

Energy Tidbits

May 29, 2022

Produced by: Dan Tsubouchi

Vanguard To Keep Investing in Oil & Natural Gas as Their Duty is to Maximize Long-Term Total Returns to Clients

Welcome to new Energy Tidbits memo readers. We are continuing to add new readers to our Energy Tidbits memo, energy blogs and tweets. The focus and concept for the memo was set in 1999 with input from PMs, who were looking for research (both positive and negative items) that helped them shape their investment thesis to the energy space, and not just focusing on daily trading. Our 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 our review of investor days, conferences and earnings calls focusing on sector developments that are relevant to the sector and not just a specific company results. Our target is to write on 48 to 50 weekends per year and to post by noon mountain time on Sunday.

This week's memo highlights:

1. Vanguard to keep investing in oil, gas and coal as *"there is already a pensions crisis and we have to make sure that climate concerns do not make that even worse"*. [\[LINK\]](#)
2. Beijing is loosening some mobility restrictions starting today. [\[LINK\]](#)
3. Novak's forecast implies Russia oil production to be down close to 1 mmb/d for balance of 2022 ie. no real recovery from April production hit. [\[LINK\]](#)
4. Germany's Habeck says high inflation, energy crisis, food crisis and climate crisis, but *"we can't solve the problems if we are only concentrating on only one of crisis."* [\[LINK\]](#)
5. Rush for LNG buyers to lock up long term supply now includes Germany and totals 8.64 bcf/d since July 1, 2021. [\[LINK\]](#)
6. Please follow us on Twitter at [\[LINK\]](#) for breaking news that ultimately ends up in the weekly Energy Tidbits memo that doesn't get posted until Sunday noon MT.
7. For new readers to our Energy Tidbits and our blogs, you will need to sign up at our blog sign up to receive future Energy Tidbits memos. The sign up is available at [\[LINK\]](#).

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Natural Gas – Natural gas injection of +80 bcf, storage now -387 bcf YoY deficit

The YoY storage deficit started the winter at -282 bcf YoY at Oct 31 and is now -387 bcf YoY. The EIA reported a 80 bcf build (with 89 bcf build expectations) for the May 20 week, which was below the 5-yr average build of +97 bcf, and below last year's injection of +115 bcf. Storage is 1.812 tcf as of May 20, increasing the YoY deficit to -387 bcf, from -358 bcf last week and storage is 327 bcf below the 5-year average vs 310 bcf below last week. Below is the EIA's storage table from its Weekly Natural Gas Storage Report [\[LINK\]](#).

**YoY storage at
-387 bcf YoY
deficit**

Figure 1: US Natural Gas Storage

Region	Stocks billion cubic feet (Bcf)				Historical Comparisons			
	05/20/22	05/13/22	net change	implied flow	Year ago (05/20/21)		5-year average (2017-21)	
					Bcf	% change	Bcf	% change
East	325	296	29	29	381	-14.7	388	-16.2
Midwest	391	364	27	27	495	-21.0	467	-16.3
Mountain	109	103	6	6	143	-23.8	128	-14.8
Pacific	190	187	3	3	255	-25.5	235	-19.1
South Central	797	781	16	16	925	-13.8	921	-13.5
Salt	251	251	0	0	294	-14.6	292	-14.0
Nonsalt	546	531	15	15	631	-13.5	630	-13.3
Total	1,812	1,732	80	80	2,199	-17.6	2,139	-15.3

Source: EIA

Natural Gas – Venture Global announces FID for Plaquemines LNG

There was no one surprised by the Wednesday announcement by Venture Global LNG [\[LINK\]](#) of its final investment decision of the \$13.2 billion project financing for the initial phase (an upsized 1.75 bcf/d) of the Plaquemines LNG facility and the associated Gator Express pipeline. Venture Global's transaction represents the largest project financing in the world closed to date in 2022. As noted in previous Energy Tidbits memos, the company has executed 20-year SPAs for 80% of the full 2.63 bcf/d project. Plaquemines LNG phase one customers include PGNiG, Sinopec, CNOOC, Shell and EDF; phase two customers announced to date include ExxonMobil, PETRONAS and New Fortress Energy. Below is a map showing the Plaquemines facility and the Gator Express Pipeline. Our Supplemental Documents package includes the Venture Global press release.

**Venture Global FID
Plaquemines LNG**

Figure 2: US Natural Gas Storage



Source: Venture Global

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Natural Gas – Mexico's natural gas production still stuck below 5 bcf/d, up 1.5% YoY

On Sunday, Pemex reported its oil and gas data for April. Pemex reported natural gas production of 4.740 bcf/d, which was up 1.5% YoY and down slightly -0.55% MoM, from March. For the past 3 years, an ongoing theme of the Mexican energy sector, has been their inability to grow domestic natural gas production. As a result, Mexico has relied on imports from the US which are reaching record levels; US pipeline exports to Mexico have increased ~2 bcf/d since Jan 1, 2018. Pemex does not provide any commentary along with its production data. Below is our ongoing table of Pemex reported monthly natural gas production.

Mexico natural gas still stuck below 5 bcf/d

Figure 3: Mexico Natural Gas Production (bcf/d)

Natural Gas Production bcf/d	2016	2017	2018	2019	2020	2021	21/20	2022	22/21
Jan	6.162	5.326	4.910	4.648	5.005	4.848	-3.1%	4.713	-2.8%
Feb	6.122	5.299	4.853	4.869	4.942	4.854	-1.8%	4.646	-4.3%
Mar	6.030	5.383	4.646	4.857	4.946	4.839	-2.2%	4.766	-1.5%
Apr	5.921	5.334	4.869	4.816	4.827	4.671	-3.2%	4.740	1.5%
May	5.841	5.299	4.827	4.841	4.460	4.730	6.1%		
June	5.881	5.253	4.840	4.843	4.754	4.727	-0.6%		
July	5.785	5.216	4.856	4.892	4.902	4.725	-3.6%		
Aug	5.686	5.035	4.898	4.939	4.920	4.656	-5.4%		
Sept	5.619	4.302	4.913	5.017	4.926	4.746	-3.7%		
Oct	5.583	4.759	4.895	4.971	4.928	4.718	-4.3%		
Nov	5.515	4.803	4.776	5.015	4.769	4.751	-0.4%		
Dec	5.380	4.811	4.881	5.024	4.846	4.697	-3.1%		

Source: Pemex

Natural Gas – Tidbits from 2022 World Gas Conference

The 2022 World Gas Conference took place this week. We didn't find webcasts but fortunately Bloomberg, Reuters and Platts reported on soundbites from the speaker. This is a major global natural gas conference with all the major global natural gas players. As a result, we noted a number of good macro insights into global natural gas and LNG themes. No surprise, a common topic of discussion at the conference was how to cope with the widening gap between supply and demand. This issue has been exacerbated by Russia's invasion of Ukraine, as nations and companies scramble to replace Russian supply. Below we note some of these tidbits.

Highlights from 2022 World Gas Conference

Kogas – Plans to add new long term and short term LNG supply deals

The importance of energy security was the headline from Kogas at the World Gas Conference this year. It will be interesting to see how much follow thru from Kogas given the increasing competition for LNG supply. On Tuesday, Bloomberg reported the CEO of Kogas stated, *"Korea Gas plans to increase LNG procurement through new long- and short-term deals, as well as maximizing supply from existing contracts"*. He went on to emphasize the urgent need to stabilize volatile natural gas prices. He stated, *"Market volatility is very high, and if this persists for a long time, then that may destroy demand, especially in emerging nations"*.

Nigeria National Petroleum Corp. – Train 7 at LNG export expected in 4 years

On Tuesday, Bloomberg reported on comments from Mele Kyari (Managing Director of Nigerian National Petroleum Corp). Kyari offered a timeline for their newest development at their national LNG export facility *"Train 7 at the Nigeria LNG export facility is slated to come online in four years"*. Train 7 will boost the capacity at the Nigeria LNG export facility by 35% to 3.95 bcf/d.

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Petronas Gas – Tightness in LNG supply to persist this winter

On Tuesday, Bloomberg reported on comments from Abdul Aziz Othman (CEO of Petronas Gas). He highlighted the persisting tightness in LNG supply as global demand increases. Othman stated, *“LNG supplies will remain tight this winter as there’s limited new capacity being added globally”*. No surprise, he noted the expectation for continued tight LNG markets is driven the slowdown of new LNG supply investments in the low LNG price environment of 2020.

Shell PLC – Replacing Russian gas is challenging, uncertain and takes time

On Thursday, Platts reported on comments from Shell’s Steve Hill (Executive Vice President Shell Energy). He reiterated Shell’s concern that replacing Russian natural gas on global markets is not as easy as many may assume. And it won’t/can’t happen as quickly as expected. Rather, the major LNG players of the world like Shell have to deal with the reality of getting natural gas supply to Russian natural gas customers. Shell highlighted that that the global gas market is facing an extended period of volatility as the industry grapples with a worsening shortage and unprecedented uncertainty, And Shell was sure to highlight this at the conference. Steve Hill, vice president of marketing at Shell stated, *“We have a massive range of uncertainty over what will happen next”*. On Europe replacing Russian Gas with LNG, he stated, *“it’s a big challenge and it’s actually already showing to be more complicated than we first thought. The uncertainty is on the supply side, especially with what Russia decides to do, which is very hard to predict”*.

Natural Gas – Two more long-term LNG supply deals

Our March 13, 2022 Energy Tidbits memo noted Europe’s plan to move away from Russian pipeline natural gas and LNG is a global game changer for energy for at least the 2020s. We were already seeing clear signals of the bullish LNG for 2020s call since the end of June 2021 with the abrupt shift of Asian LNG buyers to long term contracts. Now, with Russia, the rush continues and from more than Asian LNG buyers. There continues to be a consistent news flow of more long-term LNG supply deals, especially for the quickest to market LNG from the US Gulf Coast. (1) On Tuesday, TotalEnergies announced [\[LINK\]](#) the signing of a Sale and Purchase Agreement with the Korea’s Hanwha Energy Corporation for the supply of 0.08 bcf/d of LNG over 15 years, starting in 2024. The LNG will be sourced from TotalEnergies’ global LNG portfolio, delivered to the Tongyeong regasification terminal in South Korea, and then used to supply Hanwha & HDC’s greenfield 1 GW power plant currently under construction next to the terminal. (2) On Wednesday, Sempra Infrastructure announced [\[LINK\]](#) it has entered into a heads of agreement with German RWE Supply & Trading for the purchase of approximately 0.67 bcf/d of LNG for 15 years. The LNG is to be supplied on a long-term, free-on-board basis from the Port Arthur LNG Phase 1 project under development in Jefferson County, Texas. Our Supplemental Documents package includes the TotalEnergies and Sempra releases.

Two more long term LNG deal**Is RWE’s deal a one-off or will other Germans step up for long term LNG deals**

The Sempra 15-yr LNG deal with RWE looks to be significant as it looks to be the first significant long term LNG supply deal signed up by a German LNG player ie. it looks like Germans now realize they have to do long term LNG deals to lock up

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supply. The question will be how many others will step up for long term LNG deals and will they commit to a 20-year deal ie. the length Qatar wants for its long term LNG deals. We expect to see this answered over the coming months as LNG buyers commit to long term deals ahead of next winter.

Europe has a long way to go to catch up to Asia

Our March 13, 2022 Energy Tidbits memo noted that Europe LNG buyers were starting 9 months behind the wave of Asian LNG buyers who started to lock up long term LNG supply starting in July 2021. It was clear to many that there was a major sea change in LNG outlook. We turned very bullish on LNG outlook for the 2020s once TotalEnergies went force majeure on its Mozambique LNG in April 2021. We posted our April 28, 2021 blog *"Multiple Brownfield LNG FIDs Now Needed To Fill New LNG Supply Gap From Mozambique Chaos? How About LNG Canada Phase 2?"* as we thought the market had overlooked that this force majeure backed up 5.0 bcf/d of Mozambique LNG that was originally planned to start in phases in 2024. And that this would create an earlier and larger LNG supply gap in the mid 2020s. Then we started to see validation of this view when Asian LNG buyers in July made an abrupt change to their LNG contracting and pivoted to trying to lock in long term LNG supply. On July 14, 2021 we posted our 8-pg *"Asian LNG Buyers Abruptly Change and Lock in Long Term Supply – Validates Supply Gap, Provides Support For Brownfield LNG FIDs"*. Here is an excerpt from the blog *"The last 7 days has shown there is a sea change as Asian LNG buyers have made an abrupt change in their LNG contracting and are moving to lock in long term LNG supply. This is the complete opposite of what they were doing pre-Covid when they were trying to renegotiate Qatar LNG long term deals lower and moving away from long term deals to spot/short term sales. Why? We think they did the same math we did in our April 28 blog 'Multiple Brownfield LNG FIDs Now Needed To Fill New LNG Supply Gap From Mozambique Chaos? How About LNG Canada Phase 2?' and saw a much bigger and sooner LNG supply gap driven by the delay of 5 bcf/d of Mozambique LNG that was built into most, if not all LNG supply forecasts. Asian LNG buyers are committing real dollars to long term LNG deals, which we believe is the best validation for the LNG supply gap. Another validation, Shell, Total and others are aggressively competing to invest long term capital to partner in Qatar Petroleum's massive 4.3 bcf/d LNG expansion despite plans to reduce fossil fuels production in the 2020s. And even more importantly to LNG suppliers, the return to long term LNG contracts provides the financing capacity to commit to brownfield LNG FIDs. The abrupt change by Asian LNG buyers to long term contracts is a game changer for LNG markets and sets the stage for brownfield LNG FIDs likely as soon as before year end 2021. It has to be brownfield LNG FIDs if the gap is coming bigger and sooner. And we return to our April 28 blog point, if brownfield LNG is needed, what about Shell looking at 1.8 bcf/d brownfield LNG Canada Phase 2? LNG Canada Phase 1 at 1.8 bcf/d capacity is already a material positive for Cdn natural gas producers. A FID on LNG Canada Phase 2 would be huge, meaning 3.6 bcf/d of Cdn natural gas will be tied to Asian LNG markets and not competing in the US against Henry Hub. And with a much shorter distance to Asian LNG markets. This is why we focus on global LNG markets for our views on the future value of Canadian natural gas."* Our Supplemental Documents package includes our April and July blogs.

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There have been 8.64 bcf/d of long term LNG supply deals since July 1, 2021

We first highlighted this abrupt shift to long term LNG supply deals in our July 14, 2021 8-pg “Asian LNG Buyers Abruptly Change and Lock in Long Term Supply – Validates Supply Gap, Provides Support For Brownfield LNG FIDs”. We included a table of the deals done in that short two week period. We continue to update that table, which now shows 8.64 bcf/d of long term LNG deals since July 1, 2021. 75% of the deals have been by Asian LNG buyers, but we are now seeing rest of world long term deals post Russia/Ukraine. Below is our updated table of Asian and Europe LNG buyers new long term supply deals since July 1, 2021.

Figure 4: Long Term LNG Supply Deals since July 1, 2021

Long-Term LNG Buyer Deals Since July 1, 2021							
Date	Buyer	Seller	Country	Volume	Duration	Start	End
			Buyer / Seller	(bcf/d)	Years		
Asian LNG Deals							
Jul 7, 2021	CNOOC	Petronas	China / Canada	0.30	10.0	2022	2032
Jul 9, 2021	CPC	QatarEnergy	Taiwan / Qatar	0.16	15.0	2022	2037
Jul 9, 2021	Guangzhou Gas	BP	China / US	0.13	12.0	2022	2034
Jul 12, 2021	Korea Gas	QatarEnergy	Korea / Qatar	0.25	20.0	2025	2045
Sept 29, 2021	CNOOC	QatarEnergy	China / Qatar	0.50	15.0	2022	2037
Oct 7, 2021	Shenzhen	BP	China / US	0.04	10.0	2023	2032
Oct 11, 2021	ENN	Cheniere	China / US	0.12	13.0	2022	2035
Nov 4, 2021	Unipecc	Venture Global LNG	China / US	0.46	20.0	2023	2043
Nov 4, 2021	Sinopec	Venture Global LNG	China / US	0.53	20.0	2023	2043
Nov 5, 2021	Sinochem	Cheniere	China / US	0.12	17.5	2022	2040
Nov 22, 2021	Foran	Cheniere	China / US	0.04	20.0	2023	2043
Dec 6, 2021	Guangdong Energy	QatarEnergy	China / Qatar	0.13	10.0	2024	2034
Dec 8, 2021	S&T International	QatarEnergy	China / Qatar	0.13	15.0	2022	2037
Dec 10, 2021	Suntien Green Energy	QatarEnergy	China / Qatar	0.13	15.0	2022	2037
Dec 15, 2021	SPIC Guangdong	BP	China / US	0.03	10.0	2023	2033
Dec 20, 2021	CNOOC Gas & Power	Venture Global LNG	China / US	0.26	20.0	2023	2043
Dec 29, 2021	Foran	BP	China / US	0.01	10.0	2023	2032
Jan 11, 2022	ENN	Novatek	China / Russia	0.08	11.0	2024	2035
Jan 11, 2022	Zhejiang Energy	Novatek	China / Russia	0.13	15.0	2024	2039
Feb 4, 2022	CNPC	Gazprom	China / Russia	0.98	30.0	2023	2053
Mar 24, 2022	Guangdong Energy	NextDecade	China / US	0.20	20.0	2026	2046
Mar 29, 2022	ENN	Energy Transfer	China / US	0.36	20.0	2026	2046
Apr 1, 2022	Guangzhou Gas	Mexico Pacific Ltd	China / Mexico	0.26	20.0	n.a.	n.a.
Apr 6, 2022	ENN	NextDecade	China / US	0.20	20.0	2026	2026
Apr 22, 2022	Kogas	BP	Korea / US	0.20	18.0	2025	2043
May 2, 2022	Gurvor Singapore Pte	Energy Transfer LNG	Singapore / US	0.26	20.0	2026	2046
May 3, 2022	SK Gas Trading LLC	Energy Transfer LNG	Korea / US	0.05	18.0	2026	2042
May 10, 2022	Exxon Asia Pacific	Venture Global LNG	Singapore / US	0.26	n.a.	n.a.	n.a.
May 11, 2022	Petronas LNG	Venture Global LNG	Malaysia / US	0.13	20.0	n.a.	n.a.
May 24, 2020	Hanwha Energy	TotalEnergies	Korea / France				
Total Asian LNG Buyers New Long Term Contracts Since Jul/21				6.45			
Non-Asian LNG Deals							
Jul 28, 2021	PGNIG	Venture Global LNG	Poland / US	0.26	20.0	2023	2043
Nov 12, 2021	Engie	Cheniere	France / US	0.11	20.0	2021	2041
March 7, 2022	Shell	Venture Global LNG	US / US	0.26	20.0	2024	2044
March 16, 2022	NFE	Venture Global LNG	US / US	0.13	20.0	2023	2043
March 16, 2022	NFE	Venture Global LNG	US / US	0.13	20.0	2023	2043
May 2, 2022	Engie	NextDecade	France / US	0.23	15.0	2026	2041
May 17, 2022	PGNIG	Sempra Infrastructure	Poland / US	0.40	20.0	n.a.	n.a.
May 25, 2022	RWE Supply & Trading	Sempra Infrastructure	Germany / US	0.67	15.00	n.a.	n.a.
Total Non-Asian LNG Buyers New Long Term Contracts Since Jul/21				2.19			
Total New Long Term LNG Contracts since Jul/21				8.64			
*Excludes Asian short term/spot deals							
*on Dec 20, CNOOC also agreed to buy an additional 0.13 bcf/d from Venture Global for an undisclosed shorter period							

Source: Company reports, SAF Group

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Natural Gas – India April natural gas production +6.6% YoY to 3.33 bcf/d

One of the key themes for India in the last year is that it looks like they have turned the corner on a decade of declining domestic natural gas production, which is even more important given the stronger than expected LNG prices in 2021-2022. The key India natural gas theme for the past decade was that India's natural gas production declined, which meant that increases in natural gas consumption had to be met by increased LNG imports. India's domestic natural gas production peaked in 2010 at 4.6 bcf/d but it now looks like we are seeing modest return to growth. On Tuesday, India's Petroleum Planning and Analysis Cell released their monthly report for April natural gas and oil statistics [\[LINK\]](#). India's domestic natural gas production was up 6.6% YoY from 3.12 bcf/d in April 2021 to 3.33 bcf/d, up from 3.29 bcf/d in March. India has consistently struggled to grow domestic natural gas production with 2018-2019 production averaging 3.18 bcf/d, declining to 3.02 in 2019-2020 and averaged 2.78 bcf/d 2020-2021. Our Supplemental Documents package includes excerpts from the PPAC monthly package.

India natural gas production +6.6% YoY

Natural Gas – India April LNG imports down -13.2% YoY to 2.91 bcf/d, down -2.3% MoM

There is no surprise that the above noted increasing India domestic natural gas production means reduced need for LNG imports. India is always viewed as an extremely price sensitive buyer in terms of its LNG imports, which was exemplified in their 2020-2021 import data. India had ramped up imports from June to October 2020, taking advantage of low LNG prices to fill their stocks. Imports began to decline in November 2020 as LNG prices rose, with the price trajectory ramping up in late Dec and reaching record levels in January. This resulted in India LNG imports declining from a 2020-2021 peak of 3.84 bcf/d in Oct 2020 to just 2.85 bcf/d in Jan 2021. April imports decreased again, down -2.3% MoM to 2.91 bcf/d and down -13.2% YoY due to abnormally high spot prices. India has been trying to avoid high spot LNG prices.

India LNG imports -13.2% YoY

Natural Gas – Petronet points to lower than expected LNG growth for India to 2030

Petronet CEO Akshay Kumar Singh may not have said it specifically, but it's clear he believes India's natural gas consumption growth (and therefore LNG growth) will be less than India's target to get natural gas to 15% of its energy mix by 2030. Singh is calling India's plan to be "very ambitious", which is political speak for there is no way to hit the target. On Friday, we tweeted [\[LINK\]](#) "Expect India #LNG growth to be strong but less than expected. #Petronet CEO India's plan to have #NatGas be 15% of energy mix by 2030 is "very ambitious", some demand destruction due to elevated prices. Thx @SPGlobal Srabhi Sahu. #OOTT [\[LINK\]](#)." On Friday, Platts reported "Demand destruction to a certain extent will likely occur because elevated natural gas prices are prompting consumers to seek other alternatives, but gas will play a key role in satiating India's growing energy needs, Singh said. India's continued plan to increase the share of gas in its overall primary energy sector is "very ambitious," Singh said, adding that the central government has decided to increase the target of natural gas' share in the energy mix to 15% by 2030 from the current level of around 6%. That translates to a roughly four-fold rise in the country's natural gas requirement, he said." Our Supplemental Documents package includes the Platts report.

Lower than expected India LNG growth

India is poised for strong LNG growth, but is behind in its target

Our May 15, 2022 Energy Tidbits noted that we still expect India to have strong growth in LNG imports but we don't expect them to reach their 2030 target for natural

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gas to be 15% of its energy mix. In that memo, we wrote “On Wednesday, we tweeted [\[LINK\]](#) “Positive, India 📈 adding 2.9 bcfd of #LNG regas capacity by 2025. But need a big step up in 2025-30 pace to hit #Petronet est +12 bcfd/d LNG import growth to reach India's target for #NatGas to be 15% of its energy mix by 2030. #OOTT”. The good news is that India is moving quickly to expand its regasification capacity, but the bad news is that we don't see it moving at the pace needed to hit its ambitious goal for natural gas to 15% of its energy mix by 2030 or the pace forecast by Petronet in October that would see India increase LNG imports (not capacity) by +12.4 bcfd/d to 2030. We retweeted the India Ministry of Petroleum and Natural Gas's tweet [\[LINK\]](#) “India's capacity to regasify LNG to increase by 55% by 2025. LNG holds around 49% share in total natural gas consumption in FY 2021-22. LNG is bound to be the key driver for India's #PragatiKiGati #PMGatiShakti @Logistics_MoCI.” It's positive that India is ramping up its LNG regasification import capacity. It will increase regasification by +55% or +2.9 bcfd/d to 8.2 bcfd/d by 2025. But our concern is that these regasification plans were committed to 2 to 3 years ago, before the changing LNG market and current very high LNG prices. So we have to believe that they will not reach their ambitious goal of natural gas being 15% of the energy mix by 2030, especially with the huge stress and high prices of LNG with Europe moving off Russia oil supply. We still expect India's growth in LNG imports will be very big, but I think it will be more like +10 bcfd/d to 2030 instead of +12.4 bcfd/d.”

Petronet Oct 22/21 forecast India LNG imports +12.4 bcfd/d to 15.8 bcfd/d in 2030

As noted above, we believe they are behind the pace needed to reach Petronet's Oct 22, 2021 forecast for India's LNG imports to be +12.4 bcfd/d by 2030. In our Oct 24, 2021 Energy Tidbits memo, we wrote “We continue to believe India's moves to increase natural gas to 15% of its energy mix by 2030 is a game changer for LNG markets in the 2020s. Especially as we have seen clear signs of action toward that target. On Friday, there was very bullish for India's LNG import growth from Petronet CEO Singh at the India Energy Forum on Friday. As soon as we saw the reports, we tweeted [\[LINK\]](#) “Bullish for #LNG #NatGas in 2020s. #Petronet CEO fcasts India LNG imports +12.4 bcfd to reach 15.8 bcfd (120 MTPA) in 2030. In line with his June est, see below SAF Group June 20 Energy Tidbits #Petronet sees LNG imports +13 bcfd to 2030. Thx @JournoDebjit @rajeshsing13 #OOTT”. Bloomberg's India energy team reported “India's import of natural gas is expected to hit 120 million tons/year by 2030 as the nation targets an energy mix goal, Akshay Kumar Singh, CEO of Petronet LNG, said at the India Energy Forum by CERAWEEK. NOTE: India aims to boost use to natural gas to 15% of primary energy mix from about 6% now. * India's current annual LNG import is about 26 million tons”. Singh is forecasting India's LNG imports to grow from current 26 MTPA (3.4 bcfd/d) to 120 MTPA (15.8 bcfd/d) in 2030. That is an increase of 12.4 bcfd/d to 2030. This is very bullish for LNG and natural gas in the 2020s. Our Supplemental Documents package includes the Bloomberg report.”

Remember Modi's highlighted India "should be a gas-based economy"

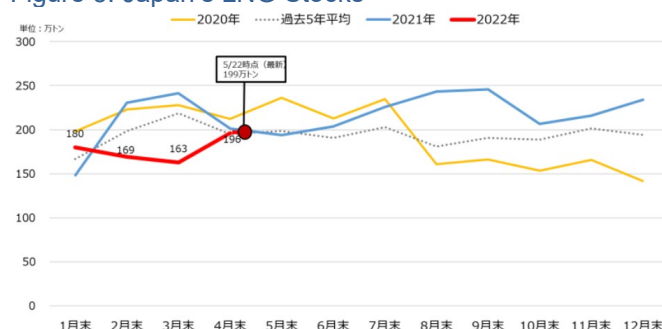
Our August 15, 2021 Energy Tidbits highlighted Modi's 75th anniversary of India independence speech. Modi has been stressing the importance to increase natural gas share of India's energy mix from 6% to 15% by 2030. India posted the Modi speech transcript at [LINK](#). This is a big picture speech about the future for India and Modi's tries to set a vision for the next 25 years to the 100th anniversary. It's a general speech but it is also good reminder to people in the west that India still has a long way to go to catch up. Modi notes how they "have made authentic efforts to construct toilets in 100% households". One of his major themes was that India should be a gas based economy but targets to be energy independent in 25 years. Modi didn't get into his policy to increase natural gas share of the energy mix from 6% to 15% by 2030 and only gave gas a glancing mention, but the mention is significant – India "should be a gas based economy". Our August 15, 2021 Energy Tidbits had more detailed on the other Modi speech themes.

Natural Gas – Japan's LNG stocks down -2.5% from last week

As a reminder, Japan's LNG stockpiles are not huge relative to LNG imports that have ranged from 7 to 14 bcf/d since Jan 1, 2021. LNG stockpiles held by Japanese power producers have exceeded both last year's level and the 4-year average. Japan's METI weekly LNG stocks data was released on Wednesday [LINK](#). LNG stocks at May 15 were ~96 bcf, -2.5% WoW from 98 bcf and up a bit from the 5-yr average of 95 bcf. Below is the LNG stocks graph from the METI weekly report.

**Japan LNG stocks
-2.5% WoW**

Figure 5: Japan's LNG Stocks



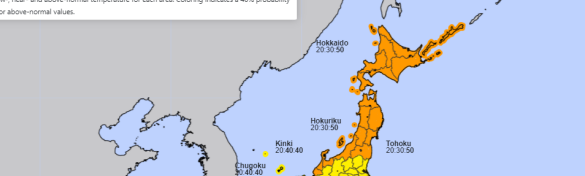
Source: METI

Natural Gas – Japan forecasts warmer temps than normal this summer

The Japan Meteorological Agency posted their updated seasonal forecast for June/July/August [LINK](#). The forecast for the summer season is above normal temperatures, especially in the northern portion of Japan. Boding well for energy demand and providing increased incentive to import more LNG. A similar forecast was projected for last JJA, so expect to see similar LNG demand for air conditioning. Below is the 2022 JJA forecast.

**Japan expecting
a warm summer**

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Probability of below-, near- and above-normal temperature for each area. Coloring indicates a 40% probability or more of below or above-normal values.

Legend:

- Probability of above-normal occurrence
 - 10% or more (light blue)
 - 10% (blue)
 - 10% (dark blue)
 - 10% (light blue)
 - 10% (dark blue)
 - 10% (light blue)
 - 10% (dark blue)
- Probability of below-normal occurrence
 - 10% or more (orange)
 - 10% (yellow)
 - 10% (light yellow)
 - 10% (orange)
 - 10% (yellow)
 - 10% (light yellow)
 - 10% (orange)

Map labels:

- Hokkaido 20.30-50
- Tohoku 20.30-50
- Hokuriku 20.30-50
- Kinki 20.40-40
- Chugoku 20.40-40
- Kanto Koshin 20.40-60
- Shikoku 20.40-40
- Northern Kyushu 20.40-40
- Southern Kyushu 20.40-60
- Amami 20.30-40
- Okinawa 20.30-40

Timeline:

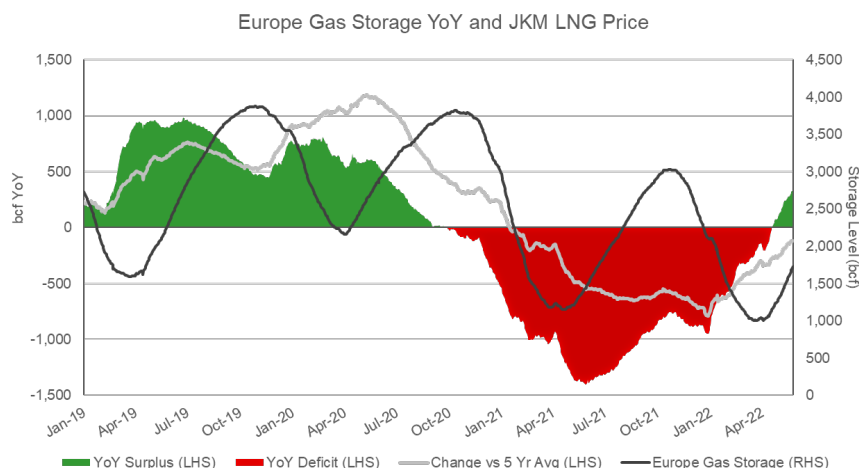
- 05/28-06/27
- 05/28-06/03
- 06/04-06/10
- 06/11-06/24
- Jun-Aug
- Jun
- Jul
- Aug
- Summer (Jun-Aug)

Europe storage
now 44.45% full

13

is normal during spring and early summer. Europe gas storage started last winter (Nov 1/20) at basically full levels at 94.66% and had dropped by 65.77% to be 28.89% at Apr 1/21. Europe storage levels bottomed in late Apr at 29%, which was the lowest level since Apr 2018. This winter began (Nov 1/21) with gas storage at 77.14% capacity, down 18.52% YoY. The YoY deficit has turned to surplus after months of the deficit tightening this week. Thanks to the warm weather and US LNG, storage as of May 27 is at 44.45%, which is +8.42% greater than last year levels of 36.03% and are -2.99% below the 5-year average of 47.44%. As spring injections continue, we expect to see a decline in demand for LNG as less is used to heat homes. Below is our graph of Europe Gas Storage Level.

Figure 7: Europe Gas Storage Level



Source: Bloomberg

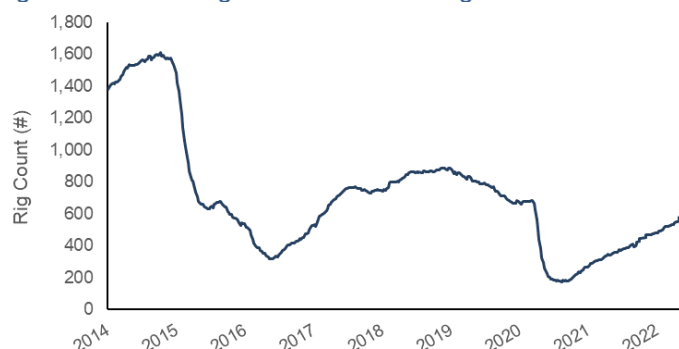
Oil – US oil rigs -2 WoW at 574 oil rigs at May 27

Baker Hughes released its weekly North American drilling activity data on Friday. There are still extremely strong oil, NGLs and natural gas prices and industry has fresh (and many modestly increasing) 2022 capex budgets and the reality is that industry needs to crank up drilling to increase the depleted inventory of DUCs. This week US oil rigs were -2 WoW at 574 oil rigs, as the US Memorial Day holiday often leads to a temporary decline in activity. Oil rigs are +402 off the bottom of 172 in Aug14/2020 week. Permian was up -1 at 341 rigs this week while Bakken was flat at 37 rigs after no change last week. US oil rigs hit their 2020 peak at 683 on March 13 and have since fallen by -109 (-16%) to 574 oil rigs. US gas rigs were +1 at 151. Below is our graph of US oil rigs since January 1, 2014.

US oil rigs -2 WoW

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Figure 8: Baker Hughes Total US Oil Rigs



Source: Baker Hughes

Oil – US frac spreads -5 to 283 for the week ending May 27

Mark Rossano (C6 Capital Holdings) held his weekly US frac spread recap for the week ended May 27 on the Primary Vision network. YouTube video is at [\[LINK\]](#). For the week ended May 27, US frac spreads at the high point in the week were -5 to 283. He attributes the drop to a typical pause around Memorial Day. Small drop in the Permian, also Anadarko, but he expects both to come back very quickly. Same with Louisiana ie. inferring a small drop. With these fracs coming back, still thinks will be at the target of 290 for the end of May. Enough capacity out there to get to 300, It's above that 300 is when you will start to hit a wall, there is probably about 325 spreads out there, probably about 315 that are likely. There is not much above that, which is why he expects a slowdown once past 300 spreads.

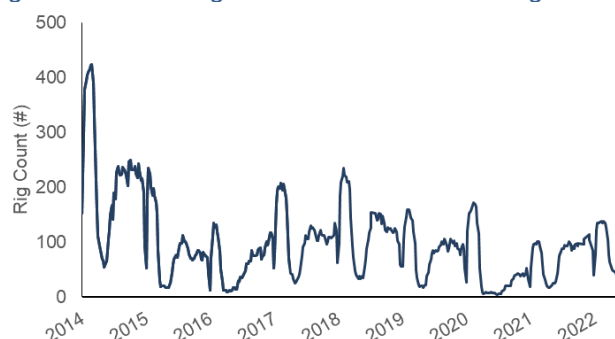
Frac spreads -5 to 283**Oil – Total Cdn rigs +15 WoW at 103 total rigs, +41 rigs YoY**

Total Cdn rigs were +15 total rigs this week at 103 total rigs. Cdn oil rigs were +15 at 55 rigs. Cdn gas rigs were level at 48 gas rigs. It looks like the combination of high prices and a relatively dry spring is leading to an early spring breakup trough. Normally, the typical bottom for rig count is the first or second week of June. Total rigs are now +90 since the June 26, 2020 all-time low. Cdn drilling has recovered YoY, a year ago Cdn oil rigs were 28 and Cdn gas rigs were 34 for a total Cdn rigs of 62, meaning total Cdn oil rigs are +27 YoY and total rigs are +41 vs 2021.

Cdn rigs +15 WoW

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Figure 9: Baker Hughes Total Canadian Oil Rigs



Source: Baker Hughes

Oil – US weekly oil production flat at 11.9 mmb/d

US oil production was flat at 11.9 mmb/d for the week ended May 20 after decreasing last week. Lower 48 production drove total production and was down from last weeks level at 11.4 mmb/d this week, with Alaska having immaterial change. US oil production is up YoY at +0.9 mmb/d and is still down significantly at -1.2 mmb/d since the 2020 peak of 13.1 mmb/d on March 13. With the continued sanctions against Russian crude, we would expect US oil production to remain relatively flat if not inch up a little higher in Q2/22 given the big drawdown in DUCs.

**US oil
production flat
WoW**

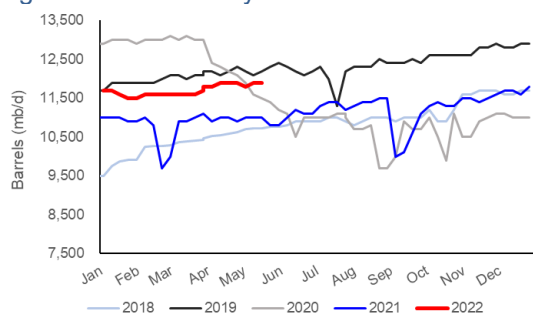
Figure 10: EIA's Estimated Weekly US Oil Production

Year-Month	Week 1		Week 2		Week 3		Week 4		Week 5	
	End Date	Value	End Date	Value	End Date	Value	End Date	Value	End Date	Value
2020-Mar	03/06	13,000	03/13	13,100	03/20	13,000	03/27	13,000		
2020-Apr	04/03	12,400	04/10	12,300	04/17	12,200	04/24	12,100		
2020-May	05/01	11,900	05/08	11,600	05/15	11,500	05/22	11,400	05/29	11,200
2020-Jun	06/05	11,100	06/12	10,500	06/19	11,000	06/26	11,000		
2020-Jul	07/03	11,000	07/10	11,000	07/17	11,100	07/24	11,100	07/31	11,000
2020-Aug	08/07	10,700	08/14	10,700	08/21	10,800	08/28	9,700		
2020-Sep	09/04	10,000	09/11	10,900	09/18	10,700	09/25	10,700		
2020-Oct	10/02	11,000	10/09	10,500	10/16	9,900	10/23	11,100	10/30	10,500
2020-Nov	11/06	10,500	11/13	10,900	11/20	11,000	11/27	11,100		
2020-Dec	12/04	11,100	12/11	11,000	12/18	11,000	12/25	11,000		
2021-Jan	01/01	11,000	01/08	11,000	01/15	11,000	01/22	10,900	01/29	10,900
2021-Feb	02/05	11,000	02/12	10,800	02/19	9,700	02/26	10,000		
2021-Mar	03/05	10,900	03/12	10,900	03/19	11,000	03/26	11,100		
2021-Apr	04/02	10,900	04/09	11,000	04/16	11,000	04/23	10,900	04/30	10,900
2021-May	05/07	11,000	05/14	11,000	05/21	11,000	05/28	10,800		
2021-Jun	06/04	11,000	06/11	11,200	06/18	11,100	06/25	11,100		
2021-Jul	07/02	11,300	07/09	11,400	07/16	11,400	07/23	11,200	07/30	11,200
2021-Aug	08/06	11,300	08/13	11,400	08/20	11,400	08/27	11,500		
2021-Sep	09/03	10,000	09/10	10,100	09/17	10,600	09/24	11,100		
2021-Oct	10/01	11,300	10/08	11,400	10/15	11,300	10/22	11,300	10/29	11,500
2021-Nov	11/05	11,500	11/12	11,400	11/19	11,500	11/26	11,600		
2021-Dec	12/03	11,700	12/10	11,700	12/17	11,600	12/24	11,800	12/31	11,800
2022-Jan	01/07	11,700	01/14	11,700	01/21	11,600	01/28	11,500		
2022-Feb	02/04	11,600	02/11	11,600	02/18	11,600	02/25	11,600		
2022-Mar	03/04	11,600	03/11	11,600	03/18	11,600	03/25	11,700		
2022-Apr	04/01	11,800	04/08	11,800	04/15	11,900	04/22	11,900	04/29	11,900
2022-May	05/06	11,800	05/13	11,900	05/20	11,900				

Source: EIA

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Figure 11: US Weekly Oil Production



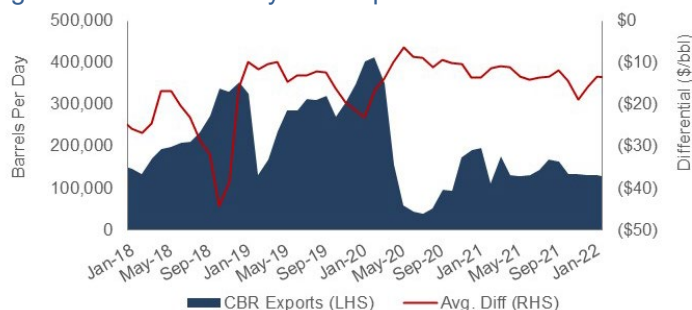
Source: EIA, SAF

Oil – Cdn crude by rail exports up MoM at 151,894 b/d in March, down 13.5% YoY

The Canadian Energy Regulator (successor to NEB) reported Canadian crude by rail exports were +27,112 b/d MoM in March to 151,894 b/d vs 124,781 b/d in February [\[LINK\]](#). This puts March export volumes at -23,686 b/d YoY (-13.5%) vs March 2021 of 175,580 b/d. CBR volumes are +113,027 since the July 2020 bottom of 38,867 b/d, when COVID-19-fueled capital spending reductions and lower drilling activity in Western Canada were in full effect. March WCS-WTI differentials decreased to -\$12.27 as prices steadily increased over the course of the month. Normally, differential closer to \$10 than \$15 lead to lower CBR but, with the high WCS prices, most, if not all, Cdn heavy/medium is being moved to markets. There is also the support for declining Russia oil exports into US markets. The start-up of Enbridge Line 3 additional export volumes is likely the key reason for the decline in exports by rail vs prior years. Below is our graph of Cdn crude by rail exports compared to the WCS-WTI differential.

Cdn crude by rail exports

Figure 12: Cdn Crude by Rail Exports vs WCS Differential



Source: Canadian Energy Regulator, Bloomberg

Oil – Refinery inputs +0.334 mmb/d WoW at 16.269 mmb/d

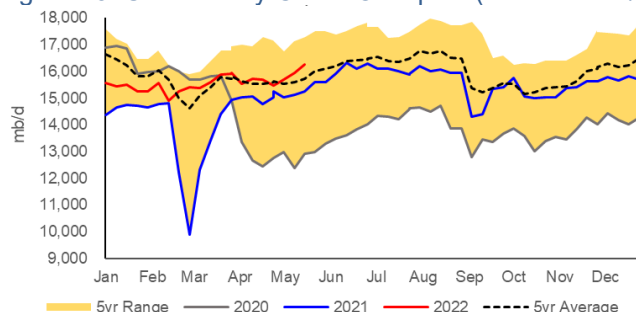
US refineries normally increase processing volumes in Q2 every year. The EIA crude oil input to refinery data is for the week ended May 20. The EIA reported crude oil inputs to refineries up 0.334 mmb/d to 16.269 mmb/d for the week ended May 20 and are +1.030 mmb/d YoY. Refinery utilization was up at 93.2%, which is +6.2% YoY though is still below 5-year average utilization levels; refineries are exiting the planned maintenance season as the summer

Refinery inputs up WoW

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demand is soon to ramp up. Note that hurricane season in the US is around the corner with June 1 marking the official start of the season. Total products supplied (i.e., demand) increased slightly WoW, up 0.023 mmb/d to 19.684 mmb/d, and Motor gasoline was down -0.229 mmb/d at 8.798 mmb/d from 9.027 mmb/d last week. The 4-week average for Motor Gasoline was down -0.246 mmb/d YoY to 8.846 mmb/d.

Figure 13: US Refinery Crude Oil Inputs (thousands b/d)



Source: EIA

Oil – US “net” oil imports down -0.903 mmb/d WoW at 2.145 mmb/d

Increasing US exports led to US “NET” imports were down -0.903 mmb/d to 2.145 mmb/d for the May 20 week. US imports were down -0.082 mmb/d to 6.486 mmb/d. US exports were up +0.821 mmb/d to 4.341 mmb/d. The WoW increase in US oil imports was driven by US's Top 10 imports by country were up by 0.130 mmb/d from Top 10. Some items to note on the by country data. (i) Canada was down this week by -0.090 mmb/d to 3.498 mmb/d. (ii) Saudi Arabia was up 0.168 mmb/d to 0.588 mmb/d this week. (iii) Colombia was down -0.147 mmb/d to 0.218 mmb/d. (iv) Ecuador was up +0.207 mmb/d at 0.250 mmb/d. (v) Iraq was up 0.040 mmb/d to 0.282 mmb/d. (vi) Mexico was up 0.040 mmb/d to 0.872 mmb/d.

US “net” oil imports down WoW

Figure 14: US Weekly Preliminary Oil Imports by Major Countries

(thousand b/d)	Feb 18/22	Feb 25/22	Mar 4/22	Mar 11/22	Mar 18/22	Mar 25/22	Apr 1/22	Apr 8/22	Apr 15/22	Apr 22/22	Apr 29/22	May 6/22	May 13/22	May 20/22	WoW
Canada	3,869	3,630	3,731	3,398	3,806	3,612	3,923	3,153	3,465	3,510	3,492	3,284	3,588	3,498	-90
Saudi Arabia	358	520	701	562	534	333	573	328	255	438	554	306	420	588	168
Venezuela	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mexico	768	497	412	645	641	731	619	763	488	391	553	693	832	872	40
Colombia	332	144	71	279	72	284	216	49	332	364	313	276	365	218	-147
Iraq	285	295	188	161	489	82	71	155	266	242	181	326	242	282	40
Ecuador	98	0	160	205	103	96	76	145	211	108	66	351	43	250	207
Nigeria	25	43	96	0	2	148	148	89	191	0	43	136	127	39	-88
Kuwait	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Angola	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Top 10	5,735	5,129	5,359	5,250	5,647	5,286	5,626	4,682	5,208	5,053	5,202	5,372	5,617	5,747	130
Others	1,093	638	960	1,145	839	973	674	1,313	629	881	1,130	897	951	739	-212
Total US	6,828	5,767	6,319	6,395	6,486	6,259	6,300	5,995	5,837	5,934	6,332	6,269	6,568	6,486	-82

Source: EIA, SAF

Oil – Pemex oil production still stuck around 1.7 mmb/d, but partners now 61,000 b/d

On Wednesday, Pemex released its April production for its interests, it was 1.686 mmb/d of oil, which is basically unchanged for Q1/22 and down slightly MoM after decreasing last month. Pemex has been unable to grow its own oil production. The non-Pemex oil production in Mexico is now up to 61,000 b/d and has averaged 59,000 b/d for YTD April 30.

Pemex April oil 1.686 mmb/d

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As a result, total Mexico oil production (Pemex and non-Pemex) was 1.696 mmb/d for March and 1.686 mmb/d for YTD May 31. Below is our chart tracking Pemex oil production.

Figure 15: Pemex Mexico Oil Production

Oil Production (thousand b/d)	2015	2016	2017	2018	2019	2020	2021	2022	22/21
Jan	2,251	2,259	2,020	1,909	1,623	1,724	1,651	1,705	3.3%
Feb	2,332	2,214	2,016	1,876	1,701	1,729	1,669	1,684	0.9%
Mar	2,319	2,217	2,018	1,846	1,691	1,745	1,697	1,696	-0.1%
Apr	2,201	2,177	2,012	1,868	1,675	1,703	1,693	1,686	-0.4%
May	2,227	2,174	2,020	1,850	1,663	1,633	1,688		
June	2,247	2,178	2,008	1,828	1,671	1,605	1,698		
July	2,272	2,157	1,986	1,823	1,671	1,595	1,701		
Aug	2,255	2,144	1,930	1,798	1,683	1,632	1,657		
Sept	2,271	2,113	1,730	1,808	1,705	1,643	1,709		
Oct	2,279	2,103	1,902	1,747	1,655	1,627	1,692		
Nov	2,277	2,072	1,867	1,697	1,696	1,633	1,691		
Dec	2,275	2,035	1,873	1,710	1,706	1,650	1,694		

Source: Pemex

Oil – Mexico March oil exports up to 1.024 mmb/d

Our April 3, 2022 Energy Tidbits highlighted the major (and a surprising one) change in Mexico oil export strategy for 2022. On March 31, AMLO announced “plan emergente” that would see Mexico oil exports relatively flat YoY in 2022, and not down huge as has been one of the primary election promises to the Mexican people. On Sunday, Pemex reported April oil exports were 1.024 mmb/d, which was up MoM vs March of 0.905 mmb/d, and up 10.9% YoY vs April 2021 of 0.923 mmb/d. Pemex oil exports to US were 0.594 mmb/d in April, which was in line with the average of the prior few months. Below is our table of the Pemex oil export data.

Pemex March oil exports

Figure 16: Pemex Mexico Oil Export

Oil Exports (thousand b/d)	2016	2017	2018	2019	2020	2021	21/20	2022	22/21
Jan	1,119	1,085	1,107	1,071	1,260	979	-22.3%	832	-15.0%
Feb	1,241	1,217	1,451	1,475	1,093	1,006	-8.0%	925	-8.1%
Mar	1,062	1,001	1,176	1,150	1,144	925	-19.1%	905	-2.2%
Apr	1,081	1,017	1,266	1,023	1,179	923	-21.7%	1,024	10.9%
May	1,204	958	1,222	1,205	1,062	1,031	-2.9%		
June	1,098	1,157	1,110	995	1,114	1,106	-0.7%		
July	1,146	1,255	1,156	1,079	1,051	1,173	11.6%		
Aug	1,261	1,114	1,181	1,082	1,190	1,099	-7.6%		
Sept	1,425	1,159	1,206	995	1,023	983	-3.9%		
Oct	1,312	1,342	1,027	963	908	935	3.0%		
Nov	1,273	1,388	1,135	1,114	1,171	1,025	-12.5%		
Dec	1,115	1,401	1,198	1,115	1,243	1,037	-16.6%		

Source: Pemex

Oil – Looks like Colombia will elect a leftist anti-oil and gas President

Turnout is going to be key in today's first round Presidential election in Colombia today with a runoff in 3 weeks if no one wins a majority. The election is for a successor to outgoing President Ivan Duque. Leftist candidate Senator Gustavo Petro continues to be in the lead but still polling well below a majority (call it just over 40% going into the election). But as is often the case in elections, it will depend on the turnout. There will always be the hope that there can be an anybody but Petro movement for any run off, but there will inevitably be some of those who didn't vote for Petro end up voting for him in the run off. So while it may be far too early to be certain, if the polls hold, we would expect Petro to be the winner and

Colombia election today

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next President. On Wednesday, Bloomberg wrote “1. Why are investors worried? Crude and coal account for about half of Colombia’s exports, so Petro’s pledge to halt oil exploration, if carried out, would be a break from a history of reliably pro-business administrations. The bonds of state oil company Ecopetrol SA have lagged behind other emerging-market oil companies since August, when Petro first said he would end oil exploration. Petro also wants to convert Ecopetrol into a green energy producer and raise tariffs to protect local agricultural producers. Such policies would come at a time when the nation is enjoying a bonanza from the surge in energy prices triggered by Russia’s invasion of Ukraine.”

Petro’s election would point to lower not higher Colombia oil production

All the commentary following Petro is that he would be a negative to Colombia’s oil production and to investment in oil and gas ie. production will be going lower not higher. This will be in contrast to outgoing Colombia President Duque who has been highlighting Colombia can, in a short period, restore oil production to much higher levels. Our May 8, 2022 Energy Tidbits noted the just posted oil and gas data for March. We then wrote “Colombia oil production in March increased slightly MoM at 0.751 mmb/d vs 0.740 mmb/d in Feb.

Figure 17: Colombia Oil Production

million b/d	2015	2016	2017	2018	2019	2020	2021	21/20	2022	22/21
Jan	1.036	0.986	0.860	0.860	0.899	0.884	0.745	-15.7%	0.740	-0.7%
Feb	1.030	0.955	0.864	0.823	0.893	0.878	0.746	-15.1%	0.740	-0.8%
Mar	1.023	0.917	0.804	0.856	0.885	0.857	0.745	-13.0%	0.751	x
Apr	1.029	0.915	0.857	0.865	0.891	0.796	0.745	-6.4%		
May	1.027	0.904	0.851	0.866	0.895	0.732	0.703	-3.9%		
June	1.010	0.888	0.857	0.864	0.892	0.730	0.694	-4.9%		
July	0.947	0.843	0.856	0.860	0.869	0.735	0.731	-0.5%		
Aug	0.968	0.827	0.858	0.866	0.883	0.742	0.748	0.8%		
Sept	1.009	0.859	0.851	0.869	0.879	0.749	0.744	-0.7%		
Oct	1.005	0.846	0.864	0.879	0.883	0.751	0.740	-1.5%		
Nov	0.990	0.855	0.851	0.883	0.880	0.761	0.747	-1.9%		
Dec	0.999	0.837	0.870	0.889	0.882	0.759	0.745	-1.8%		

Source: Bloomberg, Colombia Ministry of Mines and Energy

Oil – Oil output at Kashagan nearly halves in May due to maintenance

On Wednesday, Bloomberg reported [\[LINK\]](#) oil output at Kazakhstan's giant offshore Kashagan oilfield has nearly halved since May 20 to 220,000 bpd from over 400,000 bpd in early May as a result of maintenance works. The oilfield is carrying out planned maintenance works from May 19 until August 3 with production expected to be completely halted in June. Overall output of oil and gas condensate in Kazakhstan is consistent with the drop at Kashagan, and fell to 1.66 mmb/d on May 22 from 1.85 mmb/d in early May.

**Kashagan oil
output down**

Oil – Novak’s forecast points to lower Russia oil production than he last indicated

It sounds like Russian oil production isn’t recovering as fast as Russian energy minister Novak said a week ago. This is the big wildcard in global oil supply. Novak may not have said this specifically, but he gave a forecast for 2022 where the math leads us to that conclusion. On Thursday, we tweeted [\[LINK\]](#) “Positive for #Oil, Novak fcast shows very little recovery off 1 mmbd Apr hit. ‘s RUS 2021: 10.52 mmbd, fcast 9.64 - 10.04 mmbd. midpoint - 0.68 mmbd YoY for full yr ave 2022, but -0.91 mmbd if allocated over Apr 1-Dec 31 vs Novak saying Apr hit 1 mmbd. #OOTT.” TASS reported [\[LINK\]](#) “I think that there will be a much

**Russian oil is
not recovering
from April**

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smaller decline. We had a decline of just over a million barrels per day for just one month, now it's already lower. Accordingly, I think that there will be a recovery further. Last year we had 524 million tons. this year it may be 480-500 million tons. But this is for today, everything can change depending on the situation," he stressed." Novak is saying the same thing as last month that April was hit by 1 mmb/d. But he wasn't as specific on May and June both being higher production. And the math supports that the hit to Russia oil production will be about 1 mmb/d to the April thru Dec period ie. not much different than April hit. Novak says production last year was 524 million tons and this year should be 480-500 million tons. He is saying 2021 was 10.52 mmb/d, Novak expects 2022 to be down to 9.64 to 10.04 mmb/d. If we use the mid point of 9.84 mmb/d, that is a reduction on average of 0.68 mmb/d for the year. if we put that over a 9 month impact instead of 12 mths, it's a hit of 0.91 mmb/d for the April 1 thru Dec 31 period. That is not much different than the April down 1 mmb/d and that is using the midpoint. Novak did say everything can change. Our Supplemental Documents package includes the TASS report.

Last week, Novak said May was +200-300,000 b/d & June would be higher

Last week's (May 22, 2022) Energy Tidbits memo highlighted Novak's more specific comments on the recovery of Russian oil in May and June. We wrote *"The big oil supply wildcard is how much Russian oil production and oil exports are off the market. It is important to remember that losses to oil production and oil exports will not be the same. For example, Russia oil production could be down 1 mmb/d, but oil exports could be done more or less depending on how Russian domestic oil consumption is being hit. The accepted expectation is that Russia domestic consumption is down and therefore oil exports might not be hit as much as oil production. The negative oil story on Thursday morning was on Russia oil being stronger than expected. Early Thursday morning, we tweeted [\[LINK\]](#) on the breaking news "Negative to #Oil. Russia #Oil production & exports continue to recover, not going lower. #Novak: production down 1 mmb/d in Apr, up 200-300,000 b/d in May, further recovery in June. Also restoring oil exports & RUS oil exporting companies "today they feel quite confident". #OOTT."* The negative is because most are expecting Russia oil production to be going lower and not higher from the 1 mmb/d. TASS reported [\[LINK\]](#) *"Yes, somewhere in March-April, as a result of the shock, we received a slight decrease in production and oil refining. This was expressed in approximately 10-14% figures," he said. production is increasing. If in April we reduced production by about 1 million barrels per day, in May we already increased by 200-300 thousand b / d. And we expect that further recovery will also take place in June."* Our Supplemental Documents package includes the TASS report.

Oil – Next OPEC and non-OPEC ministerial meeting (ONOMM) is Thurs June 2

The next, 29th OPEC and non-OPEC Ministerial Meeting (ONOMM) is to scheduled to be held on Thursday June 2, 2022. As of our 7am MT news cut off, we haven't heard any serious chatter that the meeting will be anything more than the last few meetings – a rubber stamp of the existing plan to increase OPEC+ production by ~0.4 mmb/d for the month of July.

**OPEC+ meeting
is June 2**

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Oil – JCPOA, Iran still wants IRGC terrorist designation removed

There is no question that more are believing there won't be a return to the JCPOA even though both sides are continuing the same dance for the last few months that it's up to the other side if it fails or succeeds. One of the major sticking points is that Iran wants the removal of the IRGC terrorist designation. This week, Iran's Foreign Minister was interviewed at the World Economic Forum. We tweeted [\[LINK\]](#) *"#JCPOA. looks like no change to Iran wanting IRGC terrorist designaton removed. At 29:05min "you claim you have good intentions, we are ready. give us economic guarantees and remove elements of the maximum pressure policy of Trump" @Amirabdollahian to @FareedZakaria. #OOTT."* In the interview, at 20:07 min mark Interviewer Fareed Zakahari asks about JCPOA. It goes on for awhile. Amirabdollahian seems to restate Iran's reported views ie. Biden hasn't really changed anything from Trump's views, rather has added his own additional sanctions despite negotiations going on. And elements of trump's maximum pressure policy should be removed, would like to make a deal, if Americans have realistic approach we will make a deal. At 24:00 min, Zakahari asked about IRGC and why let hold that up, and then again at 26:50 min, Zakaraia trias to get him to say if say removing of IRGC terrorist designation wouldn't hold up a deal. Amirabdollahian says remove elements of the maximum pressure by trump ie. inferring but not saying yes we want IRGC terrorist designation removed. This is the holdup as the US says the IRGC terrorist designation is not part of JCPOA sanctions as it was done separately. Here is the link to the interview. [\[LINK\]](#)

**Iran not moving
from IRGC
demands**

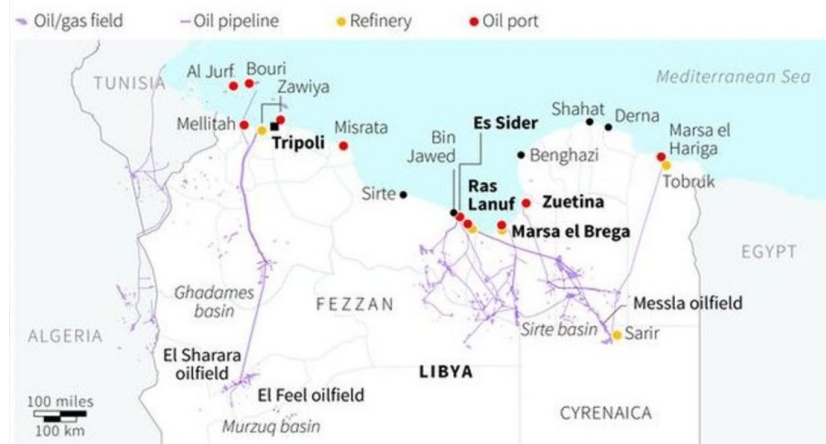
Oil – Libya oil production reportedly back up to ~750,000 b/d

On Tuesday, Bloomberg reported on Libya's current oil production, writing *"Libyan crude production has risen to around 750,000 barrels a day, Oil Minister Mohamed Oun said Thursday."* There was no color on what fields are up. Earlier this month, Oun said Libya's oil output was ~600,000 b/d due to a blockade amid protests calling for Prime Minister Abdul Hamid Dbeibah to step down. Negotiations with demonstrators continue in attempt to restart affected assets in the El Sharara and El Feel fields. There is still a chance that output goes back down to levels seen in early May. Our Supplemental Documents package includes the Bloomberg report.

**Libya oil up to
~750,000 b/d**

Figure 18: Libya Ports, Major oilfields and Terminals map

SAF Group Compiled Libya Ports & Terminals Status



Source: Bloomberg, HFI Research, SAF
<https://safgroup.ca/news-insights/>

Source: SAF Group

Oil – China cranking up Russian ESPO oil imports

We continue to see more support that China is snapping up cheap Russian oil. Last week's (May 22, 2022) Energy Tidbits highlighted the May 20 TASS report [\[LINK\]](#) that China's oil reports could reach almost 2 mmb/d, 1.1 mmb/d by tanker and 0.8 mmb via pipeline. TASS wrote "China's imports of Russian oil via sea routes are expected to grow to an almost record-breaking 1.1 mln bpd in May, compared to 750,000 bpd in Q1 of 2022 and 800,000 bpd in 2021." On Friday, Bloomberg reported "China's oil trading giant Unipetec has significantly increased the number of hired tankers to ship a key crude from eastern Russia. China International United Petroleum & Chemical Co., better known as Unipetec, has chartered at least 10 tankers so far this month to transport Russian ESPO crude that's loaded from Kozmino port, according to traders and a shipbroker. That would be a fivefold increase on the number of vessels booked for the trade a month earlier, data from shipping analytics firm Vortexa show." The other advantage of ESPO is that it is a short tanker travel time of approx. five days.

China oil imports from Russia

Oil – Can China take all Russia's 1.6 mmb/d ESPO oil? ie. Japan, Korea will be out

After seeing the above Bloomberg report on tankers to take Russian ESPO oil, we couldn't help think of the big picture – will China be able to take all of the 1.6 mmb/d of ESPO oil capacity. If so, it will help Japan and Korea reduce Russia oil imports because there won't be any of the close by ESPO pipeline grade crude oil. ESPO stands for the East Siberia-Pacific Ocean oil pipeline. ESPO pipeline is ~1.6 mmb/d capacity, but splits off into a China leg that has capacity of approx. 0.7 mmb/d with the balance going on to Russia refineries consumption of approx. 0.3 mmb/d and the balance approx. 0.6 mmb/d for tanker exports via its export terminal that is basically adjacent to China and Japan. Note these are approximates. It led to our tweet [\[LINK\]](#) "JPN KOR being forced to find alternative to RUS ESPO crude. @iamsharoncho reports big ramp up in China tankers taking ESPO oil. ESPO

Russia's ESPO pipeline

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pipeline ~1.6 mmb/d capacity. Can China take it all, not just pipeline connected portion? Great map from @IHSMarkeit Carol Zu. #OOTT.” This would be significant. Clearly, China is increasing its share of ESPO oil via tankers, We weren't able to find any precise export splits, but we saw a number of reports from earlier this year that point to approximately 2/3 of ESPO to China, the balance to Japan, Korea and others. That makes sense as it would suggest China only got ESPO via its pipeline leg and not via tanker. This would be significant to Japan and Korea as they will have to find ESPO equivalent oil and from some much longer tanker voyage ie. landed cost of oil will be more expensive. Below is a good IHSMarkeit map that we put in our tweet.

Figure 19: East Siberia-Pacific Ocean Oil Pipeline



Source: IHSMarkeit

Oil – Beijing is loosening some mobility curbs starting today

Beijing is not on any official lockdown but the mobility restrictions are much like a lockdown. Any restrictions are only a start and Beijing is far from reopening but it seems like yesterday's Beijing comments are a turn in direction. Yesterday morning, Bloomberg reported on the Saturday comments from Xu Hejian, a spokesman for the Beijing city government. We tweeted [\[LINK\]](#) "Beijing will loosen mobility curbs in several districts from Sunday", most public transportation to resume in 3 districts incl Chaoyang (central business district) report @business John Liu, Dong Lyu, Fran Wang. Far from reopening but seems a turn in direction. #OOTT.” Some of the Bloomberg comments were "China's capital Beijing will loosen mobility curbs in several districts from Sunday after authorities said its outbreak is under control, while total case numbers in the financial hub of Shanghai continued to decline. Most public transportation services including buses, subways and taxis will resume in three districts including Chaoyang, according to Xu Hejian, a spokesman for the Beijing city government. Shopping centers outside of controlled areas in the city will also be allowed to reopen with capacity limits on the number of people. Chaoyang is home to Beijing's central

Beijing relaxing some mobility restrictions

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business district, most foreign embassies and expatriates. The number of new infections has fallen for six straight days in Beijing with no cases outside of quarantine reported on Friday, Xu said. "This round of outbreak has been effectively controlled," he said at a briefing Saturday." Our Supplemental Documents package includes the Bloomberg report.

Oil – Shanghai's "action plan for accelerating economic recovery & revitalization"

Earlier this morning, we tweeted [\[LINK\]](#) *"Lots in Shanghai 50 pt "action plan for accelerating economic recovery & revitalization" #20 Vigorously promote automobile consumption, increase quota of 40,000 non-commercial car license plates, reduce the purchase tax of some cars in stages, etc. #OOTT [\[LINK\]](#)." Thanks to Google Translate, we were able to review Shanghai's 50 point "Action Plan for Accelerating Economic Recovery and Revitalization in Shanghai". [\[LINK\]](#). The first impression is that there is a lot in here for a city, but then remember there are approx. 27 million people in Shanghai, which is like a country. Shanghai is doing a lot to help kickstart the recovery much like a federal govt like some subsidies to keep people employed, breaks on power usage prices, etc. The other impression we get is that Shanghai wants to get back to where it was and more – Shanghai wants to get more cars on the road. Point 20 was "20. Vigorously promote automobile consumption, increase the quota of 40,000 non-commercial passenger vehicle license plates during the year, and reduce the purchase tax of some passenger vehicles in stages according to the requirements of national policies. Before December 31, 2022, individual consumers who scrap or transfer out a passenger car registered in Shanghai and meet the relevant standards and purchase a pure electric vehicle will be given a financial subsidy of 10,000 yuan per vehicle. Support the development of car rental business. Improve the management regulations for the registration, filing, and vehicle transaction registration of used car market entities. (Responsible units: Municipal Development and Reform Commission, Municipal Transportation Commission, Municipal Public Security Bureau, Municipal Finance Bureau, Municipal Taxation Bureau, Municipal Economic Information Commission, Municipal Commerce Commission)." Our Supplemental Documents package includes the Google Translate of Shanghai's 50 point plan.*

Shanghai's 50 point action plan

Oil – IEA's Birol oil prices be going higher if Saudi et al don't increase production

We have to give IEA Executive Director Fatih Birol credit, he was all over the World Economic Forum in Davos and he seemed to stick fairly close to his first day messaging. That isn't easy to do. On Monday, Birol spoke to Bloomberg and made three key points. (i) His headline warning was that oil may be going even higher unless "responsible players" don't increase oil supply. (ii) He didn't specifically call out Saudi Arabia, UAE and others, but there was no doubt who Birol was referring to asking "responsible players to increase supply. (iii) We were a little surprised by his statement on near term demand. He seemed to imply that near term demand is inelastic other than the "only" demand item he worries about is China. Birol said *"this summer, this summer will be difficult. This summer will be difficult because in summer as we know the oil demand normally goes up with the driving season and the production growth is set to come from US, Brazil, Canada is still on its way but it may not be ready by summer. The only issue that we have to keep our eye on is whether or not China demand will be still flat or be very weak as a result of the Chinese economic weakness."* (iv) Here was our Monday morning tweet on Birol's comments. On Monday, we tweeted [\[LINK\]](#) *"1/2. @fbirol #Oil may be going even higher & more volatile. Increasing demand in summer driving season, "the ONLY issue that we have to keep our eye on is*

IEA Birol's latest tweet

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whether or not China demand will be still flat or be very weak as a result of the Chinese economic weakness” #OOTT” and [LINK](#) “2/2. US, BRA, CAN #Oil supply takes time. If “responsible players” (dig at Saudi) “if you don’t make a positive contribution here, we may see prices even going higher, be much more volatile and becoming a major risk for recession for the global economy”. Thx @flacqua #OOTT.” Our Supplemental Documents package includes the transcript we made of Birol’s comments with Bloomberg.

Oil – IEA’s Birol seems to make a big bet that oil demand will start to decline soon

IEA Executive Director Birol doesn’t say this, but the only way we see reconciling his oil strategy and a way to relief oil prices is for there to be a large near term crash in oil demand and oil demand not going back below pre-Covid levels and in a steady decline in 2023 onward. And if that is so, then it can only be because of a massive global economic crash and that has to be negative to short term oil prices. This means the IEA will have to crash their oil demand forecast. Otherwise, we don’t know you reconcile his recommendation that effectively says use up any short cycle, don’t add capital to add any mid/long term oil capacity. On Monday afternoon, we tweeted [LINK](#) “Support for high #Oil prices in mid/late 2020s. @fbirol at #WEF22, yes fix energy crisis but should only be short cycle projects, not large projects to add long term capacity ie. use all the bullets now. Yet @IEA WEO Oct fcast #PeakOilDemand after 2030 in stated policies. #OOTT.” After going back to the IEA work, we worry more that, if the western govts (IEA member countries) follow the IEA advice as they have been doing, then we think the issue will be even worse. Note we are concerned that the IEA’s views are really shaped by their govt stakeholders, in particular the US and big EU players, and not the US and big EU players shaping their policy based on independent analysis. On Monday, Birol’s comments fit his May 13 LinkedIn post that we highlighted in our May 15, 2022 Energy Tidbits. Birol wants the only thing the oil and gas sector should do to help solve the energy crisis is do short cycle items like shale, maximizing production from existing fields. As an aside, does he really think oil and gas companies aren’t maximizing production from existing fields under \$100 oil and \$8 gas? But he doesn’t want any investment in any large long term oil and gas items including major oil exploration. It’s basically use up all the bullets today and don’t worry about saving some or adding some more bullets for the future. This is a very high stakes risk, which is fine as he isn’t a decision maker. So add any and all existing capacity now and accelerate the energy transition and hope that oil demand goes down and goes down soon because he doesn’t want to see any building of oil capacity. So a key assumption has to be oil demand declining starting now as any short cycle adds are here to fill in the gap for Russia. The problem with that is their own work. Our Oct 17, 2021 Energy Tidbits highlighted the IEA’s World Energy Outlook and included the below table. This is before Russia/Ukraine, and also before COP26 Glasgow that was considered disappointing given it was held in the face of the Europe energy crisis in H2/21. In their forecast, the IEA forecasts peak oil demand sometime after 2030. The IEA forecasts oil demand grows from 96.6 mmb/d in pre-Covid 2019 to 103.0 mmb/d in 2030 under its Stated Policies case. The IEA will have to assume that oil demand doesn’t grow, but rather declines right away ie. they are assuming that there are big cuts to demand by new government policy impact. Our Supplemental Documents package includes the transcript we made of Birol’s comments on Monday in the panel and also his May 13 LinkedIn post.

IEA bets on oil demand declining soon

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Figure 20: IEA's World Energy Outlook Oil Demand Forecast

Table A.8: Oil demand (mb/d)

	Historical			Stated Policies		Announced Pledges		Sustainable Development	
	2010	2019	2020	2030	2050	2030	2050	2030	2050
World	86.7	96.6	87.9	103.0	103.0	96.1	76.7	87.6	47.0
North America	22.2	22.7	20.1	21.3	16.7	18.0	7.7	17.7	6.8
United States	17.8	18.4	16.4	17.4	13.4	14.7	5.4	14.6	5.4
Central and South America	5.5	5.5	5.0	5.4	6.0	4.8	4.0	4.5	2.4
Brazil	2.3	2.4	2.3	2.4	2.5	1.9	1.1	1.9	1.0
Europe	13.9	13.0	11.9	10.4	6.4	9.0	3.6	8.7	2.2
European Union	10.6	9.7	8.9	7.4	4.1	6.2	1.4	6.2	1.3
Africa	3.3	4.0	3.6	5.1	8.4	5.0	7.9	4.6	4.3
Middle East	6.6	7.4	6.7	8.2	10.2	8.2	10.2	7.2	6.1
Eurasia	3.2	3.8	3.7	4.4	4.5	4.4	4.5	4.0	2.6
Russia	2.6	3.1	3.0	3.5	3.1	3.5	3.1	3.2	2.0
Asia Pacific	25.0	32.0	30.8	38.5	38.8	37.8	30.1	33.0	17.2
China	8.8	13.1	13.3	15.7	13.4	15.7	6.4	13.6	5.9
India	3.3	4.8	4.4	7.2	9.2	7.2	9.2	6.0	4.1
Japan	4.2	3.4	3.1	2.8	1.8	2.4	0.8	2.4	0.8
Southeast Asia	4.0	5.1	4.7	6.6	7.7	6.6	7.6	5.6	3.2
International bunkers	7.0	8.3	6.1	9.6	11.9	8.9	8.8	7.9	5.4

Source: IEA

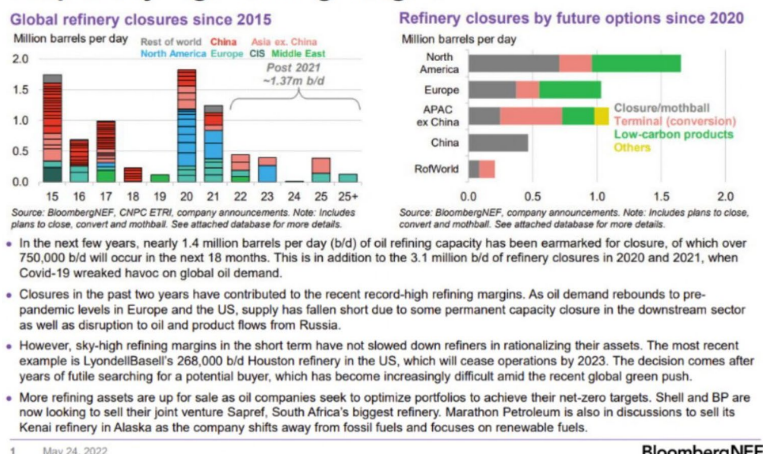
Oil – A products squeeze, 4.4 mmb/d of refinery capacity shut down since Jan 1/2020

Sooner or later, the world is going to focus on refinery capacity to produce gasoline, jet fuel, diesel, etc. The amount of these finished products in the market is limited by the refinery capacity. It's too bad the media only goes where they are led by the politicians because instead of only hammering home why doesn't OPEC release more or US drill more oil wells, they would be asking why don't the US, EU and other countries move to restart recently closed oil refineries to produce more diesel, gasoline and jet fuel for future years. We understand why Biden and others don't talk about the key reason for gasoline, diesel and jet fuel prices going way higher than what should be expected with the oil price rise as they know they can't do anything about that. And also that it was the push they led to have reduced emissions among integrated oil companies led to this issue – the shutdown of global refinery capacity. On Tuesday, we tweeted [\[LINK\]](#) “Focus by #Biden @fbirol is on short term oil supply (want more #OPEC, shale), but don't have answer for big 2022 problem - refining capacity to produce #Diesel #Gasoline #JetFuel. 4.4 mmbd shut down since Jan 1/2020 driven by #ESG pressures. Thx @BloombergNEF Sisi Tang. #OOTT”. BloombergNEF posted a Refinery Closure Tracker that noted there has been 4.4 mmb/d of refinery capacity shut down since Jan 1, 2020. They included the blow graph that notes there is another 750,000 b/d of refinery capacity to shut down by the end of 2023.

Refinery closures

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Figure 21: Scheduled global refinery closures
Another 750k b/d capacity set to close by end 2023, despite sky-high refining margins



Source: BloombergNEF

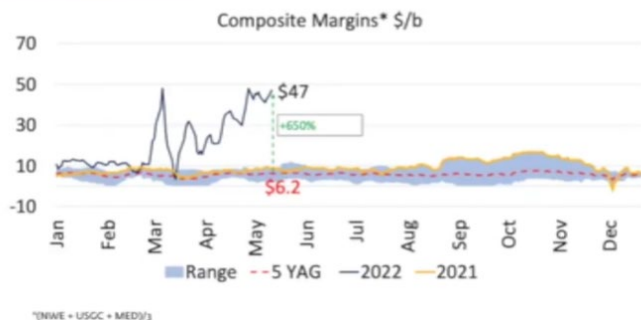
Saudi's Abdulaziz warned there is no refining capacity commensurate with demand

Last week's (May 22, 2022) Energy Tidbits memo highlighted the warning from Saudi's Abdulaziz. Here is what we then wrote "Once again, Saudi Energy Minister Abdulaziz is able to clearly and very simply explain the oil situation – there is no refining capacity to meet the summer expectations of demand. It's one of the reasons why we call him "The Man". And, of course, the big reason is that he basically led OPEC+ out of the depths of Covid crashing oil price to the great oil markets for producers. It's hard to believe, it's really just been a little of over two years. On Monday, we tweeted [\[LINK\]](#) "Buckle up! "The Man" Abdulaziz "simple. it tells you that there is no refining capacity commensurate with the current demand and the expectation, again the expectation of the demand this summer when people go to gasoline, diesel & what have you for their transportation". #OOTT. We created a transcript of his interview on Monday [\[LINK\]](#), when Abdulaziz said "I also would like to show you the physical impediments that no producer can sort. Here you go. Luckily, I am with a group here that are veterans of industry when did we ever, when did we, when did we have seen in our lives, at least in my 35 years in this business. I don't want to say how many years you have had. When did we have a thirty or \$47. I think it's not appearing properly but it's \$47 of refining margin. 650% change between March and what it is today. or 650% between the average of the five-year average and what it is today. what does this tell you? Simple. It tells you that there is no refining capacity commensurate with the current demand and the expectation, again the expectation, of the demand this summer when people go to gasoline, diesel and what have you for their transportation". Below is the graph referred to by Abdulaziz in these refining comments.

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Figure 22: Refining Capacity Margins

Refining capacity shortages are causing refining margins to reach record highs.



Source: Saudi Arabia Ministry of Energy

Oil - How will non-OECD Food Crisis roll over to impact oil demand in OECD?

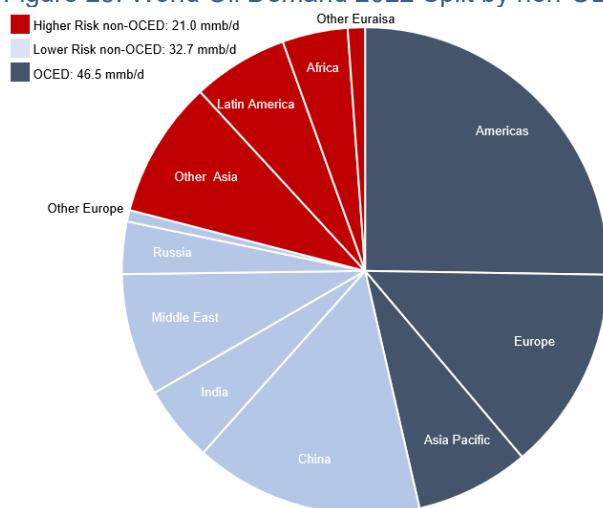
We were reminded by Gita Gopinath (IMF, First Deputy Managing Director) that there is much more to economic growth than the problems we are facing in developed countries with inflation. She was on Bloomberg on Tuesday morning and highlighted there is no fiscal room left today in many countries to deal with food prices. A rising Food Crisis with governments not able to help on subsidies has to oil demand in these countries. But then the question comes up in how will this Food Crisis roll over to impact developed economies and oil demand. Gopinath was asked about governments providing subsidies to deal with rapidly rising food prices. Gopinath replied *“after two years of the pandemic, governments around the world, especially in countries like Egypt, do not have the fiscal space to provide widespread support. And this is something that we are tracking very closely, exactly this question of how many countries are now facing these rapid increase in food prices and therefore are likely to develop balance of payment problems. This is one of the trackers that we have and this is a major concern”*. There was more to Gopinath's comments on food. Our Supplemental Documents package includes the transcript we made of Gopinath's comments on Bloomberg.

Non-OECD food crisis**Higher risk non-OECD countries represent 21.0 mmb/d of oil demand**

It is impossible to define exactly how much of the world's 2022 oil demand is at high risk and the follow on impact as poorer countries try to deal with the increasing Food Crisis. We tried to take OPEC's current forecast for 2022 oil demand of 100.3 mmb/d and do an approximate split of non-OECD into higher risk for food crisis to impact oil demand ie. those regions that are more likely to have a direct impact on oil demand. Then that raises the question of how this Food Crisis in poor developing countries spills over to impact oil demand in lower risk non-OECD countries and in OECD countries. Unfortunately, we don't have by country demand so had to included broad group. Our rough split is higher risk non-OECD with 21.0 mmb/d demand vs lower risk non-OECD with 32.7 mmb/d and OECD at 46.5 mmb/d.

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Figure 23: World Oil Demand 2022 Split by non-OECD vs OECD



Source: OPEC, SAF Group

Oil – Vortexa crude oil floating storage 98.79 mmb as of May 27, -1.16 mmb WoW

We are referencing the Vortexa global crude oil floating storage data posted on the Bloomberg terminal as of 6am MT today. Note Bloomberg did not post Vortexa estimates on Saturday as is normally the case. Also 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 today are compared to the prior weeks Vortexa estimates posted on Bloomberg on May 21 at 1pm MT. (i) As of 6am MT today, Bloomberg has posted Vortexa crude oil floating storage estimate as of May 27 was 98.79 mmb, which is -1.16 mmb WoW vs upwardly revised May 20 of 99.95 mmb. Note May 27 was revised +6.26 mmb from the 93.69 mmb posted on Bloomberg as of 1pm MT on May 21. (ii) Note that other than the upward revision for May 27 estimates noted above, the prior several weeks were all revised down approx. 2 to 4 mmb. However, the recent two months of weekly data still point to the crude oil floating storage being higher than seen a month ago, it's now in mostly in the 100-105 mmb range and not the 90-100 mmb range ie. crude oil floating storage looks to be increasing. Again, we think it isn't that surprising to see revisions given this coincides with the post Russian/Ukraine war period. (iii) May 27 estimate of 98.79 mmb is -122.98 mmb vs June 26, 2020 peak of 221.68 mmb. (iv) The below graph goes back 3 years and not just 2 years as floating oil storage was in the big ramp up period in late March/April/May 2020 as Covid started to have a huge impact. May 27 estimate of 98.79 mmb is +45.54 mmb vs pre-Covid of 53.25 mmb on May 27, 2019. Note May 27 estimate of 98.79 is -83.60 mmb vs post-Covid of 182.39 mmb on May 29, 2020. (v) Below are the last several weeks of estimates made as of 6am MT today, May 21 at 1 pm MT, and May 14 at noon MT.

**Vortexa crude
oil floating
storage**

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Figure 24: Vortexa Floating Storage as of May 27 Posted on Bloomberg 6am MT today



Source: Bloomberg, Vortexa

Figure 25: Vortexa Estimates May 29 6am MT, May 21 1pm MT, and May 14 noon MT

Est as of May 29, 6am MT					Est as of May 21, 1pm MT					Est as of May 14, noon MT				
FZWWFST VTXA Indx					FZWWFST VTXA Indx					FZWWFST VTXA Indx				
05/26/2019 - 05/27/2022					05/19/2019 - 05/20/2022					05/12/2019 - 05/13/2022				
ID	3D	1M	6M	YTD	ID	3D	1M	6M	YTD	ID	3D	1M	6M	YTD
FZWWFST VT...					FZWWFST VT...					FZWWFST VT...				
Date					Date					Date				
Fr 05/27/2022					Fr 05/20/2022					Fr 05/13/2022				
Last Px					Last Px					Mid Px				
98794					93690					110.855k				
Fr 05/20/2022					Fr 05/13/2022					Fr 05/06/2022				
99945					111.179k					100.987k				
Fr 05/13/2022					Fr 05/06/2022					Fr 04/29/2022				
107.943k					101.029k					Fr 04/22/2022				
Fr 05/06/2022					Fr 04/29/2022					Fr 04/15/2022				
96610					104.849k					Fr 04/08/2022				
Fr 04/29/2022					Fr 04/22/2022					Fr 04/01/2022				
101.589k					106.645k					Fr 03/25/2022				
Fr 04/22/2022					Fr 04/15/2022					Fr 03/18/2022				
102.899k					108.614k					Fr 03/11/2022				
Fr 04/15/2022					Fr 04/08/2022					Fr 03/04/2022				
106.256k					105.863k									
Fr 04/08/2022					Fr 04/01/2022									
102.156k					93843									
Fr 04/01/2022					Fr 03/25/2022									
91461					Fr 03/18/2022									
Fr 03/25/2022					Fr 03/11/2022									
91549					95861									
Fr 03/18/2022														
95244														

Source: Bloomberg, Vortexa

Oil – BloombergNEF: global oil stocks continue to be supportive of oil prices

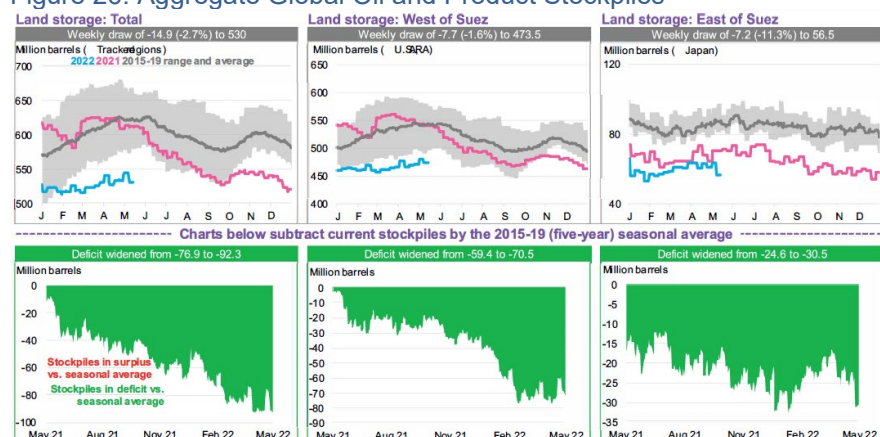
For those with a Bloomberg terminal we recommend flipping thru BloombergNEF's "Oil Price Indicators" weekly that comes out on Mondays as it provides good charts depicting near-term global oil demand and supply indicators. The key global oil and products stocks data point continues to be positive with a large deficit relative to the 2017-2019 average. The YoY deficit widened for crude and products from 102.5 mmb to 114.5 mmb. The stockpile deficit against the five-year average (2015-19) widened from 76.9 mmb to 92.3 mmb. Total crude inventories decreased by 0.8% to 642.8 mmb, including global floating inventories. Product stocks were up 0.2% WoW with the stockpile deficit against the 3-year average widening from 67.9 mmb to 75.8 mmb. Gas oil and middle distillate stocks have narrowed against their three-year average deficit (2017-2019) of 36.2 mmb to 34.5 mmb. Jet fuel consumption by international departures increased by 1,300 b/d WoW while consumption by domestic passenger departures decreased by 14,000 b/d. The global mobility index weakened over the past week, dropping from the highest level since March 2020. Below is a snapshot of

BNEF's global oil inventories

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aggregate global stockpiles. Our Supplemental Documents package includes excerpts from the BloombergNEF report.

Figure 26: Aggregate Global Oil and Product Stockpiles



Source: Bloomberg

Oil – Biden may release 1 mmb diesel from Northeast Home Heating Oil Reserves

We probably shouldn't have been surprised by the multiple reports this week that Biden is considering a release of the 1 mmb of diesel fuel from the Northeast Home Heating Oil Reserves (NEHOR) strategic reserves and that seems to be very much driven by diesel prices. It's why we tweeted [\[LINK\]](#) *"(NEHHOR), a one million barrel supply of ultra low sulfur distillate (diesel), was created to build a buffer to allow commercial companies to compensate for interruptions in supply DURING severe winter weather" says @ENERGY #OOTT [LINK].* The link in our tweet was to the US Dept of Energy description of NEHOR saying that NEHOR was to compensate for interruptions in supply "during severe winter weather". It was not set up to help lower diesel prices. So we probably shouldn't be surprised that as Biden and the Democrats worry more and more about the midterms. People in the northeast will be hoping it isn't a cold winter 2022/23. Our tweet referenced the WSJ report [\[LINK\]](#) *"The Biden administration is considering a release of diesel fuel from federal reserves to address skyrocketing prices and the threat of supply outages on the East Coast. Officials have drafted an emergency declaration as prices have soared to record highs in recent weeks, White House spokeswoman Emilie Simons said on Twitter on Monday. Such a declaration would allow for the quick release of some of the 1 million barrels of diesel in the Northeast Home Heating Oil Reserve "if necessary," she said. "We're closely monitoring challenges to diesel supply and prices as a result of Putin's invasion," she said, referring to the Russian war in Ukraine that has roiled global energy markets. "This would bridge short-term supply shortfalls." The WSJ also wrote "The Biden administration has been preparing for a release in case those soaring prices and shrinking inventories lead to local supply outages, according to a White House official. But diesel inventories in the Northeast have started to rise again and retail prices fell last week for the first time in a month, leaving administration officials optimistic for now that they might not need to intervene, the official said."* Our Supplemental Documents package includes the WSJ report and DOE summary of NEHOR.

US has 1 mmb diesel reserves for winter emergency

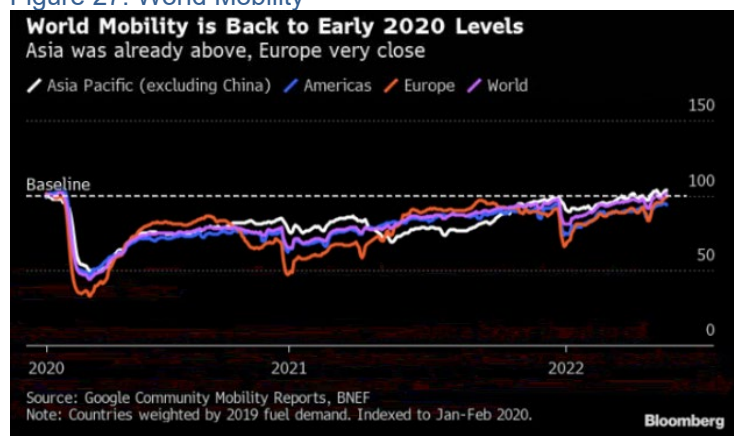
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Oil – Bloomberg Oil Demand Monitor: China's airlines miss out on rising mobility

We recommend reading the weekly Bloomberg terminal Oil Demand Monitor for a good recap of key oil demand indicators around the world. Road fuel demand is almost back to normal as governments use subsidies to try to shield consumers from high prices. Expensive gasoline and diesel arguably constitute a bigger threat to oil consumption in Europe, Africa and the Americas, while coronavirus travel curbs remain a more significant deterrent to road and air transport in China, especially for those stuck in some of the country's biggest cities. Global mobility has finally risen above a starting point set in early 2020. Traffic congestion readings on Monday morning across a sample of 13 world cities showed that only Rome and London had levels higher than the 2019 average for that time of the week. The data from TomTom showed the other 10 cities lagged pre-Covid congestion levels. New York was down 8%. Beijing's traffic levels have followed a downward trend seen in Shanghai, as China's pandemic control efforts seem to have shifted attention to the nation's capital. Overall congestion in 15 Chinese cities with the highest vehicle registrations rose back above a January 2021 baseline last week and is now back to levels last seen in early March. The number of seats offered by airlines on planes for the week ahead has dropped 1.7% back below 90 million a week after hovering above that level for two weeks. While European flight activity has improved steadily in recent weeks, the main drag on global activity is China. There was an 18% WoW reduction in North East Asia, which includes China, for domestic and international seats combined. That region lags 2019 levels by 45%. The global estimate for seat capacity trails 2019 by about 20%, a slightly wider margin than the week before. This means airlines currently provide four seats for every five they offered pre-Covid. Refinery Utilization at US refineries was up 5.5% YoY with US GoM and US East refineries up 7.2% and 7.8% YoY, respectively. Our Supplemental Documents package includes the Bloomberg Oil Demand Monitor.

Bloomberg's Oil Demand Monitor

Figure 27: World Mobility



Source: Bloomberg

Oil – Quantas cuts flights/increases airfares due to high jet fuel price

It's been a good Q2 for airlines as people have ramped up travel, but the reality is that most of this travel was booked months ago before jet fuel and airfares jumped up. The question will be how will air travel be under the higher airfares. We are starting to get an indication

Quantas adjusts due to high jet fuel price

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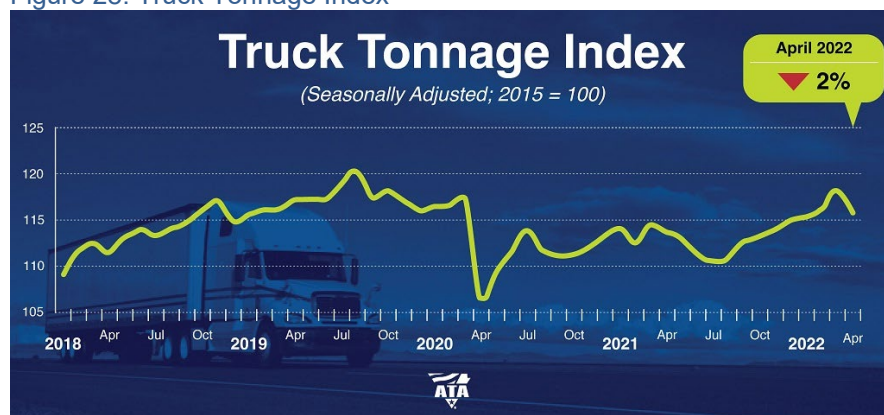
such as from Qantas. On Thursday, Qantas Group announced [\[LINK\]](#) they would be rebalancing capacity and raising fares in response to high jet fuel prices. Despite domestic travel continuing to perform well with strong demand across all categories, they stated that, *“The cuts to domestic flying levels for July and August are being deepened with capacity moving from 107 per cent of pre-COVID levels to 103 per cent”*. Our Supplemental Documents package includes the Qantas release.

Oil – April truck tonnage fell 2% MoM, up 1.8% YoY

The American Trucking Association released its seasonally adjusted Truck Tonnage Index for April on Tuesday [\[LINK\]](#). April observed a 2% decrease MoM from March, after increasing 2.4% last month. This decrease comes after 8 straight months of gains, and it is worth noting that the index fell by 4.6% from April to July 2021, so it has yet to return to levels observed in 2020. Chief Economist Bob Costello noted, *“After eight straight gains totaling 6.9%, for-hire tonnage finally slid back in April. Despite being the largest sequential drop since August 2020, the index was still above where it started in 2022 and a year earlier. It is important to note that ATA’s for-hire tonnage data is dominated by contract freight with minimal amounts of spot market loads. The spot market has softened more than for-hire contract freight, as the market transitions back to pre-pandemic shares of contract versus spot market. While I expect contract freight to outperform spot market freight, the rate of growth will be slower than in 2021. Most contract carriers are still struggling with maintaining enough capacity, both equipment and drivers.”* The index is up 1.8% YoY from April 2021, with a consecutive YoY gain. Trucking serves as a barometer of the U.S. economy, representing 72.5% of tonnage carried by all modes of domestic freight transportation, including manufactured and retail goods. Trucks hauled 10.23 billion tons of freight in 2020. Motor carriers collected \$732.3 billion, or 80.4% of total revenue earned by all transport modes.

Truck tonnage index -2% MoM in April

Figure 28: Truck Tonnage Index



Source: ATA

Oil & Natural Gas – Dalio “resource allocation is political and ideological” not economic

One of our favorite commentaries from the World Economic Forum was Ray Dalio (Founder, Co-Chief Investment Officer, and Member of the Bridgewater Board) on World Economic Forum panel *“An Economic Iron Curtain: Scenarios and Their Implications”* on May 25, 2022 [\[LINK\]](#). There were multiple good insights. (i) Resource allocation is no longer economic, it’s

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ideological and political. This isn't a surprise, rather it was a reminder of what we have seen in capital allocation to resources – it isn't about economics anymore. We are seeing this play out in the energy transition. And we are seeing this play out in oil and gas. We have seen huge ideological themes drive resource allocation that is not based on economics. Dalio sets the thesis for that. And we remind that ideology doesn't get changed quickly. It takes time and a lot of pain. After Covid hit, we said if Covid didn't at least throw a big delay push on clean energy, nothing would at least for the near term. Fortunately, Russia has come up to blame for the energy crisis. But what they are doing on fossil fuels is to try to patch it up for a year or two or three, while accelerating climate change items. And they can blame the short term need for oil and gas on Russia even though there was an European energy crisis in 2021. Dalio's comments reinforce this. And any true reality check moment on fossil fuels is still years away and will require more pain. Not just at the pump. It is also important to note ideological risk doesn't have to be in response a war. It's the creating a war ie. the war against fossil fuels. Or it can be creating a war against the wealthy. It's why we tweeted [\[LINK\]](#) *"Great @RayDalio insights ie. "the resource allocation system is no longer economic. The resource allocation is political & ideological""those ideologies become the dominant consideration ""the unimaginable is becoming increasingly probably". #Oil #NatGas look good for 2020s #OOTT."* (ii) Redefines geopolitical risk. Dalio's comments on how this ideological/political move is to forcing the world to take sides and that adds geopolitical risk. Dalio said *"So we see the world, if you read history and you see this happen over and over again. You see the world is now breaking up into sides. It's like there are allied powers and there are axis powers, and there are neutral powers. And those ideologies become the dominant consideration. So it's entirely possible, for example that we could see in China and so on that it's no longer desirable, or politically acceptable to do business in China. It may not be. Now you think about how intertwined the world economy is. 22% of American manufactured goods import come from China. So now just imagine the implications for inflation and inefficiencies. That's just mechanistically what's going on."* Our Supplementals Documents package includes the transcript we made of the Dalio comments.

Dalio's China risk seems justified based on Blinken's big China speech

We couldn't help think about Dalio's above China concern after seeing Blinken's major China speech [\[LINK\]](#) on Thursday on what China needs to do. We tweeted [\[LINK\]](#) *"we cannot rely on Beijing to change its trajectory. So we will shape the strategic environment around Beijing to advance our vision for an open, inclusive international system" @SecBlinken. does this not fit @RayDalio concerns 📌? #Oil #NatGas looks good for 2020s. #OOTT."*

Oil & Natural Gas – NOAA expecting above average hurricane season

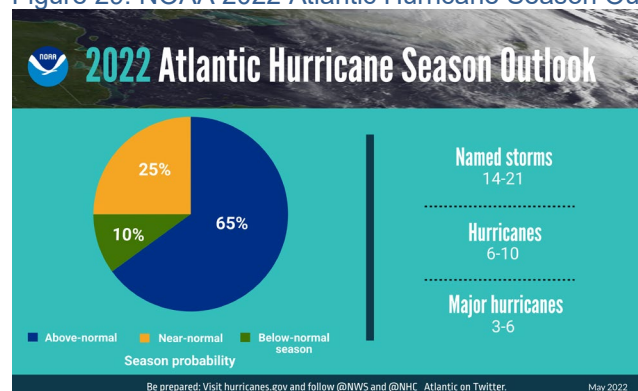
The nominal start to Atlantic hurricane season is June 1 and the forecasts have all been for above average hurricane activity. On Wednesday, the NOAA released its forecast for the 2022 hurricane season running June 1 – Nov 30 [\[LINK\]](#). NOAA is expecting a 65% chance of an above-normal hurricane season, 25% chance on near normal, and 10% chance of below normal. Forecasts for an above average hurricane season is a reminder to be prepared for supply interruptions in the Gulf Coast. The NOAA wrote *"For the 2022 hurricane season, NOAA is forecasting a likely range of 14 to 21 named storms (winds of 39 mph or higher), of which 6 to 10 could become hurricanes (winds of 74 mph or higher), including 3 to*

**NOAA expects 14
– 21 named
storms**

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6 major hurricanes (category 3, 4 or 5; with winds of 111 mph or higher)". The NOAA also reminded of correlation between active hurricane seasons and La Nina/Neutral conditions, the NOAA wrote *"The increased activity anticipated this hurricane season is attributed to several climate factors, including the ongoing La Niña that is likely to persist throughout the hurricane season, warmer-than-average sea surface temperatures in the Atlantic Ocean and Caribbean Sea, weaker tropical Atlantic trade winds and an enhanced west African monsoon"*. Our Supplemental Documents package includes the NOAA forecast.

Figure 29: NOAA 2022 Atlantic Hurricane Season Outlook



Source: NOAA

Energy Transition – Whitecap CEO Grant Fagerheim Saskatchewan Oilman of the Year

We have to give a shout out to Whitecap Resources CEO Grant Fagerheim for being inducted in the Saskatchewan Petroleum Industry Hall of Fame for being named Saskatchewan Oilman of the Year. Fagerheim has built one of the top Cdn oil and gas producers. They noted his 30+ year career in the energy sector. But I have had the pleasure of knowing Grant for about 40 years during my early oil patch years at Dome Petroleum. Grant graduated from U of C in 1983, but also worked some summers at Dome Petroleum while getting his degree. It is a well deserved recognition. Our Supplemental Documents package includes the report on his award. [\[LINK\]](#)

**Whitecap CEO
Grant Fagerheim**

Energy Transition – Siemens Joe Kaeser, profit pool of wind installation is negative

There were some pretty blunt comments from Siemens Chairman Joe Kaeser at the World Economic Forum on the lack of profits in the wind business. Siemens Gamesa is their wind installation arm and is generally #1 or #2 along with Vestas out of Denmark. Sooner or later, the lack of profitability has to flow thru to higher costs ie. the energy transition will be getting more expensive. We tweeted [\[LINK\]](#) "Straight talk on #Wind from @JoeKaeser "The issue currently on renewable and predominately in #Wind energy is that none of the big companies, Siemens Gamesa or our competitors are making any money. Great interview @flacqua. #EnergyTransition will be expensive. #OOTT #NatGas." We made a transcript of his comments on Bloomberg. Bloomberg's Francine Lacqua asks "When you talk about renewables, there are a lot of people here in Europe who say this will save the future. Not everything is working. You are having trouble with some of your wind turbines, what's the problem with wind". Kaeser "The issue currently on renewable and predominately in wind energy is that none of the big companies, Siemens Gamesa or our competitors are making

**Wind installations
lack of profit**

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any money. So it means the profit pool of that industry is negative. So if the profit pool is negative and this is so attractive, how come?" Lacqua "But why. Why is it so difficult, I know it's supply components, I know its delays" Kaeser "The industry got caught flat first of all on the cost inflation of the raw materials. That's only temporary, one, two years. Second topic is the industry has got ahead of itself in terms of forward pricing. It was 7 cent or 5 cent, people say well if you want to build this, you need 3 cent. And people were jumping into that trying to understand time will tell, they're really going to find some saving along the way. And they didn't. The fact of the matter was and actually through the inflation of the raw material prices, it went the other way."

Electricity – Siemens, grey hydrogen is very profitable, blue is cost competitive

Siemens is also in the green hydrogen space. In his Bloomberg interview, Chairman Joe Kaeser spoke on the profitability of grey and blue hydrogen, and then about making green hydrogen out of renewable. We tweeted [\[LINK\]](#) "'grey #Hydrogen, very profitable already', blue hydrogen 'competitive but complicated', 'green hydrogen, today if you want to make that out of electricity, i think that's a bad idea' says @JoeKaeser to @flacqua. Energy Transition will be expensive. #OOTT #NatGas." His comments were pretty clear. We made a transcript of the exchange with Bloomberg's Francine Lacqua. "Lacqua "there are huge question marks also about hydrogen, when will you make hydrogen profitable?" Kaeser "It depends on which one. You have the so called grey hydrogen, very profitable already, Linde, Praxair, Proxair, others are very profitable, [xxx?] hydrogen. Then there is the blue hydrogen which basically takes the CO2 extraction and puts it back in the ground. Competitive, but complicated because whenever people want to put that into the ground through a well, what will happen, it comes back up. so environmentally complicated. Green hydrogen, today if you want to make that out of electricity, I think that's a bad idea. You need to first serve society with electricity. Once you are done with that, we should convert electricity into green hydrogen".

Grey vs blue vs green hydrogen

Siemens comment remind that hydrogen is an energy carrier, not a source

Siemens Joe Kaeser comments on green hydrogen reminded us to tweet [\[LINK\]](#) "Important to remember #hydrogen is an energy carrier, it is not an energy source like #NatGas #Coal #Wind, etc. @JoeKaeser "green hydrogen, today if you want to make that out of electricity, i think that's a bad idea'. #OOTT #EnergyTransition." Here is what we wrote in our Jan 23, 2022 Energy Tidbits. "This follows the new Jan 20 update from the EIA "Hydrogen explained". Hydrogen is considered one of the must be a significant contributor to any and all plans to get to Net Zero. Our view is unchanged, we understand why the Net Zero side pushes it for items like heavy industry, but it seems to get overlooked that hydrogen is not an energy sources like natural gas or solar. Rather it is an energy carrier. The EIA stuck to the basics on hydrogen and didn't politicize their message in their Jan 20 update on hydrogen. The EIA explained this concept clearly. "Hydrogen is an energy carrier Energy carriers allow the transport of energy in a usable form from one place to another. Hydrogen, like electricity, is an energy carrier that must be produced from another substance. Hydrogen can be produced—separated—from a variety of sources including water, fossil fuels, or biomass and used as a source of energy or fuel. Hydrogen has the highest energy content of any common fuel by weight (about three times more than gasoline), but it has the lowest energy content by volume (about four times less than

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gasoline). It takes more energy to produce hydrogen (by separating it from other elements in molecules) than hydrogen provides when it is converted to useful energy. However, hydrogen is useful as an energy source/fuel because it has a high energy content per unit of weight, which is why it is used as a rocket fuel and in fuel cells to produce electricity on some spacecraft. Hydrogen is not widely used as a fuel now, but it has the potential for greater use in the future".

Energy Transition – EIA reminds hydrogen is an energy carrier, not an energy source

On Friday, we tweeted [\[LINK\]](#) *"takes more energy to produce #hydrogen (by separating it from other elements in molecules) than hydrogen provides when it is converted to useful energy" "an energy carrier that must be produced from another substance". nice to see @EIAgov give facts not fiction. #OOTT #NatGas."* This follows the new Jan 20 update from the EIA *"Hydrogen explained"*. Hydrogen is considered one of the must be a significant contributor to any and all plans to get to Net Zero. Our view is unchanged, we understand why the Net Zero side pushes it for items like heavy industry, but it seems to get overlooked that hydrogen is not an energy sources like natural gas or solar. Rather it is an energy carrier. The EIA stuck to the basics on hydrogen and didn't politicize their message in their Jan 20 update on hydrogen. The EIA explained this concept clearly. *"Hydrogen is an energy carrier Energy carriers allow the transport of energy in a usable form from one place to another. Hydrogen, like electricity, is an energy carrier that must be produced from another substance. Hydrogen can be produced—separated—from a variety of sources including water, fossil fuels, or biomass and used as a source of energy or fuel. Hydrogen has the highest energy content of any common fuel by weight (about three times more than gasoline), but it has the lowest energy content by volume (about four times less than gasoline). It takes more energy to produce hydrogen (by separating it from other elements in molecules) than hydrogen provides when it is converted to useful energy. However, hydrogen is useful as an energy source/fuel because it has a high energy content per unit of weight, which is why it is used as a rocket fuel and in fuel cells to produce electricity on some spacecraft. Hydrogen is not widely used as a fuel now, but it has the potential for greater use in the future"*. Our Supplemental Documents package includes the EIA Jan 20 update *Hydrogen explained*. [\[LINK\]](#)

EIA reminds hydrogen is not an energy source

Energy Transition – Vanguard, make sure climate crisis doesn't worsen pension crisis

Vanguard is reportedly the 2nd largest asset manager in the world and is the latest to say they will keep investing in oil and gas. They are like others in saying they are doing so to maximize returns, but Vanguard reminded of one of the big financial issues for the future – do pensions have the financial strength to deliver the pension liabilities. On Friday, we tweeted [\[LINK\]](#) *"Latest major investor to keep investing in #Oil #NatGas. #Vanguard "duty is to maximize long term total returns" & " Thx @chrisflood_FTfm #OOTT."* There were very straightforward comments from Vanguard's CEO Tim Buckley as to why they are going to keep investing in oil and gas ie. new investments. On Wednesday, the FT report *"Vanguard refuses to end new fossil fuel investments"* wrote *"The world's second-largest asset manager Vanguard has refused to stop new investments in fossil fuel projects and end its support for coal, oil and gas production."* *"Vanguard does not seek to direct company strategy. We engage with companies on climate change, ask them to set goals and to report how they are mitigating climate risks. That transparency will ensure that climate risks are priced appropriately by the market,"* Buckley said in an interview with the Financial Times.

Vanguard to keep investing in fossil fuels

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Companies that have a large carbon footprint now could play a critical role in the transition to a low-carbon future, he added. "Our duty is to maximise long-term total returns for clients. Climate change is a material risk but it is only one factor in an investment decision. There is already a pensions crisis and we have to make sure that climate concerns do not make that even worse," said Buckley." Our Supplemental Documents package includes the FT report.

BlackRock sees attractive returns from oil and gas

Vanguard is not alone in looking at fossil fuels for the returns. Here is what we wrote about BlackRock in our May 22, 2022 Energy Tidbits. *"No one should have been surprised by BlackRock Investment Stewardship (BIS) "2022 climate-related shareholder proposals more prescriptive than 2021" given the changing BlackRock views over the past several months with respect to investing under the energy transition. BlackRock's disclosure was much more specific than its Feb "how to invest in the Net Zero Transition". These were positive to oil and gas as BlackRock is coming out specifically saying they will be investing in "traditional" energy for attractive returns. And we would expect others to follow BlackRock's lead. We tweeted [\[LINK\]](#) "1/2. Bullish for #Oil #NatGas stocks. #BlackRock is specific on investing in traditional energy stocks." "This set of dynamics will - at least in the short- and medium-term - drive a need for companies that invest in both traditional and renewable sources of energy and ... OOTT" and [\[LINK\]](#) "2/2 "... we believe the companies that do that effectively will produce attractive returns for our clients." An even clearer message than the Feb "how to invest in the #NetZero transition". More capital for #Oil #NatGas stocks & other institutional investors will follow #OOTT." The new BIS views are pretty clear about "traditional" energy, which is oil and gas and perhaps most importantly, they expect these companies "will produce attractive returns for our clients". The BIS wrote "Importantly, in the context of voting on shareholder proposals regarding climate related risk, companies face particular challenges in the near term, given under investment in both traditional and renewable energy, exacerbated by current geo political tensions. In recent research, BlackRock noted that reducing reliance on Russian energy in the wake of the invasion of Ukraine will impact the net zero transition that is already underway. Net exporters of energy are likely to be required to increase production, while net importers are expected to accelerate efforts to increase the proportion of renewables in their energy mix. This set of dynamics will at least in the short and medium term drive a need for companies that invest in both traditional and renewable sources of energy and we believe the companies that do that effectively will produce attractive returns for our clients." Our Supplemental Documents package includes the BlackRock BIS disclosure."*

Energy Transition – Germany can't solve energy crisis by focusing on climate crisis

Interesting to see how a shift in Germany's position that fixing the climate crisis won't fix the energy crisis. Germany's Vice Chancellor and economy minister, Robert Habeck is also the leader of Germany's Green Party. The pro-Climate change side has been working on a key given – clean energy means energy security, which, in theory, should mean being able to provide reliable, available and affordable power/energy. They never looked at energy security as a problem to fix. The only problem was the climate crisis and the assumption was

Germany's four world crisis

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that taking care of the climate crisis would take care of energy security. Our concern is that the climate change side keeps saying the energy crisis is about Russia and conveniently forget that there was an European energy crisis in 2021 before Russia invaded Ukraine. And this will allow them to kick the can down the road and not allow them to admit that their climate change process automatically means energy security over the 2020s. But Habeck's comments on Monday at the World Economic Forum point to Germany opening their mind on this assumption. We made a transcript of his comments. [\[LINK\]](#) At 6:00 min mark, Habeck said "... caring about a new security of energy supply is not a contradiction to the greater goal of getting independent of fossil fuels at all. So we have a number of legislation acts now in the parliament that should carefully increase installation of renewables all over the place in Germany. And this is the link to the greater picture, I feel and I would like to share with you. I think we have at least four problems or crisis right now that are all interwoven. We have high inflation some of the countries, in Europe, the US and a lot of other countries. We have an energy crisis, you must call it this way. We have food poverty. And we have the climate crisis. We can't solve the problems if we are only concentrating on only one of crisis. But if none of the problems are solved, I'm really afraid that we are running into a global recession with a tremendous effect not only about, on climate protection, on climate action but of global stability at all. Imagine, imagine that part of the world is starving next year, it's not only about hunger, which is terrible enough, but this is about global stability."

Energy Transition – Biden seems to say energy transition means high gasoline prices

We should say that Biden's comments were not prepared remarks, rather they were in a Q&A and he isn't the best in a Q&A. On Tuesday, we tweeted [\[LINK\]](#) "High gasoline price here to stay? @POTUS "when it comes to the gas prices, we're going through an incredible transition that is taking place that, God willing, when it's over, we'll be stronger and the world will be stronger and less reliant on fossil fuels when this is over' #OOTT." We have trouble believing he wanted to leave the views that high gasoline prices are here to stay during the energy transition. But, in his press conference with Japan PM Kishida, Biden was asked about the "enormously high gas prices" and replied "Our GDP is going to grow faster than China's for the first time in 40 years. Now, does that mean we don't have problems? We do. We have problems that the rest of the world has, but less consequential than the rest of the world has because of our internal growth and strength. Here's the situation. And when it comes to the gas prices, we're going through an incredible transition that is taking place that, God willing, when it's over, we'll be stronger and the world will be stronger and less reliant on fossil fuels when this is over." The other comment is that we would have thought this could have been an opportunity for him to say what his staff say – he is laser focused on lowering gasoline prices and is looking all available tools.

Biden on enormously high gas prices

Energy Transition – Biden proposes 1st ever California offshore wind lease sale

On Friday, the US Dept of Interior announced [\[LINK\]](#) proposed wind lease sales in two regions on the outer continental shelf offshore California. The proposed sale is part of the leasing path announced last year to meet the Biden-Harris administration's goal to deploy 30 gigawatts of offshore wind energy by 2030. It includes three proposed lease areas in the Morro Bay Wind Energy Area off central California and two proposed lease areas in the Humboldt Wind Energy Area off northern California, totaling approximately 373,268 acres that have the potential to unlock over 4.5 gigawatts of offshore wind energy and power 1.5 million homes. To date, the Bureau of Ocean Energy has held 10 competitive lease sales

Biden proposes offshore wind lease sale

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and has issued 25 active commercial offshore wind leases in the Atlantic Ocean from Massachusetts to North Carolina. The California lease sale will be the first in the Pacific region.

Capital Markets – IFIC: Mutual funds and ETF assets -4.4% in April

On Tuesday, the IFIC (Investment Funds Institute of Canada) reported [\[LINK\]](#) mutual funds and ETF sales for April. IFIC does not provide any commentary on the numbers but there should be no surprise that the assets are down. Market price decreases accounted for majority of the overall decrease in net assets as Russia invaded Ukraine and China continued COVID lockdowns. For April, the IFIC reported “*Mutual fund assets totalled \$1.914 trillion at the end of April 2022. Assets decreased by \$87.5 billion or 4.4% compared to March 2022. Mutual funds recorded net redemptions of \$4.9 billion in April 2022. ETF assets totalled \$310.0 billion at the end of April 2022. Assets decreased by \$14.7 billion or 4.5% compared to March 2022. ETFs recorded net sales of \$1.0 billion in April 2022.*” Our Supplemental Documents package includes the IFIC release.

Mutual Fund & ETF assets decrease MoM

Twitter – Look for our first comments on energy items on Twitter every day

For new followers to our Twitter, we are trying to tweet on breaking news or early views on energy items, most of which are followed up in detail in the Energy Tidbits memo or in separate blogs. Our Twitter handle is @Energy_Tidbits and can be followed at [\[LINK\]](#). We wanted to use Energy Tidbits in our name since I have been writing Energy Tidbits memos for over 20 consecutive years. Please take a look thru our tweets and you can see we aren't just retweeting other tweets. Rather we are trying to use Twitter for early views on energy items. Our Supplemental Documents package includes our tweets this week.

@Energy_Tidbits on Twitter

LinkedIn – Look for quick energy items from me on LinkedIn

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

Look for energy items on LinkedIn

Misc Facts and Figures.

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

It looks like we will be rooting for the Oilers to carry the Maple Leaf

We don't think many Calgarians will be going out to buy an Edmonton Oiler jersey, but we have to believe most of us will be watching and rooting for the Oilers to beat the Colorado Avalanche to be Western Conference champions and try to bring the Stanley Cup back to Canada. At a minimum, people will want to keep watching Connor McDavid as he plays to superstar levels not seen in many years. And there is no question his performance drives the others to higher levels because that's what great players do – they help other players play great.

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Great line from former Finland PM on why not worried for WWII

We tried to watch as many World Economic Forum interviews/panels as possible. There was a great line former Finland Prime Minister Alexander Stubb on Bloomberg Surveillance at World Economic Forum 2022 in Davos. We created a transcript of his short exchange. Bloomberg's Tom Keene asks *"as a leader of your nation, or Scandinavia states, are you worried about a World War III?"* Stubb *"No, we're not"*. Keene *"Why?"* Stubb *"Well, I think we human beings have a tendency to do three things, right? We over-rationalize the past, we over-dramatize the present, and we underestimate the future."* One other aside that hockey followers probably know is that Stubb's dad is well known, in hockey circles, Goran Stubb, who is NHL's Director of European Scouting.

Manchester City FC manager Pep Guardiola quotes

Anyone English Premier League fan had to think no way Manchester City would be the champions when they went down 0-2 at the 69 min mark (only 21 minutes to go) but they scored 3 goals in 5 minutes to win 3-2 and win the title. Manager Pep Guardiola has now won 4 titles in the past 5 years, which is amazing in any pro sport. Here are some of his quotes [\[LINK\]](#) that we believe, like other coaches, provide lessons or guidance to business. *"In football, the worst things are excuses. Excuses mean you cannot grow or move forward."* *"Creating something new is the difficult part. To make it and build it and get everyone to follow? Amazing."* *"All the managers in the world, it doesn't matter how good you are, if your players don't understand what you are looking for or what you want, it makes no sense."* *"I am here just to learn, to improve, to help my team improve."* *"I don't like it when a player says, 'I like freedom; I want to play for myself.' Because the player has to understand he is part of a team with 10 other players. If everyone wants to be a jazz musician, it will be chaos. They will not be a team, and nothing will be possible."* *"You know what happens in all the big companies and business in the world. If something doesn't work, you have to find a solution."*

Golf match play is very unpredictable as evidenced by LPGA Bank of Hope

It's probably an appropriate title for a golf tournament this week with the LPGA Bank of Hope Match-Play in Las Vegas because no one would have bet that the top ranked golfer in today's semi-finals is only #27. It reminds that match play golf is unpredictable. The semi-finals are this morning and finals this afternoon. The semi-final matches feature Ayaka Furue (Japan) ranked #27 vs Lilia Vu (US) ranked #123, and Eun-Hee Ji (Korea) ranked #83 vs Andrea Lee (US) ranked #108.