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Energy Tidbits

Sept 8, 2024

Produced by: Dan Tsubouchi

321 Crack Spreads -$2.27 WoW to $14.79. Haven't been <$15 Since Feb/21 when WTI was ~$60.

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. Bad week for 321 crack spreads that were -$2.27 WoW to $14.79. Haven't been <$15 since Feb/21 when WTI was ~$60. [click here]

2. ECMWF continues to forecast a warm start to winter in Asia and Europe, a warm start to winter is never good for LNG and TTF prices. [click here]

3. Vortexa crude #Oil floating storage 58.69 mmb at Sep 6 and last 6 wks average 65.57 mmb, only been 20 wks <70 mmb since Covid. [click here]

4. Still see a challenge for Saudi et al to add any barrels back in Q1/25 given global oil demand is forecast seasonally lower than Q4/24. [click here]

5. Toyota and Volvo the latest major global car manufacturers to make major reduction to their EVs expectations. [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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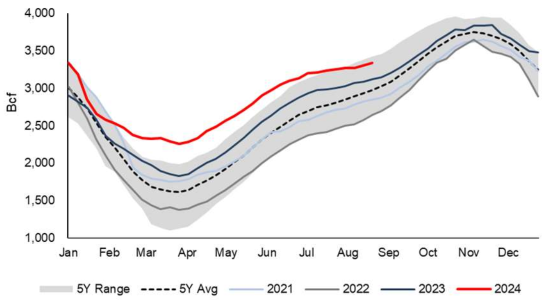
Natural Gas: Really hot summer = less risk US gas storage gets filled early

Less risk for US gas storage to be filled early

HH continues to be held back with US natural gas storage at or near the high end of the 5-yr range and producers still shutting in natural gas with low prices. 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 +208 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, July, and August has lessened the risk to storage being filled early. 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 be way worse if producers didn't shut-in production or hold back on planned completions. On Aug 20, 2024, 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 bcf/d 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. Ther are others like Chesapeake who have shut-in natural gas due to low natural gas prices.

Natural Gas: +13 bcf build in US gas storage; now +208 bcf YoY

+13 bcf build in US gas storage

As noted above, US gas storage would be way worse if producers hadn't shut-in natural gas due to low natural gas prices. For the week ending August 30, the EIA reported a +13 bcf build [LINK]. Total storage is now 3.347 tcf, representing a surplus of +208 bcf YoY compared to a surplus of +228 bcf last week. Since February, total storage had remained above the top end of the 5-yr range, until 1 month ago when storage dipped into the 5-yr range. This week's data shows that storage is now -73 bcf below the 5-yr maximum of 3.420 bcf. Total storage is now +323 bcf above the 5-year average, below last week's +361 bcf surplus. Below is the EIA's storage table from its Weekly Natural Gas Storage report and a table showing the US gas storage over the last 8 weeks.

Figure 2: US Natural Gas Storage

	Stocks billion cubic feet (Bcf)				Year ago (08/30/23)		5-year average (2019-23)	
Region	08/30/24	08/23/24	net change	implied flow	Bcf	% change	Bcf	% change
East	761	754	7	7	762	-0.1	717	6.1
Midwest	922	909	13	13	870	6.0	844	9.2
Mountain	270	266	4	4	217	24.4	191	41.4
Pacific	289	287	2	2	251	15.1	263	9.9
South Central	1,105	1,119	-14	-14	1,039	6.4	1,009	9.5
Salt	267	272	-5	-5	243	9.9	233	14.6
Nonsalt	838	847	-9	-9	797	5.1	776	8.0
Total	3,347	3,334	13	13	3,139	6.6	3,024	10.7

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
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
Aug-23	3,334	35	228	361
Aug-30	3,347	13	208	323

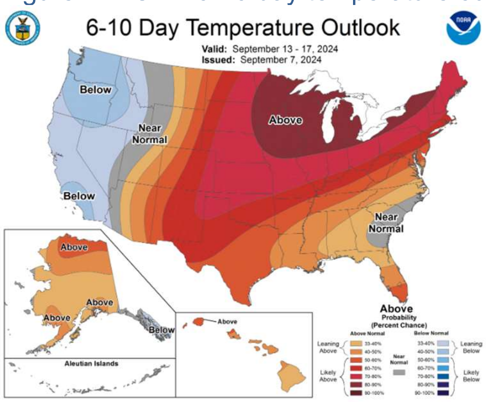
Source: EIA, SAF

Natural Gas: NOAA forecasts warm temperatures in E ½ of US for Sept 13-21

Warm E ½ of US for Sept 13-21

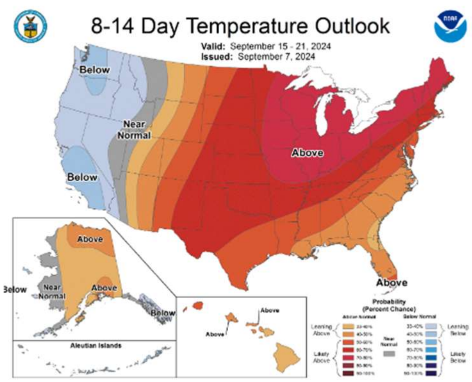
HH prices closed at $2.28 on Friday and our concern is that HH stays stuck around this level or a little weaker until the start of the winter unless there are some supply interruption as storage is still +208 bcf YoY and would be worse if producers like EQT, Coterra and others haven't been shutting in natural gas production due to low prices. Yesterday, we tweeted [LINK] "*Updated @NOAA 6-10 & 8-14 day temperature outlook covers Sept 13-21. Warmer than normal for populous E1/2 but warmer than normal Sept doesn't drive a big ramp in A/C. Not likely to impact prices with storage +208 bcf YoY & lots of shut-in #NatGas due to low prices. #OOTT.*" Our reminder is that warmer than normal Sept temperatures don't drive as much A/C demand as warmer than normal July or Aug temperatures. Below are NOAA's updated, as of yesterday, 6-10 day and 8-14 day temperature outlook maps covering Sept 13-21.

Figure 4: NOAA 6-10 day temperature outlook for Sept 13-17



Source: NOAA

Figure 5: NOAA 8-14 day temperature outlook for Sept 15-21



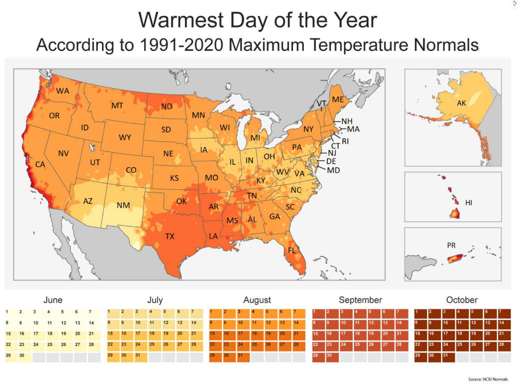
Source: NOAA

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

It's September, which means it is past the warmest day of the year for the Lower 48 and so hot weather relative to normal isn't as hot for temperatures as during July and August. So when NOAA posts its temperature outlook map and it shows well above normal temperatures for late September, it doesn't have the air conditioning demand impact as a well above normal temperature in July or August. Our July 2, 2023 Energy Tidbits included the below map from NOAA's post "*When to expect the Warmest Day o the Year*" [LINK]. We checked the link and it still works.

Normal warmest day of the year across the US

Figure 6: NOAA Warmest Day of the Year



Source: NOAA

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

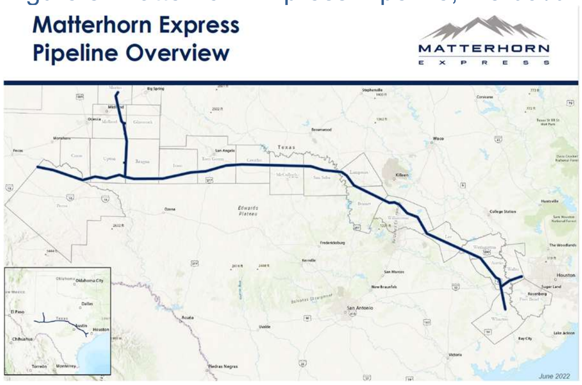
Waha spot prices are -$0.07

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 may be getting some relief. On Friday, we tweeted [LINK] "*Will start up 2.5 bcfd Matterhorn Express move Waha (Permian) spot #NatGas price to the positive for a bit? Waha +$5.09 WoW to close -$0.07. $PR CEO: "Matterhorn is online, moving a little bit of gas & coming online in a real way over the next month or 2." #OOTT.*" Waha spot natural gas prices were +$5.09 WoW to close at -$0.07 on Friday. And our tweet notedf the comments from Permian Resource co-CEO that Matterhorn is online, moving a little bit of gas and is ramping up. So we should see over the next two weeks if Matterhorn will take Waha spot prices above zero for a bit. 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 7: Waha Natural Gas Prices to Sept 6 close

Source: Bloomberg

Figure 8: Matterhorn Express Pipeline, 2.5 bcf/d



Source: Matterhorn Express

Permian Resource CEO "*Matterhorn is online, moving a little bit of gas*"

Our tweet included the transcript excerpt of Permian Resource co-CEO William Hickey update on the 2.5 bcf/d Matterhorn Express pipeline in the Q&A of his sellside presentation. His comments that Matterhorn is not moving a little bit of gas and is ramping up is consistent with the timing we have been highlighting for mid-Sept. Hickey said "*Having said that, I think the specific one that you're probably referencing is WAHA pricing today. It's been about as bad as it's ever been over the last few weeks. But Matterhorn is online, moving a little bit of gas and coming online in a real way over the next month or 2. And so I think although it continues to get delayed more than we would hope, I feel like I've said it will be on line a month from today, two or three times over the last two or three months. that is going to be on line and moving a real amount of gas over the next couple of months. And so hopefully, that we'll see at least WAHA turn positive. I don't think this is going to be the big game changer for gas. Like ultimately, we have a lot more work to do, I think, with logistics of how we move gas around the nation and really the other countries to solve the supply/demand side of the gas part of the equation. But generally speaking, that would be a nice relief.*"

Natural Gas: Shell signs 0.39 bcf/d 10-year LT LNG supply deal with BOTAŞ

Shell / BOTAŞ sign 10-yr LNG supply deal

On Monday, Shell announced that they signed a 0.39 bcf/d 10-year LNG supply deal with BOTAŞ (Turkey) for the delivery of LNG starting in 2027 [LINK]. The Republic of Türkiye's Minister of Energy and Natural Resources, Alparslan Bayraktar, said *"Our goal in natural gas, 99% of which we imported until the discovery of Black Sea Gas, is to diversify the supply side and offer natural gas to our citizens and industry in a more competitive and affordable rate. In this context, we have strengthened our infrastructure with international pipelines, LNG terminals and underground storage projects".* The C.E.O. of Shell, Wael Sawan, noted "*Building on 100 years of Shell's presence in Türkiye, we are delighted to work with BOTAS and supply LNG to assist Türkiye diversify its national gas supply. LNG offers a flexible and reliable source of energy and around the world it has a vital role to play in the transition to a lower carbon energy system*". Our Supplemental Documents package includes the BOTAŞ announcement.

There have been 25.61 bcf/d of long-term LNG supply deals since July 1, 2021

The abrupt big wave of LNG deals started in July 2021, and we highlighted this in our July 14, 2021, 8-pg "Asian LNG Buyers Abruptly Change and Lock in Long Term Supply – Validates Supply Gap, Provides Support For Brownfield LNG FIDs". We continue to update that table, which now shows 25.22 bcf/d of long-term LNG deals since July 1, 2021. 64% of the deals have been by Asian LNG buyers, but we are now seeing rest of world locking up long term supply deals post Russia/Ukraine. Note in our non-Asian LNG deals will major LNG players (i.e. Chevron, Shell, etc.) buying for their LNG portfolio supply. China ha)as been particularly active in this space, accounting for 43% of all Asian LNG buyers in long term contracts since July 1, 2021. Below is our updated table of Asian and Europe LNG buyers new long-term supply deals since July 1, 2021.

Figure 9: Long-Term LNG Buyer Deals Since July 1, 2021

			Buyer / Seller	(bcf/d)	Years		
Asian LNG Deals							
Jul 7, 2021	CNOOC	Petronas	China / Canada	0.30	10.0	2022	2032
Jul 9, 2021	CPC	QatarEnergy	Taiwan / Qatar	0.16	15.0	2022	2037
Jul 9, 2021	Guangzhou Gas	BP	China / US	0.13	12.0	2022	2034
Jul 12, 2021	Korea Gas	QatarEnergy	Korea / Qatar	0.25	20.0	2025	2045
Sep 29, 2021	CNOOC	QatarEnergy	China / Qatar	0.50	15.0	2022	2037
Oct 7, 2021	Shenzhen	BP	China / US	0.04	10.0	2023	2032
Oct 11, 2021	ENN	Cheniere	China / US	0.12	13.0	2022	2035
Nov 4, 2021	Unipec	Venture Global LNG	China / US	0.46	20.0	2023	2043
Nov 4, 2021	Sinopec	Venture Global LNG	China / US	0.53	20.0	2023	2043
Nov 5, 2021	Sinochem	Cheniere	China / US	0.12	17.5	2022	2040
Nov 22, 2021	Foran	Cheniere	China / US	0.04	20.0	2023	2043
Dec 6, 2021	Guangdong Energy	QatarEnergy	China / Qatar	0.13	10.0	2024	2034
Dec 8, 2021	S&T International	QatarEnergy	China / Qatar	0.13	15.0	2022	2037
Dec 10, 2021	Suntien Green Energy	QatarEnergy	China / Qatar	0.13	15.0	2022	2037
Dec 15, 2021	SPIC Guangdong	BP	China / US	0.03	10.0	2023	2033
Dec 20, 2021	CNOOC Gas & Power	Venture Global LNG	China / US	0.26	20.0	2023	2043
Dec 29, 2021	Foran	BP	China / US	0.01	10.0	2023	2032
Jan 11, 2022	ENN	Novatek	China / Russia	0.08	11.0	2024	2035
Jan 11, 2022	Zhejiang Energy	Novatek	China / Russia	0.13	15.0	2024	2039
Feb 4, 2022	CNPC	Gazprom	China / Russia	0.98	30.0	2023	2053
Mar 24, 2022	Guangdong Energy	NextDecade	China / US	0.20	20.0	2026	2046
Mar 29, 2022	ENN	Energy Transfer	China / US	0.36	20.0	2026	2046
Apr 1, 2022	Guangzhou Gas	Mexico Pacific Ltd	China / Mexico	0.26	20.0	n.a.	n.a.
Apr 6, 2022	ENN	NextDecade	China / US	0.26	20.0	2026	2026
Apr 22, 2022	Kogas	BP	Korea / US	0.20	18.0	2025	2043
May 2, 2022	Gunvor Singapore Pte	Energy Transfer LNG	Singapore / US	0.26	20.0	2026	2046
May 3, 2022	SK Gas Trading LLC	Energy Transfer LNG	Korea / US	0.05	18.0	2026	2042
May 10, 2022	Exxon Asia Pacific	Venture Global LNG	Singapore / US	0.26	n.a.	n.a.	n.a.
May 11, 2022	Petronas LNG	Venture Global LNG	Malaysia / US	0.13	20.0	n.a.	n.a.
May 24, 2022	Hanwha Energy	TotalEnergies	Korea / France	0.08	15.0	2024	2039
May 25, 2022	POSCO International	Cheniere	Korea / US	0.05	20.0	2026	2036
June 5, 2022	China Gas Holdings	Energy Transfer	China / US	0.09	25.0	2026	2051
Jul 5, 2022	China Gas Holdings	NextDecade	China / US	0.13	20.0	2027	2047
Jul 20, 2022	PetroChina	Cheniere	China / US	0.24	24.0	2026	2050
Jul 26, 2022	PTT Global	Cheniere	Thailand / US	0.13	20.0	2026	2046
Jul 27, 2022	Exxon Asia Pacific	NextDecade	Singapore / US	0.13	20.0	2026	2046
Sep 2, 2022	Woodside Singapore	Commonwealth	Singapore / US	0.33	20.0	2026	2046
Nov 21, 2022	Sinopec	QatarEnergy	China / Qatar	0.53	27.0	2026	2053
Dec 26, 2022	INPEX	Venture Global LNG	Japan / US	0.13	20.0	n.a.	n.a.
Dec 27, 2022	JERA	Oman LNG	Japan / Oman	0.11	10.0	2025	2035
Jan 19, 2023	ITOCHU	NextDecade	Japan / US	0.13	15.0	n.a.	n.a.
Feb 7, 2023	Exxon Asia Pacific	Mexico Pacific Ltd	Singapore / Mexico	0.26	20.0	n.a.	n.a.
Feb 23, 2023	China Gas Holdings	Venture Global LNG	China / US	0.26	20.0	n.a.	n.a.
Mar 6, 2023	Gunvor Singapore Pte	Chesapeake Energy	Singapore / US	0.26	15.0	2027	2042
Apr 28, 2023	JERA	Venture Global LNG	Japan / US	0.13	20.0	n.a.	n.a.
May 16, 2023	KOSPO	Cheniere	Korea / US	0.05	19.0	2027	2046
Jun 1, 2023	Bangladesh Oil	QatarEnergy	Bangladesh / Qatar	0.24	15.0	2026	2031
Jun 21, 2023	Petro Bangle	Oman	Bangledesh / Oman	0.20	10.0	2026	2036
Jun 21, 2023	CNPC	QatarEnergy	China / Qatar	0.53	27.0	2027	2054
Jun 26, 2023	ENN LNG	Cheniere	Singapore / US	0.24	20.0	2026	2046
Jul 5, 2023	Zhejiang Energy	Mexico Pacific Ltd	China / Mexico	0.13	20.0	2027	2047
Aug 8, 2023	LNG Japan	Woodside	Japan / Australia	0.12	10.0	2026	2036
Sep 7, 2023	Petrochina	ADNOC	China / UAE	n.a.	n.a.	n.a.	n.a.
Nov 2, 2023	Foran	Cheniere	China / US	0.12	20.0	n.a.	n.a.
Nov 4, 2023	Sinopec	QatarEnergy	China / Qatar	0.39	27.0	2026	2053
Nov 27, 2023	Gunvor Singapore Pte	Delfin Midstream	Singapore / US	0.10	15.0	n.a.	n.a.
Dec 20, 2023	ENN	ADNOC	Singapore / UAE	0.13	15.0	2028	2043
Jan 5, 2024	GAIL	Vitol	India / Singapore	0.13	10.0	2026	2036
Jan 8, 2024	Shell	Ksi Lisims LNG	Singapore / Canada	0.26	20.0	2027	2047
Jan 16, 2024	ExxonMobil	Mexico Pacific Ltd	Singapore / Mexico	0.16	20.0	2024	2044
Jan 29, 2024	Excelerate	QatarEnergy	Bangladesh / Qatar	0.13	15.0	2026	2041
Jan 30, 2024	ADNOC	GAIL India	UAE / India	0.07	10.0	2024	2034
Feb 6, 2024	Petronet LNG	QatarEnergy	India / Qatar	0.99	20.0	2028	2048
Feb 19,2024	Deepak Fertilisers	Equinor	India / Norway	0.09	15.0	2026	2041
Feb 28, 2024	Kogas	Woodside	Korea / Australia	0.07	10.5	2026	2037
Feb 29, 2024	Sembcorp	TotalEnergies	Singapore / France	0.11	16.0	2027	2043
Apr 29, 2024	Kogas	BP	Korea / Singapore	0.12	11.0	2026	2037
May 26, 2024	AMNS	Shell	India / Canada	0.05	10.0	2027	2037
May 28, 2024	Hokkaido	Santos	Japan / Australia	0.05	10.0	2027	2037
Jun 4, 2024	IOCL	TotalEnergies	India / France	0.11	10.0	2026	2036
Jun 5, 2024	CPC	QatarEnergy	Taiwan / Qatar	0.53	27.0	2025	2052
Jul 11, 2024	CPC	Woodside	Taiwan / Australia	0.79	10.0	2024	2034
Aug 6, 2024	Osaka Gas	ADNOC	Japan / UAE	0.11	10.0	2028	2038
Aug 26, 2024	KPC	QatarEnergy	Kuwait / Qatar	0.39	15.0	2025	2040
Aug 26, 2024	POSCO International	Mexico Pacific Ltd	Korea / Mexico	0.09	20.0	2027	2047
Sep 2, 2024	BOTAS	Shell	Turkey / UAE	0.39	10.0	2027	2037
Total Asian LNG Buyers New Long Term Contracts Since Jul/21				**16.37**			

			Buyer / Seller	(bcf/d)	Years		
Non-Asian LNG Deals							
Jul 28, 2021	PGNiG	Venture Global LNG	Poland / US	0.26	20.0	2023	2043
Nov 12, 2021	Engie	Cheniere	France / US	0.11	20.0	2021	2041
Mar 7, 2022	Shell	Venture Global LNG	US / US	0.26	20.0	2024	2044
Mar 16, 2022	NFE	Venture Global LNG	US / US	0.13	20.0	2023	2043
Mar 16, 2022	NFE	Venture Global LNG	US / US	0.13	20.0	2023	2043
May 2, 2022	Engie	NextDecade	France / US	0.23	15.0	2026	2041
May 17, 2022	PGNiG	Sempra Infrastructure	Poland / US	0.40	20.0	n.a.	n.a.
May 25, 2022	RWE Supply & Trading	Sempra Infrastructure	Germany / US	0.30	15.0	n.a.	n.a.
Jun 9, 2022	Equinor	Cheniere	Norway / US	0.23	15.0	2026	2041
Jun 21, 2022	EnBW	Venture Global LNG	Germany / US	0.20	20.0	2026	2046
Jun 22, 2022	INEOS Energy	Sempra Infrastructure	UK / US	0.21	20.0	2027	2047
Jun 22, 2022	Chevron	Venture Global LNG	US / US	0.26	20.0	n.a.	n.a.
Jun 22, 2022	Chevron	Cheniere	US / US	0.26	15.0	2027	2042
Jul 12, 2022	Shell	Mexico Pacific Ltd	US / Mexico	0.34	20.0	2026	2046
Jul 13, 2022	Vitol	Delfin Midstream	US / US	0.07	15.0	n.a.	n.a.
Aug 9, 2022	Centrica	Delfin Midstream	UK / US	0.13	15.0	2026	2041
Aug 24, 2022	Shell	Energy Transfer	US / US	0.28	20.0	2026	2046
Oct 6, 2022	EnBW	Venture Global LNG	Germany / US	0.26	20.0	2022	2042
Dec 6, 2022	ENGIE	Sempra Infrastructure	France / US	0.12	15.0	n.a.	n.a.
Dec 20, 2022	Galp	NextDecade	Portugal / US	0.13	20.0	n.a.	n.a.
Dec 20, 2022	Shell	Oman LNG	UK/Oman	0.11	10.0	2025	2035
Jan 25, 2023	PKN ORLEN	Sempra Infrastructure	EU//US	0.13	20.0	2027	2047
Jan 30, 2023	BOTAS	Oman	Turkey / Oman	0.13	10.0	2025	2035
Mar 27, 2023	Shell	Mexico Pacific Ltd	UK / Mexico	0.15	20.0	2026	2046
Apr 24, 2023	Hartree Partners LP	Delfin Midstream	US / US	0.08	20.0	n.a.	n.a.
Jun 21, 2023	Equinor	Cheniere	Norway / US	0.23	15.0	2027	2042
Jun 22, 2023	SEFE	Venture Global LNG	EU//US	0.30	20.0	2026	2046
Jul 14, 2023	ONEE (Morocco)	Shell	Africa/US	0.05	12.0	2024	2036
Jul 18, 2023	IOCL	Adnoc	India/UAE	0.16	14.0	2026	2040
Jul 28, 2023	OMV	BP	Austira/UK	0.13	10.0	2026	2036
Aug 4, 2023	ConocoPhillips	Mexico Pacific Ltd	US/Mexico	0.29	20.0	2025	2045
Aug 22, 2023	BASF	Cheniere	Germany / US	0.10	17.0	2026	2043
Aug 30, 2023	Shell	Oman LNG	US / Oman	0.11	10.0	2025	2035
Oct 11, 2023	TotalEnergies	QatarEnergy	France / Qatar	0.46	27.0	2026	2053
Oct 18, 2023	Shell	QatarEnergy	Netherlands / Qat	0.46	27.0	2026	2053
Oct 23, 2023	ENI	QatarEnergy	Italy / Qatar	0.13	27.0	2026	2053
Oct 31, 2023	Vitol	Chesapeake Energy	Sweden / US	0.13	15.0	2028	2043
Nov 29, 2023	OMV	Cheniere	Netherlands / US	0.11	15.0	2029	2044
Dec 5, 2023	Woodside Energy	Mexico Pacific Ltd	Australia / Mexico	0.17	20.0	2024	2044
Mar 18, 2024	SEFE	ADNOC	Germany / UAE	0.13	20.0	2024	2044
Apr 17, 2024	Shell	Oman LNG	US / Oman	0.21	10.0	2025	2035
Apr 22, 2024	TotalEnergies	Oman LNG	France / Oman	0.11	10.0	2025	2035
May 8, 2024	EnBW	ADNOC	Germany / UAE	0.08	15.0	2028	2043
June 13, 2024	Saudi Aramco	NextDecade	Saudi Arabia / US	0.16	20.0	2028	2048
June 26, 2024	Saudi Aramco	Sempra Infrastructure	Saudi Arabia / US	0.66	20.0	2029	2049
July 23, 2024	Fluxys	ConocoPhillips	Belgium / US	0.10	18.0	2027	2045
Aug 5 2024	Galp	Cheniere	Portugal / US	0.07	20.0	2030	2050
Total Non-Asian LNG Buyers New Long Term Contracts Since Jul/21				**9.24**			

Total New Long Term LNG Contracts since Jul/21	**25.61**

*Excludes Asian short term/spot deals
*on Dec 20, 2021 CNOOC agreed to buy an additional 0.13 bcf/d from Venture Global for an undisclosed shorter period
Source: Bloomberg, Company Reports
Prepared by SAF Group https://safgroup.ca/news-insights/

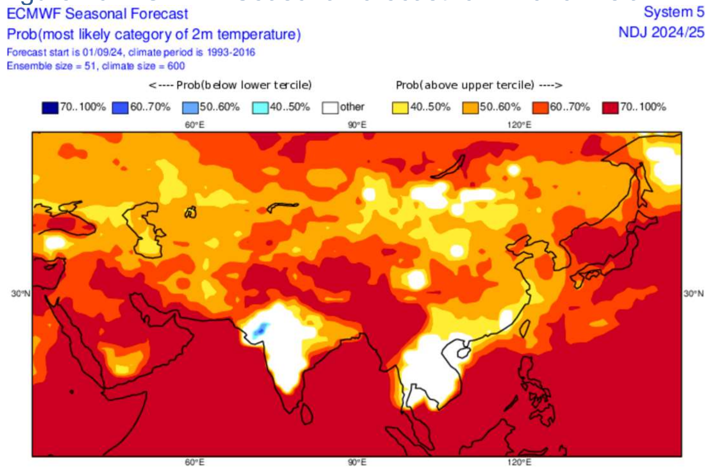
Source: SAF

Natural Gas: ECMWF forecasts a warmer than normal Nov/Dec/Jan for Asia

A warmer than normal Asia in Nov/Dec/Jan?

Winter is key to natural gas and LNG prices. Absent a significant LNG supply interruption, we continue to expect LNG prices to be held back going into the winter. And our concern is that a warm start t winter in Europe, Asia and the US sets up the likelihood for a report of 2024 where a warm winter 2023/24 has kept LNG, TTF and HH prices relatively weak all year. We recognize weather forecasts are far from 100% but forecasts for a warm start to winter will keep a hold on prices for now. On Friday, the European Centre for Medium Range Weather Forecasts (ECMWF) updated its seasonal forecast for Asia for the start of winter. And the ECMWF still expects a warmer than normal Nov/Dec/Jan for Asia ie. a warm start to winter. [LINK]

Figure 10: ECMWF Seasonal forecast for NDJ for Asia



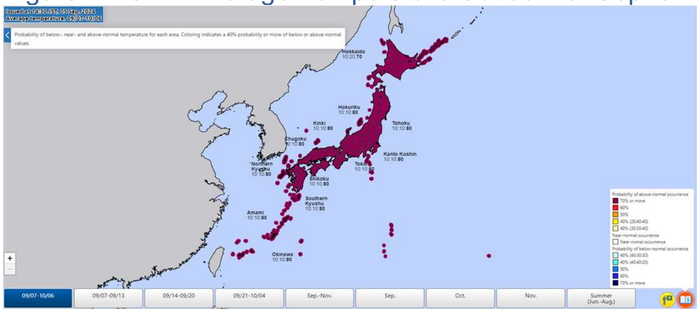
Source: ECMWF

Natural Gas: Japan expects hot temperatures to continue in September

JMA temperature forecast for the next 30 days

It's been a hot summer in Japan and the hot weather is expected to continue for the next 30 days. But we remind that a really hot for September is not as hot as being really hot in July or August. On Thursday, the Japan Meteorological Agency updated its forecast for the next 30 days, Sept 7 thru Oct 6, in Japan [LINK]. There is no JMA commentary on the forecast. JMA is calling for well above normal temperatures for September and the first week of October, with a +70% probability of above normal temperature occurrence everywhere. We checked AccuWeather for Tokyo and they are still forecasting daily highs in the low 30'sC for the next five days and then daily highs range from 23 to 28C. That is not typically a temperature that drives high electricity demand; however, Japanese offices and houses tend to have air conditioning turned way higher than in North America. Below is the JMA temperature forecast for the next 30 days.

Figure 11: JMA Average Temperature Outlook for Sept 07 – Oct 6

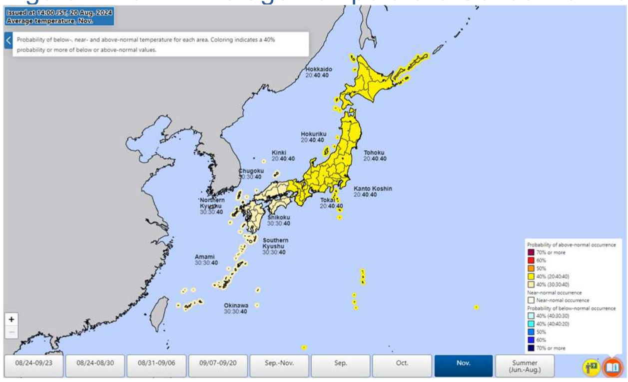


Source: Japan Meteorological Agency

Fits JMA's Aug 20 forecast for a warmer than normal November for Japan

The JMA continuing to forecast a much warmer than normal next 30-days seems to keep tying into the JMA's recent Aug 20 forecast for a warm start to winter. Here is what we wrote in our Aug 25, 2024 Energy Tidbits memo. "*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 12: JMA Average Temperature Outlook for November



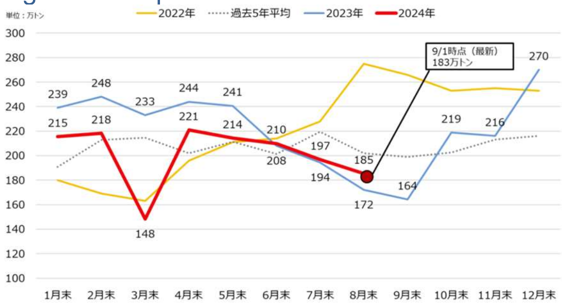
Source: Japan Meteorological Agency

Natural Gas: Japan LNG stocks down WoW, up YoY

Japan LNG stocks down WoW

Japan's LNG stocks were down WoW, are up YoY but are still down from the 5-year average. On Wednesdays, Japan's METI releases its weekly LNG stocks data [LINK]. LNG stocks on September 1 were 87.9 bcf, down -11.2% WoW from August 25 of 98.9 bcf, and up +6.4% from 82.6 bcf from a year ago. Stocks are down -9.4% from the 5-year average of 97.0 bcf. Below is the Japanese LNG stocks graph from the METI weekly report.

Figure 13: Japan LNG Stocks



Source: METI

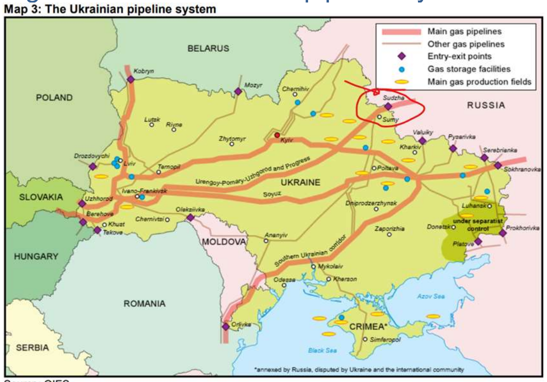
Ukraine captures key Russian gas infrastructure

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

It's now been over a month 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 Bloomberg Sept 6 report that Gazprom continues to ship the same volume of natural gas of 1.50 bcf/d 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 14: The Ukrainian pipeline system

Map 3: The Ukrainian pipeline system



Source: OIES

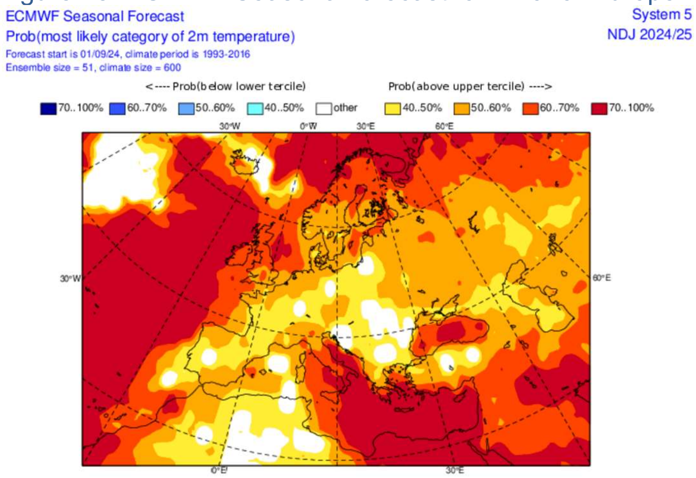
Source: Oxford Institute for Energy Studies

A warmer than normal Europe in Nov/Dec/Jan?

Natural Gas: ECMWF forecasts a warmer than normal Nov/Dec/Jan for Europe

Winter is key to natural gas and LNG prices. Absent a significant LNG supply interruption, we continue to expect LNG prices to be held back going into the winter. And our concern is that a warm start t winter in Europe, Asia and the US sets up the likelihood for a report of 2024 where a warm winter 2023/24 has kept LNG, TTF and HH prices relatively weak all year. We recognize weather forecasts are far from 100% but forecasts for a warm start to winter will keep a hold on prices for now. On Friday, the European Centre for Medium Range Weather Forecasts (ECMWF) updated its seasonal forecast for Europe for the start of winter. And the ECMWF still expects a warmer than normal Nov/Dec/Jan in Europe ie. a warm start to winter. [LINK]

Figure 15: ECMWF Seasonal forecast for NDJ for Europe



Source: ECMWF

Natural Gas: Europe LNG imports down big in July and again in Aug

Europe LNG imports down big

We have been highlighting that a big holdback to Europe natural gas prices is that Europe gas storage would be way worse if Europe hadn't moved back in June to significantly reduce LNG imports in July and Aug. On Tuesday, we tweeted [LINK] "*Holdback on TTF #NatGas prices. EU #NatGas storage would be at/very close to full IF #LNG imports hadn't been cranked down in July/Aug. Was 92.7% full as of Aug 30. But LNG imports down big. July: -35% or -2.85 bcfd YoY. Aug: -28% or -2.8 bcfd YoY. Thx @BloombergNEF. #OOTT.*" Our tweet reminds that Europe gas storage would have been full by now if NW Europe hadn't been pulling back on LNG imports in July and Aug because it was getting too full too fast. So they cut back LNG imports. On Tuesday, BloombergNEF posted its LNG Trade Weekly, which provided the data for the significantly lower Europe LNG imports that July was down 35% or down 2.85 bcf/d YoY and August was down 28% or down 2.8 bcf/d YoY. Our tweet included the below BloombergNEF charts.

Figure 16: Europe LNG Imports July

Weekly performance dashboard JULY

	Million metric tons	Week starting Jun 24	Week starting Jul 1	Week starting Jul 8	Week starting Jul 15	Week starting Jul 22	Latest Week-on-week change		Cumulative month Jul 2023	Cumulative month Jul 2024	Monthly Year-on-year change		Year-to-date 2024
	Total exports	**7.31**	**7.64**	**7.30**	**7.69**	**7.15**	-0.54	-7%	**30.92**	**29.77**	-1.15	-4%	**237.52**
Region	Pacific Basin	2.58	2.87	2.74	2.90	2.39	-0.50	-17%	10.86	10.90	0.03	0%	88.19
Region	Atlantic Basin	2.67	2.71	2.52	2.55	2.96	0.42	16%	11.29	10.74	-0.55	-5%	86.04
Region	Middle East	2.06	2.05	2.04	2.24	1.80	-0.45	-20%	8.77	8.14	-0.63	-7%	63.30
Market	Qatar	1.52	1.45	1.58	1.69	1.46	-0.23	-13%	6.52	6.18	-0.34	-0.05	45.69
Market	Australia	1.34	1.66	1.59	1.46	1.22	-0.24	-16%	5.85	5.93	0.08	1%	46.49
Market	US	1.68	1.70	1.56	1.36	1.82	0.46	34%	7.00	6.44	-0.56	-8%	52.37
Market	Russia	0.37	0.38	0.37	0.57	0.43	-0.14	-25%	1.95	1.74	-0.21	-11%	18.30
Market	Malaysia	0.51	0.52	0.41	0.45	0.40	-0.05	-12%	1.85	1.77	-0.07	-4%	15.59
	Re-export supply	0.02	0.14	0.02	0.25	0.09	-0.16	-65%	0.21	0.50	0.29	134%	2.39
	Total imports	**7.75**	**7.81**	**7.82**	**6.67**	**6.77**	0.11	2%	**29.28**	**29.07**	-0.21	-1%	**231.68**
Region	JKCT	4.19	3.58	4.12	3.66	3.46	-0.20	-5%	13.86	14.82	0.96	7%	118.00
Region	South Asia	0.91	0.99	0.74	0.50	0.96	0.46	90%	2.86	3.19	0.32	11%	23.32
Region	Southeast Asia	0.50	0.66	0.71	0.46	0.55	0.09	19%	2.04	2.38	0.34	17%	16.35
Region	NW Europe and Italy	0.96	0.78	1.02	0.77	0.77	0.00	0%	5.13	3.35	-1.79	-35%	37.09
Region	Other Europe	0.51	0.82	0.55	0.43	0.52	0.09	21%	2.64	2.32	-0.32	-12%	21.65
Region	Middle East	0.26	0.52	0.27	0.34	0.36	0.02	6%	1.08	1.49	0.41	38%	5.43
Region	Americas	0.42	0.38	0.42	0.51	0.15	-0.36	-71%	1.59	1.44	-0.14	-9%	9.38
Region	Other markets	0.00	0.09	0.00	0.00	0.00	0.00	-	0.07	0.09	0.02	22%	0.40
Market	Japan	1.27	1.14	1.40	1.13	1.19	0.06	5%	4.56	4.85	0.30	6%	36.91
Market	South Korea	0.85	0.64	0.70	0.99	0.68	-0.31	-31%	2.39	3.00	0.61	26%	26.21
Market	Mainland China	1.60	1.28	1.59	1.17	1.09	-0.08	-7%	5.44	5.13	-0.31	-6%	43.02
Market	Taiwan	0.47	0.52	0.43	0.38	0.51	0.13	35%	1.47	1.84	0.36	25%	11.86
Market	India	0.71	0.67	0.48	0.38	0.59	0.21	54%	1.71	2.13	0.43	25%	15.54
Market	Thailand	0.20	0.44	0.40	0.11	0.18	0.07	66%	0.99	1.12	0.13	13%	7.35
Market	Belgium	0.00	0.15	0.08	0.21	0.07	-0.14	-67%	0.51	0.52	0.01	2%	4.15
Market	Spain	0.28	0.41	0.19	-0.01	0.14	0.15	-	1.00	0.72	-0.28	-28%	8.05
Market	UK	0.07	0.00	0.07	0.00	0.00	0.00	-	0.14	0.07	-0.07	-49%	4.45

Source: Bloomberg AHOY JOURNEY<GO>, BloombergNEF. Note: Imports based on arrival dates, exports on departure dates. Imports reflect net import volumes and may sometimes be negative for some markets due to re-exports. JKCT is Japan, South Korea, mainland China and Taiwan. Figures from previous publications are occasionally revised based on most recent available data.

3 July 30, 2024 BloombergNEF

Source: BloombergNEF

Figure 17: Europe LNG imports August

Weekly performance dashboard AUGUST

Liquefied natural gas volumes into Japan and mainland China over August 26-September 1 plunged by almost 0.7 million and 0.6 million metric tons from their respective three-week highs seen the previous week. In contrast, Northwest Europe and Italy took in over 0.3 million tons more week-on-week.

	Million metric tons	Week starting Jul 29	Week starting Aug 5	Week starting Aug 12	Week starting Aug 19	Week starting Aug 26	Latest week-on-week change		Cumulative month Aug 2023	Cumulative month Aug 2024	Monthly year-on-year change		Jan 1 to Aug 31, 2023	Jan 1 to Aug 31, 2024	Jan 1 to Sep 1 year-on-year change	
	Total exports	**7.41**	**7.64**	**7.72**	**8.16**	**7.89**	-0.27	-3%	**32.89**	**34.41**	1.51	5%	**271.78**	**275.44**	3.66	1%
Region	Pacific Basin	2.66	2.77	2.86	3.07	2.57	-0.51	-16%	12.24	12.48	0.24	2%	99.72	102.02	2.30	2%
Region	Atlantic Basin	2.81	2.95	2.82	3.02	3.14	0.12	4%	11.37	12.89	1.52	13%	96.18	100.06	3.89	4%
Region	Middle East	1.94	1.91	2.03	2.06	2.18	0.12	6%	9.28	9.03	-0.25	-3%	75.88	73.36	-2.52	-3%
Market	Qatar	1.50	1.54	1.53	1.65	1.55	-0.09	-6%	6.60	6.91	0.31	0.05	53.95	53.32	-0.62	-1%
Market	Australia	1.59	1.46	1.64	1.63	1.39	-0.24	-15%	6.68	6.89	0.21	3%	53.62	54.07	0.45	1%
Market	US	1.76	1.68	1.69	1.79	1.92	0.13	7%	7.31	7.66	0.34	5%	59.18	60.78	1.60	3%
Market	Russia	0.69	0.57	0.76	0.64	0.55	-0.09	-14%	2.06	2.99	0.93	45%	20.17	21.50	1.33	7%
Market	Malaysia	0.24	0.46	0.37	0.52	0.37	-0.15	-29%	2.04	1.71	-0.34	-16%	17.25	17.51	0.25	1%
	Re-export supply	0.00	0.03	0.09	0.13	0.02	-0.11	-86%	0.40	0.28	-0.12	-31%	3.50	2.55	-0.95	-27%
	Total imports	**8.08**	**7.01**	**7.54**	**8.06**	**6.49**	-1.58	-20%	**32.41**	**32.93**	0.52	2%	**265.58**	**267.55**	1.97	1%
Region	JKCT	4.55	3.79	3.95	4.27	3.05	-1.22	-29%	17.01	17.39	0.38	2%	129.78	136.94	7.17	6%
Region	South Asia	0.77	0.63	0.84	0.79	0.69	-0.10	-13%	2.87	3.20	0.33	12%	22.35	26.87	4.52	20%
Region	Southeast Asia	0.55	0.53	0.50	0.73	0.55	-0.18	-25%	1.92	2.47	0.55	29%	15.42	19.14	3.72	24%
Region	NW Europe and Italy	0.78	0.66	0.90	0.71	1.05	0.34	48%	5.30	3.84	-1.47	-28%	52.95	41.04	-11.91	-22%
Region	Other Europe	0.62	0.55	0.59	0.69	0.55	-0.14	-20%	3.09	2.59	-0.51	-16%	30.38	24.51	-5.88	-19%
Region	Middle East	0.58	0.28	0.49	0.50	0.31	-0.19	-38%	1.11	1.92	0.82	73%	5.02	7.61	2.59	52%
Region	Americas	0.14	0.56	0.26	0.30	0.29	-0.01	-4%	1.10	1.45	0.35	32%	9.44	10.82	1.38	15%
Region	Other markets	0.07	0.00	0.00	0.07	0.00	-0.07	-100%	0.00	0.07	0.07	-	0.16	0.54	0.39	248%
Market	Japan	1.60	1.00	1.15	1.57	0.89	-0.68	-43%	5.63	5.43	-0.20	-4%	42.53	42.86	0.32	1%
Market	South Korea	0.82	1.05	1.02	0.62	0.64	0.02	3%	3.46	3.69	0.22	6%	29.36	30.09	0.73	2%
Market	Mainland China	1.76	1.22	1.38	1.63	1.08	-0.55	-34%	6.20	6.35	0.16	3%	44.71	50.04	5.33	12%
Market	Taiwan	0.37	0.51	0.40	0.45	0.44	-0.01	-2%	1.72	1.92	0.20	12%	13.18	13.96	0.78	6%
Market	India	0.58	0.27	0.65	0.52	0.43	-0.09	-17%	1.89	2.06	0.17	9%	13.91	17.95	4.05	29%
Market	Thailand	0.22	0.20	0.24	0.30	0.24	-0.07	-22%	0.93	0.95	0.02	2%	7.68	8.34	0.66	9%
Market	France	0.28	0.14	0.21	0.35	0.24	-0.11	-31%	1.39	1.08	-0.31	-22%	13.54	12.23	-1.31	-10%
Market	Netherlands	0.26	0.21	0.33	0.15	0.29	0.14	97%	1.52	1.17	-0.35	-23%	11.13	9.49	-1.64	-15%
Market	Spain	0.28	0.18	0.27	0.29	0.10	-0.18	-64%	1.50	0.90	-0.61	-40%	12.15	9.09	-3.06	-25%

Source: Bloomberg AHOY JOURNEY<GO>, BloombergNEF. Note: Imports based on arrival dates, exports on departure dates. Imports reflect net import volumes and may differ from combined contract and spot deliveries due to re-exports. JKCT is Japan, South Korea, mainland China and Taiwan. NW stands for northwest. Figures from previous publications are occasionally revised based on most recent available data.

1 September 3, 2024 BloombergNEF

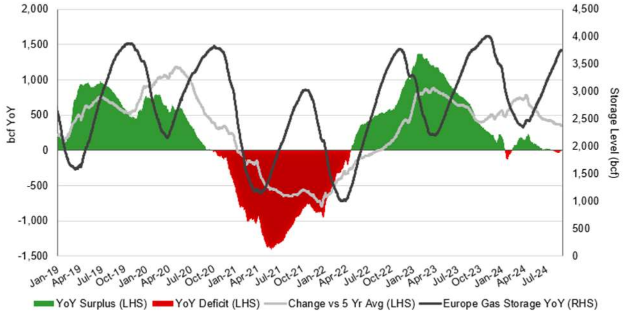
Source: BloombergNEF

Europe gas storage

Natural Gas: Europe storage up +0.6% WoW to 92.7% full, down -0.6% YoY

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 was up +0.6% WoW to 92.7% vs 90.1% on August 29th. Storage is now down -0.6% from last year's levels of 93.3% on September 5th, 2023, but up huge vs the 5-year average of 70.26%. 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 18: European Gas Storage Level

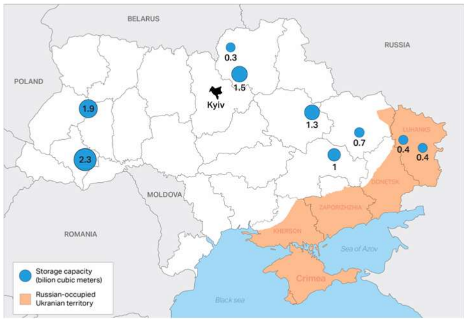


Source: Bloomberg, SAF

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 September 5th, natural gas in Ukraine storage was at 23.5% of its total capacity, up from 22.9% of its total capacity on August 29th. 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 19: Ukraine Gas Storage Facilities as of July 2023



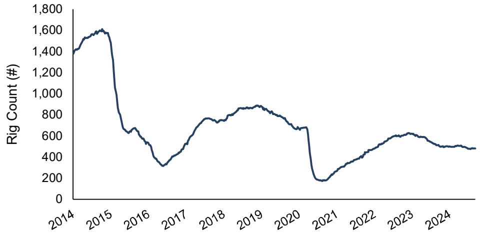
Source: Bruegel

Oil: US oil rigs flat WoW and down -30 rigs YoY to 483 oil rigs

US oil rigs down -30 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 September 6th. US oil rigs went below 520 rigs on Aug 25, 2023, were around 490-510 rigs for several months, but then dipped down to 477 on July 19, the lowest oil rig count since December 2021. (iii) Note we can see the basin changes but not by type of rig; the major basin changes were DJ Niobrara -1 rig WoW to 8 rigs, and Permian +1 rig WoW to 306 rigs. (iv) The overlooked US rig theme is the YoY declines. Total US oil rigs are -50 rigs YoY to 582 rigs including US oil rigs -30 oil rigs YoY to 483 oil rigs. And for the key basins, the Permian is -14 rigs YoY, Haynesville is -9 rigs YoY and Marcellus -6 rigs YoY. (v) US gas rigs were down -1 rigs this week to 94 gas rigs.

Figure 20: Baker Hughes Total US Oil Rigs



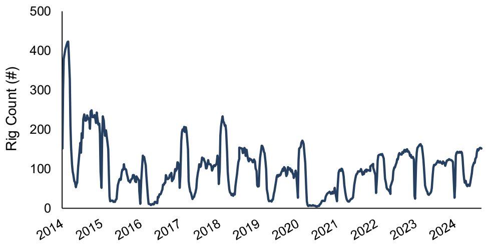
Source: Baker Hughes, SAF

Oil: Total Cdn rigs flat WoW On Friday, with oil rigs -1 WoW

Cdn rigs flat WoW

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 flat WoW at 220 rigs. Continuing wildfires and soft natural gas spot prices are likely slowing the rate of increasing rigs that we typically see as part the seasonal ramp up. Cdn oil rigs were down -1 rig WoW this week to 152 rigs and are up +39 rigs YoY. Gas rigs are flat WoW this week at 67 rigs and are down -2 rigs YoY, and miscellaneous rigs are up +1 rig WoW at 1 rig total and are up +1 rig 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 flat WoW at 13.300 mmb/d

US weekly oil production

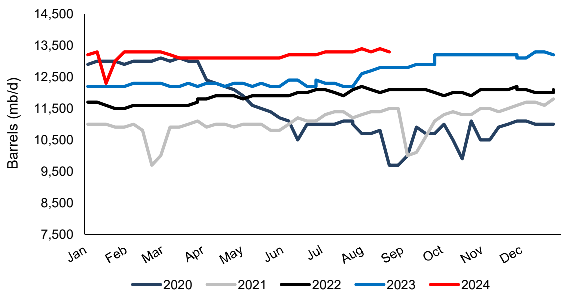
We don't place as much emphasis on the EIA weekly oil supply estimates as others do because we recognize the near impossibility for anyone to post an accurate estimate on a Wednesday for the totality of US oil production for the week ended the prior Friday. We have to give the EIA credit for putting 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. This week's estimate is flat WoW at 13.300 mmb/d for the week ending Aug 30th. 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 flat at 13.300 mmb/d for the week ended August 30. Alaska was flat WoW at 0.400 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	08/23	13,300	08/30	13,300

Source: EIA

Figure 23: EIA's Estimated Weekly US Oil Production



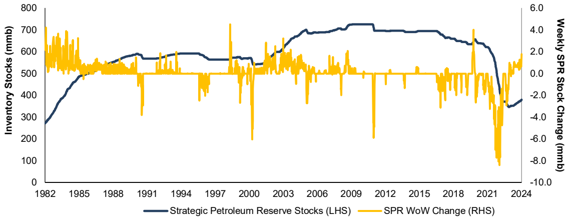
Source: EIA

Oil: US SPR less commercial reserve deficit narrows, now -48.638 mmb

US SPR reserves

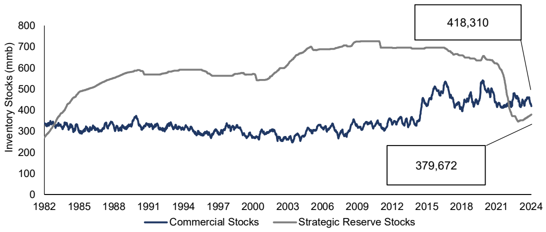
The US Strategic Petroleum Reserves (SPR) continues to be much lower than total US commercial crude oil reserves. The SPR went back below commercial for the first time since 1983 in the Sep 16, 2022 week. This week, we saw a build on the SPR side and a draw on the commercial side. The EIA's weekly oil data for August 30th [LINK] saw the SPR reserves increase +1.764 mmb WoW to 379.672 mmb, while commercial crude oil reserves decreased -6.873 mmb to 418.310 mmb. There is now a -38.638 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



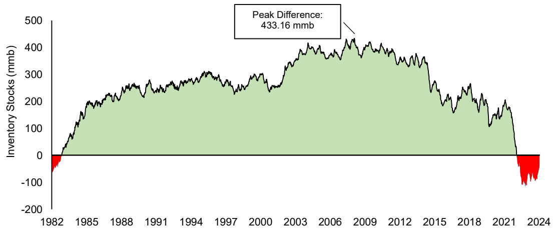
Source: EIA

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 -$0.05 WoW to $3.30

US gasoline prices

Yesterday, we tweeted [LINK] "*US National average gasoline prices keep drifting lower post end of summer. AAA National average prices -$0.05 WoW to $3.30 on Sept 6, -$0.16 MoM and -$0.50 YoY. But California up small at $4.67 on Sept 6, which was +$0.04 WoW, +$0.05 Mom and -$0.68 YoY. Thx @AAAnews #OOTT.* Yesterday, AAA reported that US national average prices were $3.30 on Sept 6, which was -$0.05 WoW, -$0.16 MoM and -$0.50 YoY. Yesterday, AAA also reported California average gasoline prices were $4.67 on Sept 6, which was +$0.04 WoW, +$0.05 MoM and -$0.68 YoY.

Oil: Crack spreads -$2.27 WoW to $14.79, WTI -$5.88 WoW to $67.67

Crack spreads closed at $14.79

On Friday, we tweeted [LINK] "*Brutal week for 321 crack spreads & WTI. WTI -$5.88 WoW to $67.67. 321 cracks -$2.27 WoW to $14.79. Haven't been <$15 since Feb/21 when WTI was*

~$60. Other factors aside, $14.79 cracks are no incentive for refineries to take extra crude & drive up WTI. Thx @business #OOTT." It was a brutal week for WTI and crack spreads. Crack spreads were -$2.27 WoW to $14.79 and WTi was -$5.88 WoW to $67.67. Crack spreads of $14.79 are very low and below the normal pre-Covid ranges of $15-$20. The last time crack spreads were below $15 was in Feb 2021 when WTI was ~$60. There is no real financial incentive for refineries to refine any extra oil. Crack spreads of $14.79 on Sept 6 followed $17.06 on Aug 30, $17.10 on Aug 23, $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, and $24.04 on May 31.

Crack spreads point to near term oil price moves, explaining 321 crack spread
There are other global oil and market items that impact WTI. But, other factors aside, we have focused on crack spreads for since the 90s as they are an unchanged fundamental of refineries – wide/high crack spreads provide incentives for refineries to buy more crude because there are big profit margins to be made. So if crack spreads are wide/high, it is normally a positive for the very near term look ahead to WTI. Conversely, if crack spreads are narrow/low, it is normally a negative for the very near term look ahead to WTI. 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 $14.79 as of the Friday Sept 6, 2024 close.

Figure 27: Cushing Oil 321 Crack Spread & WTI Sept 6, 2014 to Sept 6, 2024

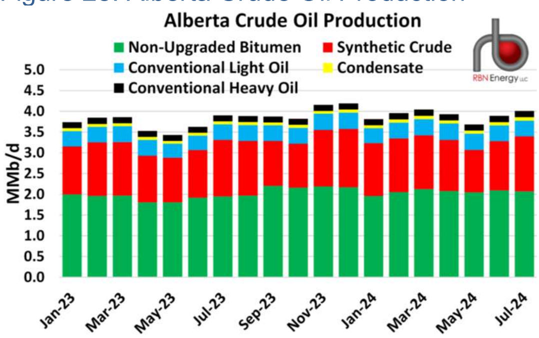
Source: Bloomberg

Oil: Alberta sets July oil production record at 4.000 mmb/d, but YoY growth slows
On Thursday, RBN Energy's Martin Smith posted a good recap of Alberta setting a July record oil production at 4.000 mmb/d, up +0.105 mmb/d YoY, and +0.116 mmb/d MoM. RBN

Alberta sets record July oil production

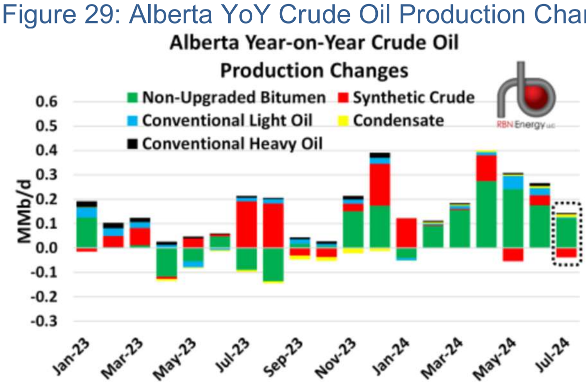
said the following regarding July's production record: "*This was an increase of 116 Mb/d from June, driven by a recovery in the output of synthetic crude oil of 138 Mb/d after the completion of maintenance turnarounds at Canadian Natural Resources' Horizon upgrader (capacity 250 Mb/d) and Suncor's Base Plant upgrader (capacity 350 Mb/d) in June. July's total crude output was just 183 Mb/d below the individual monthly record set in December 2023 at 4.19 MMb/d*" [LINK]. However, RBN also noted: "*The year-on-year production gain in July (black dashed rectangle in chart below) is the slowest rate of expansion since January (+71 Mb/d) when extreme cold for part of that month slowed operations at oil sands sites and upgraders*". In addition to this, the growth in production has been primarily driven by non-upgraded bitumen output. Many will remember Smith from his days as one of the top oil and gas research analysts at FirstEnergy. Our Supplemental Documents package includes the RBN Energy report.

Figure 28: Alberta Crude Oil Production



Source: RBN Energy

Figure 29: Alberta YoY Crude Oil Production Changes



Source: RBN Energy

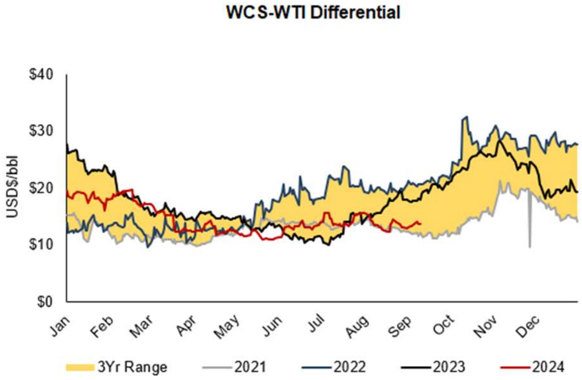
Oil: Cdn heavy oil differentials widen +$0.25 WoW to close at $13.65 on September 6th

WCS differential widened slightly

As a reminder, there is no work stoppage or rail strike in Canada as the parties were ordered back to work under their existing contract and to go to binding arbitration for a new contract. WCS less WTI differentials have been moving up this week and closed the week up $0.25

WoW at $13.65. We expect to see further widening with the Wednesday news that workers at Marathon's Detroit refinery went on strike as Detroit processes mostly Cdn crude. The WCS less WTI spread widened +$0.25 WoW to $13.65 on September 6. Now that we are in September, 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 August. The WCS less WTI differential closed on September 6, at $13.65 which was a widening of +$0.25 WoW vs $13.40 on August 30.

Figure 30: WCS less WTI oil differentials to September 6 close



Source: Bloomberg

Oil: Strike at Marathon Detroit 140,000 b/d refinery will impact WCS less WTI diffs

Strike at Marathon Detroit refinery

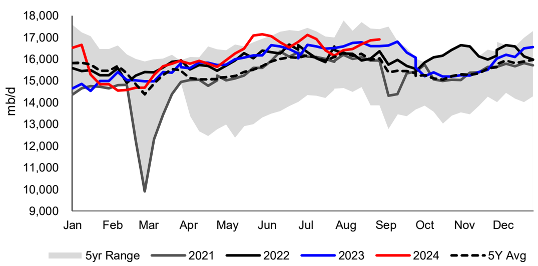
Cdn WCS less WTI differentials should be impacted by the strike at Marathon's Detroit refinery as the refinery primarily processes Cdn crude oil. This will also impact US oil imports from Canada. On Wednesday, Teamsters Local 283 announced [LINK] "*Members of Teamsters Local 283 will go on strike at Marathon Petroleum's Detroit Refinery today, September 4 following several months of negotiations and mediation with the company. Throughout negotiations, Marathon has been unwilling to bargain fairly with the Teamsters.*" Marathon's Fact Sheet says "*Our Detroit refinery is located in southwest Detroit and has a crude oil refining capacity of 140,000 barrels per calendar day (bpcd). The refinery processes sweet and heavy sour crude oils into gasoline, distillates, asphalt, fuel-grade coke, chemical-grade propylene, propane and slurry. Products are distributed via pipeline, transport truck, rail and barge. The 2012 Detroit Heavy Oil Upgrade Project (DHOUP) enabled the processing of up to an additional 80,000 bpcd of heavy sour crude oils, including Canadian crude oils.*" Our Supplemental Documents package includes the Marathon Detroit refinery fact sheet.

Oil: Refinery Inputs up +0.036 mmb/d WoW to 16.900 mmb/d

There are always unplanned refinery items that impact crude oil inputs into refineries. And there is always different timing for refinery turnarounds; generally, August is when refineries start their fall turnarounds so we would expect to see oil input into refineries start to seasonally decline. On Thursday, the EIA released its estimated crude oil input to refinery data for the week ended August 30th [LINK]. The EIA reported crude inputs to refineries were up +0.036 mmb/d this week to 16.900 mmb/d and are up +0.277 mmb/d YoY. There were some refineries returning to production. Refinery utilization was flat WoW at 93.3% and was up 0.2% YoY.

Refinery inputs +0.036 mmb/d WoW

Figure 31: US Refinery Crude Oil Inputs



Source: EIA, SAF

Oil: US net oil imports down -0.853 mmb/d WoW as oil exports up +0.085 mmb/d WoW

The EIA reported US "NET" imports were down -0.853 mmb/d to 2.036 mmb/d for the week of August 30. US imports were down -0.768 mmb/d to 5.792 mmb/d, while exports were up +0.085 mmb/d to 3.756 mmb/d. Top 10 was down -0.732 mmb/d. (i) We still don't know why the EIA doesn't have any data in the row for Venezuela weekly oil imports. And 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. However, EIA monthly data shows Padd 3 imports from Venezuela were 226,100 b/d for June. Give the EIA credit for putting out weekly oil import estimates, but it's a reminder that we must be careful about using the weekly oil import estimates. Rather we need to make sure we go to the monthly data for oil imports. (ii) Canada was down -0.358 mmb/d to 3.516 mmb/d. We expect the decline was at least partially due to some Midwest refinery downtime. Weekly imports have been higher of late with the increased Cdn crude coming off TMX and hitting west coast US refineries. As noted earlier, the new strike at Marathon's 140,000 b/d Detroit refinery will roll thru to impact US imports of Cdn oil. (iii) Saudi Arabia was down -0.107 mmb/d to 0.204 mmb/d. (iv) Mexico was down -0.245 mmb/d to 0.374 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. (v) Colombia was down -0.033 mmb/d to 0.179 mmb/d. (vi) Iraq was up +0.048 mmb/d to 0.201 mmb/d. (vi) Ecuador was up +0.001 mmb/d to 0.104 mmb/d. (vii) Nigeria was down -0.001 mmb/d to 0.032 mmb/d.

Figure 32: US Weekly Preliminary Imports by Major Country

	Jul 12/24	Jul 19/24	Jul 26/24	Aug 2/24	Aug 9/24	Aug 16/24	Aug 23/24	Aug 30/24	WoW
Canada	4,418	4,364	4,033	3,478	3,785	4,083	3,874	3,516	-358
Saudi Arabia	394	221	144	353	183	207	311	204	-107
Venezuela	0	0	0	0	0	0	0	0	0
Mexico	388	355	504	224	714	167	619	374	-245
Colombia	79	314	207	215	71	213	212	179	-33
Iraq	220	150	178	143	194	166	153	201	48
Ecuador	50	102	160	235	137	163	103	104	1
Nigeria	164	197	113	170	109	190	33	32	-1
Brazil	331	271	71	267	428	177	302	180	-122
Libya	0	0	144	115	2	86	1	86	85
Top 10	6,044	5,974	5,554	5,200	5,623	5,452	5,608	4,876	-732
Others	993	897	1,399	1,024	662	1,200	952	916	-36
Total US	**7,037**	**6,871**	**6,953**	**6,224**	**6,285**	**6,652**	**6,560**	**5,792**	**-768**

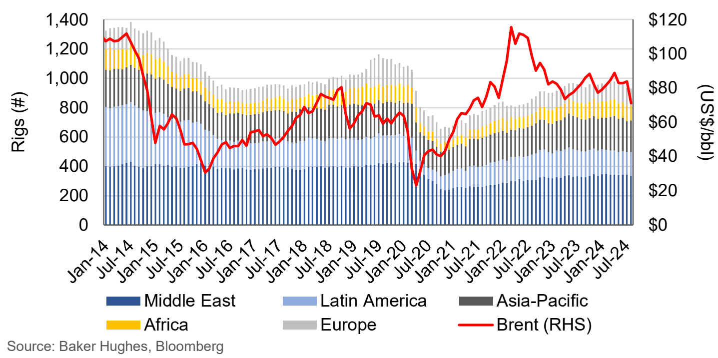
Source: EIA, SAF

Oil: Baker Hughes International -3 rigs MoM to 931 rigs in August, down -2% YoY

International rigs -3 MoM in August

On Friday, Baker Hughes posted its monthly update to international rigs, in total, that show rigs in August decreased -3 rigs MoM. (i) Note that Baker Hughes has changed its report format which doesn't allow us to break out country-by-country information. (ii) Total international rigs decreased by -3 rigs MoM to 931 rigs in August, and total rigs are now up +125 rigs from the recent low of 806 in April 2022. The MoM rig count is as follows: Africa -4 rigs, Asia-Pacific +6 rigs, Europe -3 rig, Latin America +6 rigs, and the Middle East -8 rigs. The YoY rig count is Africa -5 rigs, Asia-Pacific -5 rigs, Europe -6 rigs, Latin America -13 rigs, and the Middle East +8 rigs. (iii) We were not able to summarize the MoM data by country due to Baker-Hughes' new format. (iv) August's count of 931 rigs was -2% YoY from 952 in August 2023, and down -14% vs pre-Covid February 2020 of 1,085 rigs. Below is our graph of international rigs by region and avg monthly Brent price.

Figure 33: Baker Hughes International Rig Count and Brent Price



Source: Baker Hughes, Bloomberg, SAF

Oil: Colombia oil production still well below pre-Covid, July was 0.784 mmb/d

Colombia oil production stuck below 800,000 b/d

We continue to believe it's hard to see how Colombia oil production ever sustainably rallies anywhere back to 1.000 mmb/d or even 900,000 b/d. Despite stronger oil prices post Covid, Colombia oil production has been stuck below 800,000 b/d. On Tuesday, Hydrocarbons Colombia released production data for July. Production in July was up +0.3% MoM to 0.784 mmb/d from 0.781 mmb/d in June. This puts July's production up +0.3% YoY vs 0.782

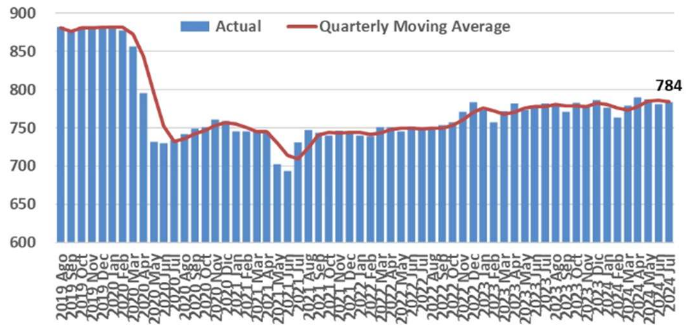
mmb/d in July 2023. Production is now -11.51% below pre-Covid levels of 0.886 mmb/d in 2019.

Figure 34: Colombian Oil Production

mmb/d	2016	2017	2018	2019	2020	2021	2022	2023	2024	24/23
Jan	0.986	0.860	0.860	0.899	0.884	0.745	0.740	0.774	0.777	0.4%
Feb	0.955	0.864	0.823	0.893	0.878	0.746	0.740	0.759	0.764	0.7%
Mar	0.917	0.804	0.856	0.885	0.857	0.745	0.751	0.771	0.780	1.2%
Apr	0.915	0.857	0.865	0.891	0.796	0.745	0.751	0.782	0.790	1.0%
May	0.904	0.851	0.866	0.895	0.732	0.703	0.746	0.774	0.788	1.7%
June	0.888	0.857	0.864	0.892	0.730	0.694	0.752	0.778	0.781	0.4%
July	0.843	0.856	0.860	0.869	0.735	0.731	0.748	0.782	0.784	0.3%
Aug	0.827	0.858	0.866	0.883	0.742	0.748	0.749	0.782		
Sept	0.859	0.851	0.869	0.879	0.749	0.744	0.754	0.771		
Oct	0.846	0.864	0.879	0.883	0.751	0.740	0.757	0.778		
Nov	0.855	0.851	0.883	0.880	0.761	0.747	0.771	0.783		
Dec	0.837	0.870	0.889	0.882	0.759	0.745	0.784	0.787		

Source: Hydrocarbons Colombia

Figure 35: Colombia's Oil Production (mb/d)



Source: Hydrocarbons Colombia

Oil: Venezuela opposition Presidential candidate Gonzalez Urrutia flees to Spain

Venezuela opposition candidate flees to Spain

Venezuelan opposition Presidential candidate Edmundo Gonzalez Urrutia was flown out last night on a Spanish air force plane and is seeking political asylum in Spain. Gonzalez Urrutia was widely viewed as having soundly defeated Maduro in the July 28 election. But in Maduro's crackdown post the election, on Monday, Venezuela's court issued an arrest warrant for Gonzalez Urrutia. Reuters wrote "*Venezuela's attorney general's office said on Monday a court has issued an arrest warrant for opposition leader Edmundo Gonzalez, accusing him of conspiracy and other crimes amid a dispute over whether he or President Nicolas Maduro won a July election.*"

Oil: Sounds like next US sanctions on Venezuela will not impact oil

More US sanctions on Venezuela?

We continue to believe that, if the US wanted to really impact Maduro and Venezuela, they should go back to the enforcement of sanctions on Venezuela oil that would hurt their oil production and oil exports revenue. However, it sounds like the US is about to place more sanctions on Venezuela but there is no talk about anything that would impact Venezuela oil production or US oil imports of Venezuelan oil. On Tuesday, Bloomberg reported "*The US is laying the groundwork for new sanctions on Venezuelan government officials in response to Nicolás Maduro's disputed reelection in July. The Treasury Department is close to announcing 15 individual sanctions on Maduro-affiliated officials who it claims "obstructed the* *holding of free and fair presidential elections," according to documents seen by Bloomberg. Additionally, the State Department plans to impose visa restrictions on 34 relatives of government officials, according to two people with knowledge of the matter, who asked not to be identified because they're not authorized to speak publicly. The measures target key leaders the US says collaborated with Maduro to undermine the July 28 vote, a list that includes members of the electoral authority, Venezuela's top court, the National Assembly and the intelligence and military intelligence police, known as SEBIN and DGCIM. The plans could be announced as soon as this week and could change before they're finalized".*

US importing 226,000 b/d from Venezuela

As noted above, if the US wanted to hurt Maduro and Venezuela, the US would go back and enforce sanctions such that Venezuela oil production and oil exports are hurt. The EIA's latest monthly data is for June and the EIA estimates the US imported 226,000 b/d from Venezuela in June, which was flat MoM from 224,000 b/d in May. Below is the current EIA graph of oil imports from Venezuela.

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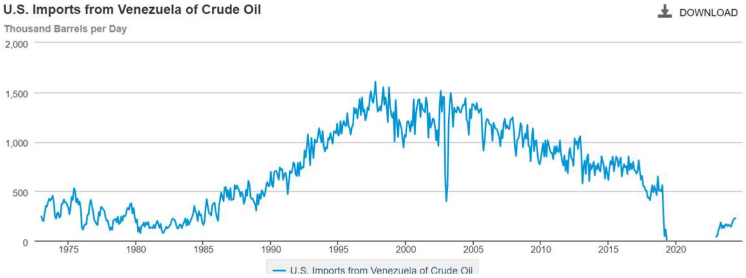
Figure 36: US oil imports from Venezuela



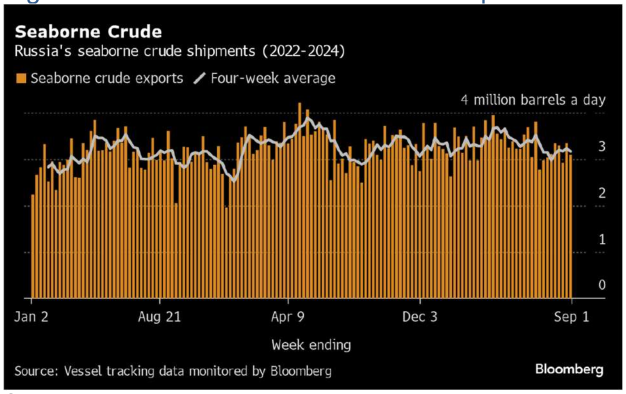
Source: EIA

Oil: Russia's seaborne crude oil exports dip lower following previous increase

Russia's seaborne crude exports

This week, the four-week average for Russia's seaborne crude exports decreased, returning to the previous downward trend that was interrupted last week with an increase. We assume the previous climb was due to the escalating Ukraine drone/missile attacks on Russian refineries that has clearly hit oil input into refineries i.e., more oil for export. The four-week average is down to 3.16 mmb/d for the week to September 1. The decrease was driven by halted shipments from Russia's offshore Arctic Prirazlomnoye field, which Bloomberg noted is presumably due to maintenance. The four-week average has increased in 2 of the past four weeks. Bloomberg reported "*Crude processing rates at Russia's oil refineries averaged 5.52 million barrels a day in the first four weeks of August. That's the highest average monthly level since July 2023 and month-on-month increase of about 90,000 barrels a day*... *Russia's seaborne daily crude flows in the week to Sept. 1 fell by about 250,000 barrels to 3.1 million".* Crude shipments so far this year are 40,000 b/d below 2023's average. 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 37: 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 1.19 mmb/d for the week ending September 1, down from last week's 1.20 mmb/d for the week of August 25, and down from 1.36 for the first half of April. The last six weeks average is now 1.18 mmb/d. In addition to the seaborne shipments to China, there have been 800,000 b/d imported to China via Russian pipelines. 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 to 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 38: 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 28, 2024	1.09	1.58	0.00	0.04	0.00	2.71
August 4, 2024	1.18	1.62	0.00	0.07	0.00	2.88
August 11, 2024	1.19	1.67	0.00	0.10	0.00	2.96
August 18, 2024	1.23	1.57	0.03	0.10	0.00	2.93
August 25, 2024	1.20	1.78	0.03	0.06	0.00	3.07
September 1, 2024	1.19	1.66	0.03	0.03	0.05	2.96

Source: Vessel tracking data compiled by Bloomberg

Bloomberg

Source: Bloomberg

Oil: Bloomberg OPEC production -70,000 b/d MoM to 27.060 mmb/d in August

OPEC August production -70,000 b/d

On Monday, Bloomberg posted its monthly survey of OPEC production. (i) The Bloomberg survey estimates OPEC production in August was down -70,000 b/d MoM to 27.060 mmb/d. (ii) July's estimates were revised up small from 26.990 mmb/d to 27.130 mmb/d, with Iran being revised up +40,000 b/d to 3.300 mmb/d from 3.260 mmb/d, Iraq being revised up +40,000 b/d to 4.320 mmb/d from 4.280 mmb/d, Venezuela being revised up +60,000 b/d to 0.890 mmb/d from 0.830 mmb/d. (iii) The largest MoM changes in August vs July were: Libya was down -150,000 b/d MoM to 1.000 mmb/d, recall that we have noted last week's stoppage of oil production in Libya following an opposition move to replace Central Bank leadership; and Nigeria was up +50,000 b/d to 1.480 mmb/d. Below is the Bloomberg survey table.

Figure 39: Bloomberg Survey OPEC production in August (mmb/d)

Production ('000 b/d)	Aug	Jul	Chg	Capacity
Total OPEC	27,060	27,130	-70	33,490
Algeria	890	900	-10	1,060
Congo, Republic	250	240	+10	300
Equatorial Guinea	70	60	+10	120
Gabon	220	220	0	220
Iran	3,300	3,300	0	3,830
Iraq	4,320	4,320	0	4,800
Kuwait	2,470	2,450	+20	2,820
Libya	1,000	1,150	-150	1,200
Nigeria	1,480	1,430	+50	1,600
Saudi Arabia	8,990	9,000	-10	12,000
U.A.E.	3,170	3,170	0	4,650
Venezuela	900	890	+10	890

Source: Bloomberg

Oil: OPEC+ countries delay return of voluntary cuts by 2 months to Dec 1, 2024

OPEC+ countries voluntary cuts

As many have been expecting, on Thursday, OPEC announced that eight countries have committed to extend voluntary production cuts by two months, which means the planned return of the voluntary cuts would start on Dec 1, 2024 instead of Oct 1, 2024. [LINK]. The voluntary cuts are 2.200 mmb/d until the end of November 2024, after which the cuts will begin to decrease. The OPEC press release said the following: "*the eight participating countries have agreed to extend their additional voluntary production cuts of 2.2 million barrels per day for two months until the end of November 2024, after which these cuts will be* *gradually phased out on a monthly basis starting December 1st, 2024… The overproducing countries also reconfirmed their commitment that the entire overproduced volume will be fully compensated for by September 2025"*. We are not surprised by this extension of cuts, due to the recent drop in oil prices. As noted below, we have he same concern on OPEC restarting the return of voluntary cuts on Dec 1, 2024 that we had on them restarting on Oct 1, 2024. Below is the revised planned schedule for bringing back on the voluntary cuts that was attached to the OPEC press release. Our Supplemental Documents package includes the OPEC press release.

Figure 40: OPEC Production Level Schedule

	2024		2025												Required Production Level as per 37th ONOMM (1)
Country	Oct-Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Algeria	908	912	917	921	925	929	934	938	942	946	951	955	959	959	**1,007**
Iraq	4,000	4,018	4,037	4,055	4,073	4,092	4,110	4,128	4,147	4,165	4,183	4,202	4,220	4,220	**4,431**
Kuwait	2,413	2,424	2,436	2,447	2,458	2,469	2,481	2,492	2,503	2,514	2,526	2,537	2,548	2,548	**2,676**
KSA	8,978	9,061	9,145	9,228	9,311	9,395	9,478	9,561	9,645	9,728	9,811	9,895	9,978	9,978	**10,478**
UAE	2,912	2,926	2,972	3,020	3,067	3,114	3,161	3,207	3,254	3,301	3,348	3,361	3,375	3,375	**3,519**
Kazakhstan	1,468	1,475	1,482	1,489	1,495	1,502	1,509	1,516	1,523	1,530	1,536	1,543	1,550	1,550	**1,628**
Oman	759	763	766	770	773	777	780	784	787	791	794	798	801	801	**841**
Russia	8,978	9,017	9,057	9,096	9,135	9,174	9,214	9,253	9,292	9,331	9,371	9,410	9,449	9,449	**9,949**

Source: OPEC

OPEC+ will have to wait until Q2/25 if it doesn't add back barrels on Dec 1/24
For the past few months, we have been reminding of the big challenge for the OPEC+ voluntary cut countries in their planned start to adding back oil was that, if they didn't start adding back the voluntary cut oil on Oct 1, they might be forced to wait until at least Q2/25. As the speculation on delaying the restart was building, we tweeted [LINK] "*Reminder if #OPEC doesn't back #Oil starting Q4/24, they may have to wait until at least Q2/25. See 👇Aug 13 tweet. Global oil consumption is always seasonally lower in Q1 each year vs the preceding Q4. #OOTT."* The OPEC+ voluntary cut countries delayed the planned restart of barrels by two months from Oct 1, 2024 to Dec 1, 2024. Even with the change, our view is unchanged from what we wrote over the past few months. 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 IEA posted its Aug OMR on Aug 13, 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 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.

Oil: Seems like a non-denial denial if the Saudi oil tanker was hit by a Houthi drone?
We are in the camp that believes Saudi Arabia doesn't want to return to a war with the

Houths hit a Saudi oil tanker

Houthis, which is likely why we believe there was a Saudi non-denial denial that the Saudi oil tanker AMJAD was hit by a Houthi drone. If they had admitted the drone attack, Saudi would have been obligated to do something in return. Assuming everyone is telling the truth and being precise in their language, it looks like a non-denial denial. (i) On Tuesday morning, we tweeted [LINK] "*Non-denial denial on Houthis hitting Saudi #Oil tanker. Zero impact on Brent -$2.01 to $75.51 as China dominating. Bahri: "confirm that AMJAD was transiting north in the Red Sea, near another tanker that came under attack. We unequivocally affirm that AMJAD was not targeted and sustained no injuries or damage." Wasn't targeted but didn't say wasn't hit by a drone as per @UK_MTO. And synonyms to no sustained damage are no prolonged, lengthy, or extended damage. #OOTT."* (ii) The UKMTO [LINK] noted the two vessels were in close proximity and both were hit by Houthis. One, the Blue Lagoon 1 was identified and "*hit by 2 unknown projectiles".* The UKMTO didn't name the second vessel but said it "*was hit by an unscrewed aerial system*". (iii) US specifically said the Saudi oil tanker was hit. US CENTCOM tweeted [LINK] "*On the morning of Sep. 2, the Iranian-backed Houthis attacked two crude oil tankers, the Panama flagged/owned, Greek operated MV BLUE LAGOON I and the Saudi flagged, owned, and operated MV AMJAD, with two ballistic missiles and a one-way attack uncrewed aerial system, hitting both vessels. Both vessels are laden with crude oil. The MV AMJAD is carrying approximately two million barrels of oil, almost twice the amount onboard the Greek-owned MV DELTA SOUNION, which the Houthis attacked on Aug. 21."* (iv) Saudi non-denial denial. We read the Bahri statement and they said their tanker wasn't targeted and sustained no injuries or damage. So the tanker wasn't targeted but they didn't say it wasn't hit by a drone as CENTCOM said. Bahri is the owner of the drone and its press release [LINK] said "*Bahri Confirms Tanker AMJAD Safe Transit in the Red Sea. In response to reports concerning an incident involving the Bahri tanker AMJAD (IMO: 9779800) on Monday, 2 September 2024, at approximately 06:27 UTC, we confirm that AMJAD was transiting north in the Red Sea, near another tanker that came under attack. We unequivocally affirm that AMJAD was not targeted and sustained no injuries or damage. The vessel remains fully operational and is proceeding to her planned destination without interruption. Bahri has promptly informed all relevant authorities and remains in continuous communication with our crew as we vigilantly monitor the situation.".* Our Supplemental Documents package includes the Bahri release, CENTCOM tweet and UKMTO statement.

Oil: Still no indication if/when Iran will hit Israel with its announced retaliation

Waiting for Iran's response

As of our 7am MT news cut off, it's the same story that Iran has yet to make its declared revenge attack on Israel that is to come at time of maximum surprise. Last week's (Sept 1, 2024) Energy Tidbits memo noted that one timing issue might be that Iran President Pezeshkian is planning to travel to New York to the annual UN General Assembly meetings on Sept 10-24. Our initial thoughts were that Iran wouldn't hit Israel until Pezeshkian is back from the UN. However, who knows. After all recall what Iran said on Aug 21. Here is what we wrote in our Aug 25, 2024 Energy Tidbits memo. "*Iran says its response to Israel "occurs at a moment of maximum surprise" 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

Netanyahu warned Congress on Iran nuclear

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."*

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.*

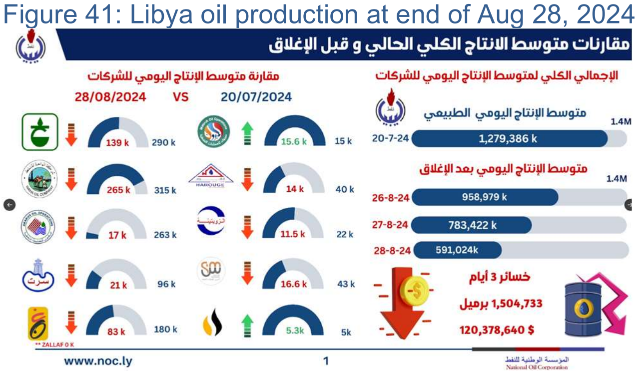
Blinken said "Iran, because the nuclear agreement was thrown out, instead of being at least a year away from having the breakout capacity of producing fissile material for a nuclear weapon, is now probably one or two weeks away from doing that. Now, they haven't developed a weapon itself --." We weren't 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: Not clear how much Libya is production, last official NOC was 591,000 b/d

Libya oil production is unclear

As of our 7am MT news cut off, we have not seen any oil production updates from the Libya National Oil Corporation since their Aug 29 update. Last week's (Sept 1, 2024) Energy Tidbits memo wrote "*Finally, on Thursday, the Libya NOC gave a production update and we tweeted [LINK] "Ouch! Libya #Oil production down 688,000 b/d to 591,024 b/d yesterday. See 👇@NOC_Libya update by operating company. #OOTT."* On Monday, the Libya NOC announced Force Majeure at El-Feel oil field. The NOC did not disclose El Feel production but it was likely around 60,000 b/d. We have been surprised the El Feel was producing when the Sharara oil field was shut down as El Feel production runs thru Sharara. We would assume that El Feel was in the Libya NOC Aug 29 production was down ~700,000 b/d to 591,024, which would seem to suggest Libya oil production would be more like 530,000 b/d. Again, we don't know as the NOC is not providing an update. Below is the Libya NOC Aug 29 production update.

Figure 41: Libya oil production at end of Aug 28, 2024



Source: Libya NOC

Was some Libya being restored but just to feed domestic markets?
Last week's (Sept 1, 2024) Energy Tidbits memo noted the confusing reports that some Libya oil may be coming back on, possibly just to feed domestic markets. We still don't have any formal reports from the Libya NOC on the status. But last week, we wrote "*Earlier this morning, UBS Analyst Giovanni Staunovo tweeted "The operator, Arabian Gulf Oil Co., didn't explain its directive, but the resumption is likely to supply local refineries and power plants rather than for export, the people said. Meanwhile, production from Waha Oil Co. kept dropping to 96,200 barrels a day from its normal level of 320,000, according to another person familiar with the matter*".

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

UN warned Libya heading the wrong direction

The one thing that seems clear on Libya is that there is still huge risk to the domestic situation and uncertainty as to what happens and when. Here is what we wrote in our Aug 25, 2024 Energy Tidbits memo on the UN's warning on Libya. "*UN envoy warned Libya is headed to "greater domestic and regional instability. 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?
The domestic uncertainty hasn't gone away and is an area that has been obvious as a risk. Here is another part of the above item we wrote in last week's (Aug 25, 2024) Energy Tidbits memo. "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*

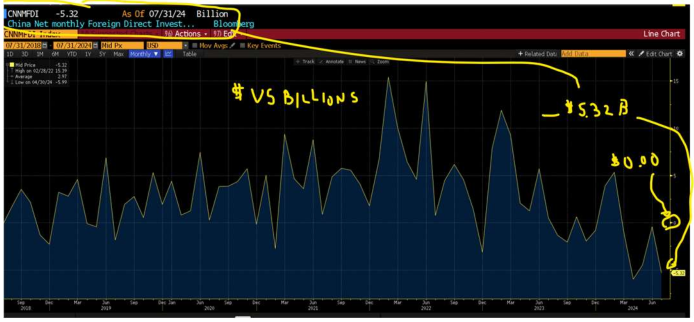
were mobilized in what was described as a response to Haftar moving his forces into SW Libya. On Friday, Libya Observer (and the others similarly) "Nine people were killed and 16 others injured, including a civilian, in armed clashes in Tajoura at noon on Friday, as reported by Libya's Ambulance and 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?"

Oil: July sees 5th Consecutive Negative Net Monthly FDI into China

Negative net monthly FDI into China

For the past 10 months, we have highlighted a major negative indicator for the China economy – China went from years of net monthly foreign direct investment inflows to now months of net monthly foreign direct investment outflows. And what China needs is more foreign investment capital, not less foreign investment capital. This week, we saw this negative indicator for China's recovery – Net monthly foreign direct investment in China was negative for the 5th consecutive month and now for 7 of the last 9 months. On Monday, we tweeted [LINK] "*Negative indicator for a China recovery 5th consecutive mth of negative net monthly foreign direct investment flows. US $ B July: -5.32 June: -0.44 May: -4.50 Apr: -5.99 Mar: -0.9 Feb: 5.3 Jan: 3.9 Dec: -0.8 Nov: -2.0 Thx @business #OOTT"* Foreign direct investment has been a huge driver of China over the decades and that is, at least for now, not a strength. The negative net monthly Foreign Direct Investment into China in July was a negative -$5.32b. Here is what we wrote in our May 12th, 2024, Energy Tidbits memo on the first month of this latest now five-month streak of negative net monthly FDI: *"This was a reversal of what happened to start 2024, which saw positive inflows during January and February. However, recall before that in the months to close 2023, four of the five months saw negative net monthly direct investment in China."* Our tweet included the below Bloomberg graph, and we also included a table showing the actual net monthly foreign direct investment by month for the last two years. Below is the Bloomberg graph and the historical table, which we added the notation is in US$.

Figure 42: China net monthly foreign direct investment



Source: Bloomberg

Figure 43: Historical table of China's net monthly foreign direct investment

CNNMFDI -5.32 As Of 07/31/24 Bil

China Net monthly Foreign Direct Invest...

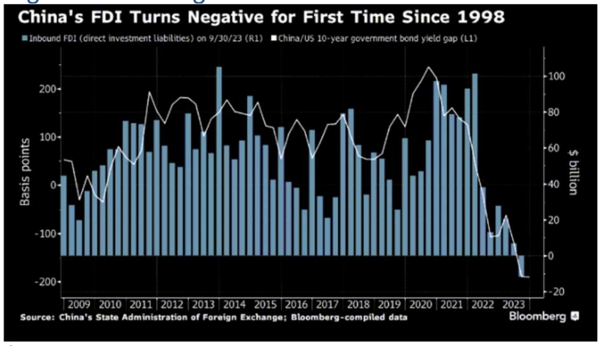
Date	CNNMFDI In... Mid Px
07/31/2024	-5.32
06/30/2024	-.44
05/31/2024	-4.50
04/30/2024	-5.99
03/31/2024	-.90
02/29/2024	5.33
01/31/2024	3.89
12/31/2023	-.84
11/30/2023	-1.96
10/31/2023	.59
09/30/2023	-2.07
08/31/2023	-1.35
07/31/2023	.51
06/30/2023	5.71
05/31/2023	1.26
04/30/2023	2.05
03/31/2023	9.25
02/28/2023	11.89
01/31/2023	7.86
12/31/2022	-3.14

Source: Bloomberg

11/08/23: Q3/23 was 1st net outflow of net foreign direct investment in China

Here is what we wrote in our Nov 12, 2023 Energy Tidbits memo. "*There is a big negative to the China recovery that we haven't been tracking – the net inflow or outflow of foreign direct investment in China. And likely because it never got much attention because there has always been a net inflow. FDI is significant as foreign companies disproportionately contribute to trade, generated more tax revenue and urban employment. But this week, we saw the first ever net outflow of FDI since records have been kept in 1998. On Wednesday, we tweeted [LINK] "Here's why China recovery is slow. Huge exodus in foreign direct investment in China & more FDI flowing out for 1st time. Q3/23 saw $11.8b outflow, vs recent $101b in Q1/22. Foreign co's drive disproportionate trade, tax revenue & urban employment. Thx @business #OOTT." Bloomberg wrote "China is struggling in its attempt to lure foreigners back as data shows more direct investment flowing out of the country than coming in, suggesting companies may be diversifying their supply chains to reduce risks. Direct investment liabilities in the country's balance of payments have been* *slowing in the last two years. After hitting a near-peak value of more than $101 billion in the first quarter of 2022, the gauge has weakened nearly every quarter since. It fell $11.8 billion in the July-to-September period, marking the first contraction since records started in 1998."*"

Figure 44: Foreign Direct Investment in China



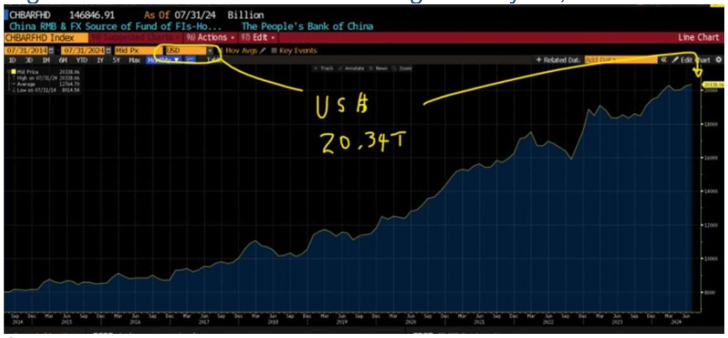
Source: Bloomberg

Oil: Chinese household savings increase MoM vs. June to $20.338T at July 31

Chinese household savings

One of the biggest reasons for the weak China recovery is that consumers have been on the sidelines and therefore keep adding to savings instead of spending. The increasing savings fits with the commentary that Chinese consumers are not yet confident in economic recovery to start to spend more. On Thursday, we tweeted [LINK] "*Negative China indicator. Chinese consumers aren't out spending & still adding to savings. China Household Savings +US$87b MoM to $20.338 trillion at July 31. Negative. The norm is 8 of last 10 July's saw Chinese household savings down MoM vs June. Thx @business #OOTT"* Chinese household savings at the end of July were $20.338T, up $87b MoM from $20.251T at June 30. Our tweet reminded that July is normally a month of decreasing household savings ie. people are spending. And that 8 of the last 10 years saw July savings decrease MoM. So instead of the norm of Chinese consumers spending out of savings, the Chinese consumer put more into savings. The $87b add to savings works out to $61 in additional savings for each Chinese citizen, approximating a population of 1.425b. Below is the Bloomberg household saving graph that was attached to our tweet.

Figure 45: China Household Savings to July 31, 2024



Source: Bloomberg

Figure 46: China Household Savings

Source: Bloomberg

Oil: Chinese consumer spending on Quiet Luxury but not Loud Luxury

Chinese luxury spending

No surprise that, in the big consumer pullback in China this year, the one group that still seems to be spending is the wealthy. We wish we had more than knowing they are buying Hermes and Brunell Cuchinelli because, if the Chinese wealthy are like North American wealthy, they always take advantage of down cycles to buy for the future. Down cycles are when the wealthy take advantage of others running for the hills. But we don't if and what the Chinese wealthy are buying. But, as we have noted this year, they are buying Quiet Luxury brands like Brunello Cuchinelli. Earlier this morning, we tweeted [LINK] "*Chinese consumer. Wealthy Chinese still spending on Quiet Luxury. Not so for higher income but not wealthy Chinese spending on Loud Luxury. @_kitrees on Chinese rich not spending. Only brands catering to ultra-wealthy such as Hermes & Brunello escaped the earnings/stocks hit. #OOTT.*" Earlier this morning, Bloomberg reported "*After enduring almost a quarter-trillion dollar hit to their market value in recent months, Europe's luxury firms may see their stock-market clout wane further as China's downturn worsens. Once seen as Europe's answer to the US "Magnificent Seven" tech megacaps, shares in companies producing high-end clothing, handbags and jewelry are languishing, sapped by a spending slump. Even more ominous are signs that China's rich, who once flocked to upscale boutiques in Paris, Milan and Hong Kong, may not return, their appetite for pricey items extinguished by the economy's downward spiral.*" And "*The deflation of the post-pandemic spending bubble was evident in recent earnings reports. Kering, Burberry and Hugo Boss issued profit warnings, while at LVMH, quarterly organic revenue at its crucial leather-goods unit grew just 1%, versus 21% a year earlier. Only brands catering to the ultra-wealthy, such as Hermes International SCA and Brunello Cucinelli SpA, escaped the full force of the earnings downturn.*" Our Supplemental Documents package includes the Bloomberg report.

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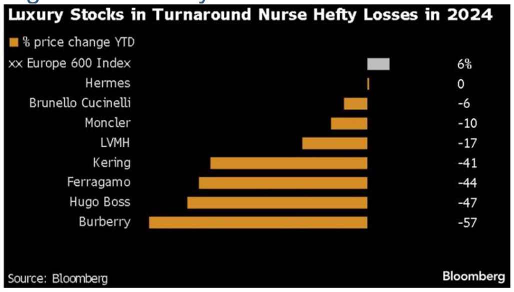
Figure 47: Luxury stocks in turnaround nurse hefty losses in 2024



Source: Bloomberg

04/17/24: Brunello shows Chinese ultra quiet luxury buyers are spending

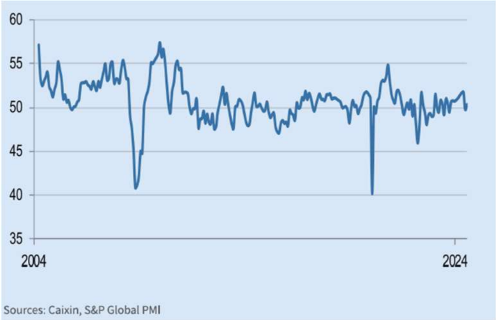
Above we reference on how the Quiet Luxury brands like Hermes and Brunello Cuchinelli are still doing well in China. Here is what we wrote in last week's (Apr 21, 2024) Energy Tidbits memo. "*It's far from a perfect indicator, but a good indicator that China's wealthy are spending was seen in the Bruncello Cuchinelli Q1 release on Wednesday. We tweeted [LINK] "Ultra Quiet/Gentle Luxury Chinese buyers are spending! Brunello Q1 sales: "significant growth achieved in all major Asian areas incl China, Japan, South Korea & the Middle East" "substantial growth prospects in the Chinese market are evident to our great satisfaction" #OOTT." Brunello Cuchinelli doesn't get the same amount of regular press/media as brands like Chanel but its price point is probably a lot more so Brunello buyers tend to be wealthy and not just high income. In their Q1, Brunello had strong sales in all of their major Asian markets including China. Our tweet included excerpts from the Brunello Q1. "Excellent results in all geographical areas and distribution channels". ""We are convinced it is important to emphasise how the contribution of the different geographical areas and distribution channels is very healthy, balanced, and synergic. This contribution is characterised by a structural growth in the demand for the highest luxury segment in Americas, Europe and Asia, all of which fully confirms excellent development potential." "thanks to the significant growth achieved in all major Asian areas, including China, Japan, South Korea and the Middle East. The substantial growth prospects in the Chinese market are evident, to our great satisfaction".*

Oil: Caixin Manufacturing PMI at 50.4 in Aug but exports declined for 1st time in 8 mths

Caixin Manufacturing August PMI 50.4

Out of the two China manufacturing PMI data reports that come out each month, the Official Manufacturing PMI that the National Bureau of Statistics publishes, and the Caixin Manufacturing PMI from S&P Global, we have focused on the Caixin Manufacturing PMI. The Caixin Manufacturing PMI is viewed as more of a leading indicator for how the China recovery is doing. In addition to this, it focusses more on smaller Chinese companies who are export-oriented PMI and exports have been the big driver of China for the past 20 years. Commenting on the official manufacturing PMI on Sunday, we tweeted [LINK] "*China smaller & export oriented firms return to modest expansion in Aug. BUT "exports declined for the first time in eight months, dragged particularly by weakening demand for consumer products" China Caixin Manufacturing PMI Aug 50.4, est 50.0 Jul 49.8 Jun 51.8 May 51.7 Apr 51.4 Mar 51.1 Feb 50.9 Jan 50.8 Dec 50.8 Nov 50.7 Thx @SPGlobalPMI #OOTT".* The Caixin Manufacturing PMI for August was released last Sunday night. [LINK]. The seasonally adjusted headline Caixin PMI was 50.4 in August, up from July's 49.8. August marked a return to expansion following July's contraction. However, the report noted "*Exports declined for the first time in eight months, dragged particularly by weakening demand for consumer products, pushing the corresponding indicator to the lowest since November*". Our Supplemental Documents package includes the China Caixin Manufacturing PMI report.

Figure 48: China Caixin General Manufacturing PMI

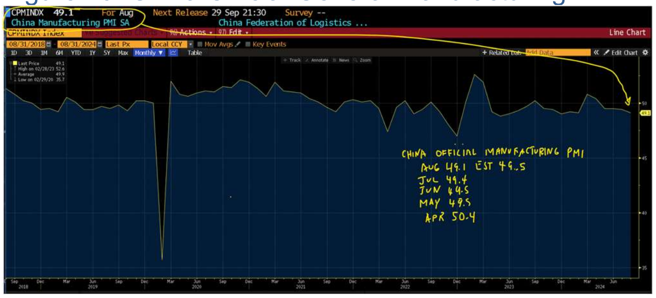


Source: S&P Global

China official Manufacturing PMI 4th consecutive month of contraction

As noted above, the Caixin China Manufacturing PMI from S&P Global is one of the two monthly China manufacturing PMI numbers. The other being the Official Manufacturing PMI that is from the National Bureau of Statistics, which always comes out a day or two before the Caixin PMI. Here is what we wrote in last week's (Sept 1, 2024) Energy Tidbits memo on the official China Manufacturing PMI that was release on Aug 31 (Beijing time). "*More indicators for China economy is stuck in negative territory with the China official manufacturing PMI released on Friday night that had August as the 4th consecutive month of contraction. As a reminder, there are two China manufacturing PMI data reports that come out each month, The Official Manufacturing PMI that the National Bureau of Statistics publishes, and the Caixin Manufacturing PMI from S&P Global. The Caixin Manufacturing PMI is for more smaller, export-oriented companies. The Official Manufacturing PMI normally comes out a day before the Caixin Manufacturing PMI data that we track, and, Friday night MT, the Official Manufacturing PMI was released. Yesterday, we tweeted [LINK] "China manufacturing negative. 4th mth of contraction. China official National Bureau of Statistics Manufacturing PMI. Aug 49.1. Est 49.5. July 49.4. Jun 49.5. May 49.5. Apr 50.4. Mar 50.8. Feb 49.1. Jan 49.2. Export oriented smaller firm Caixin Manufacturing PMI is Sun night. #OOTT. Thx @business." As noted in our tweet, the more export oriented smaller firm Caixiin Manufacturing PMI is to be released tonight."*

Figure 49: China Official General Manufacturing PMI



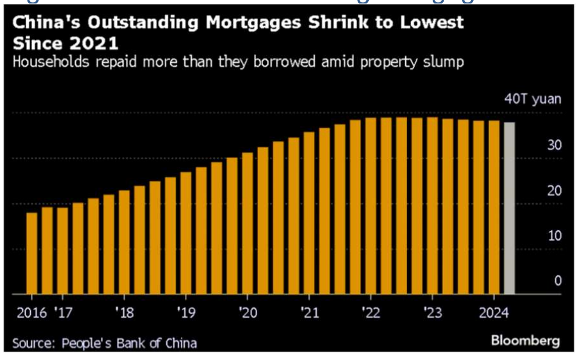
Source: Bloomberg

Oil: China's outstanding mortgages shrinking to 2021 levels

China's outstanding mortgages

We have highlighted homes because they are the prime assets of most Chinese and the continuing declining home values means Chinese consumers continue to be on the sidelines for consumer spending, including on new homes. On Wednesday, we tweeted [LINK] *">14 mths of declining China home values not yet convincing Chinese it's time to jump back in. Outstanding mortgages shrinking to 2021 levels. Trillion of Yuan: Q2/24: 37.8. Q1/24: 38.2. Q4/23: 38.2. Q3/23: 38.4. Q2/23: 38.6. Q1/23: 38.9. Q4/22: 38.8. Q3/22: 38.9. Q2/22: 38.9. Q1/22: 38.8. Q4/21: 38.3. Q3/21: 37.4. Thx @business John Liu, #OOTT."* Our tweet included the below Bloomberg chart "*China's Outstanding Mortgages Shrink to Lowest Since 2021"*. Bloomberg wrote "*China's outstanding amount of home mortgages, which count as prime assets at Chinese lenders, stood at 37.79 trillion yuan at the end of June, the lowest level in nearly three years."*

Figure 50: China's Outstanding Mortgages

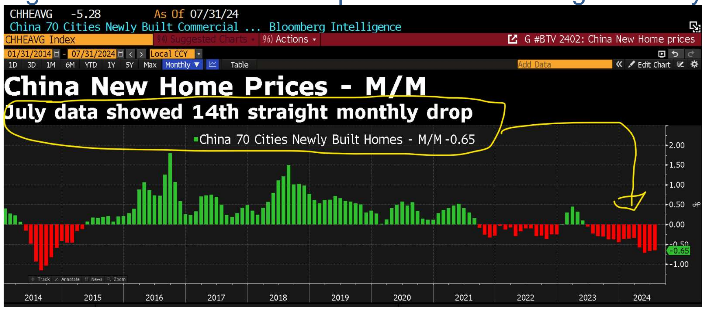


Source: Bloomberg

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

Our tweet on China mortgages also included the below two graphs of home values of Chinese new home and 2nd hand home. Here is what we wrote in our 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 51: China new home prices MoM % change incl July 2024



Source: Bloomberg, National Bureau of Statistics

Figure 52: China 2nd hand home prices MoM % change incl July 2024

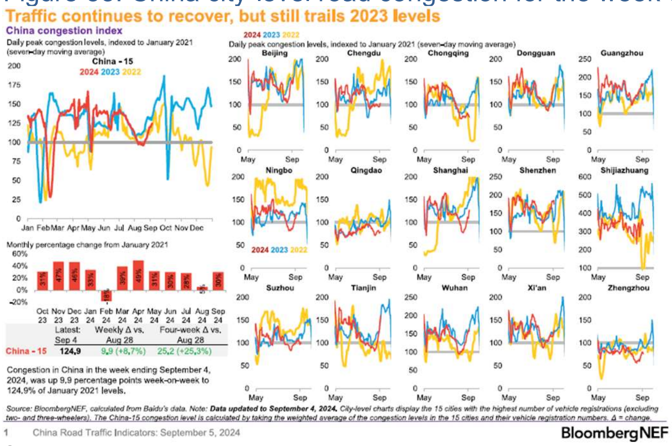
Source: Bloomberg, National Bureau of Statistics

Oil: Baidu China city-level road congestion in September is down -16.0% YoY

China city-level traffic congestion

The China Baidu city-level road congestion is for the week ended Sept 4, so it is a combination of end of Aug and beginning of Aug ie. it probably mostly reflects summer ending travel and not summer is over travel. But based on the city-level road congestion data for the week ended Sept 4, it seems like more are away from the cities and ending holidays than last year. However, we caution that it is tough to be definitive based on only four days in Sept. On Thursday, BloombergNEF posted its China Road Traffic Indicators Weekly September 5 report, which includes the Baidu city-level road congestion for the week ended September 4. 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 "*Congestion rebounds further*". This week, BloombergNEF reported Baidu city-level road congestion was up by +8.7% WoW to 124.9% of Jan 2021 levels, but compared to September 2023, September's average daily peak congestion levels so far are down -16.0% YoY. Bloomberg noted that 14 of the top 15 cities are down YoY. Below are the BloombergNEF key figures.

Figure 53: China city-level road congestion for the week ended September 4



Source: Bloomberg

Figure 54: China city-level road congestion for the week ended September 4

Month-to-date congestion is 16% lower than the entire month of September 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

	Sep 23	Oct	Nov	Dec	Jan 24	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
China-15	153	130	146	146	133	81	138	148	130	129	127	104	129
Beijing	180	159	167	161	145	73	151	169	143	141	146	123	175
Chengdu	130	121	123	116	120	68	134	140	125	119	126	98	106
Chongqing	127	112	122	116	111	80	112	138	122	129	119	75	70
Dongguan	147	130	141	144	121	52	129	138	138	138	126	103	142
Guangzhou	184	160	178	181	161	76	171	195	174	170	162	158	170
Ningbo	127	118	146	142	127	79	144	146	120	128	121	94	123
Qingdao	106	92	99	103	78	51	71	78	72	75	91	80	82
Shanghai	162	127	155	150	115	79	146	152	130	132	119	93	139
Shenzhen	181	151	169	170	149	68	160	164	172	163	162	155	176
Shijiazhuang	484	343	491	461	494	350	400	390	311	329	334	308	333
Suzhou	135	108	127	136	118	79	134	137	113	112	105	96	103
Tianjin	173	150	169	190	133	85	160	165	145	132	106	98	184
Wuhan	189	143	159	159	167	105	174	171	146	144	141	117	161
Xi'an	151	135	156	155	152	98	141	147	129	123	135	107	129
Zhengzhou	106	80	97	108	110	85	95	96	80	78	86	66	76

Indexed to the same month in previous year = 100

	Sep 23	Oct	Nov	Dec	Jan 24	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
China-15	112	126	155	187	151	55	100	114	110	96	104	87	84
Beijing	106	149	214	275	135	42	92	113	103	93	106	90	97
Chengdu	174	117	131	124	144	51	106	107	115	91	116	85	81
Chongqing	98	130	395	224	136	64	101	125	125	112	113	85	58
Dongguan	105	108	104	156	258	41	99	127	120	108	108	101	97
Guangzhou	114	146	317	307	199	45	99	127	127	107	107	106	93
Ningbo	69	95	101	127	203	59	115	140	121	112	106	81	97
Qingdao	100	96	124	195	175	62	94	97	98	87	95	76	78
Shanghai	81	115	93	172	156	54	98	117	105	101	98	76	86
Shenzhen	122	108	97	156	189	41	96	120	132	99	113	106	97
Shijiazhuang	218	120	459	258	156	69	93	85	81	77	89	70	65
Suzhou	87	91	88	157	171	60	111	130	117	97	99	88	76
Tianjin	213	109	137	244	136	60	114	121	119	100	96	86	106
Wuhan	144	199	192	187	151	55	94	100	97	85	95	86	85
Xi'an	106	149	139	152	132	66	110	112	105	91	110	97	86
Zhengzhou	112	171	294	164	119	76	98	102	90	82	98	72	72

*Source: BloombergNEF calculations based on Baidu data. Note: Data updated to **September 4, 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.*

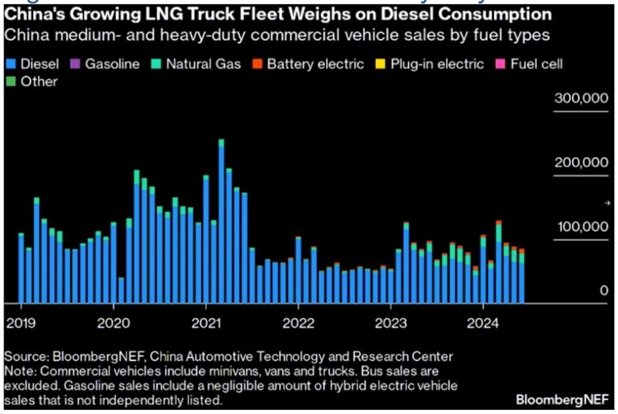
Source: Bloomberg

Oil: China LNG fueled trucks should lead to diesel demand peak sooner than expected

China diesel demand to peak

We have been highlighting how China's rapid adoption of LNG fueled medium and heavy duty trucks looks to be a game changer for China diesel demand and one that will lead to China diesel demand peaking sooner than expected. We have never been believers that electric medium and heavy duty trucks would take off as aspired. But buy into LNG for medium and heavy duty trucks. On Tuesday, we tweeted [LINK] *"China diesel demand to peak sooner than expected. Good @BloombergNEF Luxi Hong chart on LNG fuel taking share of medium/heavy duty trucks in China. See 👇SAF 06/30 Energy Tidbits memo excerpt on peak diesel demand. Thx @WoodMackenzie Alan Gelder. Also diesel will be less of an indicator of China economy. #OOTT #Oil."* BloomergNEF wrote "*Diesel's dominance in China's medium- and heavy-duty commercial vehicles is set to ease as the use of liquefied natural gas and electric trucks gathers pace. LNG truck sales have accelerated since 2023, now accounting for roughly 20% of China's new sales for the segment."* Below is the BloombergNEF chart attached to our tweet. Our tweet also included what we wrote in our June 30, 2024 Energy Tidbits memo tha tis below.

Figure 55: China medium and heavy duty commercial vehicle sales by fuel types



Source: BloombergNEF

06/25/24: China to reach peak diesel demand sooner than expected

Here is what we wrote in our June 30, 2024 Energy Tidbits as to the logic why China diesel demand should peak sooner than expected. "*China to reach peak diesel demand sooner than expected. On Tuesday, we saw the rationale for why China should hit peak diesel demand sooner than expected. Wood Mackenzie said something we, and it seems many others, hadn't realized in that 25% of new heavy-duty trucks in China are now LNG fueled and not diesel fueled. We say others must be realizing because we saw comments later this week on this very subject of 25% of heavy-duty trucks being LNG fueled so we suspect they also saw the Wood Mackenzie comments. We assume that this didn't go from zero to 25% overnight so there has been some buildup of this LNG truck sales. Diesel is driven by trucks so this will have a direct impact on diesel demand. And if China reaches peak diesel demand, it also points to peak oil demand as diesel demand is roughly 25% of China's 16 mmb/d oil consumption. And on early Tuesday morning, we tweeted [LINK] "Good China insights from @WoodMackenzie Alan Gelder. Chinese distillate demand is not particularly great. so negative indicator for economy today. But decoupling of China diesel demand vs economy indicator is starting for mid-term as 25% of new heavy duty trucks are LNG fuel so "that decouples the manufacturing & movement of goods from diesel demand"" Would also be a factor to China oil demand peaking sooner than prior forecasts. #OOTT @gulf_intel." Our tweet included the transcript we made of comments by Alan Gelder (Downstream Global SME, VP Refining, Chemicals & Oil Markets, Commodities Research, Wood Mackenzie) on Gulf Intelligence's Daily Energy Markets June 25 podcast. [LINK] Items in "italics" are SAF Group created transcript. At 10:40 min mark, Gelder "The Chinese economy hasn't materially returned to growth. So there is a degree to which how you measure that. We look at Chinese distillate demand – it's not particularly great, not particularly strong. There is a challenge in that actually there is a akin to* *what China has done around electrification of the passenger car fleet. They are shifting trucks onto LNG. So something like 25% of new heavy duty truck purchases are LNG. So in a sense, we are having that move decouples the manufacturing and movement of goods from diesel demand. Just that activity of changing their fuel type.“*

Diesel consumption will become less of an economy indicator in China

Our June 25, 2024 tweet noted above on diesel demand included the note that this mean diesel consumption will be less of an indicator for the economy. Many look at diesel consumption as an indicator for the China economy and increasing LNG heavy duty trucks will delink this relationship. Wood Mackenzie's Alan Gelder said "*They are shifting trucks onto LNG. So something like 25% of new heavy duty truck purchases are LNG. So in a sense, we are having that move decouples the manufacturing and movement of goods from diesel demand. Just that activity of changing their fuel type.*"

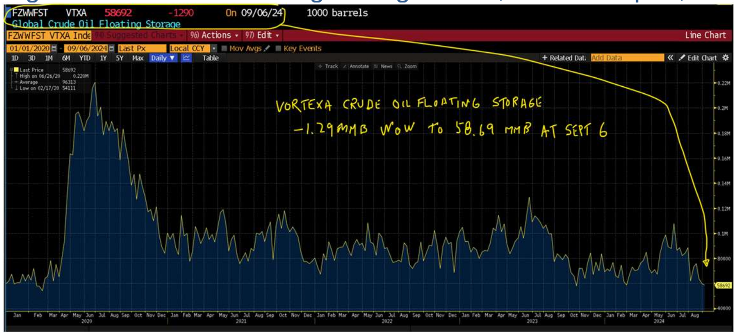
Oil: Vortexa crude oil floating storage est 58.69 mmb at Sept 6, -1.29 mmb WoW

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 31 at 9am MT. (i) Yesterday, we tweeted [LINK] "*Floating storage isn't why oil was hammered. Vortexa crude #Oil floating storage 58.69 mmb at Sep 6. Aug 30 revised +8.30 but only to 59.98 mmb. Only been 4 wks <60 mmb since Covid. Last 6 wks average 65.57 mmb, only been 20 wks <70 mmb since Covid. Thx @vortexa @business #OOTT.*" Brent oil was -$7.74 WoW to close at $71.06 on Friday driven by macro items in particular increasing negative views on China. And China was expected to be the growth engine for oil demand in 2024. But the Vortexa crude oil floating storage over the past two months continues to be the lowest such period since Covid. (ii) As of 9am MT Aug 31, Bloomberg posted Vortexa crude oil floating storage estimate for Sept 6 at 58.69 mmb, which was -1.29 mmb WoW vs revised up Aug 30 of 59.98 mmb. Note Aug 30 of 59.98 mmb was revised +8.20 mmb vs 51.78 mm originally posted at 9am MT on Aug 31. (iii) Revisions. The last two weeks were revised up including +8.20 mmb to Aug 30 and +2.79 mmb to Aug 23. Rest or the weeks had modest +/- revisions. Here are the revisions for the past seven weeks compared to the estimates originally posted on Bloomberg at 9am MT on Aug 31. Aug 30 revised +8.20 mmb. Aug 23 revised +2.79 mmb. Aug 16 revised -0.29 mmb. Aug 9 revised +1.87 mmb. Aug 2 revised +0.43 mmb. July 26 revised +0.79 mmb. July 19 revised +0.61 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 68.85 mmb vs last week's then prior seven-week average of 70.45 mmb. The decline was due to adding a low 58.69 mmb week to the rolling 7-week average more than offsetting the prior two weeks' upward revisions. (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) Sept 6 estimate of 58.69 mmb is -70.31 mmb vs the 2023 peak on

June 25, 2023 of 129.00 mmb. Recall Saudi Arabia stepped in on July 1, 2023 with its voluntary cuts. (viii) Sept 6 estimate of 58.69 mmb is -22.95 mmb YoY vs Sept 8, 2023 of 81.64 mmb. Below are the last several weeks of estimates posted on Bloomberg as of 9am on Sept 7, Aug 31 and Aug 24.

Figure 56: Vortexa Floating Storage Jan 1, 2000 – Sept 6, 2024, posted Sept 7 at 9am MT



Source: Bloomberg, Vortexa

Figure 57: Vortexa Estimates Posted 9am MT on Sept 7, Aug 31, and Aug 24

Posted Sept 7, 9am MT		Aug 31, 9am MT		Aug 24, 9am MT	
FZWWFST VTXA Inde		FZWWFST VTXA Inde		FZWWFST VTXA Inde	
01/01/2020 - 09/06/2024		01/01/2020 - 08/30/2024		01/01/2020 - 08/23/2024	
Date	Last Px	Date	Last Px	Date	Last Px
Fr 09/06/2024	58692	Fr 08/30/2024	51779	Fr 08/23/2024	53753
Fr 08/30/2024	59982	Fr 08/23/2024	61036	Fr 08/16/2024	75178
Fr 08/23/2024	63828	Fr 08/16/2024	76132	Fr 08/09/2024	68262
Fr 08/16/2024	75836	Fr 08/09/2024	71141	Fr 08/02/2024	59210
Fr 08/09/2024	73011	Fr 08/02/2024	61644	Fr 07/26/2024	82720
Fr 08/02/2024	62074	Fr 07/26/2024	87766	Fr 07/19/2024	84040
Fr 07/26/2024	88555	Fr 07/19/2024	83651	Fr 07/12/2024	81557
Fr 07/19/2024	84259	Fr 07/12/2024	80504	Fr 07/05/2024	88804
Fr 07/12/2024	82071	Fr 07/05/2024	87643	Fr 06/28/2024	87119
Fr 07/05/2024	88470	Fr 06/28/2024	86628	Fr 06/21/2024	107.647k
Fr 06/28/2024	86397	Fr 06/21/2024	107.84k	Fr 06/14/2024	87788
Fr 06/21/2024	107.849k	Fr 06/14/2024	88718	Fr 06/07/2024	89317

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" for rest of world. (i) As noted above, last week's Aug 30, in total, was revised +8.20 mmb with the key revision being Asia revised +4.55 mmb. (ii) Total floating storage at Sept 6 was -1.29 mmb WoW vs the revised up Aug 30 of 59.98 mmb. The major WoW changes were West Africa +4.04 mmb WoW and US Gulf Coast +2.79 mmb WoW. (iii) Sept 6 estimate of 58.69 mmb is -70.31 mmb vs the 2023 high on June 23, 2023 of 129.00 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 -47.30 mmb and Other -17.95 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 30 that was posted on Bloomberg at 9am MT on Aug 31.

Figure 58: Vortexa crude oil floating by region

				Original Posted	Recent Peak	
Region	Sept 6/24	Aug 30/24	WoW	Aug 30/24	Jun 23/23	Sept 6 vs Jun 23/23
Asia	26.16	28.45	-2.29	23.90	73.46	-47.30
North Sea	0.47	1.55	-1.08	1.65	5.23	-4.76
Europe	1.30	2.42	-1.12	2.52	5.63	-4.33
Middle East	3.10	5.44	-2.34	3.45	6.76	-3.66
West Africa	12.07	8.03	4.04	6.66	7.62	4.45
US Gulf Coast	4.26	1.47	2.79	1.17	1.02	3.24
Other	11.33	12.62	-1.29	12.43	29.28	-17.95
Global Total	58.69	59.98	-1.29	51.78	129.00	-70.31
Vortexa crude oil floating storage posted on Bloomberg 9am MT on Sept 7						
Source: Vortexa, Bloomberg						

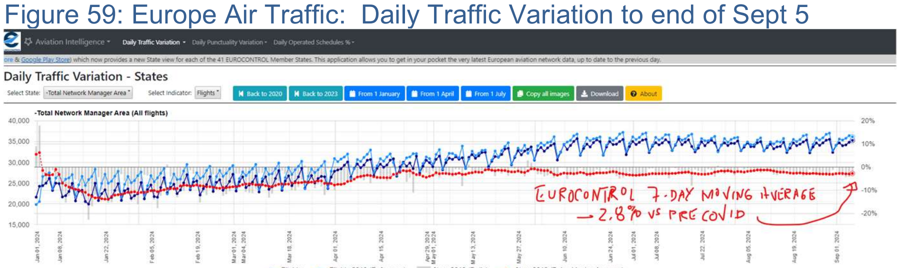
Source: Bloomberg, Vortexa

Oil: Europe airports daily traffic 7-day moving average is -2.8% below pre-Covid

Europe airports daily traffic

Yesterday, we tweeted [LINK] "*Daily Europe air traffic remains stuck below pre-Covid. 7-day moving average as of: Sept 5: -2.8% below pre-Covid. Aug 29: -3.1%. Aug 22: -2.8%. 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%. Thx @eurocontrol. #Oil #OOTT.*" Other than over Christmas, European daily traffic at airports has been stuck just a little bit below pre-Covid. The 7-day moving average has got close to pre-Covid including -0.8% below pre-Covid as of May 30, but the 7-day moving average is now -2.8% below pre-Covid as of Sept 5, which followed –3.1% as of Aug 29, -2.8% as of Aug 22, -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, -2.6% below as of July 18, and -2.9% below as of July 11. 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 59: Europe Air Traffic: Daily Traffic Variation to end of Sept 5



Source: Eurocontrol

Oil: Germany June diesel consumption -4.5% YoY, jet fuel -26% YoY

Germany's diesel & jet fuel down

We haven't been tracking Germany's petroleum products consumption and still haven't found where the data is located within the BAFA website. But UBS analyst Giovanni Staunovo tweeted out the June data. Earlier this morning, we tweeted [LINK] "*Germany economy isn't working. Trucks not trucking, planes not flying. @staunovo 👇oil product sales -4.5% YoY in June incl diesel -4.5%, gasoline -0.7%, jet fuel -26%. Also May -9.3% YoY. "Germany as a business location is falling behind in terms of competitiveness" VW CEO. See [LINK] #OOTT.*" Staunovo noted that Germany petroleum products sales (deemed consumption) was down -4.5% YoY in June, which followed -9.3% YoY in May. And what jumped out at us on the June numbers were how diesel was -4.5% YoY in June and jet fuel -26% YoY. Diesel is viewed as a key indicator for the economy as diesel big use is in trucking so a negative indicator. And jet fuel -26% YoY is a surprisingly large YoY decline. We recognize Germany isn't viewed as a hot summer holiday location in Europe vs Spain and Italy and June is only viewed as the start of holidays but the -26% YoY drop seems huge. We will be watching to see what the July data shows.

Oil: Spain's fuel consumption up YoY in July

Spain's fuel consumption

Spain continues to show strong YoY growth in its fuels consumption. And from the sounds of feedback from friends who went to Spain on holidays, Spain had a very busy tourist season that helped the strong fuel demand. On Monday, Cores reported Spain's monthly oil and petroleum consumption for the month of July [LINK]. Cores wrote "*This month, consumption of all product groups increased year-on-year: LPG (+1.5%), gasoline (+7.4%), kerosenes (+11.4%), diesel (+0.3%) and fuel oils (+4.8%). In the annual cumulative total, all product groups also increased: LPG (+6.0% vs. 2023), gasoline (+7.9%), kerosenes (+12.8%), diesel (+1.0%) and fuel oils (+8.3%).* Below is a table showing the breakdown of demand by fuel type in July. Our Supplemental Documents package includes the Cores report.

Figure 60: Spain's July Oil Demand Product Breakdown (thousand mt)

	Consumos			Tasas Variación (%) Interanuales		
Productos Petrolíferos	Julio 2024	Acumulado Anual	Año Móvil	Julio 2024	Acumulado Anual	Año Móvil
Gasolinas Automoción	627	3.707	6.336	7,4%	7,9%	6,4%
Gasóleos Automoción	1.887	12.779	21.796	-1,8%	1,2%	-0,5%
Combustibles de Automoción	**2.514**	**16.486**	**28.132**	**0,4%**	**2,6%**	**1,0%**
GLP	173	1.334	2.172	1,5%	6,0%	2,9%
Gasolinas*	628	3.710	6.340	7,4%	7,9%	6,4%
Querosenos	723	4.160	7.113	11,4%	12,8%	12,9%
Gasóleos*	2.487	17.364	29.703	0,3%	1,0%	-2,8%
Fuelóleos	694	5.024	8.422	4,8%	8,3%	7,5%

* Productos de automoción incluidos en el grupo de productos correspondiente

Source: Cores

Oil & Natural Gas: Tropical Depression expected to hit along Texas Gulf Coast

Tropical Depression along Gulf Coast

Tropical Depressions are tropical cyclones with maximum sustained surface winds of 38 mph, which is the level below Tropical Storms that have maximum sustained winds of 39-74 mph. As a general rule, Tropical Depressions don't have any major wind damage impact. They bring heavy rain and can cause some flooding but, again, generally not large flooding impact like in a Tropical Storm. But they are worth watching to see if they pick up strength to move up to Tropical Storm strength. Earlier this morning, we tweeted [LINK] "*Latest @NHC_Atlantic update. "Tropical depression is likely to form while the system moves generally northward near or along the Gulf Coast of Mexico and Texas" Formation chance 70% thru 48 hrs, 80% thru 7 days. Tropical Depression is below Tropical Storm strength winds. #OOTT.*"

Figure 61: Potential Tropical Depression

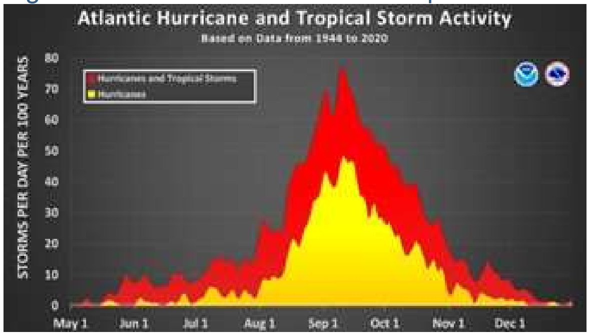
Source: National Hurricane Center

Oil & Natural Gas: Sept is normally the busiest Atlantic hurricane month

Sept is normally the busiest hurricane emonth

It was a relatively quiet in August for Atlantic hurricane season and it's been quiet to start September. This is not the norm as the normal peak hurricane season is mid-Aug thru mid-Oct and that 90% of the Atlantic hurricanes typically come after Aug 1. The peak of peak hurricane season is normally mid-Sept and September normally sees 45% of Atlantic hurricanes. And don't forget all the hurricane forecasters are calling for a more than normal hurricane activity. 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 62: Atlantic hurricane and tropical storm activity by month



Source: NOAA

Energy Transition: Baker Hughes thinks western govt understand need fossil fuels

Baker Hughes CEO on fossil fuels

We thought Baker Hughes CEO Lorenzo Simonelli had a good way of describing how western politicians aren't coming out and saying the world needs fossil fuels for a long time but are accepting they need fossil fuels. Rather we hear politicians talk about energy security but not say that means having fossil fuels. Simonelli was on Bloomberg Surveillance on Wednesday morning and we tweeted [LINK] "*Reality check by western govt on fossil fuels even if they don't admit it. "I think there is an understanding that it's not just about an energy transition. It's also about an energy expansion. And it's not about the fuel type, it's about reducing emissions" ie. why #NatGas is needed. $BKR CEO Simonelli to @FerroTV @annmarie. #OOTT."* Here is the transcript we made of Simonelli's comments that was attached to our tweet. SAF created transcript of Baker Hughes CEO Lorenzo Simonelli with Bloomberg's Jonathan Ferro and Annmarie Hordern on Bloomberg Surveillance on Sept 4, 2024. Items in "italics" are SAF Group created transcript. Ferro: *"do you feel like the attitude on fossil fuels has shifted in the last 12 months. Do you feel governments, particularly in the west, have had a reality check?"* Simonelli "*I think there is an understanding that it's not just about an energy transition. It's also about an energy expansion. And it's not about the fuel type, it's about reducing emissions. And that's where gas [natural gas] plays a key role because it is abundant, it is available and you need affordable secure reliable energy*".

UK restricting ICE/HEV sales to hit EV targets

Energy Transition: Restricting ICE/HEV is how UK EVs sales at 22% of total cars

The UK government will be able to say UK EVs sales should be near their regulated 22% of total car sales. But it won't be because EVs demand supports 22% of total car sales. Rather it will be because car manufacturers are holding back ICE and HEVs in 2024. It's math. If EVs sales are less, then the ICE/HEV sales have to be stopped or else the denominator will get too large. On Friday, we tweeted [LINK] "*Blunt talk! UK EVs should hit UK regulated EVs to be 22% of total car sales BUT not because of EVs demand. RATHER @vertumotorsCEO explains: "some franchises there's a restriction on supply of petrol cars and hybrid cars, which is actually where the demand is." "It's almost as if we can't supply the cars that people want, but we've got plenty of the cars that maybe they don't want." "They [manufacturers] are trying to avoid the fines. So they're constraining the ability for us to supply petrol cars in order to try and keep to the government targets." "The new car market is no longer a market, unfortunately. It's a state-imposed supply chain." #OOTT."* This is the concern that others have had but weren't as blunt as Vertu Motors CEO Forrester – disappointing demand for EVs means car manufacturers have to restrict deliveries of ICE and HEVs. Vertu Motors posted The Daily Telegraph story that included Forrester's comments. They also wrote "*But the scheme has prompted stark warnings from bosses at major brands, such as Vauxhall owner Stellantis and Ford, which have said they cannot sacrifice profits by selling EVs at large discounts indefinitely. Instead, they have previously warned they may be forced to restrict petrol car supplies to artificially boost their ZEV mandate performance. The warning from Vertu is the first confirmation that carmakers have now begun doing so."* Our Supplemental Documents package includes the Vertu posted story. [LINK]

Toyota cuts global EVs plan by 1/3

Energy Transition: Toyota cuts global EVs output by 1/3 to 1 mm in 2026

Surely western politicians and their IEA Energy Agency will have to admit that EVs sales are way less than expected pretty well everywhere in the world other than China. This is especially so when they see Toyota come out and cut their global EVs output plan for 2026 by 1/3. This is a reduction from 1.5 mm to 1.0 mm in 2026. And a cut of this size is huge when you realize it's only two years to 2026. Toyota made a big cut to its global EVs output plan for 2026 cutting its 2026 plan to 1 mm in 2026, down from its intention of 1.5 mm per year starting in 2026. That's a huge cut considering this is only two years away so Toyota must be nowhere near its 1.5 mm in 2026. Reuters noted Toyota only sold ~104,000 EVs in 2023. On Friday, we tweeted [LINK] "*Intentions are not plans. Big cut to Toyota's EVs output plans to 1 mm in 2026. Toyota reportedly said BUT no change to its intention to produce 1.5 mm EVs/yr by 2026 & 3.5 mm by 2030. Can China make up for ROW EVs reductions? Thx @danielleussink @KantaroKomiya #OOTT [LINK].*" Reuters reported on the initial Nikkei report on the reduced plan. Our tweet said intentions are not plans as Toyota said they haven't changed their intention for 2026. Reuters wrote "*Toyota said in a statement there was no change to its intention to produce 1.5 million EVs per year by 2026 and 3.5 million by 2030. It said, however, that the figures were not targets but benchmarks for shareholders*." Our Supplemental Documents package includes the Reuters report.

05/08/24: Mercede was early to back away from all-electric by 2030

It seems like we have seen a run of major global car manufacturers backing wway from their EVs plans in the past month. One that was early was Mercedes. Here is what we wrote in our May 12, 2024 Energy Tidbits memo. "*Mercedes politely backs away from all-electric by 2030. No one should be surprised to see the continuing backtracking or softening of all the auto company push on EVs, it's just a question of how politely they do so. On Wednesday, Mercedes held its AGM and Chairman Kallenius speech opened up with a polite, but clear backing away from their stated goal for all electric by 2030. Kallenius didn't make any criticism of EVs or even clearly state customers aren't stepping up for EVs as was expected. Kallenius did say they "want a CO2-neutral new car fleet by 2039", which looks like a decade deferral of being all electric by 2030. And he was clear on how they will be keeping EVs and ICE models up to date and letting the customer decide. On Wednesday, we tweeted [LINK] "Mercedes public AGM backtrack from all #EV future! "transformation might take longer than expected" "makes sure all relevant drive systems are fully up to date. And then the customer decides". "we can produce combustion engine models alongside electric cars". Peak #Oil demand will take longer than aspired. #OOTT." Prior to this, the public goals were for all-electric by 2030."*

Mercedes Chairman Kallenius opening to his Ambitious Strategy comments

Here is another Mercedes item from our May 12, 2024 Energy Tidbits memo. "*Mercedes Chairman Kallenius opening to his ambitious strategy comments. Our tweet included the Mercedes posted opening remarks in Kallenius's speech on the EV transformation. Kallenius opened "Our ambitious strategy also makes Mercedes-Benz, Mercedes-Benz. We want a CO2-neutral new car fleet by 2039. Across the entire value chain. That's why the strategic aim of Mercedes-Benz is zero emissions. That is certain. However, the transformation might take longer than expected. We are therefore prepared for all market conditions. We are creating the conditions to become fully electric. But many factors influence the pace of transformation. For example, the expansion of the charging infrastructure. There will be both in the coming years: Electric cars and cars with ultra-modern, electrified combustion engines. If the demand is there, well into the 2030s. We make sure that all relevant drives systems are fully up to date. And then the customer decides. We will build the perfect Mercedes for every wish. We have set our plants up for flexibility. That way* *we can produce combustion engine models alongside electric cars. And react quickly to the market."*

Energy Transition: Big reduction in Volvo's BEV ambition

Big reduction in Volvo's BEV ambition

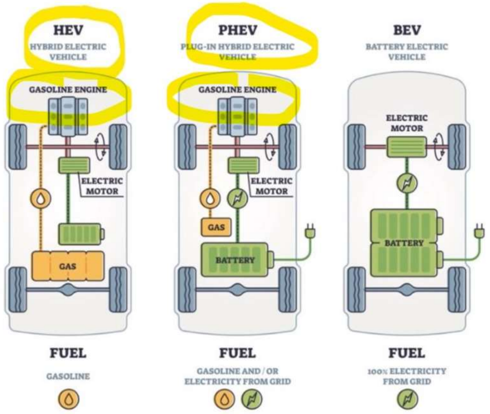
Volvo was another major car manufacturer to announce a big reduction in their BEV ambition this week. (i) On Wednesday, we tweeted [LINK] *"Big reduction to Volvo BEV ambition. WAS: ".. be fully electric by 2030". NOW: ".. 90 to 100% of its global sales volumes by 2030 to consist of electrified cars, meaning a mix of both fully electric and plug-in hybrid models". Didn't give PHEV vs BEV split. PHEVs are really just way more fuel-efficient ICE. Volvo says its PHEVs around 1/2 of km driven are in battery mode ie. 1/2 in gasoline/diesel mode. Reduced/adjusted BEV ambition due to "changing market conditions and customer demands". #OOTT."* (ii) The Volvo backtrack is a bigger backtrack than most initially thought. On the surface, people will see they are only putting HEV to 0-10% of their 2030 sales and still not including any ICE in their 2030 sales is not a huge backtrack. However, there is also an inferred big shift to PHEV. Volvo is moving from the prior ambition for the line up to be "*fully electric by 2030*", which infers all BEV. And now they say "*Volvo Cars aims for 90 to 100 per cent of its global sales volume by 2030 to consist of electrified cars, meaning a mix of both fully electric and plug-in hybrid models – in essence, all cars with a cord*." Ie. some portion of the 90% will be PHEV cars that are electrified but run at least half the time on gasoline or diesel. (iii) Volvo didn't disclose what percentage of the 90% will be PHEV. But in the press release, Volvo says their PHEVs run half the time on battery mode. "*Volvo Cars' most recent data shows that around half of the kilometres covered by the latest plug-in hybrid Volvo cars are driven on pure electric power*. (iv) So Volvo has moved from 100% BEV in 2030 to 10% HEV and some undisclosed percentage of the 90% electrified being PHEV. Our Supplemental Documents package includes the Volvo release.

Energy Transition: HEVs & PHEVs are really just more fuel efficient ICE vehicles

HEVs/PHEVs are more fuel efficient ICE vehicles

We don't think most realize that HEVs and PHEVs are really just more fuel-efficient ICE vehicles and, in particular, for PHEVs that are generally lumped in with EVs for an electrified car group. HEVs and PHEVs run on gasoline or diesel for likely at least half of the time for PHEVs and probably 90% for HEVs. (i) On Wednesday, we tweeted [LINK] "*HEV/PHEV 101 - They are really just more fuel efficient ICE. Ford: HEV F150 does 23 mpg vs ICE150 at 19 mpg. Volvo: PHEVs km driven are split 1/2 using battery, 1/2 using petrol/diesel. #OOTT."* (i) Ford F150 Hybrid vs ICE mpg. Our tweet included the EPA rated mileage for the Ford F150 ICE vs Hybrid. The EPA rates the Hybrid fuel efficiency as being only 4 mpg more than the ICE. That increased fuel efficiency would be reduced if it was a full apples-to-apples comparison. The ICE has a much larger towing capacity. The F150 ICE 3.5L cyl F-150 does 19 MPG with a tow capacity of 13,500 lbs. The F150 HEV 3.5L 6 cyl F-150 does 23 MPG with a tow capacity of 11,200 lbs. (ii) Volvo PHEV. Most just lump PHEVs in with EVs because both are electrified. But the reality is that a lot of PHEV is driven in ICE mode. As noted earlier, Volvo backed off its fully electric plans and its press released noted "*Volvo Cars' most recent data shows that around half of the kilometres covered by the latest plug-in hybrid Volvo cars are driven on pure electric power."* So based on the "most recent data", Volvo PHEVs are driven around 50/50 between km driven in battery mode vs ICE mode. Given the press release was Volvo having to back away from its electrified goals, we have to be believe the "around half" driven by PHEV is likely below half. (iii) We also believe that Volvo has likely picked the best time period for PHEVs driving in battery mode. We wodl assume the most recent data is referring to some spring/early summer period. and it does not include winter months where the PHEVs will be driven more in ICE mode.

Figure 63: HV vs PHEV vs BEV



Source: ACEA

Energy Transition: VW, 2 mm less cars per yr sold in Europe, more guests at the table

VW warns on the Europe car market

There is no question there is an EVs demand is way less than expected in Europe and this has been reflected in the EV strategy changes at Mercedes, Volkswagen, Volvo, etc. But we were reminded this morning by the Volkswagen CEO of the bigger picture car problem – overall demand isn't growing as expected. Volkswagen CFO Arno Antlitz reportedly reminded employees that there are 2 million less cars per year being sold in Europe and Volkswagen is "*missing sales of around 500,000 cars, the sales for around two plants*." And then the added issue for EVs, Chinese EVs are increasing competitors. Earlier this morning, we tweeted [LINK] "*Reality facing EU car manufacturers, not just VW. "Fewer vehicles are being bought in Europe. At the same time, new competitors from Asia are pushing into the market with force. The cake has become smaller and we have more guests at the table" VW CEO Blume. Thx @krone_at #OOTT [LINK].*" VW CEO Blume was interviewed by Bild am Sonntag (German news) but that report is under subscription. Fortunately, Kronen Zeitung (Austrian news) posted some of Blume's key quotes. Our tweet linked to the Kronen Zeitung report, which wrote "*At ailing carmaker VW, everything seems to be even worse than initially assumed. Group board member Oliver Blume has announced "further measures". Because: Things cannot go on as they are now. After the Volkswagen Group's announcement that it would once again intensify the austerity course with job cuts and possible plant closures at the core VW brand, Group Board Member Oliver Blume describes the poor economic situation at Volkswagen as alarming. At the VW brand, the situation is "so serious that you can't just let everything continue as before," Blume told Bild am Sonntag. "Fewer vehicles are being bought in Europe. At the same time, new competitors from Asia are pushing into the market with force. The cake has become smaller and we have more guests at the table," the CEO continued.*" Separately, Kronen Zeitung reported [LINK] on VW's leadership meeting with 10,000 employees on Wednesday. "*With a view to the locations, Antlitz referred to overcapacity. In Europe, two million fewer cars are currently sold per year than before the Corona pandemic. And that will hardly change. For VW, with a market share of around a quarter in Europe, this means: "We are missing the sales of around 500,000 cars, the sales* *for around two plants. And that has nothing to do with our products or poor sales performance. The market is simply no longer there."* Our Supplemental Documents package includes the Kronen Zeitung two reports.

Energy Transition: VW CEO, Germany manufacturing falling behind in competitiveness

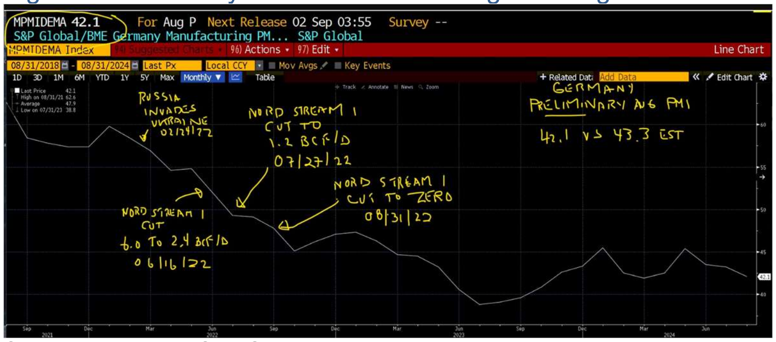
Germany manufacturing losing competitiveness

The headlines this week were that Volkswagen may have to its first ever closing of a Germany car plant as it's cost cutting hasn't been fast enough. And that it may to do layoffs, which is not permitted under its labor/govt agreements. However, no one should be surprised as Germany has been under huge manufacturing profitability stress over the past few years with a or the key driver being cut off from cheap Russia natural gas pipeline natural gas. Note we could not find the actual letter to employees but there has been extensive reporting on it. There is also nothing on the Volkswagen corporate website. (i) On Monday, we tweeted [LINK] "*German economy isn't working! "Germany as a business location is falling behind in terms of competitiveness" VW CEO. VW weighs 1st-ever Germany plant closures to cut costs @MonicaRaymunt @Rauwald. See 👇Aug 1 tweet, VW moves to 1st ever EU plant closure, Brussels #EVs plant. #OOTT."* (ii) New York Times reported the exact quote was " "*The European automotive industry is in a very demanding and serious situation," Oliver Blume, chief executive of Volkswagen, said in a statement. "Germany in particular as a manufacturing location is falling further behind in terms of competitiveness. In this environment, we as a company must now act decisively."* (iii) We have been highlighting how Germany manufacturing weakness has tied directly with the cutting off of cheap Russian pipeline natural gas and, to the extent the manufacturer could get access, replacing it with more expensive LNG. Energy costs are a crucial element of any medium/heavy industry. So we do not think its correlation, rather we believe it is causation that big increases in energy costs by cutting off cheap Russian natural gas has been the key cause to Germany manufacturing not being competitive. Our Supplemental Documents package include the DW (Germany) report that was the basis for our tweet.

Germany manufacturing PMI continues its big downward trend

We have been highlighting the linkage between Germany no longer getting cheap Russian pipeline natural gas and manufacturing. Our last comment on this was two weeks ago. Here is what we wrote in our Aug 25, 2024 Energy Tidbits memo. "*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 64: Germany HCOB Manufacturing PMI Aug & Russian natural gas events



Source: Bloomberg, SAF Group

08/01/24: Volkswagen 1st ever EU plant closing is Audi Brussels EV plant

Volkswagen's comments were on mgmt warning on the potential for the first ever plant closing in Germany. If so, that would be the first ever plant closing in Germany (speculated as an EV plant), but that would be the 2nd plant in Europe. A month ago, we wrote on the expected first ever Volkswagen plant closing in Europe – the Audi EV plant in Brussels. Here is what we wrote in our Aug 4, 2024 Energy Tidbits memo. "*Volkswagen 1st ever EU plant closing is Audi Brussels EV plant. Volkswagen had a bad quarter and outlook so its shares were -5.1% following its Q2 release. One factor was Volkswagen's first ever plant closing in Europe – an EV plant based on demand. We were watching Bloomberg TV's Europe show and they noted Volkswagen was closing a plant in Europe. So we went to the financial statements and saw the post period note to the Q2 financial statements, we tweeted [LINK] "Volkswagen signals 1st ever plant closure in Europe. Starts Belgian law process for restructuring of Audi Brussels #EVs plant "against the backdrop of the development of demand for the Audi Q8 e-tron vehicle manufactured in Brussels" €1.3b expense. Thx @ocrook #OOTT." This is Volkswagen's first ever auto plant closing in Europe and it's Audi EV plant in Brussels. Volkswagen didn't give any specific color on the call or in the press release but the closure is due to less than expected demand. Our tweet included Note 18 to the Q2 financial statements that said this was "against the backdrop of the development of demand for the Audi Q8 e-tron model family manufactured in Brussels." But Volkswagen is closing a large passenger EV plant despite them highlighting "The performance of the large individual passenger car markets in this region was positive across the board." And Volkswagen noted "The number of new passenger car registrations in Germany from January to June 2024 was noticeably up on the previous year's level. The change in electric vehicle subsidies at the end of 2023 weighed on new registrations of all-electric vehicles, but this effect was more than offset by rising demand for vehicles with conventional and hybrid drivetrains." Our Supplemental Documents package includes excerpts from the Volkswagen Q2 financial statements."*

Energy Transition: Baker Hughes massive data center growth need baseload NatGas

Baker Hughes on data center

No one denies that data center operators want to run as much solar and wind as can be accommodated in their need to be able to run 24/7. But, every company linked to providing power to data centers is highlighting data centers need, first and foremost, reliable affordable available baseload power from sources like nuclear, coal and natural gas. Simonelli reminded of the rapid and large electricity demand coming from data centers and that they need 24/7 power and that means natural gas. Simonelli described the increasing electricity demand from data centers in the US over the next two years is equal to the annual electricity demand of Japan. Baker Hughes CEO Lorenzo Simonelli was the latest to do so in his interview on Bloomberg Surveillance on Wednesday. On Wednesday, we tweeted [LINK] "*Data Center 101: Massive 24/7 power needs ahead."..the other important aspect is intermittency is important because a data center can't go down. So you need to have that consistency of [#NatGas] power generation." $BKR CEO Simonelli to @FerroTV @annmarie #OOTT."* Here is the transcript we made of Simonelli's comments that was attached to our tweet. SAF created transcript of Baker Hughes CEO Lorenzo Simonelli with Bloomberg's Jonathan Ferro and Annmarie Hordern on Bloomberg Surveillance on Sept 4, 2024. Items in "*italics*" are SAF Group created transcript. Ferro asks about the scale of demand he is seeing from data center and the need for off-grid solutions. Simonelli replies "… *the consumption of electricity by data centers. It's expected to double by 2026. That's going from 2% to 4% of the electricity usage. Think about that. That's the same amount of electricity that Japan uses on an annual basis. So from an installed capacity perspective, it's a significant increase. What do we have as a challenge? Grid stability. And also, I live in Houston, today, I have power outages on a continuous basis. And we need off-grid solutions. And that's where distributed power comes in. That's where opportunities for modular capabilities of gas turbines that are packaged, smaller, off-grid and they provide the stability to the data centers for ongoing operations. Because the other important aspect is intermittency is important because a data center can't go down. So you need to have that consistency of power generation*. "

Energy Transition: Vattenfall pauses Kriegers Flak Offshore Wind due to grid rules

Kriegers Flak offshore wind project paused

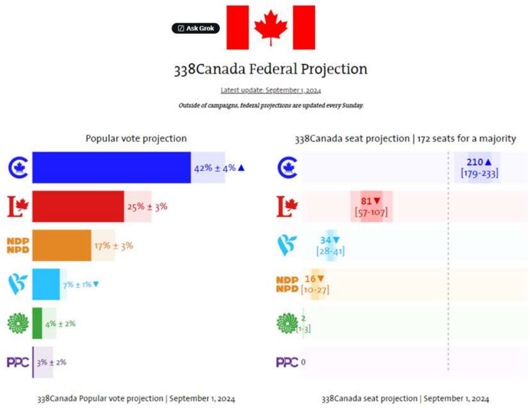
Global offshore wind projects had a brutal 2023 and the setbacks from 2023 will carry thru to impact offshore wind growth thru the rest of the decade. However, offshore wind is rebounding in 2024. But, at the same time, it looks like offshore wind projects are facing many of the historic logistical issues that offshore oil and gas has faced over the past decades – regulated on how and what connections are allowed. In this case, Vattenfall's offshore wind project is paused because Sweden won't allow it to connect into an existing grid connection. Rather, Sweden is requiring Vattenfall to have a separate connection to the grid that will add 25% to the total project cost so Vattenfall is pausing the project. On Monday, Reuters reported that Vattenfall has halted construction of Sweden's Kriegers Flak offshore wind project due to unresolved issues regarding its connection to the national grid [LINK]. The statement from Vattenfall was as follows: "*Vattenfall has decided to pause the development of the offshore wind power project Swedish Kriegers Flak until further notice, due to unviable investment prerequisites in Sweden*" [LINK]. The project, which received permission from Sweden in 2022, was expected to start production in 2028 and generate 2.7 TWh of power annually - enough to supply around 500,000 homes. Helene Bistrom, Vattenfall's Head of Wind, said "*This project is not profitable with present conditions… if Vattenfall had to build its own grid connection to shore, this would increase overall costs by some 25%*". Importantly, Bistrom noted "*The whole industry has experienced sharp cost* *increases the last three years, but we can still proceed with projects in markets where we have the prerequisites in place*". Our Supplemental Documents package includes the Vattenfall press release.

Capital Markets: Hard to see the NDP wants an election now

Will NDP force a Canada election?

We have trouble believing that NDP leader Jagmeet Singh ended his deal with the Liberals so he could try to force a federal election this fall. But you never know. The big news in Canada politics this week was the surprise Wednesday announcement by NDP leaders Jagmeet Singh that they are ending the cooperation deal with the Liberals. We tweeted [LINK] "*Breaking. NDP @theJagmeetSingh says end to cooperation deal with Liberals @JustinTrudeau. BUT if @PierrePoilievre can force non-confidence vote, will Singh vote to force an early election and risk losing a lot of NDP 24 seats? Thx @338Canada. Be interesting to watch!"* Singh will be in position to force a federal election on any upcoming non-confidence vote if he votes against the Liberals. Our tweet included the 338Canada Sept 1 federal projection that projects the NDP would get 16 seats, which is down from their current 24 seats. That is why we have trouble believing Sigh would want to force an election. Below is the 338Canada projection we attached to our tweet.

Figure 65: 338Canada Federal Projection Sept 1, 2024



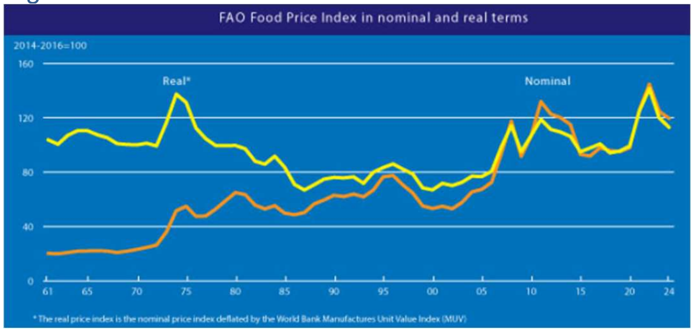
Source: 3389Canada

Capital Markets: UN FAO Food Price Index down MoM in August, -1.1% YoY

UN food price index down MoM

The UN Food Price Index is a monthly food commodities measure and not an index of consumer food prices or food prices in grocery stores. However, increases or decreases in food commodity prices should, in theory, eventually work their way into grocery prices. The UN Food Price index has been gradually decreasing since the middle of 2023 and is down MoM in August. On Friday, September 6th, the UN posted its monthly update of its FAO Food Price Index titled "*FAO Food Price Index down marginally in August: lower sugar, meat and cereal quotations offset higher dairy and vegetable oil prices"* [LINK]. Note that the index is calculated on a Real Price basis. The FFPI averaged 120.7 points in August, down from 121.0 in July (revised), and is down -1.1% YoY. The FFPI reported categories were mixed in their index movements over August. The Vegetable Oil Index was up +0.8% MoM from July, up +8.1% YoY, and marks the highest level since January 2023. The increase was driven by increasing quotations for palm, which offset lower soy, and sunflower oil quotations. The Dairy Price Index was up +2.2% MoM and up +14.2% YoY. The Cereal Price Index was down -0.5% MoM which is -11.9% YoY. The Meat Price Index was down -0.7% MoM and up +3.7% YoY. The Sugar Price Index was down -4.7% MoM and down -23.2% YoY.

Figure 66: UN FAO Food Price Index



Source: UN Food and Agricultural Organization

Capital Markets: UK PM "*with the broadest shoulders should bear the heavier burden*"

UK to increase taxes on wealthy

We have noted it previously and find it amusing when we see the Trudeau Liberals write and speak on how they are "asking the wealthiest Canadians to pay a little bit more". They don't ask, they just raise taxes and use the ask language as if it becomes more acceptable. So must admit, we prefer UK PM Starmer not pretending he isn't going to raise taxes on the wealthy. Last Tuesday, Starmer was speaking to the press on the October budget and said 'I will be honest with you, there is a budget coming in October and it's going to be painful." And then said the reality to the wealthy "those with the broadest shoulders should bear the heavier burden".

Capital Markets: Shiseido sees UK consumer demand softening and trading down

Shiseido, UK consumer trading down

Many overlook that a group of consumer staple products is cosmetics. Shiseido's UK MD Charles de Montelivet was on Bloomberg TV and on Tuesday morning, we tweeted [LINK] "*UK consumer weakness. seen softening in UK demand and consumers are reading down on cosmetics says Shiseido UK MD to @flacqua.*" He was clear that he is seeing a weaker UK consumer and one that is trading down. He was asked if he was seeing a softening of demand from UK consumers. De Montelivet replied "*Yes, you are right. This softening in demand…. it's softening of lately as we see people are retreating with those rent increases and mortgages*." And "*What we see also is some people are trading down to more accessible brands.*"

Demographics: New Zealand increases visitor fee to NZ$100 (US$65)

New Zealand ups visitor fee

We are surprised that more countries don't have visitor fees because, if you read the New Zealand logic, it's hard to disagree with the concept of a visitor fee. The question is how much. On Tuesday, New Zealand announced it was increasing its International Visitor Conservation and Tourism Levy (IVL) from NZ$35 to NZ$100 (~$US65). New Zealand wrote ""*But international tourism also comes with costs to local communities, including additional pressure on regional infrastructure and higher upkeep and maintenance costs across our conservation estate. "The IVL was introduced in 2019 as a mechanism to ensure international visitors were contributing directly to these costs, the vast majority of which are paid for by New Zealand taxpayers and ratepayers."* New Zealand noted that ""*The new IVL remains competitive with countries like Australia and the UK, and we are confident New Zealand will continue to be seen as an attractive visitor destination by many around the world."* Our Supplemental Documents package includes the New Zealand announcement

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

Look for energy items on LinkedIn

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

Misc Facts and Figures.

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

23 years ago, 9/11 changed the world

I had the opportunity this week to catch up with some Toronto people and one of the non market items that came up was on 9/11. It's hard to believe it was 23 years ago. And like most in the investment business, I was at work, we had finished our morning meeting at Griffiths McBurney (it was before we went public as GMP Securities) and I had the small TV on in my office as it unfolded. It feels like last week. And it always feels more recent but I think it's because I had the opportunity to live in the US, travelled dozens of times to NYC on business including meetings at the World Trade Center in June 2021 and had friends working right there in other buildings of the World Trade Center complex on 9/11. It was the day that changed the world. And I can't help but feel for the all the families and friends of the thousands who died that day and in the aftermath in the fight against terrorism.

The phenomenal story of Gander Newfoundland on 9/11

9/11 was a brutal day for tragic stories But, among, the tragedy, there were many stories of heroism on people rescuing people. And there is one of what I think is one of the most amazing stories of 9/11 – the story of Gander, Newfoundland. When the US and Canada closed down North America air space, it meant that overseas planes were forced to land in Newfoundland. Gander was the major airport landing with 39 jumbo jets. It was then a town of ~9,000 and they took in ~6,600 travellers overnight. The town basically doubled. That is unbelievable. It would be like Calgary taking in 1 million people overnight. And the story of how the locals took in, fed, gave them friendship, love is an amazing story and a tribute to Newfoundlanders. On the bucket list is to hopefully get to Appleton, the adjoining town to Gander, Newfoundland for their 9/11 memorial service just to be able to see some of the amazing Gander and Appleton citizens who stepped up during 9/11. If you haven't seen it, I highly recommend the documentary movie "*You Are Here Trailer - A Come From Away Story*" about Gander on 9/11 and for the week after. Unfortunately, it will be tough to find. It used to be available on Crave in Canada but we couldn't see it on Crave this morning. The trailer is at [LINK]. I have probably seen this documentary movie a dozen times or more.

Must see musical "Come From Away", about Gander, Newfoundland on 9/11

On Thursday, we tweeted [LINK] "*Must see, the musical on 9/11. @wecomefromaway. How 39 jumbo jets w/ ~6,600 people had to land in Gander, a town of ~9,000. Uplifting story of how Newfoundlanders did what Newfoundlanders do to take them in, gave them friendship and love during the uncertain world caused by the terrorist attack on US.*" Come From Away, the musical, is on its Cdn tour right now so we wanted to tweet out the dates. They were in Calgary two years ago and we took guests twice to see it. It was great. It's a musical about the story of Gander on 9/11 and it's played to huge applause wherever it played. What was really great was in hearing the reaction of Gander Police Chief Oswald Fudge on the musical, saying they nailed it. We had the opportunity to go on a Thursday and join the crowd in saying it is a great musical and deserved of all the descriptions. And then on Sept 11, 2022, it was the 21st anniversary of 9/11 and we went for the second time as a reminder of what happened on 9/11 and the phenomenal story of the people of Gander. The musical trailer is at [LINK]. A good clip of he Broadway cast performing "Welcome to the Rock" at the Olivier Awards 2019 is at [LINK].

Wine of the week: 2000 Chateau La Nerthe Chateauneuf-du-Pape

In August, I started the wine of the week when I realized I had to get to opening up some wines bought 20 to 30 years ago that included some 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. 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 2000 Chateau La Nerthe Chateauneuf du Pape. It is the entry level vs the Chateau La Nerthe Cuvee des Cadettes. But it was a trendy, relatively cheap wine that was highlighted by the wine reviewers and 2000 was a pretty good vintage year for Chateauneuf du Pape. I think it was maybe $35 in

2003. Normally I look at about 15 years as the ideal drinking window for a Chateauneuf du Pape, but the La Nerthe was pretty good especially so considering its price. That is good as I still have a few more bottles.

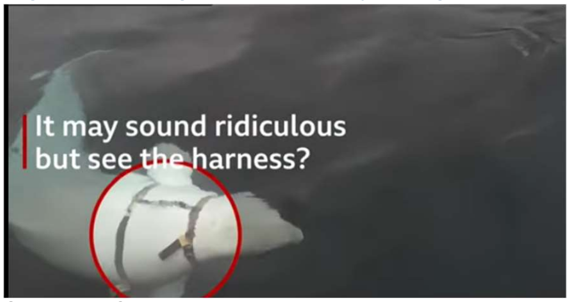
Figure 67: 2000 Chateau la Nerthe Chateauneuf du Pape

Source: SAF Group

Alleged Russian spy Beluga whale "Hvladimir" found dead off Noway

ON Sunday, the BBC and others reported that the *alleged spy whale, Hvladimir, was found dead off the coast of Norway. The BBC wrote "The body of the animal - nicknamed Hvaldimir - was found floating off the south-western town of Risavika and taken to the nearest port for examination. The whale was first spotted in Norwegian waters five years ago with a GoPro camera attached to a harness that read "Equipment of St Petersburg". This sparked rumours the mammal could be a spy whale - something experts say happened in the past. Moscow never responded to the allegations*."

Figure 68: Alleged Russian spy Beluga whale "Hvaldimir" Beluga



Source: BBC News