

# Energy Tidbits

June 30, 2024

Produced by: Dan Tsubouchi

## Barclays CEO: “*The world and the world economy cannot go cold turkey on this [Oil, Natural Gas] tomorrow*”

**Welcome to new Energy Tidbits memo readers.** We are continuing to add new readers to our Energy Tidbits memo, energy blogs and tweets. The focus and concept for the memo was set in 1999 with input from PMs, who were looking for research (both positive and negative items) that helped them shape their investment thesis to the energy space, and not just focusing on daily trading. My priority was and still is to not just report on events, but also try to interpret and point out implications therefrom. The best example is the review of investor days, conferences and earnings calls focusing on sector developments that are relevant to the sector. My target is to write on 50 weekends per year and to post by noon MT on Sunday. The Sunday noon timing was because PMs said they didn't have research to read on Sundays and Sundays are a day when they start to think about the investing week ahead.

This week's memo highlights:

1. Barclays CEO says “*The world and the world economy cannot go cold turkey on this [Oil, Natural Gas] tomorrow*” [\[click here\]](#)
2. Too early to know if what happens to Hurricane Bery. Will it hit veer north into the GoM Gulf Coast or hit Yucatan Peninsula as forecast and, if so, will it re-emerge in the Gulf Coast? [\[click here\]](#)
3. May was 3<sup>rd</sup> consecutive month and 5<sup>th</sup> of last 7 months for negative China net monthly foreign direct investment [\[click here\]](#)
4. US oil rigs were -6 WoW to 479 oil rigs, which is -66 oil rigs YoY and the lowest oil rigs since Dec 2021 [\[click here\]](#)
5. Cdn mutual funds saw net redemptions in May of \$3.3b in balanced funds and \$0.9b in equity funds to bring YTD 2024 net redemptions to \$14.9b for balanced funds but net sales of \$0.4b in equity funds. [\[click here\]](#)
6. I ran out of time on Friday and Saturday to get all the items written up for this weekend.
7. 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.
8. 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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## Table of Contents

Natural Gas: Still a risk US natural gas storage gets filled early .....	7
Figure 1: US Natural Gas Storage .....	7
Natural Gas: +52 bcf build in US gas storage; now +314 bcf YoY .....	7
Figure 2: US Natural Gas Storage .....	7
Natural Gas: No change, NOAA forecasts hot 1 <sup>st</sup> half of July .....	8
Figure 3: NOAA 6-10 day temperature outlook for July 5-9 .....	8
Figure 4: NOAA 8-1 day temperature outlook for July 7-13 .....	8
Figure 5: NOAA Monthly Temperature Outlook for July .....	9
Natural Gas: US natural gas production down -1.2 bcf/d MoM in April .....	9
Figure 6: US dry natural gas production .....	9
Natural Gas: US natural gas pipeline exports to Mexico up +8.1% MoM, +12.4% YoY .....	10
Figure 7: US Natural Gas Pipeline Exports to Mexico .....	10
Natural Gas: US LNG exports down -15.1% MoM and -19.0% YoY to 10.1 bcf/d in April .....	10
Figure 8: US Monthly LNG Exports .....	11
Figure 9: Natural gas inflows to Freeport LNG .....	11
Natural Gas: Mexico's natural gas production stuck below 5 bcf/d .....	11
Figure 10: Mexico Natural Gas Production .....	12
Natural Gas: Saudi Aramco and Sempra announce a 20-year Long-term LNG Deal .....	12
Figure 11: Long-Term LNG Buyer Deals Since July 1, 2021 .....	13
Natural Gas: WMO forecasts hot Jun/Jul/Aug around the world .....	13
Figure 12: WMO Temperature Forecast for Jun/Jul/Aug .....	14
Natural Gas: Japan expects warmer than normal temperature thru July .....	14
Figure 13: JMA Average Temperature Outlook for June 29 – July 28 .....	14
Natural Gas: JMA forecasts above average temperatures for Jul/Aug/Sept .....	14
Figure 14: JMA Average Temperature Outlook for Jul/Aug/Sep .....	15
Natural Gas: Japan LNG stocks down WoW, flat YoY .....	15
Figure 15: Japan LNG Stocks .....	15

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Natural Gas: BloombergNEF forecast Europe gas storage full by end of Sept .....	15
Figure 16: Europe Gas storage forecast .....	16
Natural Gas: Europe storage builds WoW to 76.5%, down -0.1% YoY .....	16
Figure 17: European Gas Storage Level .....	16
Figure 18: Ukraine Gas Storage Facilities as of July 2023 .....	17
Oil: US oil rigs down -6 rigs WoW at 479 rigs, US gas rigs down -1 rig WoW to 97 rigs .....	17
Figure 19: Baker Hughes Total US Oil Rigs .....	18
Oil: Permian oil drill rigs to be impacted by Waha natural gas prices flip negative .....	19
Figure 20: Waha Natural Gas Prices .....	19
Figure 21: Percent of responses what impact low Waha prices on rest of 2024 drilling plans .....	20
Oil: Total Cdn rigs up +10 rigs WoW, ramping up post spring breakup .....	20
Figure 22: Baker Hughes Total Cdn Oil Rigs .....	20
Oil: US weekly oil production flat WoW at 13.200 mmb/d .....	20
Figure 23: EIA's Estimated Weekly US Field Oil Production (mb/d) .....	21
Figure 24: EIA's Estimated Weekly US Oil Production .....	21
Oil: EIA Form 914 – US April oil production up MoM, up YoY .....	22
Figure 25: EIA Form 914 US Oil Production vs Weekly Estimates .....	22
Oil: Small vs Big US oil have different views on how M&A will impact US oil production .....	22
Figure 26: Will M&A have any impact on US oil production over the next 5 years? .....	23
Oil: US SPR less commercial reserve deficit widens, now -88.499 mmb .....	23
Figure 27: Strategic Petroleum Reserve Stocks and SPR WoW Change .....	23
Figure 28: US Oil Inventories: Commercial & SPR .....	23
Figure 29: US Oil Inventories: SPR Less Commercial .....	24
Oil: US oil demand in April was 440,000 b/d above EIA STEO forecast for April .....	24
Oil: US national average gasoline price +\$0.05 WoW to \$3.50 .....	24
Figure 30: Bloomberg's National Average Gasoline Prices .....	24
Oil: Crack spreads flat WoW at \$24.36 .....	25
Figure 31: Cushing Oil 321 Crack Spread & WTI June 28, 2014 to June 28, 2024 .....	25
Oil: Cdn heavy oil differentials widen \$1.10 WoW to close at \$14.00 on June 28 .....	26
Figure 32: WCS less WTI oil differentials to June 28 close .....	26

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Oil: CER reports Cdn crude by rail exports at 96,323 b/d in April, up +20.4% YoY .....	26
Figure 33: Cdn Crude By Rail Exports vs WCS Differential .....	27
Oil: EIA reports total Cdn crude by rail imports -22,444 b/d MoM in Apr, PADD 3 down.....	27
Figure 34: US Imports of Canada CBR to US Gulf Coast vs WCS Differential.....	27
Oil: Refinery Inputs down -0.233 mmb/d WoW to 16.532 mmb/d .....	28
Figure 35: US Refinery Crude Oil Inputs .....	28
Oil: US net oil imports up +0.065 mmb/d WoW as oil exports down -0.443 mmb/d WoW.....	28
Figure 36: US Weekly Preliminary Imports by Major Country .....	29
Oil: Mexico oil production including partner volumes up MoM to 1.524 mmb/d .....	29
Figure 37: Pemex (Incl Partners) Mexico Oil Production .....	30
Oil: Mexico exports up +33.8% MoM to 0.911 mmb/d of oil in May .....	30
Figure 38: Pemex Mexico Oil Exports .....	30
Oil: Reuters, sources say new Olmeca refinery is well behind Pemex CEO indications .....	30
Oil: US oil imports from Venezuela hit 209,000 b/d in April.....	32
Figure 39: UA oil imports from Venezuela.....	32
Oil: Angola now producing more than prior OPEC+ quota.....	33
Figure 40: Angola's Production limits from OPEC.....	33
Oil: Russia's seaborne crude oil exports drop the most in three months .....	33
Figure 41: Russia's Seaborne Crude Shipments .....	34
Figure 42: Russian Crude Exports to Asia .....	35
Oil: Ukraine hits oil depot at Druzhba pumping station in central Russia.....	35
Figure 43: Druzhba oil pipeline, Aug 2022 .....	36
Oil: Russian refineries crude processing lowest since May 2022 .....	37
Figure 44: Russia refinery runs.....	37
Oil: Iran says \$3b can add 400,000 b/d, a crazy low cost to add oil production .....	37
Oil: Seems like Houthis are advancing their drones/missile capabilities.....	38
Figure 45: Houthis missile attack east of Socotra .....	38
Oil: May sees 3 <sup>rd</sup> Consecutive Negative Net Monthly FDI into China .....	38
Figure 46: China net monthly foreign direct investment .....	39
Figure 47: Historical table of China's net monthly foreign direct investment.....	39

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Figure 48: Foreign Direct Investment in China .....	40
Oil: Baidu China city-level road congestion MTD Jun 26 is 1 <sup>st</sup> down YoY month .....	40
Figure 49: China city-level road congestion for the week ended June 26.....	41
Figure 50: China city-level road congestion for the week ended June 26.....	41
Oil: China official Manufacturing PMI 2 <sup>nd</sup> mth of contraction after 2 expansions .....	41
Figure 51: China Official General Manufacturing PMI .....	42
Oil: China to reach peak diesel demand sooner than expected.....	42
Oil: Vortexa crude oil floating storage est 73.83 mmb at June 28, -23.81 mmb WoW .....	43
Figure 52: Vortexa Floating Storage Jan 1, 2000 – June 28, 2024, posted June 29 at 9am MT.....	44
Figure 53: Vortexa Estimates Posted 9am MT on June 29, June 22, and June 15.....	44
Oil: Vortexa crude oil floating storage WoW changes by regions .....	44
Figure 54: Vortexa crude oil floating by region .....	45
Oil: TSA says the 7 busiest air travel days have been since May 24.....	45
Figure 55: TSA Top 10 Busiest Travel Days .....	45
Oil: Asia/Pacific intl May passenger air travel up +23.9% YoY but -10.4% vs 2019 .....	45
Figure 56: APAA Preliminary International Air Traffic Data.....	46
Oil: Europe airports daily traffic 7-day moving average is -2.9% below pre-Covid levels .....	46
Figure 57: Europe Air Traffic: Daily Traffic Variation to end of June 27 .....	47
Oil: Delta CEO sees US air travel constraints for another 3-5 years .....	47
Oil & Natural Gas: Hurricane Beryl expected to be Cat 4, not clear if will go into GoM.....	47
Figure 58: Hurricane Beryl as of 5am MT June 30.....	48
Oil & Natural Gas: EIA's interactive hurricane tracking vs oil and gas wells/infra.....	48
Figure 59: Hurricane Beryl as of 5am MT June 30.....	48
Oil & Natural Gas: Hurricane track map rule of thumb – the Dominican Republic.....	49
Figure 60: Atlantic hurricane track map for 2021.....	49
Oil & Natural Gas: 90% of Atlantic hurricanes come after Aug 1, peak is normally mid-Sept .....	49
Figure 61: Atlantic hurricane and tropical storm activity by month .....	50
Figure 62: Northern Virginia is #1 global data center market .....	52
Figure 63: Benefits for data centers in Virginia.....	53
Figure 64: Dominion Virginia 2022 actual energy capacity mix and actual energy mix .....	53

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Energy Transition: Barclays, world economy cannot go cold turkey on natural gas .....	53
Energy Transition: Big hit to Canada EV sales if follow US in big tariffs on China EVs.....	54
Energy Transition: GE Verona, offshore wind will be very expensive .....	55
Energy Transition: Europe wind and solar have offsetting seasonal peaks/troughs.....	55
Figure 65: BloombergNEF wind generation outlook.....	56
Figure 66: BloombergNEF solar generation outlook .....	56
Energy Transition: EverGen says it gets \$36.92/mcf for its RNG sales to Cdn utilities .....	56
Figure 67: EverGen’s “Out Offtake Advantage.....	57
Energy Transition: Lufthansa 1 <sup>st</sup> environmental cost surcharge (ie. SAF costs).....	57
Energy Transition: J.D. Power, EVs & Hybrids require way more repairs than ICE .....	59
Figure 68: Brand Ranking - J.D. Power 2024 U.S. Initial Quality Study <sup>SM</sup> (IQS).....	60
Figure 69: % of Ev owners likely to switch back to ICE.....	61
Energy Transition: Denmark introduces carbon tax on cattle and pigs.....	61
Figure 70: Denmark, Head of cattle, including dairy cows .....	62
Figure 71: Denmark, Number of pigs .....	62
Capital Markets: Hard to see Biden making it to election day .....	62
Capital Markets: Will Trudeau talk a walk along the beach in Tofino this summer? .....	64
Capital Markets: IFIC, mutual funds equity & balanced funds at net redemptions in May.....	64
Figure 72: Cdn Mutual Fund Net Sales/Net Redemptions (\$ Millions).....	65
Figure 73: Cdn Mutual Fund Net Sales/Net Redemptions (\$ Millions).....	65
Capital Markets: USDA Consumer Price Index May for food +0.1% MoM, +2.1% YoY .....	66
Capital Markets: Walgreens, consumers increasingly price sensitive, stock -22%.....	66
Demographics: Thousands stranded by AMFA strike on WestJet during long weekend .....	66
Demographics: Early cancer screening something everybody should think about.....	67
Twitter: Thank you for getting me to 10,000 followers.....	67
LinkedIn: Look for quick energy items from me on LinkedIn .....	67
Misc Facts and Figures.....	67

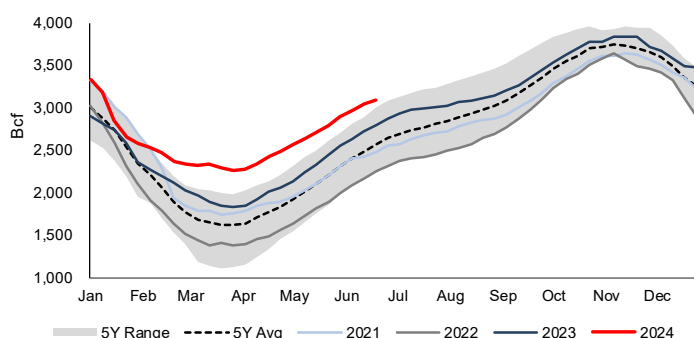
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**Natural Gas: Still a risk US natural gas storage gets filled early**

It's been a hot June in the Lower 48, which helped to narrow the YoY gas storage surplus from looking like a good probability to storage being filled early to a lesser but still potential probability to do so. The US gas storage data is up until June 21. Our concern remains that if there is the visibility to US storage being full early, then there will be a hit to HH prices in Sept/Oct ahead of the winter. There may very well be items such as hurricane interruptions, a big spike up in natural gas for data centers, etc. that will change this outlook but when we see natural gas storage still higher YoY and forecasts for Europe storage full by Sept 30, we still see the risk for an early fill to US natural gas storage. As noted below, US natural gas storage is now +314 bcf YoY, which is down WoW from +343 bcf YoY last week.

**Risk for US gas storage to be filled early?**

Figure 1: US Natural Gas Storage



Source: EIA

**Natural Gas: +52 bcf build in US gas storage; now +314 bcf YoY**

The hot weather in the Lower 48 continues to narrow the YoY storage surplus. For the week ending June 21, the EIA reported a +52 bcf build. Total storage is now 3.097 tcf, representing a surplus of +314 bcf YoY compared to a surplus of +343 bcf last week. Since February, total storage has remained well above the top end of the 5-yr range. Total storage is +561 bcf above the 5-year average, below last week's +528 bcf surplus. Below is the EIA's storage table from its Weekly Natural Gas Storage report [\[LINK\]](#).

**+52 bcf build in US gas storage**

Figure 2: US Natural Gas Storage

Region	Stocks billion cubic feet (Bcf)				Year ago (06/21/23)		5-year average (2019-23)	
	06/21/24	06/14/24	net change	implied flow	Bcf	% change	Bcf	% change
East	646	631	15	15	616	4.9	537	20.3
Midwest	753	736	17	17	677	11.2	614	22.6
Mountain	237	230	7	7	163	45.4	152	55.9
Pacific	283	279	4	4	200	41.5	244	16.0
South Central	1,179	1,168	11	11	1,127	4.6	1,023	15.2
Salt	334	337	-3	-3	330	1.2	301	11.0
Nonsalt	845	831	14	14	797	6.0	722	17.0
<b>Total</b>	<b>3,097</b>	<b>3,045</b>	<b>52</b>	<b>52</b>	<b>2,783</b>	<b>11.3</b>	<b>2,569</b>	<b>20.6</b>

Source: EIA

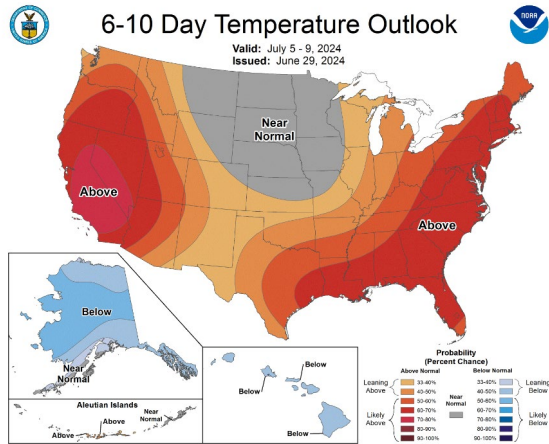
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**Natural Gas: No change, NOAA forecasts hot 1<sup>st</sup> half of July**

NOAA posts a daily update to its short term 6-10 day and 8-14 day temperature outlooks. Yesterday's update has NOAA forecasting warmer than normal temperatures for July 5 thru July 13, basically the first half of July. Below are NOAA's updated, as of yesterday, 6-10 day and 8-14 day temperature outlook maps covering July 5-13.

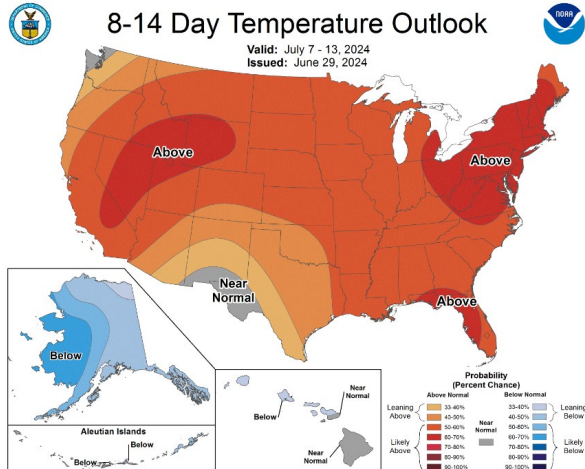
**NOAA sees hot 1<sup>st</sup> half of July**

Figure 3: NOAA 6-10 day temperature outlook for July 5-9



Source: NOAA

Figure 4: NOAA 8-14 day temperature outlook for July 7-13



Source: NOAA

**06/20/24: NOAA forecasts hot weather in July for all of the Lower 48**

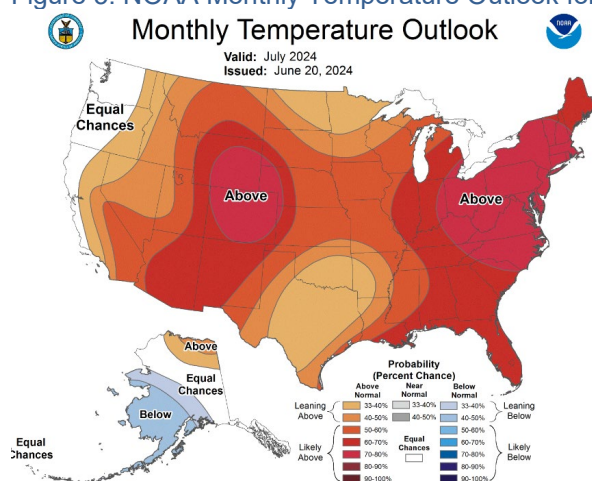
The above NOAA 6-10 and 8-14 day temperature outlooks are in line with NOAA's recent June 20, 2024 forecast for July. Here is what we wrote in last week's (July 23, 2024) Energy Tidbits memo. *"It looks like the hot weather in the US is going to*

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continue for at least another month. On Thursday, NOAA posted its 30-day outlook, which is its Monthly Temperature Outlook for July [\[LINK\]](#). NOAA’s temperature forecast shows above average probability for much warmer than normal temperatures for all of the Lower 48. Below is NOAA’s monthly temperature outlook for July.”

Figure 5: NOAA Monthly Temperature Outlook for July



Source: NOAA

**Natural Gas: US natural gas production down -1.2 bcf/d MoM in April**

On Friday, the EIA released its Natural Gas Monthly [\[LINK\]](#), which includes its estimated “actuals” for April dry gas production. Key items to note are as follows: (i) March’s data was revised up small, from 102.6 bcf/d to 102.8 bcf/d. (ii) April’s production of 101.6 bcf/d was - 1.2 bcf/d MoM and -1.0 bcf/d YoY from April 2023 of 102.6 bcf/d. The EIA does not provide any commentary. (iii) Something to keep in mind as we look ahead to June actuals is if Texas production is impacted by some reported maintenance in infrastructure. Our Supplemental Documents package includes the EIA Natural Gas Monthly.

**US gas production 101.6 bcf/d in April**

Figure 6: 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	103.6
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	102.8
Apr	66.1	70.5	75.2	73.7	73.3	81.2	90.7	95.0	94.3	98.3	102.6	101.6
May	65.9	70.2	74.1	72.9	73.3	82.1	91.4	87.9	94.2	99.1	103.6	
June	65.8	70.5	74.0	72.2	74.0	82.5	91.7	90.4	93.9	99.3	103.3	
July	67.1	72.0	74.2	72.8	74.7	84.2	92.2	90.3	94.8	100.4	103.4	
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	103.5

Source: EIA

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**Natural Gas: US natural gas pipeline exports to Mexico up +8.1% MoM, +12.4% YoY**

Also included in the DOE's U.S. Natural Gas Imports and Exports Monthly was a breakout of exports by destination. Natural gas and LNG exports to Mexico were up +8.1% MoM to 6.3 bcf/d in April from 5.9 bcf/d in March and were up +12.4% YoY from 5.6 bcf/d in April 2023. April is up but still below the Q3/23 pipeline exports to Mexico of ~6.8 bcf/d. The DOE doesn't provide a split but for pipeline vs LNG 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.

**US to Mexico April natural gas exports****Figure 7: 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	
June	3.8	5.3	5.5	5.8	5.4	6.6	6.2	6.8	
July	4.0	4.8	5.6	6.2	5.8	6.4	6.1	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 -15.1% MoM and -19.0% YoY to 10.1 bcf/d in April**

On Thursday, we tweeted [LINK](#) "ICYMI, @ENERGY released US #LNG exports -15.1% MoM & -19.0% YoY to 10.1 bcf/d in April. April was hit by maintenance at 2.1 bcf/d Freeport LNG, which was completed ~May 14. This is same data as more referenced @EIAgov Natural Gas Monthly that comes out tomorrow. #OOTT." On Monday, the Department of Energy (DOE) posted its US LNG exports estimates for April 2024 [LINK](#). The DOE normally posts the US LNG export data before the more commonly referenced US LNG exports from the EIA's Natural Gas Monthly, and in this case, on Monday whereas the EIA data was released on Friday. The EIA is a group within the DOE so the data for LNG exports is either identical or just a rounding issue. US LNG exports were down MoM to 10.1 bcf/d in April from 11.9 bcf/d in March, and down -2.4 bcf/d YoY from April 2023. US LNG exports averaged 11.9 bcf/d per month over 2023, which is +1.3 bcf/d compared to 2022. April was the big month for maintenance at the Freeport LNG 2.1 bcf/d LNG terminal, which returned to full production around May 14. The top five countries destinations were Netherlands 1.6 bcf/d, France 1.3 bcf/d, Japan 0.7 bcf/d, Germany 0.7 bcf/d and India 0.7 bcf/d. The DOE did not comment on the MoM or YoY changes. Our Supplemental Documents package includes excerpts from the U.S. Natural Gas Imports and Exports Monthly.

**US April LNG exports**

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Figure 8: US Monthly LNG Exports

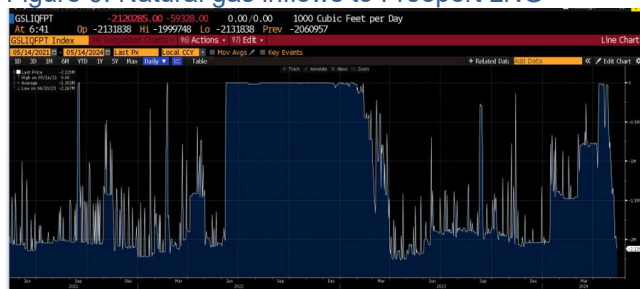
(bcf/d)	2016	2017	2018	2019	2020	2021	2022	2023	2024
January	0.0	1.7	2.3	4.1	8.1	9.8	11.4	10.9	12.8
February	0.1	0.9	2.6	3.7	8.1	7.4	11.3	11.7	12.4
March	0.3	1.4	3.0	4.2	7.9	10.4	11.7	11.8	11.9
April	0.3	1.7	2.9	4.2	7.0	10.2	11.0	12.5	10.1
May	0.3	2.0	3.1	4.7	5.9	10.2	11.3	11.8	
June	0.5	1.7	2.5	4.7	3.6	9.0	10.0	10.9	
July	0.5	1.7	3.2	5.1	3.1	9.7	9.7	11.3	
August	0.9	1.5	3.0	4.5	3.6	9.6	9.7	11.4	
September	0.6	1.8	2.7	5.3	5.0	9.5	9.8	11.6	
October	0.1	2.6	2.9	5.7	7.2	9.7	10.0	12.4	
November	1.1	2.7	3.6	6.4	9.4	10.2	10.1	12.9	
December	1.3	2.7	4.0	7.1	9.8	11.1	11.0	13.6	
Full Year	0.5	1.9	3.0	5.0	6.6	9.7	10.6	11.9	

Source: EIA, DOE

**Freeport LNG was back to running at 2.1 bdf/d capacity in mid-May**

Here is what we wrote in our May 19, 2024 Energy Tidbits memo on Freeport LNG. “On Tuesday, we tweeted [LINK](#) “Freeport LNG is back! #NatGas supplying Freeport LNG is back to its capacity of ~2.1 bcf/d. Thx @ruthcoverslng #OOTT. Bloomberg reported that repairs and maintenance were completed and natural gas flows had returned to full capacity of 2.1 bcf/d. Our tweet included the below Bloomberg graph of natural gas flows into Freeport LNG. “

Figure 9: Natural gas inflows to Freeport LNG



Source: Bloomberg

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

On Monday, Pemex posted its natural gas production data for May [LINK](#). Pemex does not provide any commentary on the data but reported May 2024 natural gas production of 4.488 bcf/d, which is down -10.8% YoY and -0.3% MoM. This month’s production marks a new low since May of 2020, which we believe was due to the April 6 fire on the Akai-8 platform that impacted April and May production. The big picture story for Mexico natural gas for the past six years has been that Mexico natural gas production has been stuck at or below 5 bcf/d, and that means any increased domestic natural gas consumption has been met by US natural gas imports. Below is our ongoing table of Pemex reported monthly natural gas production.

**Mexico natural gas stuck <5 bcf/d**

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Figure 10: Mexico Natural Gas Production

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

Source: Pemex, SAF

### Natural Gas: Saudi Aramco and Sempra announce a 20-year Long-term LNG Deal

On Wednesday, Sempra announced a non-binding HOA 20-year long deal with Saudi Arabia's Aramco for the delivery of 5.0 mtpa or 0.66 bcf/d of LNG [\[LINK\]](#). The delivery will be part of Phase 2 of the Port Arthur Expansion Project in Southeast Texas. Aramco and NextDecade are currently negotiating a binding agreement. The President of Aramco Upstream, Nasir K. Al-Naimi, said, "We are excited to take this next step into the LNG sector. As a potential strategic partner in the Port Arthur LNG Phase 2 project, Aramco is well placed to grow its gas portfolio with the aim of meeting the world's growing need for lower-carbon sources of energy. This agreement is a major step in Aramco's strategy to become a leading global LNG player." Jeffery W. Martin, Chairman and CEO of Sempra, said, "The planned expansion of Port Arthur LNG would help facilitate the broad distribution of U.S. natural gas across global energy markets. By expanding the global reach of the Port Arthur LNG facility, we have the opportunity to improve energy security, while providing a lower-carbon alternative to coal for electricity production." Our Supplemental Documents Package includes the press release from Sempra.

Another LT LNG Deal

### There have been 23.68 bcf/d of long-term LNG supply deals since July 1, 2021

Here is what we wrote in May 12, 2024's Energy Tidbits memo. "The big wave in buyers locking up long term supply started in July 2021. We first highlighted this abrupt shift to long term LNG supply deals in our July 14, 2021 8-pg "Asian LNG Buyers Abruptly Change and Lock in Long Term Supply – Validates Supply Gap, Provides Support For Brownfield LNG FIDs". We included a table of the deals done in that short two week period." We continue to update that table, which now shows 23.02 bcf/d of long-term LNG deals since July 1, 2021. 62% of the deals have been by Asian LNG buyers, but we are now seeing rest of world locking up long term supply deals post Russia/Ukraine. Note in our non-Asian LNG deals will major LNG players (ie. Chevron, Shell, etc) buying for their LNG portfolio supply. China has been particularly active in this space, accounting for 49% of all Asian LNG buyers in long term contracts since July 1, 2021. Below is our updated table of Asian and Europe LNG buyers new long-term supply deals since July 1, 2021.

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Figure 11: Long-Term LNG Buyer Deals Since July 1, 2021

Table with columns for Date, Buyer, Seller, Country, Volume (bcfd), Duration Years, Start, End, and separate columns for Long-Term LNG Buyer Deals Since July 1, 2021 (repeated).

Source: SAF

Natural Gas: WMO forecasts hot Jun/Jul/Aug around the world

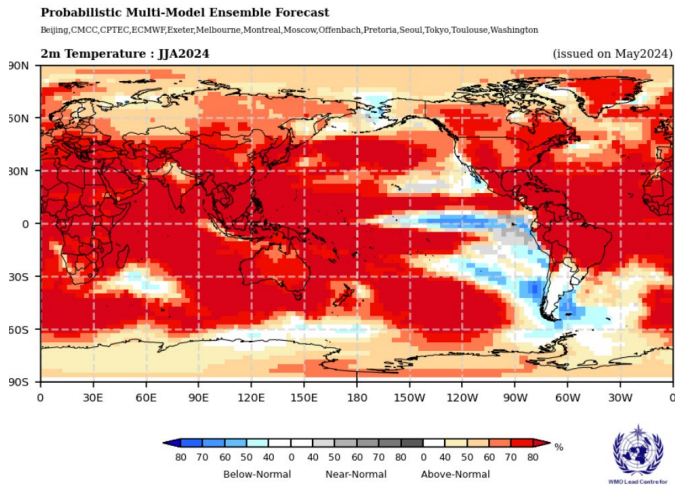
On June 13, the World Meteorological Agency posted its "Global Seasonal Climate Update for June-July-August 2024" [LINK]. The WMO is calling for hot temperatures in Jun/Jul/Aug in almost every land area of the world.

WMO forecasts hot JJA everywhere

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America, Europe and Asia have weak to moderately increased probabilities for above-normal temperature.”

Figure 12: WMO Temperature Forecast for Jun/Jul/Aug



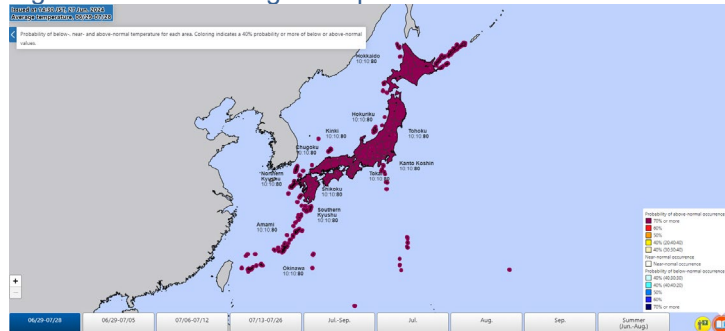
Source: WMO

**Natural Gas: Japan expects warmer than normal temperature thru July**

On Thursday, the Japan Meteorological Agency updated its forecast for the next 30 days in Japan [LINK]. There is no JMA commentary on the forecast. JMA is calling for above normal temperatures for the month of July, with a +70% probability of above normal temperature occurrence. We checked AccuWeather and they are forecasting daily highs in of 29-31C for the next 30 days. Anyone who has been to Tokyo in July knows that it is humid so we should see temperature driven demand for electricity incl natural gas. Below is the JMA temperature forecast for the next 30 days.

**JMA temperature forecast for the next 30 days**

Figure 13: JMA Average Temperature Outlook for June 29 – July 28



Source: Japan Meteorological Agency

**Natural Gas: JMA forecasts above average temperatures for Jul/Aug/Sept**

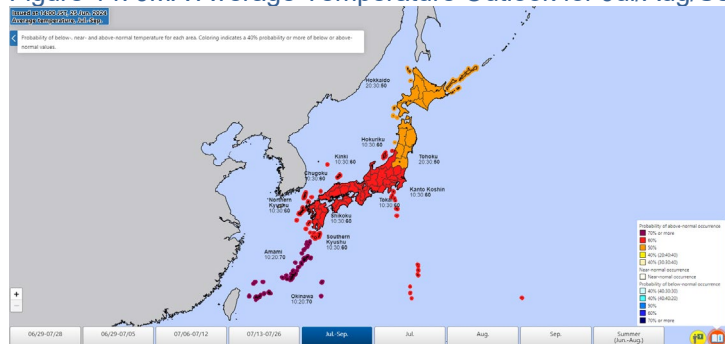
On Thursday, the Japan Meteorological Agency posted its seasonal temperature outlook for Jul/Aug/Sept for Japan. We tweeted [LINK] “May not drive up #LNG

**JMA temperature forecast for Jul/Aug/Sept**

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prices but Japan Meteorological Agency forecasts a hot July and hot Jul/Aug/Sep so should provide near term support for prices. #OTT #NatGas.” There is no JMA commentary on the forecast but it is calling for above average temperatures throughout the summer and September. It looks to be in line with Jul/Aug/Sep 2023 that was above average temps. Below is the JMA temperature forecast for Jul/Aug/Sep.

Figure 14: JMA Average Temperature Outlook for Jul/Aug/Sep



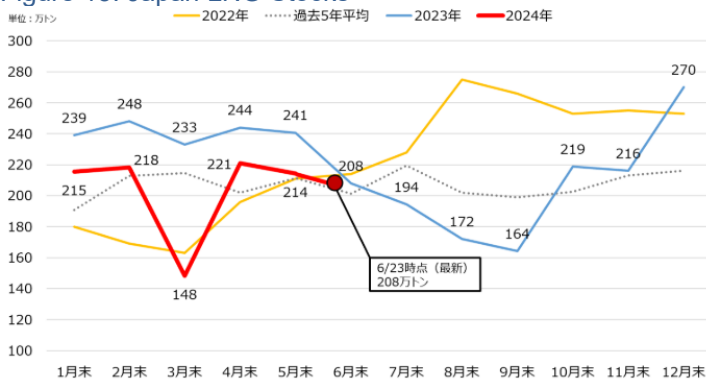
Source: Japan Meteorological Agency

**Natural Gas: Japan LNG stocks down WoW, flat YoY**

Japan’s LNG stocks are down WoW, are flat YoY, and are above the 5-year average. On Wednesdays, Japan’s METI releases its weekly LNG stocks data [LINK](#). LNG stocks on June 23 were 100.0 bcf, down -2.8% WoW from June 16 of 102.8 bcf, and flat from a year ago. Stocks are up +3.5% above the 5-year average of 96.5 bcf. Below is the Japanese LNG stocks graph from the METI weekly report.

Japan LNG stocks down WoW

Figure 15: Japan LNG Stocks



Source: METI

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

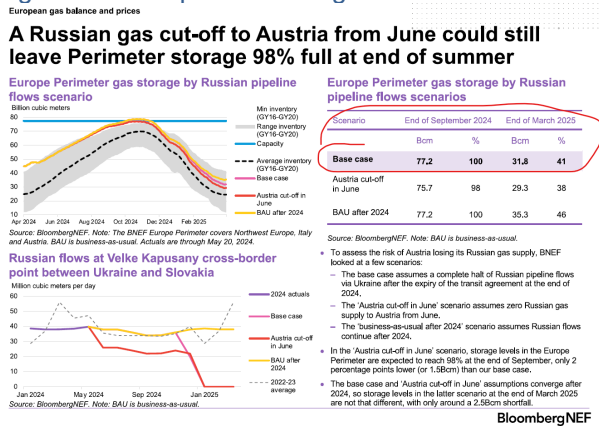
As our 7am MT news cut off, we haven’t seen an update to BloombergNEF’s European Gas Monthly report. Here is what we wrote in our June 2, 2024 Energy Tidbits on the then new

EU gas storage forecast to be full

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

Figure 16: Europe Gas storage forecast



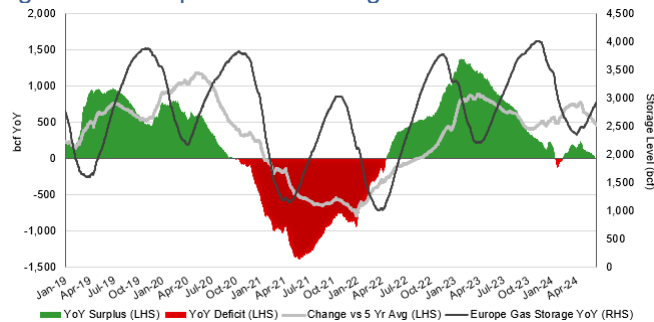
Source: BloombergNEF

**Natural Gas: Europe storage builds WoW to 76.5%, down -0.1% YoY**

This week, Europe storage increased by +1.9% WoW to 76.5% vs 74.6% on June 20. Storage is now -0.1% lower than last year’s levels of 76.6% on June 27, 2023, and up huge vs the 5-year average of 64.33%. As noted above, BloombergNEF’s recent May 31 forecast is for Europe gas storage to be full by Sept 30. This would be early and would bring low Europe gas prices in Sept/Oct. Below is our graph of European Gas Storage Level.

Europe gas storage

Figure 17: European Gas Storage Level



Source: Bloomberg, SAF

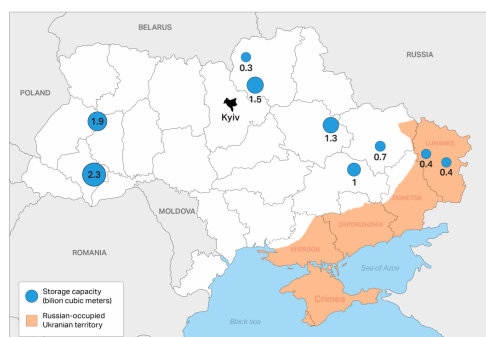
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### Ukraine storage is currently ~6% of total Europe gas storage volume

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 June 27<sup>th</sup> natural gas in Ukraine storage was at 17.32% of its total capacity, up from 16.64% of its total capacity on June 20<sup>th</sup>. Last year, Ukraine storage started the winter on Nov 1, 2023 at 39.38%. Right now, Ukraine makes up ~6% of Europe's natural gas in storage and, at the beginning of winter 2023/24, it was ~10% of Europe's natural gas in storage. Below is a map of Ukraine's major gas storage facilities.

Figure 18: Ukraine Gas Storage Facilities as of July 2023



Source: Bruegel

### Oil: US oil rigs down -6 rigs WoW at 479 rigs, US gas rigs down -1 rig WoW to 97 rigs

On Friday, Baker Hughes released its weekly North American drilling rig data. (i) Note, after we sent them an email earlier this year, Baker Hughes confirmed they wouldn't be returning to the old format which previously allowed us to break out the basin changes by oil vs gas rig type. (ii) Total US oil rigs were down -6rigs WoW to 479 oil rigs as of June 28. US oil rigs went below 520 rigs on Aug 25 and has been around 490-510 rigs for the past several months, however, this week's 479 rigs marks the lowest oil rig count since December 2021. (iii) Note we aren't able to see the basin changes but not by type of rig. The major changes were Ardmore Woodford -1 rig WoW to 4 rigs, Eagle Ford -3 rig WoW to 47 rigs, and Permian -3 rig WoW to 305 rigs. It looks like we may be seeing a pull back with the WTI back down in the \$70s. (iv) The overlooked US rig theme is the YoY declines. Total US rigs are -93 YoY to 581 rigs including US oil rigs -66 oil rigs YoY to 479 oil rigs. And for the key basins, the Permian is -36 rigs YoY, Haynesville is -8 rigs YoY and Marcellus -10 rigs YoY. (v) US gas rigs were down - 1 rig this week to 97 gas rigs.

US oil rigs  
down WoW

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Figure 19: Baker Hughes Total US Oil Rigs



Source: Baker Hughes, SAF

#### Oil: Baker Hughes CEO sees Lower 48 E&P spend is slightly down in 2024

Here is what we wrote in last week's (June 23, 2024) Energy Tidbits memo on Baker Hughes CEO outlook for Lower 48 E&P spend in 2024. *"In his Wednesday sellside Q&A, Baker Hughes CEO Lorenzo Simonelli also confirmed his same outlook for Lower 48 E&P spend in 2024 to be slightly down in 2024 but then to pick up as they go into 2025. On Wednesday, Simonelli said "I think the important aspect is let's stay focused on the macro and what's taking place. And we continue to see that there is a strong international growth. We see high-single-digit. We said that from the beginning of the year. May not have been as robust as some others thought, but we stayed true to what we said at the beginning of the year. We still see that high-single-digit. We think that, again, as we look at going forward, North America will pick up as we go into 2025. As you look at the rig count and you look at activity, clearly, 2024 is slightly depressed. We said that at the beginning of the year. And we continue to be really on pace for what we said at the beginning of the year of the market outlook as we go forward. And I think the fundamentals from a demand perspective, especially with international activity, continue to be robust as we look at also 2025".*

**Negative Waha  
Baker Hughes  
on 2024 Lower  
48**

#### 01/24/24: Baker Hughes sees E&P spend down mid single digits in US land

Here is what we wrote in our Jan 28, 2024 Energy Tidbits memo. *"On Wednesday, we tweeted [LINK](#) "Is \$BKR CEO pointing to down YoY, or flat at best YoY, US #Oil production over 2024? CEO "In NA, activity continues to lag, and we are now anticipating no meaningful recovery in activity during the first half of the year. On our last quarterly call, we expected 2024 North American DNC spend to be flattish, but now expect spending down in low to mid single-digits, driven by mid single-digit declines in U.S. land. #OOTT." Baker Hughes CEO Simonelli didn't give an estimate for US oil production growth in 2024 but surprised most by forecasting US E&P spend on land would be down mid single digits in 2024. So Baker Hughes sees lower E&P spend onshore US in 2024. When we see, we have to assume Baker Hughes isn't calling for US oil growth in 2024. They see lower E&P spend. Plus they should know that the strong YoY growth to the 2023 exit would also increase the oil decline in 2024. So increased number of barrels lost thru decline in the face of lower E&P spend would seem to be the formula for much lower oil growth, if any, in 2024.*

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### Oil: Permian oil drill rigs to be impacted by Waha natural gas prices flip negative

It's been really hot in Texas in June and ERCOT, the grid operator, has been seeing record or near record demand for electricity. But, it looks like some natural gas infrastructure maintenance has led to Waha natural gas price in the Permian flip negative again this week. So Waha prices have flipped negative in April, May and again in June. This volatility is likely a reason why Permian oil rigs have been soft. The natural gas from the Permian is the associated natural gas that is produced from oil wells. So if there is near term concerns on Waha natural gas prices, it will impact oil drilling. The Dallas Fed posted its quarterly energy survey this week [\[LINK\]](#) and one of their special questions was "What impact will low Waha Hub natural gas prices likely have on your firm's drilling and completion plans in the Permian for the rest of 2024?" Dallas Fed summarized the responses "The Waha Hub is a gathering location for natural gas in the Permian Basin that connects to major pipelines. Of the executives surveyed, 43 percent said low Waha Hub natural gas prices won't likely affect their firm's drilling and completion plans in the Permian for the rest of 2024. Meanwhile, 43 percent expect a slightly negative impact, and an additional 14 percent said the low Waha Hub prices will have a significantly negative impact on drilling and completion plans for the rest of this year in the Permian. Small E&P firms were more likely to expect negative impacts."

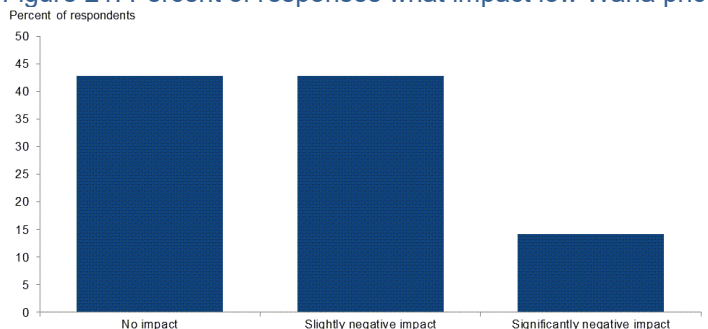
Figure 20: Waha Natural Gas Prices



Source: Bloomberg

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Figure 21: Percent of responses what impact low Waha prices on rest of 2024 drilling plans



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

SOURCE: Federal Reserve Bank of Dallas.

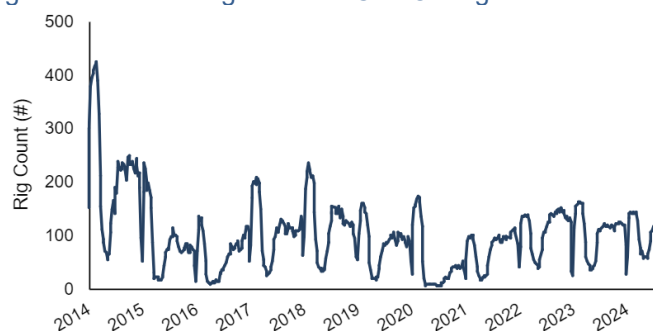
Source: Dallas Fed

**Oil: Total Cdn rigs up +10 rigs WoW, ramping up post spring breakup**

As happens every year in Canada, the rig count drops dramatically from early March thru the end of April/beginning of May as winter drilling season ends and the industry moves into spring break up. Spring break up is the period when it warms up and the melting snow leads to road access being limited/restricted in many parts of Alberta and BC. Total Cdn rigs declined from 231 at the beginning of March to 114 one month ago. This week's increase in rigs looks to continue the ramp up we saw beginning last month that follows every spring break up. Cdn oil rigs were up +7 rigs WoW this week to 116 rigs and are also up +7 rigs YoY. Gas rigs are up +2 rigs WoW this week to 59 rigs and are up +1 rig YoY, and miscellaneous rigs are up +1 rig WoW, and are up +1 rig YoY. Baker Hughes did not update their old format report, so we weren't able to see the provincial breakouts.

**Cdn total rigs up  
WoW**

Figure 22: Baker Hughes Total Cdn Oil Rigs



Source: Baker Hughes, SAF

**Oil: US weekly oil production flat WoW at 13.200 mmb/d**

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 sometimes require re-benchmarking. And sometimes the

**US oil production  
flat WoW**

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re-benchmarking can be significant and other times, it is relatively small. Here's what the EIA wrote on their website back in April with the April STEO: *“When we release the Short-Term Energy Outlook (STEO) each month, the weekly estimates of domestic crude oil production are reviewed to identify any differences between recent trends in survey-based domestic production reported in the Petroleum Supply Monthly (PSM) and other current data. If we find a large difference between the two series, we may re-benchmark the weekly production estimate on weeks when we release STEO. This week’s domestic crude oil production estimate incorporates a re-benchmarking that decreased estimated volumes by 177,000 barrels per day, which is about 1.3% of this week’s estimated production total”*. On June 11, the EIA released its June STEO. There was an immaterial downward revision to Q1/24 production estimates to 12.94 mmb/d from 12.96 mmb/d in May’s STEO. This week, the EIA’s production estimates were flat WoW at 13.200 mmb/d for the week ended June 21. Alaska was down -0.004 mmb/d WoW to 0.410 mmb/d from 0.414 mmb/d last week. Below is a table of the EIA’s weekly oil production estimates.

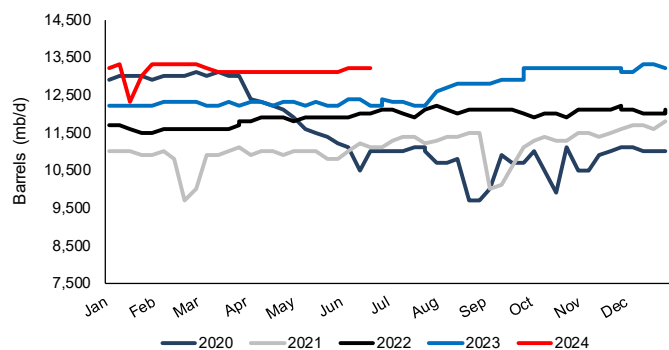
Figure 23: EIA’s Estimated Weekly US Field Oil Production (mb/d)

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

Year-Month	Week 1		Week 2		Week 3		Week 4		Week 5	
	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				

Source: EIA

Figure 24: EIA’s Estimated Weekly US Oil Production



Source: EIA, SAF

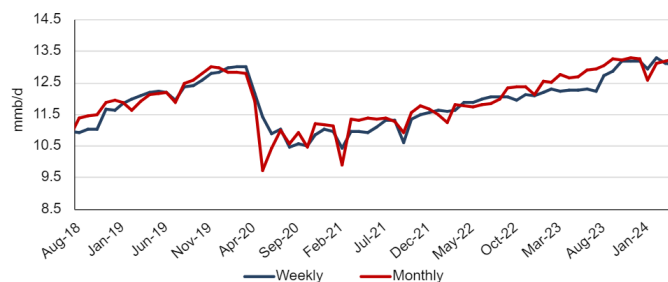
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### Oil: EIA Form 914 – US April oil production up MoM, up YoY

On Friday, the EIA released its Form 914 data [\[LINK\]](#), which is the EIA's "actuals" for April US oil and natural gas production. As noted previously, over the past four months the EIA has had to make big upward adjustments to their weekly oil supply estimates to bring them more in line with the Form 914 actuals, however this month's 914 data shows a downward revision. (i) This month, the EIA revised March down by -49,000 b/d from 13,182 mmb/d to 13,176 mmb/d. As a result, the March actuals were +73,000 b/d vs the weekly supply estimates of 13,103 mmb/d. (ii) The EIA Form 914 reported April "actuals" at 13,248 mmb/d, which was +148,000 b/d above the weekly supply estimates of 13,100 mmb/d. (iii) April "actuals" of 13,248 mmb/d are +72,000 b/d MoM vs 13,176 mmb/d in March. And also +578,000 b/d YoY vs April 2023 of 12,650 mmb/d. Below is a chart of monthly actuals vs. weekly estimates. Our Supplemental Documents package includes an excerpt from the Form 914 figures.

### EIA Form 914 April

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



Source: EIA, SAF

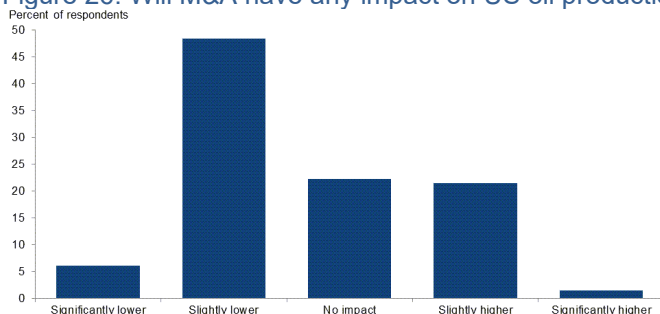
### Oil: Small vs Big US oil have different views on how M&A will impact US oil production

No surprise, smaller E&P companies have different views than big oil companies. A good example is from one of the special questions in the Dallas Fed quarterly energy survey this week [\[LINK\]](#) was on M&A and the impact on US oil production. All executives from E&P >100,000 b/d see no impact. The Dallas Fed wrote "*What impact on U.S. oil production would you expect if there were continuing industry consolidation in the U.S. E&P sector over the next 5 years? Oil production would be: The most-selected response was "slightly lower" (48 percent of respondents) followed by "no impact" (22 percent of respondents) and "slightly higher" (22 percent of respondents). All executives from E&P firms that produce 100,000 b/d or more selected "no impact."*" Our Supplemental Documents package includes the Dallas Fed quarterly energy survey.

### M&A and US oil production outlook

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Figure 26: Will M&A have any impact on US oil production over the next 5 years?



NOTE: E&P is exploration and production. Executives from 130 oil and gas firms answered this question during the survey collection period, June 12-20, 2024.  
SOURCE: Federal Reserve Bank of Dallas.

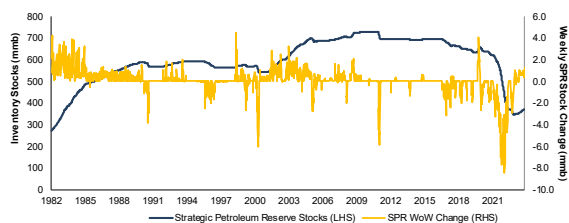
Source: Dallas Fed

**Oil: US SPR less commercial reserve deficit widens, now -88.499 mmb**

The US Strategic Petroleum Reserves (SPR) continues to be much lower than total US commercial crude oil reserves. The SPR went back below commercial for the first time since 1983 in the Sep 16, 2022 week. This week, we saw a build on the SPR side and a build on the commercial side. The EIA’s weekly oil data for June 21 [\[LINK\]](#) saw the SPR reserves increase +1.285 mmb WoW to 372.197 mmb, while commercial crude oil reserves increased +3.591 mmb to 460.696 mmb. There is now a -88.499 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.

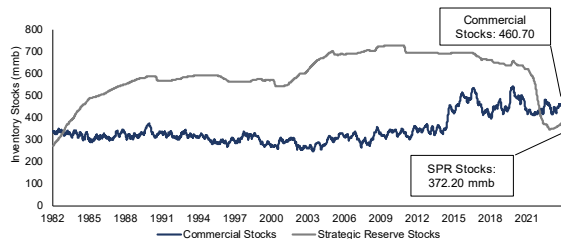
**US SPR reserves**

Figure 27: Strategic Petroleum Reserve Stocks and SPR WoW Change



Source: EIA

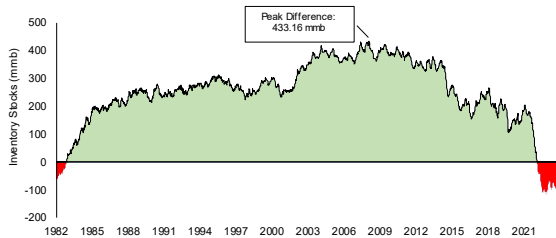
Figure 28: US Oil Inventories: Commercial & SPR



Source: EIA

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Figure 29: US Oil Inventories: SPR Less Commercial



Source: EIA

**Oil: US oil demand in April was 440,000 b/d above EIA STEO forecast for April**

On Friday, the EIA posted its “actuals” oil data for April, which includes for oil and products demand. Two weeks ago, the EIA posted its monthly Short Term Energy Outlook and their backup includes splitting their 2024 forecast into the monthly splits so we can compare how the actuals compare to the monthly forecast and the EIA forecast for monthly demand are Jan 19.59 mmb/d, Feb 19.95 mmb/d, Mar 19.88 mmb/d, Apr 19.57 mmb/d, May 20.02 mmb/d, and June 20.75 mmb/d ie. the EIA forecast for Q2/24 is 20.11 mmb/d. On Friday, the EIA posted the actuals for April demand at 20.01 mmb/d, which is 0.44 mmb/d vs the STEO forecast for April of 19.57 mmb/d.

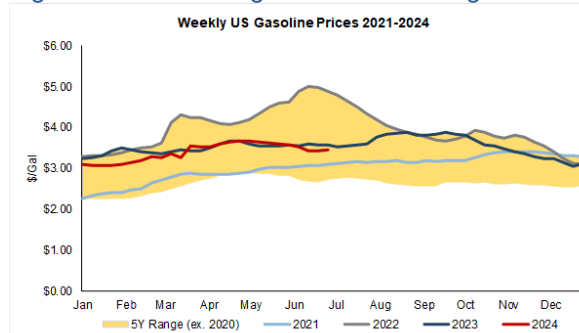
US oil demand

**Oil: US national average gasoline price +\$0.05 WoW to \$3.50**

Yesterday, we tweeted [LINK](#) “1st weekly increase in US national average gasoline prices in a month. AAA National average prices +\$0.05 WoW to \$3.50 on June 28, down \$0.08 MoM and down \$0.06YoY. California at \$4.80 on June 29, down \$0.01 WoW, down \$0.30 MoM & down \$0.03 YoY. Thx @AAAnews #OOTT.” Yesterday, AAA reported that US national average prices were \$3.50 on June 29, which was +\$0.05 WoW, -\$0.08 MoM and -\$0.06 YoY. Yesterday, AAA reported California average gasoline prices were \$4.80 on June 29, which was -\$0.01 WoW, -\$0.30 MoM, and -\$0.03 YoY. Below is our graph of Bloomberg’s National Average Gasoline prices.

US gasoline prices

Figure 30: Bloomberg’s National Average Gasoline Prices



Source: Bloomberg

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**Oil: Crack spreads flat WoW at \$24.36**

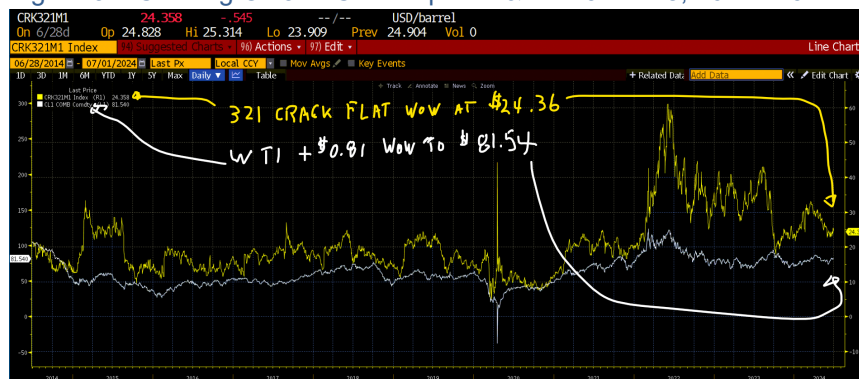
On Friday, we tweeted [LINK](#) “321 crack flat WoW at \$24.36 on Jun 28. WTI was +\$0.81 WoW to \$81.54. No specific #Oil event this week so both traded in a relatively tight range. 321 cracks at \$24.36 generally aren't high enough to drive up oil. Thx @business #OOTT.” Crack spreads were flat WoW at \$24.36. We have always said crack spreads around \$30 are a big incentive for refiners to buy as much crude as possible. But crack spreads in the low \$20s and, even at current spreads of \$24.36, generally aren't high enough by itself to point to higher WTI ahead. WTI was +\$0.81 WoW to \$81.54 but we didn't note any specific event on oil price this week. Rather WTI and crack spreads traded in a fairly narrow range this week. Crack spreads were flat WoW to close at \$24.36 on Friday and WTI was +\$0.81 WoW to close at \$81.54. Crack spreads of \$24.36 on June 28 followed \$24.36 on June 21, \$23.45 on June 14, \$24.31 on June 7, \$24.04 on May 31, \$25.65 on May 24, \$27.04 on May 17, \$25.89 on May 10, \$27.59 on May 3, \$28.96 on Apr 26, \$28.30 on Apr 19, and \$30.39 on Apr 12. Crack spreads at \$24.36 are still above the high end of the more normal pre-Covid that was more like \$15-\$20 but, by themselves, shouldn't be a driver up of WTI.

**Crack spreads closed at \$24.36**

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

We have focused on crack spreads for since the 90s as they are an unchanged fundamental of refineries – big crack spreads provide incentives for refineries to buy more crude because there are big profit margins to be made. People often just say “cracks”, which refers to the 321 crack spread. This is the spread or margin that refiners make from buying crude at a certain price and then selling the finished petroleum products at their respective prices. The 321 crack spread is meant to represent what a typical US refinery produces. It assumes that for every three barrels of crude oil, the refinery will produce two barrels of gasoline and one barrel of distillates. So the crack spread is based on that formula and worked back to a crack spread per barrel. Below is the current 321 crack spread vs WTI that we put in our tweet where we marked the gaps where the crack spread normally drags up oil prices. The crack spread was \$24.36 as of the Friday June 28, 2024 close.

Figure 31: Cushing Oil 321 Crack Spread & WTI June 28, 2014 to June 28, 2024



Source: Bloomberg

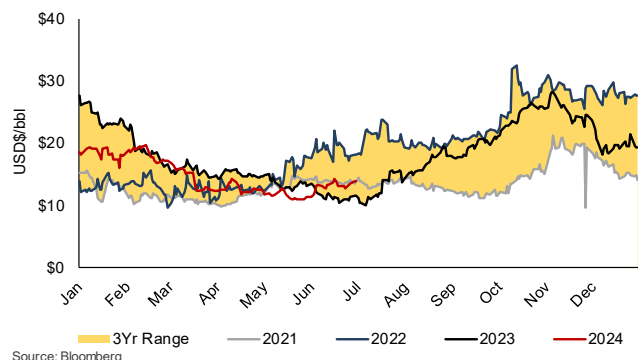
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**Oil: Cdn heavy oil differentials widen \$1.10 WoW to close at \$14.00 on June 28**

The positive for WCS less WTI differentials continues to be the May startup of the TMX 590,000 b/d expansion. As noted in June 16, 2024's Energy Tidbits memo, Trans Mountain's has increased loadings by 407,000 b/d so far with the TMX startup. We believe that if TMX had not happened, WCS less WTI differentials would be wider. And that the key test for TMX is times like now and coming up in July/Aug/Sept to see if there will be less of the normal seasonal widening in WCS less WTI differentials. Right now, we are in the normal late Q1 and Q2 period that normally sees WCS less WTI differentials in the low double digits as US refiners maximize production of asphalt for annual paving season and to maximize production of summer grade fuels as well as asphalt ahead of the annual summer driving and paving season. So it's hard to determine how much of an impact TMX has had on WCS less WTI differentials although with the last two weeks have been below the bottom end of the 3-yr range. Below is graph showing WCS-WTI differentials that shows this normal seasonal trend of narrowing WCS-WTI differentials in late Q1 and Q2. The WCS less WTI differential closed on June 28 at \$14.00, which was a widening of \$1.25/bbl WoW vs \$12.85/bbl on June 21.

**WCS differential widens**

Figure 32: WCS less WTI oil differentials to June 28 close



Source: Bloomberg

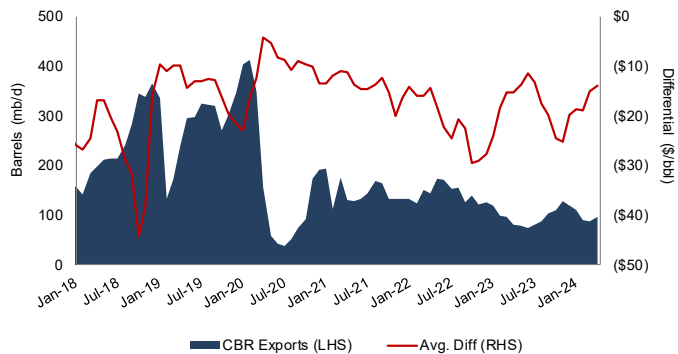
**Oil: CER reports Cdn crude by rail exports at 96,323 b/d in April, up +20.4% YoY**

We have reached out a couple times to the EIA (but never get a response) as to why their crude by rail imports from Canada data are so much lower than the CER data for Cdn crude by rail exports to the US. Our assumption is that the major reason for the difference is likely that Cdn crude by rail that goes directly to the Gulf Coast and then onto tankers for export will show up in Cdn crude by rail exports but not in US crude by rail imports from Canada, ie. the oil never stay in the US. On June 24, the CER released their Canadian crude exports by rail figures for April [\[LINK\]](#). April crude exports by rail were 96,323 b/d, up +11.0% MoM from 86,766 b/d in March and up +20.4% YoY from 80,026 b/d in April 2023. As noted below, the EIA estimates crude by rail imports from Canada were only 59,233 b/d in April. 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.

**Cdn crude by rail up YoY in April**

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Figure 33: Cdn Crude By Rail Exports vs WCS Differential

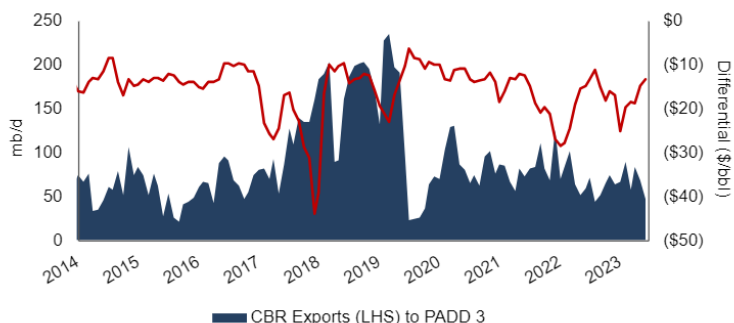


Source: Canadian Energy Regulator, Bloomberg

**Oil: EIA reports total Cdn crude by rail imports -22,444 b/d MoM in Apr, PADD 3 down**  
 On Friday, the EIA posted its “U.S. Movements of Crude Oil 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 59,233 b/d in April, which was -22,444 b/d MoM from 81,677 b/d (revised) in March. The EIA estimates Cdn crude by rail into PADD 3 (Gulf Coast) was 45,933 b/d in April, which was -22,196 b/d MoM from 68,129 b/d (revised) in March. As noted above, we have been highlighting how the EIA imports of oil by rail from Canada are less than the CER estimates of Cdn oil exports by crude to the US. That continues in the April data. The CER reported that 96,323 b/d of crude was exported by rail out of Canada during April vs the EIA estimates of 59.233 b/d of Cdn oil imported by rail in April. Below is our graph of Cdn CBR exports to the Gulf Coast and WCS differential over time.

EIA Cdn crude by rail imports

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



Source: EIA, Bloomberg

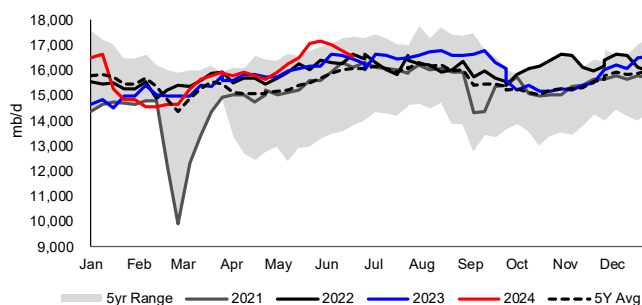
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### Oil: Refinery Inputs down -0.233 mmb/d WoW to 16.532 mmb/d

There are always unplanned refinery items that impact crude oil inputs into refineries. And there are always different timing for refinery turnarounds. But, as a general rule, this is the normal seasonal ramp up in refinery runs for the summer that normally peaks in August. On Wednesday, the EIA released its estimated crude oil input to refinery data for the week ended June 21 [\[LINK\]](#). The EIA reported crude inputs to refineries were down -0.233 mmb/d this week to 16.532 mmb/d and are up +0.277 mmb/d YoY. Refinery utilization was down -1.3% WoW to 92.2%, which is flat YoY.

**Refinery inputs  
-0.233 mmb/d WoW**

Figure 35: US Refinery Crude Oil Inputs



Source: EIA, SAF

### BP Whiting Advances work on CDU to July from September

Our June 16, 2024 Energy Tidbits memo highlighted the advancement of the turnaround at BP Whiting refinery, which runs on Cdn crude oil. Here is what we wrote last week *“On Thursday, Bloomberg reported that BP’s Whiting refinery has advanced their planned turnaround from September up to early July, so it will be down sooner than originally expected. As noted earlier, the 435,000 b/d Whiting refinery impacts Cdn crude oil because it runs almost all on Cdn crude oil from the Enbridge main line so the turnaround is a negative to WCS less WTI differentials. . Bloomberg wrote, “The work on the largest of three crude units and its 95k b/d companion coker is scheduled to extend into early September with additional days needed to restore operations to normal.....The shutdown of the biggest crude unit, coming in the middle of the summer gasoline season, could tighten Midwest fuel supplies, sending regional gasoline prices higher at the pump and margins higher.....Whiting, the largest US inland refinery, has a total crude processing capacity of 435k b/d” BP has not given a reason for advancing the work.”*

### Oil: US net oil imports up +0.065 mmb/d WoW as oil exports down -0.443 mmb/d WoW

The EIA reported US “NET” imports were up +0.065 mmb/d to 2.701 mmb/d for the June 21 week. US imports were down -0.443 mmb/d to 6.611 mmb/d, while exports were down -0.508 mmb/d to 3.910 mmb/d. Top 10 was down -0.632 mmb/d. (i) Venezuela weekly imports. We know why the EIA doesn’t have any data in the row for Venezuela weekly oil imports but we still don’t know if the weekly oil imports are off or if Venezuela is included in the weekly oil imports in the Others number. But we do know the EIA monthly data shows Padd 3 imports from Venezuela around 150,000 b/d. Give the EIA credit for putting out weekly oil import

**US net oil  
imports**

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estimates, but it's a reminder that we have to be careful about using the weekly oil import estimates. Rather we need to make sure we go to the monthly data for oil imports. (i) Canada was down -0.247 mmb/d to 3.890 mmb/d. Weekly imports have been higher of late with reports of increased Cdn crude coming off TMX and hitting west coast US refineries. For this week's decline, we expect the key reason for the decline was the refinery maintenance that is about to start at BP Whiting refinery that runs on Cdn crude from Enbridge's mainline pipeline. (ii) Saudi Arabia was down -0.210 mmb/d to 0.162 mmb/d. (iii) Mexico was down -0.191 mmb/d to 0.372 mmb/d. (iv) Colombia was down -0.223 mmb/d to 0.083 mmb/d. (v) Iraq was up +0.031 mmb/d to 0.195 mmb/d. (vi) Ecuador was up +0.011 mmb/d to 0.210 mmb/d. (vii) Nigeria was down -0.029 mmb/d to 0.056 mmb/d.

Figure 36: US Weekly Preliminary Imports by Major Country

	Apr 26/24	May 3/24	May 10/24	May 17/24	May 24/24	May 31/24	Jun 7/24	Jun 14/24	Jun 21/24	WoW
Canada	3,847	3,659	3,812	3,495	3,666	3,768	3,974	4,137	3,890	-247
Saudi Arabia	402	355	196	486	422	375	278	372	162	-210
Venezuela	0	0	0	0	0	0	0	0	0	0
Mexico	459	805	507	184	551	538	987	563	372	-191
Colombia	363	183	211	215	32	496	75	306	83	-223
Iraq	307	326	123	239	233	126	228	164	195	31
Ecuador	0	129	207	163	103	200	149	199	210	11
Nigeria	89	322	212	144	71	0	208	86	57	-29
Brazil	0	217	293	315	127	254	134	201	341	140
Libya	98	1	86	0	262	0	87	0	86	86
Top 10	5,565	5,997	5,647	5,241	5,467	5,757	6,120	6,028	5,396	-632
Others	1,207	972	1,097	1,422	1,302	1,301	2,184	1,026	1,215	189
<b>Total US</b>	<b>6,772</b>	<b>6,969</b>	<b>6,744</b>	<b>6,663</b>	<b>6,769</b>	<b>7,058</b>	<b>8,304</b>	<b>7,054</b>	<b>6,611</b>	<b>-443</b>

Source: EIA, SAF

### 150,000 b/d Cdn crude from TMX expansion is hitting US West Coast refineries

The EIA released April actuals on Friday but that is before the start of the 590,000 b/d TMX expansion. We have been noting how the EIA's weekly import data is showing higher US imports of Cdn crude oil, which we believe is due to increasing crude oil hitting US West Coast refineries because of the start of the 590,000 b/d TMX expansion. EIA does not provide splits in their weekly data of where Cdn crude is hitting. But, on Monday, Bloomberg's report "*Cheap Canadian Oil Displaces Iraqi Imports on US West Coast*" referenced Vortexa data showing about 150,000 b/d of Cdn crude is expected to hit US West Coast refineries coming off TMX. Bloomberg wrote "*US West Coast refiners are replacing their heavy Iraqi oil imports with cheaper crude from Canada as the newly expanded Trans Mountain pipeline reshuffles trade flows across the Pacific. California and Washington are set to import about 150,000 barrels a day of Canadian crude by tanker in June — a seven-fold increase from average volumes, according to preliminary Vortexa data. At the same time, imports of Iraq's Basrah Heavy crude are poised to plunge to just 3,587 barrels a day from 76,000 barrels in May.*" Our Supplemental Documents package includes the Bloomberg report.

### Oil: Mexico oil production including partner volumes up MoM to 1.524 mmb/d

On Monday, Pemex posted its May 2024 oil production data [\[LINK\]](#). Pemex does not provide any commentary on the data, but reported May oil production, including partners, was 1.524 mmb/d, which was down -8.2% YoY and up +2.6% MoM from 1.485 mmb/d in April, which was the lowest oil production in almost 40 years. As noted earlier, we expect the dip in April

### Pemex May oil production

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production was due to the April 6 fire on the Akai-8 platform. The big picture story remains the same - Mexico (Pemex) oil production has been stuck around 1.6 mmb/d for the last three years. Pemex has been unable to grow Mexico oil production, which means that any increase in Pemex Mexico refineries crude oil input will result in less Mexico oil for export including to the US Gulf Coast. And it also means that if Mexico has refinery issues in a month, there will be more Mexico oil for export in a month. Below is our table tracking Pemex oil production.

Figure 37: Pemex (Incl Partners) Mexico Oil Production

Oil Production (thousand b/d)	2016	2017	2018	2019	2020	2021	2022	2023	2024	24/23
Jan	2,259	2,020	1,909	1,623	1,724	1,651	1,649	1,628	1,545	-5.1%
Feb	2,214	2,016	1,876	1,701	1,729	1,669	1,619	1,619	1,538	-5.0%
Mar	2,217	2,018	1,846	1,691	1,745	1,697	1,620	1,636	1,532	-6.4%
Apr	2,177	2,012	1,868	1,675	1,703	1,693	1,586	1,656	1,485	-10.3%
May	2,174	2,020	1,850	1,663	1,633	1,688	1,588	1,661	1,524	-8.2%
June	2,178	2,008	1,828	1,671	1,605	1,698	1,570	1,610		
July	2,157	1,986	1,823	1,671	1,595	1,701	1,583	1,550		
Aug	2,144	1,930	1,798	1,683	1,632	1,657	1,604	1,552		
Sept	2,113	1,730	1,808	1,705	1,643	1,709	1,594	1,581		
Oct	2,103	1,902	1,747	1,655	1,627	1,692	1,592	1,560		
Nov	2,072	1,867	1,697	1,696	1,633	1,691	1,582	1,558		
Dec	2,035	1,873	1,710	1,706	1,650	1,694	1,561	1,545		

Source: Pemex, SAF

**Oil: Mexico exports up +33.8% MoM to 0.911 mmb/d of oil in May**

The big picture theme for Pemex (Mexico) oil exports is unchanged – oil production is stuck around or below 1.6 mmb/d so any improvement in crude run rates at the existing Pemex oil refineries and the startup, albeit delayed, of the new 340,000 Olmeca (Dos Bocas) refinery means there will be less oil for export - the startup, albeit slow of the new 340,000 b/d In the following item, we note how Olmeca continues to delayed again. The factor that hit Pemex refinery runs in May were fires that reduced crude oil runs. On Monday, Pemex posted its oil exports for May [LINK](#). Pemex does not provide any commentary on the data but reported May oil exports were 0.911 mmb/d, which is +33.8% MoM and -16.2% YoY vs 1.087 mmb/d in May 2023. Below is our table of the Pemex oil export data.

**Pemex May oil exports**

Figure 38: Pemex Mexico Oil Exports

Oil Exports (thousand b/d)	2016	2017	2018	2019	2020	2021	2022	2023	2024	24/23
Jan	1,119	1,085	1,107	1,071	1,260	979	832	980	951	-3.0%
Feb	1,241	1,217	1,451	1,475	1,093	1,006	925	949	940	-0.9%
Mar	1,062	1,001	1,176	1,150	1,144	925	905	971	687	-29.2%
Apr	1,081	1,017	1,266	1,023	1,179	923	1,024	989	681	-31.1%
May	1,204	958	1,222	1,205	1,062	1,031	965	1,087	911	-16.2%
June	1,098	1,157	1,110	995	1,114	1,106	1,029	1,203		
July	1,146	1,255	1,156	1,079	1,051	1,173	1,062	1,052		
Aug	1,261	1,114	1,181	1,082	1,190	1,099	915	1,076		
Sept	1,425	1,159	1,206	995	1,023	983	1,022	1,119		
Oct	1,312	1,342	1,027	963	908	935	971	1,053		
Nov	1,273	1,388	1,135	1,114	1,171	1,025	893	883		
Dec	1,115	1,401	1,198	1,115	1,243	1,037	900	1,027		

Source: Pemex, SAF

**Oil: Reuters, sources say new Olmeca refinery is well behind Pemex CEO indications**

Last week’s (June 23, 2024) Energy Tidbits highlighted how Pemex CEO’s public comments and comments by other Pemex officials to Mexican media noted how Pemex’s new 340,000 b/d Olmeca oil refinery had significantly increased its oil processing volumes and should be at full capacity by year-end. A Monday Reuters report threw doubt on that positive Pemex update. And if the ramp up of the new Olmeca refinery is delayed or behind schedule as

**Is Olmeca refinery on track?**

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Reuters says, then it means there will be more Mexico oil available for export. On Monday, we tweeted [\[LINK\]](#) “OOPS! “Pemex is unlikely to produce any commercially viable motor fuels at its new [340,000 b/d] Olmeca refinery before the end of the year, five sources said” @Abeadriana @stefanieyaa. looks nowhere near the 168,000 b/d by yr-end Pemex CEO said last week. Means MEX has more oil for export and needs to import more fuels. #OOTT.” Reuters reported [\[LINK\]](#) “Mexican state energy company Pemex is unlikely to produce any commercially viable motor fuels at its new Olmeca refinery before the end of the year, five sources said, despite pressure that it should be ready before the outgoing president's term ends.” And “As recently as last Thursday, Pemex CEO Octavio Romero insisted during an industry event the refinery would “work at full capacity next month.” Now, five sources familiar with the operations told Reuters that it was impossible to meet these targets and that progress had been exaggerated ahead of the June presidential election. Neither Pemex nor the president's office responded to requests for comment. Two sources with detailed knowledge of the operations said engineers were still working on individual parts of the refinery and will then face the even bigger challenge of linking them. One of the sources, an engineer, described this last step as a hugely complex and “agonizing” process of trial and error that takes months. The other source, also an engineer, said that in the most optimistic scenario the first of two production lines of the refinery would be ready between October and November. “Technically and operationally, the refinery is fine so far but the problem is the expectations that have been created,” the source said. He added that the information shared publicly by officials “doesn’t take into consideration more technical criteria” around how a refinery works.” Our Supplemental Documents package includes the Reuters report.

#### **06/20/24: Pemex CEO says Olmeca is finally ramping up oil processing**

Here is what we wrote in last week’s (June 23, 2024) Energy Tidbits memo. “Finally, it looks like Pemex’s new 340,000 b/d Olmeca oil refinery is ramping up its oil processing. The reminder is that as Mexico’s oil refineries refine more Mexico crude oil, it means there is less Mexico oil available for export. (i) Pemex has been vague about how much oil is being processed at its new 340,000 b/d Olmeca (also known as Dos Bocas) refinery. Olmeca has been late and the recent reports were that it was only processing 16,300 b/d a month or two ago. But, on Thursday, Pemex CEO Oropeza addressed the opening of the XVIII Mexican Petroleum Congress and included an update on Olmeca. Also Mexican media reported on comments from unnamed Pemex officials on Olmeca. (i) On Thursday, we tweeted [\[LINK\]](#) “Here’s why Biden is letting Venezuela ramp up oil production & imports into the US Gulf Coast. Pemex expects to refine 1.439 mmb/d by yr-end with 340,000 b/d Olmeca refinery finally ramping up. This means less oil for export by 0.2 mmb/d vs Q1/24, and by 0.4 mmb/d vs 2023. #OOTT.” (ii) Pemex reported on Oropeza’s speech but did not provide a transcript. Pemex did not note what Olmeca was refining right now, but that he said total Mexico refining, including its Deer Park (Texas) refinery would be 1.439 mmb/d by year-end 2024. Our tweet included Pemex’s below May 2024 investor presentation graphs that noted how they refined 1.249 mmb/d in Q1/24 and 1.051 mmb/d in 2023. Using those as base levels, Oropeza’s 1.439 mmb/d by year end, that would be refining 0.2 mmb/d more than in Q1/24 and 0.4 mmb/d more than in 2023. Ie. this would be how much Mexico oil exports would be down relative to those periods. (iv) Separately, on Thursday, El Economista confirmed Olmeca had ramped up volumes, when they reported [\[LINK\]](#) “The new Olmeca refinery will reach

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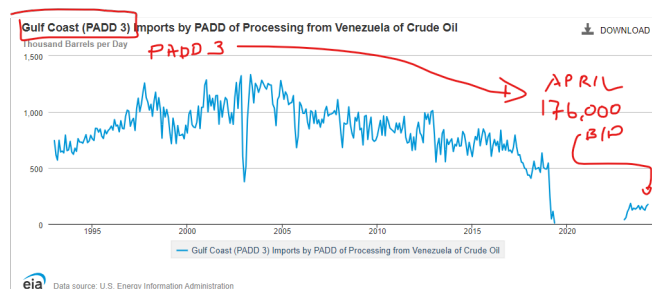
a process volume of 73,000 barrels per day of ultra-low sulfur diesel this week, equivalent to almost 60% of the national production of this type of fuel in April.” In other words, Olmeca is producing refined products. (v) Then on Friday, *El Economista* reported [\[LINK\]](#) “again delayed the full start of operations of its new Olmeca refinery located in Paraíso, Tabasco, which will now produce fuel until the second half of this year, to close at an average annual volume of 163,000 barrels per day processed of crude oil, which is 8% lower than the government’s latest estimate. This was explained by the general director of the company, Octavio Romero Oropeza, who appeared at the Mexican Petroleum Congress in Tampico, Tamaulipas.” *ie. Olmeca is refining products, is further behind schedule but expected now at 163,000 b/d by year end vs total capacity of 340,000 b/d. Our Supplemental Documents package includes the Pemex report of Orepeza’s speech and the El Economista June 21 report.”*

### Oil: US oil imports from Venezuela hit 209,000 b/d in April

On Friday, the EIA posted its “actuals” for April, which included its April data for crude oil imports from Venezuela and confirmed the June 3 Reuters report that Venezuela oil shipments were over 200,000 b/d in April. The EIA reported that US oil imports from Venezuela were 209,000 b/d in April, which included 176,000 b/d into PADD 3 Gulf Coast and also 33,000 b/d into PADD 1 East Coast refineries.

**209,000 b/d  
Venezuela oil  
hits US in Apr**

Figure 39: UA oil imports from Venezuela



Source: EIA

### 06/03/24: Reuters, Venezuela oil to US >200,000 b/d for 1<sup>st</sup> time since 2019

The EIA “actuals” for April oil imports from Venezuela were right in line with Reuters June 3 report on oil shipments/loading data. Here is what we wrote in our June 9, 2024 Energy Tidbits memo. “We have been of the view that Biden is going to do all he can to keep Venezuela oil flowing to global markets and, in particular, to the US Gulf Coast refineries to do what he can to help keep gasoline prices as low as possible in the run up to the election There is less than five months to the Nov 5 election and it’s clear that Biden is pushing any levers he has to keep gasoline and groceries prices from rising. And one of his key levers is allowing as much Venezuela oil to hit global markets in the shortest time. And it’s working as Venezuela oil exports/loadings to the US are hitting new highs since 2019. Reuters reports shipments to the US reached 205,000 b/d in April, which is the first time above 200,000 b/d since 2019. On Monday, we tweeted [\[LINK\]](#) “Venezuela #Oil exports up

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to 708,900 b/d in May. Note, 205,000 b/d of VEN oil imported by Chevron to Gulf Coast PADD 3, 1st time over 200,000 b/d since 2019. Good timing for Biden, more VEN oil into PADD 3 ahead of Nov 5. Thx @mariannaparraga #OOTT.” Reuters wrote “A total of 50 vessels departed Venezuelan waters last month carrying an average 708,900 barrels per day (bpd) of crude and fuel, and 614,000 tons of petrochemicals and oil byproducts, according to internal PDVSA documents and shipping data from financial firm LSEG.” And “Over a third of total exports, or 250,000 bpd, were bound for Asia. The United States was the second largest recipient with an average of 205,000 bpd sent by U.S. oil major Chevron, opens new tab(CVX.N), opens new tab to its own refineries and others, followed by Europe with 129,000 bpd.” Our Supplemental Documents package include the Reuters report.”

**Oil: Angola now producing more than prior OPEC+ quota**

On Friday, Bloomberg released a report on Angola’s increasing oil production since they decided to leave OPEC. Angola decided to leave OPEC in December because of increasing output restrictions, and they are now on track to export the most oil in almost four years in August. Bloomberg reported “Shipments will jump to 1.23 million barrels a day, loading plans show. The Organization of Petroleum Exporting Countries had tried to set a production limit of 1.1 million a day on Luanda, prompting Angola to depart the group. Output is not directly tied to monthly exports.... The recent stabilization in production is likely the result of incremental field work and infill drilling undertaken over the past few years.” Below is a graph showing Angola’s production against the OPEC production limits. Our Supplemental Documents Package contains the report from Bloomberg.

Angola’s increased oil production after leaving OPEC

Figure 40: Angola’s Production limits from OPEC



Source: Bloomberg

**Oil: Russia’s seaborne crude oil exports drop the most in three months**

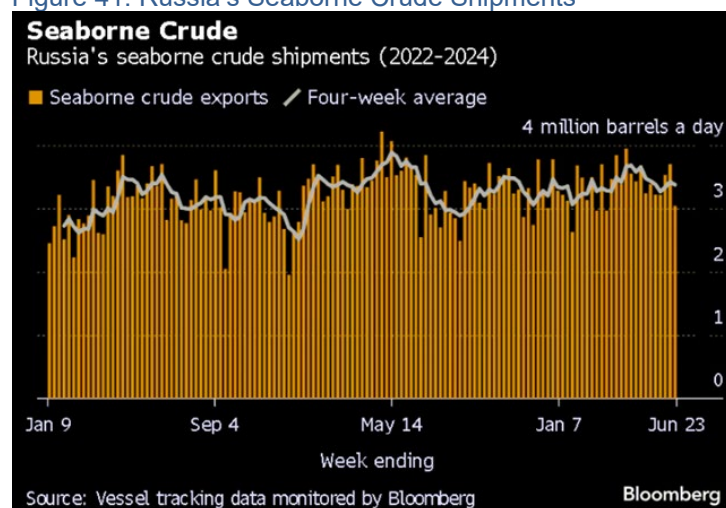
Information on the impacts on Russian oil infrastructure and its impact on moving crude is still a black hole. So it’s far from clear how drone strikes have affected refinery capacity in Russia would free up crude for export assuming the crude oil volumes can be moved to export terminals. And as noted previously, Russia has been moving more crude and products via rail, and this week shows a decrease in seaborne crude exports. On Tuesday, Bloomberg reported, “Russia’s seaborne crude flows in the week to June 23 dropped by 660,000 barrels

Russia’s seaborne crude exports

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a day to 3.04 million, the lowest in more than three months. The less volatile four-week average was also down, falling by about 45,000 barrels a day to 3.37 million. A week-on-week slump in shipments from Russia's two most important crude export ports — Primorsk on the Baltic Sea and Kozmino on the Pacific coast — was partly offset by more ships leaving Novorossiysk and the Arctic terminals at Murmansk. The gap in the Primorsk loading program, with no loadings scheduled to commence between June 18 and June 22, suggests a period of maintenance work was the reason for the halt in flows from the port for most of the week. It's likely that work was also behind the lower shipments from Kozmino, with no vessel activity at the port for several days. Flows from both ports are expected to rebound in the coming week." 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, however they were still above their promised target. Our Supplemental Documents package includes the Bloomberg report.

Figure 41: Russia's Seaborne Crude Shipments



Source: Bloomberg

### Russia oil exports to China down vs two months ago with lesser discounts

Russia oil shipments to China averaged 1.36 mmb/d for the first half of April. But they have been down since then with the reports that Russia had cut its discounts to China and that meant China was taking less Russian oil. Bloomberg's above report this week highlighted Russia oil shipments to China were down to 1.03 mmb/d for the June 23 week, which brings the last six weeks average to 1.21 mmb/d. We were warned that China oil imports from Russia were being hit on April 22 by one of our favorite commentators on the Gulf Intelligence Daily Energy Podcasts is Victor Yang, Senior Analyst JLC Network Technology. He is based in China so we like hear his on-the-ground views on oil, natural gas and markets in China. Here is what we wrote in our April 28, 2024 Energy Tidbits memo referencing Yang's comments from our April 22, 2024 tweet [LINK](#) that included a transcript we made of Yang's comments. "And for the second quarter, we see a lot of refinery maintenance, is imports will actually come down. And for now, the premium for Russian cargoes have

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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 42: 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
May 19, 2024	1.20	1.68	0.00	0.12	0.00	3.00
May 26, 2024	1.26	1.62	0.00	0.10	0.00	2.99
June 2, 2024	1.17	1.66	0.00	0.10	0.00	2.93
June 9, 2024	1.34	1.50	0.00	0.13	0.00	2.97
June 16, 2024	1.25	1.66	0.00	0.09	0.00	3.00
June 23, 2024	1.03	1.66	0.00	0.25	0.03	2.96

Source: Vessel tracking data compiled by Bloomberg  
Bloomberg

Source: Bloomberg

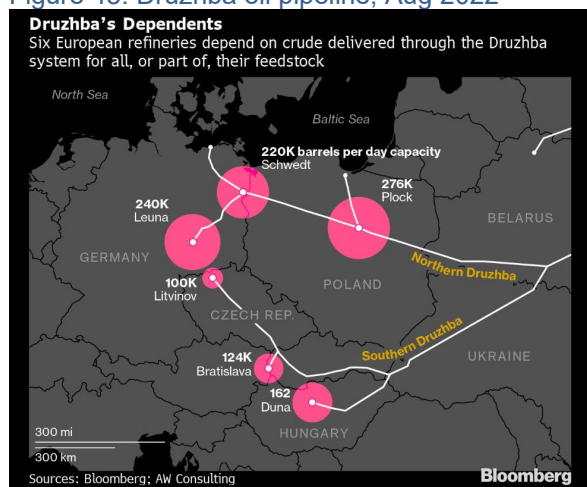
**Oil: Ukraine hits oil depot at Druzhba pumping station in central Russia**

It didn't get much attention as the reports were that, on Thursday, Ukraine drone hit an oil depot in Central Russia, SE of Moscow. And most of the reporting didn't mention that the oil depot was at a pumping station on the major Russia oil export pipeline, Druzhba. This is why, on Friday, June 28, 2024, we tweeted [\[LINK\]](#) "Was this a UKR reminder they can directly hit Russia #Oil export revenue? Russia says oil tank hit at Nikolskoye pumping station for Druzhba main oil pipeline. Druzhba still moving ~200,000 b/d to Eruope. Aug 2022 map from @ja\_herron #OOTT." We wouldn't have known this if we hadn't gone to the source regional governor Telegram post, which is why we saw the link to the pipeline. And why we also wonder if this is a Ukraine reminder they can hit Russian oil export infrastructure like the Druzhba pipeline. Our tweet included a Bloomberg Aug 2022 map of Druzhba oil pipeline and we noted in our tweet that the latest Interfax report we saw said there was still ~200,000 b/d of Russian oil moving on Druzhba to Europe markets. The Google Translate of the Telegram post was "Tambov Region. ⚡ Currently, an open burning tank has been eliminated on the territory of the Druzhba main oil pipeline, the Nikolskoye linear production and dispatch station, which arose as a result of a UAV attack. Work is underway to cool the tank."

**Druzhba oil pipeline**

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Figure 43: Druzhba oil pipeline, Aug 2022



Source: Bloomberg

### Will Ukraine escalate its drones to target Russian export infrastructure?

The reason we highlight this drone attack is that it reminds us of the big risk that Ukraine can have on oil markets – will they move their drone attacks away from refineries to Russia's oil and LNG export infrastructure. Our March 31, 2024 Energy Tidbits memo was titled "Helima Croft "closely watching whether Ukraine moves at some stage to target actual [Russian] export facilities." Here is what we wrote in our March 31, 2024 Energy Tidbits memo. " We couldn't help think of the above RBC Helima Croft comment this morning when start looking at overnight news and seeing more Russian escalating drone attacks on Ukraine energy/power infrastructure. Earlier this morning, we tweeted [\[LINK\]](#) "This 📌 Must Read from @CroftHelima looks even more relevant with the last 4 days, incl last night, of escalating Russia drone attacks on Ukraine energy/power infra. Will Ukraine expand its drone attacks to target RUS oil export facilities? has to be at least a risk? #OOTT." The news of the last four days, including last night, was on escalating Russian drone attacks on Ukraine energy and power infrastructure. Bloomberg reported "Russia continues almost daily strikes at Ukraine's critical infrastructure, and hit energy facilities in the country's south and in the far western region of Lviv on Sunday, local authorities said. Kremlin forces targeted high-voltage electricity substations in the Odesa region, damaging equipment, which caused power to be cut off to more than 170,000 households in Ukraine's third largest city, according to electricity provider DTEK." Ukraine hasn't gone along with the reported US request to not go after Russian refineries and so we have to believe there is at least a risk they expand their drone attacks to go after Russian oil and LNG export facilities." Our Supplemental Documents package includes the cover page of the Helima Croft note.

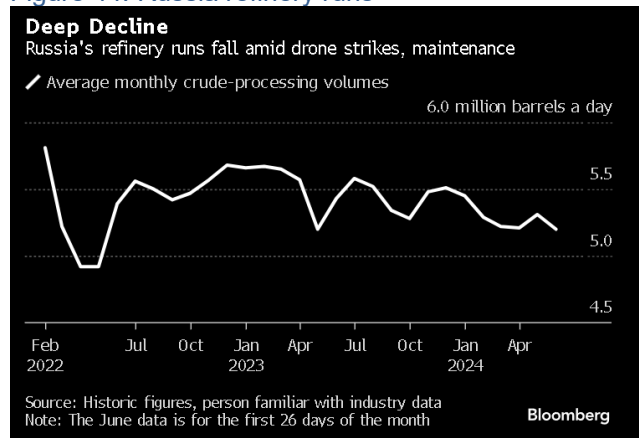
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### Oil: Russian refineries crude processing lowest since May 2022

It's been a black box on what level of impact of drones on Russian refineries. All we know is that Ukraine drones have hit parts of multiple refineries. But it seems like Russian refineries have some oil processing offline. We haven't been seeing Bloomberg reports on Russian refineries crude oil processing levels for several weeks until Friday, when Bloomberg reported "Russia's Oil Refining in June Declines to Lowest Since 2022". "Russia's oil processing for the most of June dropped to levels last seen in spring of 2022, as Ukrainian drone strikes and seasonal maintenance curbed refinery operations. The nation processed just under 5.2 million barrels a day of oil on average from June 1 to 26, according to a person with knowledge of industry data. That's more than 2% below the May average, historical figures show. It's also the lowest level since May 2022, when Russia had to cut its oil processing as some foreign fuel buyers became reluctant to take the nation's petroleum products in the wake of the invasion in Ukraine". Our Supplemental Documents package includes the Bloomberg report.

### Russian oil refineries

Figure 44: Russia refinery runs



Source: Bloomberg

### Oil: Iran says \$3b can add 400,000 b/d, a crazy low cost to add oil production

Last week's (June 23, 2024) Energy Tidbits memo highlighted last Sunday morning's comments by Iran's oil minister Owji that expects to add 0.4 mmb/d to reach 4.0 mmb/d in March 2025. Early last Sunday morning, we tweeted [LINK](#) "One continued hold back on #Oil. Yesterday, Iran said expects to increase #Oil production by 0.4 mmb/d to 4.0 mmb/d by end of March 2025 reports IRNA. Given their recent track record of oil production growth, no reason to doubt for now that they can do it. #OOTT." We forgot to include an item from our May 26, 2024 Energy Tidbits memo that first highlighted Iran's expectation to add 400,000 b/d by March 25 and to do so at a crazy low cost to add oil production. Here is what we wrote in our May 26, 2024 Energy Tidbits memo. "The headline on Iran's oil update is that it plans to increase its oil capacity from 3.6 to 4.0 mmb/d. But these numbers also remind that Iran has a lot of low risk oil development projects. We have been of the view that the decades of sanctions against Iran that led to very little foreign capex in Iran's oil sector would mean there is still lots of low hanging fruit for Iran to add oil production at low cost. But, yesterday, the numbers that Iran are saying is equal to crazy low costs to add oil production. Yesterday, we

### Iran \$3b to add 400,000 b/d

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tweeted [\[LINK\]](#) "WOW! Decades of sanctions & very low foreign capital = lots of low hanging fruit to add oil b/d. Iran says invest \$3b to add 400,000 b/d. That is crazy low cost to add oil production. Compare that to Exxon 04/12/24 invest \$12.7b to add 250,000 b/d Whiptail (Guyana).#OOTT." Yesterday, IRNA reported "In the plan to increase crude oil production by the National Iranian Company with an investment of three billion dollars only in 1403 and with an increase of 400,000 barrels per day equivalent to seven billion oil revenues for the country." That is only \$3b to add 400,000 b/d, which is crazy low cost to add oil of \$7,500 per b/d. Our tweet compared that to the recent Exxon 04/12/24 press release on its latest Guyana development project, Whiptail, that Exxon says it will invest \$12.7b to add 250,000 b/d." Our Supplemental Documents package includes the IRNA report.

### Oil: Seems like Houthis are advancing their drones/missile capabilities

We recognize that the Houthis, even with Iran support, don't have drones and missiles with anywhere the capability as US drones and missiles. However, they have already disrupted global shipping markets and our concern is that people overlook they are advancing their drones/missiles capabilities. It was another week of Houthis attacking and also hitting multiple merchant ships as well as the US hitting Houthi launch sites. One of the takeaways this week is that the Houthis seem to be advancing their drone/missile capabilities. (i) The Houthis hit their first merchant ship with a sea drone in the Red Sea. (ii) Houthis claim to have advanced their sea drones. Yesterday, Al Masirah (Houthi news) reported [\[LINK\]](#) "On Friday, the war media disclosed that the drone boat used in the attack was a "Tufan-1" type, noting that it is an attack boat carrying a 150-kilogram warhead, featuring high speed and great maneuverability and stealth, reaching speeds of up to 35 nautical miles per hour. The war media confirmed that the boat is used against nearby marine targets, both stationary and moving." (iii) The Houthis claim that the latest missile, Hatem-2, is a solid fuel missile. This is the first time we have seen them claim solid fuel missiles that are typical cheaper and, more importantly, launch quicker. (iv) Houthis attacking ships farther away in the Gulf of Aden and Arabian Sea. On Monday, UK MTO reported a Houthi missile landed in close proximity to a merchant ship east of the island of Socotra.

Are Houthis advancing their capability

Figure 45: Houthi missile attack east of Socotra



Source: Google Maps

### Oil: May sees 3<sup>rd</sup> Consecutive Negative Net Monthly FDI into China

There was another negative indicator for China's recovery this week – Net monthly foreign direct investment in China was negative for the 3<sup>rd</sup> consecutive month and now for 5 of the last 7 months. On Friday, we tweeted [\[LINK\]](#) "Negative indicator to China recovery 3<sup>rd</sup>

Negative net monthly FDI into China

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consecutive mth & 5 of last 7 mths have negative net monthly foreign direct investment flows. May: -\$4.50b Apr: -\$5.99 Mar: -\$0.9 Feb: \$5.3 Jan: \$3.9 Dec: -\$0.8 Nov: -\$2.0 Only 13 worse mths in last decade. Apr 2024 was lowest since Feb 2018 -\$7.83b Thx @business #OTT.” Foreign direct investment has been a huge driver of China over the decades and that is, at least for now, not a strength. The negative net monthly Foreign Direct Investment into China was a negative \$4.50b. Here is what we wrote in our May 12<sup>th</sup>, 2024 Energy Tidbits memo after the first negative net monthly FDI: “This was a reversal of what happened to start 2024, which saw positive inflows during January and February. However, recall before that in the months to close 2023, four of the five months saw negative net monthly direct investment in China.” Our tweet included the below Bloomberg graph and we also included a table showing the actual net monthly foreign direct investment by month for the last two years. Below is the Bloomberg graph and the historical table, which we added the notation is in US\$.

Figure 46: China net monthly foreign direct investment



Source: Bloomberg

Figure 47: Historical table of China's net monthly foreign direct investment

Date	Mid Px
05/31/2024	-4.50
04/30/2024	-5.99
03/31/2024	-0.90
02/29/2024	5.33
01/31/2024	3.89
12/31/2023	-0.81
11/30/2023	-1.96
10/31/2023	-0.59
09/30/2023	-2.07
08/31/2023	-1.35
07/31/2023	0.51
06/30/2023	5.71
05/31/2023	1.26
04/30/2023	2.06
03/31/2023	9.25
02/28/2023	11.89
01/31/2023	7.86
12/31/2022	-3.14
11/30/2022	1.44
10/31/2022	-4.53

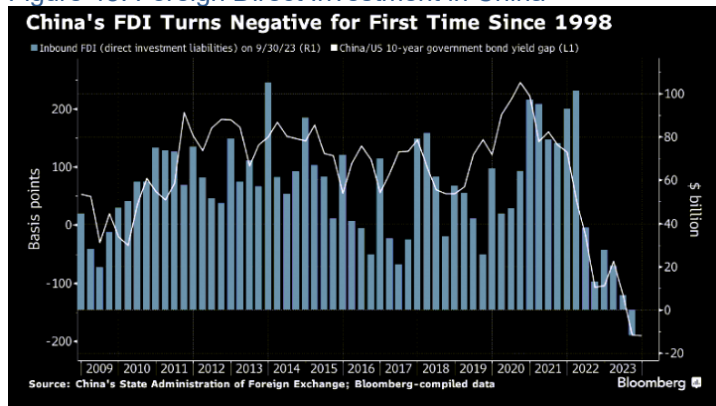
Source: Bloomberg

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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 48: Foreign Direct Investment in China



Source: Bloomberg

### Oil: Baidu China city-level road congestion MTD Jun 26 is 1<sup>st</sup> down YoY month

On Friday, we tweeted [LINK] *“Negative indicator, less city traffic in China. MTD to Jun 26, Baidu city-level road congestion for top 15 cities is first down YoY month and 8 of 15 top cities are down YoY. Feb was down big but that was timing of Chinese New Year in 2024 vs 2023. Thx @BloombergNEF #OOTT.”* On Thursday, BloombergNEF posted its Global Road Traffic Indicators Weekly June 27 report, which includes the Baidu city-level road congestion for the week ended June 19. BloombergNEF’s report was titled *“Traffic inches up slightly and stabilizes”*. What jumped out at us was that month-to-date June 26 was the first month that was down YoY other than Feb 2024. But Feb 2024 being down big YoY was due to the different time of Chinese New Year that was Jan 22, 2023 vs Feb 10, 2024. Feb 2024 saw

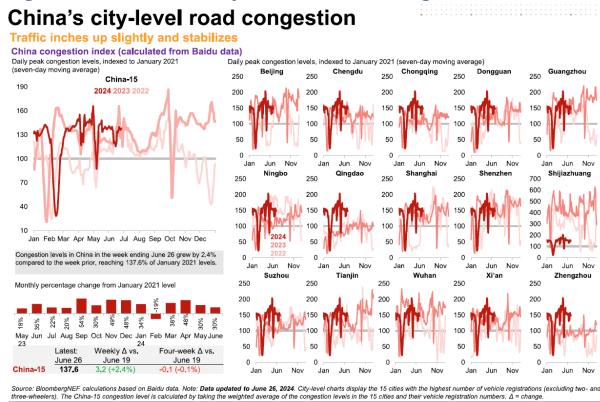
China city-level  
traffic congestion

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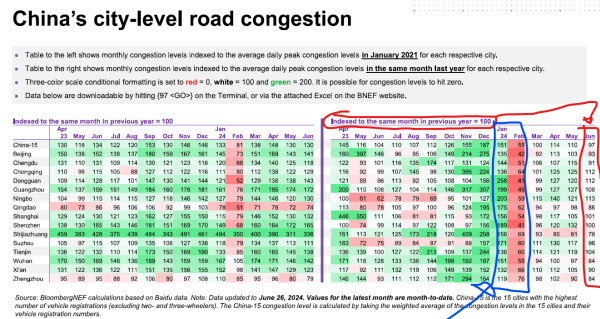
people leaving cities over Chinese New Year on Feb 10 whereas people were back to work in Feb 2023 as Chinese New Year was Jan 22, 2023. BloombergNEF reported Baidu city-level road congestion was up by +2.4% WoW to 137.6% of Jan 2021 levels. Compared to June 2023, so far June's average daily peak congestion levels are down -3% YoY. And BloombergNEF noted that month-to-date June 19 2024 for the top 15 cities were at 97% of June 2023 traffic levels. And that 8 of the top 15 cities are down YoY. Below are the BloombergNEF key graphs.

Figure 49: China city-level road congestion for the week ended June 26



Source: Bloomberg

Figure 50: China city-level road congestion for the week ended June 26



Source: Bloomberg

**Oil: China official Manufacturing PMI 2<sup>nd</sup> mth of contraction after 2 expansions**

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 earlier the same day or the day before the Caixin Manufacturing PMI data that we track,

**China official Manufacturing in contraction**

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however, only the Official Manufacturing PMI has come out this weekend, and the Caixin Manufacturing PMI will be released this evening at 7:30pm MT. Yesterday, we tweeted [LINK](#) “2nd mth of contraction after 2 mths of expansion. China official National Bureau of Statistics Manufacturing PMI out. Jun 49.5. Est 49.7. May 49.5. Apr 50.4. Mar 50.8. Feb 49.1. Jan 49.2. Export oriented smaller firms Caixin Manufacturing PMI is tomorrow night. #OOTT Thx @business.” Note the Caixin Manufacturing PMI has been expansion since Nov.

Figure 51: China Official General Manufacturing PMI



Source: Bloomberg

### Oil: China to reach peak diesel demand sooner than expected

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

### China peak diesel demand

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### Diesel consumption will become less of an economy indicator in China

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

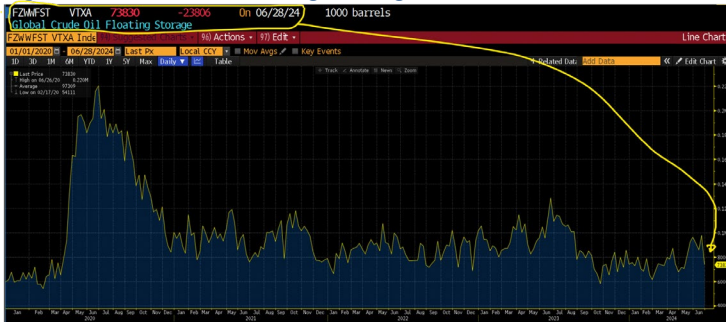
### Oil: Vortexa crude oil floating storage est 73.83 mmb at June 28, -23.81 mmb WoW

### 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 June 22 at 9am MT. (i) Yesterday, we tweeted [\[LINK\]](#) [\[LINK\]](#) *"Only 1 data point but a big drop in Vortexa oil floating storage est -23.81 mmb WoW to 73.83 mmb at Jun 28 However, it's been negative as 4 of prior 5 wks were >90 mmb & 1st >90 mmb wks since Aug 2023 ie. before Saudi July 2023 cuts kicked in. Thx @vortexa @business #OOTT."* (ii) Our tweet highlighted this is a very big WoW drop in floating storage but it is only one week data whereas four of the prior five weeks had floating storage over 90 mmb and there haven't been any other above 90 mmb weeks since earl Aug 2023. And then the Saudi extra voluntary 1 mmb/d cuts from July 1, 2023 had started to kick in and knock floating storage down. (iii) As of 9am MT yesterday, Bloomberg posted Vortexa crude oil floating storage estimate for June 28 at 73.83 mmb, which is -23.81 mmb WoW vs revised up June 21 of 97.64 mmb. Note June 21 was revised +4.41 mmb to 97.64 mmb vs 93.21 mmb originally posted at 9am MT on June 22. (iv) Revisions. The prior two weeks were revised up but the rest of the last seven weeks revisions were almost nothing. Here are the revisions for the past seven weeks compared to the estimates originally posted on Bloomberg at 9am MT on June 22. June 21 revised +4.41 mmb. June 14 revised +2.58 mmb. June 7 revised -0.43 mmb. May 31 revised -0.52 mmb. May 24 revised -0.61 mmb. May 17 revised +0.55 mmb. May 10 revised -0.02 mmb. (v) There is a wide range of floating storage estimates for the past seven weeks, but a simple average for the prior seven weeks is 88.33 mmb vs last week's then prior seven-week average of 87.03 mmb. (vi) Also remember Vortexa revises these weekly storage estimates on a regular basis. For example, when most report on the Vortexa data on Monday morning, they will be reporting on different estimates. We do not track the revisions through the week. Rather we try to compare the first posted storage estimates on a consistent week over week timing comparison. Normally we download the Vortexa data as of Saturday mornings around 9am MT. (vii) Note the below graph goes back to Jan 1, 2020 to show the run up to Covid and then how Covid started to impact Covid in March/April 2020. (viii) June 28 estimate of 73.83 mmb is -54.5 mmb vs the 2023 peak on June 23, 2023 of 128.33 mmb. Recall Saudi Arabia stepped in on July 1, 2023 with its voluntary cuts. (ix) June 28 estimate of 73.83 mmb is -35.58 mmb YoY vs June 30, 2023 of 109.41 mmb. Below are the last several weeks of estimates posted on Bloomberg as of 9am MT June 29, June 22, and June 15.

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Figure 52: Vortexa Floating Storage Jan 1, 2000 – June 28, 2024, posted June 29 at 9am MT



Source: Bloomberg, Vortexa

Figure 53: Vortexa Estimates Posted 9am MT on June 29, June 22, and June 15.

Posted June 29, 9am MT						June 22, 9am MT						June 15, 9am MT					
FZWWFST VTXA Inde						FZWWFST VTXA Inde						FZWWFST VTXA Inde					
ID	3D	1M	6M	YTD	5Y	ID	3D	1M	6M	YTD	5Y	ID	3D	1M	6M	YTD	5Y
Fr	06/28/2024					Fr	06/21/2024					Fr	06/14/2024				
Fr	06/21/2024					Fr	06/14/2024					Fr	06/07/2024				
Fr	06/14/2024					Fr	06/07/2024					Fr	05/31/2024				
Fr	06/07/2024					Fr	05/31/2024					Fr	05/24/2024				
Fr	05/31/2024					Fr	05/24/2024					Fr	05/17/2024				
Fr	05/24/2024					Fr	05/17/2024					Fr	05/10/2024				
Fr	05/17/2024					Fr	05/10/2024					Fr	05/03/2024				
Fr	05/10/2024					Fr	05/03/2024					Fr	04/26/2024				
Fr	05/03/2024					Fr	04/26/2024					Fr	04/19/2024				
Fr	04/26/2024					Fr	04/19/2024					Fr	04/12/2024				
Fr	04/19/2024					Fr	04/12/2024					Fr	04/05/2024				
Fr	04/12/2024					Fr	04/05/2024					Fr	03/29/2024				

Source: Bloomberg, Vortexa

**Oil: Vortexa crude oil floating storage WoW changes by regions**

Bloomberg also posts the Vortexa crude oil floating storage in key regions, but not all regions of the world. The regions covered are Asia, North Sea, Europe, Middle East, West Africa and US Gulf Coast. We then back into the “Other” or rest of world. (i) As noted above, last week’s June 21, in total, was revised +4.43 mmb with the key revisions being Other revised +3.15 mmb, US Gulf Coast revised +2.59 mmb and Asia revised -2.22 mmb. (ii) Total floating storage was down a whopping -23.81 mmb WoW vs the revised up June 21. The major WoW changes were Other -6.74 mmb WoW, Europe -5.66 mmb WoW, Middle East -5.07 mmb WoW and West Africa -3.62 mmb WoW. (iii) June 28 estimate of 73.83 mmb is -54.50 mmb vs the 2023 high on June 23, 2023 of 128.33 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 -35.00 mmb and Other -25.14 mmb. (v) Below is the table we created of the WoW changes by region posted on Bloomberg at of 9am MT yesterday. Our table also includes the “Original Posted” regional data for June 21 that was posted on Bloomberg at 9am MT on June 22.

**Vortexa floating storage by region**

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Figure 54: Vortexa crude oil floating by region

Region			Original Posted		Recent Peak	
	Jun 28/24	Jun 21/24	WoW	Jun 21/24	Jun 23/23	Jun 28 vs Jun 23/23
Asia	37.76	38.37	-0.61	40.59	72.76	-35.00
North Sea	3.82	5.73	-1.91	6.69	5.42	-1.60
Europe	9.79	15.45	-5.66	16.24	5.80	3.99
Middle East	8.72	13.79	-5.07	12.17	6.76	1.96
West Africa	4.66	8.28	-3.62	7.24	7.62	-2.96
US Gulf Coast	5.27	5.47	-0.20	2.88	1.02	4.25
Other	3.81	10.55	-6.74	7.40	28.95	-25.14
Global Total	73.83	97.64	-23.81	93.21	128.33	-54.50

Vortexa crude oil floating storage posted on Bloomberg 9am MT on Jun 29  
Source: Vortexa, Bloomberg

Source: Bloomberg, Vortexa

**Oil: TSA says the 7 busiest air travel days have been since May 24**

Yesterday, the TSA tweeted [LINK](#) “JUST IN: Friday, June 28th, was the 4th busiest day ever for TSA – our officers screened 2.93M individuals at airports nationwide. Please arrive at the airport early with plenty of time to get through security. Have travel questions? Ask the experts: @AskTSA.” The TSA included the below table that shows the seven busiest air travel days have been since May 24. This fits what the TSA posted on Monday with their press release “TSA breaks record for most individuals screened on a single day, readies for record-breaking Independence Day weekend travel volumes.” [LINK](#). “As airline passengers prepare to take to the skies this Independence Day holiday, the Transportation Security Administration (TSA) is prepared for a sustained period of high passenger volumes. TSA expects to screen more than 32 million individuals from Thursday, June 27 through Monday, July 8, which is a 5.4% increase over 2023 Independence Day holiday travel volumes. On Sunday, June 23, TSA broke the record for most people screened on a single day, screening nearly 3 million (2.99 million) individuals.” This summer’s record-breaking travel volumes reflect the role TSA and the Department of Homeland Security (DHS) have in securing the nation’s transportation systems, while ensuring freedom of movement for people and commerce, which is vital to our country’s economic well-being.”

7 busiest air travel days

Figure 55: TSA Top 10 Busiest Travel Days

Date	Total Passenger Volume	Date	Total Passenger Volume
1. 6/23/2024	2,996,495	6. 6/27/2024	2,921,862
2. 5/24/2024	2,951,859	7. 6/09/2024	2,915,830
3. 6/24/2024	2,944,001	8. 11/26/2023	2,908,785
4. 6/28/2024	2,935,065	9. 5/23/2024	2,897,421
5. 6/14/2024	2,929,467	10. 6/30/2023	2,884,783

TSA.gov

Source: TSA

**Oil: Asia/Pacific intl May passenger air travel up +23.9% YoY but -10.4% vs 2019**

On Thursday, we tweeted [LINK](#) “Asia Pacific airlines passenger demand up YoY but still down vs pre-Covid. Association of Asia Pacific Airlines (AAPA) international air passenger demand for May. +23.9% YoY but still -10.6% vs pre-Covid May 2019. #OOTT [LINK](#).” On Thursday, the Association of Asia Pacific Airlines released its May traffic results [LINK](#) which

Asian Pacific air traffic in May

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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 10.4% below 2019 levels. The AAPA reports preliminary May 2024 travel figures were up +23.9% YoY from May 2023. The AAPA wrote "Preliminary May 2024 traffic figures released today by the Association of Asia Pacific Airlines (AAPA) showed solid expansion in both international air passenger demand and air cargo markets, in tandem with an acceleration in economic activity globally. In May, the region's airlines carried a combined total of 27.9 million international passengers, 23.9% more than in the same month last year. Traffic averaged 89.4% of 2019 levels. Measured in revenue passenger kilometres (RPK), demand grew by 27.4% year-on-year, reflecting strength in long haul travel markets. After accounting for a 26.4% expansion in available seat capacity, the average international passenger load factor edged marginally higher, by 0.6 percentage points to 79.0% for the month." (ii) Air cargo was up +17.9% YoY, measured in Freight Tonne Kilometres (FTK), and the load factor increased to 61.4%. Meanwhile, headline capacity measured in Available Seat Kilometres (ASK) expanded +26.4%. (iii) Subhas Menon, Director General of the AAPA, said "The current pick-up in global economic activity, supported by improvements to business confidence levels and increased consumer spending, has boosted demand for both international travel and air cargo. Asia Pacific airlines, being major players in the air cargo markets, have also benefitted from disruptions to ocean freight services... Encouraging trends in passenger and cargo traffic bode well for Asian airlines this year, following strong traffic performance for the year 2023. However, profit margins remain under pressure, with operating costs impacted by the strong US Dollar and jet fuel prices averaging above the US\$100 per barrel mark during the first five months of the year. Overall, Asian airlines remain committed to maintaining stringent cost controls across their operations, alongside a proactive pursuit of growth opportunities." Below is a snapshot of the APAA's traffic update.

Figure 56: APAA Preliminary International Air Traffic Data

International	May-24	May-23	% Change
Passengers (Thousand)	27,910	22,520	+ 23.9%
RPK (Million)	100,138	78,614	+ 27.4%
ASK (Million)	126,692	100,268	+ 26.4%
Passenger Load Factor	79.0%	78.4%	+ 0.6 pp
FTK (Million)	6,129	5,197	+ 17.9%
FATK (Million)	9,977	8,667	+ 15.1%
Freight Load Factor	61.4%	60.0%	+ 1.4 pp

Source: AAPA

### Oil: Europe airports daily traffic 7-day moving average is -2.9% below pre-Covid levels

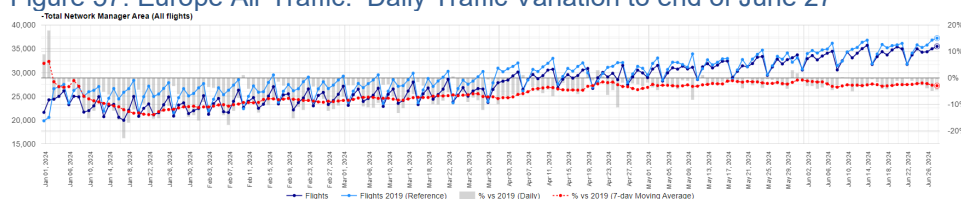
Yesterday, we tweeted [\[LINK\]](#) "Daily Europe air traffic -2.9% below pre-Covid. 7-day moving average as of: Jun 29: -2.9% below pre-Covid. Jun 20: -2.5%. Jun 13: -2.6%. Jun 6: -3.2%. May 30: -0.8%. May 23: -1.9%. May 16: -1.2%. May 9: -3.2%. May 2: -2.9%. Apr 25: -3.2%. Thx @eurocontrol #OOTT." Other than over Christmas, European daily traffic at airports has been below pre-Covid. The 7-day moving average has got close a few times including four weeks ago at only 0.8% below pre-Covid as of May 30, but the 7-day moving average being

### Europe airports daily traffic

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2.9% below pre-Covid as of June 70, which followed 2.5% below pre-Covid as of June 20. Eurocontrol updates this data daily and it is found at [\[LINK\]](#).

Figure 57: Europe Air Traffic: Daily Traffic Variation to end of June 27



Source: Eurocontrol

**Oil: Delta CEO sees US air travel constraints for another 3-5 years**

Delta CEO Ed Bastian was on CNBC on Tuesday and stressed that US air travel will continue to face capacity constraints for another 3 to 5 years. We tweeted [\[LINK\]](#) "US air travel constraints another 3-5 yrs. ". overall supply chain constraints that are still out there. it's keep a lid on capacity, no question" "i think you're looking at another 3 to 5 years ...." with supply constraints. Delta CEO Bastian to @Lebeaucarnews @KellyCNBC #OOTT." Here is our more longer transcript of Bastian's comments. "overall supply chain constraints that are still out there. it's keeping a lid on capacity, no question" "first of all we will never get back to where we could have been. Because this has been going for years already to this stage. i think you're looking at another 3 to 5 years because this is about labour. This is about parts. This is about ensuring you have the right poli specs with the FAA getting a whole more energized around the certification process. I think this is going to continue to be some of the challenges that we see in our industry in terms of constraint."

US air travel constraints

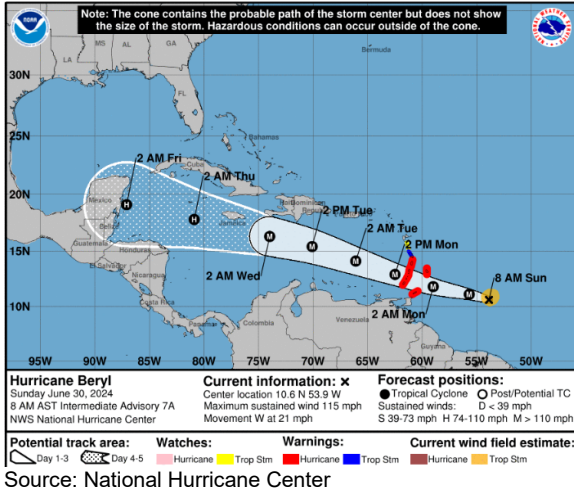
**Oil & Natural Gas: Hurricane Beryl expected to be Cat 4, not clear if will go into GoM**

Earlier this morning, we tweeted [\[LINK\]](#) "Hurricane Beryl expected to reach Category 4 strength. @NHC\_Atlantic. Category 4 is 130-156 mph sustained winds and "catastrophic damage will occur". Still not clear if Beryl hits Yucatan, or veers into GoM Gulf Coast or both. Hope everyone can get to safety. #OOTT #NatGas." Beryl will be a big one, a Category 4 hurricane. Earlier this morning (5am MT), the National Hurricane Center's update was that Beryl reached hurricane strength and is expected to be a Category 4 as it approaches the islands such as Grenada, Barbados, St. Vincent and the Grenadines, St. Lucia, etc. The current projects are for it to keep moving and hit the Yucatan peninsula on Friday. Right now, it is a very fast moving hurricane at 21 mph. that is fast. The current forecast is that Beryl will hit the Yucatan Peninsula on Friday, but it could easily veer a little north into the GoM Gulf Coast or even re-emerge after the Yucatan into the GoM. Our tweet included the NHC's explanation of the Saffir-Simpson hurricane scale. Category 4 is a big one. It is 130-156 mph sustained winds and "Catastrophic damage will occur". Our Supplemental Documents package includes the Saffir-Simpson hurricane wind scale.

Hurricane Beryl to be a Category 4

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Figure 58: Hurricane Beryl as of 5am MT June 30



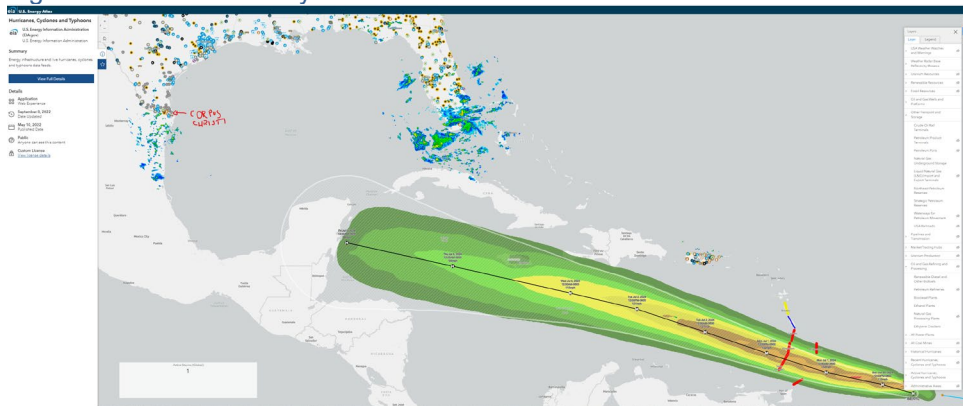
Source: National Hurricane Center

**Oil & Natural Gas: EIA’s interactive hurricane tracking vs oil and gas wells/infra**

Earlier this morning, we tweeted [\[LINK\]](#) “Will Hurricane Beryl re-emerge in the GoM  
 Reminder the EIA has a great live hurricane tracking map 📍 that shows #Oil #NatGas #LNG wells, refineries, infrastructure etc in the path of any Tropical Storm or Hurricane. #OOTT [\[LINK\]](#).” As noted in the above NHC track path, Hurricane Beryl is currently forecast to hit the Yucatan Peninsula on Friday morning. It’s still early so the path could easily veer a little north and directly into the GoM. But if it doesn’t veer, then the question is what happens to Beryl as it re-emerges from the Yucatan. Will it regain lost strength when it goes back over the warm waters of the GoM and be a Tropical Storm or Hurricane? And if so where will it go. Our tweet reminded there is a good EIA live tropical storm and hurricane tracking that shows the projected path and any oil, natural gas, LNG and other infrastructure in its path. Below is the EIA map we attached to our tweet that notes Corpus Christi ie. home of major oil export terminals, products terminals, refineries, etc.

EIA’s hurricane vs oil and gas infra live map

Figure 59: Hurricane Beryl as of 5am MT June 30



Source: National Hurricane Center

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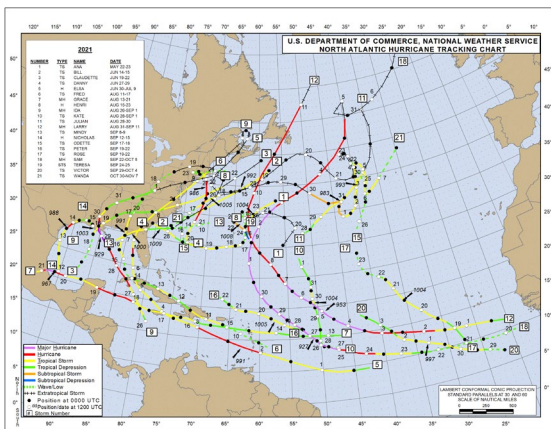


**Oil & Natural Gas: Hurricane track map rule of thumb – the Dominican Republic**

Hurricanes and tropical storms are always unpredictable in terms of speed, wind strength and path. But, based on history, there are some rules of thumb. One pretty good rule of thumb is that tropical storms or hurricanes that move south of the Dominican Republic are likely to either hit the Yucatan Peninsula or come into the Gulf of Mexico and hit the Gulf Coast. Our tweet included the last four years of NHC track maps and we maintain the track maps since 2000 and they provide support for this rule of thumb On Thursday, we tweeted [\[LINK\]](#) “Hurricane Track Map Rule of Thumb. Hurricanes that move south of the Dominican Republic are the ones that are likely to hit Yucatan Peninsula or come into the GoM to hit Gulf Coast. Last 4 yrs of @NHC\_Atlantic track maps 📍 are indicative of track maps since 2000. #OOTT #NatGas “

**Hurricane track map rule of thumb**

Figure 60: Atlantic hurricane track map for 2021



Source: National Hurricane Center

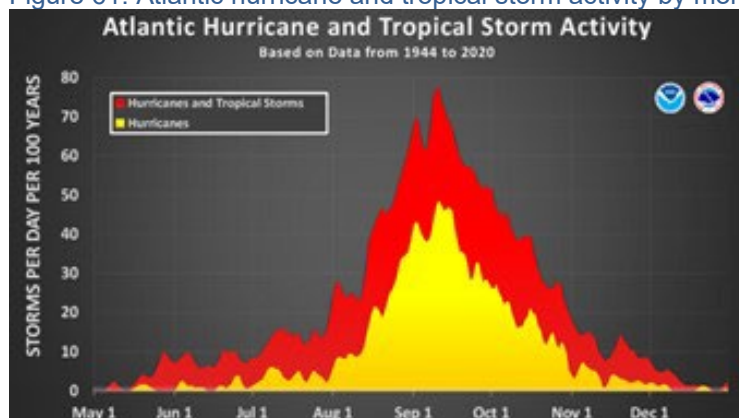
**Oil & Natural Gas: 90% of Atlantic hurricanes come after Aug 1, peak is normally mid-Sept**

It is important to remember that normally 90% of Atlantic hurricanes typically come after Aug 1. 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. [\[LINK\]](#).”

**90% of hurricanes are after Aug 1**

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Figure 61: Atlantic hurricane and tropical storm activity by month



Source: NOAA

### Electricity: GE Verona, natural gas is very important in 2020s with data centers growth

Every week, we could write multiple comments on companies jumping on the AI data center growth in electricity consumption, but we try to limit our writing to companies with some expertise or insight in the space. On Thursday, GE Verona CEO Scott Strazik was on CNBC Squawk Box. GE Verona is the new public spin-out from GE and is one of the biggest global suppliers for wind and natural gas generation. Strazik was another who reminded of two key AI data center issues: the growth is very fast this winter and natural gas is the first call for 24/7 power. Our view is unchanged in that data centers want as much solar and wind as possible so they can say they are powered by clean energy. However, data centers know that if they want to run their data centers for the other 2/3 of the time or so, they need natural gas or coal or nuclear. It's why data centers look to natural gas as the 1<sup>st</sup> choice for 24/7 electricity. And natural gas or maintain coal power for longer are the only ones that can respond quickly to the rapid increase in power consumption. On Thursday, we tweeted [\[LINK\]](#) "AI Data Centers 101. #NatGas will be the 1st call for rapid growth of AI Data center 24/7 power. "with the amount of power that's going to be needed this decade, gas is going to be important. We'll decarbonize that gas over time with hydrogen and carbon capture" GE Verona CEO to @andrewsorkin. #OOTT." We created a transcript of Strazik's comments with CNBC's Andrew Ross Sorkin. On the massive power demand from AI data centers, Sorkin asks "where do you think it's going to come in terms of clean energy?" Strazik "Well, it's going to be an all of the above, technology. The reality is that this is going to be a multi-step journey. And with the amount of power that's going to be needed this decade, gas is going to be important. We'll decarbonize that gas over time with hydrogen and carbon capture. Wind is going to grow and play a real role. Solar's going to be important. But we're also going to move nuclear, small modular reactors are going to be"

Electricity supply gap coming?

### 06/07/24: Huntsman, risk for electricity supply gaps in 2020s

There are two key AI data center 101 issues/opportunities – the electricity demand is big and fast, and natural gas is the go-to fuel for 24/7 power. And that brings up an overlooked risk of an electricity supply gap. We don't believe governments are focused on the how fast the electricity demand will grow for AI data centers. These are complex buildings but can be built within a couple of years. And our concern is

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that there is an electricity supply gap ahead and this is not appreciated by governments. Here is what we wrote in our June 9, 2024 Energy Tidbits memo. *“Huntsman, is an electricity supply gap inevitable with data center growth? It’s pretty amazing how AI and data center electricity needs has gone from a non-event to the largest variable to electricity consumption over the coming years. Our Energy Tidbits memos have been highlighting that the major issue is that this AI data centers growth in electricity consumption is happening right away. This is our concern – we are in a calm before the storm where data centers electricity consumption is being met but can the rapid large growth in electricity consumption be met on a timely basis with increased electricity generation? On Friday, we tweeted [\[LINK\]](#) “Electricity Gap is coming! “a new data center takes a little over a yr to build, it takes 10 yrs to permit these new #NatGas burning power plants. It takes even longer for Wind & Solar. So that’s a disconnect we have” Huntsman CEO. Higher power costs ahead! #OOTT @SquawkCNBC.” Huntsman CEO Peter Huntsman was on CNBC Squawk Box on Thursday morning. There is an electricity gap coming and it is coming faster than expected because there is no way new supply can keep up with projected electricity growth coming from data centers. This was a great reminder from Huntsman. The other part that Huntsman didn’t specifically address is the big problem is transmission approval, which is even harder than getting approvals for new natural gas plants and for solar/wind projects. Our tweet included an mobile clip, where Huntsman said “... AI coming on, we’re building data centers, a new data center takes a little over a year to build. It takes 10 years to permit these new gas burning power plants . it takes even longer for wind and solar. So that’s the disconnect we have.” It was a great point by Huntsman, data centers are being ramped up quickly but approvals take way longer to get new natural gas power generation and even more for wind and solar power generation. We also note how an even longer timeline is power transmissions lines.”*

#### **06/07/24: Huntsman, data centers can’t be run on renewables**

Here is another Huntsman item from our June 9, 2024 Energy Tidbits memo. *“There was another reminder about AI data centers fundamentals from Huntsman CEO Peter Huntsman on CNBC Squawk Box on Thursday – they need fossil fuels to provide 24/7 reliable, affordable power. On Friday, we tweeted [\[LINK\]](#) “Data center reality check. “if the projected amount of electricity that is going to be needed to power all this .....the capacity that will be built will have to be hydrocarbon based. You cannot have reliable wind that is going to running 100% of the time” Huntsman CEO. Also why he expects power costs are going way higher. #OOTT #NatGas @SquawkCNBC @BeckyQuick.” Huntsman was highlighting his view that energy costs are going way higher and linked in his view that data centers need fossil fuels for power. Here is the transcript we made of his comments with CNBC’s Becky Quick. CNBC’s Becky Quick asks “electricity prices you think will go up 30% because we won’t be able to meet demand?” Huntsman “There’s a 30%. The last electron available electricity, how much is that going to be worth? It’s not going to be 30% up, it’s going to be multiple times up. And when we have consumers and utilities, they’re competing against these multi-trillion dollar high tech companies”. Quick “for the data centers.” Huntsman “for the data centers and so forth. They want to buy it, the reliable and affordable electricity. And I have no problem with them doing it. It’s a*

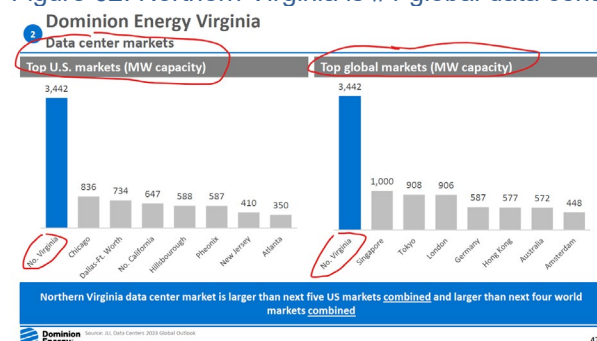
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free market, heaven bless them. But on one hand, we're out here saying we don't want hydrocarbons and we're willing to fund that. On the other hand, that's, we're extending the life of coal, we're extending" Quick "it's not a free market though, you have regulators who say you can't raise prices. Does that mean we will have shortages?" Huntsman "if that's the case, Yes. You are not building the capacity. It's been projected, these are not Huntsman's numbers. These are New York Times and Wall Street Journal. If the projected amount of electricity that is going to be needed to power all this, if that indeed comes on, we are not building the electrical capacity today. The capacity that will be built will have to be hydrocarbon based. You cannot have reliable wind that is going to be running 100% of the time.",

**Dominion Energy: renewables 14% of capacity but only 5% of actual power**

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

Figure 62: Northern Virginia is #1 global data center market



Source: Dominion Energy

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Figure 63: Benefits for data centers in Virginia

**Dominion Energy Virginia**  
Benefits for data centers in Virginia

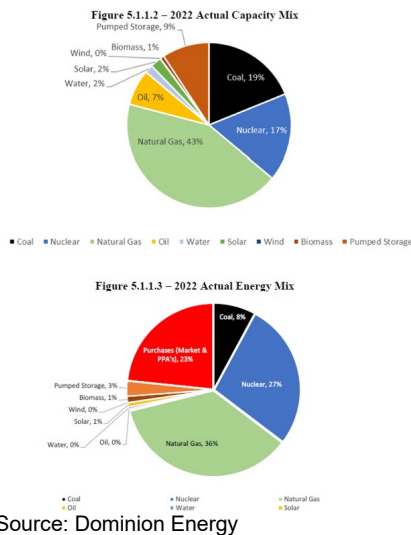
Lower ◯ → Higher

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

Dominion Energy Source: Data Center Market Assessment conducted by a third-party consulting firm on behalf of Dominion Energy, dated November 3, 2021 48

Source: Dominion Energy

Figure 64: Dominion Virginia 2022 actual energy capacity mix and actual energy mix



**Energy Transition: Barclays, world economy cannot go cold turkey on natural gas**

On Friday, we tweeted [\[LINK\]](#) “Govts don’t want to admit it BUT “the reality is that for quite some time, fossil fuels will be with us, right, especially #NatGas. So that glide path is long. The world and the world economy cannot go cold turkey on this tomorrow.” Barclays CEO to @annaedwardsnews #OOTT.” It seems western governments are holding out on jumping on the increasing company views that natural gas is needed for the indefinite future. Whereas, we continue to see increasing comments from companies that to many are a changed view to their natural gas and Net Zero plans. On Tuesday, Barclays CEO C.S. Venkatakrishnan spoke at the Bloomberg Sustainable Finance Forum and he was explaining why Barclays has to keep providing capital to oil and natural gas. He got some headlines for saying they can’t go “cold turkey” on oil and gas or else risk energy security. We created the below transcript of his comments. [\[LINK\]](#) Items in “italics” are SAF Group created transcript.

**Barclays CEO on natural gas**

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Venkatakrisnan: *“We have the ambition to be a net zero company in financed emissions. Scope one, scope two, scope three by 2050. We have aggressive targets on energy and power and other sectors to 2030. We are adding to that cement and aviation. But, that journey, the end has never been in question. The only thing that’s been questioned is how fast, and are there some activities that you would not do? So for instance coal is something, or Arctic oil sands, are things we would not do. But we are very much moving away from coal to oil, oil to gas, gas to clean energy. And the reality is that for quite some time, fossil fuels will be with us, right, especially natural gas. So that glide path is long. The world and the world economy cannot go cold turkey on this tomorrow. That was the commitment we made and we made a statement of how aggressively we were going to do it.”*

### Energy Transition: Big hit to Canada EV sales if follow US in big tariffs on China EVs

This week Canada Finance Minister Chrystia Freeland announced *“On July 2, we will launch a 30-day consultation on potential policy responses to protect Canada’s auto workers, our growing EV industry, and to prevent trade diversion.”* This is to consider following the US lead in adding big surtax on EVs made in China. (i) On Monday, we tweeted [\[LINK\]](#) *“Can’t be good if EV price cutting leader Tesla gets hit by more tariff. Wonder if Liberals will still let point-of-sale \$5,000 rebate for Shanghai-made Teslas? One advantage for Liberals is would provide a bad guy to blame for EV sales below expectations. #OOTT [\[LINK\]](#).”* (ii) Biden’s added tariffs on Chinese-made EVs does not impact near term EV sales. No one has been making a big deal on Biden cranking up tariffs on Chinese EVs because everyone said the US doesn’t import any Chinese made EVs so it has no impact today and is meant to prevent future Chinese made EV imports like from BYD. (iii) (ii) There was a good reminder from Globe and Mail that Canada EVs sales should be hurt if the Liberals follow the US and crank up tariffs of Chinese-made EVs. The Globe and Mail reported 44,400 Chinese made EVs landed in Vancouver in 2023. We confirmed with the Globe and Mail that they were referring to Shanghai-made Teslas. They wrote *“Chinese brands aren’t really a part of Canada’s EV market right now. But, according to Bloomberg, Canada is seeing a significant surge in imports of Chinese-made EVs, particularly Tesla Inc. models made in Shanghai. The number of cars arriving from China at the port of Vancouver rose more than fivefold last year, to 44,400. And Canadians get a \$5,000 point-of-sale rebate on these models, to boot.”* (iv) We agree with the Globe and Mail that it would slow down EV adoption if Liberals add tariffs that cover any Chinese-made EVs including Teslas made in Shanghai; They noted the existing tariff is 6.1%. For round numbers, let’s assume or use \$3,000 as a ballpark tariff today. If that is doubled, that adds \$3,000 to the EV price. (v) Then there is a bigger question. Why is Canada cranking up the tariffs? If its like the US on unfair trade practices, why would they leave a Shanghai-made Tesla still eligible for a point-of-sale rebate of \$5,000. Imagine if Shanghai-made Teslas are dropped from this \$5,000 rebate on top of a doubling of the tariffs. That is a huge added cost that isn’t a factor in why it’s a nothing event in the US. (vi) The bottom line is that if you make the price cutter leader’s EVs more expensive then it has to impact overall EV sales. It’s not like you making the most expensive EVs more expensive. So we agree with the Globe and Mail that this should impact EV sales, especially If the point-of-sale rebate comes into play as Tesla has been the leader in cutting prices and accounted for ~25% of Canada EV sales in 2023. (vii) Driving.ca reported [\[LINK\]](#) *“Tesla doesn’t report market-specific, model-specific sales figures on a monthly or quarterly basis in the manner of virtually all other automobile manufacturers. But if it feels as though you’re beginning to see Model 3s and Model Ys everywhere you turn, there’s good reason. Automotive News*

### Big hit to Canada EV sales?

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estimates Tesla sold 16,000 Model 3s in Canada in 2023; 18,500 Model Ys.” That is 34,500 Teslas in 2023. Bloomberg reported an estimate of 139,500 EVs sales in 2023 so Teslas were approx. 25% of total Canada EV sales. So the numbers make sense. (viii) The domestic politics reason why we think Liberals are likely to crank up tariffs on Chinese-made EVs is that we think it gives the Liberals something to blame for EVs slowdown. EVs sales are less than expected. The Liberals haven't yet come out and said slower sales make sense as Canadians don't want EVs as much as the Liberals want them to. So this would give the Liberals the Chinese to blame for the EVs shortfall. And blaming the Chinese plays well in Canada or the US. Our Supplemental Documents package includes the Globe and Mail report.

### Energy Transition: GE Verona, offshore wind will be very expensive

We were surprised by the comments from a global offshore wind player that the prices for offshore wind have to become analogous to building a new nuclear plant to make offshore wind get back on track. We try to watch as many live CEO interviews as possible because it's like the Q&A of a conference call, the CEOs have to respond to a question and not speak from a script. We saw some great examples of this from the CNBC Andrew Ross Sorkin interview with GE Verona CEO Scott Strazik on Thursday. GE Verona is the new public spin-out from GE and is one of the biggest global suppliers for wind and natural gas generation. On Thursday, we tweeted [\[LINK\]](#) “WOW! Offshore wind will be expensive electricity. @andrewsorkin asks “what has to happen as a result. The [offshore wind] losses are in the billions?” GE Verona CEO “Yes. It starts with price. The reality is that when you think about offshore wind, price is going to have to be much more analogous to building a new nuclear plant..” Reality is electricity prices under the Energy Transition are going way higher. More #NatGas will be needed for longer. #OOTT.” Strazik believes the recent hit on offshore wind that has cost some billions and led to project cancellations will be the catalyst to realize that there needs to be a new pricing for offshore wind. We don't think anyone disagrees with that but we were surprised by him saying it needs price that would be analogous to the cost of building a new nuclear power plant. That seems to suggest offshore wind electricity prices have to go up by multiples. And it far from the narrative that offshore wind costs are cheap. We created a more fulsome transcript of the exchange. CEO Strazik says “..... at the end of the day, the storming and some of the scary headlines you see in the news today on offshore winds, projects getting cancelled, customers losing a lot of money, I actually think that's really what's going to lead to a reset of the industry”. CNBC Andrew Ross Sorkin “what has to happen as a result. The losses are in the billions”. Strazik “Yes. It starts with price. The reality is that when you think about offshore wind, price is going to have to be much more analogous to building a new nuclear plant, putting carbon capture on gas. Offshore wind prices are going to” Ross Sorkin “How do you get those prices there, without subsidies?” Strazik “At the end of the day, there are incentives to help”.

Offshore wind will be very expensive

### Energy Transition: Europe wind and solar have offsetting seasonal peaks/troughs

On Tuesday, we tweeted [\[LINK\]](#) “Wind & Solar 101. Big increases in EU wind & solar is reducing demand for power generation from fossil fuels, especially if hot winters like 22/23 & 23/24. But wind has big losses from winter peak to summer trough vs solar has big gains from winter trough to summer peak in actual generation. Offsetting seasonality means adding solar + wind capacity doesn't add 1 + 1 in terms of actual generation in EU. Thx @BloombergNEF #OOTT.” There was a good reminder from BloombergNEF's European

Europe wind and solar seasonality

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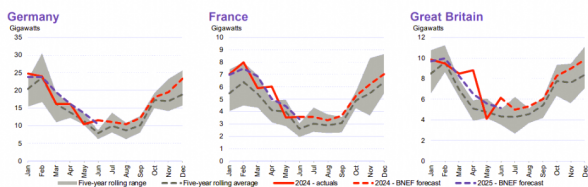
Power Monthly that, in Europe, wind and solar power generation complement each other in terms of their seasonal peaks and troughs. Europe wind peaks in the winter and troughs in the summer whereas solar troughs in the winter and peaks in the summer. So wind and solar generation are affected by their daily intermittency and also by their seasonal highs and lows. So adding wind and capacity doesn't deliver 1+1 n actually delivering wind and solar generation. Our tweet included the below graphs. Eyeballing the graphs, Germany is Europe's largest wind and solar generation. Look at average peak to trough and trough to peak changes. It looks like Germany losses about 15 GW of wind moving from winter peak to summer low. And it looks to add about 8 GW of sun moving from winter low to summer high

Figure 65: BloombergNEF wind generation outlook

Supply and demand outlook

Wind generation outlook (1)

The month of July coincides with a period of seasonally low wind speeds in Germany, France and Great Britain. For this July, wind generation is expected to decline across these three markets by up to 20% year-on-year. That is despite increased installations, as BNEF's forecasts are based on an average weather year versus the bumper wind speeds seen last July. For the summer, BNEF expects wind output to decrease by 3% year-on-year in Great Britain and 5% in France, but grow by 4% in Germany. BNEF's outlook for winter 2024/25 remains unchanged for Germany and France since our last outlook, although has been reduced by 5% for Great Britain. This is due to a decline in expected wind installations in Great Britain.



Wind output (GW)	Germany				France				Great Britain			
	Jun 24	May 24	f-o-f change	y-o-f change	Jun 24	May 24	f-o-f change	y-o-f change	Jun 24	May 24	f-o-f change	y-o-f change
July 2024	11.0	11.0	-0.3%	-19.8%	3.5	3.5	+1.1%	-18.7%	5.0	4.7	+5.0%	-20.4%
Summer 2024	11.2	11.4	-1.8%	+4.3%	3.5	3.6	-2.5%	-8.9%	5.5	5.2	+6.1%	-2.9%
Winter 2024/25	21.3	21.2	+0.6%	-4.1%	6.6	6.6	-0.2%	-9.0%	9.2	9.6	-4.6%	-1.8%

Source: BloombergNEF. Note: BNEF actuals data shows average values for June 2024 up to June 19. 'f-o-f' is forecast-on-forecast and shows the change in the value predicted by the BNEF model in this outlook and the previous outlook for select traded time periods/contracts. 'y-o-f' is year-on-forecast and shows the change in the value predicted by the BNEF model in this outlook and the historical value for select traded time periods/contracts. The values in the charts for this month are a weighted average between historical values and BNEF's forecast for the remainder of the month. Summer 2024 includes the months of April to September.

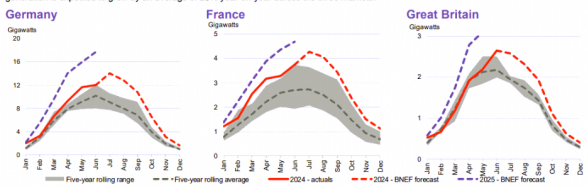
8 June 2024 BloombergNEF

Source: BloombergNEF

Figure 66: BloombergNEF solar generation outlook

Solar generation outlook (1)

Growing installed solar capacity is having a more noticeable impact in Germany and France than Great Britain so far this year. Both Germany and France are expected to see record-breaking solar generation every month for the rest of the year. Solar output in Great Britain, meanwhile, has stayed within the five-year range up until June, although is poised to surpass this level moving forward. For the rest of the summer, solar generation is expected to grow by an average of 28% year-on-year across the three markets.



Solar output (GW)	Germany				France				Great Britain			
	Jun 24	May 24	f-o-f change	y-o-f change	Jun 24	May 24	f-o-f change	y-o-f change	Jun 24	May 24	f-o-f change	y-o-f change
July 2024	14.0	14.3	-2.4%	+36.8%	4.3	4.4	-2.3%	+17.5%	2.6	2.6	-1.0%	+40.1%
Summer 2024	12.5	13.1	-4.4%	+33.5%	3.9	3.9	+0.8%	+15.1%	2.3	2.5	-6.6%	+34.6%
Winter 2024/25	4.7	4.7	-	+46.2%	1.9	1.9	-	+19.8%	0.9	0.9	-	+31.4%

Source: BloombergNEF. Note: BNEF actuals data shows average values for June 2024 up to June 19. 'f-o-f' is forecast-on-forecast and shows the change in the value predicted by the BNEF model in this outlook and the previous outlook for select traded time periods/contracts. 'y-o-f' is year-on-forecast and shows the change in the value predicted by the BNEF model in this outlook and the historical value for select traded time periods/contracts. The values in the charts for this month are a weighted average between historical values and BNEF's forecast for the remainder of the month. Summer 2024 includes the months of April to September, while winter 2024/25 includes the months of October to March. For more, see BNEF's capacity outlook (link) (bottom).

10 June 2024 BloombergNEF

Source: BloombergNEF

Energy Transition: EverGen says it gets \$36.92/mcf for its RNG sales to Cdn utilities

Our view is unchanged in that we believe renewable natural gas (RNG) projects will continue to grow as they work economically due to the big incentives per mcf and that we believe the government incentives will continue because the size of RNG is so small that big incentives

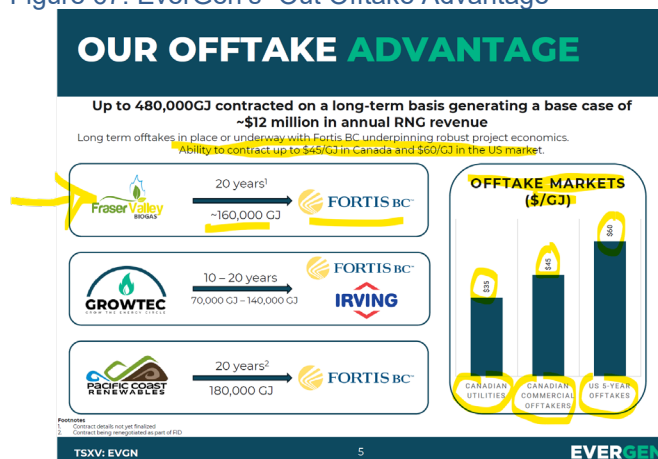
EverGen's RNG  
offtake  
advantage

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per mcf don't cost \$billions in total. So RNG has the sweet spot – it allows govts to say they are doing it and no one really focuses on the huge cost of subsidy per mcf because the absolute total of the subsidy is still modest. (i) We don't normally see disclosure on the deals to provide the full picture but did so this week with FortisBC/EverGen deal. On Monday, EverGen announced a 20-yr RNG offtake deal to sell RNG to FortisBC. The deal is for "Agreement provides for the purchase of up to 160,000 GJs of RNG annually by FortisBC". To put in perspective, 160,000 GJ per year is 0.42 mmcf/d vs a company like Pine Cliff Energy that produces 113.6 mmcf/d. (ii) It wasn't in the press release but EverGen's public May investor slide deck includes the below slide that they can get \$35/GJ from offtake agreements to Canadian Utilities, \$45/GJ from Canadian Commercial Offtakers and \$60/GJ from US 5 year Offtakers. We assume FortisBC fits into the \$35/GJ group. \$35/GJ is equal to \$36.92/mcf. This is why we believe RNG is economic and will keep growing – for its RNG, it gets RNG prices that are around 15 times the price of natural gas. To put in perspective, Pine Cliff Energy received \$2.56/mcf for its 113.6 mmb/d of natural gas in Q1/24. (iii) Here is the math for the EverGen/FortisBC deal. The deal is for 160,000 GJs annual at \$35/GJ is \$5.6 million of revenues per year. This is equal to 0.42 mmcf/d and the \$35/GJ would equal a price of \$36.92/mcf. So there may be a huge incentive per mcf, the absolute dollars are very small. For comparison, the Pine Cliff Q1 had natural gas production of 113.6 mmcf/d at a price of \$2.56/mcf for natural gas revenues of \$26.5 million. The bottom line is that RNG economics work and, given the very small amount of RNG, we expect to see RNG projects keep growing as long as there are huge incentives. Our Supplemental Documents packae includes the EverGen June 24, 2024 release and excerpts from their May investor slide deck.

Figure 67: EverGen's "Out Offtake Advantage"



Source: EverGen May investor presentation

**Energy Transition: Lufthansa 1<sup>st</sup> environmental cost surcharge (ie. SAF costs)**

It didn't get much attention but, on Wednesday, Lufthansa announced "Lufthansa Group introduces Environmental Cost Surcharge" on all flights. [LINK]. So yesterday we tweeted [LINK] "How many more billions will it cost? Lufthansa environmental cost surcharge only covers "part of" rising regulatory environmental cost incl Sustainable Aviation Fuel (SAF) to 2% of fuel. Didn't say they wouldn't raise the surcharge under SAF at 2%. And they warn the

Lufthansa's 1<sup>st</sup> environmental cost surcharge

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*big cost increases are still to come as "The SAF quota is to be 2% from 2025, 6% from 2030, 20% from 2035 and 70% from 2050. For the Lufthansa Group, this will lead to additional costs in the billions in the future" #OOTT,"* We expect this to be the first of many more and larger future environmental cost surcharges as European airlines. Lufthansa says the charge is to cover "part of" the rising regulatory environmental costs including the requirement to get SAF (sustainable aviation fuels) to 2% of fuel. *"The amount of the surcharge varies depending on the flight route and fare and is between 1 euro and 72 euros."* So not a huge surcharge. But what is overlooked is that this surcharge only covers part of the 2% for 2025. Note Lufthansa does not say there won't be an increase to the surcharge even though the 2% doesn't change until 2030. Lufthansa makes a point of saying this only covers part of the added regulatory costs. So why won't they recapture all of the costs and also what is SAF costs go up. And the SAF requirement increases over time, which is why this is the first of many and much larger surcharges for using SAF. And *"For the Lufthansa Group, this will lead to additional costs in the billions in the future."* Reminder *"The SAF quota is to be 2 percent from 2025, 6 percent from 2030, 20 percent from 2035 and 70 percent from 2050."* We didn't see this last point being highlighted – this new surcharge is only for part of the move to 2% SAF and that there is a move to 6% SAF in 2030. Lufthansa didn't specify the math but wrote *"As part of its "Fit for 55" climate protection program, the EU has decided on mandatory SAF blending quotas that will increase over the years up to 2050. The SAF quota is to be 2 percent from 2025, 6 percent from 2030, 20 percent from 2035 and 70 percent from 2050. For the Lufthansa Group, this will lead to additional costs in the billions in the future."* Our Supplemental Documents package includes the Lufthansa release.

#### **09/27/23: Lufthansa CEO makes it seem impossible to decarbonize airlines**

Last September, Lufthansa CEO reminded of other realities to decarbonize airlines. Here is what we wrote in our Oct 1, 2023 Energy Tidbits memo. *"There seemed like a huge reality check from the Lufthansa CEO on the energy transition on how it seems like there is no realistic visible path to the airline industry decarbonization. (i) On Wednesday, we tweeted [\[LINK\]](#) "Reality check. #Lufthansa CEO on hard (impossible?) to decarbonize airline industry. All the SAF in world today would fuel Lufthansa flights for 2 weeks. See 06/06/23 SAF tweet on #IATA SAF fcast to get to 9.4% of 2022 jet fuel consumption. [\[LINK\]](#) Lufthansa CEO "we would need around half of DEU's electricity to create enough of the fuels [e-kerosene]. #Oil, #JetFuel will be needed for a long time. Thx @parthprakash #OOTT." Fortune reported on comments from Lufthansa CEO and notes how the airline industry has what looks like an impossible road to decarbonization unless something new is invented. (ii) Sustainable Aviation Fuel. SAF. We have been pointing out for years how expensive SAF is and how it is growing at a fast rate but is nothing to mention. And SAF is considered the #1 item for airline industry decarbonization. Fortune wrote "'If the Lufthansa Group were to use all the SAF currently available, it would only be able to fly for just under two weeks. A market ramp-up, higher availability and associated lower prices are urgently needed to enable greater use of SAF," a Lufthansa spokesperson told Fortune in an emailed statement." (iii) E-kerosene. We haven't bother reporting on e-kerosene because we have been under the view that it extremely expensive and seemingly impossible to see how this would make any significant dent in replacing jet fuel. Fortune wrote "But while Lufthansa has tried to do its bit to adopt sustainable practices, the company's chief has said that switching*

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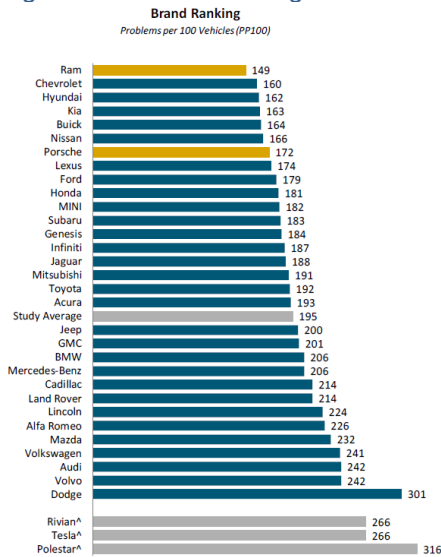
*the airline to green fuels like e-kerosene could come at a big price—half of Germany’s electricity supply. “We would need around half of Germany’s electricity to create enough of the fuels,” Lufthansa’s Carsten Spohr said at an aviation conference Monday, Bloomberg reported. He added that while green fuels made using renewable energy sources would help Lufthansa decarbonize its fuel consumption, the likelihood of having enough electricity to produce such materials was low. “I don’t think Mr. Habeck is going to give me that,” Spohr said at the Hamburg conference, referring to German energy minister Robert Habeck. Industry search for alternatives. Comments from the chief of Germany’s biggest airline come as the aviation industry looks for alternatives to high carbon-emitting sources that have traditionally been used by airlines. SAFs offer a path to achieving this as they are biofuels manufactured with a lower carbon footprint. Green kerosene, or e-kerosene, is a type of SAF made from CO2 and water, but requires copious amounts of renewable electricity.” Our Supplemental Documents package includes the Fortune report.”*

### **Energy Transition: J.D. Power, EVs & Hybrids require way more repairs than ICE**

EVs and hybrids performed poorly relative to ICE in the latest J.D. Power car reliability survey. Yesterday, we tweeted [\[LINK\]](#) “Is this partly why 46% of US EV owners plan to switch back to ICE? per @McKinsey. @JDPower BEV & PHEV owners are 3x higher than ICE owners to have problem of a severity level high enough to have to take their car to the dealer. #OOTT.” On Thursday, J.D. Power released its J.D. Power 2024 U.S. Initial Quality StudySM (IQS) that is “incorporating franchise dealership repair visits with the Voice of the Customer (VOC) data to create a more expansive metric for problems per 100 vehicles (PP100).” The headline was “Problems Plague BEVs Despite Traditional OEMs Leveling Playing Field with Tesla, J.D. Power Finds.” Their summary was clear. “Proponents of battery electric vehicles (BEVs) often state these vehicles should be less problematic and require fewer repairs than gas-powered vehicles since they have fewer parts and systems. However, newly incorporated repair data shows BEVs, as well as plug-in hybrid electric vehicles (PHEVs), require more repairs than gas-powered vehicles in all repair categories. “Owners of cutting edge, tech-filled BEVs and PHEVs are experiencing problems that are of a severity level high enough for them to take their new vehicle into the dealership at a rate three times higher than that of gas-powered vehicle owners,” Hanley said. Gas- and diesel-powered vehicles average 180 PP100 this year, while BEVs are 86 points higher at 266 PP100.” It’s a fairly easy read. Our Supplemental Documents package includes the J.D. Power report. [\[LINK\]](#)

**EVs & hybrids  
require way more  
repairs**

Figure 68: Brand Ranking - J.D. Power 2024 U.S. Initial Quality StudySM (IQS)



Source: J.D. Power

**McKinsey 46% of US EV owners likely to switch back to ICE**

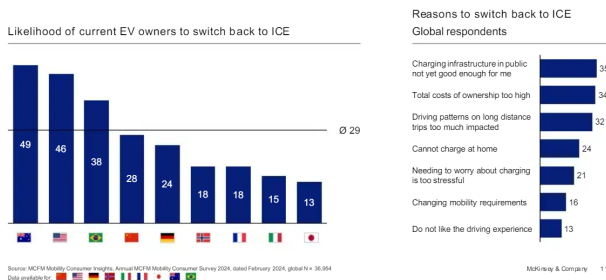
Our tweet yesterday on the new J. D. Power ranking referenced McKinsey's data that said 46% of US EV owners are planning to switch back to ICE on their next car purchase. Here is what we wrote in last week's (June 23, 2024) Energy Tidbits memo on the McKinsey data. *"One of the key question marks that we don't see addressed in EV sales forecasts is how many EV owners switch back to ICE vehicles. It must be that they assume no EV owners switch back to ICE. At a minimum, we hope forecast for EVs sales at least note that as a qualifier to its EV forecast. It didn't get much media attention given it is a negative to EVs outlook but McKinsey's "McKinsey Mobility Consumer Pulse: Media Presentation June 2024" included a slide "29% of EV owners globally likely to switch back to ICE, mostly because of difficulties with charging". That is a global number but, for the US, it's 46% of EV owners likely to switch back to ICE. Note that McKinsey says it's mostly because of difficulties with charging. But the reality of their numbers is that there are three major reasons. Difficulties with charging at 35%, total costs of ownership too high at 34%, and driving patterns on long distance trips too much impacted at 32%.*

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Figure 69: % of EV owners likely to switch back to ICE

**29% of EV owners globally likely to switch back to ICE, mostly because of difficulties with charging**

Share of EV owners (very) likely to switch back to ICE



Source: Wood Mackenzie

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

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

**Energy Transition: Denmark introduces carbon tax on cattle and pigs**

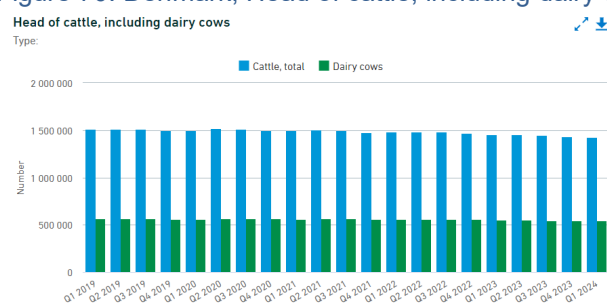
On Wednesday, we tweeted [\[LINK\]](#) "Denmark introduces carbon tax on cattle and pigs starting 2030, increasing in 2035. See 🇩🇰 Statistics Denmark Q2/24 data says there are 1.430 million cows and 11.449 million sheep in Denmark. #NetZero #Methane [\[LINK\]](#)" We recognize that TV is not reality but after first seeing Borgen a few years ago we started following Denmark more on their climate change push. Denmark is a leader in moving on climate change initiatives and that was reinforced this week when Denmark approved the first

**Denmark carbon tax on cows & pigs**

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carbon tax on cattle and pigs. New Zealand would have been the first but, as highlighted in our June 16, 2024 Energy Tidbits memo, New Zealand backed off charging farmers on methane emissions. Our tweet linked to the Denmark release [LINK](#) that *“With the agreement, the parties agree that a CO2e-tax on emissions from livestock. A tax of DKK 300 per tonne of CO is introduced in 2030 increasing to DKK 750 per tonne of CO2e in 2035 with a basic deduction of 60 per cent. The effective tax will thus amount to DKK 120 per tonne of CO2e in 2030 increasing to DKK 300 per tonne of CO2e in 2035.”* The Danish Kroner is about US\$0.14 ie. DKK 300 is US\$42 and DKK 750 is US\$105. Our tweet included the below Statistics Denmark Q2/24 estimate of 1.430 million cows and 11.449 million sheep in Denmark. Our Supplemental Documents package includes the Denmark release.

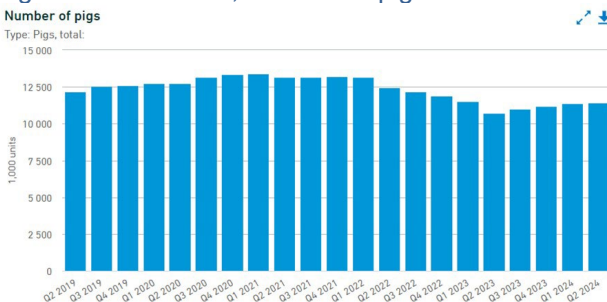
Figure 70: Denmark, Head of cattle, including dairy cows



In Statbank Denmark, you can find more data on Number of cattle (KVAEGS)

Source: Statistics Denmark

Figure 71: Denmark, Number of pigs



In Statbank Denmark, you can find more data on Number of pigs (SVIN)

Source: Statistics Denmark

**Capital Markets: Hard to see Biden making it to election day**

Biden had a bad debate that unfortunately made everyone worry that their worst fears on Biden were correct – at his age, he just doesn’t have the ability to do the most difficult job in the world for another term. We watched the post debate analysis on MSNBC and we were surprised how the Democrat favored panel were bluntly negative on Biden and his performance. That continued with other Democrat favored media and also many Democrats bluntly negative on his performance. This is what surprised. It’s understandable for anyone who watched the debated but it is rare to have this open dissent. So Biden says he is continuing on but, with the open Democrat criticism of their leader, it feels like one more

**Will Biden make it to election day?**

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event that make people question his ability to be President for four more years will be the straw that breaks the camel's back. Things can change and maybe Trump does something really bad but, if not, it's 2 and ½ months to the next debate on Sept 10, which is less than two months before the election. We find it hard to believe that many Democrats are prepared to have Biden in that debate. And the problem is that if he is to go, it has to be soon. And it feels like his team is testing the waters on if he can survive to fight the election. So no should be surprised to see report like on Friday that people close to Biden don't think Harris has a better chance at winning. That just seems like testing the waters to see if that can gain momentum. Who knows and a lot can change but, at least for now, we have trouble believing he will be on the ballot. And we also thought that was a possibility seven months ago. It was interesting that, prior to the debate, the feedback we got from investors was that they weren't expecting to do any change in investing prior to Labor Day but now are looking at doing something sooner.

### **11/19/23: Can Biden orchestrate a passing of the torch to who he anoints?**

We were, like many, surprised by Biden wanting to push for the early debate with Trump. It was a high risk strategy that looks like it backfired. And, unfortunately for Biden, his performance was viewed so poorly by Democrats with so much Democrat criticism that he lost his luster within a good chunk of the party and that it has hurt his ability to dictate what happens if he steps down. We had been of the view that this would be the period when he might step down and pass the baton. Here is what we wrote in our Nov 19, 2023 Energy Tidbits memo. *"It's a few weeks early for 2024 predictions but one of my top predictions for 2024 will be that Biden tries to orchestrate a passing of the torch to who he anoints. Just not clear if its Newsom or Harris or someone else, but right now I favor Newsom. Biden turns 81 tomorrow so his age will keep raising as a question mark for him and the Democrats in the 2024 elections. Everyone has their view if Biden will or will not run even though he is saying over and over he is running. I am just surprised that I don't see the political pundits with my view of Biden. With all the political pundits in the world, it must be that I am out in left field. So that is why I thought I would put it out there as one of my top prediction. Maybe it's because I believe he is fundamentally a decent guy is why I don't think he will do something really stupid. But I also believe he is underrated for his wanting to control politics. He is a President and, perhaps other than Jimmy Carter, all Presidents want to control politics. So my prediction is Biden wants to orchestrate who will be the next Democratic nominee. He doesn't want chaos and an unpredictable Democratic nominee, which is why he isn't going to say he isn't running. Rather he keeps running in the primaries, gets the nomination effectively locked up in March given the primary schedule. And sometime in late Q2 or early Q3. I think the timing will depend upon Trump's legal situation. But sometime ahead of the convention in late Aug. he announces he isn't going to run and is throwing his support behind someone who is his anointed candidate asking the Biden delegates to switch to his anointed one. This is as opposed to him saying he won't run soon and therefore taking control away from him as to who is his successor. If Biden runs, gets all the delegates, he more or less controls who will be the nominee even if the delegates won't be bound to vote for his anointed one. Maybe Prediction isn't the right word, but I just think Biden knows he runs a big risk of losing so the best thing*

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*for him in controlling politics is to set it up so the Democrats effectively have to go with his anointed pick. If so, will it be Newsom? Or Harris? Or someone else.”*

### **Capital Markets: Will Trudeau talk a walk along the beach in Tofino this summer?**

It seems like the same thing is happening to Trudeau as Biden but with the catalyst being the Liberals loss in the Toronto St. Paul's by election in what was considered one of the safest seats in Canada. That loss looks like a turning point. Like him or not, Trudeau has maintained a very tight control on the Liberals and there hasn't been open dissent. But look to be changing and open dissent and open calls for a new leader by senior Liberals is not a good sign for Trudeau. On Friday, we tweeted [\[LINK\]](#) "turning point? no longer senior Liberals saying off the record criticism or only speaking on background. rather Former Trudeau minister Catherine McKenna come out of the shadows. "it's time for new ideas, new energy and a new leader" for the Liberals." McKenna resigned her seat last year but prior to that was a senior key member of Trudeau's cabinet. Surely she would realize the risk of being the first senior Liberal to openly call for a new leader. And then even backbenchers who fear discipline followed McKenna. Wayne Long, a New Brunswick MP sent an email to his caucus colleagues saying Trudeau should resign as leader. Our view on Trudeau has been that 2024 is the critical year for Trudeau to see if he can turn around the negative numbers and the means he will tax and spend like crazy and not worry about the deficit to try to attract support. And that if this tax and spend didn't work at the polls, he would likely take a walk in the snow like his dad and step down. We continue to believe Trudeau would not be at the lead of the party if it looked like a wipeout. But, now with the upset loss in Toronto St. Paul and open calls for the change a leadership, we think that timeline has been pushed up to this summer. So maybe he makes his normal trip to Tofino and talks a walk on the beach.

**Open calls for  
Trudeau to step  
down**

### **Capital Markets: IFIC, mutual funds equity & balanced funds at net redemptions in May**

We have been highlighting the big change to Cdn mutual funds that started in Q2/22 – when there started a shift from net sales to massive net redemptions in balanced and equity funds. What started in H2/22 played out even bigger in 2023 and is continuing, but on a lesser scale, in 2024 to date. On Monday, IFIC (Investment Funds Institute of Canada) reported mutual funds and ETF sales for May [\[LINK\]](#). IFIC reported net redemptions (sale of positions) for balanced funds to be -\$3.334b in May vs net redemptions of -\$3.499b in April. This brings the YTD figure for balanced funds net redemptions to -\$14,907b, down from -\$17.258b in YTD 2023. Equity funds saw net redemptions of -\$0.920b in May, after net redemptions of -\$0.014 in April and \$0.792b of net sales in March. For equity funds, there was a return to net redemptions, down -\$0.906b MoM from April. Recall February was the first net sales in equity funds in 12 months and March followed with small net sales in equity funds. But April was a return to net redemptions, and May is once again reflecting net redemptions. Our Supplemental Documents package includes the IFIC release.

**IFIC Cdn mutual  
fund data**

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Figure 72: Cdn Mutual Fund Net Sales/Net Redemptions (\$ Millions)

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

Asset class	May 2024	Apr 2024	May 2023	YTD 2024	YTD 2023
Long-term funds					
Balanced	(3,334)	(3,499)	(3,807)	(14,907)	(17,258)
Equity	(920)	(14)	(2,173)	355	(7,245)
Bond	1,346	366	639	8,910	7,809
Specialty	623	720	295	3,310	1,750
Total long-term funds	(2,285)	(2,428)	(5,047)	(2,332)	(14,944)
Total money market funds	464	(281)	1,249	524	6,358
Total	(1,821)	(2,708)	(3,799)	(1,808)	(8,586)

Source: IFIC

**There were massive redemptions in Cdn active equity/balanced funds in 2023**

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

Figure 73: Cdn Mutual Fund Net Sales/Net Redemptions (\$ Millions)

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

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

Source: IFIC

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**Capital Markets: USDA Consumer Price Index May for food +0.1% MoM, +2.1% YoY**

We recognize that the USDA consumer food price index is a much better indicator for grocery store prices than the UN's food commodity price index. But we still continue to believe the actual prices at the grocery stores are way higher than indicated by the USDA inflation, or at least that is the view of consumers. And we highly doubt anyone who buys groceries would think grocery prices are only up 2.1% YoY. On Tuesday, the USDA posted its May Consumer Price Index for food [\[LINK\]](#), which reported the Consumer Price Index for all food (CPI) was +0.1% MoM and +2.1% YoY in May. The +2.1% YoY increase in the Consumer Price Index has a relative weighting for the various food categories. Beef and veal were up +0.3% MoM, +5.7% YoY, and are expected to increase +3.9% over 2024, farm-level vegetables are down -0.3% MoM, +0.8% YoY, and expected to increase 0.2% in 2024, retail eggs are -3.9% MoM and -9.0% YoY, and expected to increase 1.0% in 2024, and wholesale pork prices are +1.4% MoM, +2.6% YoY and are expected to increase +1.1% over 2024. It is important to note the USDA said that the *"Food prices are expected to continue to decelerate in 2024 compared to recent years. In 2024, prices for all food are predicted to increase 2.2 percent, with a prediction interval of 1.2 to 3.2 percent. Food-at-home prices are predicted to increase 1.0 percent, with a prediction interval of -0.4 to 2.5 percent, and food-away-from-home prices are predicted to increase 4.2 percent, with a prediction interval of 3.6 to 4.8 percent."*

**USDA CPI for food +2.1% YoY**

**Capital Markets: Walgreens, consumers increasingly price sensitive, stock -22%**

We recognize the changing consumer behaviour/trends doesn't impact all stores the same but there was a high profile impact this week when Walgreens shares crashed 22% on Thursday. They, like others, highlighted their consumers *"have become increasingly selective and price-sensitive in their purchases."* Early Thursday morning, Walgreens reported Q3/24 and, when we saw the release, we tweeted [\[LINK\]](#) *"Walgreens CEO just now "We continue to face a difficult operating environment, including persistent pressures on the U.S. consumer and the impact of recent marketplace dynamics which have eroded pharmacy margins. Our results and outlook reflect these headwinds..." Stock -4% in pre-market #OOTT."* The -4% was in the first ten minutes of the release. And then [\[LINK\]](#) *"Walgreens now down 17% in pre-market. Also "Finalizing significant multiyear footprint optimization program to close certain underperforming U.S. stores" "Repositioning store footprint for the future, taking action across ~25% of network over three years".* The -17% in pre-market was 40 min after the release. The shares ended up -22% on Thursday. No question the announcement they were going to do something with 25% of their US stores was a big negative. But the weakness of the US retail was consumer driven. In their earnings call, mgmt said *"The severity and duration of the challenges in the operating environment have only added urgency to our strategic and operational review."* *"In U.S. retail pharmacy, we witness continued pressure on the U.S. consumer. Our customers have become increasingly selective and price-sensitive in their purchases."* *"As Tim mentioned, the consumer backdrop remains a challenge. With this continued channel shift and a sustained pullback in discretionary spending, we have responded by lowering prices across health and wellness, personal care, and seasonal categories."*

**Walgreens shares -22%**

**Demographics: Thousands stranded by AMFA strike on WestJet during long weekend**

As of our 7am MT news cut off, there is no indication of any negotiations to end the strike that started on Friday night by the Aircraft Mechanics Fraternal Association's (AMFA). There are a lot of unhappy fliers this long weekend with the surprise strike that started on Friday night

**Strike at WestJet**

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on WestJet, which led to WestJet's first big initial flight cancellations announced Friday night for 150 flights and approximately 20,000 passengers. As of our 7am MT news cut off, the latest update from WestJet is from yesterday afternoon "AMFA strike continues, triggering further cancellations, disrupting over 49,000 travellers over July long weekend." This is one of the busiest travel times as it is the Canada Day long weekend. So a terrible time to strike for passengers but probably the best time for the union to create urgency for a deal. It was a surprise AMFA strike call on Friday night as earlier Friday, the Liberal govt had ordered binding arbitration and WestJet had agreed to binding arbitration. So the assumption was that the AMFA would also agree to the binding arbitration.

### **Demographics: Early cancer screening something everybody should think about**

We don't note companies for stock reasons but rather to bring some information or perspective to a sector or commodity or, in this case, hoping it works for all of us. Cancer has probably hit a relative or friend for almost everybody so we always perk up when we hear about cancer drugs or processes. On Tuesday, we were watching CNBC Squawk Box when CNBC's Joe Kernan interviewed Grail CEO Bob Ragusa on its early cancer screening test. We tweeted [\[LINK\]](#) "Worth a listen! @GrailBio CEO Bob Ragusa on its early cancer screening test. It really helps that MIT Masters Degree Molecular Biology @JoeSquawk @SquawkCNBC is framing questions. Agree with Joe that "Everybody should do it" Cancer sucks but early detection should help." It was good to have Kernan frame the questions because he focuses on helping viewers understand the early cancer screening test, how it works, where it works and the benefits. Kernan's Masters was in molecular biology. And Kernan's conclusion as everybody should be doing early cancer screening. Our tweet included a short video clip of the key Kernan/Ragusa exchange.

**Early cancer screening**

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

Earlier this year, I went over 10,000 followers on Twitter/X. I really appreciate the support and, more importantly, some excellent insights and items to look at from Twitter followers. It helps me do a better job. For new followers to our Twitter, we are trying to tweet on breaking news or early views on energy items, most of which are followed up in detail in the Energy Tidbits memo or in separate blogs. Our Twitter handle is @Energy\_Tidbits and can be followed at [\[LINK\]](#). We wanted to use Energy Tidbits in our name since I have been writing Energy Tidbits memos for over 20 consecutive years. Please take a look thru our tweets and you can see we aren't just retweeting other tweets. Rather we are trying to use Twitter for early views on energy items. Our Supplemental Documents package includes our tweets this week.

**@Energy\_Tidbits on Twitter**

### **LinkedIn: Look for quick energy items from me on LinkedIn**

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

**Look for energy items on LinkedIn**

### **Misc Facts and Figures.**

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

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**Canada Day used to be called Dominion Day until 1983**

July 1 is Canada Day, which is the holiday celebrating the creation of Canada on July 1, 1867 via the British North America Act, which is known in today's era as the Constitution Act, 1867. Originally, July 1 was celebrated as the anniversary of Confederation but that changed Dominion Day in 1879. That stayed 1982 when it was changed from Dominion Day to Canada Day.

**Oilers Connor McDavid brings junior league mentor Sherry Bassin to Game 7**

The Oilers lost game 7 in a tough loss. But there was a great story that caught our attention on how Connor McDavid brought his junior league mentor, Sherry Bassin, to Game 7. Probably anyone who played Junior A hockey in Ontario for the last 50 years or so would know of Sherry Bassin for his roles at the Oshawa Generals, Team Canada junior team and the last was at Erie Otters where McDavid played. . . McDavid's teammate Connor Brown played with McDavid at the Erie Otters for Sherry. The report said *“That’s amazing,” Brown said. “I mean, I think you know that me and Connor, if we ever had the chance of winning the ultimate prize in hockey like this, there was no way that Sherry wasn’t going to be here to potentially celebrate with us. “Sherry’s a huge part of our development and just an incredible man and gave us so many life lessons outside of hockey. He knows the game of hockey better than anybody. But the type of values he instilled in us as young kids propelled us to take on the challenges of playing in the NHL with character and class. A lot of that came from Sherry.”* I have known Sherry for over 50 years and still keep in touch with him and he is a truly a special person

**Four recent US Presidents didn't win re-election**

We didn't go back to before the 70s but since then there have been four sitting US Presidents who ran but didn't win re-election. Republican Gerald Ford, who took over when Nixon resigned, lost to Democrat Jimmy Carter in 1976. Carter then lost to Republican Ronald Reagan in 1980. Republican George H W Bush (Bush senior) lost to Democrat Bill Clinton in 1992. And then Republican Donald Trump lost to Democrat Joe Biden in 2020. From 1992 until Trump won in 2016, Clinton won two terms, Republican George Bush won two terms and Democrat Barack Obama won two terms.