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Energy Tidbits

Oct 6, 2024

Produced by: Dan Tsubouchi

Oil Risk Premium: Netanyahu Has Duty to Respond, IDF Plans a Serious & Significant Response and Can Hit Anywhere in Iran

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 1998 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. Yesterday, Netanyahu said Israel has the duty to respond and the IDF said are planning a serious & significant response vs Iran and that Israel can reach anywhere in the Middle East. [click here]

2. Biden didn't walk back his comment that he had discussed with Israel that Israel could hit Iran's oil facilities. [click here]

3. Risk of Israel attack on Iran oil sends floating storage tankers to buyers as largest decline in Vortexa floating oil storage was in Asia, not floating storage around Middle East. [click here]

4. Cdn oil producers are having a good win as post start of 590,000 b/d TMX, WCS less WTI differentials continue to be low and not seasonally widening as they have done in 2022 and 2023. [click here]

5. Seems IEA is setting stage to back off its call for peak natural gas demand by 2030 as its "Global Gas Security Review 2024" says "*natural gas markets have returned to more pronounced growth*". [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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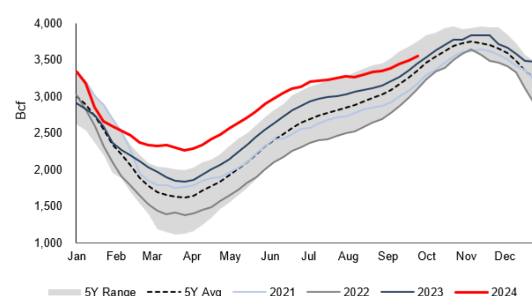
Natural Gas: Expect higher YoY but not full US gas storage to start the winter

Higher YoY but not full gas storage

It's been great week of trading HH with the move to the Nov contract, which was just under $3. It was a hot summer, Gulf of Mexico shut-ins from hurricanes and voluntary shut-in s have taken storage away from a risk of getting full early to just the expectation for High YoY gas storage. Last winter's warm temperatures led to a big +444 bcf YoY storage on May 3 with a real fear that storage would be full well before winter and that would cause producers to shut-in production. But that big early YoY surplus is now down to +127 bcf YoY so the risk of being filled early has gone and it's just the reality of higher YoY gas storage to start the winter. And, as noted below, storage could be a lot worse.

Figure 1: US Natural Gas Storage



Source: EIA

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

Storage could be worse

The big holdback to Henry Hub prices over the past four month is much like oil in that thre has been 1-2 bcf/d of voluntary shut-ins due to low price ie. 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. There are others like Chesapeake who have shut-in natural gas due to low natural gas prices. Below is last an excerpt from last week's Tidbits; we noted that EQT is to start restoring natural gas production that they previously shut-in.

> **EQT to start restoring its ~1 bcf/d shut-in natural gas production in Oct**
> Last week, EQT said they would be restoring some of their shut-in production. Here is what we wrote in last week's (Sept 29, 2024) Energy Tidbits memo. "*EQT to start restoring its ~1 bcf/d shut-in natural gas production in Oct. Last Thursday, we tweeted [LINK] "EQT to start to add back shut-in #NatGas production. Gas storage +159 bcf YoY would have been worse if EQT, Coterra, etc hadn't shut-in production due to low prices. EQT curtailed ~1 bcfd in spring. "We're watching to see that come*

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back in October and November ... We will ease curtailments in October" EQT CEO Rice. Thx @scottdisavino #OOTT [LINK] ." As we have been highlighting, natural gas storage would be way worse if EQT, Coterra, Chesapeake, etc hadn't shut in natural gas due to low prices. Don't forget HH was around $2 up until the last couple weeks. EQT had indicated they were shutting in 90 bcf over H2/24 but hadn't specifically said when they would start to restore production. But, on Wednesday, EQT CEO said they would start to bring the shut-in production on in October. On Wednesday, Reuters reported [LINK] "U.S. energy company EQT (EQT.N), opens new tab plans to reverse some natural gas production curtailments in October and November as demand for the fuel and prices increase, CEO Toby Rice told Reuters on Wednesday. EQT, the biggest U.S. gas producer, has along with other U.S. drillers curtailed output in 2024 after prices collapsed to multi-year lows in the spring following a mild winter that left a tremendous oversupply of fuel in storage. "Production curtailments will be a normal part of our strategy when prices are low," Rice said, noting the company has already curtailed about 1 billion cubic feet per day (bcfd) of production in the spring. "We're watching to see that come back in October and November ... We will ease curtailments in October," Rice said, noting total curtailments were around 2 bcfd across the entire industry."

Natural Gas: +55 bcf build in US gas storage; now +127 bcf YoY

+55 bcf build in US gas storage

For the week ending September 27, the EIA reported a +55 bcf build [LINK]. Total storage is now 3.547 tcf, representing a surplus of +127 bcf YoY compared to a surplus of +159 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 but this week's data shows that storage is now below the range at -209 bcf below the 5-yr maximum of 3.756 tcf. Total storage is now +190 bcf above the 5-year average, below last week's +233 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)				Historical Comparisons: Year ago (09/27/23)		Historical Comparisons: 5-year average (2019-23)	
Region	09/27/24	09/20/24	net change	implied flow	Bcf	% change	Bcf	% change
East	846	818	28	28	840	0.7	815	3.8
Midwest	1,013	993	20	20	983	3.1	969	4.5
Mountain	283	279	4	4	238	18.9	211	34.1
Pacific	293	289	4	4	276	6.2	275	6.5
South Central	1,113	1,113	0	0	1,085	2.6	1,087	2.4
Salt	261	265	-4	-4	256	2.0	260	0.4
Nonsalt	852	848	4	4	827	3.0	827	3.0
Total	3,547	3,492	55	55	3,420	3.7	3,357	5.7

Source: EIA

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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
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
Sep/06	3,387	40	198	296
Sep/13	3,445	58	194	274
Sep/20	3,492	47	159	233
Sep/27	3,547	55	127	190

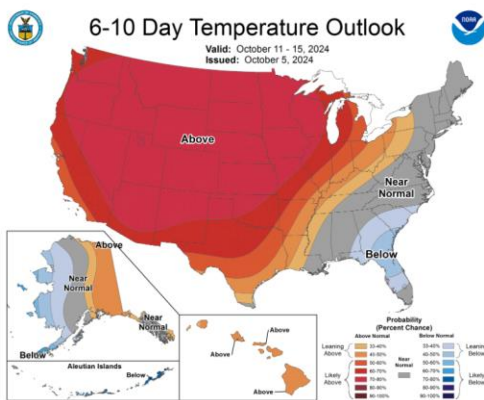
Source: EIA

Natural Gas: NOAA forecasts Fall temps, likely a big driver of NatGas

NOAA updated 6-10 and 8-14 day temperature outlook

It's now the Fall and that generally means temperatures that are not hot enough to drive air conditioning demand or cold enough to drive heating demand. Yesterday, we tweeted [LINK] "*It's Fall so that is leave the windows open temps. Excl TX, AZ, etc, not hot enough to drive A/C & not cold enough to crank up furnace. @NOAA updated 6-10 & 8-14 day temp outlook for Oct 11-19. High/lows. Chicago: 16-26C & 9-17C. NYC: 19-23C & 10-13C. Houston: 27-31C & 14-19C. #OOTT.*" Our reminder is that warmer than normal in Oct temperatures don't drive much A/C demand although we note daily highs are still above 30C in Texas/Arizona but its is now cooling off at night. We checked AccuWeather and it shows daily high/lows for Chicago were 16-26C & 9-17C, for NYC were 19-23C & 10-13C and for Houston 27-31C & 14-19C. Outside of Texas and Arizona, this is what we describe as the windows open temperatures. Below are NOAA's updated, as of yesterday, 6-10 day and 8-14 day temperature outlook maps covering Oct 11-19.

Figure 4: NOAA 6-10 day temperature outlook for Oct 11-15



Source: NOAA

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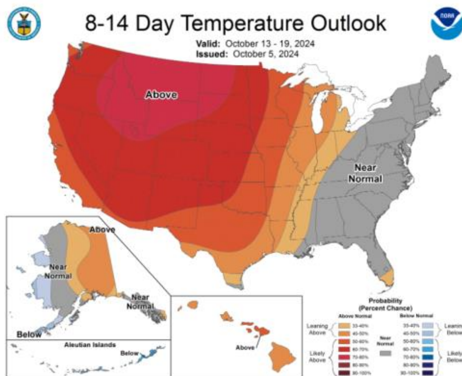
Figure 5: NOAA 8-14 day temperature outlook for Oct 13-19



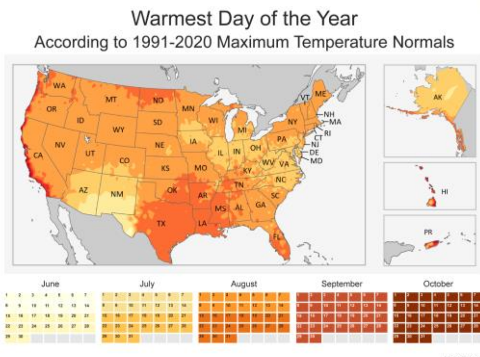
Source: NOAA

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

Normal warmest day of the year across the US

It's now October so it's fall that means it is well 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 6-10 and 8-14 day temperature outlook and it shows above normal temperature, it doesn't have any substantial air conditioning demand impact as it tends to be what we call leave the windows open temperatures. Our July 2, 2023 Energy Tidbits included the below map from NOAA's post "*When to expect the Warmest Day o the Year*" [LINK].

Figure 6: NOAA Warmest Day of the Year



Source: NOAA

Natural Gas: NOAA's normal coldest days of the year across the U.S.

Normal coldest day of the year across the U.S.

Rather, its almost the start of winter, which means warm weather is a negative for natural gas. And even though the normal coldest day of the year isn't until January, warm weather in Nov and Dec is negative as it is normally when weather is cold enough to start the furnaces. This winter's forecasted La Nina may signal a colder season however, we remind that temperature forecasts are never 100% accurate. Just like the normal warmest day of the year, NOAA also has a normal coldest day o the year map in its article "*When to Expect the Coldest Day of the Year*" which was last updated in January 2022 [LINK]. The NOAA points

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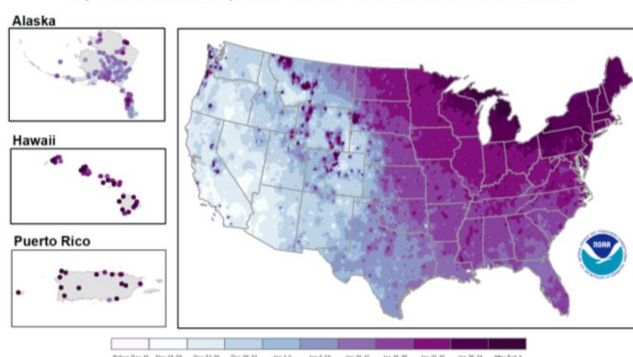
put that the day with the lowest average minimum temperature is dependent on regional location but falls after January 1 for the majority of the Eastern U.S., and the coldest day typically falls in December for much of the Western region. The NOAA said: "*The contiguous United States map reveals several interesting regional differences across the country. Most prominently, the portion of the United States west of the continental divide (the West) typically reaches its climatological coldest day in December, whereas most of the East reaches its seasonal minimum in January. The West is profoundly influenced by the flow of moderating air masses with clouds and precipitation coming off the Pacific Ocean and aligns more closely to the seasonal solar cycle, while the East is responding to cold air flowing south from Canada that is modified by snow cover reflecting solar radiation away from the surface"*. The NOAA also noted that when compared to the 1981-2010 edition of the map, there has been a 3-6 day shift in the average coldest day in stations east of the Rockies "*Compared to the 1981-2010 version of this map, there has been a small but noticeable shift of the coldest day to dates 3–6 days later or more at many stations in the U.S. east of the Rocky Mountains*". We checked the link and it still works.

Figure 7: NOAA Coldest Day of the Year



Source: NOAA

Natural Gas: 2nd consecutive week for positive Waha spot natural gas prices

Waha spot prices were positive all week

Yesterday, we tweeted [LINK] *"2nd consecutive week of positive Waha spot #NatGas prices. 10/04: no posting. 10/03: $1.70. 10/02: $1.48. 10/01: $0.62. 9/30: $0.44. 9/27: $0.17. 9/26: $0.59. 9/25: $1.83. 9/24: $0.76. 9/23: $1.79. Infers increasing volumes on new 2.5 bcfd Matterhorn Express. #OOTT Thx @business."* At least for now, it looks like the start up of the 2.5 bcf/d Matterhorn Express pipeline has taken Waha spot natural gas prices out of the negative and ito the positive. We haven't yet see any disclosure on the volumes being moved on the new 2.5 bcf/d Matterhorn Express natural gas pipeline. Matterhorn is an intrastate pipeline (all within Texas) so is not required to post volume flow rates. Prior to the last two weeks, the last time Waha was positive for a week was late July. So we think the positive Waha prices point to increasing volumes on Matterhorn Express. Our tweet noted that Waha was positive all week for the second consecutive week. 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.

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Figure 8: Waha Natural Gas Prices to Oct 4 close

Source: Bloomberg

Figure 9: Matterhorn Express Pipeline, 2.5 bcf/d

Source: Matterhorn Express

Natural Gas: US July natural gas production up MoM to 104.3 bcf/d

US July gas production

On Monday, the EIA released its Natural Gas Monthly [LINK], which includes its estimated "actuals" for July dry gas production. Key items to note are as follows: (i) July was 104.3 bcf/d, which followed June's revised 102.8 bcf/d, rising above the previous four consecutive months which were below 103 bcf/d, with April and May below 102 bcf/d, a level not seen since Jan 2023. (ii) July at 104.3 bcf/d is up +0.9 bcf/d YoY, and down -2.2 bcf/d since Dec 2023. Dec 2023 was the record high of 106.5 bcf/d. (iii) June's data was revised down small, from 103.0 bcf/d to 102.8 bcf/d. (iv) July's production of 104.3 bcf/d was up +1.5 bcf/d MoM and up +0.9 bcf/d YoY from July 2023's figure of 103.4 bcf/d. The EIA does not provide any commentary. Our Supplemental Documents package includes the EIA Natural Gas Monthly.

Figure 10: US dry natural gas production

bcf/d	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Jan	65.3	66.8	73.4	73.6	70.6	78.7	89.3	97.4	92.6	96.2	101.9	103.5
Feb	65.4	68.4	73.8	74.6	71.5	80.4	89.9	95.5	85.8	96.0	102.0	106.0
March	65.3	68.9	74.1	73.8	73.2	81.3	90.3	95.3	93.6	97.6	102.9	102.7
Apr	66.1	70.5	75.2	73.7	73.3	81.2	90.7	95.0	94.3	98.3	102.6	101.7
May	65.9	70.2	74.1	72.9	73.3	82.1	91.4	87.9	94.2	99.1	103.6	101.6
June	65.8	70.5	74.0	72.2	74.0	82.5	91.7	90.4	93.9	99.3	103.3	102.8
July	67.1	72.0	74.2	72.8	74.7	84.2	92.2	90.3	94.8	100.4	103.4	104.3
Aug	66.9	72.4	74.3	72.2	74.7	85.9	94.4	90.4	95.0	100.9	104.5	
Sept	66.8	72.4	74.7	71.7	76.0	87.3	94.8	91.3	95.7	102.4	104.5	
Oct	67.0	73.1	74.2	71.4	77.3	88.4	95.6	89.7	97.2	102.2	104.3	
Nov	67.7	72.6	73.9	72.0	79.8	89.9	97.2	92.5	98.3	102.2	105.9	
Dec	66.5	73.2	73.9	71.2	80.4	89.5	97.1	93.1	99.1	100.2	106.5	
Average	**66.3**	**70.9**	**74.2**	**72.7**	**74.9**	**84.3**	**92.9**	**92.4**	**94.5**	**99.6**	**103.8**	**103.2**

Source: EIA

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Natural Gas: US natural gas pipeline exports to Mexico flat MoM, flat YoY

US to Mexico July natural gas exports

The EIA's Natural Gas Monthly also includes pipeline exports to Mexico and, up until the last few months, was the EIA rep[ort that first provided this data. However, that changed this year when the Department of Energy changed its LNG Monthly report to US Natural Gas Imports and Exports Monthly. And this includes the pipeline exports to Mexico. And this DOE report always comes out days in advance of the EIA Natural Gas Monthly, in this case it was released on Thurs Sept 26. And since the EIA is part of the DOE, the data is the same. Here is what we wrote in last week's (Sept 29, 2024) Energy Tidbits memo. "*UN natural gas pipeline exports to Mexico flat MoM, flat YoY. On Thursday, September 26, the Department of Energy (DOE) posted its Natural Gas Imports and Exports Monthly [LINK], which includes its estimate for July natural gas exports via pipeline to Mexico. These are the same data points that will come out in the more referenced EIA Natural Gas Monthly on Monday. Natural gas exports to Mexico were flat at 6.8 bcf/d in July from 6.8 bcf/d in June and was flat YoY at 6.8 bcf/d in July 2023. This is just below the all-time high for pipeline exports of 6.9 bcf/d in August 2023. US natural gas pipeline exports to Mexico are now in line with Q3/23 exports of ~6.8 bcf/d. The DOE doesn't provide a split but for pipeline vs LNG or CNG exports to Mexico but we believe essentially 100% of the exports are via pipeline, without any CNG/LNG in the mix. Please note that we will note if we ever believe there are any notable CNG/LNG exports to Mexico. Below is a summary of natural gas via pipeline exports to Mexico from the US. Our Supplemental Documents package includes excerpts from the DOE US Natural Gas Imports and Exports Monthly.*"

Figure 11: US Natural Gas Pipeline Exports to Mexico

(bcf/d)	2016	2017	2018	2019	2020	2021	2022	2023	2024
January	0.9	4.3	4.7	5.3	5.4	5.6	5.7	5.5	6.0
February	3.4	4.6	5.0	5.1	5.3	5.4	5.5	5.5	5.8
March	3.4	4.5	5.2	5.1	5.6	5.9	5.5	5.8	5.9
April	3.5	4.2	4.7	5.0	4.6	6.1	5.9	5.6	6.3
May	3.7	4.3	4.9	5.6	4.7	6.2	6.0	6.2	6.8
June	3.8	5.3	5.5	5.8	5.4	6.6	6.2	6.8	6.8
July	4.0	4.8	5.6	6.2	5.8	6.4	6.1	6.8	6.8
August	4.4	4.6	5.6	5.9	6.1	6.3	5.9	6.9	
September	4.2	4.5	5.4	5.8	6.2	6.0	5.6	6.7	
October	4.2	4.5	5.1	5.7	6.2	6.0	5.5	6.5	
November	4.4	4.8	4.9	5.4	5.6	5.5	5.4	6.0	
December	3.8	4.5	4.9	5.2	5.3	5.4	5.1	5.6	
Average	3.6	4.6	5.1	5.5	5.5	5.9	5.7	6.2	

Source: DOE, SAF

Natural Gas: US LNG exports down -1.4 bcf/d MoM to 10.4 bcf/d in July

US July LNG exports

Here is what we wrote in last week's (Sept 29, 2024) Energy Tidbits memo on US LNG exports for July. "*US LNG exports down 1.4 bcf/d MoM to 10.4 bcf/d in July. The DOE normally posts the US LNG export data before the more commonly referenced US LNG exports from the EIA's Natural Gas Monthly. The EIA is a group within the DOE so the data for LNG exports is either identical or just a rounding issue. On Thursday, we tweeted [LINK] "US #LNG exports: July 2024: 10.4 bcf/d Jun 2024: 11.9 July 2023: 11.3 July was hit by Freeport down ~8 days re air cooler damage from Beryl & Cheniere planned maintenance. DOE actuals are same as EIA #NatGas Monthly actuals on Mon. #OOTT #NatGas [LINK]". US LNG exports were down -1.4 bcf/d MoM in July from 11.9 bcf/d in June, and down -0.9 bcf/d YoY from 11.3 bcf/d in July 2023. As we highlighted in our tweet, the key reason for the lower US LNG exports were due to the 2.1 bcf/d Freeport LNG being shut for ~7 days from Hurricane Beryl. The top five countries destinations for US LNG in Aug were China 1.1 bcf/d, India 0.9 bcf/d, Japan 0.9 bcf/d, Egypt 0.8 bcf/d and South Korea 0.8 bcf/d. The DOE did not comment on the MoM or YoY changes.*"

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Figure 12: US Monthly LNG Exports

(bcf/d)	2019	2020	2021	2022	2023	2024
January	4.1	8.1	9.8	11.4	10.9	12.8
February	3.7	8.1	7.4	11.3	11.7	12.4
March	4.2	7.9	10.4	11.7	11.8	11.9
April	4.2	7.0	10.2	11.0	12.5	10.1
May	4.7	5.9	10.2	11.3	11.8	11.9
June	4.7	3.6	9.0	10.0	10.9	11.9
July	5.1	3.1	9.7	9.7	11.3	10.4
August	4.5	3.6	9.6	9.7	11.4	
September	5.3	5.0	9.5	9.8	11.6	
October	5.7	7.2	9.7	10.0	12.4	
November	6.4	9.4	10.2	10.1	12.9	
December	7.1	9.8	11.1	11.0	13.6	
Average	5.0	6.6	9.7	10.6	11.9	

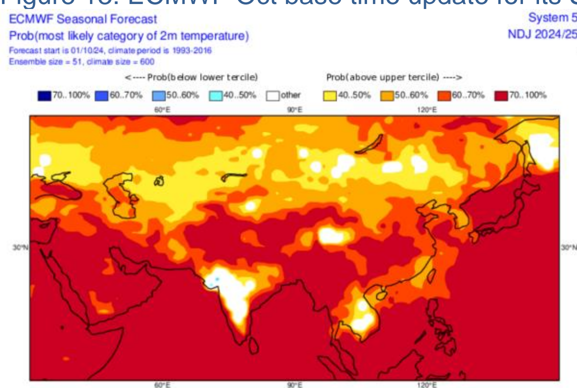
Source: EIA, DOE

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

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

Yesterday, we tweeted [LINK] "*Fact that Biden discussed with Israel it potentially hitting Iran's #Oil facilities added some risk to #Oil, EU #NatGas & LNG. If not for that, forecasts call for warmer than normal Nov/Dec/Jan start to winter in Asia & Europe would normally be a hold back to price. Thx @ECMWF #OOTT.*" Winter is key to natural gas and LNG prices. This week, we saw the Biden comments on discussing with Israel that Israel might attack Iran's oil facilities drive up oil, natural gas and LNG prices. So if not for this geopolitical risk to prices, we would have expected LNG prices to be held back going into the winter. And our concern is that a warm start to 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 with an October base time 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. The ECMWF didn't provide any commentary but when we look at this Oct update vs the Sept update, it looks like there are a few more warmer spots than last month. [LINK]

Figure 13: ECMWF Oct base time update for its Seasonal forecast for NDJ for Asia



Source: ECMWF

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Natural Gas: Japan expects warmer than normal temps to end October

JMA temperature forecast for the next 30 days

It was a hot summer in Japan and the warmer than normal temperatures continued in Sept and now looking to do so to end October, which should also support a warmer than normal start to November. On Thursday, the Japan Meteorological Agency updated its forecast for the next 30 days, Oct 5 thru Nov 4, in Japan [LINK]. There is no JMA commentary on the forecast. JMA is calling for above normal temperatures for October through to the beginning of November, with a +70% probability of above normal temperature occurrence everywhere, except the Okhotsk Sea Side of Hokkaido which has a 60% probability of above normal temperature occurrence. We checked AccuWeather for Tokyo and, for the last three weeks of October, NOAA are forecasting daily highs in the 21-24C range and overnight lows from 14-16C, which won't drive any A/C demand. As a reminder Japanese offices and houses tend to have air conditioning set at much higher temperature levels than in North America. Below is the JMA temperature forecast for the next 30 days.

Figure 14: JMA Average Temperature Outlook for Oct 19 – Nov 1

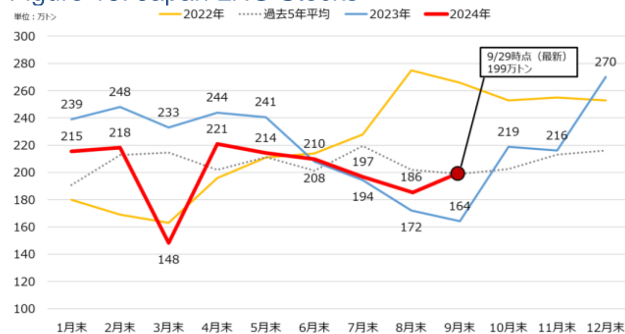
Source: Japan Meteorological Agency

Natural Gas: Japan LNG stocks up WoW, up YoY and now flat to 5-yr average

Japan LNG stocks up WoW

Japan's LNG stocks are up WoW, are up YoY, and are flat when compared to the 5-year average. On Wednesdays, Japan's METI releases its weekly LNG stocks data [LINK]. LNG stocks on September 29 were 95.6 bcf, up +22.1% WoW from September 22 of 78.3 bcf, and up +21.3% from 78.8 bcf from a year ago. Stocks are flat from the 5-year average of 95.6 bcf. Below is the Japanese LNG stocks graph from the METI weekly report.

Figure 15: Japan LNG Stocks



Source: METI

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

Ukraine captures key Russian gas infrastructure

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 Oct 4 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 16: The Ukrainian pipeline system

Source: Oxford Institute for Energy Studies

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

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

Yesterday, we tweeted [LINK] "*Fact that Biden discussed with Israel it potentially hitting Iran's #Oil facilities added some risk to #Oil, EU #NatGas & LNG. If not for that, forecasts call for warmer than normal Nov/Dec/Jan start to winter in Asia & Europe would normally be a hold back to price. Thx @ECMWF #OOTT.*" Winter is key to natural gas and LNG prices. This week, we saw the Biden comments on discussing with Israel that Israel might attack Iran's oil facilities drive up oil, natural gas and LNG prices. So if not for this geopolitical risk to prices, we would have expected TTF #Natgas and LNG prices to be held back going into the winter. And our concern is that a warm start to 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 with an October base time for Europe for the start of winter. And the ECMWF still expects a warmer than normal Nov/Dec/Jan for Europe ie. a warm start to winter. The ECMWF didn't provide any commentary but when we look at this Oct update vs the Sept update, it looks like there are a few more warmer spots than last month. [LINK]

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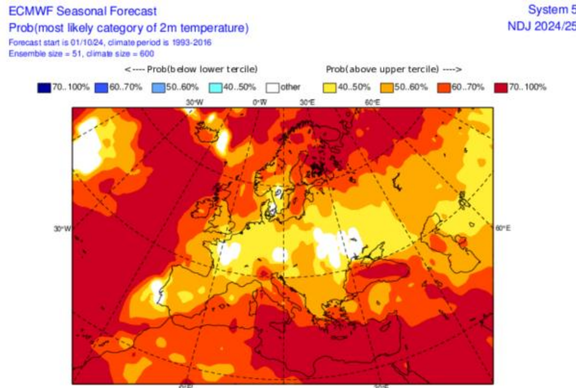
Figure 17: ECMWF Oct base time update for its Seasonal forecast for NDJ for Asia



Source: ECMWF

Natural Gas: NW Europe LNG imports down big YoY, down ~440 bcf, 1.6 bcfd YTD

Europe LNG imports down big in 2024

Yesterday, we tweeted [LINK] "*If not for Israel/Iran risk, EU #NatGas prices would be held back in shoulder season. Storage would be full if NW Europe hadn't cut back LNG imports in Q2/Q3. YTD Sept 29, NW Europe #LNG imports down ~440 bcf or ~1.6 bcf/d YoY. Thx @BloombergNEF LNG Trade Weekly. #OOTT.*" The LNG market story is also the risk to LNG market if Israel escalates to attack Iran's oil facilities. Iran doesn't export LNG but any attacks around key Iran oil infrastructure like its Kharg Island would likely cause a stop in LNG shipments from nearby Qatar. But, if not for this escalation risk, we have highlighting that there is a big holdback to Europe natural gas prices is that Europe gas storage would be way worse if Europe hadn't significantly reduced LNG imports over the past few months as storage was looking like it would be full early. LNG imports into NW Europe are down big YoY in 2024. On Tuesday, BloombergNEF posted its LNG Trade Weekly, which was titled "Northwest Europe imports near 3-year low". This is the theme we have been highlighting for months now. BloombergNEF NW Europe LNG imports YTD Sept 29 were down approx. 440 bcf of ~1.6 bcf/d this year. Our tweet included the below BloombergNEF chart.

Figure 18 Europe LNG Imports up to Sept 29

Weekly performance dashboard

Weekly liquefied natural gas volumes into Northwest Europe and Italy over September 23-29 were the lowest since December 2021, down 0.3 million metric tons from a week earlier, largely due to the Netherlands importing 0.2 million tons less. In contrast, North Asia saw imports recover by almost 1.4 million metric tons, thanks to mainland China, Japan and Taiwan absorbing around 0.7 million, 0.5 million and 0.2 million tons more, respectively. Deliveries into China will likely decline during the National Day holidays (October 1-7).

	Million metric tons	Week starting Aug 26	Week starting Sep 2	Week starting Sep 9	Week starting Sep 16	Week starting Sep 23	Latest week-on-week change		Cumulative month Sep 2023	Cumulative month Sep 2024	Monthly year-on-year change		Jan 1 to Sep 29, 2023	Jan 1 to Sep 29, 2024	Jan 1 to Sep 29 year-on-year change	
	Total exports	7.94	7.46	7.82	7.90	7.85	-0.05	-1%	32.19	32.25	0.06	0%	303.98	307.63	3.65	1%
Region	Pacific Basin	2.56	2.86	2.99	2.79	2.77	-0.02	-1%	11.66	11.65	-0.01	0%	111.38	113.66	2.28	2%
Region	Atlantic Basin	3.14	2.64	3.02	3.15	2.86	-0.29	-9%	11.46	12.32	0.86	7%	107.64	112.38	4.74	4%
Region	Middle East	2.24	1.96	1.82	1.96	2.23	0.27	14%	9.07	8.29	-0.79	-9%	84.96	81.59	-3.37	-4%
Market	Qatar	1.55	1.52	1.38	1.30	1.55	0.25	20%	6.39	5.94	-0.44	-7%	60.33	59.21	-1.12	-2%
Market	Australia	1.39	1.39	1.56	1.46	1.54	0.08	6%	6.13	6.09	-0.04	-1%	59.75	60.16	0.41	1%
Market	US	1.92	1.53	1.70	1.93	1.68	-0.25	-13%	7.10	7.28	0.18	3%	66.28	68.06	1.78	3%
Market	Russia	0.55	0.68	0.69	0.56	0.68	0.12	22%	2.54	2.61	0.08	3%	22.71	24.12	1.41	6%
Market	Malaysia	0.31	0.40	0.50	0.53	0.43	-0.10	-19%	1.93	1.98	0.05	3%	19.19	19.43	0.24	1%
	Re-export supply	0.02	0.02	0.12	0.03	0.03	0.00	-3%	0.42	0.21	-0.21	-50%	3.92	2.76	-1.16	-30%
	Total imports	6.53	7.85	8.14	6.47	8.24	1.76	27%	29.70	32.18	2.49	8%	295.28	299.79	4.51	2%
Region	JKCT	3.11	4.36	3.97	3.52	4.91	1.39	40%	15.15	17.51	2.36	16%	144.92	154.51	9.59	7%
Region	South Asia	0.69	0.55	0.91	0.50	0.65	0.15	31%	3.10	2.86	-0.24	-8%	25.45	29.72	4.28	17%
Region	Southeast Asia	0.54	0.61	0.56	0.47	0.52	0.05	11%	2.13	2.33	0.20	9%	17.55	21.47	3.91	22%
Region	NW Europe and Italy	1.05	0.83	1.18	0.94	0.64	-0.29	-31%	4.27	3.72	-0.55	-13%	57.23	44.76	-12.46	-22%
Region	Other Europe	0.55	0.68	0.60	0.50	0.59	0.09	18%	2.89	2.50	-0.39	-13%	33.27	27.01	-6.27	-19%
Region	Middle East	0.31	0.36	0.40	0.38	0.34	-0.04	-11%	0.93	1.53	0.60	64%	5.95	9.14	3.18	54%
Region	Americas	0.29	0.46	0.46	0.17	0.51	0.34	199%	1.16	1.60	0.44	38%	10.60	12.42	1.82	17%
Region	Other markets	0.00	0.00	0.06	0.00	0.07	0.07	-	0.06	0.13	0.07	126%	0.21	0.67	0.46	215%
Market	Japan	0.89	1.48	1.16	1.15	1.63	0.48	41%	5.45	5.68	0.23	4%	47.98	48.53	0.55	1%
Market	South Korea	0.64	0.69	0.70	0.76	0.77	0.01	1%	2.99	3.21	0.21	7%	32.35	33.30	0.94	3%
Market	Mainland China	1.14	1.73	1.60	1.28	1.99	0.71	55%	5.11	6.74	1.64	32%	49.81	56.84	7.03	14%
Market	Taiwan	0.44	0.46	0.51	0.33	0.53	0.20	60%	1.60	1.88	0.28	18%	14.78	15.85	1.07	7%
Market	India	0.43	0.43	0.60	0.38	0.35	-0.03	-7%	2.18	1.88	-0.30	-14%	16.08	19.83	3.75	23%
Market	Thailand	0.24	0.38	0.14	0.14	0.07	-0.07	-51%	1.00	0.91	-0.09	-9%	8.68	9.25	0.57	7%
Market	France	0.24	0.30	0.24	0.30	0.24	-0.05	-18%	1.42	1.14	-0.28	-20%	14.96	13.36	-1.60	-11%
Market	Netherlands	0.29	0.22	0.34	0.29	0.07	-0.22	-76%	0.92	0.92	0.00	0%	12.05	10.41	-1.64	-14%
Market	Spain	0.10	0.35	0.18	0.10	0.31	0.21	203%	1.29	1.01	-0.29	-22%	13.44	10.10	-3.34	-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 October 1, 2024 BloombergNEF

Source: BloombergNEF

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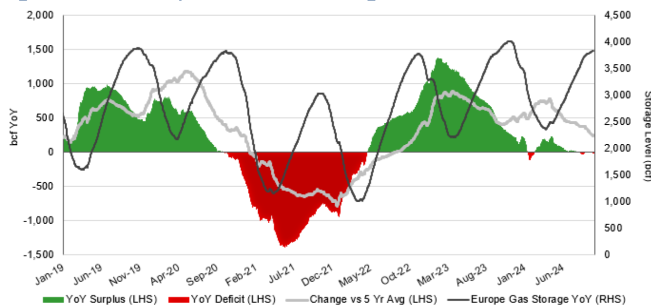
Europe gas storage

Natural Gas: Europe storage up +0.3% WoW to 94.3% full, down -2.0% YoY
As expected, European natural gas storage has slowed down in filling up as LNG cargoes have been redirected for the past few months away from NW Europe as it looked like Europe gas storage would be full early. But even still, it is now 94.3% 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 +0.3% WoW to 94.3% vs 94.0% on Sept 26. Storage is now down -2.0% from last year's levels of 96.3% on October 3, 2023, but up huge against the 5-year average of 90.7%. Below is our graph of European Gas Storage Level.

Figure 19: 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 October 2, natural gas in Ukraine storage was at 25.7% of its total capacity, up from 25.2% of its total capacity on September 25. 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 20: Ukraine Gas Storage Facilities as of July 2023

Source: Bruegel

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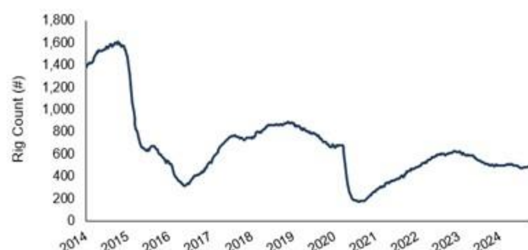
Oil: U.S. oil rigs down -5 WoW and down -18 rigs YoY to 479 oil rigs

US oil rigs down -18 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 U.S. oil rigs were -5 rigs WoW to 479 oil rigs as of October 4. US oil rigs are now only down -18 oil rigs YoY. The smaller YoY difference is because, in 2023, US oil rigs went below 520 rigs on Aug 25, 2023 and then were lower in the 490-510 rigs for several months. But then dropped down to 477 on July 19, 2024, which was the lowest oil rig count since December 2021. (iii) Note we can see the basin changes but not by type of rig; the only WoW basin changes were Ardmore Woodford down -1 rig WoW to 1 rig, Arkoma Woodford +1 rig to 2 rigs, DJ-Niobrara +1 rig WoW to 8 rigs, and Permian -2 rig WoW to 304 rigs. (iv) The overlooked U.S. rig theme is the YoY declines, which have begun to taper as Q4 2023 saw activity leveling off. Total U.S. gas and oil rigs are down -34 rigs YoY to 581 rigs including US oil rigs -18 oil rigs YoY to 479 oil rigs. And for the key basins, the Permian is -5 rigs YoY, Haynesville is -5 rigs YoY, DJ Niobrara is -6 rigs YoY, Marcellus -3 rigs YoY, Utica -1 rig YoY, Williston up +2 rigs YoY, Arkoma Woodford +2 rig YoY, and Cana Woodford +2 rigs YoY. (v) US gas rigs were up +3 rigs this week to 102 gas rigs. It is important to note that U.S. gas rigs must increase over the next several months as more U.S. LNG capacity comes onstream in 2025. Lastly, U.S. miscellaneous rigs are flat WoW, and flat YoY.

Figure 21: Baker Hughes Total US Oil Rigs



Source: Baker Hughes

Oil: Total Cdn oil rigs up +5 WoW on Friday, with gas rigs -2 WoW

Cdn rigs +5 WoW

On Friday, Baker Hughes released its weekly North American drilling rig data. This week's total oil and gas rig count was up +3 rigs WoW at 220 rigs on October 4. Increasing rigs in Sept is in line with the normal seasonal ramp up in the summer that normally sees Cdn rigs increasing through to the middle of October. Cdn oil rigs were up +5 rigs WoW this week to 157 rigs and are up +49 rigs YoY. Gas rigs are down -2 rig WoW this week at 63 rigs and are down -9 rigs YoY, and miscellaneous rigs are up +2 rigs WoW to 3 rigs total and are up +3 rigs YoY. As a reminder Baker Hughes changed their reporting format which does not allow us to see the provincial breakouts.

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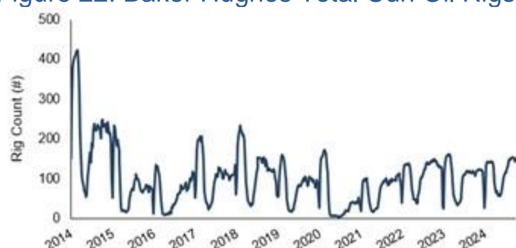
Figure 22: Baker Hughes Total Cdn Oil Rigs



Source: Baker Hughes

US weekly oil production

Oil: US weekly oil production up +0.100 mmb/d WoW to 13.300 mmb/d

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 [LINK]. 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 13.100 to 13.300 mmb/d with the weekly estimates in July all at 13.300 mmb/d. This week's estimate is up +0.100 mmb/d WoW to 13.300 mmb/d for the week ending September 27. On Tuesday September 10, the EIA released its September STEO and the EIA provides the backup monthly estimates for US oil production, and they are more or less in line with July at 13.340 mmb/d, August at 13.390 mmb/d, and September at 13.400 mmb/d. This week, the EIA's production estimates were up +0.100 mmb/d to 13.300 mmb/d for the week ended September 27. Alaska was up +0.015 WoW to 0.435 mmb/d, compared to 0.420 mmb/d last week. Below is a table of the EIA's weekly oil production estimates.

Figure 23: 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
2024-Sep	09/06	13,300	09/13	13,200	09/20	13,200	09/27	13,300		

Source: EIA

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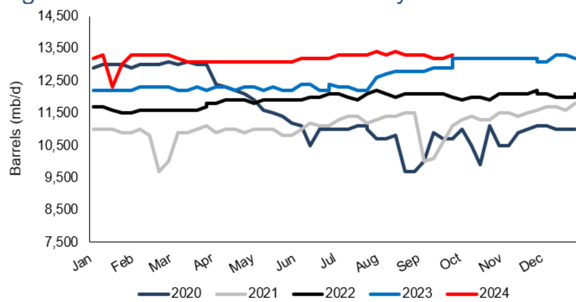
Figure 24: EIA's Estimated Weekly US Oil Production



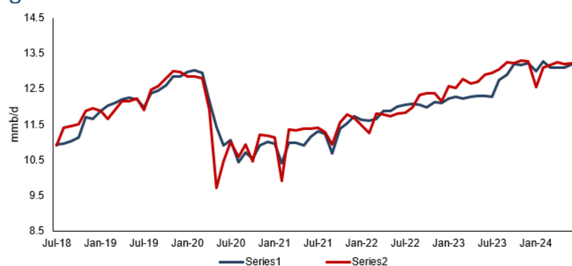
Source: EIA

Oil: EIA Form 914 – US July oil production down MoM, and up YoY

EIA Form 914 July

On Monday, the EIA released its Form 914 data [LINK], which is the EIA's "actuals" for July US oil and natural gas production. (i) This month, the EIA revised June oil production up by +0.016 mmb/d from 13.214 mmb/d to 13.230 mmb/d. As a result, the June actuals were +0.023 mmb/d vs the average weekly supply estimate of 13.207 mmb/d. (ii) The EIA Form 914 reported July "actuals" at 13.205 mmb/d, which was down -0.111 mmb/d against the weekly supply estimate average of 13.316 mmb/d. (iii) July "actuals" of 13.205 mmb/d are down -0.025 mmb/d MoM vs 13.230 mmb/d in June. On a YoY basis, "actuals" are up +0.270 mmb/d YoY vs July 2023 at 12.935 mmb/d. Below is a chart of monthly actuals vs. weekly estimates. Our Supplemental Documents package includes an excerpt from the Form 914 figures.

Figure 25: EIA Form 914 US Oil Production vs Weekly Estimates



Source: EIA, SAF

Oil: US SPR less commercial reserve deficit widens, now -34.378 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 September 27, [LINK] saw the SPR reserves increase +0.660 mmb WoW to 382.553 mmb, while commercial crude oil reserves increased +3.889 mmb to 416.931 mmb. There is now a -34.378 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.

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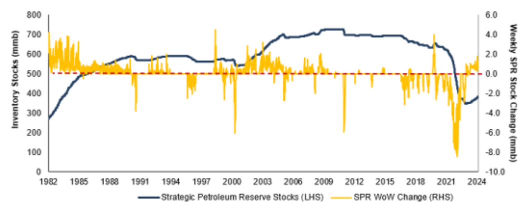
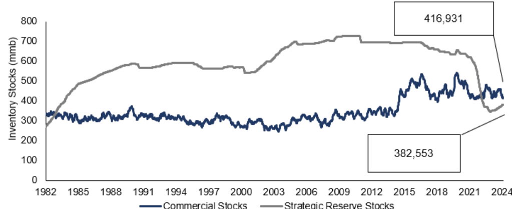
Figure 26: Strategic Petroleum Reserve Stocks and SPR WoW Change



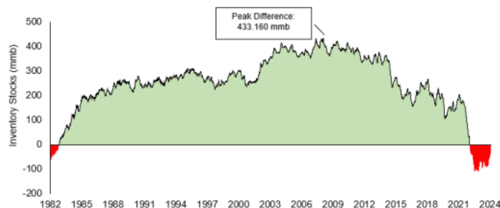
Source: EIA

Figure 27: US Oil Inventories: Commercial & SPR



Source: EIA

Figure 28: US Oil Inventories: SPR Less Commercial



Source: EIA

US gasoline prices

Oil: AAA reports US national average gasoline price -$0.04 WoW to $3.18 on Oct 5
Yesterday, we tweeted [LINK] "*AAA National average prices -$0.04 WoW to $3.18 on Oct 5, -$0.13 MoM & -$0.59 YoY. California $4.67 on Oct 5, -$0.03 WoW, -$0.01 MoM & -$1.26 YoY. US election is 1 month today. National average prices were ~$3.80 at time of 2022 mid-term election. Thx @AAAnews #OOTT.*" Yesterday, AAA reported that US national average prices were $3.18 on Oct 5, which was --$0.04 WoW, -$0.13 MoM and -$0.59 YoY. Yesterday, AAA also reported California average gasoline prices were $4.67 on Oct 5, which was -$0.03 WoW, +$0.01 MoM, and -$1.26 YoY. Below is our graph of Bloomberg's National Average weekly gasoline prices.

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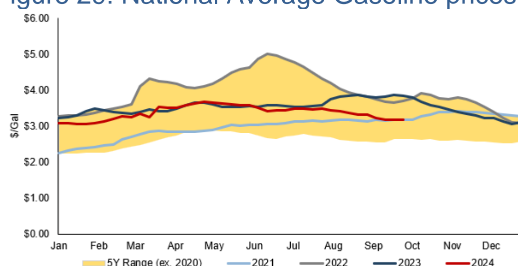
Figure 29: National Average Gasoline prices



Source: Bloomberg

Oil: Crack spreads +$0.83 WoW to $16.65, WTI +$6.20 WoW to $74.38

Crack spreads closed at $16.65

On Friday, we tweeted [LINK] "*321 crack spreads +$0.83 WoW to still relatively low $16.65. BUT WTI +$6.20 WoW to $74.38. Reminds WTI impacted more by global markets ie. China stimulus, Biden on Israel may attack Iran oil infra than by crack spreads. Thx @business #OOTT.*" Cracks spreads were +$0.83 WoW to $16.65 and WTI was +$6.20 WoW to $74.38 Crack spreads at $16.65 are just above the bottom end of the pre-Covid range of $15-20 and aren't high enough to incentivize refineries to take any more crude than necessary. Crack spreads of $16.65 on Oct 4 followed $15.82 on Sept 27, $15.57 on Sept 20, $14.30 on Sept 13, $14.79 on Sept 6, $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, and $25.38 on July 5.

Crack spreads normally point to near term oil moves, explaining 321 cracks

This week was another example that there are other global oil and market items that impact WTI more than crack spreads. This week, it was the broad market euphoria from the China stimulus and Biden saying Israel might bomb Iran's oil infra that drove oil +$6,20 WoW. But, broad market 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. We track US crack spreads but there is also an influence on global refining capacity on US crack spreads as the increasing global refining capacity has also tended to have downward pressure on US crack spreads especially with demand being less than most expect. Plus, this year, as noted below, we have less US refinery turnarounds to there is less refinery capacity offline this fall than prior years. 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 doesn't give refineries any real incentive to take more crude, which is normally softness 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

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where the crack spread normally drags up oil prices. The crack spread was $16.65 as of the Friday Oct 4, 2024 close.

Figure 30: Cushing Oil 321 Crack Spread & WTI Oct 4, 2014 to Oct 4, 2024

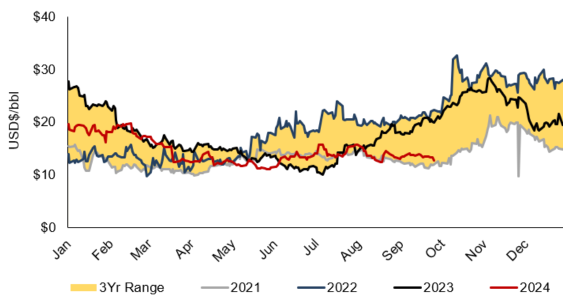
Source: Bloomberg

Oil: Cdn heavy oil differential narrows -$0.50 WoW to close at $12.70 on October 4

WCS differential narrow

WCS less WTI differentials were down this week, decreasing -$0.50 WoW to close at $12.70 on October 4. As noted in the following item, we have been saying that the real test for WCS less WTI differentials will be in Sept/Oct as to how much the startup of the 590,000 b/d TMX expansion will impact WCS less WTI differentials. And, at least so far, TMX is working as hoped in keeping WCS less WTI differentials way lower than would be expected. Late August is normally when we normally see a widening of the WCS less WTI differentials. And WCS less WTI differentials remained lower and did not widen. But even with the TMX startup, there will always be the unexpected impact on WCS less WTI differentials from other 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 through September. The WCS less WTI differential closed on October 4, at $12.70 which was a narrowing of -$0.50 WoW vs $13.20 on September 26.

Figure 31: WCS less WTI oil differentials to October 4 close



Source: Bloomberg

TMX impact: WCS less WTI diffs not seasonally widening as in 2022 & 2023

It looks like TMX is having, at least so far, the expected impact of keeping WCS less WTI differentials a lot narrower than what is normally seen in the normal seasonal widening in Sept/Oct. For the past few months, we have been saying that the big

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test for the impact of the start of the 590,000 b/d TMX expansion on WCS less WTI differentials will be in late Aug, Sept and Oct when differentials normally start to widen with seasonal refinery turnarounds. On Friday, we tweeted [LINK] "*Cdn #Oil positive. Looks like ramp up of volumes on new 590,000 b/d TMX has, at least so far, kept WCS less WTI differentials from the normal Sept/Oct widening. WCS less WTI diffs: 10/04/24: $12.45. 10/04/23: $20.85. 10/04/22: $24.30. Thx @garquake. #OOTT.*" Our tweet included the below chart that shows how WCS less WTI differential have been stronger this summer, been fairly flat in Aug/Sept/Oct and how differentials were widening at this time of year in 2022 and 2023.

Figure 32: WCS less WTI differentials

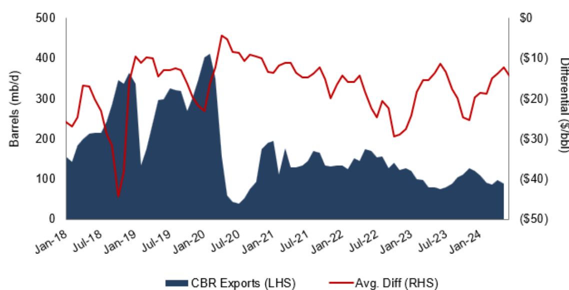
Source: Bloomberg

Oil: CER reports Cdn crude by rail exports at 83,201 b/d in July, up +4.2% YoY

Cdn crude by rail up YoY in July

As a reminder, the CER reports crude by rail exports to the US but the CER volumes were previously always greater than the EIA reported crude by rail imports from Canada, however, the past two months have seen CER estimates less than the EIA figures. In the past, it was because the EIA excludes Cdn crude by rail that is exported down to the Gulf Coast for immediate loading onto tankers for export i.e. the EIA doesn't include crude by rail from Canada that doesn't stay in the US. Last week, the CER released their Canadian crude exports by rail figures for July [LINK]. July crude exports by rail were 83,201 b/d, which is down -6.7% MoM from 89,204 b/d in June and up +4.2% YoY from 79,812 b/d in July 2023. The CER doesn't provide any explanation for the MoM changes. Below is our graph of Cdn crude by rail exports compared to the WCS–WTI differential.

Figure 33: Cdn Crude by Rail Exports vs WCS Differential



Source: Canadian Energy Regulator, Bloomberg

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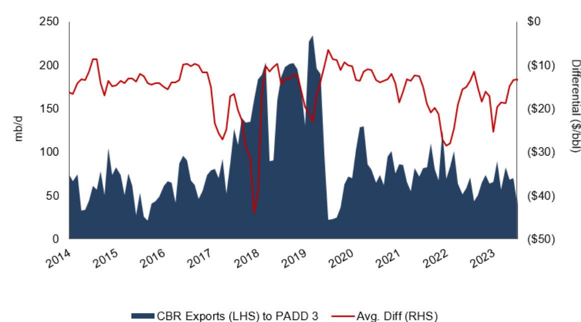
Oil: Total Cdn crude by rail imports -19,453 b/d MoM in July, PADD 3 down

EIA Cdn crude by rail imports

On Monday, the EIA posted its "*Movements of Crude Oil and Selected Products by Rail*" [LINK], which includes the EIA data on US imports of Cdn crude by rail. EIA estimates total US imports of Cdn crude by rail were 97,581 b/d in July, which is down -19,453 b/d MoM from 117,033 b/d (revised) in June. The EIA estimates Cdn crude by rail into PADD 3 (Gulf Coast) were 75,194 b/d in July, which is down -14,673 b/d MoM from 89,867 b/d (revised) in June. We have been highlighting how the EIA imports of oil by rail from Canada have been consistently less than the CER estimates of Cdn oil exports by crude to the US. But that did not happen in the June, or July data. Rather the CER reported that 83,201 b/d of crude was exported by rail out of Canada during July vs the EIA estimates of 97,581 b/d of Cdn oil imported by rail in July. There is no explanation given; we would typically say that the reason for why the EIA reports lower numbers than the CER is that the difference is due to Canada crude by rail exports that go directly to US Gulf Coast ports for exports i.e. do not stay in the US. Below is our graph of Cdn CBR exports to the Gulf Coast and WCS differential over time.

Figure 34: US Imports of Canada CBR to US Gulf Coast vs WCS Differential



Source: EIA, Bloomberg

Oil: Refinery Inputs down -0.662 mmb/d WoW to 15.691 mmb/d

Refinery inputs -0.662 mmb/d WoW

There are always unplanned refinery items that impact crude oil inputs into refineries. And there is always different timing for refinery turnarounds; generally September/early October is when refineries are in their fall turnarounds to change from summer to winter fuel blends. However, as noted in our Sept 22, 2024 Energy Tidbits memo, US refinery maintenance is expected to be less this year, which means that, on average, turnarounds will be shorter than normal ie. less extra maintenance. But even though there is more refineries available to receive crude, we may see refineries reduce runs given the low crack spreads. On Wednesday, the EIA released its estimated crude oil input to refinery data for the week ended September 27 [LINK]. The EIA reported crude inputs to refineries were down -0.662 mmb/d this week to 15.691 mmb/d and are up +0.089 mmb/d YoY. Refinery utilization was down -3.3% WoW to 87.6% and was up +0.3% YoY.

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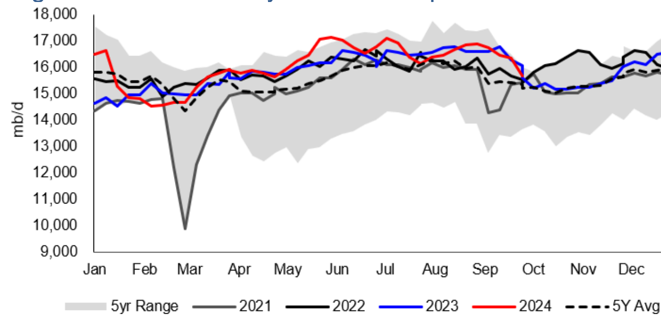
Figure 35: US Refinery Crude Oil Inputs

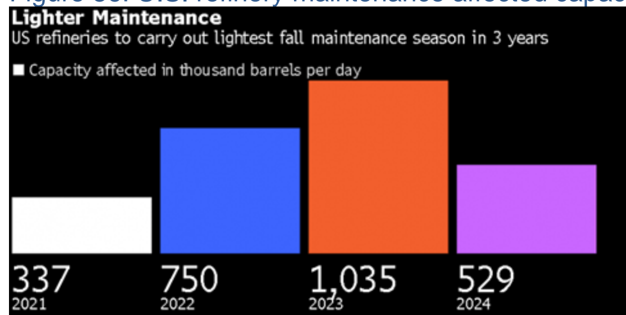


Source: EIA, SAF

US refinery preventative maintenance to be much less this fall than last

Here is what we wrote in September 22, 2024, Energy Tidbits memo. "*On Thursday, Bloomberg posted a good reminder that US refineries are expected to have a light preventative maintenance season this fall according to IIR Energy data. Note they focused on "preventative maintenance" and didn't use the word turnarounds. Refineries are have turnarounds to allow the refinery to switch from summer blend to winter blend fuel mix. Normally refineries schedule preventative maintenance at the same time as a turnaround. If preventative maintenance is less than normal, it means that the downtime for refineries will be less. They forecast that only 0.529 mmb/d of crude-processing capability is estimated to go offline during the fall, which is -0.506 mmb/d less than the fall of 2023, which saw 1.035 mmb/d go offline during the same period. However, this fall's capacity reduction of 0.529 mmb/d, is still +0.192 mmb/d when compared to the fall 2021 capacity that went offline of 0.337 mmb/d. If 321 crack spreads were high, we would expect to see the refineries run at high utilization rates to make the big profits. But with 321 crack spreads low, we would expect refineries to not run at high utilizations rates. Below is the Bloomberg chart.*"

Figure 36: U.S. refinery maintenance affected capacity



Source: Bloomberg, IIR Energy

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Oil: US net oil imports up +0.190 mmb/d WoW as oil exports down -0.019 mmb/d WoW

US net imports up +0.190 mmb/d WoW

The EIA reported US "NET" imports were up +0.190 mmb/d to 2.750 mmb/d for the week of September 27. US imports were up +0.171 mmb/d to 6.628 mmb/d, while exports were down -0.019 mmb/d to 3.878 mmb/d. Top 10 was up +0.064 mmb/d. (i) Previously we have noted that the EIA did not report weekly Venezuela imports, however, this week the EIA reported imports from Venezuela of 0.297 mmb/d. 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 -0.113 mmb/d to 3.799 mmb/d, which is likely due to US Midwest refinery turnarounds. Weekly imports have been higher of late with the increased Cdn crude coming off TMX and hitting west coast US refineries. (iii) Saudi Arabia was down -0.146 mmb/d to 0.145 mmb/d. (iv) Mexico was down -0.051 mmb/d to 0.448 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 up +0.052 mmb/d to 0.347 mmb/d. (vi) Iraq was down -0.113 mmb/d to 0.152 mmb/d. (vii) Ecuador was up +0.249 mmb/d to 0.253 mmb/d. (vii) Nigeria was down -0.051 mmb/d to 0.084 mmb/d.

Figure 37: US Weekly Preliminary Imports by Major Country

	Aug 9/24	Aug 16/24	Aug 23/24	Aug 30/24	Sep 6/24	Sep 13/24	Sep 20/24	Sep 27/24	WoW
Canada	3,785	4,083	3,874	3,516	4,026	4,155	3,912	3,799	-113
Saudi Arabia	183	207	311	204	326	210	291	145	-146
Venezuela	0	0	0	0	0	0	0	297	-26
Mexico	714	167	619	374	510	420	499	448	-51
Colombia	71	213	212	179	229	121	295	347	52
Iraq	194	166	153	201	222	155	265	152	-113
Ecuador	137	163	103	104	103	54	4	253	249
Nigeria	109	190	33	32	175	264	135	84	-51
Brazil	428	177	302	180	113	306	0	186	186
Libya	2	86	1	86	83	0	0	77	77
Top 10	5,623	5,452	5,608	4,876	5,787	5,685	5,401	5,788	64
Others	662	1,200	952	916	1,080	637	1,055	840	-215
Total US	**6,285**	**6,652**	**6,560**	**5,792**	**6,867**	**6,322**	**6,456**	**6,628**	**172**

Source: EIA, SAF

Oil: Baker Hughes International +16 rigs MoM to 947 rigs in September, up +1% YoY

International rigs +16 MoM in September

On Friday, Baker Hughes posted its monthly update to international rigs, in total, rigs in September increased +16 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 increased by +16 rigs MoM to 947 rigs in September, and total rigs are now up +141 rigs from the recent low of 806 in April 2022. The MoM rig count is as follows: Africa +2 rigs, Asia-Pacific +11 rigs, Europe +6 rig, Latin America -3 rigs, and the Middle East is flat MoM. The YoY rig count is Africa +1 rigs, Asia-Pacific +8 rigs, Europe +6 rigs, Latin America -18 rigs, and the Middle East +10 rigs. (iii) We were not able to summarize the MoM data by country due to Baker-Hughes' new format. (iv) September's count of 947 rigs was up +1% YoY from 940 in September 2023, and down -13% vs pre-Covid February 2020 of 1,085 rigs. Below is our graph of international rigs by region and avg monthly Brent price.

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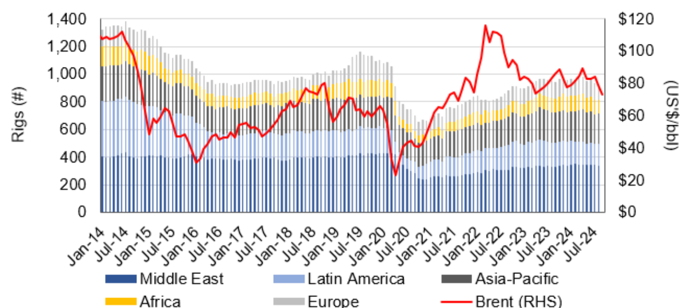
Figure 38: Baker Hughes International Rig Count and Brent Price



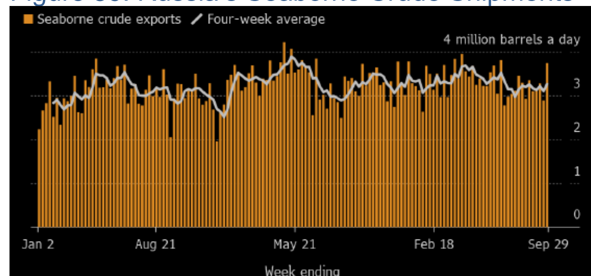
Source: Baker Hughes, Bloomberg, SAF

Oil: Russia's seaborne crude oil exports rise to highest since June

Russia's seaborne crude exports

This week, the four-week average for Russia's seaborne crude exports rebounded to the highest figures since June, following last week's fall in exports. It's hard to know exactly how much Russian refining capacity is on or off and how much extra oil is freed up for export. Generally, when Russian refining capacity gets hit, it allows for more oil for export. The four-week average reached 3.26 mmb/d for the week to September 29. The increase was driven by a return to operations at the Kozmino export terminal, which saw a four-day gap in operations during the week to September 22; Bloomberg noted that the gap in shipments was presumably due to maintenance to the port or pipeline supplying it. Bloomberg reported "*Russia's crude shipments rebounded to the most in three months last week on the resumption of normal flows from the country's main Pacific terminal at Kozmino and a second week of elevated exports from Primorsk on the Baltic. Weekly cargoes rose by about 850,000 barrels a day, to the highest since the end of June. Four-week average crude volumes, which are less volatile, climbed to 3.26 million barrels a day in the week to Sept. 29, up by 160,000 from the previous period*". Crude shipments so far this year are 50,000 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 slightly still above their promised targets. Notably, in this week's OPEC JMMC, the committee confirmed the cooperation of Russia in complying with these cuts going forward. Our Supplemental Documents package includes the Bloomberg report.

Figure 39: Russia's Seaborne Crude Shipments



Source: Bloomberg

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Russia oil exports to China inch above average April levels

It's been about five months where Russia's oil exports to China have been down. Russia oil shipments to China averaged 1.36 mmb/d for the first half of April. But they were down thereafter with the reports that Russia had cut its discounts to China, meaning China was taking less Russian oil. Bloomberg's above report this week highlighted the four-week average of Russia oil shipments to China were up +0.100 mmb/d to 1.370 mmb/d for the week ending September 29, up from last week's 1.270 mmb/d for the week of September 22. The week up to September 15 was the first figure to come in above 1.3 mmb/d in months. We have not seen any reports of pricing discount, but we have to believe Russia has given some sort of discount to China. We have been highlighting that the warning 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 40: 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
August 25, 2024	1.24	1.79	0.00	0.04	0.00	3.07
September 1, 2024	1.23	1.73	0.00	0.00	0.00	2.96
September 8, 2024	1.27	1.67	0.00	0.00	0.00	2.94
September 15, 2024	1.39	1.65	0.00	0.03	0.00	3.06
September 22, 2024	1.27	1.57	0.00	0.10	0.00	2.94
September 29, 2024	1.37	1.50	0.00	0.18	0.05	3.10

Source: Vessel tracking data compiled by Bloomberg   Bloomberg

Source: Bloomberg

Oil: Bloomberg OPEC production -0.480 mmb/d MoM to 26.610 mmb/d in September

On Monday, Bloomberg posted its monthly survey of OPEC production. (i) The Bloomberg survey estimates OPEC production in September was down -0.480 mmb/d MoM to 26.610 mmb/d. (ii) August's estimates were revised up small from 27.060 mmb/d to 27.090 mmb/d, with Iran being revised up +70,000 b/d to 3.370 mmb/d from 3.300 mmb/d, Libya being

OPEC September production -0.480 mmb/d

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revised down -40,000 b/d to 0.960 mmb/d from 1.000 mmb/d. (iii) The largest MoM changes in September vs August were: Libya was down -360,000 b/d MoM to 0.600 mmb/d, The MoM drop was due to the shutting in of production fields and ports over the central bank leadership change. But, as noted later in the memo, the Libya NOC announced the lifting of force majeure on field and ports so production is being restored. And Iraq was down -70,000 b/d to 4.250 mmb/d. Below is the Bloomberg survey table.

Figure 41: Bloomberg Survey OPEC production (mmb/d)

Production ('000 b/d)		Sep	Aug	Chg	Capacity
▾ Total OPEC		26,610	27,090	-480	33,490
Algeria		900	890	+10	1,060
Congo, Republic		240	250	-10	300
Equatorial Guinea		60	70	-10	120
Gabon		210	220	-10	220
Iran		3,340	3,370	-30	3,830
Iraq		4,250	4,320	-70	4,800
Kuwait	ⓘ	2,450	2,470	-20	2,820
Libya		600	960	-360	1,200
Nigeria		1,470	1,480	-10	1,600
Saudi Arabia	ⓘ	8,990	8,990	0	12,000
U.A.E.		3,220	3,170	+50	4,650
Venezuela		880	900	-20	890

Source: Bloomberg

Oil: No recommended changes from OPEC+ JMMC

OPEC+ JMMC meeting

On Wednesday, OPEC reported that the Joint Ministerial Monitoring Committee reviewed the crude oil production data for July and August, and noted the full conformity from participating OPEC and non-OPEC countries in the DoC regarding the production cut agreement and did recommend any changes. However, the JMMC stressed the importance of continued conformity and compensation [LINK]. The Committee noted technical workshops with Iraq, Kazakhstan, and Russia, aimed to determine compensation plans following August's overproduction. OPEC reported "*During the meeting, the Republic of Iraq, the Republic of Kazakhstan, and the Russian Federation confirmed that they had achieved full conformity and compensation according to the schedules submitted for September. The three countries reiterated their strong commitment to maintaining full conformity and compensation throughout the remaining period of the agreement."* Our Supplemental Documents package includes the OPEC release.

Oil: WSJ, Saudi warned OPEC+ members oil could drop to $50 if they don't comply

WSJ says Saudi warned others to comply

A negative oil price story on Wednesday morning was the WSJ report "*Saudi Minister Warns of $50 Oil as OPEC+ Members Flout Production Curbs. Kingdom called out members for overproducing, in what was seen as a veiled threat of a price war."* The WSJ reported "*During a conference call last week, Prince Abdulaziz bin Salman, the oil minister of OPEC kingmaker Saudi Arabia, warned fellow producers prices could drop to $50 a barrel if they don't comply with agreed production cuts, according to OPEC delegates who attended the call. They said he singled out Iraq, which overproduced by 400,000 barrels a day in August, according to data provider S&P Global Ratings, and Kazakhstan, whose production is set to rise with the return of the 720,000-barrels-per-day Tengiz field. The Saudi message was "there is no point in adding more barrels if there isn't room for them in the market," said a delegate who attended. "Some better shut up and respect their commitments toward OPEC+."* The WSJ reporters on this story are experienced and well-known so the market took the story as source confirmed. So the market interpreted the report as Saudi warning

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they are prepared to go after market share and crash the price to get back its market share. And it hit oil price. Our Supplemental Documents package includes the WSJ report.

OPEC said the WSJ claims were "*wholly inaccurate and misleading*"
We don't know what happened and what the delegates told the WSJ, but OPEC came out late Wednesday morning (North America time) and shot the story down. These are experienced reporters so it's hard to see how this happened. Even from the basic that OPEC said no such call happened last week and there hasn't been a conference call since Sept 5. Hindsight is 20/20 but the part that should have raised an eyebrow was that is public putdown was in a group call when everyone knows that Saudi Energy Minister Abdulaziz will work the phone lines ahead of a meeting to avoid such a situation at a meeting. We retweeted the OPEC tweet [LINK] that shot the story down. OPEC wrote "*With reference to the Wall Street Journal (WSJ) article, dated 2 October 2024, titled "Saudi Oil Min Said Prices May Fall to $50/B if Others Cheat, Sources Say," the OPEC Secretariat categorically refutes the claims made within the story as wholly inaccurate and misleading. The article falsely reported that a conference call took place in which the Saudi Arabian Energy Minister allegedly warned OPEC+ members of a potential price drop to $50 per barrel should they fail to comply with agreed production cuts. It also attributed an alleged quote to the Minister, stating: "Some better shut up and respect their commitments toward OPEC+." These claims are entirely unfounded. OPEC secretariat stresses that no such conference call occurred last week, nor has any call or video conference taken place since the last OPEC+ meeting on September 5. The alleged statements, attributed to unnamed sources, lack any credibility and are completely fabricated. OPEC secretariat emphasizes that its meetings, whether in person or via teleconference, are consistently conducted in a civil and respectful manner. Therefore, it is deeply concerning that the WSJ would publish such a report, which not only lacks journalistic integrity and professionalism but also shows a blatant disregard for the respect owed to OPEC+ Ministers.*"

Oil: Saudi to keep accessing OPM with budget deficits continuing over medium term

Saudi continued budget deficits

For years, we have highlighted the #1 financial theme for Saudi Arabia for the 2020s was an increasing need to access Other People's Money to fund Vision 2030. And we always say is if Saudi needs to keep accessing OPM, then they want to keep oil prices at strong levels. That will help Saudi oil revenue but also provide confidence for all the foreign investors providing equity and debt capital. The last thing Saudi needs is to have an oil price war for any unknown period when they are trying to attract capital. On Monday, the Saudi Ministry of Finance announced its pre-budget statement that said budget deficits will continue over the medium term and Saudi will have to keep accessing additional financing. We tweeted [LINK] "*Here's why Saudi wants/needs #OIl prices as strong as possible. Today's Pre-budget statement: - budget deficit of 2.5% of GDP is "likely to continue at similar rates over the medium term" - "will continue borrowing to meet the FY2025 est financing needs" - "additional proactive financing may also be considered" #OOTT.*" The MOF says that "*IN FY2025, the budget is anticipated to record a deficit of approximately 2.3% of GDP. The deficit is likely to continue at similar levels over the medium-term due to the government's strategic expansionary spending policies that foster economic diversification and sustainable growth. The government will continue borrowing activities to meet the FY2025 estimated*

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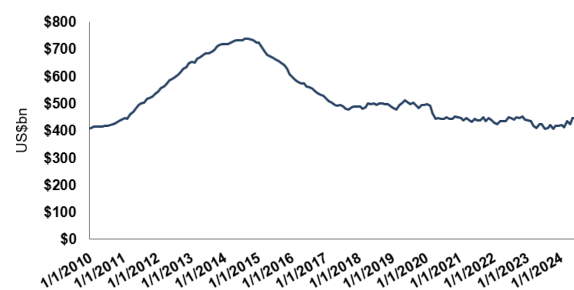
financing needs. Additional proactive financing may also be considered based on market conditions to manage future debt principal repayment." Our Supplemental Documents package includes excerpts from the MOF pre-budget statement.

Oil: Saudi nest egg, its net foreign assets were up +$16.4b MoM in August

Saudi net foreign assets

In the last year, there have been a number of major Saudi Arabia transactions raising outside capital so, no surprise, we have seen some months with big increases in Saudi net foreign assets, August follows this trend, with a MoM increase of +16.4bn. On Monday, the Saudi Central Bank (SAMA) released its Monthly Statistical Bulletin for the month of August [LINK]. Our long-stated view is that the #1 financial theme for Saudi Arabia in the 2020s will be their continued, and increasing, use of Other People's Money as they try to fund MBS's Vision 2030. It continues to play out as expected. We believe this has been obvious with how Saudi Arabia's net foreign assets dropped by ~39% or -$290.7b over the last ten yeas since the peak of 737.0b on Aug 31, 2014. We are surprised that markets and oil watchers didn't seem to pay attention to the Saudi net foreign assets data i.e., what we call their nest egg to help them their push to MBS's Vision 2030. Recently we have been seeing much larger MoM changes, both up and down. There was a +$16.4b MoM increase to Saudi Arabia's net foreign assets which are now $446.3 in August vs $429.8b in July. Last month's data saw a decrease of -$15.3b MoM for July. The thesis and big picture remains, Saudi net foreign assets as of August 31 of $446.3b is a decline of ~39% or $290.7b over the last 10 years from its peak of $737.0b on Aug 31, 2014. That is an average of $2.4b per month for the last 120 months since the peak. Saudi Arabia is far from going broke but there has been a huge decline in the last 10 years. This net foreign asset depletion is why we have been highlighting that the primary financial theme for Saudi Arabia in the 2020s is getting Other People's Money (OPM) to fund as much of their Vision 2030 as possible. And no question, accessing OPM has helped to slow down and temporarily pause the decline in net foreign assets. Below is our graph of Saudi Arabia net foreign assets updated for the August data.

Figure 42: Saudi Arabia Net Foreign Assets



Source: Bloomberg

Oil: Saudi Foreign Minister "*self-defence is not Israel's primary goal in this war*"

Saud Foreign Minister on Israel

We don't think anyone really knows the thinking and strategies of all Israel, Iran, Saudi Arabia, etc and what they want or will settle for in the increasing risk of conflict. But, it looks like Israel's increasing attacks are leading to it becoming more direct in its criticism of Israel. And this seems Saudi returning to its old ways of clearly requiring a two state solution. On Wednesday, Saudi Foreign Minister Faisal bin Farhan Al Saud posted an op-ed in the FT titled "*Saudi foreign minister: a two-state solution is more urgent than ever*". A few of the

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excerpts are "*It is time to embark on an irreversible road to resolution, one that culminates in two independent Palestinian and Israeli states living side by side." "Crown Prince Mohammed bin Salman recently reaffirmed our commitment to creating an independent Palestinian state. He emphasised that "the Palestinian issue is at the forefront of [Saudi Arabia's] concerns" and strongly condemned Israel's crimes and disregard for international law. Saudi Arabia will tirelessly work towards establishing an independent Palestinian state with East Jerusalem as its capital and will not establish diplomatic relations with Israel without this condition. It is the establishment of an independent Palestinian state that will deliver the dividends we seek: regional stability, integration and prosperity. A two-state solution is not merely an ideal; it is the only viable path to ensuring Palestine, Israel and the region's long-term security."* And the direct questioning of Israel's motivation "*Conversely, it has been clear for too long that self-defence is not Israel's primary goal in this war. Instead, it seems the objective is to eliminate the conditions for life with any modicum of dignity for decades to come. By continuing the assault on Gaza that has killed over 40,000, according to Palestinian health officials, and displaced almost 2mn, expanding settlements in the occupied West Bank and imposing movement restrictions, Israel creates a reality that diminishes prospects for a sovereign Palestinian state."* It's an op-ed that is worth a read. Our Supplemental Documents package includes the op-ed.

Oil: Iran Supreme Leader seems to want to de-escalate

Iran Supreme Leader sermon

Post this week's Iran's ballistic missile attack on Israel, the messaging out of Iran was that they really don't expect any more actions unless Israel does something that requires a further response. It seems like they are trying, as best as possible, to not get into an escalated direct attack with Israel. The Iran Supreme made his first public sermon in four years on Friday. And the message was on rallying the country behind what they have done in their battles but what he also qualified that they will take further military action "if necessary." It feels like he wants to de-escalate. PressTV (state media) reported he said *""The brilliant work of our armed forces was completely legal and legitimate. What our armed forces did was the least punishment for the usurping Zionist regime over the astonishing crimes of this wolf-like regime and rabid dog of America," he said. Ayatollah Khamenei, "Whatever duty the Islamic Republic has in this regard, it will fulfill with strength and fortitude. We will neither delay nor hurry in carrying out the task. "What is logical and reasonable and the opinion of the political and military decision makers will be done in the future if necessary just like it was done" on Tuesday, he added."* Our Supplemental Documents package includes the Supreme Leader sermon.

Oil: Biden didn't walk back discussing with Israel a potential attack on Iran oil facilities

US discussing with Israel attack on Iran oil

The jump in oil prices was on Thursday with Biden's comments on discussion with Israel on potential attacks on Iran's oil facilities and that jump was reconfirmed on Friday when Biden did not walk back his comments on discussing such an attack with Israel. On Thursday lunch time, we tweeted [LINK] "*Here's why oil is +$3.25. See 👇 Biden outside White House. Question "would you support Israel striking Iran's oil facilities, sir?" Biden "We're discussing that. I think that would be a little ... anyways" #OOTT [LINK]."* The fact that Biden said they were discussing with Israel the potential of Israel bombing Iran's oil facilities was what led to WTI increasing from $70.10 on Wed close to $74.38 on Friday close. What was interesting is that we didn't see any White House trying to walk back Biden saying they were discussing Israel potentially attacking Iran oil facilities. Rather, on Friday, Biden was asked if he could

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clarify his Israel potentially going after Iran's oil facilities and he didn't walk back his comments. On Friday, we tweeted [LINK] "*Biden did not walk back his 👇 Oct 3 comment discussing w/ Israel striking Iran's oil facilities. Today, he was asked to clarify the comments. Didn't walk back he was discussing such an attack with Israel. Rather said "That's under discussion. I think there are — if I were in their shoes, I'd be thinking about other alternatives than striking oil fields." #OOTT.*" Biden didn't walk back discussing with Israel that Israel might go after Iran's oil facilities. Rather he just said that if he was in their shoes, he would look at other alternatives. Our tweet included the White House transcript that said "Q *And — and then, secondly, could you clarify some of your comments yesterday with regard to strikes on Iranian oil facilities? What did you mean by them, given some of the reactions we're seeing in the market? THE PRESIDENT: Well, look, the Israelis have not concluded how they're — what they're going to do in terms of a strike. That's under discussion. I think there are — if I were in their shoes, I'd be thinking about other alternatives than striking oil fields."*

Oil: Israel has "the duty" to respond & plans "serious and significant" response to Iran

Israel plans "serious and significant " response to Iran

We have believe the risk premium in oil should stay at least for the very near term as Israel warns yesterday they are going to retaliate against Iran And Israel's track record to date is that their military actions warnings are warnings on something to come and not a veiled threat Earlier this morning, we tweeted [LINK] "*Continued wildcard of Israel/Iran risk to #Oil #LNG #natgas. Netanyahu: Israel has duty and right to hit back at Iran for missile attack, will do so. @Lazar_Berman. IDF planning 'serious and significant' response to Iranian ballistic missile attack. @manniefabian #OOTT.*" Our tweet included two Times of Israel reports with clear messages. They reported [LINK] "*The military on Saturday said that the response to the Iranian missile attack would be "serious and significant," and that it was devoting much of its time to planning it. On Wednesday, IDF Chief of Staff Lt. Gen. Herzi Halevi said that Israel would respond to the missile attack, vowing that the military could "reach and strike any point in the Middle East."* Note the clear warning they say they can hit anywhere in Iran by saying they can *"reach and strike any point in the Middle East*". They also reported [LINK] "*Prime Minister Benjamin Netanyahu on Saturday repeated his promise to strike back against Iran for its ballistic missile attack earlier in the week, saying Israel has an obligation to retaliate and will do so. Speaking from the Kirya military headquarters in Tel Aviv, Netanyahu said: "No country in the world would accept such an attack on its cities and citizens, and Israel won't either. "Israel has the duty and the right to defend itself and respond to these attacks — and it will do so."*

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

Netanyahu warned Congress on Iran nuclear

As of our 7am MT news cut off, there hasn't been any direct retaliation on Iran for Iran's missile attacks on Israel this week. (i) On Wednesday, Biden was clear and said he wouldn't support an Israel attack on Iran's nuclear facilities. The White House posted the transcript of Biden's comments. The question was "*Would you support an attack on the — would you support an attack on Iran's nuclear sites by Israel?"* Biden replied "*The answer is no. And I think there's things — we'll be discussing with the Israelis what they're going to do, but they — every- — all seven of us agree that they have a right to respond, but they should respond in proportion."* (ii) But we remind Netanyahu told Congress on July 24 that it was question of when not if Israel would attack Iran's nuclear facilities. And we have been regularly writing that we don't 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

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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 says Iran is 1 or 2 weeks from breakout to produce fissile material

The reason why we were surprised US media and politicians didn't make more of Netanyahu's July 24 warning on Iran nuclear program is Blinken warned two weeks prior to that that Iran was 1 or 2 weeks from reaching breakout potential for nuclear capability. Here is what we wrote in our 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."*

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Oil: Houthis hit an oil tanker with a boat drone and US hits back hard

Houthis hit an oil tanker

The reality of the Houthis attacks is that they continue disrupt shipping but their attacks on tankers and ships don't really move oil prices. On Tuesday, we tweeted [LINK] "*Houthis. Cordella Moon, oil tanker, hit by boat drone. Minian Courage, dry bulk, hit by missile. Thx @UK_MTO #OOTT.*" IN a short period of time, the Houthis hit an oil tanker and dry bulk ship and markets didn't really respond perhaps in part due to the tanker being empty on a return trip. But the reality is that oil markets really have moved based on Houthi drone/missile hits. But one area that does respond to any Houthi hits is the US hits back harder. One of the big advantages the US has is that they really don't have to worry about is the Houthis having the capability of hitting any of their fighter jets. The US can then just punish the Houthis as they please. And following the Houthis hits this week, the US hit the Houthis hard on multiple days.

Oil: Did Kurdistan agree to work jointly with Baghdad to get IOCs to agree with Iraq?

Did Iraq wear down Kurdistan on oil?

We were a little surprised that we didn't see any significant response this week from APIKUR (the industry association of international oil companies operating in Kurdistan and Kurdistan news on last week's reports that Kurdistan and Iraq will work together in the negotiations to trty to get Kurdistan oil deals modified to be able to get the Kurdistan oil back flowing. We thought it seemed like Kurdistan govt was worn down in their determination to protect the Kurdistan oil deals. Here is what we wrote in last week's (Sept 29, 2024) Energy Tidbits memo. "*Did Kurdistan agree to work jointly with Baghdad to get IOCs to agree with Iraq? Yesterday, we tweeted [LINK] "Hope it's just a lost in translation? Or has Kurdistan picked a side in oil dispute & will be unified with Baghdad to get IOCs to agree to lesser terms? Iraq's unchanged position is KRG /IOCs oil deals violate constitution and its profit share to IOCs is way too high. INA reports Baghdad & KRG "enter as a unified party in negotiations with international oil companies operating in the region; to amend their contracts from production partnership to profit-sharing, in addition to reviewing the economic and commercial conditions.... and push towards resolving them under the umbrella of the constitution." #OOTT." Interesting news reports out of Baghdad and Kurdistan that seem to infer Baghdad has worn down Kurdistan in the fight to get the IOCs operating in Kurdistan to retain their production sharing agreements or at least their economics in those deals. To date there has been no give from Baghdad on their position that the Kurdistan deals are in violation of the Iraq constitution and have to be changed from production share contracts and accept a big cut to effective share. We still have not seen anything that suggests Baghdad is moving from its position that the Kurdistan deals with IOCs are against the Iraq constitution and need to be brought in line with Iraq's other oil deals. Rather, the Iraqi News Agency report reinforces no movement. If anything, the INA report seems to suggest Kurdistan recognizes there won't be movement and it infers Kurdistan has agreed with Baghdad to work on a united front to get the IOCs on deals ion line with Baghdad's other oil deals. On Thursday, the Iraqi News agency reported [LINK] "The head of the Parliamentary Finance Committee, Atwan Al-Atwani, announced today, Thursday, an agreement with the Kurdistan Regional Government to review its oil contracts to adapt them constitutionally." And "Atwani confirmed that "the attendees reached an initial agreement with the regional government to conduct a comprehensive review of oil contracts to adapt them to the Iraqi constitution, in preparation for resolving the problem of the region's halt in oil exports," explaining that "the agreement stipulates that the central government and the regional government enter as a unified party in negotiations with international oil companies operating in the region; to amend their contracts*

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from production partnership to profit-sharing, in addition to reviewing the economic and commercial conditions." He pointed out that "the parliamentary finance committee is working to establish a sound basis for negotiating a solution to the outstanding issues, to resolve the oil export file during this year and eliminate the differences with the region," stressing that "the committee will meet with the federal oil ministry upon its return to Baghdad, to discuss the controversial issues and push towards resolving them under the umbrella of the constitution." We checked the Rudaw (Kurdistan news) reporting and it was in line with the Iraqi News agency. Our Supplemental Documents package includes the Iraqi News Agency and Rudaw news report."

09/17/24: Iraq PM sees a Kurdistan oil deal reached yr-end

After we saw last week's Iraqi News agency and Rudaw reports, it makes us wonder if this is why the Iraq PM sees an oil deal reached by year end. IF we had seen the Iraqi News Agency report last week, we would have said we can see why the Iraq PM sees a deal done by year-end. Rather, here is what we wrote in our Sept 22, 2024 Energy Tidbits memo. "*Iraq PM sees a Kurdistan oil deal reached yr-end. We are still in the camp that doesn't see how a Iraq/Kurdistan oil deal will be reached unless there is a really big give from either Iraq or the international oil companies operating in Kurdistan. On Tuesday, we tweeted [LINK] "Still hard to see an Iraq/Kurdistan oil deal. Despite Iraq PM teases "a solution will be reached by the end of this year" to resuming Kurdistan #Oil exports via Turkey. BUT PM reminds of continuing huge gap to get there. IOCs get ~$26/b in KRI vs ~$8 in IQ so need to either amend budget law or KRI deals. @business reminds KRI dispute "inadvertently helping the country get closer to its OPEC production limit." Great interview @JoumannaTV #OOTT." Bloomberg interviewed Iraq PM Al-Sudani, who teased he expects "a solution will be reached by the end of this year" But we still don't see how this happens absent a big concession from the international oil companies operating in Kurdistan unless somehow Iraq feels they are at risk to compensate the IOCs in Kurdistan in some manner. We looked at the reporting of his interview with Bloomberg as highlighting the same problems that have prevented the return of Kurdistan oil exports via Turkey and we don't see how they resume unless the oil companies operating I Kurdistan make a huge concession. Al-Sudani said ""Iraq is committed to the voluntary reduction of oil exports to maintain prices and protect the interests of producers and consumers." This iis the reminder we have had on this issue. Iraq has been over producing its OPEC+ target and so any return of the Kurdistan oil means that Iraq has to cut back on oil from its non-Kurdistan region where it has its deals with IOCs. So Iraq isn't losing anything right now by keeping out the Kurdistan oil. Bloomberg's report highlights that this is the dilemma for Iraq. This is not an Al-Sudani quote, but Bloomberg writes "The restart of a key Iraqi oil pipeline that's been shut for over a year is being held up by disagreements over costs, the nation's prime minister said, a setback that's inadvertently helping the country get closer to its OPEC production limit." Al Sudani said "there is a legal issue related to the decisions of the Federal Court regarding oil in the Kurdistan Region and the budget law." "the budget law set the average production cost at $8 per barrel, while the average production cost under the contracts with companies in the Kurdistan Region is $26 per barrel." "Iraq is facing two options: either amend the contracts with the oil companies contracted with the*

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Kurdistan Region or amend the budget law." ""the oil companies contracted with the Kurdistan Region refused to amend the production cost contracts." There are actually two issues here. One is the Iraq constitution only approves an average production cost (payment) to oil companies of $8/b vs the $26/b oil companies in Kurdistan are getting. And it is not in this report but there is a contract structure issue where Iraq doesn't do production sharing contracts (PSC) with oil companies. Kurdistan deals are PSCs and the big difference in that a PSC allows the oil companies to have ownership in the oil barrels. Our Supplemental Documents package includes the Iraqi News Agency (state media) report on the interview. [LINK]"

Kurdistan producers selling oil for $30/b and not $80b
Here is another item from our Sept 1, 2024 Energy Tidbits "*Our above tweet also included a transcript we made APIKUR's Myles Caggins speaking on Kurdistan 24 in late July 2024. Caggins noted how the IOCs in Kurdstan were getting $50 less per barrel on their oil sales Caggins said "Our member oil companies are eager to resume the oil exports. Right now, we are relying on local sales of oil, which is around 200,000 – 220,000 barrels per day. But when we had the exports through the pipeline, the Kurdistan region was producing more than 400,000 barrels of oil every day. And the price for oil on the global market is around $80 and that is much higher than the local sale price, the local sale price for a barrel of oil is around $30."*

Oil: Libya NOC lifts Force Majeure on all oil fields and ports

Libya NOC lifts Force Majeure

As of our 7am MT news cut off, we have not seen any Libya National Oil Corporation reports on how much Libya is now producing post the lifting of force majeure on Thursday. The only report we have seen is from the Libya Observer on Friday that "*Libya's largest oilfield at Sharara resumed production on Friday.*" On Thursday, the Libya NOC announced the lifting of the Force Majeure at all Libyan crude oil fields and terminals effective immediately. On Thursday, we tweeted [LINK] "*Should see ~0.5 mmb/d increase in Libya #Oil production and exports get quickly back to ~1.1 mmb/d. Libya NOC lifts force majeure. on all oil fields and ports. #OOTT".* The Force Majeure lasted approximately 2-months, beginning on August 7, 2024. With the lift at the we expect to see a 0.50 mmb/d increase in production; primarily stemming from the Sharara field which many approximate to produce 0.26 mmb/d, as well as the El Feel field which produces nearly 0.04 mmb/d. We expect to soon see Libyan production and exports back at 1.10 mmb/d. Our Supplemental Documents package includes the NOC release regarding the force majeure.

Oil: August sees 6th consecutive negative net monthly FDI into China

Negative net monthly FDI into China

The China story in the past week has been the huge stimulus that has driven a big change in investor sentiment to China. However one o the negative themes for China continues – negative net monthly foreign direct investment in 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 the recent months of net monthly foreign direct investment outflows. China needs 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 6th consecutive month and now for 7 of the last 9 months. On Sunday, we tweeted [LINK] "*Negative indicator for a China*

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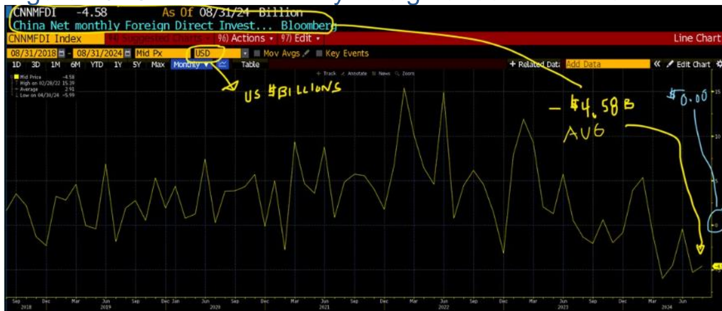
recovery BUT CSI 300 +6% tonight from last week's China stimulus 6th consecutive mth of negative net monthly foreign direct investment flows. US $ B Aug: -4.58 July: -5.32 June: -0.44 May: -4.50 Apr: -5.99 Mar: -0.9 Feb: 5.3 Jan: 3.9 Dec: -0.8 Nov: -2.0 Thx @business #OOTT". Foreign direct investment has been a huge driver of China over the decades and that is no longer a strength, at least for now. The negative net monthly Foreign Direct Investment into China in August was a negative -$4.58b. Here is what we wrote in our May 12th, 2024, Energy Tidbits memo on the first month of this latest now six-month streak of negative net monthly FDI: *"This was a reversal of what happened to start 2024, which saw positive inflows during January and February. However, recall before that in the months to close 2023, four of the five months saw negative net monthly direct investment in China."* Our tweet included the below Bloomberg graph, and we also included a table showing the actual net monthly foreign direct investment by month for the last two years. Below is the Bloomberg graph and the historical table, the notation is in US$.

Figure 43: China net monthly foreign direct investment



Source: Bloomberg

Figure 44: Historical table of China's net monthly foreign direct investment

CNNMFDI -4.58 As Of 08/31/24 Billion
China Net monthly Foreign Direct Invest... Blo
CNNMFDI Index
08/31/2018 - 08/31/2024 Mid Px USD Monthly

Date	CNNMFDI In... Mid Px
08/31/2024	-4.58
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

$ US BILLION

- $4.58B AUG 2024

Source: Bloomberg

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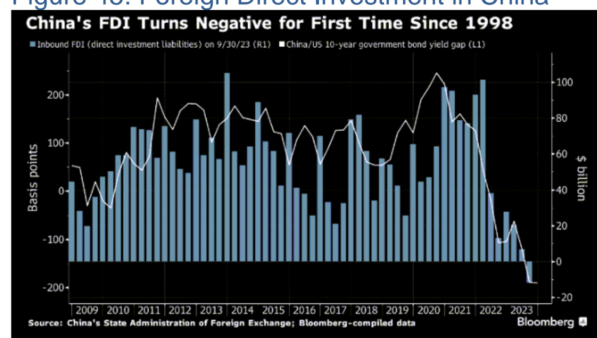
11/08/23: Q3/23 was 1st net outflow of net foreign direct investment in China
Here is what we wrote in our Nov 12, 2023 Energy Tidbits memo. "*There is a big negative to the China recovery that we haven't been tracking – the net inflow or outflow of foreign direct investment in China. And likely because 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 45: Foreign Direct Investment in China



Source: Bloomberg

Oil: Investors are buying ETFs with Chinese stocks

Investors buying ETFs with Chinese stocks

No question the big China stimulus program has got investors back to buying Chinese stocks, including ETFS with Chinese stocks. On Friday, Bloomberg reported "*Investors are piling into exchange-traded funds stuffed with Chinese stocks, eager to capitalize on a rally that has the nation's equities headed toward their best two-week performance since 2007. The inflows are likely to continue, as many traders had been underweight China exposure and don't want to miss out on the recovery. Investors on Thursday poured more than $1.4 billion into the $7.8 billion iShares China Large-Cap ETF, known by its ticker FXI. That's more than double the previous record cash infusion in the fund's 20-year lifetime. The Hang Seng China Enterprises Index has gained more than 30% since last month's low, with the bulk of the gains coming after Beijing's major stimulus announcement on Sept. 24. Since the stimulus announcement, inflows have been massive for other ETFs, such as KWEB and MCHI."*
Below is Bloomberg's chart.

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Figure 46: China Household Savings to Aug 31, 2024

Source: Bloomberg

Oil: Looks like China's wealthy are back to buying luxury homes

We have been looking for indications that the China stimulus is going to drive increasing values in the most important asset to most Chinese consumers – their homes. It may not be the broad indicator but things do trickle down so it was good to see the wealthy have come back to buy luxury homes post the stimulus. It is the way in most markets – the wealthy have the financial ability to move first. On Tuesday, the South China Morning Post reported "*China property: Shanghai and Shenzhen luxury home sales soar after stimulus package. Wealthy buyers snap up homes in prime locations amid renewed optimism driven by relaxed purchase restrictions and lower mortgage rates. Sales of luxury homes jumped in the mainland Chinese cities of Shanghai and Shenzhen immediately after the historic stimulus package, with wealthy buyers snapping up some 360 flats totalling worth 20 billion yuan (US$2.85 billion) as buyers bet on a brighter economic outlook.*" Our Supplemental Documents package includes the SCMP report.,

Chinese wealthy are buying luxury homes

China home prices keep losing value, 15 mths for new & 16 mths for old,

Hopefully for China the wealthy buying luxury homes will trickle down to regular consumers driving regular home values. As noted above, we consider homes to be the primary asset for Chinese, much like North America, and house values have gone down every month for well over year. Here is what we wrote in our Sept 15, 2024 Energy Tidbits memo. "*China home prices keep losing value, 15 mths for new & 16 mths for old. 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 Friday, we tweeted [LINK] "No wonder Chinese consumer is still on sidelines. Their most important asset, home values keep going lower. New home prices: 15th straight MoM % drop. Aug -0.73%. July -0.65%. June -0.67%. 2nd hand home prices: 16th straight MoM % drop. Aug -0.95%. July -0.80%. June -0.85%. 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 Aug, Chinese new home and 2nd home prices were down MoM vs July. China new home prices were -0.73% MoM and that is the 15th consecutive month of MoM declines. China 2nd hand*

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home -0.95% MoM and that is the 16th consecutive MoM decline. prices Below are the Bloomberg graphs with the July data."

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

Source: Bloomberg, National Bureau of Statistics

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

Source: Bloomberg, National Bureau of Statistics

Oil: China official September Manufacturing PMI 5th consecutive month of contraction

China official Manufacturing PMI

The China story has been stimulus so negative economic indicators are being overlooked or viewed as data that justifies why the stimulus was needed. More indicators for China economy are stuck in negative territory with the China official manufacturing PMI released on Sunday night that had September as the 5th 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, Sunday night MT, the Official Manufacturing PMI was released. On Sunday, we tweeted [LINK] "*5th consecutive month of contraction for China "official" manufacturing PMI But no one will care given China story is all about last week's stimulus. Sept 49.8 vs est 49.4 Aug 49.1 July 49.4 Jun 49.5 May 49.5 Apr 50.4 #OOTT".* The September figures came in at 49.8 which is up +0.7 points MoM compared to August's figure of 49.1. Below is the Bloomberg chart of China official general manufacturing PMI.

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Figure 49: China Official General Manufacturing PMI

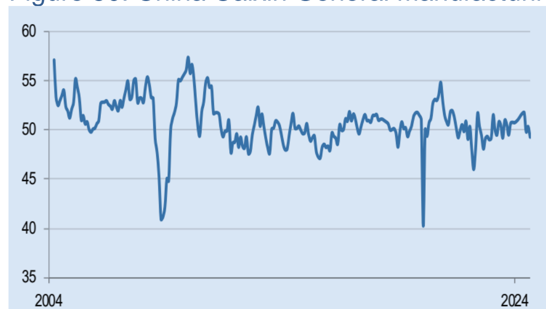
Source: Bloomberg

Oil: Caixin Manufacturing PMI fell to 49.3 in Sept; exports fell for 2nd month

Caixin Manufacturing September PMI

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 primarily focusses 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 Caixin manufacturing PMI on Sunday, we tweeted [LINK] "*China smaller & export oriented firms back to contraction in Sept. BUT market will look thru as China story is all about last week's stimulus package. China Caixin Manufacturing PMI: Sep 49.3 vs Est 50.5 Aug 50.4 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 September was released last Sunday night [LINK]. The seasonally adjusted headline Caixin PMI was 49.3 in September, down from August's 50.4, and is the lowest reading since July 2023. September marked a return to contraction following August's expansion. However, the report noted "*Operating conditions in China's manufacturing sector deteriorated in September after improving during August. This was underpinned by a renewed downturn in new orders, including exports which fell again. While manufacturers managed to keep production in expansion by working through their backlogs, optimism levels eased noticeably in the latest survey period. Furthermore, firms lowered their hiring and purchasing activity*". Our Supplemental Documents package includes the China Caixin Manufacturing PMI report.

Figure 50: China Caixin General Manufacturing PMI



Source: S&P Global

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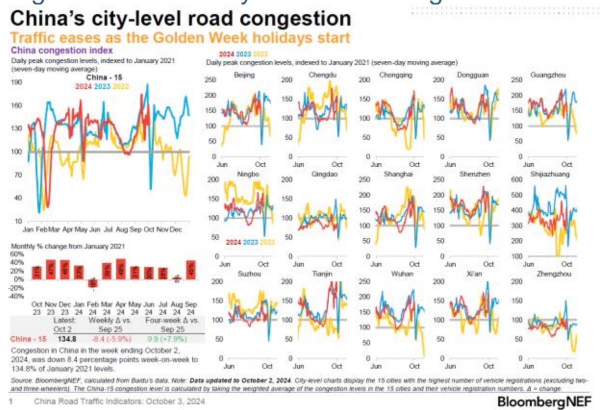
Oil: Baidu China city-level congestion down small so far for Golden Week holiday

Last week's Sept 29, 2024, Energy Tidbits memo highlighted China's Golden Week holidays, and to expect a drop in China city-level road congestion. On Friday, BloombergNEF posted its China Road Traffic Indicators Weekly Oct 4 report, which includes the Baidu city-level road congestion for the week ended Oct 2. Golden Week is Oct 1 thru Oct 7 and we had been expecting a much larger WoW drop. This week, BloombergNEF reported Baidu city-level road congestion was down by -5.9% WoW to 134.8% of Jan 2021 levels. The WoW fall was expected as the week was impacted by the national holiday, Golden Week, which sees people leave the cities for holidays. But we will want to see if the China city-level road congestion is down much more this week. Last year, the Mid-Autumn Festival ran into Golden Week to create a 12-day travel rush. September 2024 saw average daily peak congestion down -6.0% YoY when compared to September 2023. The city-level road congestion is only to Oct 2 so it really isn't worth commenting. 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 eases as Golden Week holidays begin*". Below are the BloombergNEF key figures.

China city-level road congestion eases

Figure 51: China city-level road congestion for the week ended October 2, 2024



Source: Bloomberg

Figure 52: China city-level road congestion for the week ended October 2, 2024

Indexed to January 2021 = 100

	Oct 23	Nov	Dec	Jan 24	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
China-15	130	146	146	133	81	138	148	130	129	127	104	144	60
Beijing	159	167	161	145	73	151	169	143	141	146	123	171	47
Chengdu	121	123	116	120	68	134	140	125	119	126	98	135	51
Chongqing	112	122	116	111	80	112	138	122	129	119	75	119	54
Dongguan	130	141	144	121	52	129	138	138	138	126	103	141	47
Guangzhou	160	178	181	161	76	171	195	174	170	162	158	179	72
Ningbo	118	146	142	127	79	144	146	120	128	121	94	140	58
Qingdao	92	99	103	78	51	71	78	72	75	91	80	87	54
Shanghai	127	155	150	115	79	146	152	130	132	119	93	151	33
Shenzhen	151	169	170	149	68	160	164	172	163	162	155	184	97
Shijiazhuang	343	491	461	494	350	400	390	311	329	334	308	364	144
Suzhou	108	127	136	118	79	134	137	113	112	105	96	115	85
Tianjin	150	169	190	133	85	160	165	145	132	106	98	186	66
Wuhan	143	159	159	167	105	174	171	146	144	141	117	168	69
Xi'an	135	156	155	152	98	141	147	129	123	135	107	145	77
Zhengzhou	80	97	108	110	85	95	96	80	78	86	66	91	49

Indexed to the same month in previous year = 100

	Oct 23	Nov	Dec	Jan 24	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
China-15	126	155	187	151	55	100	114	110	96	104	87	94	46
Beijing	149	214	275	135	42	92	113	103	93	106	90	95	30
Chengdu	117	131	124	144	51	106	107	115	91	116	85	104	42
Chongqing	130	395	224	136	64	101	125	125	112	113	85	94	49
Dongguan	108	104	156	258	41	99	127	120	108	108	101	96	36
Guangzhou	146	317	307	199	45	99	127	127	107	107	106	98	45
Ningbo	95	101	127	203	59	115	140	121	112	106	81	110	49
Qingdao	96	124	195	175	62	94	97	98	87	95	76	82	59
Shanghai	115	93	172	156	54	98	117	105	101	98	76	93	26
Shenzhen	108	97	156	189	41	96	120	132	99	113	106	102	64
Shijiazhuang	120	459	258	156	69	93	85	81	77	89	70	75	42
Suzhou	91	88	157	171	60	111	130	117	97	99	88	86	78
Tianjin	109	137	244	136	60	114	121	119	100	96	86	107	44
Wuhan	199	192	187	151	55	94	100	97	85	95	86	88	48
Xi'an	149	139	152	132	66	110	112	105	91	110	97	96	57
Zhengzhou	171	294	164	119	76	98	102	90	82	98	72	86	61

Source: Bloomberg

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Big drop in China city congestion with Oct 1-7 National Golden Week Holiday
In our Sept 29, 2024, Tidbits we said: "*As a reminder, there will be a big upcoming drop in China city-level road congestion with the upcoming National Day holiday. The National Day on Oct 1 every year is like the US 4th of July as it is on ,which is on Oct 1 every year to celebrate the founding of the People's Republic of China in 1949. It is also known as Golden Week Holiday as it is a 7-day national holiday from Oct 1-7. And because it is a longer holiday, it typically leads to a big drop in city-level road congestion as people leave cities".*

In 2023, Mid-Autumn Festival + Golden Week combined for 12-day travel rush
As noted above, the timing of Mid-Autumn Festival varies as it is based on the Chinese lunar calendar. Last year, the Mid-Autumn Festival was later and ran into the National Day/Golden Week holiday to form a 12-day travel period., Here is what we wrote in our Sept 17, 2023 Energy Tidbits memo. "*China's upcoming 12-day travel rush with national holidays. Earlier this morning, we tweeted [LINK] "Reminder. Major 12-day travel rush is coming, expected from Sept 27 to Oct 8 for Mid-Autumn Festival & National Day holidays. Should see big increase in China domestic flights and big decrease in China Baidu city-level road congestion. #OOTT." We have been highlighting this because it should lead to be swings in the next two weeks data for China schedule domestic flights and China Baidu city-level road congestions. Here is what we wrote in last week's (Sept 17, 2023) Energy Tidbits memo on the upcoming national holidays in China. "A reminder as we look ahead to China mobility data to end September is that there is a major 12-day travel rush coming that is expected from Sept 27 to Oct 8. This should lead to a big uptick in domestic air travel and a downtick in city-level road congestion. Yesterday, Xinhua (China state media) reported on the upcoming train travel rush. [LINK]. Xinhua wrote "Friday marks the presale of train tickets for the first day of the Mid-Autumn Festival and National Day holidays, which extend from Sept. 29 to Oct. 6 this year. Ticket sales volumes reflect the travel demands of the people and the trends in economic and social development, said an official of China Railway, adding that the record-breaking ticket sales on Sept. 15 are indicative of the strong demand for travel during the upcoming Mid-Autumn Festival and National Day "golden week" holiday. China is expected to see 190 million railway trips during the upcoming 12-day travel rush, which will last from Sept. 27 to Oct. 8. The Mid-Autumn Festival, falling on Sept. 29 this year, is a traditional Chinese Festival usually marked by family reunions, watching the full moon and eating mooncakes."*

Oil: Vortexa crude oil floating storage est 44.51 mmb at Oct 4, -20.08 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 Sept 28 at 9am MT. (i) Yesterday, we tweeted [LINK] "*WOW! Risk of Israel attack on Iran #Oil sends floating storage tankers to buyers. Vortexa crude #Oil floating storage down a whopping -20.08 mmb to 44.51 mmb at Oct 4. Big decline was in Asia floating storage -17.17 mmb WoW, not floating storage around potential Middle East conflict escalation. Last time this low was Sept 27, 2019 at 44.29 mmb. Thx @vortexa*

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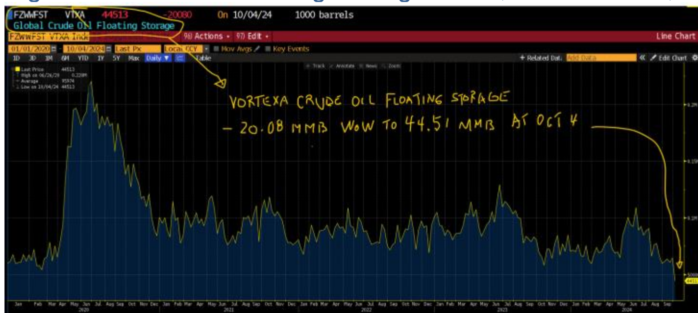
@business #OOTT". We thought this might just be floating storage moving away from the potential conflict escalation in the Middle East but the big move was in Asia floating storage down -17.17 mmb WoW. This would seem to imply Asia buyers are taking some Asian floating storage. (ii) As of 9am MT Oct 5, Bloomberg posted Vortexa crude oil floating storage estimate for Oct 4 at 44.51 mmb, which was -20.08 mmb WoW vs revised up Sept 27 of 64.59 mmb. Note Sept 27 of 64.59 mmb was revised +3.10 mmb vs 61.49 mmb originally posted at 9amn MT on Sept 28. (iii) Revisions. Other than the revised +3.01 mmb for Sept 27, the other prior six weeks only had a mix of very small + or – revisions. Here are the revisions for the past seven weeks compared to the estimates originally posted on Bloomberg at 9am MT on Sept 28. Sept 27 revised +3.10 mmb. Sept 20 revised +0.51 mmb. Sept 13 revised -0.31 mmb. Sept 6 revised +0.34 mmb. Aug 30 revised +1.36 mmb. Aug 23 revised -0.23 mmb. Aug 16 revised +0.50 mmb. (iv) There is a wide range of floating storage estimates for the past seven weeks, but a simple rolling average for the last seven weeks is 60.05 mmb vs last week's then seven-week rolling average of 63,99 mmb. The decrease was due to the record post-Covid low floating storage for Oct 4. (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) Oct 4 estimate of 44.51 mmb is -84.71 mmb vs the 2023 peak on June 25, 2023 of 129.22 mmb. Recall Saudi Arabia stepped in on July 1, 2023 with its voluntary cuts. (viii) Oct 4 estimate of 44.51 mmb is -24.61 mmb YoY vs Oct 6, 2023 at 69.12 mmb. Below are the last several weeks of estimates posted on Bloomberg as of 9am on Oct 5, Sept 29, and Sept 21.

Figure 53: Vortexa Floating Storage Jan 1, 2000 – Oct 4, 2024, posted Oct 5 at 9am MT



Source: Bloomberg, Vortexa

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Figure 54: Vortexa Estimates Posted 9am MT on Oct 5, Sept 28 and Sept 21

Posted Oct 5, 9am MT

FZWWFST VTXA Inde 94) Sug
01/01/2020 - 10/04/2024
1D 3D 1M 6M YTD 1Y 5Y

	Date	FZWWFST VT... Last Px
Fr	10/04/2024	44513
Fr	09/27/2024	64593
Fr	09/20/2024	60693
Fr	09/13/2024	63611
Fr	09/06/2024	61403
Fr	08/30/2024	59871
Fr	08/23/2024	65740
Fr	08/16/2024	77272
Fr	08/09/2024	76091
Fr	08/02/2024	66097
Fr	07/26/2024	90339
Fr	07/19/2024	88421

Sept 28, 9am MT

FZWWFST VTXA Inde 94) Su
01/01/2020 - 09/27/2024
1D 3D 1M 6M YTD 1Y

	Date	FZWWFST VT... Last Px
Fr	09/27/2024	61486
Fr	09/20/2024	60182
Fr	09/13/2024	63920
Fr	09/06/2024	61061
Fr	08/30/2024	58513
Fr	08/23/2024	65966
Fr	08/16/2024	76765
Fr	08/09/2024	75124
Fr	08/02/2024	65290
Fr	07/26/2024	90792
Fr	07/19/2024	88232
Fr	07/12/2024	84604

Sept 21, 9am MT

FZWWFST VTXA Inde 94) Sug
01/01/2020 - 09/20/2024
1D 3D 1M 6M YTD 1Y 5Y

	Date	FZWWFST VT... Last Px
Fr	09/20/2024	55740
Fr	09/13/2024	65533
Fr	09/06/2024	66267
Fr	08/30/2024	63525
Fr	08/23/2024	69048
Fr	08/16/2024	79890
Fr	08/09/2024	75236
Fr	08/02/2024	66579
Fr	07/26/2024	91949
Fr	07/19/2024	89496
Fr	07/12/2024	83348
Fr	07/05/2024	90994

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 Sept 27 was revised +3.10 mmb with the key revisions being Asia +6.18 mmb and Other -2.26 mmb. (ii) Total floating storage at Oct 4 of 44.51 mmb was down a whopping -20.08 mmb WoW vs the revised up Sept 27 of 64.59 mmb. The major WoW changes were Asia -17.17 mmb and Other -2.84 mmb. (iii) Oct 4 estimate of 44.51 mmb is -84.7 mmb vs the 2023 high on June 23, 2023 of 129.22 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 -56.09 mmb and Other -24.00 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 Sept 27 that was posted on Bloomberg at 9am MT on Sept 28.

Figure 55: Vortexa crude oil floating by region

Region	Oct 4/24	Sept 27/24	WoW	Original Posted Sept 27/24	Recent Peak Jun 23/23	Oct 4 vs Jun 23/23
Asia	17.39	34.56	-17.17	28.38	73.48	-56.09
North Sea	0.98	0.77	0.21	0.80	5.23	-4.25
Europe	3.42	3.81	-0.39	4.81	5.63	-2.21
Middle East	7.03	7.22	-0.19	6.30	6.76	0.27
West Africa	8.89	8.62	0.27	9.08	7.62	1.27
US Gulf Coast	1.32	1.29	0.03	1.54	1.02	0.30
Other	5.48	8.32	-2.84	10.58	29.49	-24.01
Global Total	44.51	64.59	-20.08	61.49	129.23	-84.72
Vortexa crude oil floating storage posted on Bloomberg 9am MT on Oct 5						
Source: Vortexa, Bloomberg						

Source: Bloomberg, Vortexa

Oil: Global oil & product stocks flipped to deficit to -7.900 mmb from +10.800 mmb

Bloomberg Weekly Oil Indicators

On Tuesday, BloombergNEF posted its "*Oil Price Indicators*" weekly, which provides good charts depicting near-term global oil demand and supply indicators. (i) Note BloombergNEF uses different periods to determine the surplus/deficit, sometimes using a four-year average for 2017-2019 + 2022-2023, and other times using a five-year average 2017-2019 + 2022-2023. In both cases they do not include 2020 and 2021 in the averages. (ii) The global stockpile for crude oil and products flipped to a deficit of -7.900 mmb for the week ending

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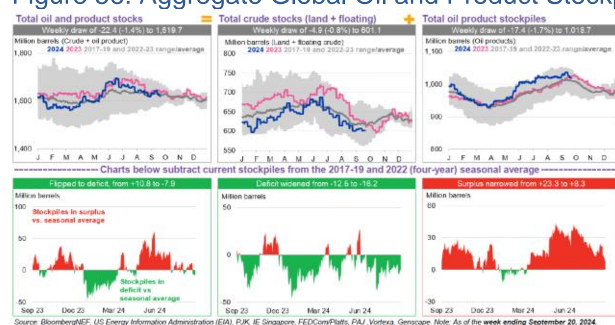
September 20, from a surplus of +10.800 mmb for the week ended September 13. (iii) Total crude inventories (incl. floating) saw a draw of -0.8% WoW to 601.100 mmb, while the stockpiles deficit widened, from a deficit of -12.500 mmb to a deficit of -16.200 mmb. (iv) Land crude oil inventories decreased -0.3% WoW to 541.000 mmb, narrowing their deficit from -15.300 mmb to -13.200 mmb against the five-year average (2017-2019 + 2022-23). (v) The gas oil, and middle distillate stocks decreased -2.6% WoW to 235.500 mmb, with the surplus against the four-year average flipping to a deficit to -2.400 mmb from +3.400 mmb. Jet fuel consumption by international departures in the week starting October 1, is set to decrease by -0.015 mmb/d WoW, while consumption by domestic passenger departures is forecast to increase by +0.044 mmb/d WoW. Below is a snapshot of aggregate global stockpiles.

Figure 56: Aggregate Global Oil and Product Stockpiles



Source: BloombergNEF

Oil: Europe airports daily traffic 7-day moving average is -2.9% 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: Oct 3: -2.9% below pre-Covid. Sept 26: -2.9%. Sept 19: -2.8% Sept 12: -3.0%. Sept 5: -2.8%. Aug 29: -3.1%. Aug 22: -2.8%. Aug 15: -2.2%. Aug 8: -1.3%. Aug 1: -1.9%. 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 -2.9% below pre-Covid as of Oct 3, which followed -2.9% as of Sept 26, -2.8% as of Sept 19, which followed -3.0% as of Sept 12, which followed -2.8% 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, and -1.9% as of Aug 1. Please note that we try to pull the data early Saturday mornings for a consistent weekly comparison. Eurocontrol updates this data daily and it is found at [LINK].

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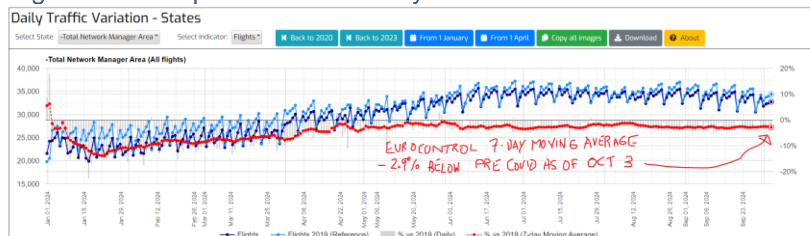
Figure 57: Europe Air Traffic: Daily Traffic Variation to end of Oct 3



Source: Eurocontrol

Oil: IATA Aug international air travel up +10.6% but still below pre-Covid

August air travel up YoY

On Thursday, the International Air Transport Association (IATA) released air passenger data for August 2024 [LINK]. (i) The IATA doesn't specifically say how the growing air trvel compares to pre-Covid but it sounds like it is still below pre-Covid. The IATA wrote "*As of August 2024, international air travel demand's monthly volumes have marked historic highs, or inched closer to them, for all regions including for the whole industry, expect for Asia Pacific, which is 8 percentage points from full recovery. PR China's economic woes and geopolitical tensions probably have an outsized effect on its region's and the industry's growth, given its market heft."* (ii) Continued strong YoY increase in air travel. IATA believes international air travel demand remains to be robust, with international demand rising +10.6% YoY, which follows July's +10.1% YoY increase. The IATA wrote "*Total demand, measured in revenue passenger kilometers (RPK), was up 8.6% compared to August 2023. Total capacity, measured in available seat kilometers (ASK), was up 6.5% year-on-year. The August load factor was 86.2% (+1.6ppt compared to August 2023), a new record high… All regions showed growth for international passenger markets in August 2024 compared to August 2023. Ticket sales in May-July for travel in August-September showed a 6.6% year-on-year increase, which bodes well for further strong growth this year"*. The IATA wrote "*International demand rose 10.6% compared to August 2023. Capacity was up 10.1% year-on-year and the load factor rose to 85.7% (+0.4ppt compared to August 2023)."* (iii) Total global traffic in August, measured in revenue passenger kilometers (RPK), rose +8.6% YoY. Please note the IATA splits out total market air travel into international travel vs domestic travel. (iv) The split was between International RPKs which were up +10.6% vs August 2023 and Domestic RPKs which were up +5.6% vs August 2023. (v) Willie Walsh, IATA's Director General, commented *"The market for air travel is hot and airlines are doing a great job at meeting the growing demand for travel. Efficiency gains have driven load factors to record highs while the 6.5% capacity increase demonstrates resilience in the face of persistent supply chain issues and infrastructure deficiencies… Looking ahead, the continued strong demand growth signals that we could be fast approaching an infrastructure capacity crunch that would restrict connectivity and choice for passengers and businesses. If governments want to maximize the benefits of aviation, they must take bold decisions to ensure sufficient infrastructure capacity. And, in the interim, both airports and air navigation service providers need to do more with the resources they currently have. In particular, the variance in declared capacity of airports with broadly the same infrastructure needs to be resolved, with airports emulating the best performers. The industry cannot afford to under-utilize the airport infrastructure that we have"*. Our Supplemental Documents package includes the official IATA report.

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Figure 58: August 2024 Air Passenger Market

	World share [1]	August 2024 (% year-on-year)				August 2024 (% year-to-date)			
		RPK	ASK	PLF (%-pt)	PLF (level)	RPK	ASK	PLF (%-pt)	PLF (level)
TOTAL MARKET	***100.0%***	**8.6%**	**6.5%**	**1.6%**	**86.2%**	**11.9%**	**10.2%**	**1.3%**	**83.4%**
International	*60.1%*	10.6%	10.1%	0.4%	85.7%	15.5%	15.2%	0.2%	83.1%
Domestic	*39.9%*	5.6%	1.2%	3.6%	86.9%	6.7%	3.0%	2.9%	84.0%

Source: IATA

Asian Pacific air traffic in August

Oil: Asia/Pacific intl Aug passenger air travel up +21.7% YoY but down -3.9% vs 2019

On Monday, the Association of Asia Pacific Airlines released its August traffic results [LINK] which is comprised of aggregate data across a total of 40 Asia Pacific airline carriers. (i) Air travel. International passenger air travel on the 40 airlines is up big YoY, but still -3.9% below 2019 levels. The AAPA reports preliminary August 2024 travel figures were up +21.7% YoY from August 2023. The AAPA wrote *"On the back of the region's resilient economic growth, Asia Pacific airlines collectively carried 32.3 million international passengers in August, reflecting a 21.7% year-on-year increase compared to the same month last year. Traffic in the region had nearly resumed to pre-pandemic levels, at 96.1% of 2019 volumes. Demand in revenue passenger kilometres (RPK) increased by 20.7% while available seat capacity expanded by 19.7% year-on-year, leading to a 0.7 percentage point increase in the average international passenger load factor to 83.2% for the month"* (ii) Air cargo was up +12.2% YoY, measured in Freight Tonne Kilometres (FTK), and the load factor increased +0.9% to 59.6%. Meanwhile, headline capacity measured in Available Seat Kilometres (ASK) rose +19.7% YoY. (iii) Subhas Menon, Director General of the AAPA, said *"During the first eight months of the year, the region's carriers saw a 36% growth in the number of international passengers carried reaching a total of 240 million, boosted by increased air connectivity and less restrictive visa policies. During the same period, international air cargo demand surged by 15% year-on-year, driven by several key factors, including a thriving e-commerce sector. Disruptions in ocean freight logistics also encouraged modal shifts from sea to air, as businesses sought faster and more reliable transport alternatives."* Below is a snapshot of the APAA's traffic update.

Figure 59: APAA Preliminary International Air Traffic Data

International	Aug-24	Aug-23	% Change
Passengers (Thousand)	32,283	26,521	+ 21.7%
RPK (Million)	113,076	93,689	+ 20.7%
ASK (Million)	135,968	113,608	+ 19.7%
Passenger Load Factor	83.2%	82.5%	+ 0.7 pp
FTK (Million)	6,076	5,417	+ 12.2%
FATK (Million)	10,196	9,235	+ 10.4%
Freight Load Factor	59.6%	58.7%	+ 0.9 pp

Source: AAPA

IATA August global air cargo

Oil: IATA, global air cargo Aug was 9th consecutive month of double-digit YoY growth

We look at international air cargo as the data that affirms the level of export orders and trade. On Thursday, the International Air Transport Association (IATA) announced cargo data for the month of August [LINK]. August global air cargo, measured through Cargo Tonne-Kilometers, increased 11.4% YoY. This marks the ninth consecutive month of double-digit

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YoY growth. The IATA wrote "*Total demand, measured in cargo tonne-kilometers (CTKs*), rose by 11.4% compared to August 2023 levels (12.4% for international operations). This is the ninth consecutive month of double-digit year-on-year growth, with overall levels reaching heights not seen since the record peaks of 2021. Capacity, measured in available cargo tonne-kilometers (ACTKs), increased by 6.2% compared to August 2023 (8.2% for international operations). This was largely related to the growth in international belly capacity, which rose 10.9% on the strength of passenger markets. Industry-wide capacity has reached an all-time high*". Willie Walsh, IATA's Director General, commented "*We continue to see very good news in air cargo markets. The sector recorded a second consecutive month of record high demand year-to-date. Even with record levels of capacity, yields are up 11.7% on 2023, 2% on the previous month, and 46% above pre-pandemic levels. This strong performance is underpinned by slow but steady growth in global trade, booming e-commerce, and continuing capacity constraints on maritime shipping*" Our Supplemental Documents package includes the official IATA report.

Figure 60: August 2024 Air Cargo Market

	World share [1]	August 2024 (% year-on-year)				August 2024 (% year-to-date)			
		CTK	ACTK	CLF (%-pt)	CLF (level)	CTK	ACTK	CLF (%-pt)	CLF (level)
TOTAL MARKET	***100.0%***	**11.4%**	**6.2%**	**2.0%**	**44.0%**	**13.0%**	**8.7%**	**1.7%**	**45.1%**
International	*86.6%*	12.4%	8.2%	1.9%	49.2%	13.9%	11.2%	0.2%	50.6%

Source: IATA

Oil & Natural Gas: Milton expected to a major hurricane when it hits Florida Gulf Coast

Milton to be a major hurricane when it hits

Earlier this morning, we tweeted [LINK] "*Last thing Floridians need. @NHC_Atlantic: Tropical Storm Milton expected to be a major hurricane when it hits Gulf Coast side of Florida on Wed. And still slow moving at 5 mph (Helene was 23 mph) so more time for wind/rain to impact. Hope everyone can stay safe. #OOTT."* Yesterday, Milton reach Tropical Storm strength and the National Hurricane Center forecasts Milton to reach hurricane strength later today and be a major hurricane when it hits the Gulf Coast side of Florida on Wed. Milton was only moving at 3 mph yesterday and is still slow moving at 5 mph. Unfortunately, slow moving hurricanes mean there is more time over an area for the winds and water to impact. Hurricane Helene was moving at 23 mph when it hit. . Below is the latest National Hurricane Center 7-day outlook map.

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Figure 61:: Tropical Storm Milton expected to be major hurricane

Source: NHC

Oil & Natural Gas: Right side of the Atlantic hurricane is the worst

Right side of a hurricane is the worst

We just saw Hurricane Helene hammer the Gulf Coast of Florida, in particular on its right side and now it looks like Milton will hammer some of the same parts of Florida's Gulf Coast. Yesterday, we tweeted [LINK] "*Hurricanes 101. The right side of a hurricane more dangerous - higher max wind speed, waves and storm surge. It's why hurricanes on Florida Gulf Coast side can have way worse impact vs Atlantic side. See 👇 @HillaryAndrews @foxweather recap. Hoping the best for everyone in Florida. #OOTT.*" Our tweet included an item from our Aug 28, 2023 Energy Tidbits memo on why the right side of an Atlantic hurricane is the worst and why hurricanes normally have a greater impact on Florida's Gulf Coast side vs the Atlantic side. We checked the link and it still works to a good Fox News Aug 28, 2023 report "*Why is the right side of a hurricane more dangerous?*" [LINK] It's a good quick read on why the right side of an Atlantic hurricane or tropical storm has more intense winds and storm surge, and also why the impacts of hurricanes or tropical storms is worse on Florida's Gulf Coast vs its Atlantic coast. Here is one of the hurricane 101 points *"How the right-front quadrant generates faster wind speed. Steering currents, driven by atmospheric airflow in the upper levels, add to the strength of the maximum sustained winds in that quadrant. For example, if a hurricane's steering currents were moving at 30 mph and the sustained winds of the hurricane were 80 to 100 mph, the combination generates a wind speed of 130 to 150 mph at 3 o'clock on the clock face. On the left side of the hurricane (9 o'clock on our imaginary clock face), the maximum sustained winds flow against the steering currents. So, in the example above, the steering current of 30 mph would reduce the 100 mph hurricane wind speed to 70 mph, according to UCAR. The National Hurricane Center takes this into account when issuing official wind estimates."* There is more in the Fox News report. Our Supplemental Documents package includes the Fox News report.

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Figure 62: Why Florida's Gulf Coast is More Susceptible to Storm Surge

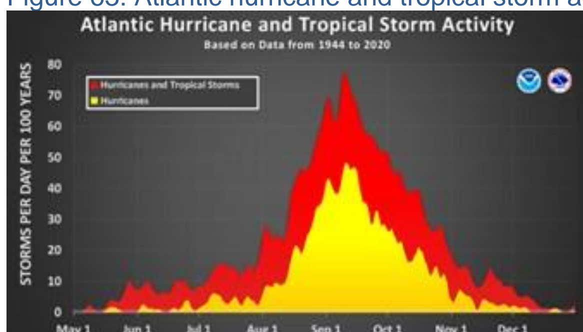
Source: Fox News

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

Sept is normally the busiest hurricane emonth

There is going to be some major reflection from hurricane forecasters on what happened so far this year in the relatively low level of hurricanes when all the major forecasters called for more active than normal Atlantic hurricane season. Even with the recent Hurricane Francine, Hurricane Helene and now soon to be Hurricane Milton, it has been a relatively quiet in August'/September for Atlantic hurricane season. 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 active 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 63: Atlantic hurricane and tropical storm activity by month



Source: NOAA

Oil & Natural Gas: Q3 will be worse for Cdn natural gas producers than Q2

AECO QTD $0.67

Q3 reporting will start in the next three weeks. And one of the known themes for Cdn oil and gas producers will be that Q3 will show lower oil and gas prices than for Q2 reporting, in

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particular for natural gas prices. Below is our table that shows the final prices to the end of Q3/24. The big negative vs Q2 is AECO, which QTD has average $0.66, vs $1.12 in Q2/24 and $2.23 in Q1/24. The issue for analysts will be twofold. Reflecting the actuals in their model and what price forecast to use in their valuations. Below is our table of oil and gas prices.

Figure 64: Oil & natural gas prices

Period	Brent	WTI	EDPAR	WCS	HH	AECO
Q1/19	US$ 62.90	US$ 54.72	US$ 50.55	US$ 44.11	US$ 2.92	C$ 2.42
Q2/19	US$ 69.19	US$ 59.93	US$ 54.39	US$ 47.34	US$ 2.56	C$ 1.05
Q3/19	US$ 62.23	US$ 56.41	US$ 52.35	US$ 43.84	US$ 2.38	C$ 0.96
Q4/19	US$ 64.19	US$ 56.98	US$ 50.75	US$ 37.94	US$ 2.39	C$ 2.34
Q1/20	US$ 51.63	US$ 46.10	US$ 39.04	US$ 28.10	US$ 1.92	C$ 1.93
Q2/20	US$ 29.71	US$ 27.97	US$ 22.25	US$ 18.39	US$ 1.70	C$ 1.90
Q3/20	US$ 44.38	US$ 40.88	US$ 36.84	US$ 31.09	US$ 1.96	C$ 2.14
Q4/20	US$ 45.17	US$ 42.80	US$ 38.03	US$ 31.36	US$ 2.47	C$ 2.52
Q1/21	US$ 61.15	US$ 57.91	US$ 54.39	US$ 46.06	US$ 3.39	C$ 2.97
Q2/21	US$ 68.05	US$ 66.16	US$ 62.17	US$ 53.31	US$ 2.91	C$ 2.93
Q3/21	US$ 73.24	US$ 70.59	US$ 66.94	US$ 57.70	US$ 4.31	C$ 3.40
Q4/21	US$ 79.04	US$ 77.29	US$ 73.79	US$ 60.91	US$ 4.71	C$ 4.48
Q1/22	US$ 101.80	US$ 94.93	US$ 93.84	US$ 82.29	US$ 4.63	C$ 4.53
Q2/22	US$ 113.86	US$ 108.85	US$ 107.12	US$ 93.39	US$ 7.47	C$ 6.89
Q3/22	US$ 100.62	US$ 91.81	US$ 89.95	US$ 71.19	US$ 7.96	C$ 4.16
Q4/22	US$ 88.64	US$ 82.61	US$ 79.71	US$ 54.91	US$ 5.54	C$ 5.01
Q1/23	US$ 81.17	US$ 76.10	US$ 73.75	US$ 56.94	US$ 2.66	C$ 3.08
Q2/23	US$ 78.30	US$ 73.61	US$ 70.56	US$ 60.29	US$ 2.16	C$ 2.30
Q3/23	US$ 86.70	US$ 82.19	US$ 79.76	US$ 66.16	US$ 2.59	C$ 2.48
Q4/23	US$ 84.22	US$ 78.46	US$ 71.01	US$ 55.67	US$ 2.74	C$ 2.19
Q1/24	US$ 83.04	US$ 76.99	US$ 68.71	US$ 60.03	US$ 2.31	C$ 2.23
Q2/24	US$ 84.84	US$ 80.80	US$ 72.80	US$ 68.28	US$ 2.07	C$ 1.12
Q3/24	US$ 80.32	US$ 75.52	US$ 68.11	US$ 62.20	US$ 2.11	C$ 0.66

Source: Bloomberg

Source: Bloomberg, SAF Group

Energy Transition: BHP. electricity share of energy consumption doubling by 2050

BHP sees big increase in electricity demand

On Monday, BHP posted its "*BHP Insights: how copper will shape our future*", which, even though it is focused on copper, outlines their bullish view for growing energy consumption and increasing share of electricity within that global energy growth. BHP makes its case for increasing electricity from traditional markets, but then highlights the huge growth in electricity from AI data centers. And, as we have seen by every other energy provider, it means increasing need for 24/7 electricity from natural gas. We also believe it means delaying retirement of coal and nuclear. (i) On Monday, we tweeted [LINK] "*Bullish #NatGas. #BHP sees growing energy consumption & electricity share thereof doubling to 40% by 2050. Within that, BHP sees massive relative growth of data centers from 2% of electricity consumption to 9%. Growing data center demand will take all the #Wind #Solar it can. But absent long duration multi-day storage send out capacity, what NEW sources can provide near term (next 10 yrs) 24/7 baseload electricity in scale other than #NatGas and #Coal. #OOTT.*" (ii) One outstanding question was we don't what BHP assumes about battery storage improvement over the critical next 10 years. We didn't see if they assume there is a big leap coming, and when, for battery storage to move from multi-hour send out capacity to multi-day send out capacity. We would assume if they assumed such a leap, they would have highlighted that assumption. (iii) Our tweet notes the accepted assumption that big electricity consumption growth means that any renewable that can be added will be need that as electricity providers/consumers still look for that as their key emissions reduction message. (iv) But BHP's key forecast is that electricity's share is growing of a growing overall energy consumption BHP sees electricity share of energy consumption doubles to around 40% by 2050. And within a growing electricity market, BHP sees massive relative growth of data centers. BHP says "*We expect global electricity consumption for data centres*

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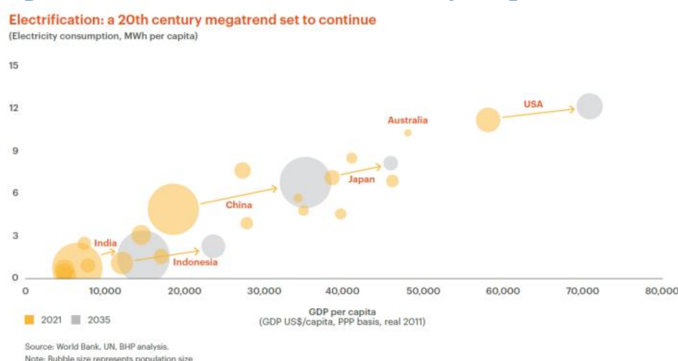
to rise from around 2% of global demand today, to 9% by 2050, with copper demand in data centres increasing six-fold by 2050. Today, we estimate that the Traditional vs Energy Transition vs Digital split of global demand is around 92%/7%/1%. By 2050 we predict the split to have evolved to 71%/23%/6%." (v) Looping back to battery storage send out capacity, until there is long duration multi day send out capacity for storage and not just multi hour, there is really no near term (next 10 yrs) NEW source of 24/7 baseload electricity in any size other than natural gas and coal. It also means that energy providers will have no choice but to try to avoid retirement of existing coal and nuclear power. Our Supplemental Documents package includes excerpts from the BHP report.

Figure 65: Electrification, a 20th century megatrend set to continue



Source: BHP

Energy Transition: Toyota reportedly cuts BEV plans by 1/3 to 1 mm BEVs in 2026

Ford won't meet UK EV targets

The real question for the IEA and others calling peak oil demand by 2030 will be can they juggle their assumptions such that strong China BEV sales offsets weak BEV sales in Europe and North America and the increasing taking of electric market share by PHEVs over BEVs. As of our 7am MT news cut off, we have not seen any Toyota comments on the Nikkei Asia Thursday report that Toyota is communicated to suppliers that it would be cutting its 1.5 mm BEVs in 2026 to 1 mm in 2026 and that this was driven by slowing BEV sales in North America. On Thursday, we tweeted [LINK] "*Massive cut in Toyota's BEV expectations? @NikkeiAsia "Toyota has said it aims to produce 1.5 million EVs globally in 2026. But new plans communicated to its suppliers put the figure at around 1 million. The shift comes as EV sales slow in the U.S. Electrics that are priced competitively against engine-powered vehicles have been slow to hit the market, and consumers are instead turning to hybrids, which are more affordable and a field where Toyota has an edge." #OOTT [LINK].*" Nikkei Asia didn't give the splits by geographic region but highlighted that this was driven by slowing BEVs demand in North America. Nikkei Asia wrote "*Toyota to delay U.S. EV production to 2026 on slowing sales. Toyota Motor will push back the production of electric vehicles in North America to the first half of 2026 amid slowing sales in the key auto market, Nikkei has learned".* And "*Toyota has said it aims to produce 1.5 million EVs globally in 2026. But new plans communicated to its suppliers put the figure at around 1 million."* Our Supplemental Documents package includes the Nikkei Asia report.

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Energy Transition: Ford CEO "*take more than jumbo rebates*" to get US BEV breakthru

Ford CEO on BEV sales

Ford CEO wrote that it will take more than jumbo rebates to break thru on US BEV sales. On Monday, Ford CEO Jim Farley's post introduced "Ford Power Promise", which should help EV sales to some degree. First he highlights the problem that they are too expensive. He says "*Ford believes it will take more than jumbo rebates to truly break through with the estimated 19 million people in the U.S. interested in electric vehicles*". So they are doing Ford Power Promise to pay for a home charger installed for free. Farley says "*Buy or lease a retail Ford Mustang Mach-E, F-150 Lightning or E-Transit and take a complimentary home charger with you or have it delivered — and when you're ready, an expert comes out to install it at no charge for a standard install. This takes the guesswork out of installation, including costs, to help you save time and money by filling up at home*." Farley didn't say what type of charger. We have to believe he isn't just throwing in a cheap Level 1 charger. But at least a Level 2 charger. If so, we assume an installed Level 2 is something over $1,000. IF so,, it's basically giving another $1,000 plus discount with the benefit that an EV buyer doesn't have to have the hassle of getting a properly installed Level 2 charger. We suspect they realize that the optics of this are better than just adding more discount than adding more to the *"jumbo* rebates" to get EV sales. Perhaps if Ford really wanted to get Ford EVs sales way up, they should try to do something creative with Ford Insure to cut the higher insurance cost for EVs. The problem with that is that would cost a lot more and on an ongoing basis as opposed to a one-time charger cost. But on the margin, got to believe this will help EV sales to some degree. Our Supplemental Documents package includes the Ford CEO post.

Energy Transition: Ford "There just isn't customer demand" to meet UK BEVs target

Ford won't meet UK EV targets

No one should have been surprised to see the Ford comments on lack of UK customer demand for BEVs and that BEVs sales won't get to 22% of its total car sales in the UK. On Tuesday, we tweeted [LINK] "*More problems for UK's target for car manufacturers to have BEV sales 22% of total car sales. Ford: "there just isn't customer demand", won't meet target, will do "all it can" to avoid reducing sales of petrol and diesel vehicles to hit targets. Reports @JamieNimmo63. See 👇 09/06 @vertumotorsCEO warning that petrol/diesel were being pushed out to 2025 for this reason. #OOTT."* Bloomberg wrote "*Ford Motor Co. is calling on the UK government to reintroduce subsidies to help carmakers hit sales targets as consumers shun electric vehicles. Chancellor of the Exchequer Rachel Reeves needs to bring back incentives in this month's budget to stimulate customer demand for EVs, said Lisa Brankin, chair of Ford UK and the company's managing director for Britain and Ireland. "There just isn't customer demand to meet the objectives," Brankin said in an interview with Bloomberg News. "If it's going to be a success, we need intervention and the government to do something." The UK has introduced rules requiring 22% of new car sales this year to be zero-emission, rising to 80% in 2030."* So if Ford UK can't get BEVs to 22% of total car sales, in theory, that would mean Ford would have to pay fines or stop selling petrol and diesel vehicles. However, Bloomberg reported *"Ford won't meet the 22% target this year, but will use the program's flexibility to avoid fines, Brankin said. The government has set "really ambitious" goals, she added. "If they want those things to happen they've got to support it."* And "*Ford will do "all it can" to avoid reducing sales of petrol and diesel vehicles to hit targets, Brankin said."* Our Supplemental Documents package includes the Bloomberg report.

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Restricting ICE/HEV sales is how UK EVs sales can get to 22% of total cars

The reason why we say no one should be surprised is that we saw this type of warning a month ago that UK BEV sales were not going to make 22% of total car sales and that car manufacturers were already pushing some petrol and diesel sales out to 2025 to not make the BEV problem bigger. Here is what we wrote in our Sept 8, 2024 Energy Tidbits memo. "*Restricting ICE/HEV is how UK BEV 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]*"

Energy Transition: Stellantis sees demand for BEVs weakens

Stellantis BEV demand weakens

On Tuesday, we tweeted [LINK] "*Stellantis CEO to address Italy parliament as demand for electric car weakens" reports @cri_carlevaro. No one should be surprised by weak EU BEV demand. See 👇 09/19 thread: @ACEA says urgent action needed as EU BEV sales were -43.9% YoY in Aug. #OOTT [LINK].*" (i) It looks like the Italian parliament wasn't impressed by Stellantis shutting down the Fiat EV production for a month in response to weak demand. So Stellantis CEO is addressing a parliamentary committee on Oct 11. (ii) Our Sept 15, 2024 Energy Tidbits memo highlighted Stellantis Sept 13 tweet [LINK] *"More EU EVs disappointing sales growth - Fiat to pause 500 EV production. "is necessary due to the current lack of orders linked to the deep difficulties experienced in the European electric (car) market by all producers, particularly the European ones,"* The shortfall in demand is reported to primarily stem from European markets, and in lieu of this demand slump Fiat announced the introduction of a hybrid version of the Fiat 500 which is expected to begin production in 2025 and 2026. Reuters reported: "*The suspension of production will start on Friday, Stellantis said, adding it was "working hard to manage at its best this hard phase of transition".As part of these efforts, the Franco-Italian group said it is investing 100 million euros ($110 million) in*

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Mirafiori to adopt a higher performance battery and will produce a hybrid version of the 500 electric model, starting between 2025 and 2026". (iii) Our Tuesday tweet also attached the Reuters report "*Stellantis CEO to address Italy parliament as demand for electric car weakens*". Reuters wrote "*Stellantis' chief Carlos Tavares will address an Italian parliamentary committee next week on the prospects for the carmaker's production in Italy, the company said on Tuesday, after it warned about poor demand for electric vehicles. The hearing will take place on Oct. 11, Stellantis said in a statement, after announcing it had extended the suspension of production of its Fiat 500 electric city car until Nov. 1 due to weak orders."* And "*A global slowdown in sales of electric vehicles (EVs), partly due to diverging policies on green incentives, has forced automakers worldwide to adjust their EV plans. In an earlier statement on Tuesday, Stellantis said it had told trade unions the electric car market in Europe is "in deep trouble."* Our Supplemental Documents package includes the Reuters report.

Energy Transition: Jeep physical recall of 154,000 PHEVs for fire risk

Jeep recalls 154,000 PHEVs for fire risk

We have to believe the worst fear for EV makers is hear their EVs went on fire for no reason. And unfortunately, it hit Stellantis Jeep PHEVs with a big physical recall of 154,000 PHEVs. On Tuesday, we tweeted [LINK] "*NHTSA Consumer Alert: Important Jeep Grand Cherokee and Jeep Wrangler PHEVs "Park Outside" Recall for Fire Risk. Physical recall of 154,000 Jeep PHEVs. Until then, "owners should park their vehicles outside and away from structures and other vehicles until their vehicle has been remedied. In addition, owners should not charge unrepaired vehicles, because the risk of fire is higher in a charged battery and the risk of fire is reduced when the battery is depleted." #OOTT #EVs."* Good thing these are PHEVs because the recall tells owners to not charge their unrepaired PHEV because of higher risk for fire in a charged battery. Plus, until the PHEV is repaired, owners should park outside and away from structures. Hopefully, Jeep can look at all the PHEVs before winter starts. Our Supplemental Documents package includes the NHTSA consumer alert

Energy Transition: Is IEA backing off peak natural gas demand by 2030?

IEA peak natural gas demand

On Thursday, we tweeted [LINK] "*Is IEA setting up to push back its peak #NatGas consumption this decade? Seems to acknowledge more, not less, #NatGas is needed for #EnergyTransition. Today: increased 2024/25 consumption forecasts, says #NatgGas returned to more pronounced growth, "the decarbonisation of the global energy system will require the deployment and scaling up of low-emissions gases." #OOTT."* The IEA has changed its tone on natural gas demand to the positive, which feels to us as a set up to back off its stated view for natural gas demand to peak by 2030. (i) On Thursday, the IEA posted its "*Global Gas Security Review 2024*", which had a hugely different (positive) view on the demand for natural gas in the coming yeas vs its latest medium term natural gas outlook from Oct 2023. We expect the new medium term natural gas outlook to be released in the coming weeks. (ii) IEA increased its global natural gas consumption forecast for 2024 to 405.3 bcf/d (was 399.0 bcf/d) and for 2025 to 415.4 bcf/d (was 407.7 bcf/d). (iii) There was a huge change in messaging. This year, IEA said *"Following the gas supply shock of 2022/23, natural gas markets have returned to more pronounced growth, with global gas demand expected to reach new all-time highs in both 2024 and 2025*." Last year, the IEA said "*The energy crisis triggered by Russia's invasion of Ukraine marketed a turning point for global natural gas markets. Growth in global gas demand is set to slow down significantly over the medium term (2022-2026). This follows a decade of strong expansion."* (iv) Given the IEA is

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expected to release its annual medium term outlook for natural gas in the coming weeks, it seems this was a set up report f backing off their peak natural gas demand by 2030. Our Supplemental Documents package includes excerpts from this week's Global Gas Security Review 2024 report and last year's Medium term outlook for natural gas report in Oct 2023.

09/12/23: IEA peak demand for oil, natural gas & coal before 2030

The IEA is significant as it is the energy agency for the western governments and the western governments use the IEA forecast for their driving on the energy transition. And on Sept 12, 2023, IEA Executive Director Fatih Birol set the stage for COP28 with the IEA view that peak demand of oil, natural gas and coal would be before 2030. Here is what we wrote in our Sept 17, 2023 Energy Tidbits memo. "*IEA peak demand for oil, natural gas and coal before 2030. On Tuesday (local time), the Financial Times front page story was "World at beginning of end of fossil fuel era, says IEA." The FT posted an op-ed by IEA Executive Director Birol titled "Peak fossil fuel demand will happen this decade" [LINK]. (i) The difference to other calls is that Birol is calling for peak demand for oil, coal and natural gas. Birol wrote "There's a taboo in the traditional energy sector against suggesting that demand for the three fossil fuels — oil, gas and coal — could go into permanent decline. Despite recurring talk of peak oil and peak coal over the years, both fuels are hitting all-time highs, making it easier to push back against any assertions that they could soon be on the wane. But according to new projections from the International Energy Agency, this age of seemingly relentless growth is set to come to an end this decade, bringing with it significant implications for the global energy sector and the fight against climate change. Every year, the IEA's World Energy Outlook maps out potential pathways the global energy system could take in the coming decades to help inform decision-making. This year's report, to be released next month, shows the world is on the cusp of a historic turning point. Based only on today's policy settings by governments worldwide — even without any new climate policies — demand for each of the three fossil fuels is set to hit a peak in the coming years. This is the first time that a peak in demand is visible for each fuel this decade — earlier than many people anticipated." (ii) We don't think anyone will disagree that the world is on track to have demand for each of the fossil fuels peak sometime. But it comes down to when. Not many would disagree with peak coal demand by 2030. The debate on peak oil demand is generally around 2030 with oil bulls more like mid 2030s, and oil bears just before 2030. But not many would expect peak natural gas demand before 2030. (iii) Birol doesn't really emphasize it, but we suspect a significant factor in the new IEA forecast for the timing of peak fossil fuels will be a very large assumed contribution from energy conservation and energy efficiency. (iv) One thing missing from Birol's op-ed is any concern on what this will do to the cost of energy ie. is the world looking at an era that energy will be higher forever? Birol doesn't say he sees these clean alternatives are able to provide reliable, available and affordable energy. (v) Birol gave himself the out to say he warned that there can still be spikes. But he is clearly inferring it isn't a higher price energy environment. Birol says "The declines in demand also won't be linear. Although fossil fuels are set to hit their peaks this decade in structural terms, there can still be spikes, dips and plateaus on the way down." (vi) And of course, Birol says there will still be a need for investment in oil and gas supply even in the face of peak oil and gas demand. Birol says "And even as*

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demand for fossil fuels falls, energy security challenges will remain as suppliers adjust to the changes. The peaks in demand we see based on today's policy settings don't remove the need for investment in oil and gas supply, as the natural declines from existing fields can be very steep. At the same time, they undercut the calls from some quarters to increase spending and underline the economic and financial risks of major new oil and gas projects — on top of their glaring risks for the climate." Our Supplemental Documents package includes the Birol op-ed."

OPEC: "*thinking on fossil fuels is ideologically driven, rather than fact-based*"
On Sept 14, 2023, OPEC responded to the IEA Fatih Birol Sept 12 op-ed. Here is what we wrote in our Sept 17, 2024 Energy Tidbits memo. "*OPEC, "thinking on fossil fuels is ideologically driven, rather than fact-based. It really is a shame for people that there can't be a coming together of the best minds as to how to tackle reducing emissions. Two days after the IEA Birol blog, OPEC wrote "On the International Energy Agency's recent Op-Ed published on 12 September 2023, asserting that fossil fuel demand would peak before 2030, OPEC notes that consistent and data-based forecasts do not support this assertion." [LINK] It is a short release and an easy read. OPEC presents a simple case – the IEA blog on the peaking of fossil fuels demand is not fact based. OPEC says "This thinking on fossil fuels is ideologically driven, rather than fact-based", describes the policies as "experimental net zero policies", and describes them as "predictions". And OPEC is concerned that as opposed to prior predictions that didn't come true for peak oil demand, this time it's dangerous because there is the call to stop investing in oil and gas. OPEC writes "the difference today, and what makes such predictions so dangerous, is that they are often accompanied by calls to stop investing in new oil and gas projects. "Such narratives only set the global energy system up to fail spectacularly. It would lead to energy chaos on a potentially unprecedented scale, with dire consequences for economies and billions of people across the world," says OPEC Secretary General, HE Haitham Al Ghais." Our Supplemental Documents package includes the OPEC release."*

02/19/24: Macron, IEA is "*our armed wing of implementing*" Paris agreement
We think that it's hard for anyone to look at the IEA's forecasts as being independent especially as France President Macron stated the IEA is not independent. Rather the IEA's forecasts are really there to support the western government's desire to eliminate fossil fuels. Here is what we wrote in our Feb 25, 2024 Energy Tidbits memo. "*Macron, IEA is "our armed wing of implementing" Paris agreement. We were shocked by France President Macron's comment on the IEA. On Monday, we tweeted [LINK] "The IEA has become, so to speak, our armed wing of implementing the Paris agreement" Macron. The IEA has no guns, is Macron saying analysis/fcasts are their weapons to implement Paris as opposed to analyzing energy! Saudi Energy Minister Abdulaziz will say I told you so! #OOTT." Macron made the keynote speech at the IEA Ministerial Meeting in Paris that also celebrated the IEA's 50th anniversary. We were surprised that Macron made such a direct comment that made it clear the IEA's focus is on implementing the Paris Agreement on behalf of the western governments that fund the IEA. This was not an accident, rather it looked like a prepared speech Macron read from a teleprompter. So, for some reason, Macron*

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wanted the world to know the IEA is there to the "armed wing" for their western country funders to implement the Paris agreement. And not an agency that provides analysis for their western governments to make the right policy decisions. But, if we take Macron at his words, the IEA's analysis is there to support policy or provide the impetus for their western government funders to make policy to support the conclusions of the analysis. And to provide the western governments with the rationale for why they make policies for Paris Agreement. It was a major ht to the IEA credibility and we just don't understand why Macron did it unless he wanted to hurt the IEA's credibility. Here is the transcript we made of Macron's comments that was attached to our tweet. Note that we made the transcript from the IEA's posting of Macron's speech. The IEA just didn't include the full Macron quote. At 0;52 min mark, Macron "We are also very proud that since its creation, the Agency has been able to profoundly shift its mandate. From an agency dedicated to managing strategic oil reserves, it has now become a global hub for debate, collective action to meet the challenge of the energy transition. The IEA has become, so to speak, our armed wing of implementing the Paris agreement, given that energy accounts for more than 75% of global greenhouse gas emissions."

IEA's prior view on their "analysis"

Here is another items from our Feb 25, 2024 Energy Tidbits memo on the IEA's independence. *"Every fall, the IEA posts their major report Oil and the year ie. Oil 2023, which is their analysis and forecast for the next five years. The last time they included a foreward by Executive Director Birol was in their Oil 2019 report. Here is the last paragraph of his foreward "The IEA's core mandate has always been energy security. Our mission has expanded over the years and the definition of energy security has also evolved beyond oil to include natural gas and electricity. But oil market analysis remains a central focus of the IEA, which we demonstrate through our vigilent analysis of market developments and their consequences. We hope this report contributes to a better understanding of the sector and helps develop policies supporting the longer term transition to a more secure but also a more sustainable energy future."*

Canada uses IEA scenarios as if they are data- based

Here is what we wrote in our Feb 18, 2024 Energy Tidbits memo on how countries like Canada use the IEA works as if it an unbiased analysis and forecast. We then wrote "*We continue to see one of our concerns play out – western leaders use the IEA scenarios as if they are forecasts. And despite these being scenarios of what if's, the western leaders want use these scenarios to support their policies, in this case the push to net zero. And that is why we have warned for several years that the Energy Transition will take way longer, cost way more and be a bumpy/rocky road. The question is do they not read the IEA work or just choose to use it as something it isn't. Either way, the Energy Transition plans aren't based on data but based on what if's. Canada's Energy & Natural Resources Minister, Jonathan Wilkinson, gave a good reminder of this in his interview with Bloomberg on Wednesday morning. Its like the western leaders are using scenarios based on what they are saying is policy to set policy. We tweeted [LINK] "Unfortunately, a big difference between data driven forecast vs a scenario based on stated policies! CA Energy Minister, "when the IEA*

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SAYS that #Oil #NatGas #Coal utiliization is gong to peak this decade, that is based on the data that show actually much of this is becoming uneconomic" IEA WEO 2023 peak demand was based on a "Stated Energy Policies Scenario" #OOTT @ManusCranny @daniburgz." Wilkinson gave the perfect example and it seems like his staff never read the assumptions when IEA Fatih Birol came out in Sept in his call for peak oil, natural gas and coal demand by 2030 that he said would be detailed in IEA big World Energy Outlook 2023 in Oct. Wilkinson said that the IEA call for peak oil, natural gas and coal demand is NOT based on policy. We made a transcript of his comments. At 3:23 am MT, Wilkinson "But I would say that a lot of this is just being driven by straight economics and by the financial markets. Like when the IEA says that oil, gas and coal utilization is going to peak this decade, that is based on the data that shows that actually much of this is becoming uneconomic for a whole range of different reasons". His staff didn't read the IEA executive director Birol FT op-ed or IEA world energy outlook key findings. Our tweet included the FT Fatih Birol op-ed and the excerpt from IEA World Energy Outlook Oct 2023 that both indicate the call for peak oil, natural gas and coal this decade is based on policy statements coming true. The IEA WEO wrote "The analysis does not present a single view of the future but instead explores different scenarios that reflect current real-world conditions and starting points. The Stated Policies Scenario (STEPS) provides an outlook based on the latest policy settings, including energy, climate and related industrial policies." And "We are on track to see all fossil fuels peak before 2030. A legacy of the global energy crisis may be to usher in the beginning of the end of the fossil fuel era: the momentum behind clean energy transitions is now sufficient for global demand for coal, oil and natural gas to all reach a high point before 2030 in the STEPS. The share of coal, oil and natural gas in global energy supply – stuck for decades around 80% – starts to edge downwards and reaches 73% in the STEPS by 2030. This is an important shift. However, if demand for these fossil fuels remains at a high level, as has been the case for coal in recent years, and as is the case in the STEPS projections for oil and gas, it is far from enough to reach global climate goals

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

HEVs/PHEVs are just fuel efficient ICE vehicles

The big winner in the EU cars sales in 2024 continues to be hybrids. The ACEA data has all power sources car sales down YoY in Aug except HEVs that were +6.6% YoY. And forYTD Aug 31, all major fuel sources car sales are down YoY excerpt HEVs that are +21.1% YoY. PHEVs are down but way less than BEVs reflecting the shift of BEV buyers into PHEVs. No one can deny an HEV will burn less gasoline or diesel than its ICE counterpart. However, we still find many don't understand that HEVs and even 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 Thursday, we tweeted [LINK] "*Reminder HEVs and PHEVs are really just more fuel efficient ICE vehicles. See 👇Sept 4 tweet for the numbers. #OOTT.*" Our tweet included our Sept 4 tweet [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.*" (ii) 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

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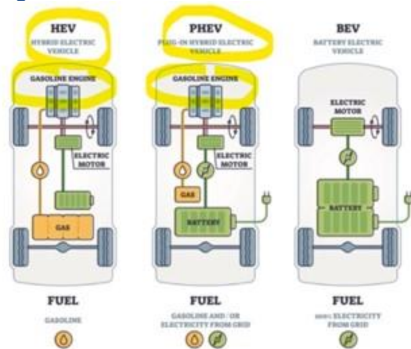
ICE has a much larger towing capacity. The F150 ICE 3.5L cyl F-150 does 19 MPG with a tow capacity of 13,500 lbs. The F150 HEV 3.5L 6 cyl F-150 does 23 MPG with a tow capacity of 11,200 lbs. (iii) Volvo PHEV. Most just lump PHEVs in with EVs because both are electrified. But the reality is that a lot 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. (iv) We also believe that Volvo has likely picked the best time period for PHEVs driving in battery mode. We would 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 their ICE mode.

Figure 66: HV vs PHEV vs BEV



Source: Engineering Infrastructure

Capital Markets: India sees per capita income doubling in five years

India per capita income to double

Yesterday, we tweeted [LINK] "*Great reminder why investors & companies will be focusing on India. "The upcoming decades will see the steepest rise in living standards for the common man" as per capita income to increase from $2,700 to $4,700 in 5 yrs. @nsitharaman. Increased living standards = accelerated energy consumption! #OOTT [LINK]."* When we saw India Finance Minister Nirmala Sitharaman's Friday comments on the projected big increase in per capita income, it reminded us of China from 20 years ago on how the common person started to see big per capita income increases from the bottom of the pyramid income levels. Because when the bottom of the pyramid starts to move up, it typically means the levels above them have also moved. LiveMint reported "*India's youth and rising middle class will drive a surge in consumption, innovation, and investment, with per capita income projected to increase by $2,000 in five years, finance minister Nirmala Sitharaman said on Friday. India's young population, with 43% under 24, is yet to fully explore its consumption behaviour, stated Sitharaman during the third Kautilya Economic Conclave. "There will be an organic growth in consumption as they become full fledged consumers. Simultaneously, a rising middle class will pave the way for strong consumption, inflow of foreign investment and a vibrant marketplace," she said." "While it took us 75 years to reach a per capita income of $2,730, as per IMF projections, it will take only five years to add another $2,000. The upcoming decades will see the steepest rise in living standards for*

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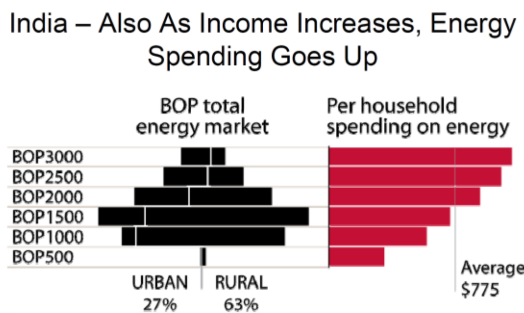
the common man, truly making it a period-defining era for an Indian to live in," she said." Our Supplemental Documents package includes the LiveMint report.

Increasing bottom of pyramid income levels = accelerated energy consumption
Our tweet included our energy reminder that Increased living standards = accelerated energy consumption! That is not a new concept. Rather it is one that we have included in Energy Tidbits since 2007. It is what happens as the bottom of the pyramid levels rise up, it elevates the BOP group to want the basics like electricity and running water. The below chart is from a Sept 2007 long term energy outlook presentation I gave in my GMP Securities days to one of the top Cdn institutional investors strategy meeting. It a reminder that as income levels increase at the BOP, there is an accelerated increase spend on energy.

Figure 67: India, as income increases, energy sending goes up



Source: World Resources Institute

Capital Markets: East and Gulf Coast ports contract extended to Jan 15, 2025

East/Gulf Coast ports strike on hold for now

There was some good news on Thursday that the International Longshoremen's Association and the United States Maritime Alliance agreed to a tentative deal on wages and extended their existing labor contract until Jan 15, 2025 so that they can continue to negotiate the other outstanding issues such as automation. This means the ports have reopened at least for now. As the news broke this week, on Monday afternoon, we tweeted [LINK] "*Feels like both sides realize a East/Gulf Coast ports strike would be at the worst possible time with Hurricane Helene impacting so many. Union "both sides have move off their previous positions. We are hopeful this could allow us to fully resume collective bargaining around the other outstanding issues - in an effort to reach an agreement" #OOTT."* The Union had just announced how parties had moved off their positions. We had thought that maybe the strike could be avoided as it would have come at a terrible time given the impacts of Hurricane Helene. But the strike happened but fortunately it only lasted two days. And, at least for now, the work stoppage ended.

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East and Gulf Coast ports strike would have been a big impact
On Tuesday, we tweeted [LINK] *"Longer shipping = more bunker fuel consumed. #SupplyChain interruptions from East & Gulf Coast port shut down will see ships revise routes. 👇Great East/Gulf Coast Ports' share of key goods from @LouKCurtis @josh_wingrove ie. coffee going higher! #OOTT [LINK]."* Our tweet included Bloomberg's table that show East and Gulf Coast ports share of key goods imports and exports as well as the map of the key ports. Who knows, maybe this will come back to be an issue in January.,

Figure 68: East and Gulf Coast Ports' share of key goods

East and Gulf Coast Ports' Share of Key Goods

%share of imports and exports most affected by strike	Imports	Exports
Tin products	85.5	—
Tobacco, nicotine	78.0	—
Dairy products, eggs, honey	75.3	—
Synthetic fibers, yarns, woven fabrics	72.8	—
Carpets, textile floor coverings	72.5	—
Coffee, tea, spices	70.7	—
Ships, boats, floating structures	65.6	—
Essential oils, perfumes, cosmetics	61.5	—
Copper products	61.4	—
Tobacco, nicotine	—	85.1
Synthetic fibers, yarns, woven fabrics	—	76.6
Wood pulp, recovered waste	—	69.1
Ships, boats, floating structures	—	57.1
Cotton products	—	53.1
Arms and ammunition	—	47.7
Wood products	—	46.5
Food industry residues, animal feed	—	45.6
Beverages, spirits, and vinegar	—	45.0

Source: Oxford Economics, USA Trade Online   Bloomberg

Source: Bloomberg

Figure 69: Major East and Gulf Coast Ports

Source: Bloomberg

Capital Markets: Surely Trudeau will give into Bloc Quebecois to avoid an election now
On Wednesday, Bloc Quebecois Leader Yves Francois Blanchet said he would give Trudeau a few more days to agree to pass the Bloc's bill that would increase the Old Age Security for all people 65 years and older, instead of the change that only affected those 65 years and older. Blanchet said if Trudeau doesn't agree, he says he is prepared to enter into discussion

Will Trudeau give in to Bloc?

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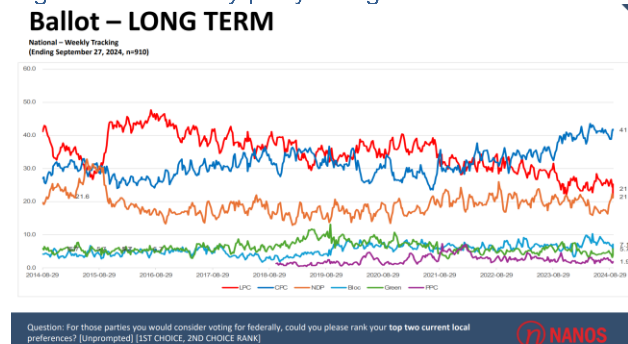
with other parties to defeat the Liberals government. The estimates are that this would cost >$16 biillion over the next five years. Unless Trudeau thinks Blanchet is bluffing, we just don't see how Trudeau won't give in as the polls show the Liberals could get wiped out in an immediate election. Note we pulled the data that shows Quebec has a significantly higher % of people ages 65-74 than Canada on an overall basis but ran out of time this morning to include. We will include the demographic data in next week's memo.

Nanos poll shows Liberals would have huge losses In an election.
On Tuesday, Nanos Research posted its polling update "*Conservatives 42, NDP 22, Liberals 22 > NDP tied with Liberals for first time since 2015. (Nanos)*" [LINK]. Nanos wrote " *Conservatives enjoy a 20-point advantage over the NDP and the Liberals. In the wake of the end of the Liberal-NDP parliamentary arrangement, the New Democrats are now tied with the Liberals for the first time since August 2015 in the weekly Nanos tracking*." The huge lead for the Conservatives may not surprise bu the fact that the NDP and Liberals are tied will surprise many.

Figure 70: Ballot by party– long term



Source: Nanos Research

Trudeau can say lowering old age security bonus is what Canadians want
We have to believe Trudeau will use it's what Canadians overwhelmingly want as his out to agree with Blanchet. On Thursday, Nanos Research posted its poll "*Most Canadians support or somewhat support extending Old Age Security benefits increase to seniors 65 to 74. (CTV News/Nanos).*" [LINK] Nanos wrote "*More than 3 in 4 Canadians support or somewhat support providing a 10% increase to benefits to seniors 65 to 74 now, as was done for seniors aged 75 and older in 2022. Support is strong across regions in Canada and across gender and age groups.*"

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Figure 71: Support for extending Old Age Security benefits

Source: Nanos Research

Capital Markets: UN FAO Food Price Index up MoM in September, +2.1% YoY

UN food price index up MoM

The UN Food Price Index is a monthly food commodities measure and not an index of consumer food prices or food prices in grocery stores. However, increases or decreases in food commodity prices should, in theory, eventually work their way into grocery prices. The UN Food Price index has been gradually decreasing since the middle of 2023, however, September marked the largest MoM increase since March 2022. On Friday, October 4, the UN posted its monthly update of its FAO Food Price Index titled "*Higher quotations across the board push the FAO Food Price Index up in September*" [LINK]. Note that the index is calculated on a Real Price basis. The FFPI averaged 124.4 points in September, up from 120.7 in August, and is up +2.1% YoY. All FFPI reported categories saw increases in August. The Vegetable Oil Index was up +4.6% MoM from August, up +17.8% YoY, and marks the highest level since early 2023. The increase was driven by increasing quotations for palm, soy, rapeseed, and sunflower oil quotations. The Dairy Price Index was up +3.8% MoM and up +21.7% YoY. The Cereal Price Index was up +3.0% MoM which is -10.2% YoY. The Meat Price Index was up +0.4% MoM and up +4.8% YoY. The Sugar Price Index was up +10.4% MoM and down -22.7% YoY.

Figure 72: UN FAO Food Price Index0

Source: UN FAO

Capital Markets: Germany manufacturing PMI continues downward trend

Germany manufacturing PMI going even lower

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.

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Cutting off cheap Russian natural gas has been the big hit to Germany's heavy industry. On Thursday, we tweeted [LINK] *"Brutal outlook for German manufacturing. "health of the German manufacturing sector took a further turn to the worse in Sept" "it is hard to picture any type of recovery happening soon" @CyrusdelaRubia Highlights car co's. "We attribute this to the "China shock". Many companies, especially in the automotive and mechanical engineering sectors, have not yet found convincing answers to the sudden intensification of competition" #OOTT".* On Tuesday, the HCOB Manufacturing PMI for Germany showed another contraction in September from an already low number. It came in at 40.6 for September, down from 42.4 in August. It was the lowest level in 12-months. We recognize there is more to manufacturing than energy prices but German manufacturing no longer has a competitive advantage by having cheap Russian pipeline natural gas. Below is the Bloomberg graph of HCOB Manufacturing PMI and we noted the key events of Russia cheap natural gas pipeline gas being cut off and that looks like a correlation to lower German manufacturing PMI. Our Supplemental Documents package includes excerpts from the HCOB Manufacturing PMI.

Figure 73: Germany HCOB Manufacturing PMI incl Sept & Russian natural gas events

Source: Bloomberg

09/24/24: Germany manufacturing outlook fell to lowest level since June 2020

Last week's (Sept 29, 2024) Energy Tidbits memo highlighted how the ifo Institute Business Climate Index for Germany fell to its lowest level since June 2020. Here is what we wrote last week. "*Germany manufacturing index fell to its lowest level since June 2020. No surprise, the German business sector continue to look a declining business climate index. On Tuesday, Bloomberg interviewed Clemens Fuest on the then just released ifo Institute Business Climate Index for Germany. The ifo Institute posted its Business Climate Index for Germany and is message was clear and it continues to show a negative outlook. On Friday, we tweeted* [LINK] *"ICYMI. German @ifo_Institut Business Climate Index. "in manufacturing, the index fell to its lowest level since June 2020...the core sectors of DEU industry are struggling". The core sectors (auto, machinery, chemical) are energy intensive & energy costs are way higher post end of cheap Russia pipeline #NatGas. #OOTT." The ifo wrote. "The outlook for the coming months continues to decline. The German economy is coming under ever-increasing pressure. In manufacturing, the index fell to its lowest level since June 2020. The companies assessed their current situation to be significantly poorer. Expectations are also significantly more pessimistic. The lack of orders has intensified. The core sectors of Germany industry are struggling". In the interview,*

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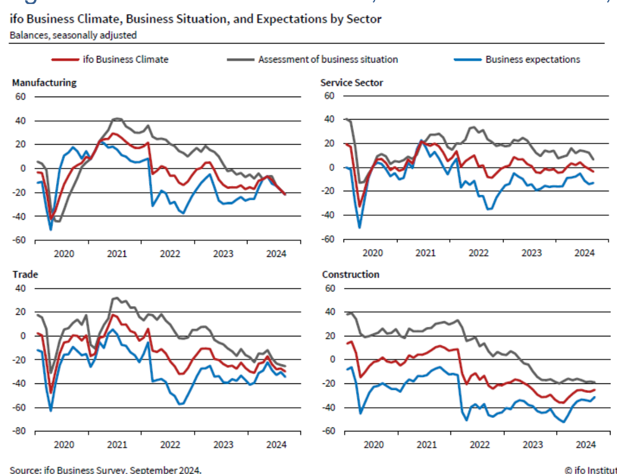
Bloomberg starts off the interview asking what are the biggest headwinds to the EU economy that has Germany at the core. Ifo's Clemens Fuest replies "well I would say the key weakness is manufacturing, which is so important for the German economy. We see this weakness across the board really – machinery, the chemical industry, electrical equipment and the car industry. Companies are telling us we are lacking orders". It jumped out at us that the common denominator for the highlighted industries is that they are high energy consumers and China is a key export market. Note later in the interview Bloomberg asks if we are getting to a floor in manufacturing. Fuest replies "well the trouble is that we are seeing a decline in investment in manufacturing and, as long as we see that, the worry is that the production potential of this industry is declining further .. it's not quite clear when we will be reaching the floor …. It's difficult see a floor. It's really weakness of investment in Germany". Our Supplemental Documents package includes the ifo Business Climate Index Sept 2024. [LINK]"

Figure 74: ifo Business Climate, Business Situation, and Expectations by Sector



Source: Bloomberg, ifo Institute

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.

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LinkedIn: Look for quick energy items from me on LinkedIn

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

Look for energy items on LinkedIn

Misc Facts and Figures.

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

Almost impossible for the 0-4 Jaguars to make the playoffs

It's only week 4 of the NFL seasons but, in a relatively short 17-game season that sees 14 of 32 teams make the playoffs, every game counts. Almost all of the 0-2 teams won to go to 1-2. There were nine 0-2 teams and now that was down to three 0-3 teams going into last weekend's games - Cincinnati Bengals, Jacksonville Jaguars and Tennessee Titans. The Bengals and Titans both won, leaving the Jaguars as the only 0-4 team going into this today's games. History says it's not impossible but almost impossible for the Jaguars to make the playoffs. Ther ehas only been one NFL team in history to make the playoffs after starting 0-4: the 1992 San Diego Chargers. The Chargers finished 11-5 and won the AFC West title. The Chargers beat the Kansas City Chiefs in the wild card round before losing in the in the divisional round by the Miami Dolphins.

First time I have ever heard an earthquake

I have had felt the rumble of an earthquake a few times that were several hundred kms away but never actually heard an earthquake until this week. On Thursday morning, in response to reports unconfirmed earthquakes near San Jose del Cabo, I tweeted [LINK] "*Two earthquakes not one. 2nd was bigger. We are on the hill over the One and Only Palmilla just outside San Jose del Cabo. It wasn't rumbling, rather our casita shook twice with sound. packed up passport and laptop as thought it might have been a gas explosion or something.*" These were not huge earthquakes but Mexico reports were just over 5 km from our place so I heard sound and felt our house shake. The good news about starting work early is that I was at my desk when the first one hit. Mexico reports it was a 2.3 that was 9 km SW of San Jose del Cabo. And our place is about 3 km south of San Jose del Cabo. After hearing the sound, went outside and good news didn't see any fires or anything. But when the 2.5 hit 11 minutes later, I packed up and got in the car just in case. The second one was a 2.5 that was 8 km SW of San Jose del Cabo. Mexico reported a dozen less than 2 in and around that time. Since then, heard and felt another one yesterday that

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Figure 75: 2.5 earthquake 8 km SW of San Jose del Cabo

Seismic-like event, possible earthquake, reported few minutes ago near San José del Cabo, Baja California Sur, Mexico

Thu, 3 Oct 2024, 12:09 | BY: EARTHQUAKEMONITOR

Unconfirmed quake or seismic-like event reported: 7.2 km southwest of San José del Cabo, Baja

Source: Earthquake Monitor

Wine of the week: 1995 Pontet- Canet

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 1995 Chateau Pontet-Canet, a Pauillac on the Left Bank. I only decanted the wine for a few hours. This is a fifth growth based on the original classification that many believe would be second growth if there was a reclassification. It was very good and it is another reminder that the Bordeaux wines are surprisingly good for longer than expected. 1995 Chateau Pontet-Canet was ranked #15 of Wine Spectator wines of top 100 of 1998 I forgot I had Chateau Pontet -anet, which in addition to Chateau Lynch Bages are two fifth growth (Cinquiemes Cru) that I bought regularly in the 90s and 2000s as they weren't expensive and were good.

Figure 76: 1995 Pontet Canet

Source: SAF Group

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