Energy Tidbits

February 2, 2025

Produced by: Dan Tsubouchi

Expect Cdn Oil Price Differentials to be Hit with Trump's 10% Tariffs on Cdn "*Energy Resources*" Imported for "*Consumption*"

Welcome to new Energy Tidbits memo readers. We are continuing to add new readers to our Energy Tidbits memo, energy blogs and tweets. The focus and concept for the memo was set in 1998 with input from PMs, who were looking for research (both positive and negative items) that helped them shape their investment thesis to the energy space, and not just focusing on daily trading. My priority was and still is to not just report on events, but also try to interpret and point out implications therefrom. The best example is the review of investor days, conferences and earnings calls focusing on sector developments that are relevant to the sector. My target is to write on 50 weekends per year and to post by noon MT on Sunday. The Sunday noon timing was because PMs said they didn't have research to read on Sundays and Sundays are a day when they start to think about the investing week ahead.

This week's memo highlights:

1. Trump hits Cdn imports with 25% tariffs but reduced 10% on Cdn "*energy resources*" includes the obvious ones (oil, natural gas, NGLs, condensate, uranium, etc.) but excluded electricity. [click here]

2. 10% tariffs should exclude ~300,000 b/d of Cdn oil that moves via pipeline & rail to Gulf Coast for re-export i.e. not consumed in US. [click here]

3. OPEC meets tomorrow and is expected to stick to Dec 5 plan to gradually add back voluntary cut barrels to the market staring Apr 1. [click here]

4. DeepSeek impact still far from certain but we wonder if it puts natural gas back to pre-2024 expectations for solid, but not the WOW, demand growth. [click here]

5. We wonder if Ontario Power Generation's on track 1st G7 SMR by 2029 will give markets confidence that SMRs can have a clear strong growth path for the 2030s. [click here]

6. Please follow us on Twitter at [LINK] for breaking news that ultimately ends up in the weekly Energy Tidbits memo that doesn't get posted until Sunday noon MT.

7. For new readers to our Energy Tidbits and our blogs, you will need to sign up at our blog sign up to receive future Energy Tidbits memos. The sign up is available at [LINK]

Dan Tsubouchi
Chief Market Strategist
dtsubouchi@safgroup.ca

Ryan Dunfield
CEO
rdunfield@safgroup.ca

Aaron Bunting
COO, CFO
abunting@safgroup.ca

Ian Charles
Managing Director
icharles@safgroup.ca

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Natural Gas: -321 bcf draw in US gas storage; now -144 bcf YoY

-321 bcf draw in US gas storage

This week, there was a great example of how when you are at the end of January, the focus for HH gas prices is what will Feb temperature look like instead of what just happened. There was a big storage draw on Thursday but HH was down $0.49 on Thursday to $3.05 with the forecasts for a warmer than normal start to Nov. For the week ending Jan 24, the EIA reported a -321 bcf draw [LINK]. Total storage is now 2.571 tcf, representing a deficit of -144 bcf YoY compared to a deficit of -57 bcf last week. For much of 2024, storage figures exceeded the 5-year range but moved back into the 5-yr range as winter approached and continues to be within the 5-yr range. The week of Jan 24 saw storage is -111 bcf below the 5-yr average, below last week's +21 bcf surplus to the 5-yr average. Below is the EIA's storage table from its Weekly Natural Gas Storage report and a table showing the US gas storage over the last 8 weeks.

Figure 1: US Natural Gas Storage

	Stocks billion cubic feet (Bcf)				Historical Comparisons Year ago (01/24/24)		5-year average (2020-24)	
Region	01/24/25	01/17/25	net change	implied flow	Bcf	% change	Bcf	% change
East	552	613	-61	-61	620	-11.0	612	-9.8
Midwest	661	744	-83	-83	744	-11.2	732	-9.7
Mountain	212	229	-17	-17	188	12.8	154	37.7
Pacific	246	269	-23	-23	224	9.8	210	17.1
South Central	901	1,037	-136	-136	939	-4.0	975	-7.6
Salt	229	297	-68	-68	254	-9.8	280	-18.2
Nonsalt	672	739	-67	-67	686	-2.0	695	-3.3
Total	2,571	2,892	-321	-321	2,715	-5.3	2,682	-4.1

Source: EIA

Figure 2: Previous US Natural Gas Storage

Previous 8 weeks (Bcf)				
Week Ended	Gas in Storage	Weekly Change	Y/Y Diff	Diff to 5 yr Avg
Dec/06	3,747	-190	67	165
Dec/13	3,622	-125	20	132
Dec/20	3,529	-93	14	166
Dec/27	3,413	-116	-67	154
Jan/03	3,373	-40	-3	207
Jan/10	3,115	-258	-111	77
Jan/17	2,892	-223	-57	21
Jan/24	2,571	-321	-144	-111

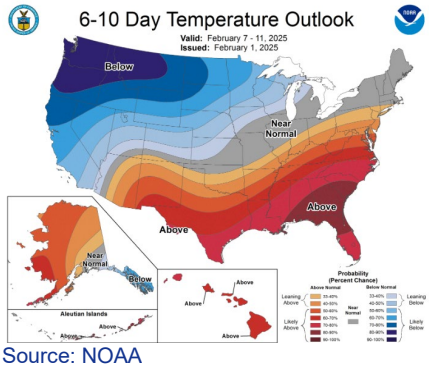
Source: EIA

Natural Gas: NOAA's 6-10 & 8-14 day calls for warmer than normal temps in E&S US

NOAA 6-10 and 8-14 day temp outlook

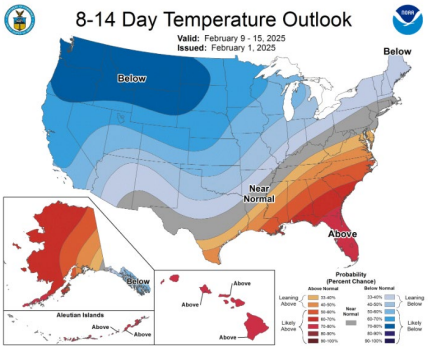
Yesterday, we posted [LINK] "*Holdback to #NatGas prices this week. Too much of populous & east coast is expected warmer than normal. Today's updated @NOAA 6-10 & 8-14 day temperature outlooks. #OOTT.*" By Feb, the coldest day of the winter is passed for almost all of the Lower 48 so the first two weeks of Feb are important as still can be strong winter temperature demand. But NOAA's temperature outlook calls for most of the populous south and a fair amount of the NE to be warmer than normal temperatures. Our post included the below NOAA Feb 1 updated temperature maps for 6-10 days and 8-14 days.

Figure 3: NOAA 6-10 day temperature outlook covering Feb 7-11



Source: NOAA

Figure 4: NOAA 8-14 day temperature outlook for Feb 9-15



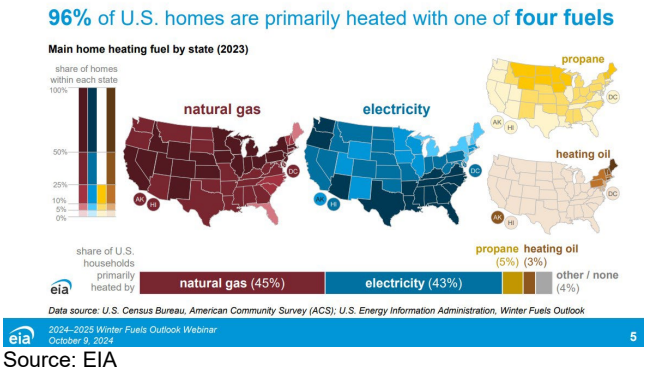
Source: NOAA

Natural Gas: US home heating by fuel by state

Natural gas home heating

Warmer temperatures around the Great Lakes and NE US are the most important regions for natural gas home heating. It's why our focus is normally how cold it is it in populous regions that use natural gas for winter home heating and that is why we typically focus on how cold is it around the Great Lakes and the NE US. Below is the EIA's map showing US winter home heating by fuel by state. Natural gas, on average, heats 45% of US homes but a way higher percentage around the Great Lakes and parts of the NE US. Below is the EIA home heating by fuel by state map.

Figure 5: Fuels for winter home heating of US homes



Source: EIA

Natural Gas: US November natural gas production +0.1 bcf/d YoY to 102.9 bcf/d

US November gas production

On Friday, the EIA released its Natural Gas Monthly [LINK], which includes its estimated "actuals" for November dry gas production. Key items to note are as follows: (i) November was 102.9 bcf/d, which followed October's revised 102.8 bcf/d. The EIA does not provide any explanation for the MoM change. (ii) November at 102.9 bcf/d is down -2.6 bcf/d YoY and down -3.0 bcf/d since the high in February of 105.9 bcf/d. The previous high of 106.5 in December 2023 was revised down to 105.5 bcf/d. (iii) October's data was revised down -0.2 bcf/d, to 102.8 bcf/d. (iv) November's production of 102.9 bcf/d was up +0.1 bcf/d MoM and down -2.6 bcf/d YoY from November 2023's figure of 105.5 bcf/d. The EIA does not provide any commentary. Our Supplemental Documents package includes the EIA Natural Gas Monthly.

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	102.0	103.5
Feb	65.4	68.4	73.8	74.6	71.5	80.4	89.9	95.5	85.8	96.0	101.8	105.9
March	65.3	68.9	74.1	73.8	73.2	81.3	90.3	95.3	93.6	97.6	103.2	102.6
Apr	66.1	70.5	75.2	73.7	73.3	81.2	90.7	95.0	94.3	98.3	102.3	101.7
May	65.9	70.2	74.1	72.9	73.3	82.1	91.4	87.9	94.2	99.1	103.5	101.5
June	65.8	70.5	74.0	72.2	74.0	82.5	91.7	90.4	93.9	99.3	103.1	102.8
July	67.1	72.0	74.2	72.8	74.7	84.2	92.2	90.3	94.8	100.4	103.3	104.1
Aug	66.9	72.4	74.3	72.2	74.7	85.9	94.4	90.4	95.0	100.9	104.1	103.0
Sept	66.8	72.4	74.7	71.7	76.0	87.3	94.8	91.3	95.7	102.4	104.2	101.8
Oct	67.0	73.1	74.2	71.4	77.3	88.4	95.6	89.7	97.2	102.2	104.1	102.8
Nov	67.7	72.6	73.9	72.0	79.8	89.9	97.2	92.5	98.3	102.2	105.5	102.9
Dec	66.5	73.2	73.9	71.2	80.4	89.5	97.1	93.1	99.1	100.2	105.5	
Average	66.3	70.9	74.2	72.7	74.9	84.3	92.9	92.4	94.5	99.6	103.6	103.0

Source: EIA

Natural Gas: US natural gas pipeline exports to Mexico down -0.54 bcf/d MoM in Nov

US to Mexico November natural gas exports

Last Thursday, the Department of Energy (DOE) posted its Natural Gas Imports and Exports Monthly [LINK], which includes its estimate for November natural gas exports via pipeline to Mexico. These are the same data points that came out on Friday in the more referenced EIA Natural Gas Monthly. Natural gas exports to Mexico were down -0.54 bcf/d to 5.94 bcf/d in November from 6.48 bcf/d in October and were immaterially changed YoY from 5.97 bcf/d in November 2023. There was no revision to October's figures. The DOE doesn't provide a split for pipeline vs LNG or CNG exports to Mexico, but we believe essentially 100% of the exports are via pipeline, without any CNG/LNG in the mix. Please note that we will note if we ever believe there are any notable CNG/LNG exports to Mexico. Below is a summary of natural

gas via pipeline exports to Mexico from the US. Our Supplemental Documents package includes excerpts from the DOE US Natural Gas Imports and Exports Monthly.

Figure 7: US Natural Gas Pipeline Exports to Mexico

(bcf/d)	2019	2020	2021	2022	2023	2024
January	5.32	5.41	5.59	5.67	5.46	5.97
February	5.08	5.32	5.39	5.54	5.46	5.84
March	5.05	5.60	5.91	5.48	5.83	5.87
April	5.01	4.62	6.10	5.89	5.64	6.34
May	5.61	4.69	6.21	6.00	6.25	6.82
June	5.78	5.43	6.61	6.21	6.80	6.77
July	6.20	5.85	6.40	6.12	6.79	6.75
August	5.87	6.12	6.25	5.89	6.87	7.12
September	5.77	6.18	5.96	5.64	6.75	6.85
October	5.75	6.23	5.99	5.55	6.51	6.48
November	5.40	5.64	5.52	5.37	5.97	5.94
December	5.20	5.31	5.39	5.14	5.63	
Average	**5.50**	**5.53**	**5.94**	**5.71**	**6.16**	

Source: DOE, SAF

Natural Gas: US LNG exports increase +0.40 bcf/d MoM to 12.53 bcf/d in Nov

US November LNG exports

On Monday, we posted [LINK] *"US LNG exports. Nov 24: 12.5 bcfd Oct 24: 12.1 Nov 23: 12.9 US LNG exports are up in Jan with start of Cheniere's Corpus Christ Stage 3 and Venture Global Plaquemines LNG. These @ENERGY LNG exports are same as coming out in @EIAgov Natural Gas Monthly on Friday. #OOTT"*. The DOE's Natural Gas Imports and Exports Monthly [LINK] was posted last Thursday and it also included the US LNG export data for November, which is the same data as in the more commonly referenced US LNG exports from the EIA's Natural Gas Monthly that came out 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 up +0.40 bcf/d MoM in November at 12.53 bcf/d but down -0.34 bcf/d YoY from 12.87 bcf/d in November 2023. The top five country destinations for US LNG in November were Turkey 1.58 bcf/d, United Kingdom 1.51 bcf/d, Netherlands 0.98 bcf/d, Japan 0.92 bcf/d, and France 0.79 bcf/d. The DOE did not comment on the MoM or YoY changes. Our post reminded that US LNG exports are going higher in Jan with the startup of the first train in Cheniere's Corpus Christi Stage 3 and Venture Global Plaquemines LNG. Our Supplemental Documents package includes excerpts from the DOE natural gas imports and exports monthly.

Figure 8: US Monthly LNG Exports

(bcf/d)	2019	2020	2021	2022	2023	2024
January	4.10	8.10	9.80	11.40	10.90	12.78
February	3.70	8.10	7.40	11.30	11.70	12.38
March	4.20	7.90	10.40	11.70	11.80	11.93
April	4.20	7.00	10.20	11.00	12.50	10.13
May	4.70	5.90	10.20	11.30	11.80	11.86
June	4.70	3.60	9.00	10.00	10.93	11.88
July	5.10	3.10	9.70	9.70	11.30	10.45
August	4.50	3.60	9.60	9.70	11.40	11.73
September	5.30	5.00	9.50	9.80	11.55	12.10
October	5.70	7.20	9.66	9.98	12.40	12.13
November	6.40	9.40	10.20	10.10	12.87	12.53
December	7.10	9.80	11.10	11.00	13.64	
Average	**4.98**	**6.56**	**9.73**	**10.58**	**11.90**	

Source: EIA, DOE

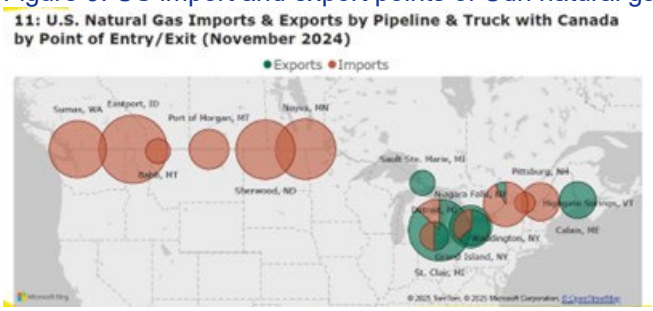
Natural Gas: US net imports from Canada 6.47 bcf/d in Dec, 6.04 bcf/d or YTD Nov 30

US net importer of natural gas from Canada

Yesterday, the White House confirmed that the US is implementing a 10% tariff on Cdn energy resources, which we assume includes oil, natural gas, electricity and uranium. On

Monday, we posted [LINK] "*US net imports of #NatGas from Canada a.k.a what Trump calls US subsidizing Canada. Nov; 194.2 bcf or 6.47 bcf/d. YTD Nov 30: 2,023.8 bcf or 6.04 bcf/d. per @ENERGY. Using $3, that's $6 billion. #OOTT.*" On Jan 23, the DOE posted its mnthly report US Natural Gas Imports an Exports Monthly. We didn't check for it until Monday as it normally comes our a few days before the EIA Natural Gas Monthly that was posted on Jan 31. US is a net importer of Cdn natural gas but it nothing compared to US net imports of Cdn oil. But it is part of Trump's US is subsidizing Canada to $250 billion or whatever is his latest estimate. The DOE estimates the US was a net importer of natural gas from Canada of 6.47 bcf/d in Nov and 6.04 bcf/d in YTD Nov 30. For Nov, the major US import points for Cdn natural gas were Eastport (Idaho), at 2.5 bcf/d (21% of US), St. Clair (Michigan) at 1.87 bcf/d (15% of US), Noyes (Minnesota) at 1.73 bcf/d (14% of US), Sherwood (North Dakota) at 1.63 bcf/d (14% of US), and Sumas (Washington) at 1.47 bcf/d (12% of US). Below is the DOE general map of US import points of Cdn natural gas.

Figure 9: US import and export points of Cdn natural gas



Source: DOE

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

Mexico Dec natural gas production

Whether Mexico new President Sheinbaum likes it or not, any increasing Mexico natural gas consumption will continue to mean increasing natural gas and/or LNG imports. This week, Pemex posted its natural gas production data for December [LINK]. The story for Mexico natural gas production is unchanged for the last several years – it is stuck right around 5 bcf/d. Pemex reported December 2024 natural gas production of 4.400 bcf/d, which is down -8.1% YoY from 4.786 bcf/d in December 2023 and down -0.7% MoM from 4.432 bcf/d in November 2024. The big picture story for Mexico natural gas for the past six years has been that Mexico natural gas production has been stuck at or below 5 bcf/d, and that means any increased domestic natural gas consumption has been met by US natural gas imports. Below is our ongoing table of Pemex reported monthly natural gas production.

Figure 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	4.606	-8.5%
July	5.216	4.856	4.892	4.902	4.725	4.815	4.936	4.566	-7.5%
Aug	5.035	4.898	4.939	4.920	4.656	4.796	4.947	4.534	-8.3%
Sept	4.302	4.913	5.017	4.926	4.746	4.798	4.969	4.515	-9.1%
Oct	4.759	4.895	4.971	4.928	4.718	4.795	4.950	4.503	-9.0%
Nov	4.803	4.776	5.015	4.769	4.751	4.845	4.888	4.432	-9.3%
Dec	4.811	4.881	5.024	4.846	4.697	4.845	4.786	4.400	-8.1%

Source: Pemex

Natural Gas: Doesn't look like near-term restart for TotalEnergies Mozambique LNG

TotalEnergies Mozambique LNG

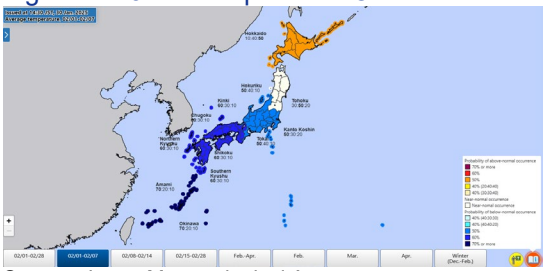
We have been highlighting that the signals out of Mozambique were pointing to a delay in the restart of TotalEnergies Mozambique LNG. This week, it looks even moreso when we saw Mozambique President's comments. On Tuesday, we posted [LINK] "*Seems TotalEnergies is not resuming work on Mozambique #LNG in coming weeks.Mozambique Pres "... efforts are therefore being made to ensure the necessary stability for its implementation." More work to be done and not prepared to say it is coming really soon. #OOTT."* When we saw the Mozambique President saying "*efforts are therefore being made to ensure the necessary stability for its implementation"*, it suggests they still have work to do and not prepared to say it is coming really soon. Our Supplemental Documents package includes the Mozambique President tweet.

Natural Gas: JMA forecasts colder than normal temps to start Feb

JMA temperature forecast for next 30 days

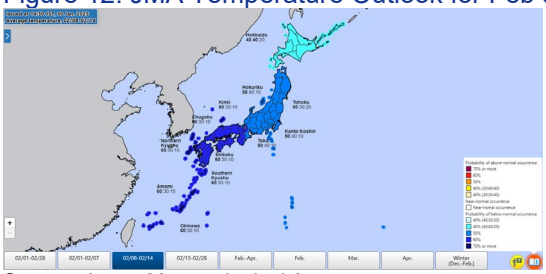
The JMA next 30-day temperature forecast has shifted from last week to now calling for colder temperatures in Japan to begin Feb. On Thursday, the Japan Meteorological Agency (JMA) updated its temperature forecast for the next 30 days, Feb 1 – Feb 28, in Japan [LINK]. There is no JMA commentary on the forecast. JMA is expecting colder than normal temperatures for the beginning of Feb throughout the southern and middle prefectures, while a pocket of the northern prefectures has a slight probability of warmer than normal temperatures. The key for winter temperatures is not the end of Feb but the end of Jan and start of Feb and the expectation is for colder than normal temps to start the month. We checked AccuWeather for Tokyo and for the period there are forecasted daily highs in the ~10C range and overnight lows around ~0C. This has the potential to drive some electricity and natural gas demand during the day, and more during the nights. Below is the JMA temperature forecast for Feb 1-7 and Feb 8-14.

Figure 11: JMA Temperature Outlook for Feb 1-7



Source: Japan Meteorological Agency

Figure 12: JMA Temperature Outlook for Feb 8-14



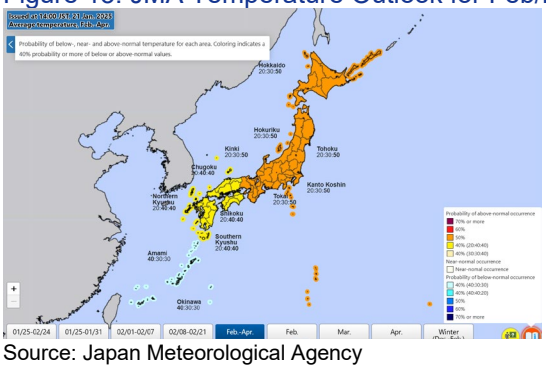
Source: Japan Meteorological Agency

Natural Gas: JMA forecasts warmer than normal temps in Feb/Mar/Apr in Japan

JMA temperature updated FMA forecast

Here is what we wrote in last week's (Jan 26, 2025) Energy Tidbits memo. *"JMA forecasts warmer than normal Feb/Mar/Apr in Japan. On Tuesday, the Japan Meteorological Agency also updated its seasonal temperature forecast for Feb/Mar/Apr. In Japan, this is really their shoulder season and there normally isn't any significant temperature driven electricity/natural gas demand. It's normally not cold enough to drive any significant turn on the heater demand or warm enough to turn on the air conditioner. The JMA expects to see warmer than normal temperatures for Feb/Mar/Apr. Below are the JMA Jan 21 temperature outlook map for Feb/Mar/Apr."*

Figure 13: JMA Temperature Outlook for Feb/Mar/Apr



Source: Japan Meteorological Agency

Natural Gas: Japan LNG imports up MoM, down YoY in December

On Thursday, Japan's Ministry of Finance (MOF) posted its import data for December [LINK]. The MOF reported Japan's December LNG imports were 9.85 bcf/d, up +21.9% MoM from November which was 8.08 bcf/d, and down -2.1% YoY from 10.06 bcf/d in December 2023. There is no explanation given but we expect the warmer than normal Oct/Nov/Dec to start the winter meant that LNG buyers didn't feel the need to load up on LNG. Plus, thermal coal is cheaper and Japan will preferentially take more thermal coal than LNG for electricity generation due to prices. Japan's thermal coal imports in December were up +13.0% YoY. Petroleum Products imports were down -16.0% YoY. Below is our table that tracks Japan LNG import data.

Figure 14: Japan Monthly LNG Imports

bcf/d	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	24/23
Jan	12.66	13.06	11.22	12.85	12.79	11.69	11.63	12.48	10.51	10.56	9.46	-10.5%
Feb	12.88	13.26	12.30	13.36	14.23	12.61	10.99	13.84	12.19	10.98	9.97	-9.2%
Mar	12.46	12.60	12.62	12.61	12.28	11.30	11.16	11.04	10.07	8.86	8.59	-3.0%
Apr	11.54	10.56	10.21	10.52	8.97	9.00	8.31	7.96	8.92	7.25	8.46	16.6%
May	10.06	8.91	8.55	9.66	9.92	8.62	7.09	7.67	8.92	7.14	7.54	5.6%
June	10.91	10.61	10.02	9.90	8.88	8.32	8.42	9.13	9.29	7.25	7.31	0.8%
July	12.14	10.77	10.19	10.19	10.55	10.56	9.35	9.58	9.54	7.88	8.70	10.4%
Aug	10.92	10.93	11.96	11.24	11.73	9.45	9.04	9.75	9.71	8.78	8.87	1.0%
Sept	11.64	11.06	10.67	9.31	10.04	10.30	10.41	8.66	8.52	8.84	8.69	-1.7%
Oct	10.75	9.38	9.73	9.50	10.12	9.75	9.20	7.17	7.88	8.38	8.19	-2.2%
Nov	11.00	10.71	12.07	10.26	10.15	10.03	9.63	9.38	8.88	8.53	8.08	-5.3%
Dec	12.79	12.51	11.69	12.31	11.23	10.54	11.96	10.89	9.39	10.06	9.85	-2.1%

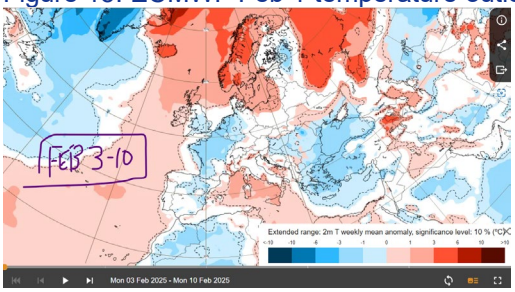
Source: Japan Ministry of Finance, SAF

Natural Gas: ECMWF forecasts Europe turning warmer in mid Feb

Warm in Europe

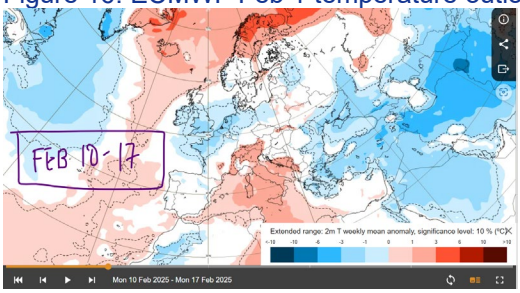
It's the beginning of Feb, which means the end of normal winter temperature driven natural gas season is quickly coming to an end. So a forecast for temperatures to get warmer than normal temperatures in mid-Feb should be a holdback to Europe natural gas prices. Yesterday, we posted [LINK] "*Holdback to Europe #NatGas prices. @ECMWF updated outlook for next three weeks calls for mostly normal turning to warmer than normal temperatures for much of Europe. It's Feb, which is basically the end of normal peak winter temp demand for #NatGas. #OOTT.*" Our post included the ECMWF (European Centre for Medium-Term Weather Forecasts) Saturday updated temperature outlooks for Europe for the Feb 3-10, Feb 10-17 and Feb 17-24 weeks.

Figure 15: ECMWF Feb 1 temperature outlook for Europe for Feb 3-10



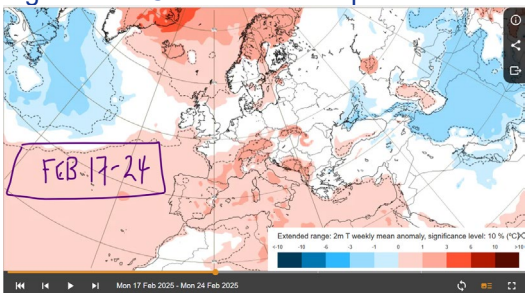
Source: ECMWF

Figure 16: ECMWF Feb 1 temperature outlook for Europe for Feb 10-17



Source: ECMWF

Figure 17: ECMWF Feb 1temperature outlook for Europe for Feb 17-24

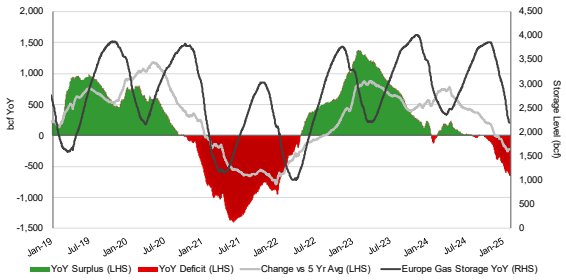


Source: ECMWF

Natural Gas: Europe storage down -2.9% WoW to 54.1% full, down -16.5% YoY

There have been gas storage draws in Europe. It wasn't really cold this week but it was another week of very low wind generation so the call on natural gas was strong to fill in for the lack of wind.. And as a reminder, the YoY comparison is to a hot Jan 2024 in Europe. The good news for Europe was that storage was fairly full to start the winter. It would have been full if Europe had not cut back on LNG imports in Q2 and Q3 for fear of being full early. But with some colder temperatures and low wind in Dec, storage draws picked up. This week, on Jan 30, Europe storage was down -2.9% WoW to 54.1% vs 57.0% on Jan 23. Recall that winter 2023/24 was one of the hottest winters in Europe. Storage is now down -16.5% from last year's levels of 70.6% on Jan 30, 2024, and down against the 5-year average of 61.1%. Below is our graph of European Gas Storage Level.

Figure 18: European Gas Storage Level



Source: Bloomberg, SAF

Ukraine storage is currently 5.6% 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 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 January 30, natural gas in Ukraine storage was at 11.6% of its total capacity, down compared to 12.8% of its total capacity on January 23. Last winter, Ukraine storage as of Nov 1, 2023, was at 39.4%. Right now, Ukraine makes up 5.6% 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 19: Ukraine Gas Storage Facilities as of June 2023

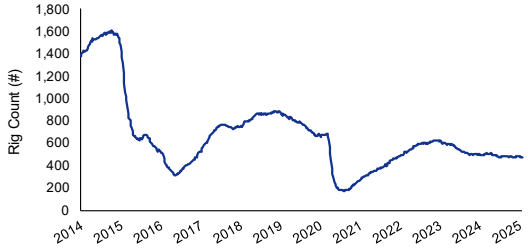
Source: Bloomberg

US oil rigs up WoW

Oil: U.S. oil rigs up +7 rigs WoW, a recovery from previous cold impact

As expected, US oil rigs were up this week, recovering from the frigid cold and snow that hit southern states like Texas the previous week. On Friday, Baker Hughes released its weekly North American drilling rig data. (i) Note Baker Hughes no longer breaks out the basin changes by oil vs gas rig type. (ii) Total U.S. oil rigs were up +7 rigs WoW as of Jan 31. We expected to see a WoW rebound from the very cold temperatures moving through the U.S. last week, and especially seen in Texas. Total U.S. oil rigs are now down -20 oil rigs YoY to 479 rigs, which is above the recent low seen in the previous week (Jan 24). (iii) Note we can see the basin changes but not by type of rig; the WoW changes at the major basins were as follows: Permian +5 rigs WoW, Williston +1 rig WoW, Haynesville -1 rig WoW, Granite Wash -1 rig WoW, Cana Woodford +1 rig WoW, Ardmore Woodford +2 rigs WoW, and Eagle Ford +1 rig WoW. There must have been a rig lost elsewhere because we did not have a proportionate number of loses within the major basins. (iv) The overlooked U.S. rig theme is the YoY declines, which have begun to taper as Q4 2023 saw activity leveling off, however, it is still important to note the YoY change. Total U.S. gas and oil rigs are down -39 rigs YoY to 577 rigs including US oil rigs -20 oil rigs YoY to 479 oil rigs. And for the key basins, the Permian is -8 rigs YoY, Haynesville is -12 rigs YoY, DJ-Niobrara is -7 rigs YoY, Marcellus is down -6 rigs YoY, Granite Wash is +7 rigs YoY, Eagle Ford is -6 rigs YoY, Barnett is flat YoY, Ardmore Woodford is flat YoY, Arkoma Woodford is -1 rig YoY, Cana Woodford is -5 YoY, Mississippian is -2 rigs YoY, Utica is -2 rigs YoY, and Williston is flat YoY. (v) U.S. gas rigs were down this week at 98 gas rigs. We believe U.S. gas rigs will need to increase over the next several months as more U.S. LNG capacity comes onstream in 2025. Lastly, U.S. miscellaneous rigs were flat WoW at 5 rigs and up +2 rigs YoY.

Figure 20: Baker Hughes Total US Oil Rigs



Source: Baker Hughes

US oil rigs down WoW

Oil: Liberty Energy sees US frac activity trough in Q4, early signs of inflection in Q1/25

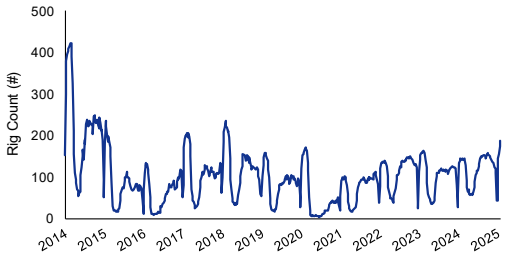
Drilling rigs are critical to build up drilled uncompleted wells, but frac spreads are needed to complete the wells and bring them on production so frac spreads are the indicator for the direction of travel for US oil and natural gas production. The reason why many are calling for low, if any, growth in US oil production in 2025 has been frac spreads went lower in Q4 instead of increasing after US Thanksgiving. On Thursday, we posted [LINK] "*Frac activity troughed in Q4/24 says frac leader Liberty Energy. "Frac markets reached a trough at the end of 2024 after progressive quarterly declines in industry activity since early 2023. Early signs of an inflection in completions activity have now emerged from 2024 lows." #OOTT."* Liberty Energy is one of the top frac players for US tight/shale oil and natural gas so should have the best sense of what oil and gas companies are planning for their Q1 frac programs. And as our post noted, Liberty sees Q4/24 as the trough for frac activity and they are seeing the early signs of the inflection in Q1/25.

Cdn oil rigs up +12 WoW

Oil: Total Cdn oil rigs up +12 WoW on Friday, with gas rigs up +1 WoW

On Friday, Baker Hughes released its weekly North American drilling rig data. This week's total oil and gas rig count was up +13 rigs WoW to 258 rigs on Jan 31 and are up +26 rigs YoY. This is not a surprise that Cdn rigs were up, but we are at or one more week out from the peak winter drilling activity levels. We have been expecting Cdn rigs to increase thru Jan. Oil rigs are up +12 rigs WoW at 186, and up +45 rigs YoY. Gas rigs are up +1 rig WoW to 72 rigs and are down -19 rigs YoY, and miscellaneous rigs are flat WoW and flat YoY at 0 rigs total. As a reminder Baker Hughes changed their reporting format which does not allow us to see the provincial breakouts.

Figure 21: Baker Hughes Total Cdn Oil Rigs



Source: Baker Hughes

Oil: US weekly oil production down -0.237 mmb/d WoW to 13.240 mmb/d, up YoY

US weekly oil production

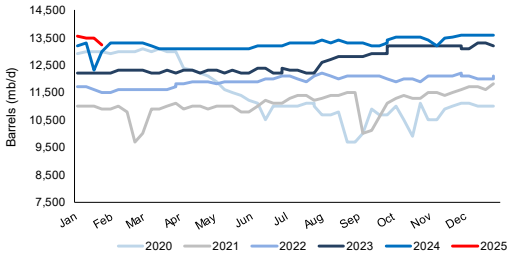
As expected, the EIA estimated US oil supply was down given the cold snap that hit the southern US. We don't place as much emphasis on the EIA weekly oil supply estimates as others do because we recognize the near impossibility for anyone to post an accurate estimate on a Wednesday for the totality of US oil production for the week ended the prior Friday [LINK]. We have to give the EIA credit for putting out weekly oil supply estimates for the prior week, that can't be easy so no one should be surprised that the EIA weekly oil supply estimates, based on the Form 914 actuals, will regularly require re-benchmarking; sometimes the re-benchmarking can be significant and other times, it is relatively small. The EIA does not provide any commentary, but we weren't surprised to see this week's estimate came in down -0.237 mmb/d WoW to 13.240 mmb/d for the week ending Jan 24. We have warned that the very cold temperatures (and even some snow) in the areas like Oklahoma and Texas was likely to temporarily impact production. This is up +0.240 mmb/d YoY from 13.000 mmb/d for the week ended Jan 26, 2024. The January STEO forecast was posted this week on Jan 14 and slightly decreased its US crude expectations for 2024 by -0.020 mmb/d to 13.210 mmb/d which will exceed the Q4/19 peak of 12.880 mmb/d, with all quarters in 2024 expected to exceed 13.200 mmb/d, other than Q1/24 at 12.940 mmb/d. 2025 estimates were revised upwards to 13.540 mmb/d, with all quarters exceeding 13.400 mmb/d and reaching a peak of 13.670 mmb/d in Q4/25. The EIA is no longer releasing a DPR, so we no longer have MoM expectations. This week, the EIA's production estimates were down -0.237 mmb/d WoW to 13.240 mmb/d for the week ended Jan 24. Alaska production figures were down -0.011 mmb/d WoW to 0.430 mmb/d, compared to 0.442 mmb/d last week. Below is a table of the EIA's weekly oil production estimates.

Figure 22: EIA's Estimated Weekly US Field Oil Production (mb/d)

	Week 1		Week 2		Week 3		Week 4		Week 5	
Year-Month	End Date	Value	End Date	Value	End Date	Value	End Date	Value	End Date	Value
2023-Sep	09/01	12,800	09/08	12,900	09/15	12,900	09/22	12,900	09/29	12,900
2023-Oct	10/06	13,200	10/13	13,200	10/20	13,200	10/27	13,200		
2023-Nov	11/03	13,200	11/10	13,200	11/17	13,200	11/24	13,200		
2023-Dec	12/01	13,100	12/08	13,100	12/15	13,300	12/22	13,300	12/29	13,200
2024-Jan	01/05	13,200	01/12	13,300	01/19	12,300	01/26	13,000		
2024-Feb	02/02	13,300	02/09	13,300	02/16	13,300	02/23	13,300		
2024-Mar	03/01	13,200	03/08	13,100	03/15	13,100	03/22	13,100	03/29	13,100
2024-Apr	04/05	13,100	04/12	13,100	04/19	13,100	04/26	13,100		
2024-May	05/03	13,100	05/10	13,100	05/17	13,100	05/24	13,100	05/31	13,100
2024-Jun	06/07	13,200	06/14	13,200	06/21	13,200	06/28	13,200		
2024-Jul	07/05	13,300	07/12	13,300	07/19	13,300	07/26	13,300		
2024-Aug	08/02	13,400	08/09	13,300	08/16	13,400	08/23	13,300	08/30	13,300
2024-Sep	09/06	13,300	09/13	13,200	09/20	13,200	09/27	13,300		
2024-Oct	10/04	13,400	10/11	13,500	10/18	13,500	10/25	13,500		
2024-Nov	11/01	13,500	11/08	13,400	11/15	13,201	11/22	13,493	11/29	13,513
2024-Dec	12/06	13,631	12/13	13,604	12/20	13,585	12/27	13,573		
2025-Jan	01/03	13,563	01/10	13,481	01/17	13,477	01/24	13,240		

Source: EIA

Figure 23: EIA's Estimated Weekly US Oil Production



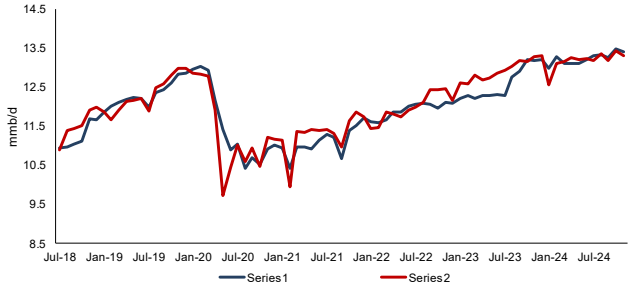
Source: EIA

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

EIA Form 914 November

On Friday, the EIA released its Form 914 data [LINK], which is the EIA's "actuals" for November US oil and natural gas production. (i) This month, the EIA made a very small revision to October's oil production, increasing +0.021 mmb/d from 13.457 mmb/d to 13.436 mmb/d. As a result, the October actuals were -0.051 mmb/d vs the average weekly supply estimate of 13.487 mmb/d. (ii) The EIA Form 914 reported November "actuals" at 13.314 mmb/d, which was down -0.099 mmb/d against the weekly supply estimate average of 13.413 mmb/d. (iii) November "actuals" of 13.314 mmb/d are down -0.122 mmb/d MoM vs 13.436 mmb/d in October. On a YoY basis, "actuals" are up +0.033 mmb/d YoY vs November 2023 at 13.281 mmb/d. Below is a chart of monthly actuals vs. weekly estimates. Our Supplemental Documents package includes an excerpt from the Form 914 figures.

Figure 24: EIA Form 914 US Oil Production vs Weekly Estimates



Source: EIA, SAF

Oil: Core Labs Q4, sounds like refrac hasn't worked as broadly as initially thought

Cor Labs on refracs

On Thursday, we posted [LINK] "*Less future upside to shale/tight plays? Core Labs: Several NA operators had refracs with lower frac efficiencies & reduced stimulated reservoir volumes in new stages. Feels like less refrac upside as may cost more & not as broadly applicable as 1st thought. #OOTT."* We have the advantage of looking at quarterly reported and not having to focus on numbers and forecasts but look at companies to see if there are tidbits that point to sector or commodity insights that get overlooked. We there the Core Labs comments on refracs point to some degree of lesser future upside to shale/tight. We didn't see analysts comment on this as refracs are such a minor item for analysts who cover Core Labs. The analysts will look at mgmt's refrac comments and think it is a reflection that Core Labs have figured out how to help oil and gas companies refract because it hasn't been

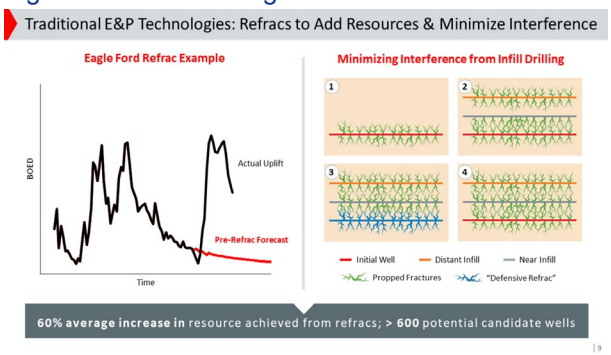
working. But what caught our attention was how Core Labs said "*Several North American operators approached Core Lab's ballistic engineers to design fit-for Purpose energetic solutions for recompletions. Conventional shape charges would provide inferior performance, leading to lower frac efficiencies and reduced stimulated reservoir volumes in the new stages".* Several companies came to them for help on refracs. If this was 5 or 6 years ago, it would be a prospective request to Core Labs before the operators really went after refracs. But oil and gas companies have been refracing for years and, in 2019/2010, they had some initial good results. But what has probably happened over the last couple years is that the initial solid results stopped being solid as oil and companies started more broadly refracing. So Core Labs saying they have come up with a proprietary way that is providing results and the conventional refract approach wasn't working. It make sense as to why we haven't been seeing the operators highlight their refracs. And mgmt's comments are that there have been challenges, but they have figured out how to do it better and their new refrac method is giving approximately 50% improved recovery vs the original refract method. Core Labs didn't disclose how much more the proprietary refrac would cost vs the conventional refrac. But given the assumed higher cost and that several operators weren't getting the expected refrac results, we think the takeaway is there will be less refrac potential. Is it huge? No. but this would point to less future upside to US shale/tight plays to some degree and is a positive to oil and gas out a few years.

10/23/19: Core Labs says refracking is working in Eagle Ford and Bakken

Here is what we wrote in our Oct 27, 2019 Energy Tidbits memo. "*Core Labs says refracking is working in Eagle Ford and Bakken. We were a little surprised that Core Labs Q3 call comments on refracking didn't get any traction. Perhaps its because the impact of refracking success won't really show up for years to come, But Core Labs had bullish comments on the industry refrack success in Eagle Ford and Bakken. We don't expect refrack success will lead to growth in these plays, but it should reduce mid term declines by increasing rate and recovery on old 1st and likely 2nd generation fracked wells. Mgmt said "Moving now to Production Enhancement. Core's Production Enhancement energetics team partnered with one of the world's largest independent E&P companies to develop a breakthrough perforating solution for their mechanically isolated recompletion programs in both the Eagle Ford and Bakken formations onshore U.S. This technology helped the operator minimize risk, improve recovery from existing wells and optimize their return on investment." "The operator has reported the ability to complete double the number of stages per day over conventional perforating techniques. The E&P company has also seen consistent and reliable frac -- fracs from stage to stage and well to well along with encouraging production results. Core's refrac technology breathes new life into the large fleet of older existing wells that were originally under-stimulated. High-quality reservoir rock and the intervals between the original stages can now be tapped, increasing oil recovery and significantly without the expense of drilling and completing an additional well." With respect to the significance to industry, it really doesn't' matter who is the company, But we believe the "one of the world's largest independent E&P companies" refers to ConocoPhillips. In theory, it could be big companies who in both plays like EOG Resources, Marathon Oil, but we think its Conoco even though Conoco has stated clearly Bakken is in plateau production and*

Eagle Ford is in late stage growth (see our Aug 4, 2019 Energy Tidbits on Conoco's Q2 call). Conoco's regular investor presentations do not mention refracking success, but Conoco held a Feb 19, 2019 "Shale Oil Technical Teach In" that had the below refrack Eagle Ford slide."

Figure 25: Conoco Eagle Ford Refrack



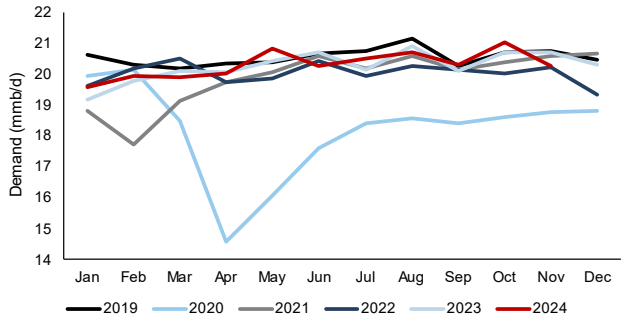
Source: ConocoPhillips

Oil: US oil demand in Nov was -0.255 mmb/d below EIA STEO forecast for Nov

US oil demand

On Friday, the EIA posted its "actuals" oil data for November, which includes US oil and products demand. In January, the EIA posted its monthly Short Term Energy Outlook and their backup data includes splitting their 2024 forecast into the monthly splits so we can compare how the actuals compare to the monthly forecast. On Friday, the EIA posted the "actuals" for November demand at 20.235 mmb/d, which is -0.255 mmb/d below the STEO forecast for November of 20.490 mmb/d. This is smaller than last month's October actuals, when the EIA posted the "actuals" for October demand at 20.442 mmb/d, which was -0.432 mmb/d below the EIA STEO forecast for October of 21.010 mmb/d. The below graph shows the EIA's reported monthly crude demand for the last 5 years.

Figure 26: EIA's Monthly US Oil Demand



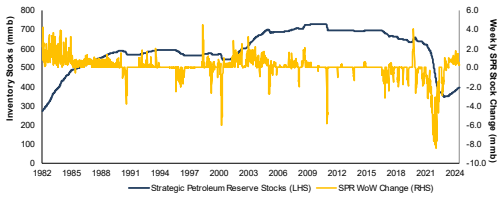
Source: EIA

Oil: US SPR less commercial reserve deficit widens, now -20.312 mmb

US SPR reserves

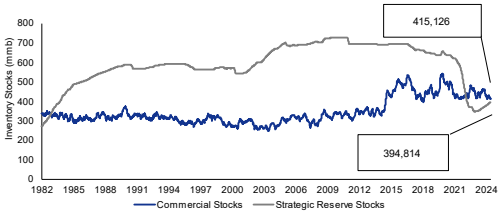
The SPR will be increasingly on the watch with Trump's stated plan to fill the SPR to the brim. The US Strategic Petroleum Reserves (SPR) continues to be much lower than total US commercial crude oil reserves. The SPR went back below commercial for the first time since 1983 in the Sep 16, 2022, week. This week, we saw a build on the SPR side and a build on the commercial side. The EIA's weekly oil data for Jan 24 [LINK] saw the SPR reserves increase +0.248 mmb WoW to 394.814 mmb, while commercial crude oil reserves increased +3.463 mmb to 415.126 mmb. There is now a -20.312 mmb difference between SPR reserves and commercial crude oil reserves. The below graphs highlight the difference between commercial and SPR stockpiles, along with the weekly changes to SPR stockpiles.

Figure 27: Strategic Petroleum Reserve Stocks and SPR WoW Change



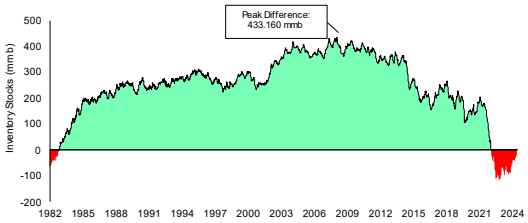
Source: EIA

Figure 28: US Oil Inventories: Commercial & SPR



Source: EIA

Figure 29: US Oil Inventories: SPR Less Commercial



Source: EIA

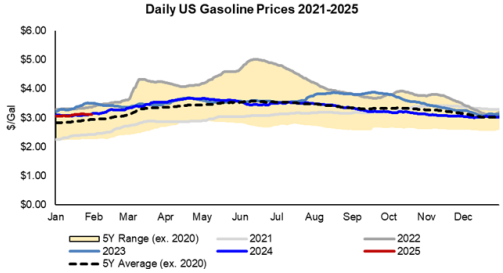
Oil: AAA reports US national average gasoline prices -$0.03 WoW to $3.10 on Feb 1

US gasoline prices

Yesterday, we posted [LINK] "*AAA National average gasoline prices -$0.03 WoW to $3.10 on Feb 1, +$0.04 MoM & -$0.05 YoY. California average prices +$0.02 WoW to $4.47, +$0.12 MoM & -$0.09 YoY. Thx @AAAnews #OOTT".* Yesterday, AAA reported that US national

average prices were $3.10 on Feb 1, which was -$0.03 WoW, +$0.04 MoM and -$0.05 YoY. Yesterday, AAA also reported California average gasoline prices were $4.47 on Feb 1, which was +$0.02 WoW, +$0.12 MoM and -$0.09 YoY. Below is our graph of Bloomberg's National Average weekly gasoline prices.

Figure 30: AAA National Average Gasoline Prices



Source: AAA

Oil: Crack spreads +$1.01 WoW to $18.74 on Jan 31, WTI -$2.13 WoW to $72.53

Crack spreads closed at $18.74

On Friday, we posted [LINK] "*321 crack spreads +$1.01 WoW to $18.74 on Jan 31. Whereas WTI -$2.13 WoW to $72.53. Reminds WTI is more impacted by global oil items such as Trump continued push on Saudi/OPEC to lower oil prices than 321 cracks. Thx @business #OOTT.*" Crack spreads were +$1.01 WoW to $18.74 on Jan 31 whereas WTI was -$2.13 WoW to $72.53. WTI was down this week driven by Trump's continued push on Saudi Arabia and OPEC to bring down the price of oil. He publicly increased started this push last week with his Davos address and continued it this week in public comments. We have been highlighting that, for the past several months, for the most part WTI has been driven more by global factors and not crack spreads. Crack spreads at $18.74 is above the mid-pont of the typical pre-Covid $15-$20 range and are Crack spreads are creeping to the $20 level which starts to incentivize refiners to take a little more crude. Crack spreads of $18.74 on Jan 31 followed $17.73 on Jan 24, $17.94 on Jan 17, $16.47 on Jan 10, $16.48 on Jan 3, $16.05 on Dec 27, $16.44 on Dec 20, $16.53 on Dec 13, $15.95 on Dec 6, $15.72 on Nov 29, $17.09 on Nov 22, $17.99 on Nov 15, $17.30 on Nov 8, and $16.82 on Nov 1.

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

Crack spreads and WTI price movement to end the week reinforced that WTI is more impacted by global oil items than crack spreads. It hasn't been normal times for oil markets in the last several months with a wide range of global factors. So for the most part, the last several months are a good example that global oil and market items impact WTI more than crack spreads. But in normal times, broad market factors aside, we have focused on crack spreads for since the 90s as they are an unchanged fundamental of refineries – wide/high crack spreads provide incentives for refineries to buy more crude because there are big profit margins to be made. We track US crack spreads but there is also an influence on global refining capacity on US crack spreads as the increasing global refining capacity has also tended to have downward pressure on US crack spreads especially with demand being less than most expect. So if crack spreads are wide/high, it is normally a positive for the very near term look ahead to WTI. Conversely, if crack spreads are narrow/low, it

doesn't give refineries any real incentive to take more crude, which is normally softness for the very near term look ahead to WTI. People often just say "cracks", which refers to the 321 crack spread. This is the spread or margin that refiners make from buying crude at a certain price and then selling the finished petroleum products at their respective prices. The 321 crack spread is meant to represent what a typical US refinery produces. It assumes that for every three barrels of crude oil, the refinery will produce two barrels of gasoline and one barrel of distillates. So the crack spread is based on that formula and worked back to a crack spread per barrel. Below is the current 321 crack spread vs WTI that we put in our tweet where we marked the gaps where the crack spread normally drags up oil prices. 321 Crack spread closed at $18.74 on Friday Jan 24.

Figure 31: Cushing Oil 321 Crack Spread & WTI Jan 31, 2015 to Jan 31, 2025

Source: Bloomberg

Oil: Trump hits Canada imports with 25% tariff but only 10% on "energy resources"

Trump 10% tariffs on Cdn "energy resources"

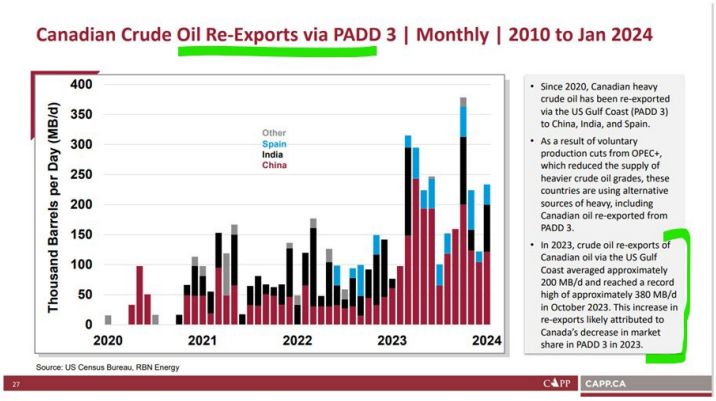
It isn't clear from the White House fact sheet when the new 10% tariff on Cdn oil exported to the US kicks in but we assume it is immediate. Yesterday was also a good example that, no matter what his cabinet members may say, it doesn't mean Trump will agree with their positions. Yesterday, we posted [LINK] "*US impose a 25% additional tariff on imports from Canada. Energy resources from CAN will have a lower 10% tariff. "This Tariff will remain in effect until such time as Drugs, in particular Fentanyl, and all Illegal Aliens stop this Invasion of our Country!" White House Fact Sheet. Assume energy incl #Oil #NatGas #Uranium #Electricity. #OOTT."* Yesterday the White House confirmed with its fact sheet that the US is imposing 25% tariffs on goods from Canada but the tariff would be 10% on "energy resources" and the tariff starts on Tuesday. The Executive Order provided more detail than the White House Fact Sheet on what is in the 10%. Earlier this morning, we posted [LINK] "*Surprised Trump's 10% tariff on CAN energy resources didn't include #electricity. 10% applies to. (a) The term "energy" or "energy resources" means crude oil, natural gas, lease condensates, natural gas liquids, refined petroleum products, uranium, coal, biofuels, geothermal heat, the kinetic movement of flowing water, and critical minerals, as defined by 30 U.S.C. 1606 (a)(3)." #OOTT #NatGas."* We were surprised that it didn't include electricity imports from Canada. Our post included the White House Fact Sheet statement on the tariff remaining until "*such time as Drugs, in particular Fentanyl, and all Illegal Aliens stop this invasion of our country*." So, it looks like 10% tariffs are here to stay for a bit. Our Supplemental Documents package includes the White House Fact Sheet and the Executive

Order and Canada's tariff retaliaton.

Should be ~300,000 b/d of Cdn oil exempt from 10% tariffs

Earlier this morning, we posted [LINK] "*Some Cdn #Oil should be exempt from Trump 10% tariff. Trump "Such rate of duty shall apply with respect to goods entered for consumption". IF its consumption in US, maybe ~300,000 b/d of Cdn oil via pipelines & rail that is re-exported out of Gulf Coast. Thx @OilGasCanada Thx @GregSheaWorkBee #OOTT.*" The Trump executive order says the 10% tariff on Cdn energy resources will apply to goods entered for consumption. We assume that means for consumption in the US. If so, that would exempt oil that goes via pipeline and rail to the Gulf Coast for re-export to international markets. Our post included the below CAPP slide on this that we put in roughly 300,000 b/d.

Figure 32: Cdn crude oi exports via Gulf Coast PADD 3



Source: CAPP

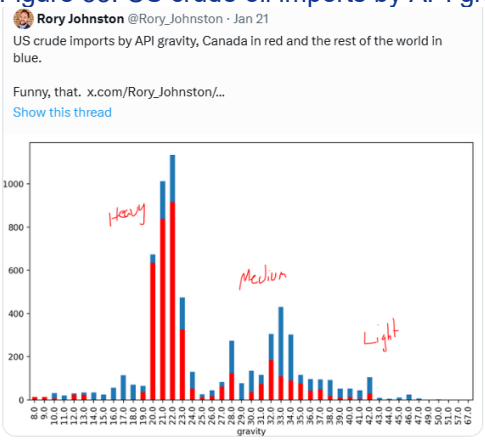
Expecting further Trump actions today vs Canada post Canada's retaliation

We have a 7am MT news cut off and we expect that Trump will do something more against Canada later today. Trump's executive order contained a specific provision that Trump may increase or expand in scope the duties if Canada retaliates. Yesterday, Canada retaliated. And that means Trump will do something more on Canada. Earlier this morning, we posted [LINK] "*Over to Trump for round 2 of tariffs vs Canada. Canada's tariff retaliation. 25% immediate tariffs on $30b of goods "such as orange juice, peanut butter, wine, spirits, beer, coffee, appliances, apparel, footwear, motorcycles, cosmetics, and pulp and paper". 21-day public comment on 25% tariff on "as passenger vehicles and trucks, including electric vehicles, steel and aluminum products, certain fruits and vegetables, aerospace products, beef, pork, dairy, trucks and buses, recreational vehicles, and recreational boats. " Trump's executive order "Should CAN retaliate against the US in response to this action through import duties on US exports to CAN or similar measures, the President may increase or expand in scope the duties imposed under this order to ensure the efficacy of this action." #OOTT.*

US domestic light oil supply can't substitute for Cdn medium/heavy oil

Yesterday, we posted [LINK] "*US domestic #Oil supply can't replace Cdn Oil. US may export ~4 mmbd of crude oil & import ~4 mmbd of Cdn crude oil. All Oil barrels are not the same and refineries run on certain crude quality. And US oil production is light oil and US refineries basically import heavy/medium crude oil from CAN. Great reminder 👇from @Rory_Johnston #OOTT.*" Oil is very different than natural gas. Natural gas that goes into pipelines has specific standards so all consumers can use any natural gas that comes off the pipeline. That is not the case for oil that has different quality (API and H2S) and refineries are set up to handle specific qualities of crude oil. Refineries have some wiggle room to blend in different quality crudes but that is limited and impacts yields of petroleum products. So Midwest refineries are set up to run on Cdn crude oil and not US light oil. And the US does not really produce any extra medium/heavy oil that can replace Cdn oil. And even if they did have added supply that could substitute for Cdn medium/heavy, there isn't the pipeline infrastructure to get US domestic crude supply to landlocked refineries in the Midwest. Our post included a great graph from Rory Johnston on how the US oil imports of medium/heavy is basically 100% from Canada.

Figure 33: US crude oil imports by API gravity, splitting Canada vs rest of world



Source: Enbridge

Can East, Gulf & West Coat refineries replace Cdn medium/heavy crude?

If US domestic light oil can't substitute for Cdn medium/heavy crude oil for refineries, the question remains can US refineries on the East, Gulf and West coasts who use Cdn medium/heavy crude oil find substitute quality crude oil on a timely basis. There will likely be some advancement of refinery maintenance to see if the tariff war can end quickly but there can't be too much as US refineries are just moving into their peak production period to meet the normal seasonal increase for petroleum products. We have highlighted before on our tariff discussions that the big winners stand to be places like Saudi Arabia, Iraq, Russia & other OPEC members that have surplus medium/heavy oil that can be substituted for Cdn medium/heavy oil. If these refineries can't find substitute medium/heavy oil, then they become landlocked refineries in being, to some degree, captive buyers of Cdn medium/heavy crude oi.

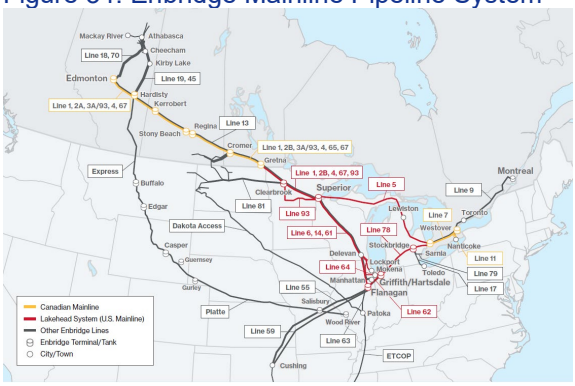
Canada is the #1 supplier of oil to the US

The US imports around 4 mmb/d of oil from Canada out of its total approx. 6.5 mmb/d of oil imports. On Friday morning, we posted [LINK] "*Canada share of US #Oil imports. 100% of landlocked refineries in Midwest and Rocky Mountains. ie captive sellers/captive buyers. East Coast: CAN #2 at ~15%. Nigeria #1, LIbya #3. Gulf Coast: CAN #1 at 1/3, MEX #2, VEN #3, collectively ~75%. West Coast: CAN #1 at ~30%, Iraq #2. IF CAN get displaced on coasts, winner is Saudi & OPEC+ who have only real spare capacity. Thx @EIAgov #OOTT."* We have been highlighting how in the landlocked regions, Canadian oil is a captive seller to the US landlocked refineries, but the US landlocked refineries are captive buyers to Canadian oil. Three isn't the pipeline infrastructure and capacity to replace Cdn oil to Midwest and Rocky Mountain refineries. Whereas the refineries on the East Coast, Gulf Coast and West Coast primarily but not exclusively get their crude by tankers. For example, Bakken crude gets railed to refineries on the east and west coast. Our post included the EIA graphs of US oil imports in total and US oil imports from Canada by each PADD. Our Supplemental Documents package includes the EIA graphs attached to our post.

Will captive buyers/captive sellers for Cdn crude share the added cost?

No one knows what is going to happen with pricing for Cdn crude but, for the landlocked refineries in the Midwest and Rocky Mountains, it's hard to see any side has more leverage. And if so, isn't the expected case some sort of sharing of the additional cost? Here is what we wrote in our Dec 22, 2024 Energy Tidbits memo. "*Captive buyers/captive sellers for Cdn medium/heavy oil to Midwest refineries. We have heard how the shippers for the ~3 mmb/d of Cdn medium/heavy oil via pipeline to the Midwest PADD 2 will have to eat any Trump tariff costs as they have no other market for their oil. We agree that they are captive sellers. However, we have reminded that Midwest PADD 2 refineries are captive buyers of Cdn medium/heavy oil as they have no other way to replace ~3 mmb/d of Cdn medium/heavy oil. Sure the refineries could tweak it a little bit to run more US light oil. But that will have limitations. And then there is no logistics that could accommodate an additional 3 mmb/d of imports via tanker and then they have to find a way to get that oil from the Gulf Coast or East Coast or West Coast, without pipelines, to the Midwest refineries. It's why we posted, on Nov 27, [LINK] "Captive buyer and captive seller. Yes, Cdn oil producers have no other replacement market for its ~2.9 mmbd of heavy/medium oil to US Midwest refineries. BUT US Midwest refineries have no other replacement supply for its ~2.9 mmbd of Cdn heavy/medium oil. So Trump 25% tariff should flow thru to regional Midwest prices of gasoline, jet fuel, diesel, etc. #OOTT."*

Figure 34: Enbridge Mainline Pipeline System



Source: Enbridge

Moving into the peak seasonal demand period for Cdn oil

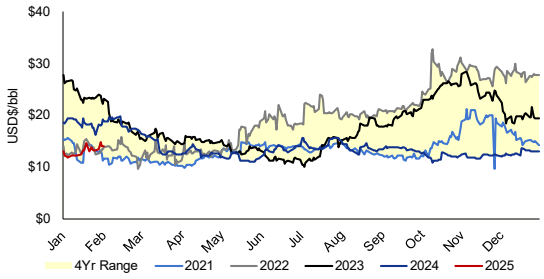
We find it hard for the landlocked Midwest refineries to not take Cdn crude especially as this is normally the period when WCS less WTI differentials normally narrow as the refineries in the US want to take more Cdn medium heavy crude as the refineries move into their spring period of increasing asphalt production for the traditional summer paving season.

Oil: Cdn heavy oil differentials widened +$2.40 WoW to $15.50b on Jan 31

WCS less WTI diffs widened

As noted above, we expect to see a widening of the WCS less WTI differentials on Monday. Normally at this time of the year, we would be trotting out our normal commentary that this is the start of the seasonal narrowing of WCS less WTI differentials as refineries in the US start to take more medium sour crude as they change their runs to produce more asphalt for the upcoming paving season. But the story for WCS less WTI differentials is US tariffs on cdn oil and natural gas. The story on Friday was Trump's Thursday and Friday comments that he will be including Cdn oil and natural gas in the tariffs. As a result, WCS less WSTI diffs widened $1.50 on Friday for a widening of $2.40 on the week to close at $15.50. But Friday pricing did not have any details.

Figure 35: WCS less WTI differentials



Source: Bloomberg

Trump's tariff plans hit WCS less WTI diffs on Friday but more to come

The story on Thursday and Friday was Trump saying he will be including Cdn oil in the tariffs on Canada. There were no details on Friday but WCS less WTI diffs widened $1.50 to close at $15.50. On Friday afternoon, we posted [LINK] "*WCS-WTI diffs widened $1.50 today with Trump saying he will hit Cdn #Oil with tariffs. Details expected tomorrow & should further widen if tariffs are to 25%. Normally, WCS-WTI diffs seasonally narrow as refiners look for more medium sour for paving season. WCS less WTI diffs: 01/31/25: $15.50. 01/31/24: $18.10. 01/31/23: $23.00. Thx @garquake @business #OOTT."* Our post reminded that this is normally the time of year when WCS less WTI diffs narrow as refiners will take more medium sour crude as they move to increase asphalt production for paving season. But the Trump tariffs will cause a widening. Fortunately, the start of TMX pipeline in Q2 was the big expected positive for Cdn oil by keeping WCS less WTI differentials a lot narrower than what is normally seen in the normal seasonal widening in Sept/Oct/Nov. As a result, WCS less WTI differentials are still narrower than prior years. The gap is narrowing as this is moving into the time of year when WCS less WTI diffs are narrow. Our post included the below chart that shows how WCS less WTI differential were low in the summer and have stayed fairly flat in Aug/Sept/Oct/Nov/Dec and how differentials were widening in Sept/Oct/Nov in 2022 and 2023.

Figure 36: WCS less WTI differentials to Jan 31, 2025 close

Source: Bloomberg

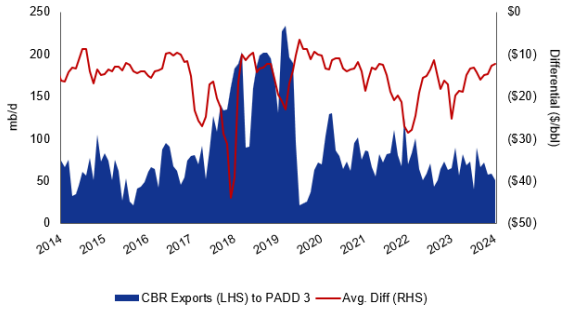
Oil: Total Cdn crude by rail imports -959 b/d MoM to 100,267 b/d in November

EIA Cdn crude by rail imports

On Friday, the EIA posted its "*Movements of Crude Oil and Selected Products by Rail*" [LINK], which includes the EIA data on US imports of Cdn crude by rail. EIA estimates total US imports of Cdn crude by rail were 100,267 b/d in November, which is down -959 b/d MoM from the upward revision of 101,226 b/d in October. The EIA estimates Cdn crude by rail into PADD 3 (Gulf Coast) were 50,900 b/d in November, which is down -7,326 b/d MoM from the upward revision of 58,226 b/d in October. We have been highlighting how the EIA imports of oil by rail from Canada have normally been less than the CER estimates of Cdn oil exports by crude to the US. The CER reported that 94,188 b/d of crude was exported by rail out of Canada during November vs the EIA estimates of 100,267 b/d of Cdn oil imported by rail in November. There is no explanation given. This is not the norm. The norm is that the CER's numbers are higher than the EIA as the CER numbers will include all exports including oil that is railed down to the Gulf Coast and put on tankers whereas eh eIA will only include Cdn

crude by rail that stays in the US. Below is our graph of EIA imports of Cdn CBR to the Gulf Coast and WCS differential over time.

Figure 37: US Imports of Canada CBR to US Gulf Coast vs WCS Differential



Source: EIA, Bloomberg

Looks like Trump's tariffs exclude Cdn crude by rail thru US for export tankers

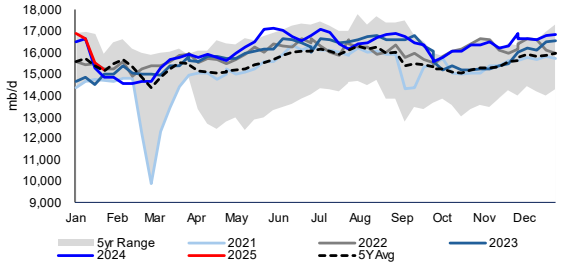
As we note every month, there is normally a larger volume of Cdn crude by rail exported by Canada reported by the CER vs US imports of Cdn crude by rail reported by the EIA. The difference has always seemed to be for Cdn crude by rail that is exported, goes thru the US and then directly onto tankers for export from the Gulf Coast. Based on the Trump executive order on 10% tariffs on Canada energy resources, it looks like these crude by rail exports to tankers are excluded from the 10% tariff. The Executive Order notes "*Such rate of duty shall apply with respect to goods entered for consumption, or withdrawn from warehouse for consumption, on or after 12:01 a.m. eastern time on February 4, 2025.*"

Oil: Refinery Inputs down -0.333 mmb/d WoW to 15.189 mmb/d with continued cold

Refinery inputs -0.333 mmb/d WoW

As expected, the cold temperatures have hit crude oil inputs into refineries, in particular in the Gulf Coast (PADD 3). There are always unplanned refinery items that impact crude oil inputs into refineries. And there is always different timing for refinery turnarounds; generally late October marks the point when refineries have come out of fall turnarounds and are ramping up crude oil inputs as they change from summer to winter fuel blends. And in Nov/Dec, it is normally ramps up before we start to see refineries move into turnarounds starting in Jan. We have been expecting to see oil inputs into refineries decline in Jan/Feb with normal seasonal timing for refineries moving into turnarounds in Jan. However, our Jan 19, 2025 Energy Tidbits memo warned that one of the areas that will be impacted by the very cold and snow will be crude oil inputs in some of the Gulf Coast refineries. That came true this week. On Wednesday, the EIA released its estimated crude oil input to refinery data for the week ended January 24 [LINK]. The EIA reported crude inputs to refineries were down -0.333 mmb/d this week to 15.189 mmb/d and are up +0.341 mmb/d YoY. Similar to last week, the US Gulf Coast PADD 3 saw the biggest hit as crude oil inputs were down -0.358 mmb/d WoW to 7.868 mmb/d for the week ended January 24. Refinery utilization was down -2.4% WoW to 83.5% and was up +0.6% YoY.

Figure 38: US Refinery Crude Oil Inputs



Source: EIA, SAF

Oil: US net oil imports up +0.532 mmb/d WoW, oil exports were down -0.829 mmb/d

US net imports +0.532 mmb/d WoW

We expect that the very cold weather across the US including in the south had an impact on imports and exports this week. The EIA reported US "NET" imports up +0.532 mmb/d to 2.762 mmb/d for the week of January 24. US imports were down -0.297 mmb/d to 6.448 mmb/d, while exports were down -0.829 mmb/d to 3.686 mmb/d. Top 10 was down -0.119 mmb/d. Give the EIA credit for putting out weekly oil import estimates, but it's a reminder that we must be careful about using the weekly oil import estimates. Rather we need to make sure we go to the monthly data for oil imports. (i) US oil imports from Canada were down -0.613 mmb/d WoW to 3.716 mmb/d, If there wasn't the wildcard of brutally cold weather across most of the US, we would have expected to see another week of high US oil imports of Cdn oil to be ahead of any potential Trump tariff on Cdn oil. Weekly imports have been higher for the past five months with the increased Cdn crude coming off TMX and hitting west coast US refineries. (ii) Saudi Arabia was up +0.215 mmb/d to 0.471 mmb/d. (iii) Mexico was up +0.277 mmb/d to 0.521 mmb/d. And, as a general rule, oil imports from Mexico since Q2 have been significantly lower than prior year's levels with the new Olmeca (Dos Bocas) refinery slowing ramping up in 2024 and Pemex's other refineries increasing crude oil processing. However, we expect oil imports from Mexico are likely going higher given reported new problems with Olmeca (Dos Bocas). (iv) Colombia was down -0.003 mmb/d to 0.283 mmb/d. (v) Iraq was up +0.118 mmb/d to 0.336 mmb/d. (vi) Ecuador was up +0.102 mmb/d to 0.102 mmb/d. (vii) Nigeria was down -0.064 mmb/d to 0.092 mmb/d.

Figure 39: US Weekly Preliminary Imports by Major Country

US Weekly Preliminary Crude Imports By Top 10 Countries (thousand b/d)

	Nov 29/24	Dec 6/24	Dec 13/24	Dec 20/24	Dec 27/24	Jan 3/25	Jan 10/25	Jan 17/25	Jan 24/25	WoW
Canada	4,044	3,829	4,339	3,919	3,733	4,422	3,985	4,329	3,716	-613
Saudi Arabia	392	175	81	368	87	69	333	256	471	215
Venezuela	173	187	521	120	353	253	240	416	319	-97
Mexico	279	440	526	397	551	392	362	244	521	277
Colombia	283	125	136	276	289	72	266	286	283	-3
Iraq	397	213	209	229	212	180	152	218	336	118
Ecuador	103	103	69	0	0	147	103	0	102	102
Nigeria	110	168	56	237	71	192	38	156	92	-64
Brazil	348	251	178	248	280	233	129	138	114	-24
Libya	204	0	32	50	189	56	86	30	0	-30
Top 10	6,333	5,491	6,147	5,844	5,765	6,016	5,694	6,073	5,954	-119
Others	957	493	502	627	1,161	412	430	672	494	-178
Total US	**7,290**	**5,984**	**6,649**	**6,471**	**6,926**	**6,428**	**6,124**	**6,745**	**6,448**	-297

Source: EIA, SAF

Oil: Pemex Mexico oil production down -3.1% MoM to 1.517 mmb/d

Mexico Dec oil production

Please note that we are reporting on Pemex "oil" production excluding "condensate" production. This week, Pemex posted its oil production data for December [LINK]. Pemex reported December oil production was 1.517 mmb/d, which was down -1.8% YoY and down -3.1% MoM from 1.566 mmb/d in November. Mexico oil production has been stuck below 1.7 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 40: Pemex (Incl Partners) Mexico Oil (excluding Condensate) Production

Oil Production (thousand b/d)	2017	2018	2019	2020	2021	2022	2023	2024	24/23
Jan	2,020	1,909	1,623	1,724	1,651	1,649	1,628	1,703	4.6%
Feb	2,016	1,876	1,701	1,729	1,669	1,619	1,619	1,696	4.8%
Mar	2,018	1,846	1,691	1,745	1,697	1,620	1,636	1,690	3.3%
Apr	2,012	1,868	1,675	1,703	1,693	1,586	1,656	1,625	-1.9%
May	2,020	1,850	1,663	1,633	1,688	1,588	1,661	1,664	0.2%
June	2,008	1,828	1,671	1,605	1,698	1,570	1,610	1,658	3.0%
July	1,986	1,823	1,671	1,595	1,701	1,583	1,550	1,636	5.5%
Aug	1,930	1,798	1,683	1,632	1,657	1,604	1,552	1,660	7.0%
Sept	1,730	1,808	1,705	1,643	1,709	1,594	1,581	1,637	3.5%
Oct	1,902	1,747	1,655	1,627	1,692	1,592	1,560	1,596	2.3%
Nov	1,867	1,697	1,696	1,633	1,691	1,582	1,558	1,566	0.5%
Dec	1,873	1,710	1,706	1,650	1,694	1,561	1,545	1,517	-1.8%

Source: Pemex, SAF

Oil: Pemex refineries process most crude in eight years

Pemex refineries crude processed

We have reminded for years that a key plus for Cdn medium/heavy oil differentials will be Mexico will be reducing its oil exports as its refineries gear up. More Mexico crude refined in Mexico = Less Mexico crude available for export. In December, Pemex's seven refineries processed 0.875 mmb/d of oil, which is 44.5% of 1.967 mmb/d capacity. For year-end 2024, the seven refineries processed 0.906 mmb/d of crude, marking the most since 2016, and was boosted by the commissioning of the Dos Bocas facility. On Tuesday, Bloomberg posted a report "*Pemex Refineries Process Most Crude in 8 Years With New Plant*". Bloomberg posted the below table and wrote *"Petroleos Mexicanos' seven refineries in Mexico processed 905.6k b/d crude oil in 2024, the most since 2016, after it commissioned the new Dos Bocas facility, according to company data compiled by Bloomberg.* Overall, refineries increased crude processing by 14% from the previous year* Runs rose as Pemex started the Dos Bocas refinery and as the Mexican government pushes to boost domestic fuel making in order to curb costly fuel imports from countries like the US".* Below is the Bloomberg table and our Supplemental Documents package includes the Bloomberg report.

Figure 41: Pemex refinery crude oil processed in Dec

Refinery	December (b/d)	m/m	y/y	Capacity use	NOTE
Cadereyta	133,701	39%	-14%	48.6%	
Madero	102,959	-4.4%	19%	54.2%	
Tula	162,330	31%	-5.4%	51.5%	3-month high
Salamanca	130,220	29%	11%	59.2%	Still operating below levels seen in May, when refinery had a sulphuric acid leak
Minatitlan	124,781	-0.6%	-19%	43.8%	
Salina Cruz	178,101	29%	31%	54.0%	Refinery struggles to ramp up after deadly September fire
Dos Bocas (Olmeca)	43,178	-27%	NA	12.7%	
Total	875,271	16%	6.4%	44.5%	3-month high

Source: Bloomberg

Oil: Mexico exports down -15.1% MoM to 0.807 mmb/d of oil in December

The big theme for Pemex (Mexico) oil exports is unchanged – oil production is stuck below 1.7 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. Due to Olmeca volumes slowly ramping, we have seen declining Mexico oil exports in H2/24. In December, exports were down MoM and this had nothing to do with Trump's election. Rather Mexico oil exports in 2024 were linked to refinery operations as the more oil Mexico refineries refine, the less Mexico oil there is for export. The other factor that impacts exports is that if there are interruptions at offshore oilfields and export loadings. On Monday, Pemex posted its oil exports for December [LINK]. Pemex does not provide any commentary on the data, but the reported December oil exports were 0.807 mmb/d, which is down -15.1% MoM and -21.4% YoY vs 1.027 mmb/d in December 2023. Below is our table of the Pemex oil export data.

Figure 42: Pemex Mexico Oil Exports

Oil Exports (thousand b/d)	2017	2018	2019	2020	2021	2022	2023	2024	24/23
Jan	1,085	1,107	1,071	1,260	979	832	980	951	-3.0%
Feb	1,217	1,451	1,475	1,093	1,006	925	949	940	-0.9%
Mar	1,001	1,176	1,150	1,144	925	905	971	687	-29.2%
Apr	1,017	1,266	1,023	1,179	923	1,024	989	681	-31.1%
May	958	1,222	1,205	1,062	1,031	965	1,087	911	-16.2%
June	1,157	1,110	995	1,114	1,106	1,029	1,203	754	-37.3%
July	1,255	1,156	1,079	1,051	1,173	1,062	1,052	779	-26.0%
Aug	1,114	1,181	1,082	1,190	1,099	915	1,076	731	-32.1%
Sept	1,159	1,206	995	1,023	983	1,022	1,119	656	-41.4%
Oct	1,342	1,027	963	908	935	971	1,053	831	-21.1%
Nov	1,388	1,135	1,114	1,171	1,025	893	883	951	7.7%
Dec	1,401	1,198	1,115	1,243	1,037	900	1,027	807	-21.4%

Source: Pemex

Oil: If Maduro is Trump's biggest supporter, will VEN oil keep flowing to Gulf Coast?

Is Maduro Trump's biggest supporter?

Up until yesterday, we were in the camp that believed Trump would, as he said on Jan 20, *"going to stop buying oil from Venezuela*". However, we at least wonder if Maduro is, at least

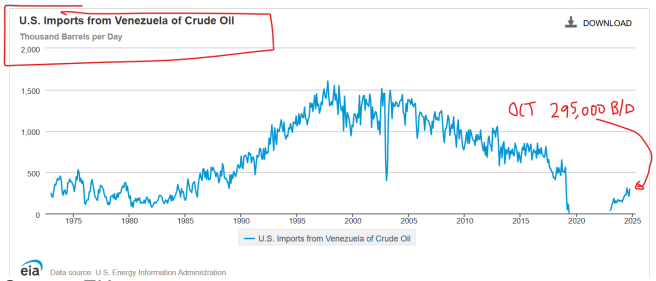
for now, convincing Trump to not stop Venezuela oil from coming into the Gulf Coast. (i) Early yesterday morning, we posted [LINK] "*Is Maduro the ONLY Latin/South American leader willingly Trump with his key priority to deport illegals? If so, will that keep VEN #Oil flowing to Gulf Coast? Met Trump's special envoy. Trump says hostages released. Surely Maduro agreed to take any Trump deportees. Will that do it? ie deportees a bigger Trump priority than cutting ~300,000 b/d of VEN oil? Ironic if VEN becomes the winner for oil into the Gulf Coast vs Cdn oil that is to be hit by tariffs.* #OOTT." (ii) Then a little later yesterday morning, we posted [LINK] "*Breaking. Trump just now: VEN hostages back in US & Maduro agreed to take back all VEN illegal aliens incl gang members. Maduro gives Trump his 2 asks incl his priority to deport illegal aliens. Will this, at least for now, keep VEN #Oil flowing into Gulf Coast? #OOTT."* (ii) Trump's envoy for special missions, Richard Grenell, met with Maduro on Friday in Venezuela. The meeting was reportedly at US request. US said his "mission" was get the swift release of some American prisoners/hostages and to ensure Venezuela took Trump deportation flights of Venezuelan illegals such as the Tren de Aragua gang members. Venezuela media said "*Among the topics discussed were migration, the negative impact of U.S. economic sanctions against Venezuela, the situation of U.S. citizens involved in crimes in Venezuelan territory, and the integrity of Venezuela's political system."* (iii) Trump's second post (8:43am MT yesterday) said "*It is so good to have the Venezuela Hostages back home and, very important to note, that Venezuela has agreed to receive, back into their Country, all Venezuela illegal aliens who were encamped in the U.S., including gang members of Tren de Aragua. Venezuela has further agreed to supply the transportation back. We are in the process of removing record numbers of illegal aliens from all Countries, and all Countries have agreed to accept these illegal aliens back. Furthermore, record numbers of criminals are being removed from our Country, and the Border numbers are the strongest they have been since the First Term of the Trump Administration!".* (iv) It feels like a set up trade. If you look at the Telesur pictures, Maduro made sure he looked pretty happy in his picture with Grennell. Maduro is willingly giving Trump his two asks especially the big one of taking all of the Venezuela illegal allies including gang members and is setting the airplanes to do so. Deporting illegal aliens is a major Trump priority. Trump rightly posted about it. But we can 't help wonder if it's the set up trade for Trump not cutting off Venezuela oil to the Gulf Coast. Our Supplemental Documents package includes excerpts of the US briefing on Grennell's mission to meet Maduro and some of the Telesur reports.

01/20/25: Trump "we're going to probably stop buying oil from Venezuela"

If Maduro can somehow convince Trump to let Venezuela oil keep coming into the Gulf Coast, it will be a surprise given Trump was clearly indicating he was going to stop Venezuela oil into the Gulf Coast. "Here is what we wrote in last week's (Jan 26, 2025) Energy Tidbits memo. "*Trump "we going to probably stop buying oil from Venezuela. On Monday night, we were watching Trump on TV and we posted [LINK] "Breaking! Trump just now "We're going to probably stop buying oil from Venezuela" Looks like supporting Rubio on Venezuela. Positive for Cdn #Oil. #OOTT." Trump was very matter of fact about this, which will create a hole to fill for the US to replace heavy/medium sour barrels in the Gulf Coast. This shouldn't surprise as Secretary of State Rubio pointed to this policy last week and we were of the view that Rubio wouldn't have pointed to this policy view unless Trump was onside. This could be bad timing if Trump does this right away as the US refineries are soon to move into*

asphalt/paving season production where they ramp up medium/heavy sour share of refiner runs. Our post said it is positive for Cdn medium/heavy as Trump cutting ~300,000 b/d of Venezuela medium/heavy creates a market for someone to fill."

Figure 43: US oil imports from Venezuela



Source: EIA

01/15/25: Rubio wants to reexplore Chevron's Venezuela oil license

Here is what we wrote in our Jan 19, 2025 Energy Tidbits memo about Rubio pointing to the US stopping Venezuela oil imports and why we thought he must have had Trump onside with that policy view. "*Rubio wants to reexplore Chevron's Venezuela oil license. Earlier in the memo, we noted Rubio's non-specific comments on a return to cutting Iran oil exports. Secretary of State nominee Marco Rubio has stayed out of the spotlight but had his Senate confirmation hearing on Wednesday. We posted [LINK] "Bullish for Cdn #Oil as Rubio points to less Venezuela heavy/medium oil to US. Re Cuba: Rubio says won't speak ahead of Admin decisions as Trump sets policy. BUT has no hesitation to say oil license to Chevron & others provided $ billions and "all that [licenses] need to be reexplored". Seems to Infer Trump is onside. Less VEN oil into US is positive for Cdn Oil prices. See 👇 @business transcript. #OOTT." We have looked at Rubio as a good pick for Secretary of State for Trump as he will be a careful speaker to not be too much offside Trump's views. On Cuba, Rubio said it was up to Trump. Late in the hearings, he is asked about Cuba. Rubio is Cuban American and has strong anti Cuba regime views. But he made a specific point of saying he didn't want to speak out on a position ahead of Trump decision. Ted Cruz, another Cuban American, asked if Rubio would commit to the view that Cuba has all the qualifications of having state sponsored terrorism activity. Rubio replies "Well, I would just say -- again, I don't want to speak ahead of the administration of these decisions. As I said, the president sets our foreign policy and my job is to execute it. That's how our system of government works." The reason we highlight this is that it seems to reaffirm our assessment of him as being careful to not get out ahead of Trump on major foreign policy items. His Cuba response makes us think Trump is onside Rubio on Venezuela. And Rubio was clear, he disagrees with the oil licenses to Chevron and others and wants them reexplored. As opposed to Cuba, Rubio had no hesitation to a clear foreign policy action. Rubio said "I was in strong disagreement with the Biden administration, because they got played the way that I knew they would get played.*

They entered into negotiations with Maduro. He agreed to have elections. The elections were completely fake. They leveraged migration against us to get those concessions, and now they (ph) have these general licenses where companies like Chevron are actually providing billions of dollars of money into the regime's coffers and the regime kept none of the promises that they made. So, all that needs to be reexplored." Trump can change his mind on a dime but Rubio seems to point to them to wanting to put an end to Chevron's oil license and that means over 250,000 b/d less Venezuela oil imports into the US. Ie. positive for WCS."

Chevron Q4 call

Oil: Nothing on Venezuela oil in Chevron Q4 call on Friday

Chevron held its Q4 call on Friday and CEO Mike Wirth was on Squawk Box. On both, he was asked about Venezuela. And he gave similar answers on both. On the Q4 call, Wirth said "*We don't set policy. We comply with laws and we engage with the government to help inform them of the potential impacts of policy choices, and we'll continue to do so."* On Squawk Box, Wirth was a little more forward on dealing with the Trump administration as he highlighted Chevron has been engaged with his administration, Venezuela is an ongoing issues that they have been working at. Wirth made it sound like it is something they are working at getting Trump Administration onside with continuing Venezuela oil into the Gulf Coast.

Feels like, at least for now, Trump will continue monthly renewals for Chevron

The positive Trump envoy Grennell meeting with Maduro seems to point, at least for now, Trump continuing the Biden approach of monthly renewals of the general license that lets Chevron operate in Venezuela and ship Venezuela oil to the Gulf Coast. The general license is good for a 6-month period but has to be renewed every month. It's a rolling 6-month license that is automatically renewed on the 1st day of every month unless it not renewed. So, at least for now, Chevron has another six months to operate in Venezuela.

No surprise, Chevron is first to switch to Trump's Gulf of America

It never hurts to be on Trump's right side and publicly support his priorities, especially the not so normal ones such as Trump saying the Gulf of Mexico is now known as the Gulf of America. It can't hurt Chevron to be seen as the leader in the Gulf of America movement. All of Chevron's spoken and written comments used the Gulf of America in the Q4 release, slides and call. Plus we checked and Chevron changed its website to reflect Gulf of America. Yesterday, we posted [LINK] "*Gulf of America! Chevron Q4 yesterday. Its results, slide deck and website no longer use Gulf of Mexico. Caught its peers by surprise so expect some other #Oil #Gas co's have been making similar changes this weekend. #OOTT."*

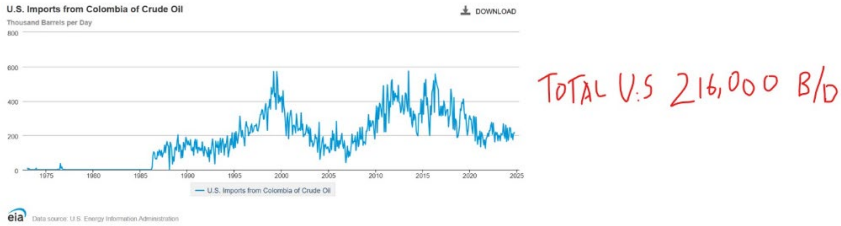
Trump & Petro exchange tariff threats

Oil: Trump/Colombia President Petro tariff threats lasted 12 hours on Sunday

It was a crazy 12 hours or so for Colombia on Sunday. (I) Late Sunday morning, Trump posted he was informed that two of the repatriation flights to Colombia weren't allowed to land so he directed his Admin "*to immediately take the follow urgent and decisive retaliatory measures: Emergency 25% tariffs on all goods coming into the United States. In one week, the 25% tariffs will be raised to 50%. A Travel Ban and immediate Visa revocations on the Colombian Government Officials,….."* (ii) Two hours later, Colombia President Petro posted

a lengthy reply that included a number of shots like "*Trump, I don't really like travelling* to the *US, it's a bit boring….. You don't like our freedom, okay, I don't shake hands with white slavers…"* And "*I am informed that you impose a 50% tariff on the fruits of our human labor to enter the United States, and I do the same."* (iii) At 8:12pm MT Sunday night, we posted [LINK] "*US #Oil imports from Colombia 216,000 b/d incl 179,000 b/d into Gulf Coast refineries. @EIAgov. Trump imposes 25% tariff on Colombia goods AND increasing to 50% in a week. Colombia President Petro retaliates with tariffs on US goods. #OOTT."* Since there was a tariff war at that time, we wanted to remind of how much Colombian' oil was coming into the US. (iv) But by the end of Sunday night, the White House announced [LINK] Colombia "*agreed to all of President Trump's terms, including the unrestricted acceptance of all illegal aliens from Colombia returned from the United States, including on U.S. military aircraft, without limitation or delay. Based on this agreement, the fully drafted IEEPA tariffs and sanctions will be held in reserve, and not signed, unless Colombia fails to honor this agreement*." (v) Early Monday morning, we posted [LINK] '*ICYMI. 👇US/Colombia tariff war is not happening. US says will hold tariff threat in reserves as Colombia gave in to Trump demand for Colombia to take any deportees from US. Like Trump or not, he got what he wanted from Colombia & shows to other leaders his approach. #OOTT*." Our Supplemental Documents package includes the Trump and Petro posts.

Figure 44: US crude oil imports from Colombia thru Oct 2024



Source: EIA

Oil: Colombia oil production still well below pre-Covid, November was 0.759 mmb/d

Ever since President Petro took office in Aug 2022, we have believed it would be very hard to see how Colombia oil production ever sustainably rallies anywhere back to 1.000 mmb/d or even 900,000 b/d. Despite stronger oil prices post Covid, Colombia oil production has been stuck below 800,000 b/d. On January 16, Hydrocarbons Colombia published Colombian production data for November [LINK]. Production in November was down -0.7% MoM to 0.759 mmb/d from 0.765 mmb/d in October. This puts November's production down -2.4% YoY vs 0.778 mmb/d in November 2023. Production is now -14.3% below pre-Covid levels of 0.886 mmb/d in 2019.

Figure 45: Colombian Oil Production

mmb/d	2016	2017	2018	2019	2020	2021	2022	2023	2024	24/23
Jan	0.986	0.860	0.860	0.899	0.884	0.745	0.740	0.774	0.778	0.5%
Feb	0.955	0.864	0.823	0.893	0.878	0.746	0.740	0.759	0.764	0.7%
Mar	0.917	0.804	0.856	0.885	0.857	0.745	0.751	0.771	0.780	1.1%
Apr	0.915	0.857	0.865	0.891	0.796	0.745	0.751	0.782	0.790	1.0%
May	0.904	0.851	0.866	0.895	0.732	0.703	0.746	0.774	0.788	1.7%
June	0.888	0.857	0.864	0.892	0.730	0.694	0.752	0.778	0.781	0.4%
July	0.843	0.856	0.860	0.869	0.735	0.731	0.748	0.782	0.784	0.3%
Aug	0.827	0.858	0.866	0.883	0.742	0.748	0.749	0.782	0.777	-0.7%
Sept	0.859	0.851	0.869	0.879	0.749	0.744	0.754	0.771	0.751	-2.7%
Oct	0.846	0.864	0.879	0.883	0.751	0.740	0.757	0.783	0.765	-2.4%
Nov	0.855	0.851	0.883	0.880	0.761	0.747	0.771	0.778	0.759	-2.4%
Dec	0.837	0.870	0.889	0.882	0.759	0.745	0.784	0.787		

Source: Hydrocarbons Colombia, Bloomberg

Oil: Russian refineries processing dips slightly WoW amid fires

Russian refineries crude oil runs

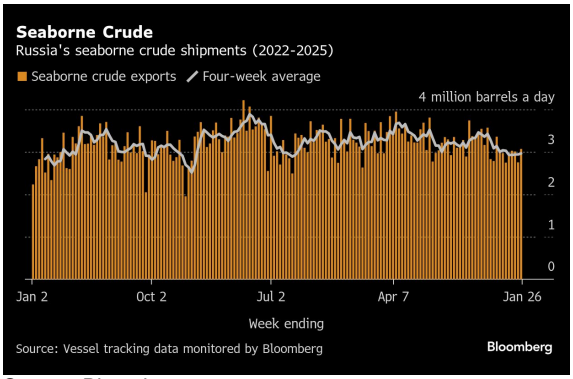
We have been surprised how Russia has been able to keep its refineries going relatively well despite Ukraine drone attacks that even Russia local politicians admit hit the refineries. It must be that the drone attacks haven't hit critical equipment that would take months to fix instead of a few weeks. There were more drone hits on Russian refinery complexes this week and we have to believe that, sooner or later, Russia refinery processing takes a step down. Unfortunately, we never get any detail on how a refinery is impacted when a drone hits at a refinery. Last week, another Russian refinery reported drone attacks causing fires outbreaks, this time the Ryazan refinery, one of Russia's largest. Bloomberg reported that, during the period of Jan 16-22, Russia's average crude processing rate decreased to just over 5.5 mmb/d, which is down approx. 14,000 b/d vs the previous seven-day period rate of 5.52 mmb/d where the runs reached a three-week high. Bloomberg wrote "*Russia's refineries processed a total of just over 5.5m b/d of crude on Jan. 16-22, according to a person with knowledge of industry data. … In the first 22 days of January, the average daily crude processing was around 60kb/d below the December volume. Over Jan. 16-22, Lukoil's Volgograd refinery reduced its runs to around 250kb/d, the lowest since early December, potentially as a result of an incident on Jan. 15*". Our Supplemental Documents package includes the Bloomberg report.

Oil: Russia's seaborne crude shipments up ~320,000 b/d WoW

Russia's seaborne crude exports

On Tuesday, Bloomberg released their weekly Russian Seaborne crude tracker, this week, titled *"Russia Sends Sanctioned Oil on Sanctioned Tankers to India"*. Russia is exporting sanctioned oil to India by tankers blacklisted by the US. India has indicated that they are only allowing tankers that were loaded before the Jan 10 US imposed its sanctions, contingent that they arrive before Feb 27. The daily crude flows were up about 320,000 b/d WoW to 3.07 mmb/d for the week ended Jan 26, vs 2.75 mmb/d for the week ended Jan 19. Lower flows from the country's Black Sea ports were more than offset by increased shipments from its Arctic and Pacific terminals. The four-week average volumes increased from the previous week's revised numbers to 2.960 mmb/d for the week of Jan 26. Bloomberg reported, "*So far, there's no clear sign of a reduction in Russia's flows since the measures were imposed by the Treasury's Office of Foreign Assets Control. A four-week rolling average of shipments observed by Bloomberg showed that they were little changed in the past seven-day period through Jan. 26, albeit at relatively low levels by historical standards.*" Our Supplemental Documents package includes the Bloomberg report.

Figure 46: Russia's Seaborne Crude Shipments



Source: Bloomberg

Russia oil exports to China continue to decline with sanctions

Reports have stated that China has been stopping some direct unloading of sanctioned Russia tankers at its port, and the Bloomberg estimates support that view. Note that the Bloomberg table says crude shipments to Asia, but it is actually crude shipments to China. Bloomberg's crude oil shipments from Russia to China saw another weekly drop off from its stable level seen over the weeks before the US implemented its sanctions. Bloomberg highlighted the four-week average of Russia oil shipments to China were down to 0.920 mmb/d for the week ending Jan 26, a decline from last week's 0.980 mmb/d. In the beginning of the month, week ended Jan 5, shipments were at 1.320 mmb/d. Below are the Bloomberg table and graph that we attached to our post.

Figure 47: Russian Crude Shipments to China

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
December 22, 2024	1.26	1.47	0.00	0.00	0.00	2.73
December 29, 2024	1.32	1.38	0.00	0.03	0.00	2.72
January 05, 2025	1.32	1.35	0.00	0.03	0.00	2.69
January 12, 2025	1.13	1.52	0.00	0.03	0.00	2.68
January 19, 2025	0.98	1.49	0.00	0.10	0.00	2.57
January 26, 2025	0.92	1.36	0.00	0.30	0.00	2.57

Source: Vessel tracking data compiled by Bloomberg
Bloomberg

Source: Bloomberg

01/10/25: Biden sanctioned 160 tankers that shipped 1.6 mmb/d of RUS oil

Here is what we wrote in (Jan 19, 2025) Energy Tidbits memo. "*Last week's (Jan 12, 2025) Energy Tidbits highlighted the Jan 10 new Biden sanctions on Russia energy sector. This week, the IEA noted the significance of the latest sanctions on Russian tankers. They noted it impacted over 160 tankers that carry oil for Russia, Iran and Venezuela. And that these newly sanctioned tankers shipped over 1.6 mmb/d of*

Russian oil in 2024, which was ~22% of Russia's seaborne exports. The IEA also noted "At the same time, there is heightened speculation that the incoming US administration will take a tougher stance on Iran's oil exports, compounding the impact of US Treasury sanctions on Tehran. On 19 December, the US expanded sanctions on vessels transporting Iranian crude. The new sanctions on Iran's shadow fleet now cover vessels that transported an average of over 500 kb/d of Iranian crude in 2024, nearly one-third of the country's crude exports. While it is too early to fully quantify the potential impact from these new measures, some operators have reportedly already started to pull back from Iranian and Russian oil."

Oil: OPEC+ is expected to stick to agreement to increase production starting Apr 1

OPEC's scheduled added production

The OPEC meetings are tomorrow and it seems like everyone is expecting OPEC to stick to their existing Dec 5, 2024 agreement that provides for the start of the return of voluntary cut barrels on April 1. The planned return of the voluntary cut barrels is on a very gradual basis with total additions of 26,000 b/d in Apr, 26,000 b/d in May, 27,000 b/d in June, etc. This is almost nothing and not much more than rounding. It's hard for anyone to look at this low a level of monthly production additions to be worried, especially as oil demand is moving into seasonally increasing demand. Below is the OPEC scheduled return of voluntary cut barrels. Our Supplemental Documents package includes the OPEC Dec 5, 2024 press release.

Figure 48: OPEC+ scheduled return of voluntary cut barrels

Country	2025										2026									Required Production Level as per 38th ONOMM (1)
	Jan - Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep - Dec	
Algeria	908	911	914	917	919	922	925	928	931	934	936	939	942	945	948	951	953	956	959	**1,007**
Iraq	4,000	4,012	4,024	4,037	4,049	4,061	4,073	4,086	4,098	4,110	4,122	4,134	4,147	4,159	4,171	4,183	4,196	4,208	4,220	**4,431**
Kuwait	2,413	2,421	2,428	2,436	2,443	2,451	2,458	2,466	2,473	2,481	2,488	2,496	2,503	2,511	2,518	2,526	2,533	2,541	2,548	**2,676**
Saudi Arabia	8,978	9,034	9,089	9,145	9,200	9,256	9,311	9,367	9,422	9,478	9,534	9,589	9,645	9,700	9,756	9,811	9,867	9,922	9,978	**10,478**
UAE	2,912	2,938	2,963	2,989	3,015	3,041	3,066	3,092	3,118	3,144	3,169	3,195	3,221	3,246	3,272	3,298	3,324	3,349	3,375	**3,519**
Kazakhstan	1,468	1,473	1,477	1,482	1,486	1,491	1,495	1,500	1,504	1,509	1,514	1,518	1,523	1,527	1,532	1,536	1,541	1,545	1,550	**1,628**
Oman	759	761	764	766	768	771	773	775	778	780	782	785	787	789	792	794	796	799	801	**841**
Russia	8,978	9,004	9,030	9,057	9,083	9,109	9,135	9,161	9,187	9,214	9,240	9,266	9,292	9,318	9,344	9,371	9,397	9,423	9,449	**9,949**

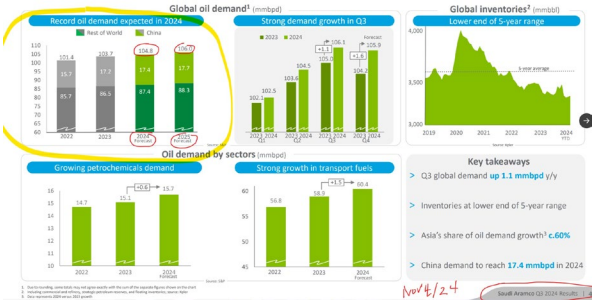
Source: OPEC

01/21/25: Saudi Aramco CEO "*started to see tightening in the [oil[market*"

It looks like Saudi Aramco CEO pointed to the oil market rationale for OPEC+ to add back oil starting Apr 1. On Wednesday, we posted [LINK] "*Did 👇01/21/25 Saudi Aramco CEO "tightening in the market" set the stage for OPEC+ to stick to its planned Apr 1 return of voluntary barrels? #Oil demand seasonally increases in Q2 vs Q1, and then the big increase in Q3 vs Q2. OPEC JMMC Feb 3. #OOTT."* Here is what we wrote in last week's (Jan 26, 2025) Energy Tidbits memo. "Saudi Aramco CEO "started to see tightening in the [oil] market. On Tuesday, we posted [LINK] ""*we started to see tightening in the [oil] market" Saudi Aramco CEO Nasser. Positive given Q1 is normally the period that sees seasonal oil stock builds given Q1 oil consumption is seasonally low. Great interview @JoumannaTV #OOTT."* (i) It looks like Saudi Aramco made a tweak down in their oil demand forecast. Early Tues

morning, we posted [LINK] "*Looks like Saudi Aramco CEO tweaks down #Oil demand forecast. 11/04/24 Q3: 104.8 mmb/d in 2024, +1.2 mmb/d YoY to 106.0 mmb/d. Today: 104.6 mmb/d in 2024, +1.3 mmb/d YoY to ~105.9 mmb/d. See 👇@marwastweets report. #OOTT.*" The numbers came from a short Reuters reporting on comments by Saudi Aramco CEO Nasser on the sidelines at Davos. Our post noted how the Aramco CEO comments point to a very small tweak down in 2025 oil demand to ~105.9 mmb/d vs their Q3 call on Nov 4. 2024 forecast for oil demand of 106.0 mmb/d. (ii) Biden sanctions on Russian tankers is tightening the oil market. But then we saw the Bloomberg TV interview with Nasser that had the same numbers as in the Reuters report but much more color on oil markets so we made a transcript of Nasser's comments that were attached to our later Tues post. Bloomberg asked Nasser on the impact of the Biden sanctions. Nasser replied "*"Well, it's still too early. We understand from the news there is 186 tankers that will be impacted. The seaborne that comes from Russia is around 3.4 million barrels and the rest is piped. If you add to that, approximately seaborne production that will export from Iran of around 1.6 million barrels, so in total you're talking about 5 million barrels per day. But for the Russian tankers that are impacted by the sanctions that impact the tanker, the volume that you're looking at is close to 2 million barrels per day. So, it's still at an early stage we will wait and see what is the impact of all of these things in the markets. But we started to see tightening in the market*." Below is Saudi Aramco's oil demand forecast from its Q3 call on Nov 4, 2024. Our Supplemental Documents package includes the transcript we made of Bloomberg's interview with Nasser.

Figure 49: Continued global oil demand growth driven by our key markets



Source: Saudi Aramco Q3 call

Saudi Aramco oil demand fits in the tighter range of demand forecasts for 2025

Here is another item from last week's (Jan 26, 2025) Energy Tidbits memo on how there is a tighter range of oil demand forecasts for 2025. "*Saudi Aramco oil demand fits in the tighter range of demand forecasts for 2025. After seeing the Saudi Aramco CEO oil demand forecast comments, we also posted [LINK] "Saudi Aramco CEO forecast for #Oil demand fits within a tighter range of 2025 oil demand growth vs 2024 estimates. 2025 YoY Demand Growth. IEA +1.05. Russia +1.25. Saudi Aramco +1.30. EIA +1.39. OPEC +1.45. See my 👇comparison. #OOTT." In 2024,most ignored the IEA demand forecasts as they were considered way too low*

and their practice would be a continuous tweak higher. And most also ignored OPEC demand forecasts for the opposite reason – they were way too high and would keep getting tweaked down. Adding Saudi Aramco CEO oil demand forecasts to the Jan updates by the EIA, IEA and OPEC, we continue to highlight there is a tighter range of oil demand YoY growth forecasts for 2025 and we have to believe this should reduce the debate on demand. It will never go away but the debate should be lessened with a tighter range of forecasts. Below is our excel table of the recent forecasts for YoY oil demand growth that range from IEA +1.05 mmb/d YoY to OPEC +1.45 mmb/d YoY. The Saudi Aramco forecast is for oil demand growth of +1.30 mmb/d YoY in 2025. Below is our excel table that we attached to our post."

Figure 50: Comparison of YoY oil demand growth forecasts

	YoY Oil Demand Growth Forecast			
million b/d	2024 YoY	2025 YoY	2026 YoY	
EIA Jan STEO	0.90	1,39	1.05	
EIA Dec STEO	0.89	1.29	-	
EIA Nov STEO	0.99	1.22	-	
EIA Oct STEO	0.92	1.29	-	
EIA Sept STEO	0.94	1.52	-	
EIA Aug STEO	1.14	1.61	IEA demand (million b/d)	
			2924	2925
IEA Jan OMR	0.94	1.06	102.901	103.956
IEA Dec OMR	0.84	1.08	102.807	103.887
IEA Nov OMR	0.92	0.99	102.817	103.807
IEA Oct OMR	0.86	1.00	-	
IEA Sept OMR	0.90	0.95	-	
IEA Aug OMR	0.97	0.95	-	
OPEC Jan MOMR	1.54	1.45	1.43	
OPEC Dec MOMR	1.61	1.45	-	
OPEC Nov MOMR	1.82	1.54	-	
OPEC Oct MOMR	1.93	1.64	-	
OPEC Sept MOMR	2.03	1.74	-	
OPEC Aug MOMR	2.11	1.78	-	
Russia (Novak Dec 25)	1.20	1.25	-	
Saudi Aramco CEO Jan 21/25	0.90	1.30		
Saudi Aramco Q3 Nov 4/24	1.10	1.20	-	
Saudi Aramco Q2	1.60	1.40	-	

Source: EIA, IEA, OPEC, Saudi Aramco, Russia via TASS

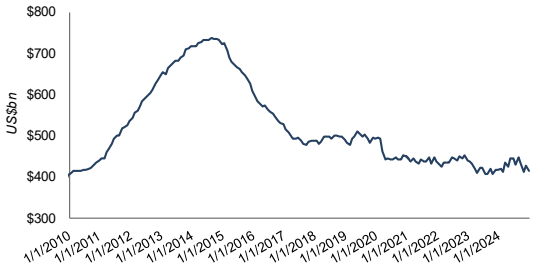
Oil: Saudi nest egg, its net foreign assets were down -$13.0b MoM in December

Saudi net foreign assets

For the past several years, we have stated that the #1 financial theme for Saudi Arabia will be the increasing use of Other People's Money "OPM" to fund their government and MBS Vision 2030 plan. This is because they have seen a $310.2b reduction in their net foreign assets in the last decade. It is also why we continue to believe Saudi Arabia will be working to keep oil prices strong and not crash oil prices for a few months to regain oil market share. We believe that will be an action of last resort. We also expect to see OPM deals in the near term to add to the piggy bank. Every month, we track Saudi net foreign assets, which we have described as their piggy bank for the future. Please note that the Net Foreign Assets have seen very big swings, both up and down, in the last couple years. For December, there was a big MoM decrease of -$13.0b, this follows from a large increase in November of +$15.0b and the largest two-month decrease of -$34.6b in September/October. On Thursday, the Saudi Central Bank (SAMA) released its Monthly Statistical Bulletin for the month of December [LINK]. Our long-stated view is that the #1 financial theme for Saudi Arabia in the 2020s will be their continued, and increasing, use of Other People's Money as they try to fund MBS's Vision 2030. It continues to play out as expected. We believe this has been obvious with how Saudi Arabia's net foreign assets dropped by -43.9% or -$323.2b since the peak of $737.0b on Aug 31, 2014. We are surprised that markets and oil watchers did not

seem to pay attention to the Saudi net foreign assets data i.e., what we call their nest egg to help them their push to MBS's Vision 2030. Recently we have been seeing much larger MoM changes, both up and down. In December there was a -$13.0b MoM decrease to Saudi Arabia's net foreign assets which are now $413.8b vs $426.8b in November. Last month's data saw an increase of +$15.0b MoM for November. The thesis and big picture remain that Saudi net foreign assets as of December 31 of $413.8b is a decline of -43.9% or -$323.2b from its peak of $737.0b on Aug 31, 2014. That is an average of -$2.6b per month for the last 123 months since the peak. Saudi Arabia is far from going broke but there has been a huge decline in the last 10 years. This net foreign asset depletion is why we have been highlighting that the primary financial theme for Saudi Arabia in the 2020s is getting Other People's Money (OPM) to fund as much of their Vision 2030 as possible. And no question, accessing OPM has helped to slow down and temporarily pause the decline in net foreign assets. Below is our graph of Saudi Arabia net foreign assets updated for the December data.

Figure 51: Saudi Arabia Net Foreign Assets



Source: Saudi Central Bank, Bloomberg

12/1/2024: Sept/Oct was largest 2-mth drop in Saudi Net Assets since Covid

As noted above, we are seeing huge monthly swings in Saudi Net Foreign Assets, much larger than seen pre-Covid. Here is what we wrote in the Dec 1, 2024, Energy Tidbits Memo: "*We are huge believers that any picture does a great job of painting a story BUT as we like to see the numbers as the numbers reveal way more than picture. And our below table of the Saudi Net Foreign Assets shows that Sept/Oct -$34.6b was the largest 2-mth drop in Saudi Net Foreign Assets since the $59.4b drop in Mar/Apr height of Covid. And Brent averaged roughly $75 so it highlights why Saudi Arabia may not target an oil price but clearly doesn't want lower oil prices. The other reminder when you look at the numbers is that the few times it has neared dropping below $400b, there was a subsequent inflow. So when we see $411.7b for Oct 31, we fully expect to see some OPM deals adding to the piggy bank in the next couple months.*"

Figure 52: Saudi Net Foreign Assets

Saudi Arabia Net Foreign Assets (US$bn)										
	2020	MoM Change	2021	MoM Change	2022	MoM Change	2023	MoM Change	2024	MoM Change
Jan	$496.1	$2.3	$445.5	($3.4)	$429.4	($8.1)	$437.6	($1.9)	$419.3	$2.2
Feb	$491.6	($4.5)	$436.7	($8.8)	$424.1	($5.3)	$433.0	($4.6)	$412.1	($7.2)
Mar	$463.3	($28.3)	$444.6	$7.9	$434.2	$10.1	$418.7	($14.3)	$434.2	$22.1
Apr	$442.2	($21.1)	$436.3	($8.3)	$435.3	$1.1	$410.2	($8.5)	$423.6	($10.6)
May	$444.3	$2.1	$432.6	($3.7)	$435.5	$0.2	$422.8	$12.6	$444.6	$21.0
Jun	$442.8	($1.5)	$441.8	$9.2	$448.5	$13.0	$423.5	$0.7	$445.1	$0.5
Jul	$443.3	$0.5	$437.4	($4.4)	$445.6	($2.9)	$407.1	($16.4)	$429.8	($15.3)
Aug	$448.6	$5.3	$437.0	($0.4)	$438.9	($6.7)	$407.4	$0.4	$446.3	$16.4
Sep	$442.8	($5.8)	$448.0	$11.0	$448.8	$9.9	$420.2	$12.8	$433.3	($13.0)
Oct	$441.9	($0.9)	$433.2	($14.8)	$444.5	($4.2)	$406.3	($13.9)	$411.7	($21.6)
Nov	$452.1	$10.2	$446.9	$13.8	$451.8	$7.3	$418.1	$11.7	$426.8	$15.0
Dec	$448.9	($3.2)	$437.5	($9.4)	$439.5	($12.3)	$417.1	($1.0)		

Source: Saudi Central Bank, Bloomberg

12/1/2024: Also why Saudi starting oil price war to regain share is a last resort

Here is what we wrote in the Dec 1, 2024, Energy Tidbits Memo: We have been consistent in our view that Saudi Arabia starting an oil price war to regain oil market share is a last resort action. Their piggy bank is still massive at $411.7 b but it declined $34.6b in roughly $75 Brent. Let's say Brent went down to $40 or $50 in an oil price war, that could hit Saudi by over $10b per month. If that had been Sept/Oct, then the drop in Saudi Net Foreign Assets would have been over $55b drop or close to what was seen in Mar/Apr 2020. We just think Saudi oil price war to regain market share is a last resort action.

Kurdistan oil via Turkey

Oil: Finally, signs for potential restart of Kurdistan oil via Turkey

It's been 23 months since Kurdistan oil has been prevented from exporting its oil via pipeline through Turkey to the Ceyhan export terminal. As a result, Kurdish oil companies, to the extent they can find local buyers, have had to sell their oil at huge discounts. Prior to the stoppage, there was ~400,000 b/d flowing thru the pipeline. It looks like there finally be light at the end of the tunnell. Earlier this morning, we posted [LINK] "*Finally? Specific moves to allow Kurdistan #Oil to resume exports via Turkey. Iraqi parliament amends bill seeking Kurdish oil exports resumption ie. compensation to IOCs in the Kurdistan Region for oil production and transportation costs, setting the rate at $16 per barrel. The move was welcomed by the Kurdistan Regional Government (KRG) and the IOCs.* 👇 *@RudawEnglish #OOTT @apikur_oil @MylesCaggins [LINK].*" Our post forwarded the Rudaw (Kurdistan news) report this morning that highlighted "*The Iraqi parliament on Sunday voted to amend the federal budget bill in a major step that is poised to resume the Kurdistan Region's oil exports through Turkey's Ceyhan pipeline nearly two years after they were halted. According to the amendment, international oil companies (IOCs) in the Kurdistan Region will receive $16 per barrel for oil production and transportation and the oil will be exported through Iraq's State Oil Marketing Organization (SOMO), Bryar Rashid, a Patriotic Union of Kurdistan (PUK) lawmaker in the Iraqi parliament, told Rudaw.*" Our Supplemental Documents package includes the Rudaw report.

Libya oil production at 1.413 mmb/d

Oil: Libya oil production of 1.413 mmb/d is above Aug 1 levels

On Thursday, the Libya National Oil Corporation posted [LINK] *"Production rates in oil fields Libya's crude oil production today reached 1,413,244 barrels per day, and condensate production reached 41,651 barrels. Gas production indicators recorded a value of 196,603*

barrels of equivalent. Total production reached 1,651,498 barrels per day. #NOC #OIL #LIBYA". The NOC reported total liquids production of 1,454,895 b/d. This is above the Aug 1 level of 1.279 mmb/d for oil + condensate before the interruptions started. Note that the NOC updates now give a split of oil vs condensate, after three months of combining the production items. The NOC also reported natural gas production, on a boe/d basis, of 196,603 boe/d, and for total oil, condensate & natural gas production of 1,651,498 boe/d.

Libya targets 1.6 mmb/d in 2025 and 2 mmb/d by 2028

Here is what we wrote in our Jan 19, 2025 Energy Tidbits memo. "*Libya targets 1.6 mmb/d in 2025 and 2 mmb/d by 2028. We have been big believes for decades that there is big oil production growth potential in Libya if there is peace and access to foreign capital. So when we see the NOC saying they can get to 2 mmb/d in three years, we believe that is attainable as longer there is peace and access to capital. Yesterday, Libya held its Libyan Energy and Economy Conference 2025 in Tripoli. Yesterday, the NOC posted [LINK] "And moving forward to achieve the main goal of reaching a production of 2 million barrels per day within the next three years, if sufficient funding is available to achieve this." Amena Bakr (Senior Research Analyst at Energy Intelligence) X/Twitter post [LINK] gave further color. "Under the current plan Libya hopes to boost its capacity to 1.6 million bpd by the end of this year, and 2 million bpd by 2028". It isn't clear if this is oil or oil + condensate, but condensate, if included would likely be under 100,000 b/d in total of the 2 mmb*/d."

Oil: Still some Libya east vs west issues, two export terminals briefly shut

Libya east vs west issues

On Tuesday, there was a brief shutdown of two major eastern Libya ports (capacity 400,000 b/d) that reminded that the Libya east vs west issues are not resolved. Early Tuesday morning, we posted [LINK] "*Libya east vs west control of #Oil industry & revenues is still an issue. As warned, LIbya east shuts down shipments from key eastern ports that load ~400,000 b/d IF HQ for 5 oil co's isn't moved from Tripoli to east. Unclear for how long. Thx @business @S_Elwardan Hatem Mohareb #OOTT [LINK]." The eastern Libyans still want the headquarters of the oil companies operating in eastern Libya to be based in eastern Libya and not in Tripoli. Then at noon on Tuesday we posted "Libya oil export ports have reopened. @NOC_Libya "... confirms that its oil operations are continuing normally in all oil fields and ports, after communicating with the protesters who organized a protest this morning in the ports of Sidra and Ras Lanuf." #OOTT."* There were no reports of what was negotiated by the NOC but the ports were reopened. Fortunately, this time it was resolved quickly but it is a reminder there are unresolved issues between east and west.

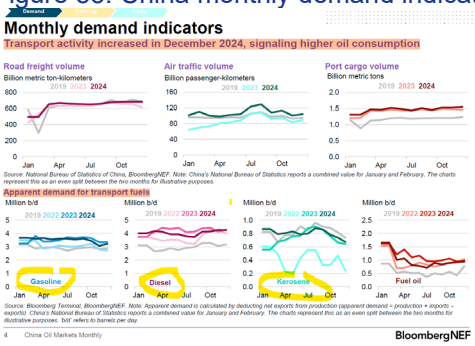
Oil: It's only one month but China Dec road fuels consumption indicators were solid

China road fuels consumption

One of the major negatives on looking ahead to the value of oil in the future is the increasing number of views that China has already reach peaked road fuels consumption and,, if so, many also call for increasing peak oil demand overall. It is never good to draw any lines from one month's data but the China road fuels consumption indicators at least put a pause into those who are saying China has already reached peak road fuels consumption. (i) On Monday, we posted [LINK] "*Dec is only 1-mth but indicators that it's taking a little longer to get to China peak road fuels consumption. Diesel consumption up YoY & above pre-Covid. Gasoline slightly lower YoY but above pre-Covid. Didn't get headlines but ICE back up to 52% of new car sales. LNG-fueled share of medium/heavy duty truck sales started 2024*

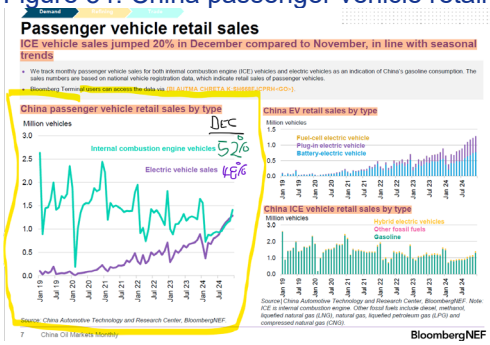
strong but has decreased. 👇graphs from @BloombergNEF Luxi Hong #OOTT." (ii) Our post included three charts from the then just posted BloiombergNEF China Oil Markets Monthly. (iii) The oil markets are assuming China's road gasoline and diesel consumption has peaked primarily driven by NEVs overtaking ICE vehicle in sales and also from medium/heavy duty trucking fueled by diesel is losing increasing share to LNG and electric. (iv) BNEF didn't provide the specific data points, but the graphs look to point to higher, in total, YoY consumption for gasoline + diesel demand with diesel up YoY and gasoline slightly down YoY. And diesel is well above pre-Covid and gasoline is also above pre-Covid. Note jet fuel/kerosene looks up slightly YoY but down vs pre-Covid. (v) The BloombergNEF pg 1 opening statement said "*China's demand for the three key oil products – gasoline, diesel and jet kerosene – edged higher in December 2024. Transport-related indicators, such as air passenger traffic and port cargo throughput, witnessed a rise compared to November, suggesting resilient consumption for jet fuel and marine fuel oil in December. Diesel demand remained elevated in December, driven by high road freight volumes as well as strong manufacturing activity throughout November and December. Gasoline consumption also rose in December as both New Year's Day and the Chinese New Year holidays pushed up driving demand."* (vi) ICE share of new car sales was back over 50% in Dec. Last month, there were a lot of stories on how Chinese NEV sales (BEV + PHEV) were more than ICE sales in Nov. But we haven't been seeing many report that ICE sales in Dec were back to more than 50%. BloombergNEF reported NEV share of new car sales was -3.6% MoM (but +13% YoY) down to a NEV share at 48% of total Dec car sales ie. ICE incl HEV were 52%. (vii) The other negative on road diesel consumption was how sales of medium and heavy duty trucks fueled by diesel were losing a rapidly increasing share to LNG-fueled and electric medium and heavy duty trucks. Diesel has been back to close to 80% of share in the last few months of new medium and heavy-duty truck sales. Below are the three BloombergNEF charts attached to our post.

Figure 53: China monthly demand indicators



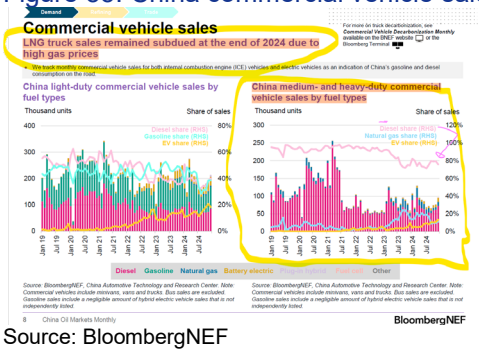
Source: BloombergNEF

Figure 54: China passenger vehicle retail sales



Source: BlombergNEF

Figure 55: China commercial vehicle sales

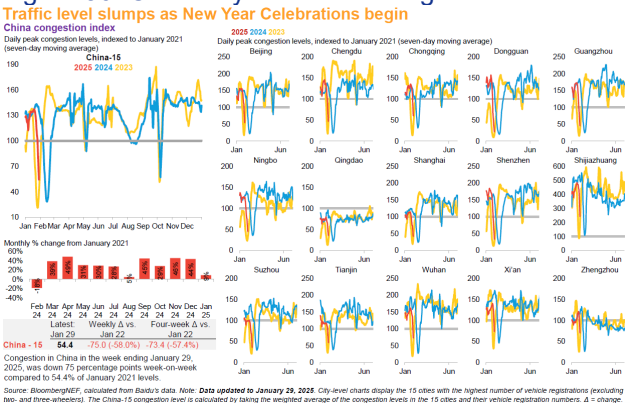


Source: BloombergNEF

Oil: Baidu China city-level road congestion crashes WoW as Spring Festival begins

Spring Festival started this week but as noted in the previous two Energy Tidbits memos, the 40-day travel period has started. Spring Festival is earlier this year, and this reflected in the significant drop in China's city-level road congestion. On Thursday, BloombergNEF posted its China Road Traffic Indicators Weekly report, which includes the Baidu city-level road congestion for the week ended Jan 29. BloombergNEF reported Baidu city-level road congestion saw a decrease of -58.0% WoW to 54.4% of Jan 2021 levels. January 2025 data saw average daily peak congestion down -18.3% YoY when compared to January 2024. We noted in last week's memo that Chinese New Year and Spring Festival is early this year and that means China city-level road congestion will see a huge decline in January and not in February as happened in 2024. Note that this report was formerly titled Road Traffic indicators, and is now China Road Traffic Indicators, but the content of the report is unchanged. BloombergNEF's report was titled "*Congestion drops sharply as Spring Festival arrives*". Below are the BloombergNEF key figures.

Figure 56: China city-level road congestion for the week ended Jan 29



Source: Bloomberg

Oil: Reminder Chinese New Year and spring festival is early this year

Chinese New Year was Jan 29

As a reminder, Chinese New Year was on Wednesday and earlier in the year than usual, whereas last year it was on Feb 10, 2024. This means all the normal city/economic activity slows down in January as opposed to the beginning of Feb. The Chinese New Year is also known as Lunar New Year or Spring Festival and normally includes at least a week of holidays starting with Jan 27 or 28 i.e. the Shanghai stock market starts its weeklong New Year holiday days on Mon Jan 27. Spring Festival is the major holiday so many seem to take much more than a week of holidays.

Oil: China 40-day Spring Festival travel rush started on Tuesday Jan 14

Spring Festival travel rush

On Jan 14, we posted [LINK] "*Chunyun, 40-day Spring Festival travel started today, thru Feb 22. World's largest annual human migration. - 9 b inter-regional trips - 7.2 b road trips - 510 mm rail trips, 12.75 mm/d, +5.5% YoY - 90 mm air trips, 18,500 flights/day, +8.4% YoY. Also, won't be separate Jan economic data for many items, combined with Feb. #OOTT".* China's 40-day Spring Festival travel rush started on Tues Jan 14. Our post included Xinhua's Jan 13 report [LINK] that noted that the Spring Festival travel is set to begin with a record 9 billion inter-regional trips expected through the 40-day travel period. Xinhua wrote "*Chinese authorities expect an unprecedented 9 billion inter-regional trips during this year's chunyun, or Spring Festival travel rush. The 40-day travel period began on Tuesday and will continue through Feb. 22. More electric car owners and foreign tourists are expected to join the annual travel frenzy, traditionally featuring millions of migrant workers and others living far from their hometowns who head back to reunite with family and celebrate China's most important festival."*

Oil: China visitors to Hong Kong up YoY in Dec

Chinese visitors to Hong Kong

On Tuesday, the Hong Kong Tourism Board released its December statistics for total arrivals and visitors from mainland China. We split out the visitors from mainland China as a measure to the recovery of the Chinese consumer and to a lesser extent mainland businessman. For Nov 2024, there were 3.568 mm total visitors and 2.558 mm visitors from mainland China. Dec is considered the city's peak tourist season with the onset of holidays and festivals leading to MoM increases in tourists from Nov. In Dec, there were total visitors of 4.256 mm,

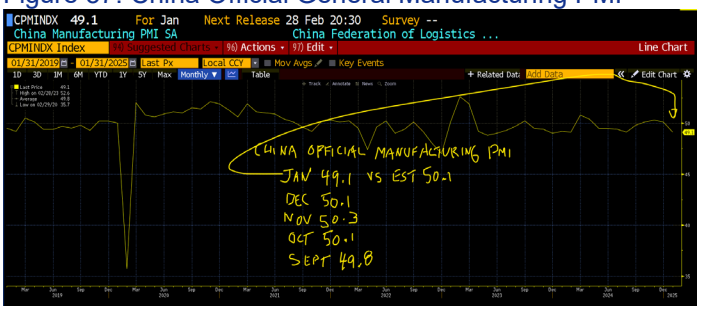
which was +8.3% YoY vs 3.929 mm in Dec 2023. For mainland China visitors, there were 3.101 mm visitors, which was +5.2% YoY vs 2.948 mm in Dec 2023. Relative to pre-Covid, total visitors of 4.256 mm in Dec 2024 are +33.4% above pre-Covid of 3.191 mm in Dec 2019. For visitors from mainland China of 3.101 in Dec 2024 is +29.3% above pre-Covid of 2.398 mm in Dec 2019. Our Supplemental Documents package contains the press release from the Hong Kong Tourism Board.

Oil: China official Jan Manufacturing PMI back to contraction before Trump 10% tariff

China official Manufacturing PMI

Yesterday, Trump's also hit China with 10% tariffs. Going back a few weeks, most were expecting a bigger hit but, as we have been highlighting, Trump had turned softer in his messaging on China. Regardless, a 10% tariff will have an impact and it will impact Chinese manufacturers risk and confidence. Prior to the tariffs, we saw Chinese manufacturers turn negative in their expectations. Last Sunday night, we posted [LINK] "*Trump uncertainty? Back to contraction after 3 mths of expansion for China "official" manufacturing PMI. Jan 49.1 vs est 50.1 Dec 50.1 Nov 50.3 Oct 50.1 Sept 49.8 Aug 49.1 July 49.4 Jun 49.5 May 49.5 Smaller, more export oriented Caixin manufacturing PMI is a week away. #OOTT"* The official China manufacturing PMI was released Sunday night. 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 and is being released tonight. Among the uncertainty with Trump's return to office, the China official manufacturing PMI for Jan contracted to 49.1 (vs estimates 50.1), which follows 50.1 in Dec and 50.3 in Nov. The Jan decrease follows the three-month period of expansion seen after China's Sept stimulus programs, which followed five months of contraction. Below is the Bloomberg chart of China official general manufacturing PMI.

Figure 57: China Official General Manufacturing PMI



Source: Bloomberg

Oil: Core Labs reminds oil & gas capex has to offset oil decline & meet demand growth

Core Labs reminds oil decline rates

On Thursday, Core Labs held its Q4 call and we posted [LINK] "*Oil 101. Another year of reserved E&P spend may not impact 2025 oil supply much BUT should be a positive to oil in later 2020s. CoreLabs reminds of overlooked basic of oil markets: investment today to add new supply in the coming years has to be sufficient to meet demand growth AND to offset oil declines. #OOTT."* In their Q4 call, mgmt started off their comments on guidance and outlook by reminding of an overlooked basic of oil markets – the oil and gas industry has to spend enough to add enough new production to meet increasing global oil demand AND to offset

global oil declines. We have said before that the reason why it is overlooked is that the global oil decline challenge is one that will paly out post 2025 and not in 2025. Our post included an excerpt from the call where mgmt leads off "*As 2025 unfolds, Core will continue to execute its strategic plan of technology investments targeted to both solve client problems and capitalize on Core's growth opportunities. A cautious near-term approach was adopted by operators in the back half of 2024. Driven by concerns for a potential imbalance between crude oil supply and demand. However, we maintain our constructive long-term outlook on international upstream projects for 2025 and beyond. The IEA, the EIA and OPEC+ continue to forecast growth in crude oil demand of approximately 1.1 million to 1.4 million barrels per day for 2025, which is in addition to the natural decline of production from existing fields. As such, continued investment in the development of onshore and offshore crude oil fields will be required to meet demand. In the near-term, we expect that crude oil markets will remain volatile due to the global economic uncertainties and geopolitical risk.*"

10/29/24: Saudi, upstream needs 60% of cash flow to offset decline rates

On Friday, we posted [LINK] "*Core Labs Q4 need #Oil #NatGas investment sufficient to meet demand growth AND offset decline rates. Reminds of 👇10/29/24 post: THE #1 Overlooked #Oil supply fundamental post 2025 from Saudi EM Abdulaziz - oil decline rates. Upstream needs 60% of its cash flow to offset declines. #OOTT.*" Here is what we wrote in our Nov 3, 2024 Energy Tidbits memo on Saudi Arabia Energy Minister Abdulaziz's warning that the upstream has to spend 60% of its cash flow to offset declines. "*Saudi Arabia, upstream needs 60% of its cash flow to offset decline rates. As noted later in the memo, I am not on the side that Trump's drill baby drill will lead to a big ramp up in US drilling and production and lower oil prices. So absent a Trump wildcard, oil markets for 2025 will continue to be worried about how Saudi et al can add back their voluntary cuts in the face of continued China economy weakness. It's why we said Saudi Energy Minister Abdulaziz warnings on decline rates is a post 2025 issue. On Monday, we tweeted [LINK] "THE #1 Overlooked #Oil supply fundamental post 2025 from Abdulaziz. "Well, there is something called natural declines. And if you don't attend to that, you lose over time. And if you don't continue spending 60% of an upstream company on maintaining potential, you lose that potential." At 6% average decline, world needs to add 6 mmbd of new oil supply to stay flat. May not be an issue for 2025 BUT becomes an increasing concern especially as these same people push out their peak oil demand forecasts. #OOTT." Abdulaziz warned that most overlook that oil production declines and that means upstream companies have to spend 60% of their cash flow just to maintain their productive capacity. This is the concept we have highlighted for decades – oil declines and every year oil companies have to add new production capacity just to stay flat. Our tweet included the transcript we made of Abdulaziz's comments. At 18:40 min mark, Abdulaziz "we are also committed to maintaining 12.3 million of crude capacity. We're proud of that, But look at what it takes to maintain that capacity. And there are so many people who claims to be understanding oil. If Saud Arabia has to go through these investments to maintain potential, I would tell some of the, well for the purpose of respect, I will tell those people who talk about, this country's going to increase this, this country's going to increase that, and the total number is 7 million. Well, there is something called natural declines. And if you don't*

attend to that, you lose over time. And if you don't continue spending 60% of an upstream company on maintaining potential, you lose that potential. However, there are good people that take these things slightly. But, anyway. as [xxx xxx] was saying once, in one of his [xxx] only time and patience will prove the country."

11/03/24: Abdulaziz points to Saudi oil decline is ~3.5%

Here is another item from our Nov 3, 2024 Energy Tidbits memo on Saudi Arabia's oil decline rate. "*Abdulaziz points to Saudi oil decline is ~3.5%. On Friday, we tweeted [LINK] "Saudi Energy Minister straight talk points to approx 3.5% decline rate for Saudi oil productive capacity. Adding 550kbd Marjan/Berri, 600 kbd Zuluf & 75 kbd Damman for total 1.225 mmbd to maintain 12.3 mmbd MSC thru 2027. Consistent with my 👇05/07/24 tweet on Aramco Q1. #OOTT." Our Monday tweet on Saudi Energy Minister Abdulaziz's warning on decline rates included his slide on what Saudi is doing to maintain its 12.3 maximum sustainable capacity that included adding 550,000 b/d at Marjan/Berri in 2025, 600,000 b/d at Zuluf in 2026 and 75,000 b/d at Damman in 2027 for a total adds of 1.225 mmb/d to maintain its 12.3 MSC thru 2027 ie. infers an approx. 3.5% annual decline rate. Our tweet noted that this is the same as we tweed on May 7 on Saudi Aramco's Q1/24 disclosure."*

Figure 58: Saudi Arabia oil projects to maintain 12.3 mmb/d MSC

Source: Saudi Arabia Energy Minister

05/07/24: Aramco points to a 3.5% Saudi oil decline rate

As noted in our Nov 1, 2024 tweet, Saudi Energy Minister Abdulaziz listing of the projects to maintain Saudi Maximum Sustainable Capacity at 12.3 mmb/d are in line with Saudi Aramco Q1 disclosure. Here is what we wrote in our May 12, 2024 Energy Tidbits memo. "*Saudi Aramco reported Q1 on Tuesday. (i) Aramco didn't come out and talk about Saudi Arabia oil decline rates but in reading the Q1 highlights, the numbers seemed to point to an oil decline rate in Saudi Arabia of ~3.5%. (ii) On Tuesday, we tweeted [LINK] "#Oil 101: Need to add ~6-7 mmbd new oil supply/yr to stay flat. Aramco Q1 👇: Damman, Marjan, Berri & Zuluf to add 1.225 mmbd to "maintain MSC at 12.0 mmbpd". Saudi ~3.5% oil decline would fit Aramco 👇12/07/23 tweet global conventional + unconventional decline of 7%. #OOTT." (iii) in the Q1, Aramco highlighted they were given the directive to maintain MSC at 12.0 mmbpd. And "This directive will have no impact on announced, nearterm projects including the Dammam development and the Marjan, Berri, and Zuluf crude oil increments. Production from these projects will be used to maintain MSC at 12.0*

mmbpd, which provides operational flexibility to increase production and supports Aramco's unique ability to rapidly respond to changing market conditions." So Damam, Marjan, Berri and Zuluf will maintain MSC at 12 mmb/d. (iv) Aramco then detailed these projects would add 1.225 mmb/d over 2025, 2026 and 2027. Adding 1.225 mmb/d over 3 years would effective offset 1.26 mmb/d assuming a 3.5% decline rate. That is just the math. Damman is to add 25 mb/d in 2024 and 50 mb/d in 2027. Marjan is to add 300 mb/d and Berri is to add 250 mb/d, both by 2025. Zuluf is to add 600 mb/d by 2026. (v) Our tweet linked to the below Dec 7, 2023 Saudi Aramco CEO view that overall global conventional + unconventional oil decline rate was 7%."

12/07/23: Aramco global conventional + unconventional oil decline rate is 7%

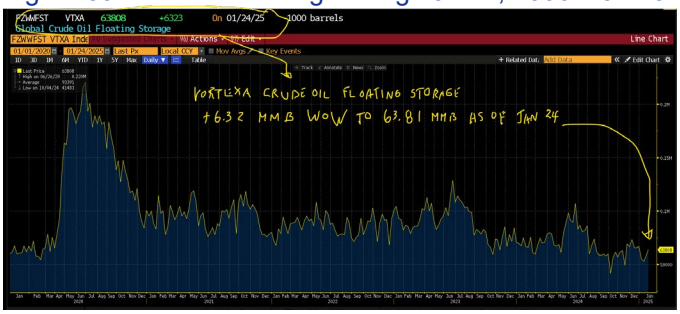
Here is what we wrote in our Dec 10, 2023 Energy Tidbits memo. "*Aramco CEO global conventional + unconventional oil decline rate is 7%. We recognize that no one is really thinking about mid-term oil outlook given the oil price weakness now going into Q1/24. For months, we have been warning that the key factor driving why Saud would continue its voluntary 1 mmb/d cuts thru Q1/24 was that global oil demand is always seasonally down in Q1 every year vs the preceding Q4. That is the big problem, the normal seasonal decrease in oil demand in Q1 vs Q4 that is approx. 1.5 mmb/d. So no one is focused beyond 2024 but, for those that care, on Thursday, we tweeted [LINK] "For anyone looking at #Oil in 2025+. #Aramco CEO "If you look at existing fields today & the level of maturity that we're seeing in conventional and unconventional resources, you're looking at a 7% decline" ie. 7 mmbd has to be replaced each yr to stay flat. Thx @jcgnana #OOTT." The headlines on the Platts story were "COP28: Saudi Aramco CEO says fossil fuel investment more viable than renewables to meet demand. HIGHLIGHTS Fossil fuel investment down 40% from 2014 levels: Nasser. Q4 2023 oil demand set to be higher than Q4 2019. Renewables, hydrogen not viable in the short term, he says." [LINK]. But what caught our eye were Nasser's comments on global oil declines. Platts wrote "Saudi Aramco's chief called for more investment in fossil fuels while dismissing the short-term viability of renewables due to what he suggested were higher costs and low demand for clean energy. "I think we need more investment," Nasser said citing a 40% decline in investment in fossil fuels from 2014 levels. "If you look at existing fields today and the level of maturity that we're seeing in conventional and unconventional resources, you're looking at a 7% decline," he added." Nasser is reminding the combined global conventional + unconventional oil decline rate is 7%, which means that, on a combined global basis, if spending were to stop oil production would be down 7 mmb/d. The reminder is that the first challenge for the global oil industry is to do the work to replace 7 mmb/d just so global oil production can stay flat. That is why there is the first capital every year to basic production maintenance, development drilling, field extensions, etc to replace the 7% decline. The 7% is an average decline rate across the world, which takes into account the way higher decline rates in the 13 mmb/d of US production.*"

Oil: Vortexa crude oil floating storage est -4.66 mmb WoW to 63.98 mmb at Jan 31

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 Jan 25 at 9am MT. (i) Yesterday morning, we posted [LINK] "*Vortexa crude #Oil floating storage. Total est 63.98 mmb at Jan 31, -4.66 mmb WoW vs revised up by +4.83 mmb Jan 24 of 68.64 mmb. Asia still ~30 mmb over past 3 wks with recent reports China had stopped taking some sanctioned tankers. Thx @vortexa @business #OOTT.*" (ii) As of 9am MT Feb 1, Bloomberg posted Vortexa crude oil floating storage estimate for Jan 31 was 63.98 mmb, which was -4.66 mmb WoW vs revised up Jan 24 of 68.64 mmb. Note Jan 24 was revised +4.83 mmb vs 63.61 originally posted at 9am on Jan 25. (iii) Revisions. The last three weeks were revised up with the largest being Jan 24 revised +4.83 mmb, and the prior weeks were revised down with the largest Jan 3 revised -3.69 mmb. The average revision for the prior seven weeks was +0.62 mmb. Here are the revisions for the prior seven weeks compared to the estimates originally posted on Bloomberg at 9am MT on Jan 25. Jan 24 revised +4.83 mmb. Jan 17 revised +3.91 mmb. Jan 10 revised +2.54 mmb. Jan 3 revised -3.69 mmb. Dec 27 revised -2.02 mmb. Dec 20 revised -0.14 mmb. Dec 13 revised -1.08 mmb. (iv) There is a wide range of floating storage estimates for the moving 7-week average, but a simple moving 7-week average to Jan 31 is 61.54 mmb vs last week's then 7-week moving average of 61,03 mmb. (v) Also remember Vortexa revises these weekly storage estimates on a regular basis. We do not track the revisions through the week. Rather we try to compare the first posted storage estimates on a consistent week over week timing comparison. Normally we download the Vortexa data as of Saturday mornings around 9am MT. (vi) Note the below graph goes back to Jan 1, 2020 to show the run up to Covid and then how Covid started to impact Covid in March/April 2020. (vii) Jan 31 estimate of 63.98 mmb is -64.68 mmb vs the 2023 peak on June 25, 2023 of 128.66 mmb. Recall Saudi Arabia stepped in on July 1, 2023 with its voluntary cuts. (viii) Jan 31 estimate of 63.98 mmb is -2.18 mmb YoY vs Feb 2, 2024 at 66.18 mmb. Below are the last several weeks of estimates posted on Bloomberg as of 9am on Feb 1, Jan 25, and Jan 18.

Figure 59: Vortexa Floating Storage Jan 1, 2000 – Jan 31, 2025, posted Feb 1 at 9am MT



Source: Bloomberg, Vortexa

Figure 60: Vortexa Estimates Posted 9am MT on Jan 25, Jan 18 and Jan 11

Posted Jan 25, 9am MT

Date	Last Px
Fr 01/24/2025	63808
Fr 01/17/2025	57485
Fr 01/10/2025	52739
Fr 01/03/2025	55081
Fr 12/27/2024	66552
Fr 12/20/2024	65725
Fr 12/13/2024	65787
Fr 12/06/2024	73232
Fr 11/29/2024	66311
Fr 11/22/2024	69265
Fr 11/15/2024	48854
Fr 11/08/2024	62822

Jan 18, 9amMT

Date	Last Px
Fr 01/17/2025	52092
Fr 01/10/2025	51411
Fr 01/03/2025	52850
Fr 12/27/2024	66154
Fr 12/20/2024	66468
Fr 12/13/2024	66408
Fr 12/06/2024	73373
Fr 11/29/2024	66058
Fr 11/22/2024	69947
Fr 11/15/2024	48395
Fr 11/08/2024	63539
Fr 11/01/2024	61892

Jan 11, 9am MT

Date	Last Px
Fr 01/10/2025	55884
Fr 01/03/2025	54813
Fr 12/27/2024	66846
Fr 12/20/2024	66446
Fr 12/13/2024	67121
Fr 12/06/2024	74314
Fr 11/29/2024	65611
Fr 11/22/2024	69599
Fr 11/15/2024	47538
Fr 11/08/2024	62884
Fr 11/01/2024	61811
Fr 10/25/2024	57575

Source: Bloomberg, Vortexa

Oil: Vortexa crude oil floating storage WoW changes by regions

Vortexa floating storage by region

Bloomberg posts Vortexa crude oil floating storage in key regions, but not all regions of the world. The regions covered are Asia, North Sea, Europe, Middle East, West Africa and US Gulf Coast. We then back into the "Other" for rest of world. (i) As noted above, last week's Jan 24 was revised up +4.83 mmb. There were no large revisions, the largest revision was Asia revised +1.46 mmb. (ii) Total floating storage at Jan 31 of 63.98 mmb was -4.66 mmb WoW vs revised up Jan 24 of 68.64 mmb. The major WoW changes were Asia -4.61 mmb WoW, Other -3.58 mmb WoW, Europe +2.79 mmb WoW and Middle East +2.06 mmb WoW. (iii) As we expected for the last few weeks, Asia floating storage is still relatively high with the then recent reports that China was being stricter in not taking sanctioned tankers. This would effectively strand some tankers until a plan can be executed to get that oil moving elsewhere or transferred into non-sanctioned tankers. Asia floating storage is 29.59 mmb on Jan 31, down from 34.20 mmb on Jan 24. (iv) Jan 31 estimate of 63.98 mmb is -64.68 mmb vs the 2023 high on June 23, 2023 of 128.66 mmb. Recall Saudi Arabia started its voluntary 1 mmb/d production cuts on July 1, 2023. The major changes by region vs the June 23, 2023 peak are Asia -43.66 mmb and Other -17.41 mmb. (iv) Below is the table we created of the WoW changes by region posted on Bloomberg at of 9am MT yesterday. Our table also includes the "Original Posted" regional data for Jan 24 that was posted on Bloomberg at 9am MT on Jan 25.

Figure 61: Vortexa crude oil floating by region

Vortexa crude oil floating storage by region				Original Posted	Recent Peak	
Region	Jan 24/25	Jan 17/25	WoW	Jan 17/25	Jun 23/23	Jan 24 vs Jun 23/23
Asia	32.74	27.96	4.78	24.41	73.25	-40.51
North Sea	1.70	0.37	1.33	0.57	4.71	-3.01
Europe	2.37	0.98	1.39	2.06	6.05	-3.68
Middle East	6.80	6.20	0.60	6.73	6.59	0.21
West Africa	5.61	7.40	-1.79	4.81	7.62	-2.01
US Gulf Coast	0.29	0.49	-0.20	0.46	1.02	-0.73
Other	14.30	14.09	0.21	13.05	29.33	-15.03
Global Total	63.81	57.49	6.32	52.09	128.57	-64.76
Vortexa crude oil floating storage posted on Bloomberg 9am MT on Jan 25						
Source: Vortexa, Bloomberg						

Source: Bloomberg, Vortexa

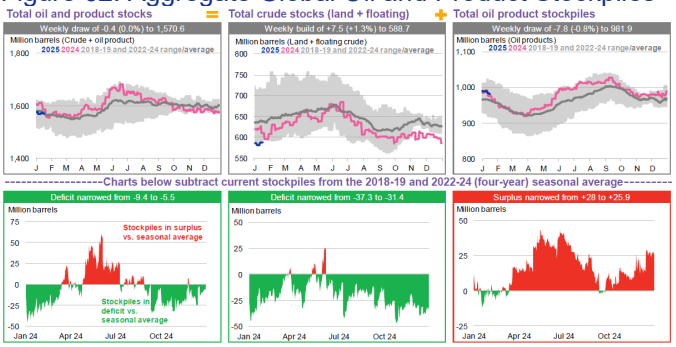
Oil: Global oil & product stocks deficit narrows to -5.500 mmb, from -9.400 mmb

Global oil stocks

On Monday, BloombergNEF posted its "*Oil Price Indicators*" weekly, which provides good

charts depicting near-term global oil demand and supply indicators. (i) Note BloombergNEF uses different periods to determine the surplus/deficit, sometimes using a four-year average for 2018-2019 and 2022-2024, and other times using a five-year average for 2018-2019 and 2022-2024. In both cases they do not include 2020 and 2021 in the averages. (ii) The global stockpile for crude oil and products deficit narrowed to -5.500 mmb for the week ending January 17, from a deficit of -9.400 mmb for the week ended January 10. (iii) Total crude inventories (incl. floating) saw a build of +1.3% WoW to 588.700 mmb, while the stockpiles deficit narrowed, from a deficit of -9.400 mmb to a deficit of -5.500 mmb. (iv) Land crude oil inventories increased +0.7% WoW to 529.800 mmb, widening their deficit from -27.100 mmb to -21.400 mmb against the five-year average (2018-2019 and 2022-24). (v) The gas oil, and middle distillate stocks were down -2.0% WoW to 236.600 mmb, with the surplus against the four-year average narrowing to +5.000 mmb from +8.200 mmb. Jet fuel consumption by international departures in the week starting January 18 is set to increase by +0.030 mmb/d WoW, while consumption by domestic passenger departures is forecast to decrease by -0.022 mmb/d WoW. Below is a snapshot of aggregate global stockpiles.

Figure 62: Aggregate Global Oil and Product Stockpiles



Source: BloombergNEF, US Energy Information Administration (EIA), PJK, IE Singapore, FEDCom/Platts, PAJ ,Vortexa, Genscape. Note: As of the ***week ending January 17, 2025.***

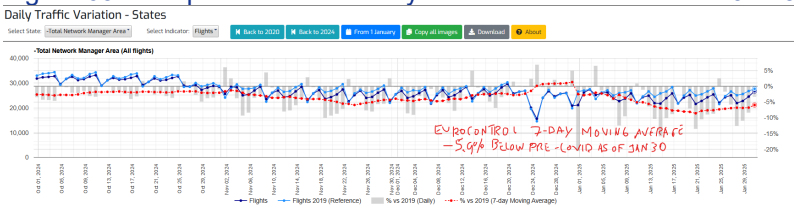
Source: BloombergNEF

Oil: Europe airports daily traffic 7-day moving average -5.9% below pre-Covid

Europe airports daily traffic

Yesterday, we posted [LINK] "*EU air traffic (arrivals/departures) is now -5.9% below pre-Covid. Xmas +0.8% vs pre-Covid on dec 26 didn't last. 7-day moving average as of: Jan 30: -5.9% below pre-Covid. Jan 23: -7.6%. Jan 16: -7.6%. Jan 9: -4.2%. Jan 2: -2.6%. Dec 26: +0.8%. Dec 19: -2.4%. Dec 12: -3.6%. Dec 5: -4.0%. Nov 28: -4.3%. #OOTT.*" The Xmas rush for the 7-day moving average as of Dec 26 was the first week above pre-Covid since the Jan 2024. Air traffic always goes up for Xmas and it always seasonally drops after Xmas. But last year, it didn't drop as much and was actually above pre-Covid in Jan 2024. This year, there has been a big drop off since Xmas. The 7-day moving average was -5.9% below pre-Covid as of Jan 30, which follows -7.6% as of Jan 23, -7.6% below as of Jan 16, -4.2% as of Jan 9, -2.6% as of Jan 2, +0.8% as of Dec 26, -2.4% below pre-Covid as of Dec 19, -3.6% as of Dec 12, which followed -4.0% as of Dec 5, and -4.3% as of Nov 28. Normally we try to pull the data early Saturday mornings for a consistent weekly comparison. Eurocontrol updates this data daily and it is found at [LINK].

Figure 63: Europe Air Traffic: Daily Traffic Variation to end of Jan 30



Source: Eurocontrol

Oil: IATA total air travel & domestic air above pre-Covid

November air travel up YoY

Overall global air travel is above pre-Covid levels for both domestic and international air travel and the one lagging region is international air travel in Asia Pacific. On Thursday, the International Air Transport Association (IATA) released air passenger data for November 2024 [LINK]. (i) Overall air travel. The IATA wrote "*The industry's total Revenue Passenger-Kilometer (RPK) increased by 8.1% year-on-year (YoY) in November, continuing to exceed historical records. Available Seat-Kilometer (ASK) rose by 5.7% YoY lagging demand growth. The Passenger Load Factor (PLF) improved by 1.9 percentage points compared to the previous year, reaching 83.4%, an all-time high for November."* (ii) Domestic air travel. *"Domestic RPK increased 3.1% over the previous year, decelerating from the last month. In actual volume, domestic passenger traffic continues to establish new records while load factors are higher compared to the previous year. Signs of stable growth were shown in all markets, while the US saw a deeper contraction in November compared to the prior month."* (iii) International air travel. "*Compared to 2019 levels, industry total international RPK were 5.2% above the same month's levels in November."* Overall, international air travel is above pre-Covid but one region lagging, but getting closer, is Asia Pacific. "*Asia Pacific is still behind the remaining regions; however, these airlines' international traffic is now only 0.5% under their 2019 levels."* Our Supplemental Documents package includes the official IATA report.

Figure 64: November 2024 Air Passenger Market

	World share [1]	November 2024 (% year-on-year)				November 2024 (% year-to-date)			
		RPK	ASK	PLF (%-pt)	PLF (level)	RPK	ASK	PLF (%-pt)	PLF (level)
TOTAL MARKET	*100.0%*	**8.1%**	**5.7%**	**1.9%**	**83.4%**	**10.6%**	**8.9%**	**1.2%**	**83.5%**
International	*60.1%*	11.6%	8.6%	2.3%	83.4%	13.8%	13.3%	0.4%	83.2%
Domestic	*39.9%*	3.1%	1.5%	1.2%	83.5%	5.7%	2.5%	2.6%	84.0%

[1] % of industry RPKs in 2023

Source: IATA

12/10/24: IATA reminded average age of global fleet is record high of 14.8 years

When we see the IATA highlight both global air passenger and cargo volumes continue to set new record highs, we like to remind that this is being done with an aging fleet. One of the items that seems to be overlooked in looking at jet fuel consumption is that there is an aging global fleet of planes and older planes are, as a general rule, more fuel inefficient and will use more jet fuel per mile than new planes. The global fleet is at record high of 14.8 yrs. The IATA reminded of this in their recent Dec 10, 2024 global outlook for air travel. Here is what we wrote in our Dec 15, 2024 Energy Tidbits memo. "*IATA forecast jet fuel consumption to be +0.40 mmb/d YoY to 6.99 mmb/d in 2025. We don't have a jet fuel forecast model, but we couldn't help*

think that the IATA's forecast for global jet fuel consumption to be +0.40 mmb/d YoY in 2025 seems conservative given the IATA's highlighting of an aging global air fleet and increasing demand for used planes. (i) On Tuesday, the IATA (International Air Transport Association) posted its global outlook. The headline is record air passenger and air cargo in 2024 and going higher in 2025. For 2025 vs 2024, the IATA forecasts passengers +6.7% YoY to 5.221 million, flights +4.7% YoY to 40.0 million, passenger RPK +8.0% YoY, and cargo growth CTK +6.0% YoY. (ii) On Tuesday, we posted [LINK] "Anyone else surprised IATA only fcast jet fuel consumption +0.40 mmbd YoY in 2025 to 6.99 mmbd. Follows 2024 was +0.59 mmbd YoY to 6.59 mmbd. Air travel up again YoY to new record flying in 2025 AND IATA highlights global fleet average age now record high 14.8 yrs and increased demand for used planes. Old planes tend to be relative jet fuel guzzlers. #OOTT." (iii) We don't know their model, but we would have expected fuel efficiency would have been worse ie. more liters per passenger. Before we saw the fuel efficiency table below, the IATA highlighted the backlog of new plane deliveries, "high traffic demand, coupled with capacity constraints, has led to an increase demand for used aircraft, and in turn, to a significant decline int eh share of parked fleet, which dropped to 14%, the lowest since 2019." And they highlighted "The ongoing delays in deliveries have increased the average age of the global fleet to a record high of 14.8 years, compared to an average age of 13.6 years during 1990-2024". Having read these first, we would have expected fuel efficiency to be worse in 2025 and not better in 2025. An older fleet and more used planes would have normally pointed to less fuel efficiency and therefore more jet fuel consumption given increasing flights. And that is why we have to wonder if the IATA forecast for jet fuel consumption being +0.40 mmb/d YoY in 2025 is conservative. Our Supplemental Documents package includes excerpts from the IATA global outlook."

Figure 65: Global air industry statistics

Table 10: Industry statistics

Global airline industry	2019	2020	2021	2022	2023	2024E	2025F
Segment passengers, million	**4,560**	**1,779**	**2,304**	**3,472**	**4,439**	**4,893**	**5,221**
O-D passengers, million	3,974	1,570	2,017	2,962	3,808	4,216	4,477
Flights, million	37.5	19.7	24.2	29.0	35.7	38.2	40.0
Passenger growth, RPK, % YoY	4.1%	-65.8%	21.8%	64.9%	36.8%	11.2%	8.0%
Cargo growth, CTK, % YoY	-3.2%	-9.9%	18.8%	-8.1%	-1.7%	11.8%	6.0%
Capacity growth, ATK, % YoY	3.3%	-44.3%	16.6%	19.7%	21.7%	9.9%	7.1%
Total load factor, % ATK	70.1%	59.8%	61.9%	67.2%	68.7%	69.6%	69.9%
Passenger load factor, % ASK	82.6%	65.2%	66.9%	78.7%	82.2%	83.0%	83.4%

Source: IATA

Figure 66: Key industry fuel metrics

Table 7: Key industry fuel metrics

Global airline industry	2019	2020	2021	2022	2023	2024E	2025F
Fuel spend, USD billion	**190**	**80**	**106**	**215**	**269**	**261**	**248**
% change YoY	1.5%	-58.0%	32.3%	103.6%	25.2%	-3.2%	-4.8%
% of operating costs	23.9%	16.1%	19.0%	29.6%	31.8%	28.9%	26.4%
Fuel use, billion gallon	**96**	**52**	**62**	**76**	**92**	**101**	**107**
% change YoY	2.2%	-45.9%	19.9%	22.9%	20.3%	9.8%	6.0%
Fuel efficiency, liter/100 ATK	**0.24**	**0.23**	**0.24**	**0.24**	**0.23**	**0.23**	**0.23**
% change YoY	-0.6%	-2.7%	3.0%	0.7%	-1.8%	-0.1%	-1.0%
Fuel consumption, liter per 100 km/passenger	**4.2**	**6.6**	**6.5**	**4.8**	**4.3**	**4.2**	**4.1**

Source: IATA

Oil: IATA, global air cargo Dec was 17th consecutive month of YoY growth

IATA December global air cargo

We look at international air cargo as the data that affirms the level of export orders and trade. On Wednesday, the International Air Transport Association (IATA) announced cargo data for the month of December [LINK]. December global air cargo, measured through Cargo Tonne-Kilometers (CTK), increased +6.1% YoY. This marks the seventeenth consecutive month of YoY growth. Full-year demand for 2024 recorded a +11.3% YoY increase in CTK, exceeding the record volumes set in 2021. The IATA wrote "*December 2024 brought the year to a close with continued strong performance. Global demand was 6.1% above December 2023 levels (7.0% for international operations). Global capacity was 3.7% above December 2023 levels (5.2% for international operations). Cargo yields were 6.6% higher than December 2023 (and 53.4% higher than in December 2019).*" Willie Walsh, IATA's Director General, commented "*Air cargo was the standout performer in 2024 with airlines moving more air cargo than ever before. Importantly, it was a year of profitable growth. Demand, up 11.3% year-on-year, was boosted by particularly strong e-commerce and various ocean shipping restrictions. This combined with airspace restrictions which limited capacity on some key long-haul routes to Asia helped to keep yields at exceptionally high levels. While average yields continued to soften from peaks in 2021-2022 they averaged 39% higher than 2019.*" Our Supplemental Documents package includes the official IATA report.

Figure 67: December 2024 Air Cargo Market

	World share [1]	December 2024 (% year-on-year)				December 2024 (% year-to-date)			
		CTK	ACTK	CLF (%-pt)	CLF (level)	CTK	ACTK	CLF (%-pt)	CLF (level)
TOTAL MARKET	*100.0%*	**6.1%**	**3.7%**	**1.1%**	**47.3%**	**11.3%**	**7.4%**	**1.6%**	**45.9%**
International	*87.3%*	7.0%	5.2%	0.9%	52.5%	12.2%	9.6%	0.5%	51.3%

Note 1: % of industry CTK in 2024

Source: IATA

Oil & Natural Gas: Rubio says not a joke, will be having discussion on Greenland

US stills wants a deal with Greenland

Like him or not, Trump doesn't give up easily when he wants something. And his track record has been to have a huge ass on something that seems outlandish, be rebuffed, keep pressing and ultimately end up with some sort of modest win. And in the case of Greenland, our longstanding view is unchanged, we think he is right to look ahead to Greenland's strategic location. So we aren't surprised to see him keeping up the pressure on Greenland. On Thursday, Secretary of State Rubio was on The Megyn Kelly Show. Bloomberg wrote "*Those conversations are going to happen, but this is not a joke," Secretary of State Marco Rubio said about discussions between Trump and Danish authorities over potentially buying the island. He spoke in an interview on SiriusXM's The Megyn Kelly Show posted online Thursday. Rubio also reiterated the Trump administration's interest in the Panama Canal. Rubio, who has previously defended Trump's interest in Greenland, said Beijing may deploy Chinese companies to establish operations on the island that might one day be used by its military, adding that this was also a concern in Panama. "It is completely realistic to believe that the Chinese will eventually, maybe even in the short term, try to do in Greenland what they have done at the Panama Canal and in other places," said Rubio, a longtime China hawk. "And that is install facilities that give them access to the Arctic with the cover of a Chinese company, but that in reality serve a dual purpose — that in a moment of conflict they could send naval vessels to that facility and operate from there."*

Trump wants Greenland, would be a big strategic deal

Here is what we wrote in our Dec 29, 2024 Energy Tidbits memo on Trump wanting Greenland. "*Trump wants Greenland, would be a big strategic deal. Early Monday morning, we posted [LINK] "Method to Trump madness! Greenland has huge strategic value for US is why Trump wants to buy Greenland again. US would control both ends of Northwest Passage and controlling major international shipping lanes has military and commercial value. See 08/18/2019 SAF Group Energy Tidbits memo. But expect Denmark/Greenlanders to reject. #OOTT." Last Sunday, Trump announced the appointment of his ambassador to Denmark and wrote ""For purposes of National Security and Freedom throughout the World, the United States of America feels that the ownership and control of Greenland is an absolute necessity." No surprise on Monday, Greenland Prime Minster Mute Egede rejected Trump's statement and wrote "Greenland is ours. We are not for sale and will never be for sale. We must not lose our long struggle for freedom." Trump raised interest in his first term and was rejected. Our post included what we wrote in our Aug 18, 2019 Energy Tidbits memo on Trump's first buy Greenland desire. It isn't an oil and gas upside, rather we see it as a hugely strategic position for the US as it would give the US control over both ends of the Northwest Passage. An, as seen elsewhere, controlling major shipping lanes is a strategic asset for both commercial and military reasons.".*

Trump buying Greenland would be of strategic value

Here is what we wrote in our Aug 18, 2019 Energy Tidbits memo. *"Trump buying Greenland would be of strategic value. We recognize Trump was ridiculed for his asking his advisors about buying Greenland. We have no idea if Trump was truly serious about wanting to try to buy Greenland. Surely he would have expected Greenlanders to vote no especially as they are viewed as anti resource development. The primary reason being attributed for his interest is Greenland's mineral and oil potential. We would say no to oil and gas. its not that Greenland doesn't have oil and gas potential, its that it hasn't worked to date (albeit with only limited exploration wells) and the US doesn't need it. We were surprised that Trump defenders didn't try to stop the ribbing by noting Greenland as big strategic value to the US in a world of global warming. Not so much that Greenland would be accessible, rather Greenland's strategic location in a world of global warming and increasing ability for ships/tankers to move thru the Northwest Passage. If Greenland was the US, the US would effectively share the effective control at both ends of the Northwest Passage with Russia on one end and Canada on the other end. Not a bad positioning. As we have seen in 2019, effective control of major waterways has been a major issue in the Strait of Hormuz, Bab el Mandeb, Strait of Gibraltar, and Strait of Malacca.* "

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Figure 68: Northwest Passage

Source: Geology.com

Energy Transition: Trump to immediately review fuel economy standards

Trump to lower fuel economy standards

Trump's new Transportation Secretary Sean Duffy moved immediately to roll back Biden's fuel economy standards by calling for an immediate review and rework of the standards to be in line with Trump's priorities. The existing fuel economy standards were set in line with Biden's priorities to stop the sale of ICE vehicles. And Duffy wants the fuel economy standards to be set in line with Trump's priorities. The question will be how much lower will the standards be revised but clearly Trump wants to make sure as many ICE cars as possible can be sold. ICE cars can be sold. But reducing fuel economy standards will allow more Ice to be sold especially SUVs. And with lower fuel economy standards and more ICE expected to be sold, it also means the decline of gasoline demand in the US will be slower. This is in line with Trump's revoking Biden's flagship EU 10457 that we highlighted in last week's (Jan 26, 2025) Energy Tidbits memo. Our Supplemental Documents package includes the Transportation Secretary's memorandum.

Trump revokes Biden EO 14057 on BEVs & carbon free electricity

Here is what we wrote in last week's (Jan 26, 2025) Energy Tidbits memo. "*Trump revokes Biden EO 14057 on BEVs & carbon free electricity. On Monday, the White House posted the lengthy list of "Initial Recissions of Harmful Executive Orders and Actions" [LINK], which included revoking of "Executive Order 14057 of December 8, 2021 (Catalyzing Clean Energy Industries and Jobs Through Federal Sustainability)." 14057 was Biden's flagship clean energy program, which included the most significant anti oil and natural gas items. "100 percent carbon pollution-free electricity on a net annual basis by 2030, including 50 percent 24/7 carbon pollution-free electricity; • 100 percent zero-emission vehicle acquisitions by 2035, including 100 percent zero-emission light-duty vehicle acquisitions by 2027". The 100% carbon pollution-free electricity was the overriding force for have to retire coal generation, retire natural gas generation and cancel plans for future natural gas generation. Later in the memo, we noted how natural gas generation in the US has moved from net retirements to big net growth driven by AI datacenter power demand. But the net retirements was directly linked to EO 14057 and the move to 100% carbon pollution-*

free electricity by 2030. And then the 100% zero-emission vehicle sales by 2027 was what drove car manufacturers to drive to BEVs. And with the big BEV incentives, the Biden Administration was able to get Americans to buy BEVs. Our Supplemental Documents package includes an overview of 14057."

Energy Transition: Will DeepSeek put natural gas back to pre-2024 call?

Still questions on DeepSeek impact

It turned out to be a timely week for markets to try to figure out how DeepSeek will impact datacenters, power and a range of related issues including what happens to existing projects about to start. It seems like the strong comments from Mark Zuckerberg that they will still be spending hundreds of billions and others has helped to settle the near term panic on datacenters that are being built or about to be built. They were all saying full speed ahead on data centers, at least for now. (i) On Monday, we posted [LINK] "*will #DeepSeek put #NatGas back to pre-2024 call? ie increasing solid demand growth for next decade because wind, green hydrogen, multi day not hour send out capacity or battery storage is nowhere near aspirations of #NetZero forecasts? ie a solid but not spectacular outlook. but if so that puts at risk the added and sudden big boost, post current in progress datacenter builds. if so it would seem to point to some late to the call capital moving to sidelines and taking out the tech upside to #NatGas for future years until or if DeepSeek initial views on impact are disproven. please send any sourced reputable views either positive or negative on impact on #NatGas. not looking to confirm or shoot down prior views. would like to get it right. Thanks. #OOTT."* (ii) Our concern was less on the near-term datacenters that are being built or about to be built. And left the big tech calls believing they believe what they say – they are charging ahead on their datacenter plans, certainly in the near term. So this should protect the short term need for more natural gas power generation as natural gas remains the #1 call for new scalable 24/7 power. This is an incremental positive to the pre-2024 natural gas call. (iii) What seems far from clear is how will forecast/planned datacenters that were to be added out in the 2028 and beyond be impacted. (iv) So, at least for now, it seems like the big tech companies are signaling no real change to datacenters in progress or about to start, but not clear on datacenters for construction in the 2028 and beyond period. It's really only been two weeks since DeepSeek disruption appeared but for now, there should still be a boost to the pre-2024 natural gas call but far too early to see the massive long-term natural gas demand boost. (v) the DeepSeek impact on the medium to long-term will clearly be the issue watched by markets and power companies.

01/22/25: BlackRock US AI datacenters to be heavily powered by natural gas

So far, we haven't seen any major statements from players like BlackRock CEO Larry Fink on how their very recent hugely bullish calls on natural gas for the coming years has changed power DeepSeek. Here is what we wrote in last week's (Jan 26, 2025) Energy Tidbits memo. "*BlackRock US AI datacenters to be heavily powered by natural gas. There was very important takeaway from BlackRock CEO comments on powering AI datacenters. They are being heavy powered by natural gas and supplemented by renewables and not the other around as the western leaders have been portraying. This is the reality – renewables aren't the baseload, they are added as much as they can but the baseload or what makes AI datacenters run is 24/7 natural gas or coal or nuclear or hydro. And for the short term, the only real fuel scale up is natural gas. No one should be surprised to see BlackRock CEO Larry*

Fink come out even more bullish on natural gas to power AI datacenters in the US. Our Jan 12, 2025 Energy Tidbits memo highlighted how BlackRock came out of the closet to finally use the words natural gas to power AI data centers after only using the code words "low-carbon" when everyone should have known they were using low-carbon because they didn't want to say natural gas. And that once they started to use the natural gas, it meant that their ongoing messaging would use natural gas. On Wednesday, Fink came out and used natural gas in a hugely bullish manner for the AI datacenter growth. On Wednesday, we posted [LINK] "WOW! Bullish for #NatGas. BlackRock clearly says AI datacenter growth is heavily powered by 24/7 #NatGas. BlackRock CEO Fink on powering AI in US "But in the short run, let's be clear. it's going to be heavily powered by gas, natural gas in the US. It will be supplemented by renewables." 👇transcript. 01/09/25, dirty little secret revealed. BlackRock's 1st specific using the word #NatGas instead of "low-carbon" to power AI. Today, no doubt about it, BlackRock says AI in the US is going to be heavily powered by #NatGas. #OOTT." Fink was in Davos in a discussion on AI and made a point of highlighting natural gas will be what powers AI datacenter growth in the near-term and renewables playing the role of supplementing natural gas ie. renewables are not the baseload for AI datacenters. Fink was clear, hyperscalers want to "utilize" more renewables but "utilize" is the another way of saying they will use it where they can but it isn't baseload. Our post included our transcript where Fink said "By no means. Every hyperscaler has long term aspirations to be utilizing more and more renewables. But in the short run, let's be clear. it's going to be heavily powered by gas, natural gas in the United States. It will be supplemented by renewables. And as I said, hopefully it raises a whole conversation about the role of nuclear in the future. It should be a conversation we are having today. We're going to need, unless fusion actually works and we have new sources of power….." Our Supplemental Documents package includes our lengthier transcript."

01/09/25: BlackRock "*think oil and gas*" to meet growing AI energy demand

Here is what we wrote in our Jan 12, 2025 Energy Tidbits memo on BlackRock finally using the words natural gas instead of low-carbon to power the AI datacenter growth. "BlackRock "think oil and gas to meet growing AI energy demand. On Thursday, we posted [LINK] "*Finally, the dirty little AI secret is revealed. BlackRock's #1 theme for the game changing AI industrial revolution is financing the future, says "think solar farms, power grids, oil and gas". 1st time specifically naming oil and gas as a winner in the AI mega trend. BlackRock 2025 global outlook "Meeting growing energy demand (think solar farms, power grids, oil and gas) will generate investment of US$3.5 trillion per year this decade" Prior to this, only used deliberately vague "low-carbon" Bullish for value of #Oil #NatGas going forward. #OOTT."* (i) Positive for oil and natural ga as BlackRock finally comes out of the closet to say the words oil and gas in their key investor theme. As opposed to their purposely vague "low-carbon" words. This is their first mention of think oil and gas when thinking about the biggest transformation theme for capital allocation for the coming years. It's the first mention so look for them to start to include it in their regular disclosure. (ii) BlackRock posted its 2025 Global Outlook this week and highlighted its view that AI is driving a major industrial revolution. Their first theme is "*This fundamentally different landscape*

upends the nature of investing, in our view. We think investors can find opportunities by tapping into the waves of transformation we see ahead in the real economy, with AI and the low-carbon transition requiring investment potentially on par with the Industrial Revolution. That's why our first theme is financing the future." And their "financing the future" page is where they finally specifically name oil and gas for the massive AI energy demand. They say "*Sizable capital will be needed as the transformation unfolds, and that investment is happening now. Major tech companies are starting to rival the U.S. government on research and development spending. But it's not just about the rise of AI and its buildout via data centers. Meeting growing energy demand (think solar farms, power grids, oil and gas) will generate investment of US$3.5 trillion per year this decade, according to the BlackRock Investment Institute Transition Scenario*." (iii) Prior to this disclosure, we have been highlighting how BlackRock has been using the vague "low-carbon" description. So now that they have admitted oil and gas, look for them to use the terms more in the future. We can't believe people didn't realize this long ago but we should now see more investors accept oil and natural gas is key to the AI datacenter growth. Our Supplemental Documents package includes excerpts from the BlackRock 2025 Global Outlook.

12/09/24: Blackrock, $3.5T/yr in capex, incl low-carbon, to meet energy demand

Here is what we also wrote in our Jan 12, 2025 Energy Tidbits memo on BlackRock estimating $3.5T/yr in capex to meet AI energy demand. *"BlackRock, $3.5T/yr in capex, incl low-carbon, to meet energy demand. On Monday, before we saw the BlackRock 2025 Global Outlook, we posted [LINK] "dirty little secret. low carbon = natural gas. see 👇12/12/24 post. AI Datacenter massive increasing need for 24/7 power is bullish for #NatGas. #OOTT." Our Monday poste linked to our Dec 11, 2024 post on BlackRock's use of "low-carbon" instead of saying natural gas. Here is what we wrote in our Dec 15, 2024 Energy Tidbits memo. "BlackRock, $3.5T/yr in capex to meet growing energy demand. We have been big believers that the value of natural gas will be going much higher as the energy transition unfolds and that is even more so with the emergence of AI data centers that need 24/7 reliable power. So as we see this golden age or super cycle for AI data centers, we see that bringing a similar bullish view for natural gas. It may have taken most of 2024 but we are finally seeing more people realize that AI data centers need 24/7 power as their priority and that means natural gas and keeping coal and nuclear plants from being retired as the only ways to have new 24/7 power in scale for the next decade. So whenever we see bullish AI data center forecasts and the associated increase in electricity demand, it is a reminder of the bullish mid- and long-term demand for natural gas. On Wednesday, we posted [LINK] "AI Data Center 24/7 power need is bullish for #NatGas. Low-carbon = #NatGas. BlackRock "I and the low-carbon transition require investment potentially on par with the Industrial Revolution.... Plus, meeting growing energy demand will generate US$3.5 trillion of investment per year this decade,,,," #OOTT." BlackRock's weekly commentary on Dec 9 highlighted the AI data center growth and need for massive growth in energy demand and hopefully low carbon as a priority. But like we have said before, it's like a dirty little secret that companies wit BlackRock don't want to use the words fossil fuels including natural gas when talking*

about the big energy demand to fuel the massive growth in energy demand for AI data centers. So the reminder we always make is low-carbon means natural gas. BlackRock wrote "More broadly, we think investors can find opportunities by tapping into the transformation we expect in the real economy. AI and the low-carbon transition require investment potentially on par with the Industrial Revolution. Major tech companies are starting to rival the U.S. government on research and development spending. Plus, meeting growing energy demand will generate US$3.5 trillion of investment per year this decade, according to the BlackRock Investment Institute Transition Scenario. We see private markets playing a vital role in financing the future. Big spending on AI and the low-carbon transition plus rising geopolitical fragmentation is likely to cause persistent U.S. inflation pressures. And an aging workforce could start to bite as immigration slows, likely keeping wage growth too high for inflation to return to the Fed's 2% target." Our Supplemental Documents package includes the BlackRock weekly commentary."

Energy Transition: Spring Festival means no China BUY Jan sales data posted

No BYD Jan sales data posted

We look every month for BYD car sales, which always come out on the 1st of every month. And with the time difference to Beijing, the monthly BEV/PHEV car sales are out when we turn on our laptop in the morning. We look to the BYD sales as they are the China and global leader in electric vehicles and their changing sales mix over the past two years was a key EV industry indicator for the shift from BEV to PHEVs. But yesterday we posted [LINK] "*Looks like Spring Festival holidays means no BYD production and sales report for Jan being posted today. Normally, BYD posts sales on the 1st day of every month for the just ended month. #OOTT."*

01/01/25: China's BYD Dec PHEV sales continue to dominate vs BEV sales

BYD's monthly sales mix has shown one key trend – buyers are moving away from BEV to PHEV. BYD doesn't sell HEVs. Here is what we wrote in our Jan 5, 2025 Energy Tidbits memo on BYD's PHEV sales dominating its BEV sales. "*China's BUY Dec PHEV sales continue to dominate vs BEV sales. On Wednesday, we posted [LINK] "Breaking! PHEVs keep dominating BEVs in China. Don't forget NEVs = BEVs + PHEVs. BYD Dec/YTD Dec 31: BEV: 207,734, +8.9% YoY. 1,764,992, +12.1% YoY. PHEV: 301,706, +101.9% YoY. 2,485,378, +72.8% YoY. PHEVs outselling BEV 1.5 to 1. Dirty little secret for PHEVs, what % of kms driven are in ICE vs electric mode. PHEVs are really just more fuel efficient ICE vehicles. See 👇09/04 tweet. Volvo said its PHEVs kms driven are 50/50 ICE vs electric mode. Unknown for Chinese PHEVs. Surely more kms in electric than Volvo but how much more? #OOTT." BYD posts its monthly NEV sales report on the 1st each month and posted its Dec 2024 sales update on New Year's Day. The Dec sales were the same trend as seen over the year – BEV sales are up modestly YoY but PHEV sales are up hugely YoY and dominate BYD's NEV sales. As a reminder in China NEV sales are the sum of BEV + PHEV sales. Our concern is that almost everyone refers to BYD's NEV sales without splitting between BEV and PHEV. We recognize it takes that extra step to go and get the split but there is likely a significant difference to the China gasoline consumption decline forecast if the cars are BEV vs PHEVs. This is not a question that the huge % increase in PHEVs is because the huge % is relative*

to a low base. BYD's PHEVs reached parity to BEV volumes about a year ago. So the YoY % growth between the two is from a similar bases in 2023. For Dec, BEV sales were +8.9% YoY to 207,734 and a 40.4% share of BYD's NEVs, whereas PHEV sales were +101.9% YoY to 301706 and a 5.6% share. For full year 2024, BEV sales were +12.1% YoY to 1,764,992 and a 41.3% share whereas PHEV sales were +72.8% YoY to 2,485,378 and a 58.2% share. And PHEVs are now about 1.5x BEV sales. Our table below shows the BYD Dec and YTD Dec 31 (full year 2024) NEV sales split into BEV, PHEV, Commercial vehicles – bus and Commercial vehicles – Others. Our Supplemental Documents package includes the BYD release this morning."

Figure 69: BYD New Energy Vehicle Sales for Dec 2024

BYD New Energy Vehicle Sales - Dec 2024

	Dec-24	% Share	Dec-23	% Share	Volume Δ	*% change*
BEV	207,734	40.4%	190,754	55.9%	16,980	*8.9%*
PHEV	301,706	58.6%	149,424	43.8%	152,282	*101.9%*
Commercial Vehicle - Bus	1,385	0.3%	805	0.2%	580	*72.0%*
Commercial Vehicle - Others	3,994	0.8%	60	0.0%	3,934	*6,556.7%*
Total	**514,819**	**100.0%**	**341,043**	**100.0%**	**173,776**	***51.0%***

	YTD Dec 24	% Share	YTD Dec-23	% Share	Volume Δ	*% change*
BEV	1,764,992	41.3%	1,574,822	52.1%	190,170	*12.1%*
PHEV	2,485,378	58.2%	1,438,084	47.5%	1,047,294	*72.8%*
Commercial Vehicle - Bus	5,580	0.1%	4,705	0.2%	875	*18.6%*
Commercial Vehicle - Others	16,195	0.4%	6,806	0.2%	9,389	*138.0%*
Total	**4,272,145**	**100.0%**	**3,024,417**	**100.0%**	**1,247,728**	***41.3%***

Source: BIYD Production and Sales Volumes for December 2024, posted Jan 1, 2025
Prepared by SAF Group

Source: BYD

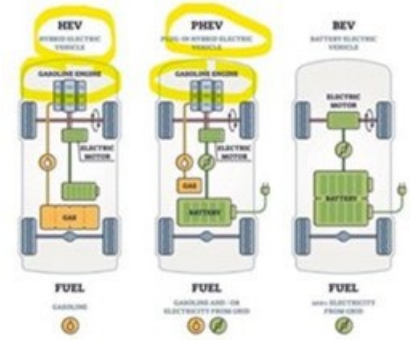
Big unknown – how much do Chinese drive in ICE vs electric mode

It seems like a dirty little secret for car companies to keep as to how much their PHEVs are driven in ICE mode vs electric mode. It is a split that they must all have but don't disclose whether it is in China, Europe or the US. The only clear statement we have seen was from Volvo and that wasn't in any disclosed reports, rather it was in the response in a conference call on how the km driven by their PHEVs is about 50/50 split ICE vs electric mode. Our BYD post highlighted this unknown. Our Wednesday post said "*Dirty little secret for PHEVs, what % of kms driven are in ICE vs electric mode. PHEVs are really just more fuel efficient ICE vehicles. See 👇09/04 tweet. Volvo said its PHEVs kms driven are 50/50 ICE vs electric mode. Unknown for Chinese PHEVs. Surely more kms in electric than Volvo but how much more?*" BYD newer higher end cars are moving more extended range electric, which has to help them drive more in electric mode. But we don't know what % of kms are driven in ICE vs electric mode. In our prior posts on the BYD data, we remind that the vast majority of Chinese in cities live in apartments vs single family homes. And given that most of these apartments were built in the big China boom from 2000 to Covid, we doubt that they were set for broad EV charging for most of the residents. Only BYD and therefore Chinese govt knows the data on how many kms these millions of PHEVs are driven in ICE mode vs electric mode.

HEVs & PHEVs are really just more fuel efficient ICE vehicles

We call it a dirty little secret by the car companies but, for some reason, they don't want to disclose what % of kms are their PHEVs driven in ICE mode vs electric mode. They have the data and we would have thought that would be some sort of sales/marketing pitch for the value equation of PHEVs vs ICE if they are driven mostly in electric mode. But that data doesn't seem to be something they disclose. As noted in our BYD post on Jan 1, 2025, it is unknown what % of kms are driven in ICE vs electric mode given vast majority of Chinese in cities live in apartments build in prior boom. Although, given that more BYD higher end PHEVs have are extended range electric, we would expect that Chinese drive their PHEVs more in electric mode than driven by Volvo's PHEV owners. We linked to our prior disclosure on Volvo saying their PHEVs are driven about 50/50 in gasoline vs electricity mode. In the western world, HEVs are the big winners as opposed to PHEVs in China. The emergence of HEVs and PHEVs is a win or at least a much lesser loss of gasoline/diesel consumption vs EVs. No one can deny an HEV will burn less gasoline or diesel than its ICE counterpart. However, we still find many don't understand that HEVs and even PHEVs are really just more fuel-efficient ICE vehicles and, in particular, for PHEVs that are generally lumped in with EVs for an electrified car group. HEVs and PHEVs run on gasoline or diesel for likely at least half of the time for PHEVs, at least for Volvo's, and probably 90% for HEVs. On Sept 4, we tweeted [LINK] "*HEV/PHEV 101 - They are really just more fuel efficient ICE. Ford: HEV F150 does 23 mpg vs ICE150 at 19 mpg. Volvo: PHEVs km driven are split 1/2 using battery, 1/2 using petrol/diesel. #OOTT."* Our tweet referenced Ford and Volvo data on HEVs and PHEVs. On Ford F150 Hybrid vs ICE mpg. Our tweet included the EPA rated mileage for the Ford F150 ICE vs Hybrid. The EPA rates the Hybrid fuel efficiency as being only 4 mpg more than the ICE. That increased fuel efficiency would be reduced if it was a full apples-to-apples comparison. The ICE has a much larger towing capacity. The F150 ICE 3.5L cyl F-150 does 19 MPG with a tow capacity of 13,500 lbs. The F150 HEV 3.5L 6 cyl F-150 does 23 MPG with a tow capacity of 11,200 lbs. On Volvo PHEVs, most just lump PHEVs in with EVs because both are electrified. But the reality is that a lot of PHEV is driven in ICE mode. As noted earlier, Volvo backed off its fully electric plans and its press released noted "*Volvo Cars' most recent data shows that around half of the kilometres covered by the latest plug-in hybrid Volvo cars are driven on pure electric power."* So based on the "most recent data", Volvo PHEVs are driven around 50/50 between km driven in battery mode vs ICE mode. Given the press release was Volvo having to back away from its electrified goals, we have to be believe the "around half" driven by PHEV is likely below half. We also believe that Volvo has likely picked the best time period for PHEVs driving in battery mode. We would assume the most recent data is referring to some spring/early summer period and it does not include winter months where the PHEVs will be driven more in their ICE mode.

Figure 70: HV vs PHEV vs BEV

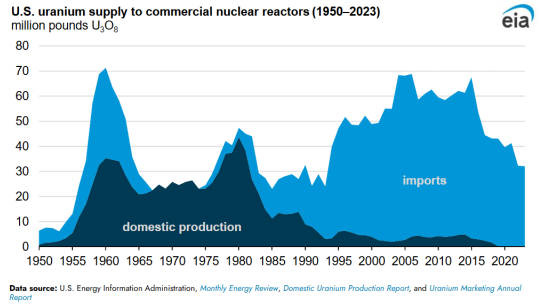


Source: Engineering Infrastructure

Energy Transition: US imports all of its uranium, Canada is the #1 supplier

No surprise, Trump's tariffs on Canada also exclude US uranium imports from Canada. The US imports 99% of its U3O8 (uranium concentrate) needed to make nuclear fuel. And Canada is the #1 supplier. So if the US can't really risk any supply issues with the supply of U3O8 imports from Canada. On Friday, we posted [LINK] "*Canada is #1 supplier of U3O8 to US. Good reminder from @EIAgov of another key commodity Trump can't risk seeing a supply interruption from Canada - Uranium for nuclear power plants! #Uranium.*" Our post included the EIA's Jan 30 blog "U*.S. nuclear generators import nearly all the uranium concentrate they use*". [LINK] The EIA wrote "*U3O8 is chemically extracted from uranium ore that has been mined and milled. The fine powder is packaged in steel drums and later enriched and processed further to prepare it for use as fuel in nuclear reactors. U.S. production of U3O8 in the third quarter of 2024 totaled 121,296 pounds, a 24% increase from production of 97,709 pounds in the second quarter. Production in the third quarter occurred at five U.S. facilities: three in Wyoming (Nichols Ranch ISR Project, Lost Creek Project, and Smith Ranch-Highland Operation) and two in Texas (Alta Mesa Project and Rosita).*
In 2023, the United States imported U3O8 and equivalents primarily from Canada, Australia, Russia, Kazakhstan, and Uzbekistan. The origin of U3O8 used in U.S. nuclear reactors could change in the coming years. In May 2024, the United States banned imports of uranium products from Russia beginning in August, although companies may apply for waivers through January 1, 2028." Our Supplemental Documents package includes the EIA blog.

Figure 71: US uranium supply to commercial nuclear reactors



Source: EIA

Energy Transition: Will Canada's 1st SMR by 2029 set stage for SMRs growth in 2030s

Canada's 1st SMR by 2029

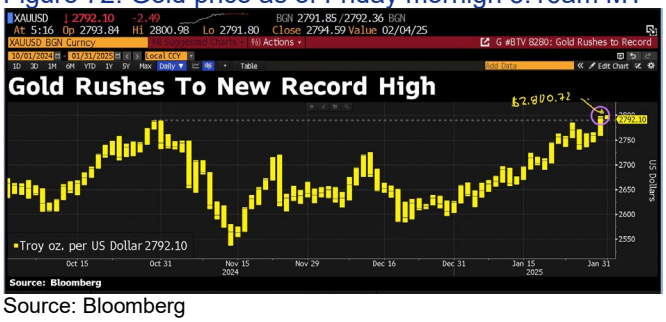
Yesterday, we posted [LINK] "*Overlooked! Will @opg 1st SMR nuclear power at Darlington set the stage for visibility & confidence SMRs can scale up in 2030s? Darlington SMR is 1st G7 SMR, on track for by 2029 start. @JustinTrudeau. Until SMRs, only scalable new 24/7 power is #NatGas & #Coal. #OOTT @BWXT."* We still believe SMRs, or mini-nukes as we have called them for decades, aren't going to be there in scale for a decade. However, we saw an indicator that there could well be visibility to ramp up mini-nukes for the 2030s as we get to 2030. The reason is Canada. It has been overlooked but Canada is on track for the G7's first SMR (small nuclear modular reactor or mini-nuke) to be on stream before 2029. But thanks to my former nuclear power executive friends, who made sure we saw Trudeau's Tuesday release "The Canada-Poland Nuclear Energy Cooperation Agreement" [LINK], which included in the below the memo Quick Facts the reminder "*Canada expects to be the first G7 country to have the first operational SMR, the GE-Hitachi BWRX-300, by 2029. It is under active development by Ontario Power Generation at its Darlington Nuclear Station, and Poland is watching developments at Darlington closely, as it plans to deploy the same SMR technology shortly thereafter."* On Monday, BWX Technologies announced [LINK] "*BWXT Awarded Historic Manufacturing Contracts to Support Pickering Life Extension and Darlington New Build Projects*" . "*BWX Technologies, Inc. (NYSE: BWXT) announced today contracts with a total value of more than C$1 billion for two major nuclear energy projects that will enable Ontario Power Generation's (OPG) life extension of the Pickering Nuclear Generating Station, and the deployment of a new small modular reactor (SMR) at the Darlington site." "The BWRX-300 scheduled for the OPG Darlington New Nuclear Project is on track to be the first on-grid SMR among G7 nations. The design is a 300-MWe water-cooled, natural circulation SMR with passive safety systems that leverages the design and licensing basis of GEH's U.S. NRC-certified ESBWR."* Our Supplemental Documents package includes the Trudeau release and the BWX Technologies release.

Capital Markets: Safe haven investors drive gold over $2,800

Gold hits $2,800

We had coffee with some older investors this week who described the uncertainty and daily ups and downs as welcome to Trump's world and they laughed. And they both said that there are too many events each day to follow and too much volatility to risk. We suspect they are far from alone and that the best evidence is how the search for safety has driven gold over $2,800. On Thursday, we posted [LINK] "*Gold hit $2,800.72 this morning. Gold winning with its traditional safe haven home with increasing risk of trade wars spurred by Trump's still planning to hit CAN and MEX with 25% tariffs tomorrow. #OOTT*." Gold closed hit $2,838 on Friday morning and closed at $2.812.50.

Figure 72: Gold price as of Friday mornign 3:16am MT



Source: Bloomberg

Twitter/X: Thank you for getting me to 12,000 followers

@Energy_Tidbits on Twitter

Last month, I went over 12,000 followers on Twitter/X. I really appreciate the support and, more importantly, some excellent insights and items to look at from Twitter/X followers. It helps me do a better job. For new followers to our Twitter/X, I am 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. My Twitter/X handle is @Energy_Tidbits and can be followed at [LINK]. I wanted to use Energy Tidbits since I have been writing Energy Tidbits memos for 25 consecutive years. Please take a look thru my tweets and you can see I don't just retweet other tweets. Rather I try to use Twitter/X for early views on energy items. Our Supplemental Documents package includes our tweets this week.

Misc Facts and Figures.

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

Wine of the week: 1999 Isole e Olena Collezione de Marchi Cabernet Sauvignon

In August, I started the wine of the week when I realized I had to get to opening up some wines bought 20 to 30 years ago that included some that, unfortunately, were getting past their prime. One of the negatives of the change in life from Covid was a huge absence of entertaining at home, which means there has been a big shortfall in wine drinking at our home. So am now making sure what, when I bought them 15-25 years ago, were some good wines and make sure bottles get opened especially as many are 20 to 40 years old. On Thursday night, I posted the wine of the week, the 1999 Isole e Olena "Collezione de Marchi" Cabernet Sauvignon. Isole e Olena was one of my favorite Tuscany wines and went to the top after I had the chance to visit the winery in 2004 for a tasting. Paolo de Marchi was away but his wife Marta took us thru a private tasting. Ever since, I buy the vin santo, the chianti, the Cepparello. But also still have some of the pre 2005 cabernet sauvignon. So I have a bias to always want to love any Isole e Olena wine. The last time I opened a 1999 cabernet sauvignon was probably a decade ago and it was great. But it was still drinking fine on Thursday. I switched over to the Cepparello and loaded up on some of their big years like the 2007, which are drinking great right now.

Figure 73: 1999 Isole e Olena "Collezione de Marchi" Cabernet Sauvignon

Source: SAF Group, K&L Wines

Costco switches from Pepsi to Coke to preserve the $1.50 hot dog & soda

Big news at last week's (Jan 23) Costco annual meeting when mgmt confirmed it was switching from Pepsi to Coke at its food courts. It was done to preserve the cost structure and so the food courts could still offer the $1.50 hot dog and soda. They know their $1.50 hot dog and soda is one of their must not change unless there is no other option. So made the decision to switch back to Coke. In the Q&A, Costco CEO confirmed ""*Yes, that is accurate" "This summer we will be converting our food court fountain business back over to Coca-Cola."* This is a switch back to Coke. Pepsi took the business from Coke in 2013 after Coke had the business for 27 years.

Cannoli with lemon cream filling for US $2.20

We don't check it every week but enjoy checking out @FootyScran for concession food around the world in football (soccer) stadiums. It's concession food so it's what you expect at stadium concessions – quick and standard. Some of it looks like you want to try and some looks like you would never try. But one that wasn't what you wouldn't expect at concessions were the cannoli with lemon cream filling at Juventus Mooca in Brazil that cost 13 reais or $2.20.

Figure 74: Cannoli with lemon cream filling at Juventus Mooca in Brazil

Source: Footy Scran

Lay's potato chips recalled for risk of life-threatening allergic reaction

First time we can recall ever seeing an urgent recall for potato chips because it could lead to a life-threatening allergic reaction.It was from Dec 16 but we didn't see it until this week. The US FDA posted [LINK] "*Frito-Lay Issues Limited Recall on Undeclared Milk in Lay's Classic Potato Chips Distributed in Oregon and Washington*." "*Frito-Lay today issued a recall of a limited number of 13 oz. bags of Lay's Classic Potato Chips that may contain undeclared milk, after being alerted through a consumer contact. Those with an allergy or severe sensitivity to milk run the risk of a serious or life-threatening allergic reaction if they consume the recalled product. The product included in this recall was distributed to certain retail stores and e-commerce distributors in Oregon and Washington. Consumers would have been able to purchase these chips as early as November 3, 2024. No allergic reactions related to this matter have been reported to date.*"