional oilfields – increasing water cut. Part of mgmt's comments were "At Johan Sverdrup. It's a pleasure to see just how it keeps on performing. This giant field with almost 3 billion barrels in initial reserves was originally designed for a gross oil capacity of 660,000 barrels per day. Last year this was increased to 755,000 barrels, if we also include natural gas, the field has a capacity to deliver close to 800,000 barrels of oil equivalents per day and the performance has been nothing but*

remarkable with high production efficiency, very low production cost of around $2 per barrel and with maybe the lowest emission intensity in the industry of less than l kilogram of CO2 per barrel. In the second quarter, Aker BP share of production from Johan Sverdrup increased to 241,000 barrels of oil equivalents per day. As we have previously discussed, water production has been increasing in some of the wells over the last year. This is as expected and something that the operator is managing but continuously optimizing production on a well by well basis. We are also adding new wells with four added in the first half of 2024 and the fifth well have been started up now in July. Another five wells are planned for the second half. As of today, Johan Sverdrup continues to produce at the elevated plateau and the ongoing drilling activity will help to maintain this level until late '24 or early '25":

Oil: Russia's oil refining rate reached 2024 high

Russia's Oil Refinery runs climbed in August

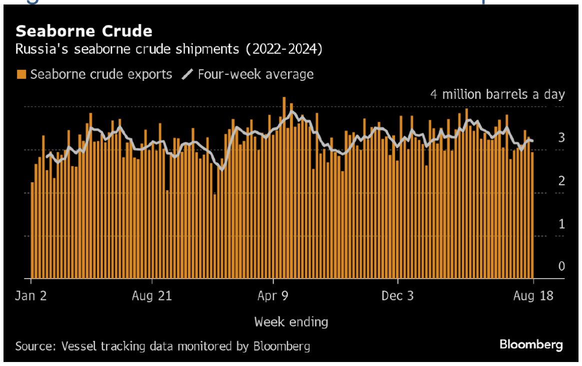
We remind that as Russia oil refining goes up, it means less Russia oil for export. On August 16th, Bloomberg reported that Russia's oil refining rate through the first two weeks of August had reached the highest of the year. Processing reached 5.53 mmb/d from August 1-14, which was above January's peak rate of 5.45 mmb/d when Ukraine started attacking Russian processing plants. Bloomberg reported, *"Average crude processing rate accelerated in the second week of August to 5.58m b/d compared with 5.49m b/d in the first week of the month. If the processing rate is sustained throughout August, it will be the highest average monthly level since July 2023, according to historical figures."* Our Supplemental Documents Package contains the Bloomberg report.

Oil: Russia's seaborne crude oil exports return to downhill trend

Russia's seaborne crude exports

This week, the four-week average for Russia's seaborne crude exports declined after two consecutive weekly increases which interrupted their downhill trend. The four-week average is down to 3.2 mmb/d for the week to August 18, and the decline was driven by a loss of barrels from its Sakhalin Island terminal in Asia. The four-week average in the week to July 28 bottomed at 2.97 mmb/d, its lowest since August 2023. Bloomberg reported "*Russia's seaborne daily crude flows in the week to Aug. 18 fell by about 360,000 barrels to 2.93 million, the second straight weekly decrease. The drop in the weekly flow was the biggest since early July and took shipments to their third-lowest recorded this year."* Crude shipments so far this year are 40,000 b/d below 2023's average. Russia has extended its gasoline export ban with the seasonal refinery turnaround, which should free up some space crude oil for exports. Russia has pledged to compensate for overproduction against its April target, which was attributed to "technicalities of making significant output cuts". Russia made significant output cuts in May, June, and July however they were still above their promised targets. Our Supplemental Documents package includes the Bloomberg report.

Figure 35: Russia's Seaborne Crude Shipments



Source: Bloomberg

Russia oil exports to China down vs early April driven by lesser discounts

Russia oil shipments to China averaged 1.36 mmb/d for the first half of April. But they have been down since then with the reports that Russia had cut its discounts to China and that meant China was taking less Russian oil. Bloomberg's above report this week highlighted Russia oil shipments to China were down to 1.22 mmb/d for the week ending August 18, up from last week's 1.16 mmb/d for the August 11 week and down from 1.36 for the first half of April. The last six weeks average is now 1.12 mmb/d. We were warned that China oil imports from Russia were being hit on April 22 by one of our favorite commentators on the Gulf Intelligence Daily Energy Podcasts is Victor Yang, Senior Analyst JLC Network Technology. He is based in China so we like hear his on-the-ground views on oil, natural gas and markets in China. Here is what we wrote in our April 28, 2024 Energy Tidbits memo referencing Yang's comments from our April 22, 2024 tweet [LINK] that included a transcript we made of Yang's comments. "*And for the second quarter, we see a lot of refinery maintenance, is imports will actually come down. And for now, the premium for Russian cargoes have strengthened this year, from -0.5 barrels to -0.3 barrels. And now it's flat to Brent, meaning 0 now. So this has dampened refiners, particularly independents, interest in Russian crude. Their margins for imported crude, including Russian crude, actually turned negative late last month and the beginning of this month. So it's now kind of [inaudible] slightly above the breakeven point. So the interest in this has been dampened too. So we are not expecting imports to grow much in the second quarter, yes.*" Below is the table from Bloomberg's Russia oil exports report this week.

Figure 36: Russian Crude Exports to Asia

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

4 weeks ending	China	India	Other	Unknown Asia	Other Unknown	Total
July 14, 2024	0.99	1.87	0.00	0.00	0.00	2.86
July 21, 2024	1.05	1.79	0.00	0.04	0.00	2.88
July 28, 2024	1.09	1.54	0.00	0.07	0.00	2.70
August 4, 2024	1.18	1.53	0.00	0.16	0.00	2.88
August 11, 2024	1.16	1.53	0.00	0.26	0.00	2.96
August 18, 2024	1.22	1.41	0.03	0.25	0.03	2.94

Source: Vessel tracking data compiled by Bloomberg   Bloomberg

Source: Bloomberg

Oil: OPEC+ gets updated compensation plans from Iraq and Kazakhstan

As expected, OPEC received the updated compensation plans from Iraq and Kazakhstan. This was supposed to happen so that is a positive. But the question remains will they deliver on their new commitment to cut back on production to levels to compensate for prior over production. OPEC's release [LINK] included the below compensation schedule. OPEC wrote it "*received updated compensation plans from Iraq and Kazakhstan for their overproduced volumes for the first 7 months of 2024 (January through July 2024), which totaled about 1,440 tb/d for Iraq and 699 tb/d for Kazakhstan, according to assessments made by the independent sources approved in the Declaration of Cooperation (DoC).*" Our Supplemental Documents package includes the OPEC release.

Can OPEC add back oil in 2024?

Figure 37: Iraq and Kazakhstan compensation schedule

Country	Cumulative overproduction Jan. 2024 thru July 2024 (tb/d)	Compensation Plan				
		Aug-24	Sep-24	Oct-24	Nov-24	Dec-24
Iraq	1,440	90	95	95	100	110
Kazakhstan	699	49	28	265	32	54

Country	Compensation Plan								
	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25
Iraq	120	120	120	120	105	90	90	90	95
Kazakhstan	65	52	39	36	33	18	16	13	1

Source: OPEC

Oil: OPEC+ will have to wait until Q2/25 if it doesn't add back barrels on Oct 1, 2024

There wee many comments this week on what OPEC will decide to do with its scheduled Oct 1, 2024 start of the returning of the voluntary cuts to oil markets. Our view has been unchanged. We continue to believe the challenge for OPEC+ in adding back barrels is that, if they don't start adding back barrels on Oct 1, 2024 as per their plan, they will have to wait until at least Q2/25. After the IEA posted its OMR on Tuesday we tweeted [LINK] "*Here's why OPEC+ will have to wait until at least Q2/25 to add back #Oil barrels if they don't start*

Can OPEC add back oil in 2024?

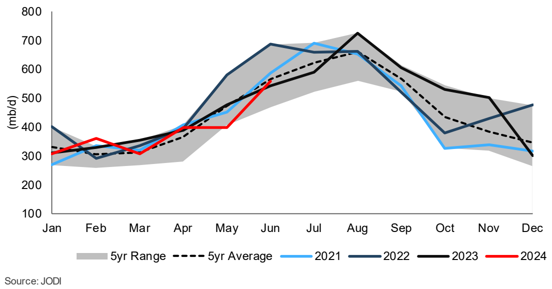
adding back on Oct 1, 2024. Oil consumption is always seasonally lower in Q1 each year vs the preceding Q4. Today's IEA OMR is -1.4 mmbd QoQ. OPEC MOMR is -0.66 mmbd QoQ #OOTT." The problem is that global oil consumption is always seasonally lower in Q1 of a year relative to Q4 of the preceding year. So the last thing we think OPEC would do is start adding back oil in a declining demand period. OPEC's MOMR Aug forecasts Q1/25 oil demand at 104.91 mmb/d, which is down -0.66 mmb/d QoQ vs Q4/2 of 105.57 mmb/d. IEA"s OMR Aug forecasts Q1/25 oil demand tat 102.3 mmb/d, which is down -1.4 mmb/d QoQ vs Q4/24 of 103.7 mmb/d.

Saudi oil use for electricity up MoM in June

Oil: Saudi use of oil for electricity up big MoM in June

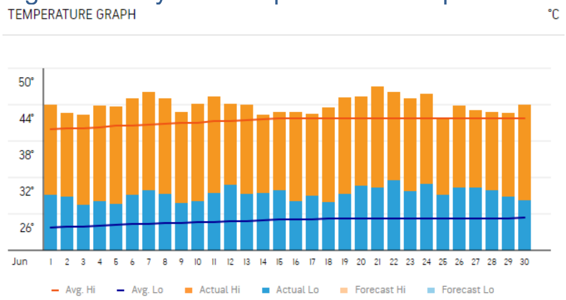
It has been hot in the Middle East this summer and that has been in sync with the normal seasonal ramp up in Saudi Arabia's use of oil for electricity for air conditioning. The JODI data for Saudi Arabia oil supply and demand for June [LINK] was updated this week. Saudi Arabia is moving into its normal season increasing use of oil for electricity for air conditioning. We won't be surprised to see a big ramp up in Saudi's use of oil for electricity in July when that data comes out in next month as it's been really hot in the Middle East. Oil used for electricity generation (direct use) in June was 558,000 b/d (vs June 2023 of 543,000 b/d) and May was 398,000 b/d (vs May 2023 of 478,000 b/d). The AccuWeather temperature recap was that it was hot in June where there were daytime highs mostly in the 42-46 degree range, reaching a maximum high of 47 degrees, while the nighttime lows were warm as well in the high twenties. Another factor impacting the use of oil for electricity is that Saudi Arabia is increasing its use of natural gas for electricity. The normal trough-to-peak swing is approx 400,000 b/d. Saudi peak oil used for electricity in 2023 was 726,000 b/d in Aug 2023. Below are the AccuWeather Temp maps for Riyadh for June and May.

Figure 38: Saudi Arabia Direct Use of Crude Oil for Electricity Generation



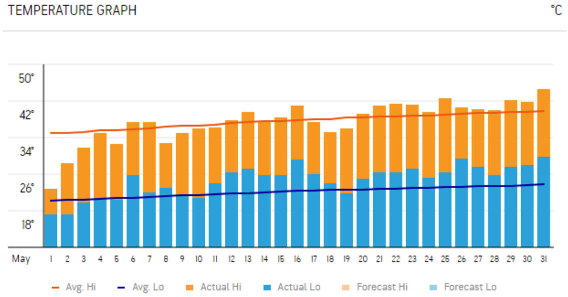
Source: JODI, SAF

Figure 39: Riyadh Temperature Recaps for June



Source: AccuWeather

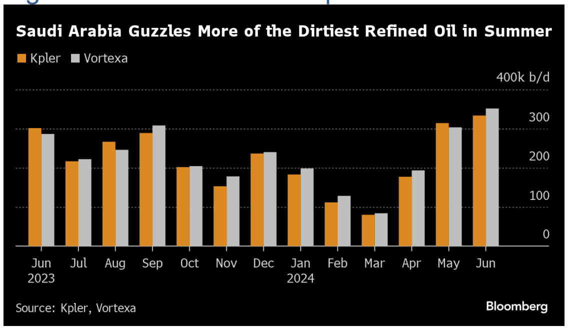
Figure 40: Riyadh Temperature Recaps for May



Source: AccuWeather

Saudi Arabia boosted fuel oil imports to 3-year high amid summer demand
The expectation for Saudi Arabia to crank up oil used for electricity has been apparent because it has been really hot but also because Saudi Arabia has been importing fuel oil for electricity. Here is what we wrote in our July 14, 2024 Energy Tidbits memo. "*It's been hot in the Middle East in June and also in early July, even hotter than normal. So there is a big air conditioning burn. On Friday, Bloomberg reported that Saudi Arabia had increased imports of fuel oil to a 3-year high to match the demand from the hot summer and increased air conditioning. Shipments have increased to about 350,000 b/d according to Vortexa. Bloomberg reported "Saudi Arabia is the region's biggest buyer of fuel oil, a type of dirty product that's left over after refineries produce transport fuels like gasoline and diesel. It also burns crude oil directly to produce electricity, which likely contributed to the kingdom's exports dropping to a 10-month low of about 5.6 million barrels a day in June, according to data compiled by Bloomberg. Fuel oil is mostly sold at a discount to crude since it's heavier and more polluting……..In April, the kingdom resumed purchases from Russia after a five-month pause. Supplies from there have nearly doubled since then though are still below the levels of last summer." Below is a graph showing Saudi Arabia's fuel oil imports, and a graph showing Saudi Arabia's fuel oil imports from Russia alone. Our Supplemental Documents package contains the report from Bloomberg."*

Figure 41: Saudi Arabia' imports of fuel oil



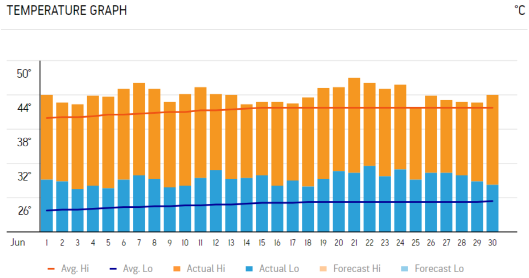
Source: Bloomberg

07/21/24: Hot weather was to drive increases in oil for electricity in Jun and Jul

Record heat in the Middle East

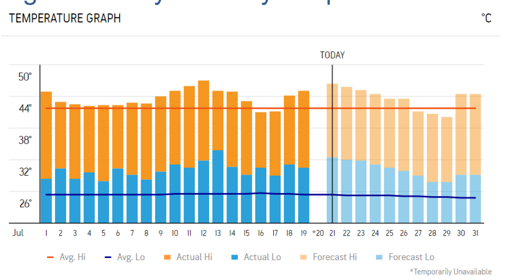
Here is what we wrote in July 28, 2024's Energy Tidbits Memo. *"Look at any of the Middle East news and one of the non-war key stories is how hot it has been in July with daily highs in the high 40sC and nighttime lows in the 30'sC. It's been record heat in the Middle East in June and July, which means we should see big increases in Saudi use of oil for electricity in June and July in the next two months' JODI data. Below are the AccuWeather daily temperatures vs normal for Riyadh for June and July to July 19."*

Figure 42: Riyadh daily temperatures vs normal in June



Source: AccuWeather

Figure 43: Riyadh daily temperatures vs normal in July

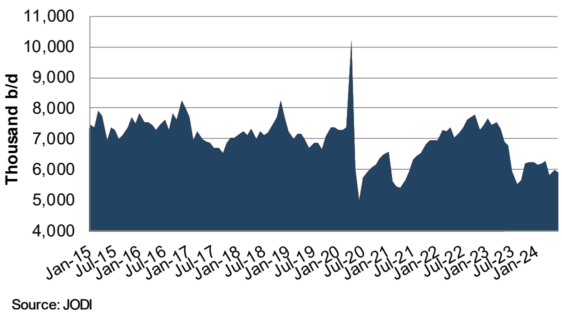


Source: AccuWeather

Oil: Saudi net oil exports down -65,000 b/d to 5.907 mmb/d in June
Note, until recently, JODI did not have access to Saudi import data. But the oil import data is available so we calculate net oil exports. In June, the JODI data showed Saudi net oil exports were down -65,000 b/d MoM to 5.907 mmb/d. This comes as imports were down -6,000 b/d and exports are down -71,000 b/d. Below is our graph of Saudi Arabia monthly net oil exports.

Saudi net oil exports down -65,000 b/d MoM

Figure 44: Saudi Arabia Net Oil Exports (mb/d)



Source: JODI, SAF

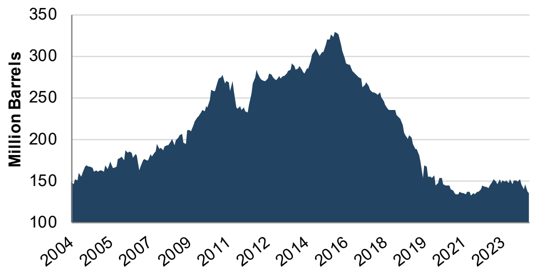
11/10/23 Saudi reminds oil exports are seasonal, less in summer/more in winter
There are always unusual events but, as a rule, there is a seasonality to Saudi oil exports. Here is what we wrote in the Nov 12, 2023 Energy Tidbits memo. "*We probably should have called it Saudi Oil 101, but we were a little surprised that Saudi Energy Minister felt the need to explain how there is seasonality to Saudi's oil exports because Saudi domestic consumption of oil has a seasonal pattern. So seasonally, there is more Saudi oil available for export in the fall than in the summer. On Friday, we tweeted [LINK] "Agreed, he is explaining Saudi Oil 101. Summer heat = more #Oil used to generate electricity for A/C ie. less for export. Aug 2023 was 726,000 b/d, +414,000 b/d vs Jan 2023. See 👇SAF 10/22/23 Energy Tidbits graph. Thx @SVakhshouri for flagging. #OOTT." Well known oil strategist Dr. Sara Vakhshouri tweeted "Saudi Energy Minister on #oil price drop: demand is healthy & speculators are to blame for the recent drop. OPEC exports don't indicate increased production. Shipments are seasonal, dipping in summer & rebounding in Sep & Oct; not a sign of output changes." This is the theme we highlight every month when we report on the monthly Saudi oil data for oil to refineries, production, exports, oil for electricity and oil into inventories. Our tweet showed our Oct 22, 2023 Energy Tidbits graph on how Saudi used 414,000 b/d more oil for electricity in Aug than it did in Jan because of the weather. The hot summers always drive up Saudi use of oil for electricity.*"

Oil: Once again, can't reconcile monthly Saudi oil stocks to the monthly components
For the past few months, we have highlighted the Saudi monthly oil consumption/production data can't be reconciled to the MoM changes in Saudi oil stocks. Ie. We raised this concern in the Saudi oil stocks/inventory data for March, April and May. And it also applies to the new June data. It's not just that we can't reconcile but the differences are large, at least on a daily

Saudi oil inventory data

basis. There is likely a reason for this but, at least for now, we can't reconcile the monthly changes in Saudi oil stocks/inventory. The JODI data for Saudi oil stocks is 134.193 mmb on June 30, which is down -1.752 mmb MoM from 135.945 mmb on May 31. But when we look at the components of the MoM changes for production, oil used for electricity, oil intakes into refineries and net oil exports, we would have expected to see a build in oil stocks of 7.950 mmb in June ie. a difference of -9.702 mmb. There is always a difference between the MoM oil inventory changes and the math of the major components but not to a variance of -9.702 mmb. For the math components. Saudi production in June was 8.830 mmb/d, down -163,000 b/d MoM vs 8.993 mmb/d in May ie. this would have led to a -163,000 b/d or -4.890 mmb MoM draw in inventories. MoM increase in oil inventories. Saudi direct use of oil for electricity was 558,000 b/d in June, up +160,000 b/d MoM vs 398,000 b/d in May ie. this would lead to a -160,000 b/d or -4,800.000 mmb MoM draw in oil inventories. Refinery intake of oil was 2.423 mmb/d in June or -523,000 b/d MoM vs 2.946 mmb/d in May ie. this would have led to a 523,000 b/d or 15.690 mmb MoM increase in oil inventories. Net oil exports were 5.907 mmb/d in June, down -65,000 b/d MoM vs 5.972 mmb/d in May ie. would lead to a 65,000 b/d or 1.950 mmb MoM build in oil inventories. The net impact of the key components would have been a MoM build of 7.950 mmb in oil inventories in June vs the reported MoM draw of -1.752 mmb.

Figure 45: Saudi Arabia Oil Inventories (million barrels)



Source: JODI, SAF

Houthis hit oil tanker

Oil: Houthis hit oil tanker carrying ~1 million barrels in the Red Sea

This week, the Houthis hit the Greek-flagged Sounion oil tanker that was reportedly carrying a load of 1 million barrels. Arab News reported "t*he United States warned Saturday of a potential environmental disaster in the Red Sea after Houthi rebels struck an oil tanker off the Yemeni coast. The Greek-flagged Sounion was struck on Wednesday off the rebel-held port city of Hodeida, with the Iran-backed Houthis claiming to have hit the vessel with drones and missiles. On Friday, the UKMTO maritime agency said three fires had been spotted on the ship, while a video released by the Houthis on social media allegedly showed three explosions on the ship. The 274-meter long vessel had departed from Iraq and was destined for a port near Athens, carrying 150,000 tons of crude oil. "The Houthis' continued attacks threaten to spill a million barrels of oil into the Red Sea, an amount four times the size of the Exxon Valdez disaster," US State Department Matthew Miller said Saturday in a statement. The Exxon Valdez spill in 1989 released 257,000 barrels along the coast of Alaska*."

Trafigura est. additional 500,000 b/d of fuel demand from Red Sea diversion
The Houthis hitting the oil tanker this week is a reminder that shipping companies will continue to divert their ships away from the Red Sea. Last week's (Aug 18, 2024) Energy Tidbits memo highlighted Trafigura's estimate that the diversion of tankers and ships away from the Red Sea is adding 500,000 b/d of fuel oil demand. Here is what we wrote last week. "*One of the reasons why we wish we had access to the full IEA Oil Market report is to see what they are saying about their numbers. And, in particular, what they may not be saying about their numbers. A good example is what does the IEA say about how much incremental fuel oil demand is incorporated into their demand forecasts for shipping industry avoiding the Red Sea due to Houthis attacks. On Wednesday, Trafigura posted its blog "Five things we can do today to decarbonise shipping" {LINK}, which included their estimate that there was an additional 500,000 b/d of fuel oil demand by tankers and ships having to avoid the Red Sea because of Houthis attack risk. Trafigura wrote "We estimate an extra 200,000 barrels per day of fuel oil will be consumed by oil tankers alone this year as they are diverted around the Cape of Good Hope…… When container ships and other vessels are considered we think an additional 500,000 barrels per day of fuel will be consumed by the shipping industry this year because of the disruptions." Our supplemental Documents package includes the Trafigura blog.*

Figure 46: Additional fuel oil consumption from shipping avoiding Red Sea

Source: Trafigura

Oil: No breakthroughs from latest Israel/Hamas ceasefire indirect talks
Last week, there was a lot of bullish views and comments that there would be a breakthrough in the Israel/Hamas ceasefire negotiations following Biden's comments that a ceasefire was closer than ever. But that did not happen. And as of our 7am MT news cut off, there is no indication that a ceasefire deal is happening. Biden has continued to push his pause but that isn't seeming to work for Hamas. No question, very few people know what is actually going on but, at least from the outside, our view is unchanged in that it is very tough to see how a lasting deal can be agreed upon unless either Hamas or Israel backs off their stated goals and some of their reported must-haves ie. Israel wants to maintain control of the entire Philadelphia corridor. However, the reports yesterday were that Hamas is sending a team to Cairo to get an update on the ceasefire talks.

No ceasefire breakthrough

Lasting ceasefire seems impossible unless someone changes their end goal
Here is what we wrote in last week's (Aug 18, 2024) Energy Tidbits memo. "*On Thursday morning, we tweeted [LINK] "Have to believe everyone, no matter what*

side they are on, hopes Israel/Hamas can somehow find their way to a lasting and peace. But near term keeps looking tough/impossible. Good recap by @RosMathieson to @flacqua and she didn't mention killing the leading negotiator. #OOTT." There was a good recap by Bloomberg's Rosalind Mathieson who laid out the reality of the negatives to see how there could be success including the fundamental impossibility that Israel and Hamas have incompatible well stated end goals for a ceasefire. And we noted that her comments didn't even have to mention the fact that Israel had recently killed the Hamas lead negotiator. Our tweet included a short 1:19 min video clip of her comments."

Oil: Major Israel pre-emptive attack on Hezbollah, Hezbollah launch rocket attacks

Israel Hezbollah escalation

As of our 7am MT news cut off, it isn't clear the extent of the Israel missile attacks on Hezbollah and the Hezbollah return rockets at Israel. But the overnight news story was a reported massive escalation in Israel Hezbollah. It started with the Israel pre-emptive missile attack on Hezbollah targets. At 11:47pm MT last night, IDF tweeted [LINK] "*Approx. 100 IAF fighter jets struck and eliminated thousands of Hezbollah rocket launcher barrels, aimed for immediate fire toward northern and central Israel. More than 40 Hezbollah launch areas were struck."* Jet means missiles so this was a heavy attack. IDF also said they attacked because Hezbollah was planning an attack. Hezbollah did respond. Washington Post reported "*Israeli officials said most of the barrage from Hezbollah, which they said numbered more than 150 rockets and drones, was intercepted by air-defense systems. They were still assessing damage from those that made impact but said there were no immediate reports of injuries."* Israel has reported put a media blackout on damages from the Hezbollah attack. No one knows what happens next. But, we have to expect Israel's move to pre-emptive attacks will continue unless there is a massive return attack from Hezbollah or Iran or Hamas or Houthis.

Oil: Iran says its response to Israel "*occurs at a moment of maximum surprise*"

Waiting for Iran's response

As of our 7am MT news cut off, Iran has yet to make its declared revenge attack on Israel. On Wednesday, IRNA (State media) reported [LINK] "*Iran's Permanent Mission to the United Nations in New York has said that the Islamic Republic's response to Israel's assassination of Hamas chief Ismail Haniyeh will be carried out in a way to ensure that it "occurs at a moment of maximum surprise." "The timing of Iran's response will be meticulously orchestrated to ensure that it occurs at a moment of maximum surprise", the mission said on Wednesday when asked whether Tehran is withholding its response to Israel so the ongoing Gaza ceasefire talks can proceed. Ismail Haniyeh was martyred in an Israeli airstrike on his accommodation in the Iranian capital on July 31, a day after he attended the inaugural of Iran's new president Masoud Pezeshkian. Iran says Haniyeh was an official guest of the Islamic Republic, and that the Israeli attack was a violation of the country's sovereignty. "Iran's response must punish the aggressor for its act of terrorism and infringements upon Iran's national sovereignty", the mission said, adding that the response should serve as a deterrent as well. The Islamic Republic's response must "bolster Iran's deterrence capabilities to induce profound regret within the Israeli regime, thereby serving as a deterrent...Iran's response must be carefully calibrated to avoid any possible adverse impact that could potentially influence a prospective ceasefire" in Gaza."*

Oil: Reminder Netanyahu said it's not if but when Israel acts on Iran nuclear program

The reason why we have reminded on Iran's advancing nuclear capability is that we worry Israel uses any subsequent attack on Iran whenever Iran retaliates as an opportunity to hit Iran's nuclear facilities. As of our 7am MT news cut off, there is still the unknown of what will Iran do in retaliation. And then it opens up another wildcard, what will Netanyahu then do. We don't know if Netanyahu will use any subsequent counter attack as an opportunity to go after Iran's nuclear program. Here is what we wrote in our July 28, 2024 Energy Tidbits memo on Netanyahu's warning to congress. "*We understand the focus was on Israel vs Hamas, but we are still surprised that Netanyahu's clear warning to Congress on Iran's nuclear program didn't get much attention. On Wednesday, we tweeted [LINK] "Netanyahu tells congress. it's not if but when Israel takes action vs Iran nuclear program! Overlooked geopolitical & #Oil wildcard/risk! 'And one more thing. When Israel acts to prevent Iran from developing nuclear weapons, nuclear weapons that could destroy Israel and threaten every American city, every city that you come from, we're not only protecting ourselves. We're protecting you." Netanyahu to congress. See 👇07/21 tweet. Blinken: Iran now 1 or 2 weeks from breakout capacity to produce nuclear material for a weapon. Thx @TimesofIsrael #OOTT." Netanyahu seemed clear it was a question of when they take action against Iran's nuclear program, not if. We don't think anyone knows how this would play out but it doesn't seem to be an issue on geopolitical risk or oil risk screens. As a reminder, the Biden Admin has been consistent that they won't let Iran develop a nuclear weapon. Israel's bar is lower as they won't let Iran have the potential to develop a nuclear weapon and reaching break out capability would appear to do so."*

Netanyahu warned Congress on Iran nuclear

07/19/24: US said Iran is 1 or 2 weeks from breakout to produce fissile material

We continue to be surprised that Iran's reported advancing nuclear capability doesn't get more attention. The reason why we were surprised US media and politicians didn't make more of Netanyahu's warning on Iran nuclear program is Blinken warned a month ago that Iran was 1 or 2 weeks from reaching breakout potential for nuclear capability. Here is what we wrote in last week's (July 21, 2024) Energy Tidbits memo. "*Earlier this morning, we tweeted [LINK] "Go Time for Israel? Overlooked major geopolitical and #Oil risk factor! Blinken: Iran now 1 or 2 weeks from breakout capacity to produce nuclear material for a weapon. If Israel won't let Iran reach breakout potential, when will it take action? #OOTT." An overlooked geopolitical risk item is Iran's nuclear advancement and when will Israel do something to prevent Iran from reaching breakout. It didn't get much attention but, on Friday, Secretary Antony Blinken spoke at the Aspen Security Forum Fireside Chat and he highlighted how close Iran is to having the capacity to produce fissile material for a nuclear weapon. Blinken said "Iran, because the nuclear agreement was thrown out, instead of being at least a year away from having the breakout capacity of producing fissile material for a nuclear weapon, is now probably one or two weeks away from doing that. Now, they haven't developed a weapon itself --." We weren't surprised by the progress but surprised by how he framed it as he made it sound like the US didn't really have a good plan to stop Iran rather they had an idea and they tested it. Blinken noted the mistake of the Trump administration in throwing out the JCPOA so Biden admin had to find a way to put Iran back in a box "so we were testing the proposition about whether we could at least create something that looked like that". The reason why we were surprised by his framing is that that was 3.5 years ago and he is effectively* *admitting by the progress that the "test" didn't work. And then he continued the administration line that "Second, we of course have been maximizing pressure on Iran across the board. We've imposed more than 600 sanctions on Iranian persons, entities of one kind or another. We haven't lifted a single sanction." As noted earlier in the memo, there may be sanctions but Iran has cranked up its oil revenues and exports because the Biden administration hasn't really enforced sanctions ie. sanctions need to be enforced to be effective."*

Oil: No reported change at Libya shut-in ~260,000 b/d Sharara, no word on El Feel b/d

Sharara oil field

As of our 7am MT news cut off, we have not seen any Libya National Oil Corporation lifting of the force majeure at its Sharara oilfield in SW Libya or any reports that it might be lifted. So we have to assume it continue to be shut-in since Aug 5. The NOC has not said how much Sharara was producing but most are using ~260,000 b/d. Plus we still haven't seen any force majeure impact on the nearby El Feel oil field. On Aug 5, we tweeted [LINK] "*Too good to last. Libya #Oil supply interruption. Its biggest field, 270,000 b/d Sharara, is reported completely shut down. Thx @S_Elwardany. Also that should mean nearby ~40,000 b/d El Feel oil field will be shut down as it links thru Sharara. #OOTT."* Bloomberg had reported on Sharara being shut in on Monday. But we still haven't seen any notice on El Feel, which producers nearly ~40,000 b/d. El Feel's production goes thru El Sharara and, normally, every time Sharara is shut-in, it forces El Feel to be shut in.

Oil: UN envoy warns Libya is headed to "greater domestic and regional instability"

UN warns Libya heading the wrong direction

We have been surprised that Libya hasn't had more domestic crisis/battles as it's been almost four years since the last minute cancelled Dec 2021 national election that was supposed to be the unifying event for the future. And there have been times when there were rumbles that haven't emerged to a return to the east vs west conflict. So it is hard to predict if the latest signs of unrest can be put back to rest or if it accelerates. But, on Tuesday, we tweeted [LINK] "*Libya watch! "the status quo is not sustainable. In the absence of renewed political talks leading to a unified government and elections – you see where this is heading - greater political financial and security instability, entrenched political and territorial divisions, and greater domestic and regional instability." @stephaniekoury1 👇 warns US Security Council. #OOTT [LINK]."* UN Special Envoy Stephanie Koury briefed the UN Security Council on Tuesday with a recap of recent events in Libya and a clear waning that things are breaking down and there needs to be a big change and some sort of unified efforts from all parties or else Libya is heading for domestic trouble. Her message is clear and worth a read. Our Supplemental Documents package includes the Koury briefing.

Is more trouble or domestic unrest about to come in Libya?

Koury's briefing to the UN Security Council on Tuesday recapped some of the key events that we have been tracking. Here is what we wrote in our Aug 11, 2024 Energy Tidbits memo on Libya's path ahead. "*Is more trouble or domestic unrest about to come in Libya? We go thru the Libyan news sites at least a few times a week, more this week as we were following the force majeure at Sharara oilfield in SW Libya. Our primary news outlets are Libya Herald, Libya Observer and Libya Review. And starting midweek, there were a few separate reports that make us wonder if there is the risk of domestic unrest about to come. And the reason why domestic unrest is significant is that it could easily lead to Libya going back down to* *zero oil production. On Tuesday, reported clashes in Aljmail (west of Tripoli) injured several. On Wednesday, there were the reports that Haftar had moved more troops down into southwest Libya, ostensibly to protect Libya's southern border. On Thursday, there were the reports that forces for the Tripoli based Libya government were mobilized in what was described as a response to Haftar moving his forces into SW Libya. On Friday, Libya Observer (and the others similarly) "Nine people were killed and 16 others injured, including a civilian, in armed clashes in Tajoura at noon on Friday, as reported by Libya's Ambulance and Emergency Service. Hostilities broke out between the Rahbat Al-Duroo Battalion and the Martyr Sabriya Battalion following an alleged assassination attempt on Rahbat Al-Duroo's commander, Bashir Khalaf Allah." Tajoura sits on the eastern edge of Tripoli. Yesterday, the Libya Herald reported "UNSMIL expressed concern in a statement yesterday over the mobilisation of forces by Hafter and anti-Hafter forces. This comes as Western Libyan forces aligned with the Tripoli based Libyan government mobilised in what they said was a response to Hafter's forces expanding out of their usual southern territory and heading northwest towards Ghadames on the Libyan Algerian border. UNSMIL's statement read: "UNSMIL monitors with concern the recent mobilization of forces in various parts of Libya, particularly in the southern and western regions. We commend ongoing efforts to de-escalate the situation and prevent further tension. UNSMIL urges all parties to exercise maximum restraint and avoid any provocative military actions that could be perceived as offensive and might jeopardize Libya's fragile stability and the safety of its people. The Mission calls for continued communication and coordination between forces affiliated to the LNA and GNU." We don't know what will evolve but it seems like the domestic tensions are rising and so the issue for Libya will be can they put a lid on the domestic tensions?"*

Libya Central Bank

Oil: Libya's Speaker of House threatens oil shutdown over Central Bank leadership

We have a 7am MT news cut off for our memo. Prior to the Sharara shut-down, Libya oil production was approaching 1.3 mmb/d There was a good reminder yesterday that Libya's oil production is at risk from the domestic turmoil/disagreements. Yesterday, we tweeted [LINK] "*Libya #Oil watch. Speaker of House Saleh warns any changes to Central Bank leadership could lead to halt in oil production. "We will not allow the continued flow of Libya's wealth to individuals who have come through suspicious means and untrustworthy hands." reports @Safa_Alharathy. #OOTT."* Post UN envoy's Koury's briefing to the UN Security Council, the oil threat came because of the Tripoli-based national government wanting to change Central Bank leadership. The Speaker of the House of Representatives Saleh stepping in and warned there is a risk to oil being shut down with a forced change. Yesterday, the Libya Observer reported [LINK] "*Saleh threatens oil shutdown over CBL governor dispute. The Speaker of the House of Representatives (HoR), Aguila Saleh, has warned of a potential shutdown of the country's vital oil production if the Central Bank Governor is replaced, following the Presidential Council's (PC) controversial appointment of Mohammed Shukri to the role. In a television interview on Thursday, Saleh accused the PC of attempting to "loot public funds and perpetuate corruption" by appointing Shukri. He declared, "We will not allow the continued flow of Libya's wealth to individuals who have come through suspicious means and untrustworthy hands."* Our Supplemental Documents package include the Libya Observer report.

Oil: China takes more steps to try to stop declining home prices

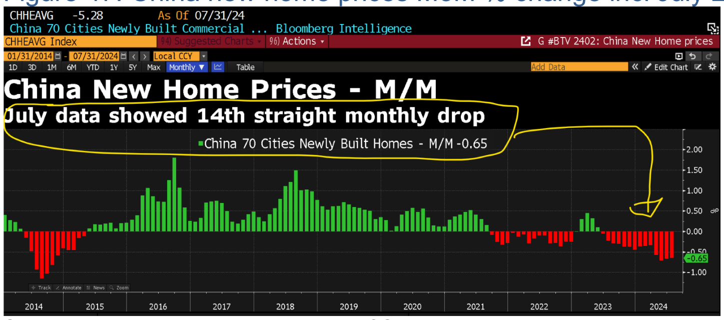
China's latest home saving measures

Yesterday, we tweeted [LINK] "*Biggest holdback to Chinese consumer is crashing value of their homes. 👇Aug 14 tweet. China trying to stop this decline. New policy "transitioning from the traditional pre-sale model to a "sales upon completion approach" ...under the new approach, houses can only be sold after completion" ie. stop adding to surplus. Plus "nearly 4 million pre-sold homes are scheduled to be handed over to homebuyers by the end of this year" Will it work and how long will it take to work? #OOTT.*" We don't think anyone thinks a China home value recovery is big and imminent so the question remains how long will it take and how much of a recovery can be had. Yesterday, Xinhua (state media) reported on the new China housing policy announced on Friday that should help adding more unsold new homes to the surplus by trying to stop builders from building on spec. Xinhua wrote "*As one of its latest efforts, the country is transitioning from the traditional pre-sale model to a "sales upon completion" approach, which has been implemented across various regions to mitigate risks associated with unfinished projects. Under the new approach, houses can only be sold after completion. Developers must promise to do so when acquiring land from local governments, Dong said.*" Xinhua also reminded of part of the big problem unsold pre-sold homes. Xinhua wrote "*Despite the policy shift, ensuring the timely delivery of housing remains a pressing task for China. According to the housing ministry, nearly 4 million pre-sold homes are scheduled to be handed over to homebuyers by the end of this year. To achieve this target, the country has launched a "white-list" mechanism to ensure that all qualified property developers have equal access to financing assistance.*" One other way to reduce adding to the surplus was the push to more quality homes in rural areas and not just quantity. Xinhua wrote *"China's housing market has already entered a new development stage, where people in the country are now attaching greater importance to the quality of housing, Ni said. With new expectations from homebuyers, it is time to leverage new technologies, products and materials in house building, the minister said. Efforts should be made to encourage property developers and builders to shift from a high-speed, quantity-centered growth model to one focusing on improving quality, technology and services."* Our Supplemental Documents package includes the Xinhua report.

China home prices keep losing value, 14 mths for new & 15 mths for old,

Here is what we wrote in last week's (Aug 18, 2024) Energy Tidbits memo. "*The big negative to the Chinese consumer is that they keep losing value in their homes, their biggest asset value keeps decreasing month after month. On Wednesday, we tweeted [LINK]: "No wonder Chinese consumer is still on sidelines. Their most important asset, home values keep going lower. July new home prices: 14th straight MoM drop, -0.65% M/M (June -0.67% M/M). July 2nd hand home prices: 15th straight M/M drop, -0.80% M/M (June -0.85% M/M). Thx @business #OOTT." Just like in North American, the home is the most important asset for most Chinese is their home and all the Chinese have seen is the value of their homes decline month after month with no end in sight. In July, Chinese new home and 2nd home prices were down MoM vs June. July MoM value declines weren't as bad as June or May, which was the worst month for China home values in ~10 years. But it was bad and kept the consecutive MoM home values losses streak alive, which is now 14 straight MoM declines in new home prices and is now 15 straight MoM declines in 2nd hand home prices. Below are the Bloomberg graphs with the July data."*

Figure 47: China new home prices MoM % change incl July 2024



Source: Bloomberg, National Bureau of Statistics

Figure 48: China 2nd hand home prices MoM % change incl July 2024

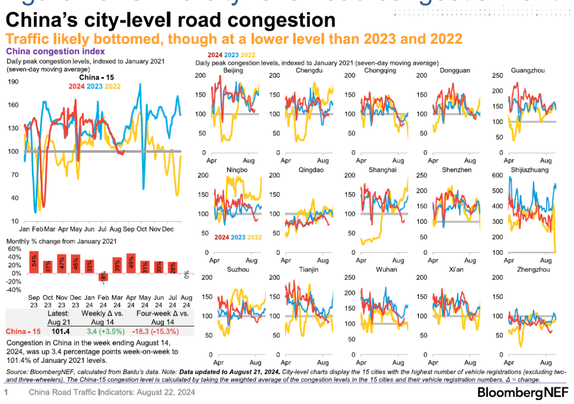
Source: Bloomberg, National Bureau of Statistics

Oil: Baidu China city-level road congestion in Aug is down YoY

China city-level traffic congestion

China Baidu city-level road congestion is an indicator of the volume of traffic in the city vs leaving the city. The July data was pointing to more Chinese staying in the city than leaving for their normal holiday. But we saw a reversal in the city-level road congestion so far in August ie. less city-level road congestion pointing to more Chinese leaving the cities for holidays. July 2024 city-level road congestion for the top 15 cities was 104% of July 2023, which suggests less people left the city for holidays this year. However, on Thursday, BloombergNEF posted its China Road Traffic Indicators Weekly August 22 report, which includes the Baidu city-level road congestion for the week ended August 21. Note that this report was formerly titled Road Traffic indicators, and is now China Road Traffic Indicators, but the content of the report is unchanged. BloombergNEF's report was titled "*Traffic likely bottomed, though at a lower level than 2023 and 2022".* This week, BloombergNEF reported Baidu city-level road congestion was up by +3.5% WoW but month to date, August's city-level road congestion levels are down -17.4% from August 2023. Bloomberg noted that all 15 of the top 15 cities are down YoY. Below are the BloombergNEF key graphs.

Figure 49: China city-level road congestion for the week ended August 21



Source: Bloomberg

Figure 50: China city-level road congestion for the week ended August 21

China's city-level road congestion

Month-to-date congestion was 17.4% lower than the entire month of August 2023

- 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 **of the same month in 2021** 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 running {97 <GO>} on the Bloomberg Terminal, or via the attached Excel on the BNEF website.**

Indexed to January 2021 = 100

	Aug 23	Sep	Oct	Nov	Dec	Jan 24	Feb	Mar	Apr	May	Jun	Jul	Aug
China-15	120	153	130	146	146	133	81	138	148	130	129	127	99
Beijing	137	180	159	167	161	145	73	151	169	143	141	146	113
Chengdu	114	130	121	123	116	120	68	134	140	125	119	126	98
Chongqing	88	127	112	122	116	111	80	112	138	122	129	119	74
Dongguan	101	147	130	141	144	121	52	129	138	138	138	126	96
Guangzhou	149	184	160	178	181	161	76	171	195	174	170	162	147
Ningbo	115	127	118	146	142	127	79	144	146	120	128	121	90
Qingdao	106	106	92	99	103	78	51	71	78	72	75	91	81
Shanghai	123	162	127	155	150	115	79	146	152	130	132	119	89
Shenzhen	146	181	151	169	170	149	68	160	164	172	163	162	144
Shijiazhuang	439	484	343	491	461	494	350	400	390	311	329	334	302
Suzhou	109	135	108	127	136	118	79	134	137	113	112	105	94
Tianjin	114	173	150	169	190	133	85	160	165	145	132	106	89
Wuhan	136	189	143	159	159	167	105	174	171	146	144	141	104
Xi'an	111	151	135	156	155	152	98	141	147	129	123	135	103
Zhengzhou	92	106	80	97	108	110	85	95	96	80	78	86	63

Indexed to the same month in previous year = 100

	Aug 23	Sep	Oct	Nov	Dec	Jan 24	Feb	Mar	Apr	May	Jun	Jul	Aug
China-15	107	112	126	155	187	151	55	100	114	110	96	104	83
Beijing	95	106	149	214	275	135	42	92	113	103	93	106	82
Chengdu	135	174	117	131	124	144	51	106	107	115	91	116	85
Chongqing	145	98	130	395	224	136	64	101	125	125	112	113	84
Dongguan	92	105	108	104	156	258	41	99	127	120	108	108	94
Guangzhou	104	114	146	317	307	199	45	99	127	127	107	107	99
Ningbo	79	69	95	101	127	203	59	115	140	121	112	106	78
Qingdao	97	100	96	124	195	175	62	94	97	98	87	95	77
Shanghai	81	81	115	93	172	156	54	98	117	105	101	98	72
Shenzhen	97	122	108	97	156	189	41	96	120	132	99	113	99
Shijiazhuang	173	218	120	459	258	156	69	93	85	81	77	89	69
Suzhou	84	87	91	88	157	171	60	111	130	117	97	99	86
Tianjin	122	213	109	137	244	136	60	114	121	119	100	96	78
Wuhan	138	144	199	192	187	151	55	94	100	97	85	95	76
Xi'an	119	106	149	139	152	132	66	110	112	105	91	110	93
Zhengzhou	112	112	171	294	164	119	76	98	102	90	82	98	68

*Source: BloombergNEF calculations based on Baidu data. Note: Data updated to **August 21, 2024. Values for the latest month are month-to-date.** 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.*

Source: Bloomberg

Oil: Are Chinese consumers trading down for their holidays ie. more driving holidays?

Chinese taking more short driving holidays

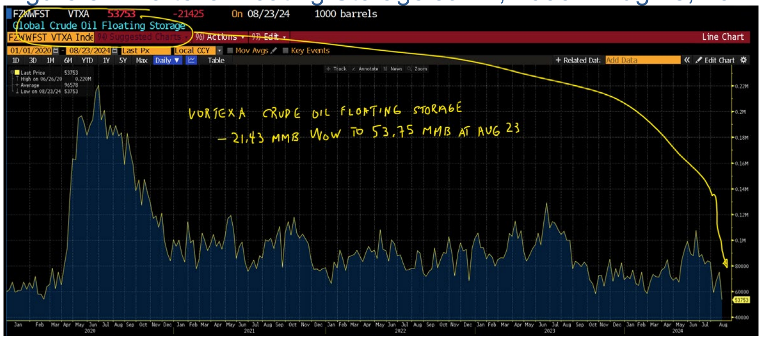
When we saw the above reversal of the Baidu city-level road congestion levels in Aug vs July, it makes us wonder if this is a sign of more Chinese taking driving holidays. Here is what we wrote in last week's (Aug 18, 2024) Energy Tidbits memo. *"Are Chinese consumers trading down for this holiday? We have to believe that consumers around the world, including in China, are the same in how they look at spending. If they have less to spend or want to spend less for their holidays, they stay closer to home, take shorter trips and spend less. So when we saw the Thursday Global Times (state media) report on how Chinese are driving more for their holidays, it seemed to be iindicator a change in Chinese holiday spending. On Thursday, we tweeted [LINK] "Is Chinese consumer trading down on their holidays? More are driving for holidays with shorter weekend trips. And spending less. "Luhun rest & service oasis has seen a daily average of more than 13,000 visitors and 4,000 vehicles, with passenger and car traffic up more than 30% and revenue rising 10% compared with last year," #OOTT." The Global Times report "Highway oases become new attractions as holiday-goers take to the roads" [LINK] highlighted "As self-driving tourism gains popularity in China" and "the growth of road trips" and ""Our service oasis is near popular attractions like Baiyun Mountain and Laojun Mountain, so many visitors choose to stop here for a 'mini vacation' for one or two days." And what caught our attention on spending of visitors to these highway stops. Global Times wrote "Since the summer began, the Luhun rest and service* *oasis has seen a daily average of more than 13,000 visitors and 4,000 vehicles, with passenger and car traffic up more than 30 percent and revenue rising 10 percent compared with last year," Ge Changbo, the manager of Henan Transport Investment Expressway Service Area Management Co, Lu Hun Service Area told the Global Times on Thursday." So >30% more vehicles and passengers but only 10% more revenue. Our Supplemental Documents package includes the Global Times report."*

Oil: Vortexa crude oil floating storage est 53.75 mmb at Aug 23, -24.13 mmb WoW

Vortexa floating storage

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 Aug 17 at 9am MT. (i) Yesterday, we tweeted [LINK] "*Headline is @Vortexa crude #Oil floating storage down a whopping 24.13 mmb WoW to 53.75 mmb. Lowest since Covid & only been 4 wks <60. But a big +13.36 mmb revision to Aug 16 to 75.18. Even still, last 4 wks average 63.10 mmb, solid trend as only been 18 wks <70 mmb since Covid, incl 3 in Aug. Thx @vortexa @business #OOTT."* (ii) As of 9am MT Aug 24, Bloomberg posted Vortexa crude oil floating storage estimate for Aug 23 at 53.75 mmb, which was a huge -24.13 mmb WoW vs revised up big Aug 16 of 75.18 mmb. Note Aug 16 was revised +13.36 mmb vs 61.82 mmb originally posted at 9am MT on Aug 17. (iii) Revisions. There was a big +13.36 mmb revision to last week's Aug 16 estimates but there weren't other big upward revisions in the prior seven weeks. Here are the revisions for the past seven weeks compared to the estimates originally posted on Bloomberg at 9am MT on Aug 17. Aug 16 revised +13.36 mmb. Aug 9 revised +2.69 mmb. Aug 2 revised -0.16 mmb. July 26 revised -0.87 mmb. July 19 revised +1.37 mmb. July 12 revised -2.66 mmb. July 5 revised -6.2 mmb. (iv) There is a wide range of floating storage estimates for the past seven weeks, but a simple average for the prior seven weeks is 72.10 mmb vs last week's then prior seven-week average of 75.97 mmb. The decline was due to adding a low 53.75 mmb for the rolling 7-week average more than offsetting the big upward revision to Aug 16. (v) Also remember Vortexa revises these weekly storage estimates on a regular basis. 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. (vi) Note the below graph goes back to Jan 1, 2020 to show the run up to Covid and then how Covid started to impact Covid in March/April 2020. (vii) Aug 23 estimate of 53.75 mmb is -75.32 mmb vs the 2023 peak on June 25, 2023 of 129.07 mmb. Recall Saudi Arabia stepped in on July 1, 2023 with its voluntary cuts. (viii) Aug 23 estimate of 53.75 mmb is -23.80 mmb YoY vs Aug 25, 2023 of 77.55 mmb. Below are the last several weeks of estimates posted on Bloomberg as of 9am MT Aug 24, 9am MT Aug 17, and 9am MT Aug 10.

Figure 51: Vortexa Floating Storage Jan 1, 2000 – Aug 23, 2024, posted Aug 24at 9am MT



Source: Bloomberg, Vortexa

Figure 52: Vortexa Estimates Posted 9am MT Aug 24, 9am MT Aug 17, 9am MT Aug 10

Posted Aug 24, 9am MT

FZWWFST VTXA Inde | 01/01/2020 – 08/23/2024

	Date	Last Px
Fr	08/23/2024	53753
Fr	08/16/2024	75178
Fr	08/09/2024	68262
Fr	08/02/2024	59210
Fr	07/26/2024	82720
Fr	07/19/2024	84040
Fr	07/12/2024	81557
Fr	07/05/2024	88804
Fr	06/28/2024	87119
Fr	06/21/2024	107.647k
Fr	06/14/2024	87788
Fr	06/07/2024	89317

Aug 17, 9am MT

FZWWFST VTXA Inde | 01/01/2020 – 08/16/2024

	Date	Last Px
Fr	08/16/2024	61819
Fr	08/09/2024	65565
Fr	08/02/2024	59366
Fr	07/26/2024	83139
Fr	07/19/2024	82674
Fr	07/12/2024	84224
Fr	07/05/2024	94995
Fr	06/28/2024	89871
Fr	06/21/2024	108.902k
Fr	06/14/2024	90174
Fr	06/07/2024	89484
Fr	05/31/2024	97889

Aug 10, 9am MT

FZWWFST VTXA Inde | 01/01/2020 – 08/09/2024

	Date	Last Px
Fr	08/09/2024	60515
Fr	08/02/2024	56169
Fr	07/26/2024	81507
Fr	07/19/2024	81530
Fr	07/12/2024	82690
Fr	07/05/2024	93498
Fr	06/28/2024	87968
Fr	06/21/2024	107.606k
Fr	06/14/2024	90036
Fr	06/07/2024	88155
Fr	05/31/2024	97667
Fr	05/24/2024	91466

Source: Bloomberg, Vortexa

Oil: Vortexa crude oil floating storage WoW changes by regions

Vortexa floating storage by region

Bloomberg also posts the Vortexa crude oil floating storage in key regions, but not all regions of the world. The regions covered are Asia, North Sea, Europe, Middle East, West Africa and US Gulf Coast. We then back into the "Other" or rest of world. (i) As noted above, last week's Aug 16, in total, was revised +13.36 mmb with the key revisions being Asia revised +8.93 mmb with all the other regions have small upward revisions. (ii) Total floating storage at Aug 23 was -24.13 mmb WoW vs the revised up big Aug 16 of 75.18 mmb. The major WoW changes were Asia -11.12 mmb WoW, Europe -2.95 mmb WoW, Middle East -2.69 mmb WoW and West Africa -2.63 mmb WoW. (iii) Aug 23 estimate of 53.75 mmb is -75.32 mmb vs the 2023 high on June 23, 2023 of 129.07 mmb. Recall Saudi Arabia started its voluntary 1 mmb/d production cuts on July 1, 2023. The major changes by region vs the last year June 23, 2023 peak are Asia -46.86 mmb and Other -15.62 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 Aug 16 that was posted on Bloomberg at 9am MT on Aug 17.

Figure 53: Vortexa crude oil floating by region

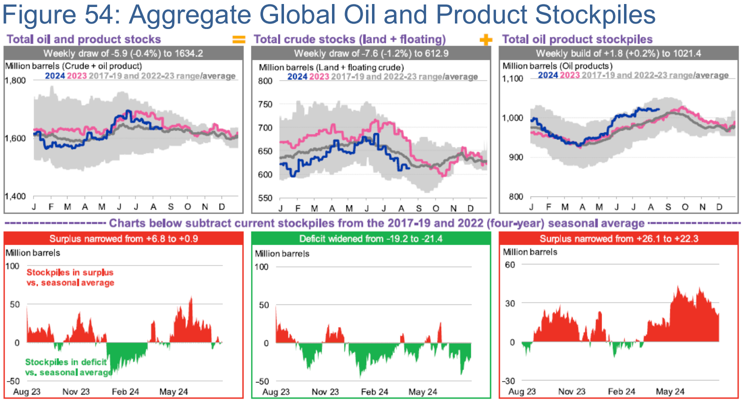
				Original Posted	Recent Peak	
Region	Aug 23/24	Aug 16/24	WoW	Aug 16/24	Jun 23/23	Aug 23 vs Jun 23/23
Asia	26.60	37.72	-11.12	28.79	73.46	-46.86
North Sea	1.62	2.68	-1.06	1.80	5.42	-3.80
Europe	3.34	6.29	-2.95	5.63	5.75	-2.41
Middle East	2.35	5.04	-2.69	3.45	6.76	-4.41
West Africa	6.42	9.05	-2.63	8.02	7.62	-1.20
US Gulf Coast	0.00	1.31	-1.31	1.22	1.02	-1.02
Other	13.42	13.09	0.33	12.91	29.04	-15.62
Global Total	53.75	75.18	-21.43	61.82	129.07	-75.32
Vortexa crude oil floating storage posted on Bloomberg 9am MT on Aug 24						
Source: Vortexa, Bloomberg						

Source: Bloomberg, Vortexa

Oil: BNEF, global oil & product stocks surplus narrowed to +0.9 mmb from +6.8 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 surplus narrowed to +0.9 mmb for the week ending August 16 from a surplus of +6.8 mmb for the week ended August 9. (iii) Total crude inventories (incl. floating) decreased -1.2% WoW to 612.9 mmb, while the stockpiles deficit widened from a deficit of -19.2 mmb to a deficit of -21.4 mmb. (iv) Land crude oil inventories decreased -1.7% WoW to 541.3 mmb, widening their deficit from -20 mmb to -24.5 mmb against the five-year average (2017-2019 + 2022-23). (v) The gas, oil, and middle distillate stocks increased +0.1% WoW to 234.3 mmb, with the surplus against the four-year average flipping to a deficit of -0.5 mmb from +3.5 mmb. Jet fuel consumption by international departures in the week to August 26 is set to decrease by -11,900 b/d WoW, while consumption by domestic passenger departures is forecast to decrease by -10,900 b/d WoW. Below is a snapshot of aggregate global stockpiles.

Figure 54: Aggregate Global Oil and Product Stockpiles



Source: BloombergNEF

Oil: Bloomberg Oil Demand Monitor, *Summer Glow Fading as China Drags on Market*

Bloomberg oil demand monitor

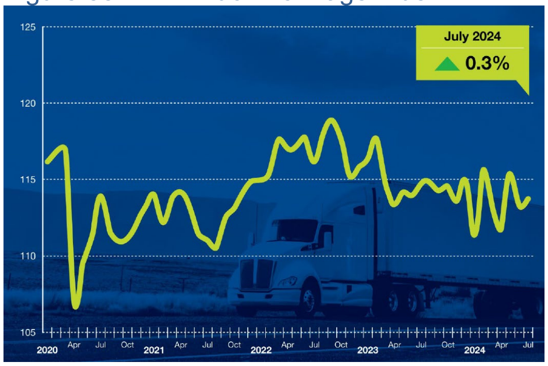
The Bloomberg Oil Demand Monitor is a good recap of key oil demand indicators around the world. This week's report discusses the seasonal decrease in gasoline demand, and the decrease in oil demand in China. Bloomberg reported *"In the skies, Flightradar24 data for the week started Aug. 19 showed week-on-week and month-on-month declines in flight numbers, with journeys leveling off after the summer peak…...On the roads, the US driving season will end on Labor Day, Sept. 2. While the annual roadtripping binge delivered the customary fillip for gasoline, the boost hasn't been spectacular. Though consumption has been strong compared with the five-year average, remove the Covid-affected years of 2020 and 2021 and demand has fallen short of recent levels for most of the summer…..Indications of waning consumption in China are multiplying. The country's apparent oil demand fell 8% year-on-year in July. Usage retreated by 110,000 barrels a day in the second quarter from a year earlier, the International Energy Agency said. OPEC trimmed forecasts for global oil demand this year and next, citing factors including "softening expectations" for China's demand. Indeed, China's demand may be even weaker than many think. Of its slightly more than 10 million barrels a day of seaborne crude imports this year, the nation may have sent as much as 800,000 barrels a day into storage, according to Eurasia Group. The upshot is that analysts have started to question whether OPEC and its allies will press ahead with their plan, due to begin in October, to start restoring idled output. Sticking to that program would send global markets swinging from a deficit to a surplus next quarter, IEA data showed."* Our Supplemental Documents package includes the Bloomberg Oil Demand Monitor.

Oil: ATA Truck tonnage index in July up +0.3% MoM, -0.9% YoY

June Truck Tonnage up +0.3% MoM

We look to items like truck tonnage for indicators on the US economy, and the July truck tonnage is indicative of a slowly growing US economy. The American Trucking Association released its seasonally adjusted Truck Tonnage Index for July on Tuesday [LINK]. Truck tonnage increased +0.3% MoM and decreased -0.9% YoY from July 2023. Chief Economist Bob Costello noted *"While July wasn't a strong month, we see continued evidence that the truck freight market is likely turning a corner, albeit slowly. Some of July's small gain was likely due to strong import activity, especially at West Coast seaports. Decent retail sales and factory output growing slightly from a year earlier also helped truck tonnage last month."* The index in June was revised slightly downwards to reflect a -1.8% MoM decrease from a -1.6% decrease and -0.6% YoY decrease from -0.4%. Trucking serves as a barometer of the U.S. economy, representing 72.6% of tonnage carried by all modes of domestic freight transportation, including manufactured and retail goods. Trucks hauled 11.46 billion tons of freight in 2022. Motor carriers collected $940.8 billion, or 80.7% of total revenue earned by all transport modes. Our Supplemental Documents package includes the ATA truck tonnage index report.

Figure 55: ATA Truck Tonnage Index

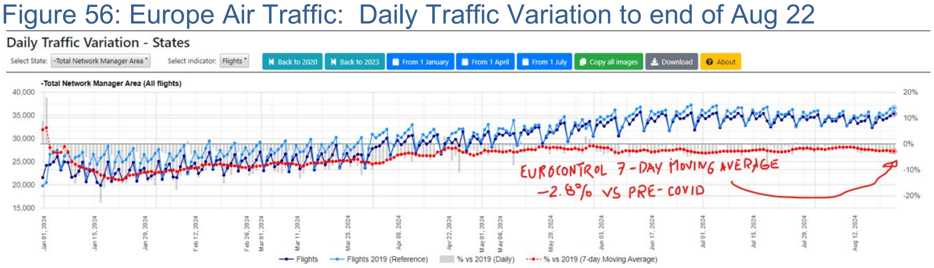


Source: ATA

Europe airports daily traffic

Oil: Europe airports daily traffic 7-day moving average is -2.8% below pre-Covid
Yesterday, we tweeted [LINK] "*Daily Europe air traffic still stuck below pre-Covid. 7-day moving average as of: Aug 22: -2.8% below pre-Covid. Aug 15: -2.2%. Aug 8: -1.3%. Aug 1: -1.9%. Jul 25: -2.2%. Jul 18: -2.6%. Jul 11: -2.9%. Jul 4: -3.3%. Jun 27: -2.9%. Jun 20: -2.5%. Jun 13: -2.6%. Thx @eurocontrol. #OOTT #Oil.*" Other than over Christmas, European daily traffic at airports has been below pre-Covid. The 7-day moving average has got close a few times including at only 0.8% below pre-Covid as of May 30, but the 7-day moving average is now -2.8% below pre-Covid as of Aug 22, which followed -2.2% as of Aug 15, -1.3% as of Aug 8, -1.9% as of Aug 1, –2.2% below as of July 25, which followed -2.6% below as of July 18, -2.9% below as of July 11, and -3.3% below as of July 4. Please note that we try to pull the data on Saturday mornings for a consistent weekly comparison. Eurocontrol updates this data daily and it is found at [LINK].

Figure 56: Europe Air Traffic: Daily Traffic Variation to end of Aug 22

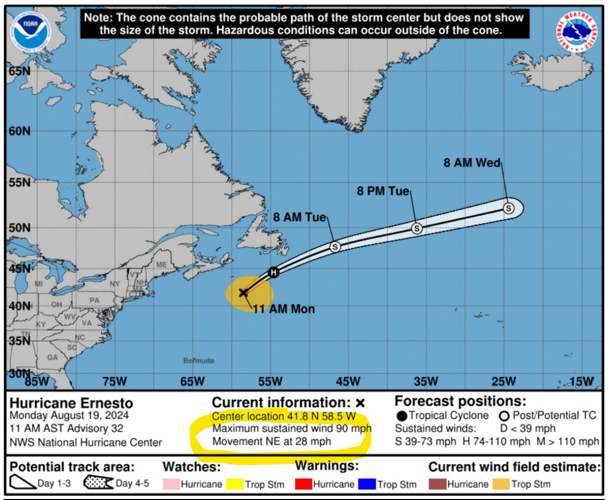


Source: Eurocontrol

Hurricane Ernesto

Oil & Natural Gas: Hurricane Ernesto was fast moving when it passed Newfoundland
We were fortunate that Hurricane Ernesto turned south so it ended up passing just south of Newfoundland. It brought heavy rains and wind but wasn't the direct hit feared a week earlier But there was also one big reminder benefit from Ernesto – it was moving at a very fast speed of 28 mph so it's impact wasn't long lasting. We always warn that the speed of a hurricane is important as it determines how long an area has to be battered by winds and heavy rainfall. Moving at 28 mph is speeding for a hurricane. Whereas we have seen speeds down to 3-4 mph and consider anything about 10 mph as fast moving.

Figure 57: Tropical Storm Ernesto



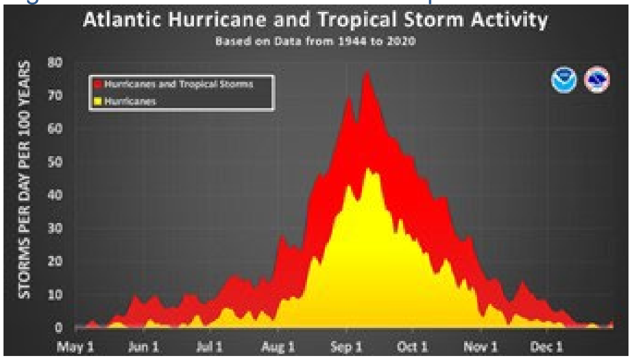
Source: National Hurricane Center

Oil & Natural Gas: 90% of Atlantic hurricanes come after Aug 1, peak is normally mid-Sept

90% of hurricanes are after Aug 1

It is very quiet for this time of the year for hurricane activity in the Atlantic side. As of our 7am MT news cut off, the National Hurricane Center is showing zero potential storms on its 7-day outlook. And don't forget all the hurricane forecasters are calling for a more than normal hurricane activity. However, we remind that we are now in the normal peak Atlantic hurricane season of Aug/Sep/Oct. And that it is important to remember that normally 90% of Atlantic hurricanes typically come after Aug 1 and the peak for Atlantic hurricane season is normally mid Sept. Here is what we wrote in our Aug 6, 2023 Energy Tidbits memo. "*90% of Atlantic hurricanes come after Aug 1, peak is normally mid-Sept It may already be the hottest time of the year, but we always remind that 90% of Atlantic hurricanes typically come after Aug 1. And August normally marks the start of the ramp up of hurricane season with high hurricane activity typically from mid-Aug thru mid-Oct with a normal peak in mid-Sept. Below is NOAA's graph showing the distribution of Atlantic hurricanes and tropical storms based on data from 1944 to 2020. [LINK].*"

Figure 58: Atlantic hurricane and tropical storm activity by month



Source: NOAA

Oil & Natural Gas: EIA's updated Norway Country Brief

EIA Norway country brief

We continue to recommend adding the EIA's country analysis briefs to reference libraries as good quick references, in this case its updated EIA country executive summary [LINK] on Norway. EIA reminds us that Norway is Europe's top producer and exporter of oil and natural gas, but as we have been highlighting, Norway's top oil producing field is set to peak at 755,000 b/d this year and begin to decline at the end of this year or early next year. The EIA wrote "*Equinor-operated Johan Sverdrup was, by a large margin, the top producing field in Norway in 2023. At 712,000 b/d of crude oil production, this field accounted for 40% of Norway's crude oil production that year. 11 Johan Sverdrup, with 2.7 billion barrels of reserves, was discovered in 2010 in the North Sea and had an expected production plateau of 660,000 b/d that has since been raised to 755,000 b/d. …Currently, Sverdrup is near its production plateau, but production is expected to decline by the end of 2024 or early 2025.*" Our Supplemental Documents Package contains the EIA report.

Energy Transition: Enbridge CEO reminds need NatGas for data center growth

Enbridge CEO on data center and natural gas

We recognize that the western politicians don't want to move off their messaging that solar and wind are the best and cheapest electricity sources for the big growth in electricity consumption driven by data centers and electrification. Because if they did move off this messaging, it would bring into doubt how they justified a key part of the energy transition not leading to higher and more volatile electricity prices. But all we see from electricity and energy providers is that natural gas is the baseload electricity for data centers who need reliable, affordable 24/7 electricity. This week, Enbridge CEO Greg Ebel did the same in his Aug 20 Bloomberg TV interview. (i) On Friday, we tweeted [LINK] "*Data Center 101 from $ENB CEO Ebel. #NatGas will be baseload #Electricity but renewables wanted for ESG scorecard. "no doubt natural gas is cheaper ….So, it is true without tax incentives you would have a hard time making renewables economic". "some of it is going to be #NagGas, right, because they need 24/7 power ... and there is intermittency with renewables"." "but at the same time you see a lot of those companies also want to meet their sustainability goals". Thx @mattmiller1973 @sonalibasak @kgreifeld #OOTT #EnergyTransition.*" (ii) Natural gas is cheaper and renewables need tax incentives to be economic.r. Enbridge provides renewable energy. Bloomberg asked "*Greg, now that you have experience with solar and wind and the ongoing capital spending, what does the total cost work out to be per kilowatt turn out to be compared to natural gas?*" Ebel was clear "*Well, that is a good question. There is no doubt natural gas is cheaper. So, okay, many of your listeners are everywhere but we are here sitting in New York City. So as a good example, in New York State, twice the energy is provided by natural gas, about 33% of all energy, versus 17% for electricity, which can be renewables, at half the cost. So twice the energy at half the cost. So, it is true without tax incentives you would have a hard time making renewables economic. But, in certain locations it's going to work great, right. In the middle of the continent, a lot of solar is being built. Places like Texas, big on wind, big on solar, but as you know Matt, big on oil and gas too. So, I think it depends but there's no doubt, without some tax incentives, you are going to have a hard time making some of the newer energy technologies work*." (iii) Natural gas is the key for 24/7 electricity but consumers need to have renewables for their ESG messaging. Ebel was asked about balancing natural as vs renewables. Ebel replied "*Well look I think for the first time in many decades you are going to see growth in electricity demand in the United States, whether that is half a percent or 3 or 3 percent, that is colossal for us, right. And a lot of that* *is driven by data centers. So, some of it is going to be gas, right, because they need 24/7 power, you know, and there is intermittency with renewables, but at the same time you see a lot of those companies also want to meet their sustainability goals*." (iv) Ebel also reminded politicians in saying *"If we don't get stuff built and we limit where we can get that energy, then think the consumer is going to have a tough time. And I don't think that will be appropriate or successful from a political perspective."* Our Supplemental Documents package includes the transcript we made of Ebel's comments.

Energy Transition: Another shipper, PIL, backs off green fuels/ammonia for ships

PIL backs of ammonia for ships

Another reminder, this time from PIL, that hard to de-carbonize for sectors like shipping and flying really means won't be de-carbonized so the focus will be on less moving to less carbon ie. more LNG for shipping, more LSFO. (i) On Thursday, we tweeted [LINK] "*Another shipper backing off green fuel/ammonia bet?? Inclusion by omission? PIL CEO 2022 sustainability report key initiatives incl "we have placed orders for 8 new LNG dual-fuel vessels equipped with ammonia intermediate ready fuel tanks. These tanks make it possible to retrofit the vessels to run on ammonia when the technology is commercially available". 07/13/23: started construction of 1st of four dual-fuel LNG/LSFO with "ammonia intermediate ready fuel tank" 08/19/24L PIL orders 5 dual-fuel #LNG/#LSFO ships, no mention of ammonia ready. Shipping is hard to de-carbonize for a reason. LNG and LSFO will be needed for longer for shipping #OOTT."* (ii) PIL (shipping company) announced it just ordered five new container ships that are dual fueled with LNG and LSFO. PIL said "*Designed with a focus on efficiency, safety and sustainability, the modern vessels will also have the flexibility to meet the demands of different voyages, weather conditions and load capacities. They will be equipped with dual-fuel engines and auxiliaries to be able to run on both LNG as well as low sulphur fuel oil*." (iii) Inclusion by omission. As often happens, the best disclosure is what is dropped from prior statements. In this case it is green fuels. So even though there is no specific mention of a backing away from their green fuel ambition, they are doing so because of what they didn't say in the press release. There was no mention of these new shi8ps being green fuels, ammonia, ready. (iv) The CEO previously highlighted how their new sustainability initiatives would be for its LNG/LSFO fueled ships to be make ammonia ready. Here is what the CEO wrote in the PIL Sustainability Report 2022. [LINK] "*To date, we have undertaken a number of key initiatives, these include investing in the necessary equipment and infrastructure - we have placed orders for 8 new LNG dual-fuel vessels equipped with ammonia intermediate ready fuel tanks. These tanks make it possible to retrofit the vessels to run on ammonia when the technology is commercially available*." (v) July 13, 2023 started construction of 1st LNG/LSFO fueled ship that is ammonia ready for their commitment to greener and cleaner future. PIL wrote "*This ship will be our first LNG dual-fueled container ship, and it represents our commitment to sustainability and our vision for a greener and cleaner future. This ship, along with her three sister ships, forms part of our strategy to decarbonize our fleet and achieve net zero carbon emissions by 2050." This order of four 14,000 TEU LNG dual-fuel container ships from Jiangnan Shipyard was announced by PIL in March 2022. All four ships will also be equipped with ammonia intermediate ready fuel tank, and they will be progressively delivered from 2H 2024 through to 1H 2025. When delivered, the vessels will become the largest container vessels in PIL's fleet and the first vessels in the fleet to run on LNG*." (vi) But now, PIL is not making its ships ammonia ready. Our Supplemental Documents package includes the PIL Aug 19, 2024 release, July 13, 2023 release and CEO message from 2022 sustainability report.

08/07/24: Maersk backs off green fuels/ammonia bet, buying LNG fueled tanker

PIL isn't alone if moving away from moving away from green fuels/ammonia for its ships. Maersk did the same for its latest tankers. Here is what we wrote in our Aug 11, 2024 Energy Tidbits memo. "*Maersk backs off its green fuels bet, buiying LNG fueled tanker. Maersk gave in this week and announced it was ordering an undisclosed number of LNG fueled tankers and ships. This was a big change from their original plans to jump to the fuel of the future – green hydrogen/ammonia. And it is a confirmation of a reality check for green fuels like green methanol/ammonia to power tankers/ships isn't going to happen anywhere near fast enough or cheap enough. Maersk's original 2020 view was not going to go to LNG fueled tankers because they were fossil fuels. Then later they announced their first orders for green methanol and they would rather just skip LNG and they didn't see that playing a big role as a transition fuel..But at that time, we highlighted that these were dual fuel ie. also run on Low sulfur fuel oil. And we said that was what they would do. This week, Maersk confirmed they are ordering more of the duel fuel ships that can be run on methanol and LSFO. But the big change is that they also confirmed they are ordering LNG fueled ships. IN their Q2 call Q&A, mgmt noted the high cost of green fuels and the lack of availability as the reason for this shift away from a single bet for the future in green fuels. Mgmt said "So we've been clear for a while that I think the future in shipping is going to be with a lot of different technologies living side by side at the same time. We will, of course, continue to have bunker fuel for the next many years being part of the mix. We will have methanol. We have started to have methanol. And this will grow. We have already in the market a lot of LNG And this will also continue to grow if you look also at the order book. And I'm sure that at some time soon, we will see also ammonia coming online as a new propulsion technology that will enable the decarbonization. For us, the assessment has been the following. There is high level of uncertainty about both availability of fuel and price of fuel in the future, price of green fuels in the future. And there is a high level of uncertainty on how the regulatory and how the regulatory regime is going to shape up. And therefore, there is a necessity for us in order to be able to reach the decarbonization agenda that we have in a way that is economically competitive. There is a need for us to hedge some of the bets that we're making on technology and not taking only one way or only one bet and then depend on assumptions that we have very little influence into making happen. So our view was that this was the opportunity for us to balance the bets. We are very happy that thanks to the work that we have done with methanol today, this is a viable and scaling technology across the segment and has a lot of momentum, but we also need to make sure we are exposed to some of the other propulsion technologies so that we don't have all of a sudden risk to have a significant disadvantage for a reason or another." Our Supplemental Documents package includes excerpts from the Maersk call transcript."*

Energy Transition: Ford, EV buyers are more cost conscious than early adoopters

Ford on EV buyes are more cost conscious

On Wednesday, Ford issued its "*Ford Broadens Electrification Strategy to Reach More Customers, Improve Profitability, Continue to Reduce CO2*" [LINK], which included its latest writedowns for EVs as well as items related to EV model delays and overall change in electrification strategy. We are amazed that the big US car companies went along for way longer that we expected on electrification strategies as if they didn't realize that the pace of

EV adoptions wasn't going to slow down as the EV buyers moved from early adopter higher income to mass market lower and middle income buyers. This amazes us. When we saw the release, we tweeted [LINK] "*Ford also reminds why pace of EVs adoption is slower previously expected. "In addition, today's electric vehicle consumers are more cost-conscious than early adopters" ie. low/middle income consumer can't pay up like high income consumer. #OOTT #EVs.*"

IEA Oil 2024 warns a 15% delay in EVs pace means oil demand grows thru 2030

We have been highlighting this key concept that EVs adoptions will not be at the pace included in EV sales forecasts especially in those forecasts like the IEA's that link to their peak oil demand call. So when we see Ford highlight the slower pace of EV sales as EVs have to move from early adopter higher income to mass market lower and middle income, it is another significant indicator of a slower pace in EV sales. And therefore a pushing out of when peak oil demand is to occur. Here is what we wrote in our June 16 2024 Energy Tidbits memo on the IEA Oil 2024 warning. "*We thought the IEA's comments in Oil2024 was a set up comments for when the IEA pushes back its peak oil demand ie. where they can say they warned in Oil2024. As noted above, the EVs sales and displacement of 6 mmb/d by 2030 is from GEVO2024 as noted above. Oil2024 says that if the pace of global EV adoption is 15% less than in their STEPS scenario from April 2024, that would put oil demand back into growth in 2030. This looks like the set-up comment for when the IEA pushes back peak oil demand ie. where they can say they warned readers in Oil 2024. The pace of global EVs is based on government policies AND objectives. And think about what has been happening in the EVs sales market. Surely people have knocked down their EV adoption pace by at least 15%. Whenever the IEA make a modest cut to their EV adoption pace (that was based on govt stated policies and objectives) , then it means peak oil demand is sometime in the 2030s and also that oi demand growth thru 2030 will be greater than in the Oil 2024 forecast. In Oil 2024, the EIA wrote "Moreover, oil's flattish, plateauing demand profile post-2027 means that it would only take relatively minor changes in its underlying drivers to directionally shift oil's demand trajectory. For example, either a 0.3% quickening in global GDP growth, a USD 5/bbl annual decline in real oil prices or a 15% slowdown in the pace of global EV adoption would be sufficient for oil consumption to cross the narrow dividing line back from shrinkage to growth at the end of the decade. Conversely, opposite shifts of the same magnitude would accelerate oil demand's slide into contraction."*

Energy Transition: Ford CEP admits F-150 pickup truck drivers need ICE & hybrid

Ford's F-150 change

The other head shaker we had from the Ford broadened electrification strategy were Ford CEO Farley's comments on F-150 trucks and how pickup truck drivers need to have choice of also hybrid and ICE and not just electric. CEO Farley says they need to give F-150 buyers the choice to also go hybrid or ICE depending on how they use their truck. The unsaid message is that if the truck driver needs to use the pickup truck for pickup truck uses, they need to go hybrid or ICE. We call it a head shaker because it's as if this is a relatively new revelation that the Lightning F-150 won't work for all pickup truck drivers when Farley said this exact thing in April 2022. On Wednesday, we tweeted [LINK] *"F150 Lightning only right for urban cowboys. Today "As the global leader in pickup trucks, we are future-proofing this* *valuable franchise across all sizes with hybrid, electric and other electrified propulsion options, giving individual customers and businesses choice based on how they use their trucks" CEO Farley. 👇04/27/22: "An electric vehicle is not a good solution for super duty customers. We're 50% of all commercial light duty vehicles in the US so we know. And the technology is not right for that. For retail customer who is doing some light towing or commuting to work, it's perfect. But for heavy duty usage, it's not the right solution. So you're going to see a mix of ICE and BEV." CEO Farley EVs are growing, but at a way slower pace in the US than expected. ie. gasoline will be needed for longer. #OOTT."*

04//26/22: Ford CEO warned EV trucks aren't for all pickup truck uses

Here is what we wrote in our May 1, 2022 Energy Tidbits memo on Ford CEO Farley's first noting the Lightning wasn't going to work for regular pickup truck uses. *"We thought there was a throwing water on the fire reality check on EV trucks from Ford CEO Jim Farley on Tuesday. We had missed his comments but one of our Twitter followers flagged it for us after seeing our Wednesday morning tweet [LINK] "GM #SilveradoEV truck will have 400 miles of range & that is only a year away, @mtbarra just said to @tomkeene on @bsurveillance. #EV range is no longer a reason not to buy. Can they get the prices down?? #OOTT." We thought 400 miles of range was a pretty good number, even if it gets hammered down in cold Cdn winters. But then we went to search out the Ford CEO interview on the Ford F150 Lightning EV. As everyone knows, Ford dominates the pickup truck market with the F150. But clearly Farley threw some cold water on the fire. We were surprised at the bluntness of his warning on EV pickup truck uses. We tweeted [LINK] "#EV trucks #F150Lightning are not good for heavy users ie. ranchers, contactors. But perfect for urban cowboy & commuting to work, so will need mix of #ICE & #BEV says #Ford CEO to @sonalibasak..So why feature towing so prominently in commercials? Thx @kropija for flagging. #OOTT. Farley is basically saying the F150 Lightning is best suited for commuters and what Texans call "all hat, no cattle" pickup truck drivers. We created a transcript of Farley's comments [LINK]. Bloomberg's Sonali Basak. "Jim, look out into the future for a second here, can you see all the F150's going electric? And what would it take for that to happen?" Farley "No way. I don't see that happening. If you're towing a fifth wheel in Wyoming, or you know with a horse trailer, there is no way. An electric vehicle is not a good solution for super duty customers. We're 50% of all commercial light duty vehicles in the US so we know. And the technology is not right for that. For retail customer who is doing some light towing or commuting to work, it's perfect. But for heavy duty usage, it's not the right solution. So you're going to see a mix of ICE and BEV." After listening to Farley, we looked at the Ford F150 Lightning promotion video [LINK] and couldn't help notice how prominently Ford featured towing in its commercials*." Below are the commercials run referenced in our April 27, 2022 tweet.

Figure 59: Excerpts from Ford F-150 Lightning YouTube ad April 2022

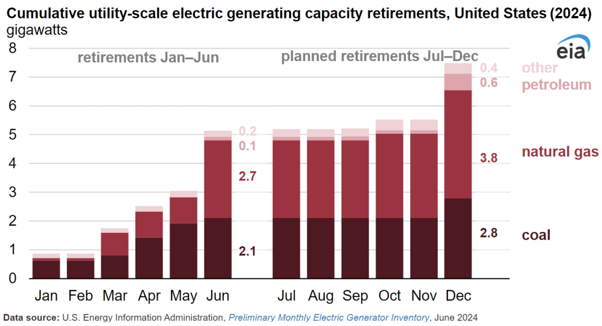
Source: Ford

Energy Transition: EIA, U.S. power grid new capacity led by solar, battery & wind

EIA power grid capacity adds in 2024

On Monday, the EIA reported that the U.S. added a total of 20.2 GW of utility-scale electric generating capacity in H1/24 to power grids [LINK]. This is 3.6 GW more than the capacity added in the same period last year, and the EIA is expecting a total of 42.6 GW to be added through 2024 by the end of the year. The part of the EIA blog that got the most headlines was on the renewable share as the EIA reported "*Nearly 60% of that planned capacity is from solar (25 GW), followed by battery storage (10.8 GW) and wind (4.6 GW).*" No question with the added capacity being led by solar, battery storage and wind. But what didn't get the attention was the area that adds to the risk of reliability is that the retirements of capacity are led by older coal and natural gas plants. Adding more solar and wind that can't produce 24/7 and losing more coal and natural gas that can produce 24/7 just adds to the reliability risk, especially in a world where every forecast expects stronger than expected growth in US electricity demand for the next decade. Our Supplemental Documents package includes the report from the EIA.

Figure 60: Cumulative utility scale electric generating capacity retirements US (2024)



Source: EIA

IFIC Cdn mutual fund data

Capital Markets: IFIC, mutual funds equity & balanced funds flip to net sales in July
We have been highlighting the big change to Cdn mutual funds that started in Q2/22 – when there started a shift from net sales to massive net redemptions in balanced and equity funds. What started in H2/22 played out even bigger in 2023 and is continuing, but on a lesser scale, in 2024 to date. On Thursday, IFIC (Investment Funds Institute of Canada) reported mutual funds and ETF sales for July [LINK]. IFIC reported net redemptions (sale of positions) for balanced funds to be -$1.025b in July vs net redemptions of -$4.048b in June. This brings the YTD figure for balanced funds net redemptions to -$19.983b, less than year ago -$26.251b in YTD 2023. Equity funds saw net sales of $2.088b in July, after net redemptions of -$2.614b in June and -$0.881b of net redemptions in May. Equity fund net sales are up +$4.702b MoM from June. Recall February was the first net sales in equity funds in 12 months and March followed with small net sales in equity funds. April was a return to net redemptions, and we had been consistently at net redemptions since, until July's flip back to net sales. Our Supplemental Documents package includes the IFIC release.

Figure 61: Cdn Mutual Fund Net Sales/Net Redemptions ($ Millions)

Mutual fund net sales/net redemptions ($ millions)*

Asset class	Jul 2024	Jun 2024	Jul 2023	YTD 2024	YTD 2023
Long-term funds					
Balanced	(1,025)	(4,048)	(4,571)	(19,983)	(26,251)
Equity	2,088	(2,614)	(1,848)	482	(11,432)
Bond	3,307	1,188	414	13,405	9,017
Specialty	800	473	262	4,583	2,276
Total long-term funds	5,169	(5,002)	(5,744)	(1,514)	(26,390)
Total money market funds	31	2,487	958	2,614	8,840
Total	5,200	(2,515)	(4,786)	1,100	(17,550)

Source: IFIC

There were massive redemptions in Cdn active equity/balanced funds in 2023
2023 was a brutal year for net redemptions for Cdn balanced and equity funds and even more than in 2022. Here is what we wrote in our Jan 28, 2024 Energy Tidbits memo. *On Friday, we tweeted [LINK] "Brutal year for net redemptions in balanced and equity mutual funds in Canada. @ific reflects $82.5 billion net redemptions including $56.9b from balanced mutual funds and $25.6b from equity mutual funds. #OOTT." One of the big Cdn equity stories in 2022 continued to play out in an even bigger way in 2023 – the continued net redemptions from active managed Cdn equity and balanced mutual funds. This flipped in Q2/22 from massive net sales into balanced and equity mutual funds to massive net redemptions in equity and balanced mutual funds. This year, the 2023 net redemption total dwarfed those in 2022. On Wednesday, IFIC (Investment Funds Institute of Canada) reported [LINK] mutual funds and ETF sales for November. IFIC reported net redemptions for balanced mutual funds were $4.612b in December vs $6.510b in November and $8.569b in October. IFIC also reported net redemptions for equity mutual funds were $2.514b vs net redemptions of $3.178b in November and $4.142b in October. This means, barring any major revisions, that in 2023 there were $82.5b of net redemptions in balanced and equity mutual funds! This is more than double the net redemptions of 2022.*

Figure 62: Cdn Mutual Fund Net Sales/Net Redemptions ($ Millions)

Mutual fund net sales/net redemptions ($ millions)*

Asset class	Dec 2023	Nov 2023	Dec 2022	2023	2022
Long-term funds					
Balanced	(4,612)	(6,510)	(4,935)	(56,866)	(29,959)
Equity	(2,514)	(3,178)	(3,069)	(25,568)	(8,461)
Bond	845	(435)	(2,187)	6,986	(13,811)
Specialty	176	391	102	3,538	1,306
Total long-term funds	(6,105)	(9,732)	(10,088)	(71,909)	(50,925)
Total money market funds	790	1,227	1,802	14,825	7,196
Total	(5,315)	(8,506)	(8,286)	(57,084)	(43,729)

Source: IFIC

Germany manufacturing PMI going even lower

Capital Markets: Germany manufacturing PMI continues its big downward trend

Germany manufacturing/industry started its big slide before Russia invaded Ukraine when Europe natural gas prices spiked and went into a steady big decline as cheap Russian natural gas via pipeline was cut to zero in 2022 following Russia's invasion of Ukraine. Cutting off cheap Russian natural gas has been the big hit to Germany's heavy industry. On Thursday, we tweeted [LINK] *" "recession in Germany's manufacturing sector deepened in Aug, with no recovery in sight, in fact new orders took a shaper dive.." @CyrusdelaRubia There are other factors but the big one hammering DEU manufacturing was cutting off cheap Russian #NatGas via Nord Stream 1 post Russia invasion of Ukraine. Give Germany credit for supporting Ukraine #OOTT."* On Thursday, the HCOB Manufacturing PMI for Germany showed an unexpected contraction in August from an already low number. It came in at 42.1 for August, down from 43.2 in July, and below estimates of 43.3. It was the lowest level in five months. Our tweet included the below Bloomberg graph of HCOB Manufacturing PMI for Germany and we noted the key cut off of Russian cheap pipeline natural gas and there is a clear correlation to lower Manufacturing PMI numbers. Our Supplemental Documents package includes an excerpt from the HCOB Manufacturing PMI.

Figure 63: Germany HCOB Manufacturing PMI incl Aug & Russian natural gas events

Source: Bloomberg, SAF Group

Record # of visitors to Japan

Capital Markets: Weak Yen leads to continuing record visitors to Japan

Japan continues to be major travel destination from all parts of the world driven by the low yen. For decades, Japan was viewed as an expensive travel destination (and it was) but that has changed with the weak yen. As a result, visitors in Japan hit a new all-time record in March, broke that record in June and set another new all-time high in July. The Japan

National Tourist Organization released July data Foreign visitors in July were up to 3.293 mm, which was +0.157 mm, +5.0% MoM vs 3.136 mm in June 2024. July was also +0.972 mm, +41.9% YoY vs 2.321 mm in July 2023. And vs pre-Covid, July was +0.302 mm, +10;1% vs pre-Covid 2.991 mm in July 2019. Below is the Bloomberg graph of Japan foreign visitors and we added the Yen.

Figure 64: Japan Foreign Visitors and Yen

Source: Bloomberg, Japan National Tourist Organization

MonkeyPox

Demographics: What EU country put the big order in for MonkeyPox vaccine?

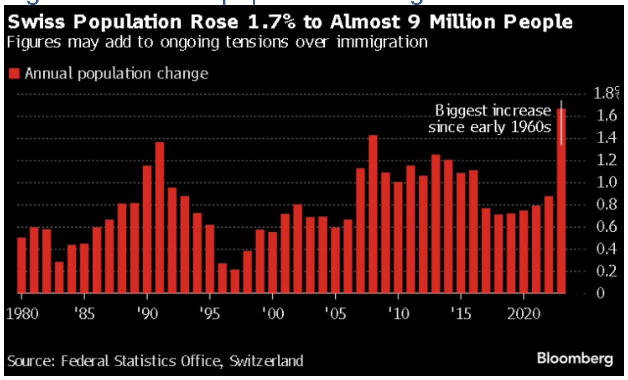
MonkeyPox isn't seeming to cause any major international health panic. But, it is something that we are watching and trying to get feedback from people who should know about it. On Thursday morning, we were watching CNBC Squawk Box when they reported on the Q2 from Bavarian Nordic, the maker of the Monkey Pox (MPox) vaccine. We tweeted [LINK] "*Let's hope it's hope for the best, plan for the worst. Have to agree with @andrewrsorkin that would like to know who is the undisclosed European country that put in large order for Bavarian Nordic's MonkeyPox (MPox) vaccine. Earnings call at 6am MT #OOTT.*" We had to agree with CNBC that we have to wonder which European country put the big order in for MPox vaccine. We looked at the Q2 call transcript and there was no disclosure of the mysterious European country. In the Q&A, mgmt reminded of the risk for the Mpox to spread to other areas. Mgmt replied "*Well, again, I'm not sure I'm qualified really to talk about the scenarios. But the one thing I would say is that the outbreak in '22-'23 originated from Africa, right? It was endemic in Africa, and it came out of Africa and spread because the levels of immunity in the population are very low. I think we should all international, everyone, have learned from COVID and from mpox in '22-'23 that you cannot ignore an outbreak of an infectious disease in one part of the world and not to expect it to eventually land at your doorstep. So as I said, I think the international community has got that message. I think now with the declared emergency, I really see a change in the urgency in the discussions that we're having. And I think the whole international community needs to come together. We can play our role in that, but they need to come together and address this outbreak in Africa as soon as possible.*"

Swiss population increase from immigration

Demographics: Swiss population jumps most since 1960s from immigration

We haven't been following the recent growth in immigration in Switzerland so were surprised to see the Thursday Bloomberg report that Switzerland's population had the biggest YoY increase in 2023 since the early 1960s. The population increased by +1.7% YoY to almost 9 million, largely driven by the volume of Ukrainian refugees being reclassified after a year in the country. This is a reminder that for major western developed countries, population growth is driven by immigration. Bloomberg reported that more than a quarter of Switzerland's residents are not citizens, and wrote "*In total, the number of non-citizens in Switzerland grew by 5.3%, and the number of Swiss citizens only edged up 0.4%*". The other interesting part of the report was "*The numbers are likely to amplify long-running tensions in the country over immigration and strains on public finances and services. Immigration played a role in elections last year, when the conservative Swiss People's Party (SVP) cemented its position as the biggest party, and it's a contentious issue in talks between Switzerland and the European Union on a new economic deal. This year, the SVP collected enough signatures to force a plebiscite on a proposal to put a 10-million limit on Switzerland's population. The threshold is currently expected to be crossed around 2035.*" Our Supplemental Documents Package contains the report from Bloomberg.

Figure 65: Annual population change in Switzerland



Source: Bloomberg

Demographics: Russia warns dating apps give Ukraine access to CCTV cameras

Dating apps give Ukraine military intel

We are a little surprised that this Interfax story didn't get any attention in the US as a reminder of the security risk from Americans using TikTok. Russia is highly discouraging the use of dating apps by people in Bryansk, Kursk and Belgorod regions as it supplies Ukraine with connectivity to CCTV cameras for military intelligence. On Tuesday, Interfax reported [LINK] "*The Department for Combating the Illegal Use of Information and Communication Technologies of the Ministry of Internal Affairs of Russia has issued a memo on information security in the Bryansk, Kursk and Belgorod regions for the population and representatives of law enforcement agencies. "The enemy massively detects IP bands in our territories and connects to unprotected video surveillance cameras remotely, viewing everything from private courtyards to roads and highways of strategic importance. In this regard, if there is no urgent need, then it is better not to use CCTV cameras," the department told reporters. "The use of online dating services is highly discouraged. The enemy actively uses such resources for the legendary collection of information," the department continued.*" Our Supplemental Documents package includes the Interfax report.

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

@Energy_Tidbits on Twitter

Last month, I went over 11,000 followers on Twitter/X. I really appreciate the support and, more importantly, some excellent insights and items to look at from Twitter followers. It helps me do a better job. For new followers to our Twitter, we are trying to tweet on breaking news or early views on energy items, most of which are followed up in detail in the Energy Tidbits memo or in separate blogs. Our Twitter handle is @Energy_Tidbits and can be followed at [LINK]. We wanted to use Energy Tidbits in our name since I have been writing Energy Tidbits memos for over 20 consecutive years. Please take a look thru our tweets and you can see we aren't just retweeting other tweets. Rather we are trying to use Twitter for early views on energy items. Our Supplemental Documents package includes our tweets this week.

LinkedIn: Look for quick energy items from me on LinkedIn

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 and food.

Cdn PGA stars Taylor Pendrith, Corey Connors, Adam Hadwin going for Top 30

We will be watching some golf today. Just like last week, there should be some TV coverage of our Cdn PGA stars in today's final round of the BMW Championship as the top 50 on the FedEx standings compete to be in the Top 30 to make it to for next week's Tour Championship event. Based on the leaderboard after the 3rd round, Taylor Pendrith is projected at 23, Corey Connors is projected at 34 and Adam Hadwin is projected at 46. The TV coverage will focus on who will the BMW but also those who are fighting to be finish in the Top 30. Last year, Corey Connors and Nick Taylor qualified to be the Top 30 and played in the Tour Championship.

Wine of the week: 2004 Clarendon Hills Hickinbotham Cabernet Sauvignon

Last week, I started the wine of the week when I realized I had to get opening up some wines bought 20 to 30 years ago that, unfortunately, were getting past their prime. One of the negatives of the change in life from Covid was a huge absence of entertaining at home, which means there has been a big shortfall in wine drinking at our home. And because I was fortunate to have had great buyside and company clients for our energy success at Griffiths & McBurney/GMP Securities in 1998 to 2013, it means there are some great older bottles of red wine downstairs. So am now making sure some good wine of the week bottles get opened especially as many are 20 to 40 years old. On Friday, I tweeted out the wine of the week, which was the 2004 Clarendon Hills Hickinbotham Vineyard Cabernet Sauvignon. Can't remember when I had the last one but it was still drinking very well. I used to put the Parker review on the back to make it easier for guests to pick out a wine to drink.

Figure 66: 2004 Clarendon Hills Hickinbotham Vineyard Cabernet Sauvignon

Source: SAF Group

Farmers' Almanac vs Old Farmer's Almanac

This week we highlighted the Farmers' Almanac winter forecast. The Old Farmer's Almanac is scheduled to release its winter forecast tomorrow. The difference is that the Farmers' Almanac started over 200 years ago in 1818, whereas the Old Farmer's Almanac started in 1792. The Old Farmer's Almanac started life as the Farmer's Almanac but added the old in 1832. We have to believe there weren't strict naming rights in 200 years ago, when the Farmers' Almanac started up in 1818 using the same name as the original Farmer's Almanac.

NHL's Matthew Tkachuk and NBA's Jayson Tatum recreate 9th grade picture

This week, NHL's Matthew Tkachuk of the Stanley Cup winning Florida Panthers and Jayson Tatum of the NBA Champions Boston Celtics were in their home town of St. Louis to jointly throw out the first pitch at a Cardinals game. Turns out they were friend in grade nine in St. Louis. Shout out to Chaminade Prep in St. Louis that has had great sports teams for decades. Tkachuk and Tatum recreated a picture of them from grade nine and included the same classmate, Jacob Bai, who photo bombed the first picture.

Figure 67: Matthew Tkachuk, Jayson Tatum and Jacob Bai then and now

Source: St. Louis Cardinals