

Energy Tidbits

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TC Energy CEO must Expect FID on 1.8 bcf/d LNG Canada Phase 2 as he is "Very Bullish" on Prospects for CGL Phase 2

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. Surely TC Energy CEO has reason to believe FID is coming for LNG Canada 1.8 bcf/d Phase 2 as he is "very bullish" on prospects for CGL Phase 2. [click here]
- 2. Trump supports AI data centers bypassing the grid to have their own power plants and the plants will be mostly powered by natural gas and then coal. [click here]
- 3. This morning, Kurdistan confirmed it has reached an agreement with Iraq to resume its oil exports via Turkey. [click here]
- 4. Hard to see how Trump doesn't restrict Venezuela oil exports unless he wants to maintain Biden's "mess". [click here]
- Today's US cable news programs will be dominated by Zelensky live press conference (still going on at 7:55am MT) just now saying Ukraine cannot reimburse the US for its grants/aid and can't exchange it into debt. [click here]
- 6. Hard to see how Chinese consumer don't say cautious as their most important asset, their homes, keep going down in value. [click here]
- 7. Please follow us on Twitter at [LINK] for breaking news that ultimately ends up in the weekly Energy Tidbits memo that doesn't get posted until Sunday noon MT.
- 8. For new readers to our Energy Tidbits and our blogs, you will need to sign up at our blog sign up to receive future Energy Tidbits memos. The sign up is available at [LINK]

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Natural Gas: -196 bcf draw in US gas storage, now -386 bcf YoY

The brutal cold for the last few weeks has been great for storage. For the week ending Feb 14, the EIA reported a -196 bcf draw [LINK]. Total storage is now 2.101 tcf, representing a deficit of -386 bcf YoY compared to a deficit of -248 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 Feb 14 saw storage at -118 bcf below the 5-yr average, down from last week's deficit of -67 bcf 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

						HISTORICAL C	ompansu	115
		billion	Stocks cubic feet (Bcf)		ear ago 2/14/24)	5-year average (2020-24)		
Region	02/14/25	02/07/25	net change	implied flow	Bcf	% change	Bcf	% change
East	419	468	-49	-49	513	-18.3	483	-13.3
Midwest	494	559	-65	-65	640	-22.8	581	-15.0
Mountain	182	193	-11	-11	174	4.6	129	41.1
Pacific	208	224	-16	-16	218	-4.6	189	10.1
South Central	799	853	-54	-54	942	-15.2	837	-4.5
Salt	214	229	-15	-15	276	-22.5	235	-8.9
Nonsalt	585	624	-39	-39	666	-12.2	603	-3.0
Total	2,101	2,297	-196	-196	2,487	-15.5	2,219	-5.3

Source: EIA

Storage deficit from -57 bcf YoY to -386 bcf YoY in four weeks

It's been a great run for HH in the past few weeks with the cold temperatures across most of the Lower 48. On Thursday, we posted [LINK] "Brutal cold over most of Lower 48 for past few weeks has been great for #NatGas. Storage -57 bcf YoY went to -386 bcf YoY over four weeks. HH closed \$4.16. #OOTT." Our post included our regular table that shows how the YoY changes in storage change for the last eight weeks to show the trends. It shows how the YoY deficit moved from -57 bcf YoY on Jan 17 to -386 bcf YoY on Feb 14.

Figure 2: Previous US Natural Gas Storage

Previous 8 weeks (Bcf)									
Week	Gas in	Weekly	Y/Y Diff	Diff to					
Ended	Storage	Change		5 yr Avg					
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					
Jan/31	2,397	-174	-208	-111					
Feb/07	2,297	-100	-248	-67					
Feb/14	2,101	-196	-386	-118					
	1.4								

Source: EIA

Natural Gas: NOAA expects warmer than normal temps in South for March

As noted above, there might some cold in the NE US to start March that might drive some #NatGas demand but normally March is the transition month from winter to shoulder season. And so there isn't normally any major weather driven natural gas demand. Shoulder season, especially in most of the populous US tends to be what we have always called leave the NOAA monthly temp outlook

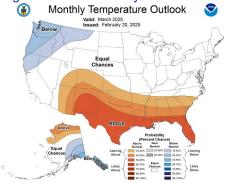
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-196 bcf draw in US gas storage



windows open weather. On Thursday, NOAA posted its 30-day forecast for March and the temperature probability calls for warmer than normal temperatures with some colder temperatures emerging in the Northwest for the Lower 48 [LINK]. The rest of the lower 48 forecasted to have equal chances of above or below average temperatures. We recognize that weather forecasts are far from 100% accurate, but near-term forecasts tend to have greater accuracy. Below is the NOAA temperature probability outlook forecast for March released on February 20.

Figure 3: NOAA 30-day forecast for Feb



Source: NOAA

NOAA, March 2024 was 16th warmest March on record for the contiguous US Here is what we wrote in our April 14, 2024, Energy Tidbits memo. "We started warning on the hot winter in Q4/23 with the reminder that it is always tough for natural gas markets to catch up from a warm start to winter. And that the only way that happens is if there is sustained cold weather in Jan and Feb. Unfortunately, the hot weather played out all winter. On Friday, the NOAA released their March recap for statewide average temperatures, which revealed March 2024 was the 16th warmest the US has seen in the past 130 years. For the most part, temperatures were normal except for NE states which were "much above" average. In a news release [LINK], the NOAA wrote "The average temperature of the contiguous U.S. in March was 45.1°F, 3.6°F above average, ranking 17th warmest in the 130-year record. March temperatures were above average across much of the contiguous U.S., while below-average temperatures were observed in small pockets of the West and Southwest". Below is a picture of statewide average temperature ranks in March."





Figure 4: NOAA Historical US Temperature Ranks by State - March 2024

Natural Gas: NOAA forecasts warmer than normal temp for Jun/Jul/Aug

February is almost over and March tends to be the transition month for natural gas from winter to shoulder season. There can be some cold winter temperatures driven natural gas demand to start March but that is typically modest. And we qualify that by our reminder that weather forecasts are never 100% predictable. However the late March, April and May tend to be what we look at as shoulder season where there isn't any significant weather driven natural gas demand. So the next weather driven natural gas demand period will be summer. Summer is still four months away so it's early for most to focus on natural gas and summer. On Thursday, we posted [LINK] "Summer is still 4 mths away but @NOAA's updated look at the start to summer still calls for a warmer than normal Jun/Jul/Aug. It's still early to focus on summer #NatGas but brutal Feb cold taking storage to -386 bcf YoY will bring more focus on spring storage refilling. #OOTT." Our post included NOAA's updated monthly JJA 2025 outlook [LINK], which expects warmer than normal temperatures across almost all of the US.

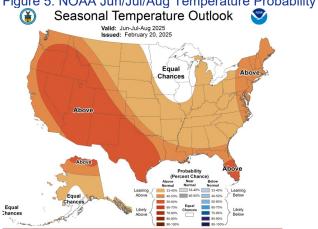


Figure 5: NOAA Jun/Jul/Aug Temperature Probability Forecast

Source: NOAA

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NOAA Jun/Jul/Aug temp forecast



Natural Gas: Precision, Haynesville/Marcellus want high \$3/mid \$4's to up drilling

On Monday, we posted [LINK] "Something to drag up HH #NatGas prices in H2/25? Increasing US #LNG exports in 2025. But Precision & other service co's see their Haynesville customers wanting higher #NatGas prices before they crank up drilling? Precision Q4 hears high \$3's to mid \$4's. #OOTT." One of the common comments from the Haynesville producers is that they need higher natural gas prices to incentivize any significant increase in shale gas drilling and fracking, even in the face of increasing US LNG exports. Precision is another who hears the same thing from their Haynesville customers. In the Q&A, mgmt was asked "... at a recent energy conference, a few Haynesville producers suggested they wanted to see significantly higher gas prices before they put new rigs to work..." Precision mgmt replied "Yeah, Aaron, so I think I've heard the same narrative you've heard, and that price range that customers are comfortable with ranges from kind of high threes to mid-fours for non-X gas. We understand that. We've had a number of conversations with customers, both in the Marcellus and in the Haynesville."

Natural Gas: Trump wants Marcellus gas for New England, therefore not Ontario

In conversations with some eastern Canada friends on the following item from last week's (Feb 16, 2025) Energy Tidbits memo on whether Trump would stop US natural gas exports to Ontario, we said that it wasn't that Trump would stop the natural gas exports. Rather, it's Trump wanting to get natural as pipelines into and within New England so US natural gas can penetrate those markets. Our point was that, if so, that would mean less Marcellus/Utica natural gas for export. Here is what we wrote last week. "Trump wants Marcellus gas for New England, therefore not Ontario. Earlier this morning, we posted [LINK] on Trump's Friday Executive Order establishing his Energy Dominance Council and noted the winners/losers from the his mandate to the council. Our post included "#Marcellus #NatGas wins "approving the construction of natural gas pipelines to, or in, New England, California, Alaska, and other areas of the country underserved by American natural gas; " Note the "or in". Eastern Canada loses if Marcellus NatGas can stay in US and doesn't get exported to eastern Canada. ie. ~0.6 bcf/d via Niagara Falls." Trump wants to get natural gas pipelines to and into New England, which has been for a well over a decade something Marcellus producers have been trying to done but haven't been able to get approved federal and state regulators. We would expect Trump's federal regulators to be okay but then the guestion will be the states. And knowing Trump's style, there will be some sort of big threat to force the states to ultimately get onside. IF so and it is still an IF, then it will mean Marcellus/Utica natural gas can feed local regional markets and it should lead to lower Marcellus gas price differentials. Then the flip side is that IF Marcellus gas can stay regional, then it would mean less natural gas exports at Niagara Falls to Ontario. This was a big event 15 years ago when Marcellus natural gas started to be exports via Niagara Falls. It went from zero to its current ~0.6 bcf/d. Earlier this morning, we also posted [LINK] "Marcellus #NatGas exports ~0.6 bcf/d to Ontario via Niagara Falls export point per @EIAgov. IF and a big IF, Trump Energy Dominance Council can get pipelines to and IN New England, be better market for Marcellus than Canada. #OOTT." Our post included the below EIA graph of natural gas exports to Ontario at the Niagara Falls export point."

US shale players need higher prices to drill more

Trump wants natural gas into New England



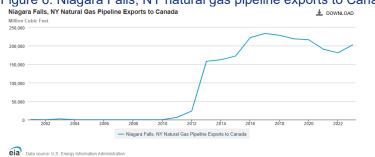


Figure 6: Niagara Falls, NY natural gas pipeline exports to Canada

Source: EIA

Natural Gas: Southern reminds big value uplift to existing natural gas power plants

Even prior to the AI data center boost, one of our big themes for the past few years has been that existing natural gas power plants will see a value uplift as the energy transition was going to take way longer, cost way more and be a rocky/bumpy road. We have said this about the energy transition for many years. And it meant that relatively new existing natural gas power generation would have big upside lift to value as renewable proved to not match the pace and reliability of the energy transition aspirations. And then in the last year, data centers have taken that to a new level as the market started to realize in 2024 that renewables couldn't power data centers. The data centers would take as much renewable power as available but they needed natural gas, coal and nuclear for their 24/7 power generation. This means existing natural gas power generation will have an even bigger value uplift. Southern made a very clear statement on this this view in their Q4 call on Thursday. In their prepared remarks, mgmt said "First, as contracts on our existing natural gas fleet come up for renewal beginning in the early 2030, the load growth in the Southeast is expected to support future renewal pricing that is significantly higher than our existing contracts. Second, meaningful upgrade opportunities are being evaluated on Southern Power's legacy natural gas fleet. These could translate into several hundred additional megawatts available to meet future market demands for capacity. Third, Southern Power has options at its existing plant sites to build new brownfield power plants in the Southeast. And, lastly, Southern Power is exploring opportunities outside of the Southeast to serve data centers with new natural gas generation. We are very gratified to have developed and retained this incredibly valuable business, as it represents a tremendous opportunity to support sustainable growth well into the next decade."

Natural Gas: TC Energy CEOs "very bullish" on CGL Phase 2 ie. LNG Canada Phase 2

We were surprised that TC Energy CEO Poirier's Feb 14 "very bullish" view on CGL Phase 2 proceeding didn't get an attention from media and analysts. CEO Poirier clearly points to the expectation for Shell and LNG Canada to FID the 1.8 bcf/d LNG Canada Phase 2. So on Thursday, we posted [LINK] "02/14/25: TC Energy CEO is "very bullish about the prospects for CGL Phase 2". CGL Phase 2 will supply #NatGas for LNG Canada brownfield 1.8 bcf/d Phase 2. Surely CEO Poirier has reason to believe Shell/LNG Canada Phase 2 FID is highly likely to go. #OOTT. Coastal GasLink Phase 2 is the expansion of the Coastal GasLink that will add compression and equipment so the Coastal GasLink pipeline that feeds LNG Canada 1.8 bcf/d Phase 1 can handle double the natural gas so that the expanded CGL, CGL Phase

Big value uplift to natural gas power plants

LNG Canada 1.8 bcf/d Phase 2?

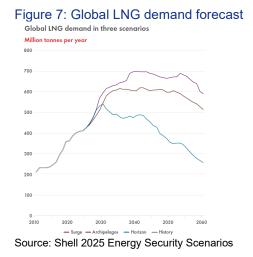


2, can deliver all the natural gas for LNG Canada 1.8 bcf/d Phase 2. On the Q4 call, CEO Poirier highlighted he is "very bullish" for CGL Phase 2 and our view is simple – Surely CEO Poirier has reason to believe that Shell/LNG Canada will FID the LNG Canada 1.8 bcf/d Phase 2 in the coming weeks or months. There is no way a big company CEO would say he is very bullish on a project proceeding that depends on another party's FID unless he had reason to believe that the other party would FID their project. Our post included an excerpt from the transcript of CEO Poirier's reply in the Q&A "On the natural gas side, there is absolutely demand for more LNG export and market opportunity for us to prosecute. We're very bullish about the prospects for CGL Phase 2 happening. That, of course, is only an input into the FID decision that our customer LNG canada will make in due course."

02/12/25:Shell sees significant LNG demand growth, LNG Canada Phase 2 FID?

Shell is holding its LNG Outlook 2025 on Tues Feb 25. But we thought Shell previewed that investors should expect to see a bullish outlook for LNG demand. Here is what we wrote in last week's (Feb 16, 2025) Energy Tidbits memo. "Shell sees significant LNG demand growth, LNG Canada Phase 2 FID? Shell is holding its big LNG Outlook 2025 on Feb 25, but it looks like they gave away the LNG views in their just released Shell 2025 Energy Security Scenarios posted on Wed. Early Wed morning, we posted [LINK] "Spoiler alert for Shell's LNG Outlook 2025 on Feb 25. "In all three scenarios, LNG shows significant [demand] growth in the near term". Q Shell 2025 Energy Security Scenarios. This demand outlook should be favorable for LNG Canada 1.8 bcfd Phase 2 FID in 2025. #OOTT #NatGas." Our post included Shell's slide "LNG in three scenarios". And Shell is very bullish on LNG demand growth. We wish they would just use scenarios with normal names. Rather Shell has three scenarios. Horizon is really another way of saying Net Zero, it is the "rapid acceleration of the energy transition" that will sharply reduce emissions to reach net zero by 2050 and limit global warming to 1.5C by end of the century. Archipelagos seems to be something like but not quite a business as usual case. Surge is "an era of robust economic growth is ushered in by AI technologies that are welcomed and not overly challenged, with economic growth and AI infrastructure driving up energy demand." Here is what Shell wrote on LNG. "In all three scenarios, liquefied natural gas (LNG) shows significant growth in the near term, fuelled by ongoing projects in Qatar and the USA, reaching around 550 million tonnes per year (mtpa) by the end of the decade. Divergence between the scenarios is a function of project timelines up until about 2030, but after that the scenarios diverge significantly as the different scenario drivers take hold." No surprise, the Net Zero type scenario shows LNG dropping steadily after 2030 to meet Net Zero emissions. But the other two scenarios see strong global LNG demand growth after 2030. It is why our post included the comment that this LNG demand growth outlook should be good for the potential of a FID for LNG Canada 1.8 bcf/d Phase 2. Below is the Shell Global LNG demand graph."





Natural Gas: WMO sees warm temps around the world in the lead-in to summer

Summer is still four months away so it's too early for most to trade on summer temperature forecasts especially as we have seen with this winter, temperature forecasts are far from 100% accurate. And the major natural gas demand countries are moving into shoulder season where there is not normally any strong weather driven demand for natural gas. However, natural gas players at least like to see it expected to be warmer than normal temperatures in the lead-in to summer. Yesterday, we posted [LINK] "This @WMO temperature fcast is for Mar/Apr/May so it's not for peak summer temperature driven demand for #NatGas, #Electricity #Oil. BUT WMO is calling for above normal temps pretty well everywhere in the world. So may not be for summer but points to a hot lead in to summer when hot temps make a difference for energy demand. #OOTT." On Wednesday, the WMO posted its outlook for Mar/Apr/May and they temperatures and they are calling for a very warm lead-in to summer across almost all of the world. The exception being Canada and the NW US. WMO wrote "there is a prediction of above-normal temperatures over almost all land areas. Extensive areas of increased probabilities for above-normal temperatures include most of mainland Africa and Madagascar, nearly all of mainland Asia, South America between the equator and 20°S, the Caribbean, Central America, the southern and eastern regions of North America below 45°N, throughout the western Pacific west of 160°E, and across all of Europe. Regions with a large increase in the probability for above-normal temperatures include the Arabian Peninsula, extending eastward into the northern parts of Eastern Asia, the western coastal regions of the Indian subcontinent and Southeast Asia, and a horseshoe pattern emanating from the Maritime Continent and extending north-eastward and south-eastward into the north and south Pacific. Regions with no clear indication for predicted signal include eastern parts of Southeast Asia and the northeastern regions, and western coastal parts of North America." Our Supplemental Documents Package includes the WMO forecast..

WMO MAM temperature forecast

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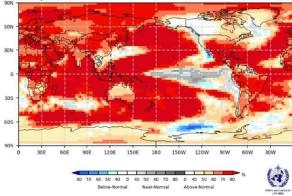


Figure 8: WMO Mar/Apr/ temperature probability 2m Temperature : MAN2023 (issued on Feb2025)

Source: WMO

Natural Gas: Oman LNG signs long-term 0.11 bcf/d LNG supply deal with Mercuria

On Tuesday, Oman LNG announced that the company signed a long-term LNG sales agreement with Mercuria Energy Group for 0.11 bcf/d for 10-years, with first deliveries to begin in April of 2025 [LINK]. The agreement is set to help drive Oman LNG's expansion by fostering a partnership with Mercuria, a Switzerland based global leader in independent energy and commodity trading. The press release said "Hamed bin Mohammed al Naamany, Chief Executive Officer of Oman LNG, explained that the agreement will help drive the company's expansion by fostering a partnership with Mercuria Energy Group and providing greater market access. He reaffirmed Oman LNG's dedication to offering energy solutions that bolster global energy security and promote sustainability." The CEO of Mercuria Energy Group, Marco Dunand, said "This partnership aligns with Mercuria's strategy to expand its portfolio in the LNG sector and meet growing market demands." Our Supplemental Documents Package includes the Mercuria press release.

Natural Gas: Centrica signs long-term 0.11 bcf/d LNG supply deal with Petrobras

On Thursday, Centrica announced that it had signed a long-term LNG sales agreement with Petrobras for 0.11 bcf/d for 15-years, with first deliveries to begin in 2027 [LINK]. The agreement is approximately 30% of Centrica's US portfolio and will be sourced from its Sabine Pass and Delfin supply agreements. The press release said "*This new partnership underscores Centrica's commitment to deliver secure and sustainable energy solutions in the transition to a lower carbon future. The agreement marks a significant step in expanding Centrica's global LNG business, diversifying the locations it can deliver LNG to and supporting energy security in Brazil with an important new long-term partner." The CEO of Centrica, Chris O'Shea, said "<i>This agreement demonstrates our approach to building long-term partnerships while derisking our portfolio as new LNG supply comes into the market over the coming years.*" Our Supplemental Documents Package includes the Centrica press release.

Oman LNG / Mercuria sign LT LNG supply deal

Centrica & Petrobras 15 yr LNG supply deal

There have been 28.41 bcf/d of long-term LNG supply deals since July 1, 2021

It's been a busy last five years of long-term LNG deals and, even though high-profile



calls, such as the IEA are for peak natural gas consumption by 2030, buyers continue to lock up long-term LNG supply. This 5-year big wave of LNG deals started in July 2021, and we highlighted this in our July 14, 2021, 8-pg "*Asian LNG Buyers Abruptly Change and Lock in Long Term Supply – Validates Supply Gap, Provides Support for Brownfield LNG FIDs*". We continue to update that table, which now amounts to 28.41 bcf/d of long-term LNG deals since July 1, 2021. 65% of the deals have been by Asian LNG buyers. Note in our non-Asian LNG deals, major LNG players (i.e. Chevron, Shell, etc.) are buying for their LNG portfolio supply. China has been particularly active in this space, accounting for 42% of all Asian LNG buyers in long term contracts since July 1, 2021. There have been so many long-term LNG deals since the market changed back to long-term LNG deals in the spring of 2021 that we have now summarized on a per quarter basis. But our Supplemental Documents package includes our detailed by deal table for all long-term LNG deals since July 1, 2021.

Long-Term LNG Quart	erly Deals Since Jul	y 1, 2021				
Quarter	Deals	Volume	Average deal length	Asian buyers	European buyers	Other buyers
	(#)	(bcf/d)	(years)	(%)	(%)	(%)
Q3 2021	6	1.6	15.3	83.8%	16.3%	0.0%
Q4 2021	13	2.1	15.4	94.8%	5.2%	0.0%
Q1 2022	8	2.3	19.5	77.1%	0.0%	22.9%
Q2 2022	18	3.7	18.6	44.0%	42.1%	13.9%
Q3 2022	9	1.8	19.3	54.1%	7.3%	38.6%
Q4 2022	7	1.4	17.4	55.4%	44.6%	0.0%
Q1 2023	7	1.3	17.1	69.1%	30.9%	0.0%
Q2 2023	9	2.0	18.4	69.6%	26.5%	3.9%
Q3 2023	9	1.1	14.1	37.8%	9.2%	53.0%
Q4 2023	10	2.2	20.8	33.6%	58.7%	7.7%
Q1 2024	10	2.1	15.7	93.9%	6.1%	0.0%
Q2 2024	10	2.1	14.3	41.3%	8.9%	49.8%
Q3 2024	13	2.7	13.7	77.5%	19.3%	3.2%
Q4 2024	9	1.6	14.0	78.5%	5.0%	16.6%
Q1 2025	4	0.4	12.3	50.0%	0.0%	50.0%

Source: SAF

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

Please note we won't be including the JMA 30-day temperature forecasts for a couple months as it is shoulder season so there should be little weather driven demand for natural gas. We will pick up again in May as the look moves to late May/June when it starts to get hotter and humid. Feb is not a huge month for winter temperature driven electricity/natural gas demand, but it's been a cold Feb in Japan and that does bring some increased temperature driven demand. The JMA next 30-day temperature forecast continues to call for colder than normal temperatures for Japan in to end Feb. On Thursday, the Japan Meteorological Agency (JMA) updated its temperature forecast for the next 30 days, Feb 22 – Mar 21, in Japan [LINK]. There is no JMA commentary on the forecasts. JMA is expecting colder than normal temperatures for the last week of the month throughout the southern and middle prefectures, while the northern prefectures are forecasted for normal to slightly above normal temperatures. We checked AccuWeather for Tokyo and, for the last week of Feb, the forecast is for overnight lows at 0C (freezing) and daytime highs around 10C. So maybe some modest weather demand at night. Below are the JMA temperature forecast maps for Feb 22-28.

JMA temperature forecast for next 30 days





Figure 10: JMA Temperature Outlook for Feb 22-28

Source: Japan Meteorological Agency

Natural Gas: Japan LNG stocks down WoW and YoY; down against to 5-yr avg

Japan's LNG stocks are down WoW, YoY, and when compared to the 5-year average. On Wednesdays, Japan's METI releases its weekly LNG stocks data [LINK]. LNG stocks on February 16 were at 96.5 bcf, down -6.5% WoW from 103.3 bcf on February 9, and down - 7.8% from a year ago. Stocks are down compared to the 5-year average of 104.7 bcf. Below is the Japanese LNG stocks graph from the METI weekly report.



Source: METI

Natural Gas: German power futures now reflect some return of RUS natural gas to EU

On Tuesday, we posted [LINK] "German power futures for 2026 down ~14% since last week peak with momentum for Trump led RUS/UKR deal/. Futures starting to price in big risk to TTF, LNG prices IF Trump/Putin deal for Ukraine sees Russian pipeline #NatGas back to Europe. Thx @EamonFarhat #OOTT." We have been warning that a downside risk to EU natural gas and LNG prices is that a Russia/Ukraine peace deal could lead to a return of Russian natural gas pipeline to Europe. And Bloomberg noted this week that that risk is being priced into Germany power futures for 2026. On Tuesday, Bloomberg wrote 'German year-ahead power prices slumped to their lowest since early January as gas futures dropped, underlining the country's stronger reliance on the fuel than its neighbors. German power futures for 2026 have fallen about 14% since their peak last week, according to data from European Energy Exchange. This is primarily due to a slump in gas prices driven by speculation about US-brokered talks on ending the war in Ukraine and the potential impact on fuel supplies." Below is Bloomberg graph attached to our post. Our Supplemental

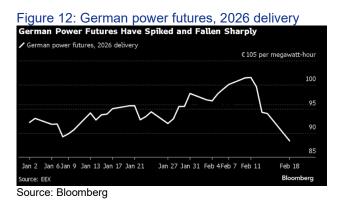
German power futures

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Japan LNG stocks down WoW



Documents package includes the Bloomberg report.



Big downside risk to TTF & LNG if Russia pipeline gas returns to Europe

Here is what we wrote in last week's (Feb 16, 2025) Energy Tidbits memo. "Big downside risk to TTF & LNG if Russian pipeline gas returns to Eruope. For the past few years we warned on how Germany cutting off Russian pipeline natural gas would hammer their industrial economy, thought they were the weak link to give so have been surprised Germany has hung in solidly with Ukraine and Europe on no Russian pipeline natural gas. And that a return of Russian pipeline natural gas would be a big negative to TTF and LNG prices. It's hard not to see the last few days reporting and not believe Trump and Putin have likely agreed on the outline of a deal and that there is big momentum to papering such deal to happen soon ie. within weeks and not months. Our view has been that we see the return of Russian pipeline natural gas and, pre-Trump, that would likely include some sort of allocation of revenues to help in some sort of Ukraine rebuild support. However, with Trump, we aren't convinced that Russia will be forced to contribute out of natural gas to some sort of rebuild. Regardless of the natural gas money split, we still expect a Russia/Ukraine peace deal will see the return of Russian pipeline natural gas to Europe as it will reduce energy costs and Europe needs all the help it can get to stimulate their economy. And if Russian pipeline natural gas comes back, it's a big negative to TTF and LNG prices."

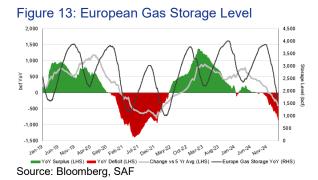
Natural Gas: Europe storage down -4.5% WoW to 41.4% full, down -23.5% YoY

There have been gas storage draws in Europe, which has been increased by unseasonably low wind generation in many parts of Europe on multiple days in Jan and Feb. This has also led to very high coal generation to fill the low wind generation gap. And as a reminder, the YoY comparison is to a hot Feb 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 Feb 20, Europe storage was down - 4.5% WoW to 41.4% vs 45.9% on Feb 13. Recall that winter 2023/24 was one of the hottest winters in Europe. Storage is now down -23.5% from last year's levels of 64.9% on Feb 20, 2024, and down against the 5-year average of 52.5%. Below is our graph of European Gas

Europe gas storage at 41.4%



Storage Level.



Ukraine storage is currently 4.5% 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 Feb 20, natural gas in Ukraine storage was at 7.1% of its total capacity, down compared to 8.6% of its total capacity on Feb 13. Last winter, Ukraine storage as of Nov 1, 2023, was at 39.4%. Right now, Ukraine makes up about 4.5% 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 14: Ukraine Gas Storage Facilities as of June 2023

Source: Bloomberg

Oil: U.S. oil rigs up +7 rigs WoW, continue turnaround after previous cold impact

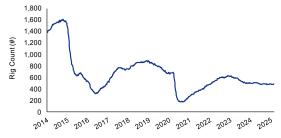
We have been highlighting the consistent comments from the service companies that they are expecting relatively flat or some small decline in US rig levels in 2025 as the oil and gas companies stay in their capital disciplined + return of capital to investors mode. But that

US oil rigs up WoW



doesn't mean there aren't up weeks as those are the consistent expectations over the year like seen in this week's rig count. And that is especially so as some of the big E&P players front-end load their drilling over the year so more drilling in H1 vs H2. 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 Feb 21. Total U.S. oil rigs are now down -15 oil rigs YoY to 488 rigs, which is above the recent low seen in the week of 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: Granite Wash +1 rig WoW, Ardmore Woodford +1 rig WoW, Marcellus +1 rig WoW, and Cana Woodford +2 rigs WoW. There must have been a few rigs added outside of the major basins to account for the total rig change for the week. (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 -36 rigs YoY to 587 rigs including US oil rigs down -15 rigs YoY to 488 rigs. And for the key basins, the Permian is -10 rigs YoY, Haynesville is -13 rigs YoY, DJ-Niobrara is -6 rigs YoY, Marcellus is -7 rigs YoY, Granite Wash is +4 rigs YoY, Eagle Ford is -4 rigs YoY, Barnett is +1 rig YoY, Ardmore Woodford is +2 rigs YoY, Arkoma Woodford is -1 rig YoY, Cana Woodford is flat YoY, Mississippian is -2 rigs YoY, Utica is -1 rig YoY, and Williston is -1 rig YoY. (v) U.S. gas rigs were down -2 rigs WoW to 99 gas rigs and down -21 rigs YoY. 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 down -1 rig WoW at 5 rigs and +2 rigs YoY.

Figure 15: Baker Hughes Total US Oil Rigs



Source: Baker Hughes

Oil: Total Cdn oil rigs flat WoW on Friday, winter peak drilling looks over

On Friday, Baker Hughes released its weekly North American drilling rig data. This week's total oil and gas rig count was down -1 rig WoW to 244 rigs on Feb 21 and are up +13 rigs YoY. It has been very cold in western Canada so that has allowed companies to keep rigs going a little longer and drill a couple extra wells to take advantage of stronger than expected natural gas prices. Normally, Cdn rigs have started their end of winter drilling peak in mid to late Feb so we would expect to see rigs with big declines over the next two weeks. We looked back over the past decade and the winter peak is normally around mid-Feb. Oil rigs are flat WoW at 174, and up +33 rigs YoY. Gas rigs are down -1 rig WoW at 70 rigs and are down -20 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.

Cdn oil rigs flat WoW

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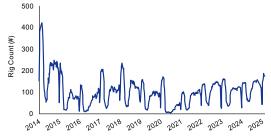


Figure 16: Baker Hughes Total Cdn Oil Rigs

Source: Baker Hughes

Oil: US weekly oil production basically flat WoW to 13.497 mmb/d, up YoY

The EIA estimated US oil supply was immaterially up from last week's numbers. 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]. As an example, please note our below comment on ow North Dakota oil production has been hit by the recent cold and we suspect that this may not be reflected in the weekly data. 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. This week's estimate came in up +0.003 mmb/d WoW to 13.497 mmb/d for the week ending Feb 14. This is up +0.197 mmb/d YoY from 13.300 mmb/d for the week ended Feb 16, 2024. This week, the EIA's production estimates were up +0.003 mmb/d WoW to 13.497 mmb/d with Alaska production figures up +0.001 mmb/d WoW at 0.436 mmb/d and the Lower 48 up +0.002 to 13.061 mmb/d from 13.042 mmb/d last week. Below is a table of the EIA's weekly oil production estimates.

Figure 17: 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								
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		
025-jan	01/03	13,563	01/10	13,481	01/17	13,477	01/24	13,240	01/31	13,478
2025-Feb	02/07	13,494	02/14	13,497						

Source: EIA

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US weekly oil production



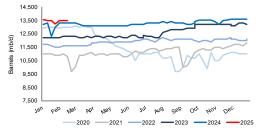


Figure 18: EIA's Estimated Weekly US Oil Production

Source: EIA

Cold snap in Feb has shut in about 40-70,000 b/d b/d for about a week or so

We reiterate that it must be very tough for the EIA to come up with weekly US oil production estimates. As noted above, one example is the recent cold that has shut in some North Dakota oil production. Here is what we wrote in last week's (Feb 16, 2025) Energy Tidbits memo. "Cold snap in Feb has shut in about 40-70,000 b/d for about a week or so. We listened to the 22-min Feb 2025 Director's Cut monthly webcast on the North Dakota NDIC Director's Cut and NDPA Monthly report [LINK]. One of the question asked was how much North Dakota oil was shut-in due to the cold snap. NDIC Director Nathan Anderson said it was about 40-70,000 b/d. We assume he was just talking about oil and there would be a separate volume of shut-in natural gas. Then later in the Q&A, North Dakota Pipeline Authority Director Jusin Kringstad said the shut-in is typically for about a week."

Oil: US approves deepwater VLCC loading terminal, but won't increase oil exports

On Monday morning, we posted [LINK] "Positive @USDOT approves another deepwater GoM terminal that can fully load VLCCs. BUT won't increase US #Oil exports in near term. See 🔶 Feb 9 post. Enterprise hasn't been able to get enough Permian oil volumes commitment to commercialize their VLCC loading. #OOTT [LINK]." Last Friday, the US Dept of Transportation approved another deepwater port that can fully load VLCCs, the Sentinel Midstream project. DOT said "The proposed deepwater port project will be located approximately 26.6 nautical miles off the coast of Brazoria County, Texas, and will establish a shoreside support facility at an operational commercial site within Freeport Harbor." There is currently one such port operational that can fully load VLCCs - the offshore Louisiana Offshore Oil Port (LOOP) and another, the Enterprise SPOT still not able to get enough Permian oil committed to commercialize. Industry is not prepared to commit to enough Permian oil barrels to commercialize the Enterprise VLCC loading terminal. It's why our post said it's positive or another terminal capable o fully loading VLCCs (2 million barrels) but we don't expect it to increase oil exports. Currently smaller tankers are loaded at the onshore oil terminals and shuttle out to a VLCC in the nearby GoM to fully load the VLCC. Our Supplemental Documents package includes the DOT announcement.

02/04/25: Enterprise: No traction on enough Permian oil for VLCC loading

As noted above, we don't see the new Sentinel VLCC loading terminal leading to an increase in oil exports. Here is what we wrote in our Feb 9, 2025 Energy Tidbits memo. *"Enterprise: No traction (Permian oil commitment) for VLCC loading terminal.*

Another deepwater GoM VLCC terminal

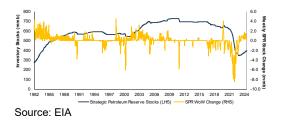


Enterprise Products held its Q4 call on Tuesday. Earlier this morning, we posted [LINK] "Industry indicator Permian #OII growth will be less than expected. Enterprise Q4: US oil exports 4 mmbd in 2024, well less than what some expected. "to date, we have not gotten enough traction in commercializing SPOT" SPOT would be 2nd GoM terminal that could full load a VLCC. LOOP is only existing. #OOTT." No surprise. investors were waiting for a SPOT update and mgmt led off their call with the update on their Sea Port Oil Terminal, which would be the second GoM offshore oil loading terminal that can fully load a VLCC (2 million barrels). The only such terminal is the LOOP, Louisiana Offshore Oil Port. Currently, if a VLCC wants to fully load, other than at LOOP, it has the VLCC has to wait in deeper waters and smaller tankers shuttle oil to them to get full loaded. But Enterprise is saying they still can't get the Permian crude oil commitments to move ahead on the approved SPOT, which we view as another industry indicator that Permian oil growth will be less than expected. We were a little surprised mgmt highlighted that some forecasters assumed US oil exports would be 7-8 mmb/d iun 2024 vs 4 mmb/d actual in 2024 as we don't know how far back it was for these forecasts. It is important to remember that, even in the face of increasing gas/oil ratios. lesser Permian growth than expected would also mean lesser Permian natural gas than expected to supply the increasing US Gulf Coast LNG exports. Our Supplemental Documents package includes the excerpt from the Enterprise Q4 call transcript."

Oil: US SPR less commercial reserve deficit widens, now -37.180 mmb

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 no change on the SPR side and a build on the commercial side. The EIA's weekly oil data for Feb 14 [LINK] saw the SPR reserves flat WoW at 395.313 mmb, while commercial crude oil reserves increased +4.633 mmb to 432.493 mmb. There is now a -37.180 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 19: Strategic Petroleum Reserve Stocks and SPR WoW Change



US SPR reserves



Figure 20: US Oil Inventories: Commercial & SPR



Source: EIA

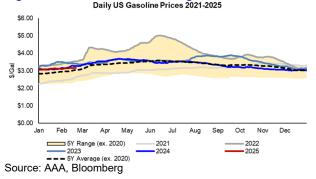
Figure 21: US Oil Inventories: SPR Less Commercial



Source: EIA

Oil: AAA US national average gas price -\$0.01 WoW, California flat WoW on Feb 22 Yesterday, we posted [LINK] "AAA National average gasoline prices -\$0.01 WoW to \$3.15 on Feb 22, +\$0.02 MoM & -\$0.12 YoY. California average gas prices are +\$0.45 in past 5 wks with continued unplanned Martinez refinery down. \$4.84 on Feb 22, flat WoW, +\$0.39 MoM & +\$0.20 YoY. Thx @AAAnews #OOTT." Yesterday, AAA reported that US national average prices were \$3.15 on Feb 22, which was -\$0.01 WoW, +\$0.02 MoM, and -\$0.12 YoY. The big news over the past five weeks has been California gas prices jumped post the recent unplanned Martinez refinery being down that has led to California gas prices +\$0.39 MoM. Yesterday, AAA also reported California average gasoline prices were \$4.84 on Feb 22, which was flat WoW, +\$0.30 MoM and +\$0.20 YoY. Below is our graph of Bloomberg's National Average weekly gasoline prices.

Figure 22: AAA National Average Gasoline Prices



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US gasoline prices



AAA reminds Feb is the normal start to seasonal increasing gasoline prices

Here is what we wrote in last week's (Feb 16, 2025) Energy Tidbits memo reminding that this is the normal seasonal period for increasing gasoline prices. "AAA reminds *Feb is the normal start to seasonal increasing gasoline prices. As we remind also on crack spreads and WCS less WTI differentials, there are normally seasonal trends. There are always unforeseen item that can impact the seasonal trends. But, on Thursday, AAA reminded that the seasonal trend for US gasoline prices is to move for the next few months. This shows up in our above US gasoline price graphs. AAA posted [LINK] "Right on Cue: Seasonal Trends Nudge Gas Prices Higher. As spring approaches, refineries are beginning their transition to summer blend fuel, which often results in higher prices this time of year. This week, gas prices rose by a few cents, bringing the national average to \$3.16 per gallon. Routine seasonal maintenance and an offline refinery in Northern California are putting additional strain on supply. These factors are pushing gas prices up, which means consumers may see higher prices at the pump as warmer months approach."*

Oil: Crack spreads +\$4.53 WoW to \$26.48 on Feb 21, WTI -\$0.48 WoW to \$70.26

On Fri, we posted [LINK] "321 crack spreads +\$4.53 WoW to \$26.48 on Feb 21. WTI -\$0.48 WoW to \$70.26. Reminds WTI more affected by global factors. Whereas cracks normally start their seasonal move up in mid Feb thru June for refineries to crank up processing for summer peak gasoline/jet fuel demand. Thx @business #OOTT." Crack spreads were up big, +\$4.53 WoW to \$26.48 on Feb 21 whereas WTI was -\$0.48 WoW to \$70.26. There continues to be concerns on global oil prices with China still uncertain recovery, the currently scheduled Apr 1 start for OPEC+ to bring back voluntary cut barrels and Trump's continued pressure for low oil prices. There was a big move up in crack spreads and our post noted that mid-Feb is normally the time when crack spreads begin their seasonal move up as refineries move to process more oil for peak summer gasoline and jet fuel season. 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 \$26.48 are strong and should. in theory, incentives refiners to try to get more crude for refining and that, under normal times, would tend to drag up WTI. The typical pre-Covid range was \$15-20. Crack spreads of \$26.48 on Feb 21 followed \$21.96 on Feb 14, \$22.06 on Feb 7, \$18.74 on Jan 31, \$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, and \$17.09 on Nov 22.

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

Crack spreads closed at \$26.48



than most expect. So if crack spreads are wide/high like right now, 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 normally drags up oil prices. 321 Crack spread closed at \$26.48 on Feb 21.



Figure 23: Cushing 321 Crack Spread & WTI Feb 21, 2015 to Feb 21, 2025

Crack spreads normally move up mid-Feb into June for peak summer demand

Our Friday post highlighted "*Cracks normally start their seasonal move up in mid Feb thru June for refineries to crank up processing for summer peak gasoline/jet fuel demand.*" We included the below Bloomberg chart that shows the seasonal moves in 321 crack spreads over the past five years. There are always items that impact the normal seasonal moves but, as a general rule, 321 crack spreads start to widen in mid-Feb into June as refineries crank up processing to have product for peak summer gasoline and jet fuel season.

Source: Bloomberg





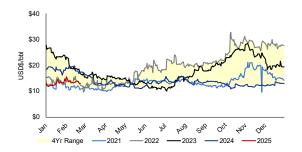
Figure 24: Cushing 321 Crack Spread – Seasonality to Feb 21, 2025 close

Source: Bloomberg

Oil: Cdn heavy oil differentials narrowed \$0.90 WoW to \$12.90 on Feb 21

The 30-day pause on Trump tariffs led to a return of WCS less WTI differentials to a more expected no-tariff range over the past few weeks. And normally, at this time of the year, we would be trotting out our normal commentary that Feb normally marks 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 for the past few weeks has been Trump's tariffs on Cdn oil and natural gas and then his 30-day pause on such tariffs. Trump's comments in prior weeks that he will be including Cdn oil and natural gas in the tariffs caused a big spike to the differential, but it then reverted back down three weeks ago after the U.S. decided to pause tariffs for 30 days. This week saw substantial narrowing on the WCS less WTI differentials after it had seen relatively flat change in the past few weeks. WCS less WTI diffs narrowed \$0.90 to close at \$12.90 to close on Feb 21.

Figure 25: WCS less WTI differentials



Source: Bloomberg

TMX impact: WCS less WTI diffs did not seasonally widen in H2/24

The start of TMX pipeline in June 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. And it has continued to help in 2025 even in the face of Trump's on and pause tariffs. It is clear increasing tanker exports

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WCS less WTI diffs narrow



has worked and differentials did not widen as normally happens WCS less WTI differentials are approx. \$5 narrower than seen over the past two years. However, we remind that WCS less WTI differentials normally seasonally narrow staring in Feb and continuing into June as refineries move into peak medium sour processing ahead of summer paving/asphalt season. This means the WCS less WTI gap vs last two years should start to narrow. On Friday, we posted [LINK] "WCS-WTI diffs narrowed \$0.90 WoW. Still way lower diffs since tanker exports increased with June TMX start. But gap is narrowing as this is the normal seasonal narrowing for WCS-WTI diffs: 02/21/25: \$12.90. 02/21/24: \$16.55. 02/21/23: \$17.30. Thx @garquake @business #OOTT."Our post included the below chart that shows how WCS less WTI differential were low in the summer, stayed fairly flat in Aug/Sept/Oct/Nov/Dec whereas how differentials normally narrow in Q1 every year as refiners start to process more medium/heavy as they look ahead to asphalt and paving season.



Source: Bloomberg

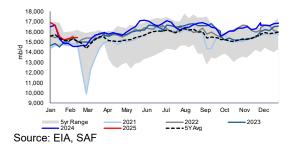
Oil: Refinery inputs down -0.015 mmb/d WoW to 15.416 mmb/d

We expect the slight WoW decrease in refinery inputs was due to cold weather impacts. There was a slight decrease in refinery inputs WoW in the US. 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/Feb for the normal winter turnarounds. And then leaving Feb is normally the start of the big seasonal increase in refinery throughput that continues into the summer. On Wednesday, the EIA released its estimated crude oil input to refinery data for the week ended February 14 [LINK]. The EIA reported crude inputs to refineries were down -0.015 mmb/d this week to 15.416 mmb/d and are up +0.842 mmb/d YoY. Refinery utilization was down -0.1% WoW to 84.9% and was up +4.3% YoY.

Refinery inputs -0.015 mmb/d WoW



Figure 27: US Refinery Crude Oil Inputs



Oil: US net oil imports down -0.960 mmb/d WoW, oil imports were down -0.489 mmb/d

The EIA reported US "NET" imports down -0.960 mmb/d to 1.439 mmb/d for the week of February 14. US imports were down -0.489 mmb/d to 5.820 mmb/d, while exports were up +0.472 mmb/d to 4.381 mmb/d. Top 10 was down -0.231 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 -0.265 mmb/d WoW to 3.653 mmb/d. We suspect weather was the factor. Weekly imports have been higher for the past six months with the increased Cdn crude coming off TMX and hitting west coast US refineries. (ii) Saudi Arabia was down -0.103 mmb/d to 0.277 mmb/d. (iii) Mexico was up +0.071 mmb/d to 0.553 mmb/d. This is still well below historical levels. However, as noted in the below item, there is an oil quality issue that is causing some Mexico oil exports to be rejected by US refineries. Prior to this, oil imports from Mexico were much lower with the new Olmeca (Dos Bocas) refinery slowing ramping up in 2024 and Pemex's other refineries increasing crude oil processing. The current oil quality issue aside, assuming Pemex can ramp up Olmeca and continue to improve processing at the other refineries, Mexico should be able to process all its own oil production (ie. no exports) by the end of 2025. (iv) Colombia was down -0.150 mmb/d to 0.000 mmb/d. (v) Iraq was up +0.211 mmb/d to 0.257 mmb/d. (vi) Ecuador was up +0.043 mmb/d to 0.043 mmb/d. (vii) Nigeria was up +0.052 mmb/d to 0.139 mmb/d.

Figure 28: US Weekly Preliminary Imports by Major Country

	Dec 20/24	Dec 27/24	Jan 3/25	Jan 10/25	Jan 17/25	Jan 24/25	Jan 31/25	Feb 7/25	Feb 14/25	WoW
Canada	3,919	3,733	4,422	3,985	4,329	3,716	4,063	3,918	3,653	-265
Saudi Arabia	368	87	69	333	256	471	488	380	277	-103
Venezuela	120	353	253	240	416	319	214	226	198	-28
Mexico	397	551	392	362	244	521	149	482	553	71
Colombia	276	289	72	266	286	283	150	150	0	-150
Iraq	229	212	180	152	218	336	99	46	257	211
Ecuador	0	0	147	103	0	102	157	0	43	43
Nigeria	237	71	192	38	156	92	152	87	139	52
Brazil	248	280	233	129	138	114	254	217	155	-62
Libya	50	189	56	86	30	0	324	0	0	0
Top 10	5,844	5,765	6,016	5,694	6,073	5,954	6,050	5,506	5,275	-231
Others	627	1,161	412	430	672	494	865	803	545	-258
Total US	6,471	6,926	6,428	6,124	6,745	6,448	6,915	6,309	5,820	-489

Source: EIA, SAF

Oil: Doesn't Trump have to stop Chevron Venezuela oil license to clean up Biden mess

After seeing Trump's comments on Friday, it seems to us that Trump has to stop Venezuela's oil exports or else he will be continuing what he calls the big mess Biden left behind with

Trump on Venezuela oil

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US net imports -0.960 mmb/d WoW



Maduro and Venezuela. Yesterday, we posted [LINK] "Positive for Cdn oil. Unless Trump wants to continue Biden's Venezuela "mess". doesn't he have to cut off VEN #Oil revenues incl VEN oil into Gulf Coast PADD 3. See his 🔶 comments. If he doesn't, he will be making the same Biden mistakes/mess - let VEN make ton of money, make them strong & keep Maduro from quitting. Thx @business #OOTT." Trump's comments to the Governors on Friday night went on the mess Biden created in Venezuela by letting Venezuela export oil including to the US. He didn't say he would cut the oil exports but, if he doesn't, he will be continuing the conditions that led to Biden's mess - letting Venezuela make a lot of money because of oil. Trump also highlighted Secretary of State Rubio who has been one of the strongest anti-Maduro US politicians. Here is what Trump said on Friday night "And then we've made Venezuela strong again. You know, they've given them a lot of money. They never thought they were going to have so much money. And all the people are leaving. So you're going to have one guy sitting there with a lot of -- a lot of oil under his feet. That's not a good situation. But we're having talks about that whole mess. What a mess. It was, that was another one that was done. He was ready to quit. He was going to be out. Marco, you know that better than anybody. Marco's been very staunch against what, took place there. And we were going to have that in any form we wanted it. But Biden made them strong."

Maybe yes or maybe no if Trump will stop Chevron's Venezuela oil license

On Tuesday, Trump teased on maybe stopping the Chevron Venezuela oil license. We have been in the camp that Trump would be moving to cut off Venezuela oil exports like he did in his first term. However, it is still far from certain if he will do so. And Maduro's Feb 1 open acceptance and support for Trump sending back Venezuela illegal immigrants seemed to be a well received olive branch. The question was then would that be enough to have Trump allow Venezuela oil to keep flowing. This week, Trump continued to play to this uncertainty. And our view on Trump continues to be that Trump's keeping other countries guessing has worked and tends to get the other countries to bid against themselves to minimize what Trump will do. On Tuesday, he teased that maybe he wouldn't renew Chevron's license for Venezuela that has led to the surge in US Gulf Coast PADD 3 oil imports from Venezuela in 2024. On Tuesday, we posted [LINK] ""Maybe not" "we're looking at that now" says Trump when asked if he is inclined to let Venezuela #Oil exports continue. Trump supporter or not, he know he has advantage so keeps countries guessing and getting them bid against themselves to avoid the worst case scenario. Thx @business #OOTT." So maybe yes and maybe no to continuing Chevron's oil license in Venezuela. Our Supplemental Documents package includes the Bloomberg transcript excerpt on the Trump comments.

02/01/25: If Maduro is Trump's biggest supporter, will VEN oil keep flowing

We have to give Maduro credit for getting on Trump's good side early as the biggest supporter in South and Latin America in helping Trump depart illegal aliens. Here is what we wrote in our Feb 2, 2025 Energy Tidbits memo. "If Maduro's is Trump's biggest supporter, will VEN oil keep flowing to the Gulf Coast? 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."

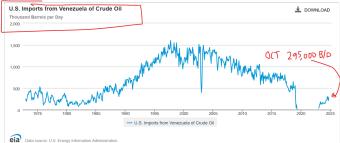
01/20/25: Trump "we're going to probably stop buying oil from Venezuela"

Here is what we wrote in our Jan 26, 2025 Energy Tidbits memo that, prior to Maduro's Feb 1 support for the taking back the Venezuela illegal immigrants, seemd to point to Trump not extending Chevron's license that would lead to no more Venezuela oil iknto the Gulf Coast. *"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."





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 US Secretary of State 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 \bigcirc @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."

Oil: Norway Jan oil production of 1.775 mmb/d is down -0.6% MoM, down -2.8% YoY

On Thursday, the Norwegian Offshore Directorate (NOD) released it's January production figures [LINK]. It reported oil production of 1.775 mmb/d, which is down -0.6% from revised December figures of 1.786 mmb/d and down -2.8% YoY from 1.826 mmb/d in January 2024. January's production actuals came in +2.6% (+0.045 mmb/d) over the forecast volumes of 1.730 mmb/d. The NOD does not provide any explanation for any MoM changes, so we do not know if the MoM increases are temporary. But, as we have been highlighting since early 2024, Norway oil production is expected to peak in early 2025 with the start of decline at Norway's biggest oilfield, Johan Sverdrup, and then move into decline. Note that, prior to 2024, the Norwegian Offshore Directorate was called the Norwegian Petroleum Directorate.

				Total MSm ³ o.e/day
January 2025		,		0.663
January 2025	1.775	1.550	340.1	0.005
January 2025	1.730	1.981	355.2	0.670
	0.045	0.009	-9.1	-0.007
	2.6 %	0.5 %	-2.6 %	-1 %
December 2024	1.786	2.025	360.6	0.682
December 2024	-0.011	-0.035	-14.5	-0.019
December 2024	-0.6 %	-1.7 %	-4 %	-2.8 %
January 2024	1.826	2.074	379.3	0.709
January 2024	-0.051	-0.084	-33.2	-0.046
January 2024	-2.8 %	-4.1 %	-8.8 %	-6.5 %
	December 2024 December 2024 December 2024 January 2024 January 2024	January 2025 1.730 January 2025 1.730 0.045 2.6 % December 2024 1.786 December 2024 -0.011 December 2024 -0.6 % January 2024 1.826 January 2024 -0.051	mill bbi/day mill bbi/day January 2025 1.775 1.990 January 2025 1.730 1.981 January 2025 1.730 1.981 January 2025 1.730 1.981 January 2025 1.730 1.981 December 2024 1.081 2.025 December 2024 -0.011 -0.035 December 2024 -0.014 -0.035 December 2024 -0.64% -1.7% January 2024 1.826 2.074 January 2024 -0.051 -0.084	mill bbi/day mill bbi/day MSmVday January 2025 1.775 1.900 346.1 January 2025 1.775 1.900 355.2 January 2025 1.730 3.000 355.2 January 2025 0.045 0.000 369.1 Composition 2.000 3.000 369.1 December 2024 1.786 2.0025 360.6 December 2024 -0.011 -0.003 361.45 December 2024 -0.014 -0.015 360.6 December 2024 -0.016 -0.015 360.6 December 2024 -0.018 -0.015 360.6 December 2024 -0.018 -0.015 360.6 January 2024 -0.018 -0.015 360.6 January 2024 -0.018 -0.017 360.6

Source: Norwegian Offshore Directorate



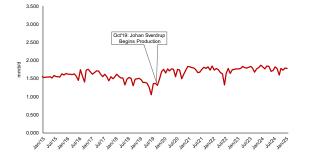


Figure 31: Norway Monthly Oil Production 2015-2025

Source: Norwegian Offshore Directorate

02/05/25: Norway biggest oilfield Johan Sverdrup production peaked in 2023/24 Here is what we wrote in our Feb 9, 2025 Energy Tidbits memo on comments by Equinor, the operator of Norway's biggest oilfield, Johan Sverdrup. . "Norway's biggest oilfield Johan Sverdrup production peaked in 2023/24. Equinor reported Q4 on Wednesday and confirmed their prior views – Norway's largest oilfield, Johan Sverdrup, oil production was peaking and is moving into plateau/small decline in 2025. On Wednesday, we posted [LINK] "Looks like Norway's biggest oil field, Johan Sverdrup peaked in 2024 and 2025 is start of slight decline or plateau. Equinor Q4 "production at the Johan Sverdrup field is expected to continue to be close to 2023 and 2024 levels in 2025" Close to = slightly lower production. Fits 🔶 10/24/24 Q3 call. #OOTT." Equinor didn't specifically say Johan Sverdrup oil production peaked in 2023/24. Rather they said that 2025 production would be close to 2023/24 levels. As

we remind, close to means less than but not too much less than. We reiterate this is not a new view, this is the same as they have said over the past year. And by Beng close to 2023 and 2024 levels, it is the same thing as saying they are in a plateau but small decline production. Johan Sverdrup peak production has been estimated at 755.000 b/d."

01/09/25: Norway oil production plateau in 2025/26, then start to decline

As a reminder, Norway has forecasting that its oil production was peaking in 2025. Our Aug 25, 2024 Energy Tidbits noted their forecast for Norway total oil production to peak in 2025 and then decline. On Jan 9, 2025, Norway came out with a similar forecast. Here is what we wrote in our Jan 12, 2025 Energy Tidbits memo. "Norway oil production plateau in 2025/26, then start to decline. On Thursday, we posted [LINK] "Norway's new fcast for peak #Oil #NatGas production. Oil. peak 2023 1.79 mmbd, plateaus 2023-26, then declines. to 1.40 mmbd in 2029. NatGas, peak 2024 12.00 bcfd, modest drop to plateau 2025-27, then decline to 10.72 bcfd in 2029. Decline accelerates as mostly older fields. #OOTT." (i) It is not a surprise to see this forecast, which is in line with Norwegian Offshore Directorate's Aug forecast. (ii) On Thursday, the Norwegian Offshore Directorate posted its "The Shelf in 2024", which included the NOD's forecast for oil, condensate, NGLs and natural gas production through 2025. Our post included a table we created from the NOD backup excel to



give the actual forecast numbers. (iii) For oil, the NOD estimates peak oil was 2.02 mmb/d in 2023, but that is essentially unchanged with a plateau production thru 2026 at 2.00 mmb/d in 2024, 2.01 mmb/d in 2025 and 2.00 mmb/d in 2026. Then declines hit with 1.92 mmb/d in 2027, 1.78 mmb/d in 2028 and 1.66 mmb/d in 2029. (iv) Natural gas. NOD forecasts peak natural gas production of 12.00 bcf/d in 2024, then down modestly to a plateau production of 11.64 bcf/d in 2025, 11.62 bcf/d in 2026, and 11.59 bcf/d in 2027. Then declines hit with 11.26 bcf/d in 2028 and 10.72 bcf/d in 2029. (v) The reason why declines start to kick in despite ongoing exploration and development is that a lot of the base production is old. Our post included the below NOD graph that NOD described as "The figure below shows a number of fields that are producing between 10 and 30 years longer than originally planned. Several of these fields will continue to produce until 2030, and some even to 2040. This provides a significant contribution to production and value creation on the shelf." So it's good news that technology and development is allowing longer life for old fields. but the reality is that the age of these fields will start to kick in. Our Supplemental Documents package includes excerpts from the NOD "The Shelf in 2024".

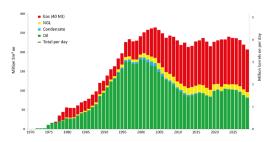
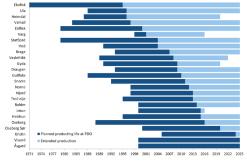


Figure 32: Norway's forecast oil and natural gas production thru 2029

Source: Norwegian Offshore Directorate

Figure 33: Norway's oil and gas fields, original planned life vs current life expectation



Source: Norwegian Offshore Directorate

Oil: Russia, CPC oil pipeline down 0.38-0.50 mmb/d, likely for several months

As of our 7am MT news cut off, we have not seen any update on repair time from the Caspian Pipeline Consortium that is different than their Feb 18 update that "According to CPC experts, the consequences of this attack will be eliminated within 1.5 to 2 months, which

Longer down time for CPC pipeline



may lead to a reduction of oil throughout volumes from Kazakhstan by about 30%." The pipeline moved approx. 1.26 mmb/d in 2024. However, on Feb 19, we saw an update from Russia Energy Minister Novak that was very different. On Wednesday, we posted [LINK] "Positive for #Oil. Russia Novak: sees CPC pipeline repairs taking "no less than several months". Moved 1.26 mmb/d in 2024. Drone attack reduced by 0.38 to 0.50 mmb/d. Big holdback. Siemens gas turbine hit & sanctions stopped western gas turbines to RUS. Kremlin transcript. #OOTT." Novak raised a key point – the drone attack including the Siemens gas turbine being hit. The issue for Russia has been that Siemens and other western big gas turbine producers like Baker Hughes are not allowed to sell or service gas turbines to Russia. And Russia doesn't have the capability to manufacture comparable strength gas turbines to power the oil pipeline pumping stations. The Ukraine drone hit was on the section of the pipeline in Russia. We would assume that smaller capacity Russian gas turbines would be able to be incorporated but we don't have any idea of how much of the recovered capacity would come back. Our original Feb 18 post was based on the CPC Feb 18 release. We also included the below map of the CPC pipeline. Our Supplemental Documents package includes the CPC Feb 17 and 18 release as well as the Kremlin transcript excerpt of Novak's Feb 19 comments.

Figure 34: CPC pipeline map



Source: Caspian Pipeline Consortium

Oil: Russian refineries processing slight grow WoW despite drone attacks persisting

We have been surprised the last few weeks of 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. There were more drone hits on Russian refinery complexes last week, but unfortunately, we never get any detail on how a refinery is impacted when a drone hits at a refinery. The two weeks ago, the Lukoil's Volgograd refinery more than halved its processing rates after a drone attack, and the Ryazan refinery remains halted from the fires outbreaks that occurred at the end of Jan. This week, it was reported that Russia's llsky oil refinery was hit by a Ukrainian strike Monday night, resulting in a fire in the facility. Bloomberg reported that, during the period of Feb 5-12, Russia's average crude processing rate increased slightly to 5.13 mmb/d, which is up about than +0.030 mmb/d WoW. This is the first weekly growth in Russian processing since the second half of Jan. Bloomberg wrote, *"Russia's crude-oil processing saw marginal growth in the week through Feb. 12 as the nation's producers are bringing back online some of the capacities damaged by earlier drone attacks, according to a person with knowledge of industry data." Our Supplemental Documents package includes the Bloomberg article.*

Russian refineries crude oil runs

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Oil: Russia's seaborne crude shipments up big with new tankers & workarounds

On Tuesday, Bloomberg released their weekly Russian Seaborne crude tracker titled "New Ships and Cargo Transfers Boost Russia's Crude Oil Flows." There was a WoW jump up in Russia oil shipments. Bloomberg wrote "Russia has amassed new tankers and resorted to ship-to-ship cargo transfers to keep key oil exports flowing. But deliveries to customers remain a problem, with laden vessels forced to idle." There was a 1.27 mmb/d WoW increase with the new tankers but also because the prior week loadings had been hit by bad weather. Bloomberg also wrote "Daily crude flows in the seven days to Feb. 16 surged by about 1.27 million barrels, or 55%, from the previous week to 3.57 million. Shipments from Kozmino rebounded to their highest in two months after a five-day storm, with winds gusting above 40 miles an hour, prevented ships from mooring at the export berths for most of the previous week. Shipments from Ust-Luga in the Baltic also rose to a two-month high." Our Supplemental Documents package includes the Bloomberg report.

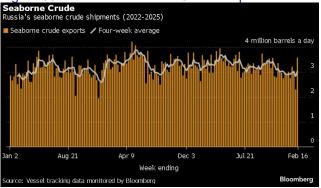


Figure 35: Russia's Seaborne Crude Shipments

Russia oil exports to China continue down ~0.25 mmb/d vs Jan 5

Bloomberg also provided the Russia oil shipments to key Asian countries. We have been highlighting the reports in Jan that China had stopped some direct unloading of sanctioned Russian tanks and the Bloomberg Russian oil shipments to China show this is happening. Bloomberg's crude oil shipments from Russia to China have continued to report lower volumes of shipments since the US sanctions were implemented on Jan 10. Bloomberg highlighted the four-week average of Russia oil shipments to China were 1.12 mmb/d for the week ending Feb 16, which is down 0.20 mmb/d vs the four-week average at Jan 5 of 1.320 mmb/d, Below are the Bloomberg table and graph that we attached to our post.

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Russia's seaborne crude exports

Source: Bloomberg



-IGULE 36: RUSSIAN CLUCE SNIPMENTS TO CHINA Russia's Asian Customers Shipments of Russian crude to Asian buyers in million barrels a day									
4 weeks ending	China	India	Other	nknown Asia	Other Unknown	Tota			
January 12, 2025	1.13	1.52	0.00	0.00	0.00	2.65			
January 19, 2025	1.00	1.52	0.00	0.00	0.03	2.55			
January 26, 2025	1.07	1.42	0.00	0.07	0.03	2.58			
February 02, 2025	1.10	1.45	0.00	0.07	0.03	2.64			
February 09, 2025	1.04	1.30	0.00	0.10	0.08	2.52			
February 16, 2025	1.12	1.35	0.00	0.28	0.08	2.83			
Source: Vessel tracking da	ta compiled by I	Ploomborg	J			Bloomberg			

Figure 36: Russian Crude Shipments to China

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: Zelensky's press conference this morning as we went to press

The big US news story on the Sunday cable news will be Zelensky's press conference in particular with his comment that they cannot reimburse the US for the grants/aids supplied and can't exchange the grants into debt. This is 100% offside what Trump has said he wants the grants repaid in some way including a massive deal to tie up Ukraine's critical minerals. He also said he is willing to exchange the Presidency if it gets a peace deal done. Unfortunately, we have a 7am MT news cut off and Zelensky's live press conference was just about to start. We stretched it to 7:55am MT and Zelensky is still talking. So all we could post was at 7:51am MT [LINK] "Breaking. *Zelensky live right now on* @BBCWorld. [10]; willing to exchange presidency for peace. also can't change grant's into debt. #OOTT." Unfortunately, we couldn't write more on live press conference due to our news cut off.

Oil: Saudi use of oil for electricity down in Dec

The key seasonal theme for Saudi oil exports is that, all things being equal, Saudi can export more oil in winter months as it uses less oil for electricity and, conversely, it would have less oil for export in summer months as it uses more oil for electricity i.e. air conditioning. Note that a normal peak to trough decline is ~400,000 b/d. If there is less oil used for electricity, then there is more oil for export and vice versa. The JODI data for Saudi Arabia oil supply

Zelensky press conference

Saudi oil use for electricity

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and demand for December [LINK] was updated on Tuesday. Saudi uses significantly less oil for electricity after August ends and the shoulder season begins. December saw a decrease in oil usage when compared to November, which saw a slight increase from October's direct use. The normal seasonal trend is for Saud oil consumption for electricity steadily to its trough in Feb. Oil used for electricity generation in December was 279,000 b/d, (vs December 2023 of 303,000 b/d), November was 382,000 b/d, October was 362,000 b/d, and September was 518,000 b/d (vs September 2023 of 606,000 b/d). Note that this year has exceeded the historical trough-to-peak swing of 400,000 b/d. December marks the new low of the year, which is less than the previous low point of 307,000 b/d in March. We saw the peak of 814,000 b/d back in August. December in Riyadh saw daytime highs of 19-25°C, while the night cooled to 8-14°C. November saw daytime highs of 32-37°C, while the night cooled to 22-26°C. Another factor impacting the use of oil for electricity is that Saudi Arabia is increasing its use of natural gas for electricity. Below are the AccuWeather temperature maps for Riyadh for December and November.

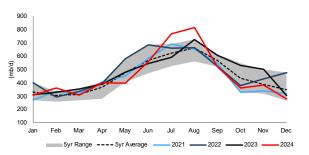


Figure 37: Saudi Arabia Direct Use of Crude Oil for Electricity Generation

Source: JODI, SAF

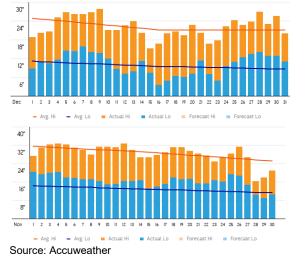


Figure 38: Riyadh Temperature Recaps for December (top) and November (bottom)

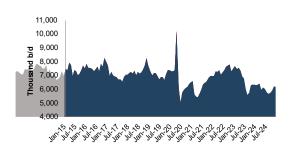


Oil: Saudi net oil exports down -0.062 mmb/d to 5.998 mmb/d in December

As noted above, Saudi Arabia used -0.103 mmb/d MoM less oil for electricity and saw a MoM decrease in exports, but increased oil inventories and crude oil inputs into refineries in Dec. JODI does not provide commentary on the monthly changes. Until recently, JODI did not have access to Saudi import data. But the oil import data is available, so we calculate net oil exports. We normally would have seen an increase in Saudi oil exports as its domestic consumption decreases but that this was not the case in December, as exports were down MoM. The JODI data showed Saudi net oil exports were down -0.062 mmb/d MoM to 5.998 mmb/d. This comes as imports were up marginally +0.02 mmb/d and exports were down -0.060 mmb/d. Below is our graph of Saudi Arabia monthly net oil exports.

Saudi net oil exports down MoM





Source: JODI, SAF

2023/10/11: Saudi reminded oil exports are seasonal i.e. more in winter One of the reasons, we have always said Saudi Arabia oil exports normally increase seasonally in Q4 is that is what Saudi Arabia has done and what Saudi Arabia Energy Minister Abdulaziz has previously stated. There are always unusual events but, as a rule, there is seasonality to Saudi oil exports. Here is what we wrote in the Nov 12, 2023 Energy Tidbits memo. "We probably should have called it Saudi Oil 101, but we were a little surprised that Saudi Energy Minister felt the need to explain how there is seasonality to Saudi's oil exports because Saudi domestic consumption of oil has a seasonal pattern. So seasonally, there is more Saudi oil available for export in the fall than in the summer. On Friday, we tweeted [LINK] "Agreed, he is explaining Saudi Oil 101. Summer heat = more #Oil used to generate electricity for A/C ie. less for export. Aug 2023 was 726,000 b/d, +414,000 b/d vs Jan 2023. See SAF 10/22/23 Energy Tidbits graph. Thx @SVakhshouri for flagging. #OOTT." Well known oil strategist Dr. Sara Vakhshouri tweeted "Saudi Energy Minister on #oil price drop: demand is healthy & speculators are to blame for the recent drop. OPEC exports don't indicate increased production. Shipments are seasonal, dipping in summer & rebounding in Sep & Oct; not a sign of output changes." This is the theme we highlight every month when we report on the monthly Saudi oil data for oil to refineries, production, exports, oil for electricity and oil into inventories. Our tweet showed our Oct 22, 2023 Energy Tidbits graph on how Saudi used 414,000 b/d more oil for electricity in Aug than it did in Jan because of the weather. The hot summers

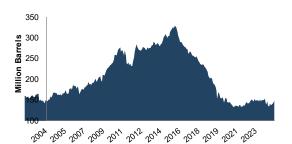


always drive up Saudi use of oil for electricity."

Oil: Saudi oil inventories build +2,642 mmb MoM in December

Saudi crude oil inventories were up MoM, as the difference between supply and demand was down for the month driven by lower production. The JODI data for Saudi oil stocks was 147.773 mmb on December 31, which was up +2.642 mmb MoM from 145.131 mmb on November 30. When we look at the components of the MoM changes for production, oil used for electricity, oil intakes into refineries and net oil exports, we would have expected to see a build in oil stocks of +2.635 mmb in December which is an immaterial difference of +0.007 mmb. For the math components: Saudi production in December was 8.905 mmb/d, down -0.020 mmb/d MoM vs 8.925 mmb/d in November i.e. this would have led to a +8.905 mmb/d build in inventories MoM. Saudi direct use of oil for electricity was 0.279 mmb/d in December. down -0.103 mmb/d MoM vs 0.382 mmb/d in November, this would lead to a -0.279 mmb/d MoM draw in oil inventories. Refinery intake of oil was 2.543 mmb/d in December and was up +0.189 mmb/d MoM vs 2.354 mmb/d in November, this would have led to a -2.543 mmb/d MoM draw in oil inventories. Net oil exports were 5.998 mmb/d in December, down -0.062 mmb/d MoM vs 6.060 mmb/d in November i.e. would lead to a -5.998 mmb/d MoM draw in oil inventories. The net impact of the key components would have been a MoM build of +2.635 mmb in oil inventories in December vs the reported MoM build of +2.642 mmb.

Figure 40: Saudi Arabia Oil Inventories (million barrels)



Source: JODI, SAF

Oil: US wants "an arrangement for Gaza", far from A 2-state solution for Palestine

It's hard to see how Gaza can be the same potential to lead big oil price volatility as it was six months ago before Israel pounded Hamas. So the debate about a 2-state solution for Palestine isn't likely to lead to big oil price volatility. Gaza looks to be one of the few areas where the US and Saudi Arabia aren't fully aligned. On Tuesday, we posted [LINK] "*Trump supporter or not. US using their advantage to take 2-state solution off the table for now? Rubio/MBS. ¬* "secretary underscored the importance of an arrangement for Gaza that contributes to regional security" An arrangement seems for Gaza far removed from 2-state solution. #OOTT. Rubio met with MBS and then the formal US State Dept readout of the meeting highlighted that the "secretary underscored the importance of an arrangement for Gaza." No one thinks an arrangement for Gaza means support for a 2-state solution and the State Dept had to emphasize how Rubio underscored the US position to MBS. And doing so

Saudi oil inventory data

US wants "an arrangement for Gaza"

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knowing that Saudia Arabia had just come out highlighted the need for a 2-state solution. Our Supplemental Documents package includes the State Dept readout.

02/05/25: Saudi Arabia's statement on need for an independent Palestine state

Here is what we wrote in our Feb 9, 2025 Energy Tidbits memo. "Saudi arabia's statement on need for an independent Palestine state. Saudi Arabia surprised some by its clear statement of support for Palestine including that they will not establish diplomatic relations with Israel without the establishment of an independent Palestine state with East Jerusalem as its capital. On Wednesday, we posted [LINK] "Saudi Arabia clear statement on Palestine. "establish an independent Palestinian state with Jerusalem as its capital, and will not establish diplomatic relations with Israel without that" "this unwavering position is non-negotiable and not subject to compromise" #OOTT." Our Supplemental Documents package includes the Saudi Foreign Ministry statement."

Oil: No security warnings yet on Ramadan that starts on March 1

The start of Ramadan is under a week away so we are a little surprised that we haven't seen any warning from the US on Ramadan. Ramadan is expected to begin on March 1 (in Saudi Arabia) and end on March 29. The timing is always tentative as it is subject to the sighting of the moon. But with less than a week to go, we are surprised that there has been now security warning from the US Overseas Security Advisory Council [LINK] for Security Alerts that typically refer to Ramadan. In prior years, their warnings have noted that "*martyrdom during the month may hold a special allure to some*". The US normally makes this reminder much like they will remind of terrorist risk on certain anniversaries. But perhaps they figure terrorists won't want to cause Israel to go back to pounding Hamas and Hezbollah. Ramadan is described by the LiveScience [LINK] "*Ramadan is the most sacred month of the year in Islamic culture. Muslims observe the month of Ramadan, to mark that Allah, or God, gave the first chapters of the Quran to the Prophet Muhammad in 610, according to the Times of India. During Ramadan, Muslims fast, abstain from pleasures and pray to become closer to God. It is also a time for families to gather and celebrate".*

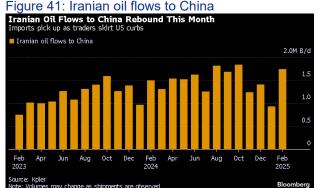
Oil: Iran oil flows to China back up in Feb

There was a good reminder this week on the thesis/reality that the global oil trade will normally be able to find a quick work-arounds to trading/sanction restrictions. It will normally mean the transit will take longer and cost more. In this case, it's Kpler tanker tracking data on Iran oil flows to China that jumped back up in Feb. This also means that the next official data for China oil imports from Iran will still be zero but oil imports from Malaysia will be up. On Wednesday, Bloomberg reported "*Oil Flows From Iran to China Jump as Traders Work Around Curbs. Oil flows from Iran to China rebounded this month after traders smoothed out logistical bottlenecks caused by tighter US curbs, enabling buyers in the largest importer to shift a backlog of cargoes. An increase in ship-to-ship transfers, plus the emergence of alternative receiving terminals, led to the jump, according to traders who participate in the market and asked not to be identified because the matter is sensitive. Imports over February are seen swelling to 1.74 million barrels a day, according to preliminary data from intelligence firm Kpler Ltd. That's 86% higher than the daily rate in January, and the most since October." Our Supplemental Documents package includes the Bloomberg report.*

Ramadan starts March 1

China home prices down again





Source: Bloomberg

Oil: Kurdistan confirms agreement with Iraq to resume Kurdistan oil thru Turkey

Fortunately our news cut off is 7am MT and not Saturday nights as we were able to include the breaking news this morning that Kurdistan agreed with Irag on the resumption of Kurdistan oil via Turkey. That was after last night saying there were issues to revolve. (i) Shortly after 5am MT, we posted [LINK] "Breaking. Last night's KRG saying issues to be resolved is now old news. Last hour, KRG, Baghdad strike deal to restart Kurdish oil exports. See 🔶 @Rudaw @JBechocha breaking news. Watch now moves to expected Iraq overproduce vs OPEC+ target. #OOTT @apikur oil." (ii) This updated the news last night that Kurdistan said there were still issues to be resolved. An hour earlier, we posted [LINK] "Too early to celebrate. Kurdistan says 2 issues to resolve before #Oil exports resume. Iraq PM has to approve how much oil is allocated for local consumption. Need "clear and specific mechanism for paying" the IOCs operating in KRG. Thx @RudawEnglish #OOTT @apikur_oil." (iii) These followed the Iraq announcement earlier yesterday that a deal was done. Yesterday we posted [LINK] "Finally! It took 2 years! Iraq Ministry of Oil "The procedures for resuming the export of oil produced in the Kurdistan Region via Ceyhan Port have been completed according to the mechanisms set forth in the Budget Law and its amendment and within the production ceiling specified for Iraq in OPEC." Now the tough part. Iraq has normally overproduced vs its OPEC+ ceiling and has to somehow incorporate potentially ~300,000 b/d of Kurdistan oil. #OOTT." It looks like Kurdistan oil flows via Turkey are finally about to resume after 23 months. The issue now moves to Irag's normal over production vs its OPEC target. This has been a problem for the last couple years and Iraq will have to cut back on its southern Irag (Non-Kurdistan) volumes to accommodate some the return of Kurdistan volumes. Yesterday, the Iragi News Agency (state media) reported [LINK] "The ministry said in a statement - received by the Iraqi News Agency (INA): "The procedures for resuming the export of oil produced in the Kurdistan Region via Ceyhan Port have been completed according to the mechanisms set forth in the Budget Law and its amendment and within the production ceiling specified for Iraq in OPEC." The ministry requested - according to the statement - the authorities of the region to "hand over the quantities produced from the operating fields to the Oil Marketing Company to start exporting via the Iragi-Turkish pipeline and Ceyhan Port in accordance with the contracts signed with the nominated companies."

Kurdistan oil via Turkey to restart



Our Supplemental Documents package includes the two Rudaw reports and the Iraqi News Agency report.

Oil: Libya oil production of 1.410 mmb/d is above Aug 1 levels

On Thursday, the Libya National Oil Corporation (NOC) posted [LINK] "Production rates in oil fields Libya's crude oil production today reached 1,410,216 barrels per day, and condensate production reached 51,280 barrels. Gas production indicators recorded a value of 207,810 barrels of equivalent. Total production reached 1,669,309 barrels per day. #OIL #NOC #LIBYA". The NOC reported crude oil production of 1,410,216 b/d, amounting to total liquids production of 1,461,496 b/d. This is above the Aug 1 level of 1.279 mmb/d for oil + condensate before the interruptions started and when the NOC stopped providing oil production updates for a few months. 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 207,810 boe/d, and for total oil, condensate & natural gas production of 1,669,309 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: China home prices continue to lower in value, 20 mths for new & 21 mths for old

One of the most important priorities for China when announcing their stimulus was to stop home values from declining and increase consumer sentiment. And there is still the wildcard of how Chinese consumers sentiment will be impacted by what Trump does or does not do on China and how that will impact Chinese consumer sentiment for home buying as Trump implements his tariffs on China. But at least for now, the indicators for Jan new and used home prices were still negative MoM but improving with a lower MoM decline than seen in Dec. On Tuesday, we posted [LINK] "Chinese consumer's most important asset, their home values, keep going lower. Jan & Dec smallest MoM % decline but still a decline. New home prices: 20th straight MoM % drop. Jan -0.07%. Dec -0.08%. Nov -0.20%, Oct -0.51%. Sept - 0.71%. 2nd hand home prices: 21th straight MoM % drop. Jan -0.34%. Dec =0.31%. Nov - 0.35%, Oct -0.48%. Sept -0.93%. Thx @business #OOTT". China home prices continue to lose value – new home prices had a MoM% drop for the 20th straight month, and second-hand home prices fell for the 21th straight month. The MoM% drop was the lowest in several months, which seems to point to an improving China housing market. Nonetheless, prices are still falling. One of the most significant drivers of negative sentiment among Chinese

Libya oil production at 1.410 mmb/d

China home prices down again



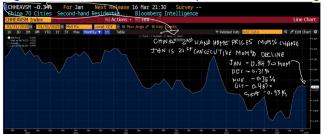
consumers has, to date, been they keep losing value in their homes, which meant their biggest asset value keeps decreasing month after month. Just like in North America, the home is the most important asset for most Chinese people, and they have seen the value of their homes decline month after month with no end in sight. In Jan, China new home prices were down -0.07% MoM and second-hand home prices were down -0.34% MoM. It seems like China home prices got a lift post China Sept stimulus and fell far less than previous months. But, as noted above, the qualifier will be how the new Trump administration is viewed by Chinese consumers. Below are the Bloomberg graphs with the Jan home prices that were included with our post.

Figure 42: China new home prices MoM % change incl Jan 2025



Source: Bloomberg, National Bureau of Statistics

Figure 43: China 2nd hand home prices MoM % change incl Jan 2025



Source: Bloomberg, National Bureau of Statistics

Oil: China city-level road congestion recovers after Spring Festival

The 40-day Spring Festival ended on Thursday, and as expected, China city-level road congestion continues to rebound post-holiday as people are back to work. Spring Festival was earlier this year, and this was reflected in the earlier big drop in China's city-level road congestion than in 2024. On Thursday, BloombergNEF posted its China Road Traffic Indicators Weekly report, which includes the Baidu city-level road congestion for the week ended Feb 19. BloombergNEF reported Baidu city-level road congestion saw a huge increase of +29.0% WoW to 113.6% of Jan 2021 levels. February 2025 data saw average daily peak congestion down -2.5% YoY when compared to February 2024. We noted in previous weeks memos that Chinese New Year and Spring Festival is early this year and that means China city-level road congestion saw 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 carries on with strong rebound*". Below are the

China city-level road congestion



BloombergNEF key figures.

Figure 44: China city-level road congestion for the week ended Feb 19

Source: Bloomberg

Oil: China says 40-day Spring Festival travel rush was +7.1% YoY to 9.02b trips

In the pre-Covid era when China was this growth engine for oil and the world, oil markets would be positive on the reports of record breaking travel during the 40-day Spring Festival travel. But not now as oil markets are in a wait and see on China to see if they can have their economy on some sort of sustained stronger growth especially in the face of Trump uncertainty. Earlier this morning, Xinhua (state media) reported [LINK] "China sees record-breaking inter-regional trips in Spring Festival travel rush". So a lot of Chinese traveled with China. It will take month or two to see how that translated into consumer spending. Xinhua reported "The total number of inter-regional passenger trips across China during the 40-day Spring Festival travel rush, also known as chunyun, reached a record of 9.02 billion, official data showed Sunday. The figure marked a 7.1 percent increase over the same period in 2024, according to a special work team established to facilitate sound operations during chunyun, which concluded on Saturday." Road traffic was +7.2% YoY to 8.39 billion trips. Railay traffic was +6.1% YoY to 513 million trips. And "According to the Civil Aviation Administration of China, the country's civil aviation sector recorded 90.2 million passenger trips and 739,000 flights during the period, both of which reached new historical highs."

Oil: China visitors to Hong Kong up YoY but still down big vs pre-Covid

On February 14, the Hong Kong Tourism Board released its January 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 Dec 2024, there were 4.256 mm total visitors and 3.101 mm visitors from mainland China. Note that the Spring Festival was earlier this year, beginning in Jan, compared to the previous year which followed the norm of it beginning in Feb. In Jan, there were total visitors of 4.742 mm, which was +24% YoY vs 3.826 mm in Jan 2024. In Jan, there were total visitors, there were 3.726 mm visitors, which was +25% YoY vs 2.984 mm in Jan 2024. Relative to pre-Covid, total visitors of 4.742 mm in Jan 2025 are down -30% below pre-Covid of 6.784 mm in Jan 2019. For visitors from mainland China of 3.726 in Jan

China Spring Festival travel

Chinese visitors to Hong Kong



2025 is -33% below pre-Covid of 5.524 mm in Jan 2019. Our Supplemental Documents package contains the press release from the Hong Kong Tourism Board.

Oil: Less debate on 2025 oil demand as EIA, IEA and OPEC have a tighter range

Oil continues to be stuck in the low \$70's with continued views of a stalled China recovery, Trump's push to keep oil prices down and OPEC's scheduled Apr 1 start of the return of voluntary cut barrels. But one big difference in 2025 vs 2024 is that there should be less debate on oil demand. Here is what we wrote in last week's (Feb 16, 2025) Energy Tidbits memo on the EIA, IEA and OPEC forecasts for 2025 oil demand. "Less debate on 2025 oil demand as EIA, IEA and OPEC have a tighter range. Yesterday, we posted [LINK] "Less of debate on #Oil demand growth. Range of 2025 YoY oil demand growth forecast tightened further post the Feb forecast updates. Range now IEA low of +1.10 to OPEC high of +1.45 mmb/d YoY with EIA, Russia & Aramco in the middle, with an average of +1.30 mmb/d. #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 considered way too high and would keep getting tweaked down. With the Feb forecasts now completed, we see an even tighter range of oil demand YoY growth forecasts for 2025 with the IEA tweaking up its 2025 oil demand growth 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 table comparing oil demand growth forecasts that was attached to our post."

Tight range of oil demand YoY growth for 2025

Figure 45: Comparison of YoY oil demand growth forecasts

	YoY Oil Den	hand Growth Fore	cast	
million b/d	2024 YoY	2025 YoY	2026 YoY	
EIA Feb STEO	0.90	1.37	1.04	
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 (mill	ion b/d)
			2024	2023
EA Feb OMR	0.87	1.10	102,894	103,99
EA Jan OMR	0.94	1.06	102.901	103.95
EA Dec OMR	0.84	1.08	102.807	103.88
EA Nov OMR	0.92	0.99	102.817	103.80
EA Oct OMR	0.86	1.00	-	
EA Sept OMR	0.90	0.95		
EA Aug OMR	0.97	0.95	-	
OPEC Feb MOMR	1.54	1.45	1.43	
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	-	
Note IEA Feb OMR revised up 2023		to 102,028 kb/d fr	om 101,966 kb/d	
Note: Aramco CEO on Jan 21/25 based o	n Reuters reporting			
Note: Russia, Novak est 2025 is 1.0 to 1.	5 mmfb/d			

Note: Russia, Novak est 2025 is 1.0 to 1.5 mmfb/d

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

Oil: Vortexa crude oil floating storage -9.47 mmb WoW to 64.35 mmb at Feb 21

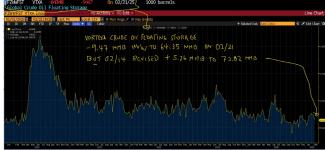
We are referencing the Vortexa crude oil floating storage data posted on the Bloomberg terminal as of 9am MT yesterday. Note that these estimates get revised over the course of the week and the revisions can go back months. We do not check daily for the revisions, so our comments on the new estimates are compared to the prior week's Vortexa estimates

Vortexa floating storage



posted on Bloomberg on Feb 15 at 9am MT. (i) Yesterday morning, we posted [LINK] "Vortexa crude #Oil floating storage. Higher in Jan/Feb as China stopped unloading some sanctioned tankers. 68.56 mmb on Feb 14. -1.84 mmb WoW but Feb 7 of 70.40 mmb was revised +5.48 mmb.7-wk moving average creeping higher 67.59 mmb vs 66.80. Thx @vortexa @business. #OOTT." (ii) As of 9am MT Feb 15, Bloomberg posted Vortexa crude oil floating storage estimate for Feb 21 was 64.35 mmb, which was -9.47 mmb WoW vs revised up Feb 14 of 73.82 mmb. Note Feb 14 was revised +5.26 mmb to 73.82 mmb vs 68.56 mmb originally posted at 9am MT on Feb 15. (iii) Revisions. Feb 14 was revised +5.26 and Feb 7 revised +4.69 mmb but the rest of the prior 7 weeks revisions were smaller such that the average revision for the prior seven weeks was +1.66 mmb. Here are the revisions for the prior seven weeks compared to the estimates originally posted on Bloomberg at 9am MT on Feb 15. Feb 14 revised +5.26 mmb. Feb 7 revised +4.69 mmb. Jan 31 revised +1.26 nnb mmb. Jan 24 revised +0.11 mmb. Jan 17 revised +2.25 mmb. Jan 10 revised -1.47 mmb. Jan 3 revised -0.46 mmb. (iv) This is the first time since Aug that the 7-week moving average is over 70 mmb. This week's move over 70 mmb was mostly driven by the dropping of the very low Jan 3 of 53.06 mmb dropped from the 7-week moving average. The 7-week moving average to Feb 21 is 70.79 mmb vs last week's then 7-week moving average of 67.59 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) Feb 21 estimate of 64.35 mmb is -65.03 mmb vs the 2023 peak on June 25, 2023 of 129.38 mmb. Recall Saudi Arabia stepped in on July 1, 2023 with its voluntary cuts. (viii) Feb 21 estimate of 64.35 mmb is +3.39 mmb YoY vs Feb 23 2024 at 60.96 mmb. Below are the last several weeks of estimates posted on Bloomberg as of 9am on Feb 22, Feb 15, and Feb 8.

Figure 46: Vortexa Floating Storage Jan 1, 2000 - Feb 21, 2025, posted Feb 22 at 9am MT



Source: Bloomberg, Vortexa



Figure 47: Vortexa Estimates Posted 9am MT on Feb 22, Feb 15 and Feb 8

Posted Feb 22, 9am NIT Feb 15, 9am NIT										ep 8,	, 9ar	n ivi i						
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Er	02/2	1/2029			1348		02/14				8562	Er	02/07	7/202	5		4923	
Fr	02/14	4/2025	5	73	3815		02/07	7/202	5	7	70403	Fr		1/202	5	7	8240	
Fr	02/0	7/2025		75	5086		01/31	1/202	5	7	75279	Fr		1/202	5	7	4044	
Fr	01/3	1/2029	5	76	5545		01/24	4/202	5	7	72772	Fr			5		8255	
Fr	01/2	4/2025		72	2881		01/17	7/202	5	e	68537	Fr		0/202	5		i 9294	
Fr	01/1	7/2029		70	0785		01/10	0/202	5	é	53539	Fr		3/202	5		8018	
Fr	01/1	0/2025		62	2067		01/03	3/202	5	5	54058	Fr		7/202			4836	
Fr	01/0	3/2029		53	3602		12/27	7/202	4	6	5106	Fr		0/202			6020	
Fr	12/2	7/2024	1	64	1562		12/20	0/202	4	e	6219	Fr		3/202			68279	
Fr	12/2	0/2024	4	63	3427		12/13	3/202	4	e	6772	Fr	12/06	5/202		7	5777	
Fr	12/1	3/2024	\$	65	5881		12/06	5/202	4	7	74068	Fr		9/202			69634	
Fr	12/0	6/2024	1	73	3265		11/29	9/202	4	e	57717	Fr		2/202		7	2542	

Source: Bloomberg, Vortexa Source: Bloomberg, Vortexa

Oil: Vortexa crude oil 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 Feb 14 was revised +5.26 mmb. The largest revision was Middle East revised +2.11 mmb. (ii) Floating storage is always subject to revisions but it seems like the huge revisions to Asia may be past. In Jan, China became stricter in not taking sanctioned tankers related to Russia and that led to a big increase in Asia floating storage and huge revisions as tankers got stuck offshore Asia without being able to unloaded. In the Feb 8 initial estimates for Feb 7 Asia floating storage, Vortexa revised Asia floating storage Jan 31 +15.82 mmb, Jan 24 revised +5.04 mmb and Jan 17 revised +6.63 mmb. But in the last month, the revisions have come down and, as noted in our updated Asia floating storage graph below, the Feb 22 initial estimates for Feb 21 show much more modest revisions for Asia floating storage. And Asia floating storage is back below 30 mmb for the first time since Jan 10, which suggests the backlog of floating storage off Asia is returning to more normal levels. The revisions to the prior weeks for Asia were Feb 14 revised +0.67 mmb. Feb 7 revised +2.92 mmb. Jan 31 revised -0.97 mmb. Jan 24 revised +2.01 mmb. Jan 17 revised +1.42 mmb. Jan 10 revised +0.64 mmb. (iii) Total floating storage on Feb 21 of 64.35 mmb was -9.47 mmb WoW vs revised up Feb 14 of 73.82 mmb. The major WoW change was Asia -7.10 mmb WoW. (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 Feb 14 that was posted on Bloomberg at 9am MT on Feb 15.

Figure 48: Vortexa crude oil floating storage by region

Vortexa crude oil floa	ating storage by regior	1		Original Posted	Recent Peak	
Region	Feb 21/25	Feb 14/25	WoW	Feb 14/25	Jun 23/23	Feb 21 vs Jun 23/23
Asia	28.81	35.91	-7.10	35.24	74.06	-45.25
North Sea	2.28	1.59	0.69	1.59	4.71	-2.43
Europe	5.39	4.08	1.31	3.83	6.05	-0.66
Middle East	9.80	11.76	-1.96	9.65	6.59	3.21
West Africa	4.02	5.47	-1.45	4.52	7.62	-3.60
US Gulf Coast	2.47	2.25	0.22	2.12	1.02	1.45
Other	11.58	12.76	-1.18	11.61	29.33	-17.75
Global Total	64.35	73.82	-9.47	68.56	129.38	-65.03
Vortexa crude oil floa	ating storage posted o	n Bloomberg 9a	m MT on Feb 22			

Source: Vortexa, Bloomberg

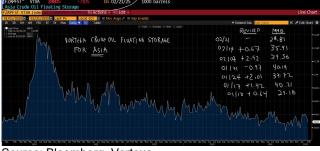
Source: Bloomberg, Vortexa

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Vortexa floating storage by region



Figure 49: Vortexa crude oil floating storage for Asia thru Feb 21, 2025



Source: Bloomberg, Vortexa

Oil: Europe airports daily traffic 7-day moving average -2.41% below pre-Covid

Yesterday, we posted [LINK] "*EU air traffic (arrivals/departures) still stuck below pre-Covid.* 7*day moving average as of: Feb 20: -2.4% below pre-Covid. Feb 13: -4.1%. Feb 6: -4.3%. 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%. #OOTT.*" Note the Eurocontrol air taffic is daily arrivals/departures data. The Xmas rush for the 7-day moving average as of Dec 26 was the only time above pre-Covid since Jan 2024 but it didn't last and went right back below pre-Covid in Jan 2025. . Air traffic always goes up for Xmas and it always seasonally drops after Xmas. But in Jan 2024, it didn't drop as much and was actually above pre-Covid in Jan 2024. This year, there was a big drop off after Xmas. The 7-day moving average was -2.4% below pre-Covid as of Feb 20, which follows -4.1% as of Feb 13, -4.3% as of Feb 6, -5.9% as of Jan 30, -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, and -2.4% as of Dec 19. 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 50: Europe Air Traffic: Daily Traffic Variation to end of Feb 20

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Source: Eurocontrol

Oil: ATA Truck tonnage index in January flat MoM, +0.3% YoY

We look to items like truck tonnage for indicators on the US economy. The American Trucking Association (ATA) released its seasonally adjusted Truck Tonnage Index for January on Tuesday [LINK]. Truck tonnage was flat MoM and was up +0.3% YoY, the first YoY increase since August. Chief Economist Bob Costello noted *"After declines in November and December totaling 1.7%, tonnage was unchanged in January. This outcome is impressive considering the massive winter storm that brought cold temperatures and significant snowfalls to large parts of the country, including those that rarely see such storms.*

January Truck Tonnage flat MoM

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Europe airports daily traffic



Furthermore, the terrible wildfires in California likely also caused freight disruptions. Softness in manufacturing and retail sales continue to be a drag on truck freight volumes as well, so the fact tonnage was flat is a positive sign." Trucking serves as an indicator of the U.S. economy, representing 72.7% of tonnage carried by all modes of domestic freight transportation, including manufactured and retail goods. Trucks hauled 11.27 billion tons of freight in 2024. Motor carriers collected \$906 billion, or 76.9% of total revenue earned by all transport modes.

Figure 51: ATA Truck Tonnage Index



Source: ATA

Oil & Natural Gas: sector/play/market insights from Q4 calls

Please note we ran out of time this weekend to write up all the Q4 calls that we reviewed as there was too much general news to follow so we didn't write up many energy company Q4 calls. Q4 calls have ramped up for a big week of Q4 calls. This is our favorite time each time of each quarter as it is quarterly reporting and this is when we get the best insights into a range of oil and gas themes/trends, sectors and plays. As a reminder, our Energy Tidbits memo does not get into the quarterly results, forecasts, or valuation. Rather the purpose of highlighting a company is to note themes/trends and plays that will help shape a reader's investment thesis to the energy sector. In the conference calls, we also tend to find the best insights from the Q&A portion as opposed to the prepared remarks. Plus, we tend to get the best E&P sector insights from services, pipelines, refineries, and utilities

Nabors: Limited indication of a near-term recovery in Lower 48 drilling rigs

Nabors held its Q4 call on Thurs Feb 13. On Monday, we posted [LINK] "2025 US #Oil production growth challenge. "At this point, we see limited indication of a nearterm recovery in the Lower 48 drilling rig market." Nabors Q4 call. Survey of largest Lower 48 operators, 46% of US rigs, point to 4% decline in rigs to yr-end. #OOTT thx @business." One of the most watched quarterly call comments for the look ahead to Lower 48 drilling is Nabors on what they say on their quarterly survey of the most active Lower 48 oil and gas operators. The survey of the big Lower 48 players point to a 4% decline in Lower 48 rigs. Nabors said "The US market remains sluggish. We are responding to this environment with actions to improve efficiency and align our cost structure. At the end-of-the fourth quarter, we surveyed the largest Lower 48 industry clients. After a number of E&P mergers, our survey now covers 15 operators. These clients account for approximately 46% of the Lower 48 industry's Sector insights from Q4 calls

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working rigs at the end-of-the quarter. The latest survey indicates this group intends to reduce its rig count 4% by the end of 2025. This expected decline is concentrated among three operators." Nabors also highlighted that Lower 48 rigs in Q4/24 were less than expected. Nabors had expected growth in Q4/24 and now does't see much support for a near term-recovery in Lower 48 rigs. Nabors said "The Lower 48 market, the potential increases we previously expected failed to materialize with operators continuing to demonstrate significant capital discipline in their oil-related drilling, while delivering only muted improvements in gas basins. As longer-term contracts continue to expire, we experienced an elevated level of churn in the fourth quarter. We expect this trend to continue in the first quarter of 2025. At this point, we see limited indication of a near-term recovery in the Lower 48 drilling rig market."

PBF Energy: No idea for return of 156,000 b/d Martinez (California) refinery

We had this item in last week's (Feb 16, 2025) Energy Tidbits memo but put it back in as it is the ke reason why California gas prices spiked up in the last few weeks. PBF Energy held its Q4 call on Thursday. Earlier in the memo, we noted how the key reason for the big spike in California gasoline prices was the fire that led to an unplanned shutdown of its 156,000 b/d Martinez refinery. In the Q&A, mgmt confirmed the entire refinery was down and they are still yet to determine the full extent of the damage as they only have limited access to the point of origin until ongoing investigations are completed. So there is no idea when Martinez will be back up, which is why California gas prices spiked up. And as PBF said on the call "The California market, with its unique specifications, is short refined products and thus relies on imports." Mgmt was careful to not give any estimates of how long given they haven't completed their assessment. But mgmt warned that Martinez being down now puts California in an short position and needing more imports. So they are falling behind where they should be. And that means problems in the fall when other refineries go down for turnaround. Mgmt said "The situation is set to compound itself with the announced shutdown of the LA Basin refinery scheduled for this fall."

Precision: Horizontal frac unconventional gas spreading thru the world

Precision held its Q4 call on Feb 13. (i) Cdn Q4 drilling averaged 65 rigs (+1 vs Q4/24) was way less than expected from their Q3 call on Oct 29 and they said it was primarily due to budget exhaustion. (ii) Looks like more Cdn rigs operating than they thought in the Q3 on Oct 29. "We were encouraged by how quickly customers activated our rigs immediately following Christmas, as we rebounded to 98 rigs by January. Sorry, I'll repeat that. We rebounded to 79 rigs by January, then to 81 just a few days later, and this level has held firm through today. Breakup will be weatherdriven, not budget-constrained. We have good customer indications that activity during breakup will exceed last year's record level and should approach 50 rigs operating straight through the spring breakup period.' Whereas in the Q3 on Oct 29, Precision said "In Canada, we currently have 75 rigs operating and expect this activity to continue until spring breakup, except for the traditional slowdown over *Christmas.*" (iii) Seems like lesser Montney activity. One of the common comments from Precision before was how demand for the Montney rigs would exceed supply or is very strong. In the Q3 and again in the Q4, Precision has switched to the saying now nearly fully utilized. Still positive but less so. In the Q4 release, Precision wrote



"Drilling utilization days increased 12% over 2023 and our Super Triple and Super Single rigs, which represent approximately 80% of our Canadian fleet, are nearly fully utilized. Demand for our Super Triple fleet, which is the preferred rig for Montney drilling, is driven by robust condensate fundamentals and the startup of LNG Canada this year." (iv) No specific guidance for Cdn drilling activity levels in H2/25. (v) US rig market has been "challenging" for Precision. In the Q&A, CEO Neveu said "So there's been an awful lot of churn in the US., and a lot of that in oil, a lot of these are very short-term, well-to-well, pad-to-pad type contracts, and that's going to continue through the next couple of quarters in the US So I think there is downside risk." (vi) Sees international unconventional gas picking up in undisclosed places around the world. Precision highlighted the move in more international areas for multi-stage frac of unconventional natural gas plays. On the Q4 call, mgmt said "Now we have seen an influx of unconventional gas inquiries for multiple rigs in three different regions. Most of these are looking to utilize North American style pad rigs and technology to pursue shale gas developments. I will intentionally remain very vague about this project as are these projects as other drillers and some perhaps listening to this call will also be pursuing these inquiries. Now it's unlikely that any of these rigs would spud before year end as contract negotiations, equipment certifications and mobilization times preclude a rapid deployment

Energy Transition: Trump, data centers can have their power plants, natural gas wins

Trump only made his AI data centers comments on Friday so we haven't seen any others raise the concern if more and more natural gas supply goes directly to AI data centers and not providing 24/7 power into the grid. Note Trump did not use the term "behind-the-meter" but this is what he is supporting. The ability of AI data centers to get their own power directly and not have to get power thru the grid. Yesterday, we posted [LINK] "Bullish for #NatGas. Trump: AI data centers can have their power plants & not have to get power from the grid. And #NatGas will be the major fuel. But regular grid customers will become more exposed to interruptible renewable if data centers take more & more 24/7 #NatGas from going into the *arid.* #OOTT." Trump made some lengthy comments at the Governors working session on Friday. He was clear that he will move to help AI data centers develop their own power generation, which means they don't have to get their power for the data centers from the grid. Trump also believes the fuel for the AI data centers own power plants will mostly come from natural gas and then from coal. And he did his usual negative views on wind generation. And he was okay with solar. Trump said "We're going to get you quick approvals, then you're going to build your own electric plant so that you're going to create your own electricity when you build your -- your plant," which will be massive. These are massive plants. "But when you build your plant." we're going to let them build an electric generating plant where they build like a utility. In other words, instead of using Con Edison, like we have in New York -- hello, Governor. Nice to see you back there. And we do have Con Edison, and they don't do a bad job, actually. It -- they could be a little cheaper with the price perhaps but they don't too bad. But we build our own utility. They can have their own utility. If they have any extra, they can put it onto the grid. But this way, they're not subject to a bad grid or a dangerous grid or a grid that gets taken out by bombs or war or anything else. So they actually couldn't believe it. They said, "Do you think you can get that approved?" "Yeah, I'll get that approved very quickly." They couldn't believe it and they're so happy. And they're going to do some in Virginia, some big ones. But we're going to go -- and this way, it's really a self-serve -- it --

Natural gas bypass grid to data center



they just have this massive building with a large electric generating facility that'll be powered by natural gas mostly. Some will use coal, some will use nuclear. Clean coal -- I always say "clean coal". But some will use nuclear. They have their right to do it. None will use wind cause wind doesn't work. It's just terrible, how an environmental person can like wind. It kills the birds, it's very expensive."

Overlooked, 24/7 NatGas/Electricity bypass grid to data centers

Here is what we wrote in last week's (Feb 16, 2025 Energy Tidbits memo.) "Overlooked, 24/7 NatGas/Electricity bypass grid to data centers. Above, we highlight the Energy Transfer deal will see up to 0.43 bcf/d of 24/7 natural gas directly supply the AI data center and not be provided to gas utilities for the grid. We continue to be surprised that governments and people aren't concerned about the implications of the increasing deals that see 24/7 natural gas and electricity (ie. nuclear) will be delivered directly to AI data centers and bypass going into the grid. We think governments and people are blinded by the AI data centers highlighting their adding renewable power and forget they are taking 24/7 power either from the grid or bypassing the grid. The message tends to be how there will be way more renewable capacity added than electricity consumed. And that is very likely the case. But the capacity is intermittent and subject to more risk as seen in Europe this winter when wind generation is low in a seasonally high period. So there very well may be more "capacity" but that doesn't mean better reliability. Rather there is increased relative exposure to intermittent wind and solar and less relative availability of 24/7 power. There is only so much 24/7 power and the more that is siloed directly or indirectly for Al data centers means the rest of the grid customers are more exposed to intermittent wind and solar power generation. And it is difficult for the environmental groups to highlight this risk given their fundamental thesis is that renewable wind and solar can power the grid. Plus Energy Transfer highlights that this is the first of many such deals. Sooner or later, we have to believe (hope) people wake up to this development. Here are a few of our prior highlighting of this 24/7 power not gong into the grid."

Consumers will be increasingly asked for electricity conservation

Here is what we previously wrote on our concern for the rest of grid customers the more 24/7 natural gas supply is provided directly to AI data centers and not being forced thru the grid. Long-term readers know that I have been following long-duration (multi-day not multi-hour) send-out capacity for battery electricity storage for over a decade as I think that will be the game changer for electricity. But we still have don't have multi-day send-out capacity. That means consumers should be prepared for an increasing push for electricity conservation and efficiency as the grid becomes more reliant on intermittent wind and solar. One thing that is very predictable about solar is that it only generates during daytimes. This is no different than what we have seen over the decades when power becomes very expensive. The difference this time is that the grid will be increasingly reliant on intermittent renewable ie. no solar when the sun goes down. It is inevitable that power utilities will increasingly be asking or educating or price driving regular consumers to use less electricity and to use it at non-peak times. So get ready for the barrage of commercials and social media short videos on how to use energy better ie. less and at off-peak hours. Regular grid



customers will have to do what AI data centers can't/won't do.

What does "Behind-the-meter" mean?

We were surprised that some didn't either now what it meant or pay attention to the Energy Transfer reference to a "behind-the-meter" deal. Energy Transfer highlighted it but it was ignored. Energy Transfer said "*natural gas supply would be sufficient to generate up to approximately 1.2 gigawatts of direct, or "behind-the-meter" electric power for a period of at least 10 years*". Behind the meter simply means natural gas that will provide the power and it bypasses the grid. This is the key – it bypasses the grid. Energysage had the below graphic [LINK] and said "What does behind-the-meter really mean? The difference between behind-the-meter (BTM) and front-of-meter systems comes down to an energy system's position in relation to your electric meter. A BTM system provides power that can be used onsite without passing through a meter, while a front-of-meter system must pass through an electric meter before reaching an end user.

Figure 52: Front of the meter vs Behind the meter



Source: energysage

02/10/25: Energy Transfer 0.43 bcf/d natural gas direct supply to data center

We also raised our concern on what happens to the regular grid customers if AI data centers take more and more 24/7 power/fuel away from going into the grid. Here is what we wrote in last week's (Feb 16, 2025) Energy Tidbits memo. "Energy Transfer 0.43 bcf/d natural gas direct supply to data center. We are surprised that Energy Transfer's Feb 10 announcement didn't get more attention as we continue to be amazed that people are worried about natural gas or electricity bypassing the grid to go directly to AI data centers. On Monday, we posted [LINK] "Breaking! Natural gas DIRECT supply to power AI data center. Energy Transfer 0.43 bcf/d of #NatGas to CloudBursts AI data center. Generate up to 1.2 GW of direct or behind the meter electric power. Other AI data centers will want their own 24/7 #NatGas power supply! #OOTT." Energy Transfer's release title "Energy Transfer and CloudBurst Sign Agreement for Natural Gas Supply to Data Center Project in Central Texas" didn't' specify the key item of this deal – it is a direct supply of natural gas to an Al data center and this natural gas is not going to supply power for the gird but will go directly to the data center. This didn't seem to get attention. Plus we didn't see any focus on Energy Transfer expecting this to be the first of many such deals AND these deals will "supply, store and transport natural gas to fuel data centers...". On Friday, we posted [LINK] "Overlooked? It's not just this is DIRECT supply of #NatGas to data



center. ET says "first of many agreements to supply, STORE and transport natural gas to fuel data centers.." Sounds like ET will also dedicate #NatGas storage capacity to the data center deals." #OOTT." We think it has been overlooked that Energy Transfer is indicating they are going to also dedicate natural gas storage capacity as part of these data center deals. It makes sense as it gives the data centers another layer of comfort for 24/7 natural gas power. Our Supplemental Documents package includes the Energy Transfer release."

Energy Transition: Trump Energy Dominance positive for coal, negative wind solar

Trump's comments on AI data centers being able to get their own power and that natural gas and then coal will be the major fuels to fire the data centers reminds of the comments for Trump's new Energy Dominance Council. Here is what we wrote in last week's (Feb 16, 2025) Energy Tidbits memo. "Trump Energy Dominance positive for coal, negative, wind solar. Earlier this morning, we posted [LINK] "Winners/Losers from Trump Energy Dominance Council. #Coal big winner. one of the "amazing" energy assets, clearly the one referred to "the national security concerns with removing reliable and affordable energy sources;" "facilitating the reopening of closed power plants. #Wind #Solar loses, not in the amazing list. unsaid reference to cut renewable subsidies "on identifying and ending practices that raise the cost of energy" #Marcellus #NatGas wins "approving the construction of natural gas pipelines to, or in, New England, California, Alaska, and other areas of the country underserved by American natural gas; " Note the "or in". Eastern Canada loses if Marcellus NatGas can stay in US and doesn't get exported to eastern Canada. ie. ~0.6 bcf/d via Niagara Falls. Opening for council to formally advise Trump don't put tariffs on Cdn #Oil #NatGas #Uranium #Electicity "provide to the President a review of markets most critical to power American homes, cars, and factories with reliable, abundant, and affordable energy. #OOTT." Earlier in the memo, we noted our post items on Marcellus gas wins if Trump gets natural gas pipelines to and in New England, how that should hurt Cdn Marcellus gas imports and how the Council will surely advise Trump not to tariff Cdn oil imports. Trump may not use the word coal, but it must be coal when he says "facilitating the reopening of closed power plants". Trump may not use the words wind and solar but he left them off the list of what he calls "amazing" US energy assets and he also referred to "identifying and ending practices that raise the cost of energy". That has to include subsidies for wind. There really is nothing that should surprise. It is worth a read. Our Supplemental Documents package includes the Trump executive order."

Energy Transition: HEVs continue to take share from BEVs in US in Jan

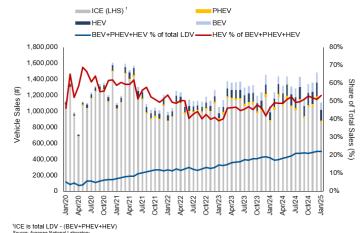
On Tuesday, we posted [LINK] "HEVs continue to take share from BEVs in US in Jan. HEV now 53.2% of total BEV+PHEV+HEV in Jan 2025 vs 39.2% in Jan 2023. Total LDV Jan split: ICE 77.8%. HEV 11.8%. BEV 8.5%. PHEV 1.9%. See -09/04/24 post: HEVs are really just fuel efficient ICE. US peak #Gasoline demand will take longer than energy transition aspirations. Thx @argonne #OOTT. As a reminder, Jan is normally a down month for vehicle sales. But the trends in US car buying in 2024 are continuing in 2025 - BEVs are not being adopted anywhere near as fast as assumed in the Energy Transition aspirations. And now most are aware that Hybrids keep taking share from BEVs in the US. Argonne National Laboratory posted its monthly US sales data for Light Duty Vehicles (LDVs) broken out into Battery Electric Vehicles (BEVs), Plug-in Electric Hybrids (PHEVs) and Hybrid Electric Vehicles (HEVs) for January, which then allows us to back into ICE sales [LINK]. (i) For Trump National Energy Dominance Council

HEVs keep taking share from BEVs in US



BEVs, PHEVs and HEVs, the two key 2024 trends were the slowing growth rate in BEV sales, and HEVs taking more share from BEVs. (ii). HEVs are still showing the strongest YoY growth and taking share from BEVs. HEVs are now 53.2% of total BEV + PHEV + HEV Jan 2025 sales, whereas it was 39.2% in Jan 2023. (iii) Jan was a worse month for BEVs, as they were down -1.8% MoM in terms of % of BEV + PHEV + HEV. In terms of % of total US LDV sales, BEV is down -0.4% to 8.5% of LDV's. (iv) Total US LDV car sales in Jan were down -377,931 cars or -25.4% MoM to 1,110,983 total car sales in Jan vs 1,488,913 in Dec 2024. BEV: -38,059 or -28.7% MoM to 94,333 and 8.5% of total US. PHEV: -8,317 or -28.4% MoM to 20,987 and 1.9% of total US. HEV: -37,225 or -22.1% MoM to 131,052 and total 11.8% of total US. ICE: -294,330 or -25.4% MoM to 864,611 and 77.8% of total US. (iv) It was a worse month for BEVs, which have continued to underperform HEVs. PHEVs also had a worse month after strong growth seen in Dec 2024. This month also represented a MoM decrease in ICE, and ICE sales represent 77.8% of total US car sales. Our Supplemental Documents package includes the data from Argonne.

Figure 53: US BEV, PHEV, HEV, ICE vehicle sales for Jan 2025



Source: Argonne National Laboratory

HEVs & PHEVs are really just more fuel-efficient ICE vehicles

For the past several months, we have reminded how HEVs are really just more fuelefficient vehicles. Here is what we wrote in our Sept 8, 2024 Energy Tidbits memo. "HEVs & PHEVs are really just more fuel-efficient ICE vehicles. We don't think most realize that HEVs and PHEVs are really just more fuel-efficient ICE vehicles and, in particular, for PHEVs that are generally lumped in with EVs for an electrified car group. HEVs and PHEVs run on gasoline or diesel for likely at least half of the time for PHEVs and probably 90% for HEVs. (i) On Wednesday, we tweeted [LINK] "HEV/PHEV 101 - They are really just more fuel efficient ICE. Ford: HEV F150 does 23 mpg vs ICE150 at 19 mpg. Volvo: PHEVs km driven are split 1/2 using battery, 1/2 using petrol/diesel. #OOTT." (i) Ford F150 Hybrid vs ICE mpg. Our tweet included the EPA rated mileage for the Ford F150 ICE vs Hybrid. The EPA rates the Hybrid fuel efficiency as being only 4 mpg more than the ICE. That increased fuel



efficiency would be reduced if it was a full apples-to-apples comparison. The ICE has a much larger towing capacity. The F150 ICE 3.5L cyl F-150 does 19 MPG with a tow capacity of 13,500 lbs. The F150 HEV 3.5L 6 cyl F-150 does 23 MPG with a tow capacity of 11,200 lbs. (ii) Volvo PHEV. Most just lump PHEVs in with EVs because both are electrified. But the reality is that a lot of PHEV is driven in ICE mode. As noted earlier, Volvo backed off its fully electric plans and its press released noted "Volvo Cars' most recent data shows that around half of the kilometres covered by the latest plug-in hybrid Volvo cars are driven on pure electric power." So based on the "most recent data", Volvo PHEVs are driven around 50/50 between km driven in battery mode vs ICE mode. Given the press release was Volvo having to back away from its electrified goals, we have to be believe the "around half" driven by PHEV is likely below half. (iii) We also believe that Volvo has likely picked the best time period for PHEVs driving in battery mode. We wodl assume the most recent data is referring to some spring/early summer period. and it does not include winter months where the PHEVs will be driven more in ICE mode."

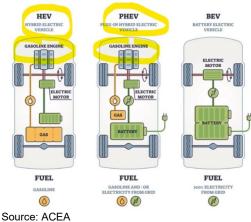


Figure 54: HV vs PHEV vs BEV

Energy Transition: Mercedes BEV sales down, PHEV sales up big

There wasn't any big surprise in the Mercedes Q4/24 car sales data released in the Q4 on Thursday. BEV sales were down, PHEV sales up big, and ICE sales also up. This has been the trend in 2024 so Q4 shouldn't have surprised. Mercedes reported Q4 on Thursday. Early Thursday morning, we posted [LINK] and included the Q4/24 and full year 2024 sales for BEV, PHEV and ICE and how their share of Mercedes total car sales changed. We posted "Mercedes Q4 car sales up YoY with ICE and PHEV making up for big drop in BEV. Q4/24: BEV -25.8% YoY to 49,151. 9.5% share (vs 12.9%). PHEV +11.4% YoY to 51,087, 9.8% sh (vs 8.9%). ICE +4.4% YoY to 419,902, 80.7% sh (vs 78.2%). 2024: BEV -23.1% YoY to 185,509, 9.3% sh (vs 11.8%). PHEV +13.2% YoY to 182,551, 9.2% sh (vs 7.9%). ICE -1.6% YoY to 1,615793, 81.5% sh (vs 80.3%) Dirty little secret remains what % of miles do PHEV drive in ICE vs electric. #OOTT." Below is our marked up table of the Mercedes Q4 and 2024 car sales that we attached to our post.

Mercedes BEV vs PHEV vs ICE sales



Figure 55: Mercedes Q4/24 and 2024 car sales and % share by fuel bype

Mercedes-Benz Cars - Unit Sales by Product Categories and Share of Electrified Models

	Q4	Q1	Q2	Q3	Q4	Q4:Q4	Q1 - Q4	Q1 - Q4	YTD : YTD
(in units)	2023	2024	2024	2024	2024	Change	2023	2024	Change
Group sales (including smart)	514,258	462,978	496,712	503,573	520,140	+1.1%	2,044,051	1,983,403	-3.0%
Top-End	81,804	66,554	70,339	61,843	82,756	+1.2%	328,268	281,492	-14.2%
Share in % of volume	15.9 %	14.4 %	14.2 %	12.3 %	15.9 %		16.1 %	14.2 %	
Core	281,578	267,662	290,015	301,048	308,394	+9.5%	1,096,923	1,167,119	+6.4%
Share in % of volume	54.8 %	57.8 %	58.4 %	59.8 %	59.3 %		53.7 %	58.8 %	
Entry	150,876	128,762	136,358	140,682	128,990	-14.5%	618,860	534,792	-13.6%
Share in % of volume	29.3	27.8	27.4	27.9 %	24.8 %		30.3 %	27.0 %	
thereof									
Electrified vehicles (xEVs)	112,043	90,177	89,963	87,232	100,238	-10.5%	401,943	367,610	-8.5%
All-electric vehicles (BEVs) Be	66,197	47,521	45,843	42,544	49,151	-25.8%	240,668	185,059	-23.1%
Plug-in hybrid vehicles (PHEVs) PLCV	> 45,846	42,656	44,120	44,688	51,087	+11.4%	161,275	182,551	+13.2%
Share of xEV in % of volume	21.8 %	19.5 %	18.1 %	17.3 %	19.3 %		19.7 %	18.5 %	
IcE	402,715				19,902	+4.4%	1,642,108	1,615,793	-1.6%
SHAIRE-KE	78.2%				80.7%		80.3%	81.5%	
REV	12.9%				9.5%		11.8%	9,3%	
PHEV	8.9%				9.0%		7.9%	9.20	

Source: Mercedes

Energy Transition: Renault BEV sales down, PHEV sales up big

Renault reported Q4 on Thursday and we had to go to the backup documents that were"t part of the Q4 financials to get the BEV sales for Q4/24 and for 2024. For Q4/24, Renault reported BEV sales of 43,245, which was +0.8% YoY vs Q4/23 sales of 42,903. For 2024, Renault reported BEV sales of 123,630, which was -19.0% YoY vs 152,619 in 2023. We don't know why such a huge YoY in drop in Volvo's Spring BEV sales in 2024. Below is the Renault backup table.

Figure 56: Renault Q4/24 and 2024 BEV sales

Europe BEV sales - PC+LCV (units)										
Туре	Family Model	Q4 2023	YTD 2023	Q4 2024	YTD 2024					
PC	Kangoo ZE	2	2							
PC	Zoe	2,987	13,918	155	3,661					
PC	Master ZE		3							
PC	Twingo ZE	5,468	17,817	827	14,342					
PC	Spring	16,547	59,231	9,305	21,461					
PC	Megane-e	10,753	43,851	6,071	31,767					
PC	Limo		5							
PC	Kangoo 3 ZE	387	1,038	179	1,246					
PC	Scenic E-Tech	31	33	11,543	24,079					
PC	5			11,916	13,195					
PC	A290			148	177					
Total PC		36,175	135,898	40,144	109,928					
LCV	Kangoo ZE	48	92	54	98					
LCV	Master			139	142					
LCV	Zoe	497	1,789	13	1,012					
LCV	Master ZE	668	1,495	228	868					
LCV	Twingo ZE	28	79	2	32					
LCV	Spring	129	487	110	531					
LCV	Megane-e	157	355	178	692					
LCV	Kangoo 3 ZE	4,935	11,856	1,872	8,907					
LCV	Trafic 3 RT	1	1	23	117					
LCV	Master RT ZE	265	567	68	426					
LCV	Scenic E-Tech			59	70					
LCV	Trafic 3 ZE			355	807					
Total LCV		6,728	16,721	3,101	13,702					
Total PC+L	cv	42,903	152,619	43,245	123,630					
Mix PC		11.4%	10.9%	11.7%	8.6%					
Mix LCV		7.8%	5.5%	3.9%	4.3%					
Mix PC+LCV		10.6%	9.9%	10.2%	7.7%					

Source: Renault

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Renault BEV sales

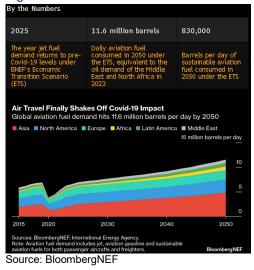


Energy Transition: BloombergNEF fcasts jet fuel demand +88% to 11.6 mmb/d in 2050

There was good reminder that hard to decarbonize sectors can also be called almost impossible to decarbonize ie. any decarbonize efforts are immaterial at best. And airlines is clearly one of the hard to decarbonize sectors. The key solutions to decarbonize commercial air travel are Sustainable Aviation Fuel (SAF) and hydrogen. And both are pointing to being nowhere near aspirations built into energy transition plans. For years, we have highlighted how SAF is hugely expensive and, even under the most optimistic cases, will not be material to the entire air fuel consumption. On Tuesday, we posted [LINK] "No peak #Oil demand for jet fuel. Commercial air travel is very hard to decarbonize to any material level. BNEF fcasts jet fuel +88% to 11.6 mmb/d in 2050 vs SAF at 0.83 mmb/d. 🔶 02/09/25 post, Airbus green hydrogen delay 5-10 yrs vs 2035 target. Thx @BloombergNEF Claudio Lubis. #OOTT." BloombergNEF posted its "2025 Aviation Fuel Outlook: The Climb Continues." We don't have the detailed assumptions behind BNEF's "Economic Transition Scenario". But under their ETS, BloombergNEF says that "in the absence of significant policy intervention, most air miles will still be powered by fossil fuels." BloombergNEF forecasts "the global demand for passenger air travel doubles between 2024 and 2050. This is largely driven by the growing population and increasing wealth per capita across regions. About 10.7 billion passenger trips could take to the skies by mid-century, up from just 4.7 billion in 2024." And that they forecast SAF to grow to 0.83 mmb/d by 2050. Below is the BeloombergNEF graphic. Our Supplemental Documents package includes the BloombergNEF report.

BNEF sees jet fuel demand +88% to 2050

Figure 57:	Global	aviation	fuel	demand
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Energy Transition: Airbus won't say how far behind is 1st hydrogen plane by 2035

On Thursday, we posted [LINK] "Jet Fuel for longer. Airbus Q4 call. Confirmed behind in its target for 1st commercial planes to run on green hydrogen by 2035. But wouldn't say how long a delay & analysts didn't ask. \Rightarrow 02/09/25 post. Unions said 5-10 yr delay. #OOTT." Airbus held its Q4 call on Thursday and mgmt said they were behind in their target for their first commercial hydrogen plane by 2035 but wouldn't say how much behind and the analysts

Airbus 1st hydrogen plane is delayed



did not follow up and ask how long a delay. Here is what mgmt said on the delay. "On hydrogen, we have the ambition to bring a commercially viable, fully electric, hydrogen powered commercial aircraft into service. This is not changing. We believe fuel cell technology to be the most promising to fulfill this ambition. The scaling up of the hydrogen ecosystem is challenging and is unfortunately progressing at a slower pace than we had previously anticipated. The scalability of fuel cell technologies towards a commercially viable product will also require more time. This is what we have learned through our efforts in the past years. While a commercially viable product is now expected to come later than 2035, we will use this additional time to further develop the performance of the fuel cell propulsion and the liquid hydrogen system technologies."

02/09/25: Union say Airbus is 5-10 yrs behind green hydrogen plane by 2030

Unfortunately, the analysts did not ask Airbus if they were 5-10 yrs delayed on their target to have their 1st commercial hydrogen plane by 2035. Here is what we wrote in last week's (Feb 16, 2025) Energy Tidbits memo. "Union say Airbus is 5-10 yrs behind green hydrogen plane by 2030. No one should be surprised to see any reports that point to the roll out of hydrogen, in particular green hydrogen, will take way longer than energy transition aspirations/plans to make any significant, not material, dent in fossil fuels consumption. Rather, as we have seen over the past year, it will be more reports and, eventually, admissions of a significant push back in timelines. Green hydrogen for commercial jets is an example. As of our 7am MT news cut off, we haven't seen official Airbus confirmation of how many years delay there will be to their target for green hydrogen planes by 2035. Last Sunday night, we posted [LINK] "Jet Fuel for longer! Unions says @Airbus is 5-10 yrs behind in its target for planes to run on Green Hydrogen by 2035. Airbus says key reason is "the availability of hydrogen produced from renewable energy sources at scale, is slower than anticipated" See 🔶 @bekammel report #OOTT." Our post included Bloomberg's reporting "The European planemaker was responding to a statement by French labor unions, which said that an entry into service of a hydrogen aircraft has been delayed by five to 10 years, from a previous goal of coming to the market by 2035." Bloomberg quoted an Airbus statement that noted delay issues but did not comment on the 2035 target. Bloomberg wrote ""We recognise that developing a hydrogen ecosystem — including infrastructure, production, distribution and regulatory frameworks — is a huge challenge requiring global collaboration and investment," Airbus said in a statement. "Recent developments indicate that progress on key enablers, particularly the availability of hydrogen produced from renewable energy sources at scale, is slower than anticipated." Our Supplemental Documents package includes the Bloomberg report."

Capital Markets: Loblaw warns higher Cdn grocery prices ahead even before tariffs Earlier this morning, we posted [LINK] "*Cdn consumer hit. Even before Trump tariffs, big upward pressure on Cdn grocery prices.* — *Loblaw Q4 call. higher-than-normal pricing increases from largest global vendors, some want double-digit price increases. plus weak Cdn dollar hit US imports ie. fresh produce.* #OOTT." The warning for higher Cdn grocery prices is even before the impact of any tariff war. Loblaw held its Q4 call on Thursday. Even before the potential impact of tariffs, mgmt seemed to warm that higher grocery prices are

Higher Cdn grocery prices ahead



likely in Canada in 2025. Loblaw is seeing big price increases requested from large global vendors and they reminded the weak Cdn dollar will add to cost of US imports like fresh produce. Mgmt said "Looking ahead, we're still seeing higher-than-normal pricing increases coming in from our larger global vendors and many are requesting double-digit price increases. We continue to push-back to mitigate these increases. This is compounded by the fact that we are working with a Canadian dollar that trades at its lowest levels in over 20 years. A year-ago, the Canadian dollar traded at \$0.74 and we began 04 at that level, but since our dollar has declined by 5% to \$0.70. This adds further inflationary pressure at a time when Canada relies on US imports for most of its fresh produce."

Demographics: Apparently >30% of US home construction workers are immigrants

On Wednesday, we were listening to CNBC Squawk Box and unfortunately didn't have a PVR to tape the program. We had heard an analyst remind that the home construction sector will be another sector hurt by Trump's deportation program. The analysts said that the home construction industry is already 300,000 to 400,000 workers short and over 30% of its work force are immigrants. The analyst was quick to say that he wasn't saying about illegal aliens just that over 30% of the home construction workers are immigrants.

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

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.

US granted Panama Canal Zone on Feb 23, 1904

We haven't heard Trump remind this week on Carter's giving away the Panama Canal. All of the this day in history sites remind that the US was granted control of the Panama Canal Zone on Feb 23, 1904 for \$10 million. The Panama Canal Zone is the 20-mile strip of land that covers the Panama Canal from the Atlantic to the Pacific.

Wine of the week: 1999 Casa Ferreirinha 'Barca Velha'

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

US home construction sector immigrants



years ago, were some good wines and make sure bottles get opened especially as many are 20 to 40 years old. Last night, I posted the wine of the week, the 199 Casa Ferreirinha "Barca Velha" from Portugal. Many people just think of ports when they think about Portugal but Portugal produces some of the best red wines n the world. The 1999 Casa Ferreirinha Barca Velha had recommended drinking window by 2012 but it was excellent. One fo the best red wines I have had in a long time. It wasn't cheap back in the 2000's when I bought a half a case. If I had known how great it would be in 2025, I would have bought cases of it. It reinforces the theory that great wines stay great for much longer than expected. And I still have a couple of the 1999's left.

Figure 58: 1999 Casa Ferreirinha 'Barca Velha'



Source: SAF Group