

Energy Tidbits

Vitol's Muller "Smart Money is of the View that the Saudi Current Sustainable Production Limit is Somewhere 11 Point Something"

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Table 1. Summary of natural gas supply and disposition in the United States, 2017-2022 (billion cubic feet)

	0	B. G. and Landson of	NCDI	D C	Supplemental	81-4	Net		
	Gross	Marketed	NGPL	Dry Gas	Gaseous	Net	Storage	Balancing	
Year and Month	Withdrawals	Production Pro	oductiona	Production ^b	Fuels ^c	Imports	Withdrawals ^d	ltem ^e	Consumption
2017 Total	33,292	29,238	1,897	27,341	66	-121		-400	27,140
2018 Total	37,326	33,009	2,235	30,774	69	-719		-300	30,139
2019 Total	40,780	36,447	2,548	33,899	61	-1,916	-503	-408	31,132
2020									
January	3,597	3,194	240	2,954	6	-248	581	8	3,300
February	3,363	2,985	224	2,761	5	-216		-53	3,041
March	3,582	3,196	240	2,956	6	-284	53	-24	2,707
April	3,374	3,012	226	2,786	5	-231	-311	-8	2,241
May	3,285	2,927	220	2,707	5	-209	-454	18	2,067
June	3,217	2,873	216	2,657	5	-151	-363	-18	2,131
July	3,374	3,021	227	2,795	5	-139	-165	-7	2,489
August	3,350	3,012	226	2,786	5	-148		-9	2,401
September	3,265	2,918	219	2,699	5	-221	-329	18	2,172
October	3,364	2,992	225	2,767	5 5	-282	-96	-74	2,320
November	3,352	2,985	224	2,761	5	-316	-6	-8	2,435
December	3,490	3,089	232	2,857	5	-287	597	-5	3,168
Total	40,614	36,202	2,717	33,485	63	-2,732	-180	-164	30,472
2021									
January	€3,506	€3,110	233	€2.877	5	-279	707	-18	3,292
February	£2,924	€2,586	172	€2,415	5 5	-152	781	-7	3,042
March	£3,482	£3,092	231	€2,861	5	-357	59	47	2,616
April	£3,409	€3,036	239	€2,797	5	-356	-174	R-31	R2,241
May	£3,510	£3,130	247	£2,883	5	-373	-416	-6	2,094
June	€3,391	€3,036	239	€2,797	4	-331	-248	R-3	R2,217
July	€3,491	€3,151	247	€2,904	5	-338	-170	R-15	R2,386
August	€3,531	€3,173	251	€2,922	5	-343	-159	R-15	R2,410
September	£3,413	€3,050	241	€2,809	4	-315	-391	R4	R2,111
October	€3,595	€3,220	257	€2,963	5	-317	-361	-52	2,238
November	€3,552	€3,161	251	€2,910	6	-315	132	-73	2,660
December	€3,679	€3,266	258	€3,008	5	-368	323	12	2,980
Total	€41,483	 ₹37,011	2,866	€34,146	59	-3,845	83	R-157	R30,287
2022									
January	RE3,591	RE3,184	245	RE2.939	6	-314	994	R-42	R3,583
February	RE3,225	RE2,855	223	RE2,632	5	-286		30	3,040
March	€3,615	€3,210	267	£2,944	5 6	-377	163	28	2,764
2022 3-Month YTD	€10,431	€9,249	734	€8,51 5	17	-977	1,816	17	9,387
2021 3-Month YTD		€8,789	636	€8,153	16	-788		22	8,950
2020 3-Month YTD		9,375	704	8,671	16	-748		-70	9,049

^a Monthly natural gas plant liquid (NGPL) production, gaseous equivalent, is derived from sample data reported by gas processing plants on Form EIA-816, Monthly Natural Gas Liquids Report, and Form EIA-64A, Annual Report of the Origin of Natural Gas Liquids Production.

Notes: Data for 2017 through 2019 are final. All other data are preliminary unless otherwise indicated. Geographic coverage is the 50 states and the District of Columbia. Totals may not equal sum of components because of independent rounding.

Sources: 2017-2020: U.S. Energy Information Administration (EIA), Natural Gas Annual 2020. January 2021 through current month: Form EIA-914, Monthly Crude Oil and Lease Condensate, and Natural Gas Production Report; Form EIA-857, Monthly Report of Natural Gas Purchases and Deliveries to Consumers; Form EIA-191, Monthly Underground Gas Storage Report; EIA computations and estimates; and Office of Fossil Energy and Carbon Management, Natural Gas Imports and Exports. See Table 7 for detailed source notes for Marketed Production. See Appendix A, Notes 3 and 4, for discussion of computation and estimation procedures and revision policies.

^b Equal to marketed production minus NGPL production.

^c Supplemental gaseous fuels data are collected only on an annual basis except for the Dakota Gasification Co. coal gasification facility which provides data each month. The ratio of annual supplemental fuels (excluding Dakota Gasification Co.) to the sum of dry gas production, net imports, and net withdrawals from storage is calculated. This ratio is applied to the monthly sum of these three elements. The Dakota Gasification Co. monthly value is added to the result to produce the monthly supplemental fuels estimate.

d Monthly and annual data for 2017 through 2020 include underground storage and liquefied natural gas storage. Data for January 2021 forward include underground storage only. See Appendix A, Explanatory Note 5, for discussion of computation procedures.

e Represents quantities lost and imbalances in data due to differences among data sources. Net imports and balancing item excludes net intransit deliveries. These net intransit deliveries were (in billion cubic feet): -24 for 2020; -8 for 2019; -12 for 2018; and 14 for 2017. See Appendix A, Explanatory Note 7, for full discussion.

 $^{^{\}rm f} \ {\sf Consists} \ {\sf of} \ {\sf pipeline} \ {\sf fuel} \ {\sf use}, {\sf lease} \ {\sf and} \ {\sf plant} \ {\sf fuel} \ {\sf use}, {\sf vehicle} \ {\sf fuel}, {\sf and} \ {\sf deliveries} \ {\sf to} \ {\sf consuming} \ {\sf sectors} \ {\sf as} \ {\sf shown} \ {\sf in} \ {\sf Table} \ {\sf 2.}$

R Revised data.

^E Estimated data.

 $^{^{\}rm RE}$ Revised estimated data.

Table 5. U.S. natural gas exports, 2020-2022

	2022	2021	2020			2022	2021
	3-Month YTD	3-Month YTD	3-Month YTD	March	February	January	Tota
Exports							
Volume (million cubic feet) Pipeline							
Canada	259,910	254,426	263,164	104,177	74,313	81,420	937,124
Mexico	498,646	493,792	478,497	169,271	154,484	174,892	2,154,457
Total Pipeline Exports	758,556	748,218	741,661	273,448	228,797	256,311	3,091,580
LNG							
Exports							
By Vessel	<u>.</u>	<u>.</u>	<u>.</u>			<u>.</u>	
Antigua and Barbuda	3	0	0	2	0	2	8
Argentina	0	2,238	0	0	0	0	83,449
Bahamas	109	96	47	43	31	34	486
Bangladesh	9,317	6,713	3,640 87	3,421	5,896	0 28	37,734
Barbados	92	49		34 17 742	31 7.601		297 5,584
Belgium	39,221	3,484	20,356	17,743	7,691	13,786	
Brazil Chile	30,217 6,376	56,227	25,762	2,236	10,660 0	17,322	307,714
China	10,884	37,629 70,832	20,034 17,699	3,214 7,527	3,357	3,162 0	121,881 449,667
Colombia	486	70,832	1,528	7,527	3,357	486	2,247
Croatia	18,311	7,367	1,528	3,358	5,870	9,084	36,133
Dominican Republic	13,177	18,161	2,872	6,530	5,870 0	9,084 6,647	53,095
Egypt	13,177	10,101	2,872	0,530	0	0,047	33,03.
France	154,145	52.116	50,574	64,415	39,646	50,084	170,780
Greece	14,012	7,405	20,168	4,116	8,094	1,802	39,708
Haiti	46	33	27	10	16	20	137
India	24,513	51,524	20,554	10,438	7,210	6,866	196,218
Indonesia	717	0	0	0	717	0,000	3,269
Israel	0	2,826	3,197	0	0	0	8,906
Italy	27,754	10,739	32,818	7,088	13,629	7,037	34,210
Jamaica	289	8,530	3,784	92	111	86	25,276
Japan	49,438	110,276	75,180	17,697	10,214	21,527	354,948
Jordan	0	0	0	0	0	0	00.,5.0
Kuwait	5,277	3,821	0	0	5,277	0	34,476
Lithuania	12,349	10,079	0	5,700	3,131	3,518	30,919
Malaysia	0	0	0	0	0	0	(
Malta	2,345	0	2,648	0	2,345	0	5,427
Mexico	0	13,354	16,968	0	0	0	15,200
Netherlands	72,791	49,930	34,552	24,922	31,591	16,279	174,339
Nicaragua	0	0	0	0	0	0	1
Pakistan	0	7,103	6,890	0	0	0	45,818
Panama	6,324	3,795	4,314	0	3,069	3,255	8,436
Poland	15,002	10,606	13,543	3,831	7,475	3,695	56,320
Portugal	17,299	3,360	6,187	10,728	3,703	2,868	65,865
Singapore	6,725	6,991	10,610	6,725	0	0	24,555
South Korea	68,602	106,233	83,486	19,289	27,489	21,824	453,483
Spain	147,961	25,011	68,309	59,224	39,359	49,379	215,062
Taiwan	24,487	23,769	23,419	12,161	6,115	6,211	99,350
Thailand	8,370	0	7,218	0	4,880	3,490	14,548
Turkey	105,407	50,930	63,429	16,629	43,697	45,081	188,849
United Arab Emirates	0	0	0	0	0	0	(
United Kingdom	142,161	73,218	79,514	56,799	25,301	60,060	195,046
By Truck	<u>.</u>	<u>.</u>	<u>.</u>				
Canada	17	0	2	0	4	13	128
Mexico	449	165	332	144	157	148	1,250
Re-Exports							
By Vessel		0					
Argentina	0	0	0	0	0	0	
Brazil Japan	0	0 0	0 305	0	0	0 0	(
	0	0		0	0	0	C
South Korea	0	0	305 0	0	0	0	(
United Kingdom Total LNG Exports	.				316,766		
CNG	1,034,672	834,612	720,360	364,116	310,700	353,791	3,560,818
Canada	*	100	105	*	0	0	211
Total CNG Exports	*	100 1 00	105 105	*		0	211
Total Exports	1,793,229	1,582,930	1,462,126	637,564	545,563	610,102	6,652,609
. Otta: Exports	1,, 33,223	1,302,330	1,702,120	037,304	3-3,303	010,102	0,032,00

Table 5. U.S. natural gas exports, 2020-2022

2021 December November October September August July June **Exports** Volume (million cubic feet) Pipeline 108,568 85,136 62,464 72,023 71,586 68,264 69,528 Mexico 166,956 165,449 184,472 178,746 193,710 197,623 198,242 **Total Pipeline Exports** 275,524 250,585 246,936 250,769 265,296 265,887 267,770 LNG Exports By Vessel Antigua and Barbuda 22,798 2,077 1,950 14,363 19,312 Argentina 0 0 Bahamas 36 34 36 43 46 48 Bangladesh 0 0 0 3,276 7,085 0 3.493 Barbados 34 27 25 33 27 31 22 Belgium 0 0 0 0 0 39,637 Brazil 24,246 10,715 40,769 38,282 34,204 32,293 2,956 Chile 2,938 6,364 7,929 16,262 19,913 China 17,050 50,228 42,202 48,584 51,662 42,222 42,319 Colombia 0 0 436 919 0 3,299 3,117 9,416 2,923 Croatia 2,980 Dominican Republic 5,969 2,780 5,619 0 5,901 1,806 4,670 0 0 Egypt 33,892 10,021 9,333 7,111 3,683 France 6,578 0 6,651 Greece 5,305 7,629 1,515 799 3,607 0 Haiti 17 10 18 14,807 3,203 10,548 23,941 20,592 13,090 16,503 India Indonesia 1,218 456 477 1,118 0 0 Israel 0 0 0 2,855 0 3,401 6,826 3,425 Italy 0 0 0 2,931 Jamaica 113 715 1,858 2,907 2,927 Japan 24,297 33,947 37,666 10,290 19,979 24,895 39,783 Jordan 0 0 3,298 7,126 6,193 10,333 Kuwait 0 0 n Lithuania 0 0 3,282 1,677 6,469 3,285 Malaysia n 0 0 0 0 2,498 Malta 0 0 1.088 758 Mexico 0 0 0 Netherlands 23,354 8,829 10,424 7,347 10,597 3,030 17,157 Nicaragua 0 0 0 0 2,490 Pakistan 0 3,138 9,642 3,319 13,428 3,376 Panama 0 911 1,390 0 7,068 7 159 3.270 6,619 10,635 Poland 10,459 6,382 3,696 Portugal 9,630 5,380 3,296 5,538 3,728 3.449 Singapore 0 0 55,918 33,836 38,201 31,375 50,101 39,314 South Korea 30,787 Spain 32,579 22.821 35,638 31.274 23,068 8.630 7.833 Taiwan 12,034 3,404 7,123 5,789 6,728 20,653 3,097 Thailand 3,707 0 0 38,420 47,330 19,385 5,591 Turkey 24,176 0 0 United Arab Emirates 0 0 **United Kingdom** 60,315 30,648 3,302 3,099 0 0 0 By Truck Canada 20 18 16 182 150 105 160 147 97 148 Mexico Re-Exports By Vessel 0 0 0 0 0 0 0 Argentina 0 0 0 0 0 0 Brazil 0 0 0 0 0 0 0 0 Japan South Korea 0 0 0 0 n 0 United Kingdom 0 0 298,119 300,143 345,363 306,397 284,813 298,262 271,368 Total LNG Exports CNG Canada 0 14 16 **Total CNG Exports** 0 27 0 14 16 620,886 556,982 545,055 539,165 535,583 563,572 566,046 **Total Exports**

Table 5. U.S. natural gas exports, 2020-2022

					2021		2020
	May	April	March	February	January	Total	Decembe
Exports							
Volume (million cubic feet)							
Pipeline							
Canada	70,561	74,567	91,301	78,198	84,927	902,449	84,307
Mexico	192,549	182,918	183,051	137,381	173,360	1,990,809	164,577
Total Pipeline Exports	263,110	257,485	274,352	215,579	258,287	2,893,258	248,884
LNG	200,110	237,403	274,002	213,373	250,207	2,033,230	2-10,00
Exports							
By Vessel							
Antigua and Barbuda	·····	n		0	n	Λ	0
Argentina	16,226	4,485	2,238	0	0	15,068	C
Bahamas	45	46	39	29	28	257	36
Bangladesh	6,948	10,219	3,566	0	3,148	10,660	0
Barbados	19	30	3,366	19	3,146	241	25
Belgium	2,100	0	3,484	0	0	31,946	20.02
Brazil	19,726	11,615	21,977	13,118	21,132	111,826	29,927
Chile	17,598	10,293	21,320	6,524	9,784	80,615	9,793
China	37,731	46,837	28,476	3,415	38,940	214,401	45,525
Colombia	0	892	0	0	0	4,626	0
Croatia	3,364	3,666	7,367	0	0	3,275	3,275
Dominican Republic	5,283	2,905	5,577	5,689	6,895	26,050	5,000
Egypt	0	0	0	0	0	0	Ó
France	11,926	36,120	33,678	14,851	3,587	90,237	3,752
Greece	6,796	0	6,805	0	600	48,403	3,382
Haiti	12	3	10	11	12	118	17
India	28,259	13,752	17,381	13,776	20,367	124,402	10,241
Indonesia	28,233	13,732	0	15,770	20,307	0	10,241
Israel	0	3,225	2,826	0	0	15,834	
	2,923			0	0		
Italy		6,896	10,739	-	-	68,453	.
Jamaica	2,925	2,370	2,458	2,365	3,708	17,052	2,374
Japan	25,058	28,756	27,673	18,271	64,331	287,672	54,004
Jordan	0	0	0	0	0	6,872	0
Kuwait	0	3,705	3,821	0	0	17,293	C
Lithuania	3,049	3,078	3,228	6,851	0	28,879	6,291
Malaysia	0	0	0	0	0	0	0
Malta	0	2,928	0	0	0	2,648	0
Mexico	0	0	0	13,354	0	34,408	C
Netherlands	26,611	17,060	24,204	22,777	2,949	85,573	3,316
Nicaragua	0	0	0	0	0	0	0
Pakistan	0	3,323	3,421	0	3,682	36,934	C
Panama	2,341	0	3,279	0	516	12,764	271
Poland	3,581	7,382	3,507	7,099	0	36,900	7,033
Portugal	10,765	7,352 7,358	0	3,360	0	36,922	3,711
				3,300 n	-	30,344 20 241	3,711
Singapore	3,089	7,297	3,303	10.004	3,688	28,341	.
South Korea	46,033	21,683	32,203	18,094	55,936	316,227	39,617
Spain	5,234	22,974	13,900	3,733	7,377	199,966	13,583
Taiwan	10,157	6,594	13,450	0	10,319	64,363	12,470
Thailand	3,453	7,388	0	0	0	32,622	0
Turkey	3,017	0	3,619	20,652	26,659	123,957	20,188
United Arab Emirates	0	0	0	0	0	10,110	0
United Kingdom	10,586	13,877	17,440	34,343	21,436	160,199	30,378
By Truck							
Canada	18	15	0	0	0	10	8
Mexico	48	48	19	63	83	822	46
Re-Exports	······································	-					
By Vessel							
Argentina	0	0	0	0	0	2,164	C
Brazil	0	0	0	0	0	82	0
Japan	0	0	0	0	0	387	0
	-			-			
South Korea	0	0	0	0	0	387	0
United Kingdom	0	0	0	0	0	0	0
Total LNG Exports	314,922	306,818	321,023	208,394	305,196	2,389,963	304,263
CNG							
Canada	25	29	36	32	32	386	29
Total CNG Exports	25	29	36	32	32	386	29
	578,056	564,333				5,283,607	

Table 5. U.S. natural gas exports, 2020-2022

2020 November October September August July June May **Exports** Volume (million cubic feet) Pipeline 81,358 72,833 62,211 60,810 71,778 66,516 67,752 Mexico 166,135 185,799 182,068 185,867 181,152 162,927 145,242 **Total Pipeline Exports** 247,493 258,632 244,279 246,677 252,930 229,442 212,994 LNG Exports By Vessel Antigua and Barbuda 0 2,229 2,249 2,218 8,372 Argentina 0 0 0 Bahamas 31 25 20 21 15 18 20 Bangladesh 0 0 0 0 3,614 0 3,406 Barbados 15 17 14 14 15 20 20 Belgium 3,633 3,285 0 0 0 0 1,348 Brazil 30,191 22,427 0 3,520 0 11,068 Chile 3,252 6,836 3,277 7,428 1,515 3,313 China 45,083 35,115 11,245 13,699 10,358 0 14,535 Colombia 2,548 550 0 0 Croatia 0 0 0 0 Dominican Republic 5,106 5,909 0 2,772 0 0 2,554 0 0 0 0 Egypt 3,390 9,546 France 6,639 0 0 0 7,027 6,544 1,076 Greece 3,543 0 0 3,430 Haiti 11 11 10 10,299 17,762 10,514 10,319 7,404 10,100 10,534 India Indonesia 0 0 0 3,317 3,277 3,001 3,041 Israel 0 3,083 6,452 Italy 0 0 6,734 3,232 12,998 Jamaica 2,514 2,610 13,729 Japan 32,967 31,554 6,855 22,541 10,618 21,836 Jordan 3,578 3,294 3,603 6,886 Kuwait Λ 3.508 0 n 0 Lithuania 3,621 6,191 3,308 0 3,049 3,473 Malaysia 0 n 0 0 Malta n 0 0 3.056 7.398 3.285 Mexico 3,701 O 0 Netherlands 6,746 6,870 6,826 6,684 3,603 6,671 Nicaragua 0 0 0 0 0 0 10,009 9,853 3,436 **Pakistan** 3,412 n 0 3,070 Panama 1,448 433 3,228 0 0 3,157 3,385 6,258 Poland n 5,830 3,564 3,416 6,853 Portugal 0 0 2,967 7,658 3,690 0 0 Singapore 20,921 32,126 13,814 28,171 South Korea 49,103 14,239 10,492 Spain 9,907 14,118 15.206 3,222 13,679 9.640 29.360 6,216 Taiwan 3,636 9,007 0 2,953 6,662 3,254 3,705 Thailand 0 0 7,397 3,611 Turkey 12,817 n 3,222 0 6,661 United Arab Emirates 3,359 3.277 3,474 **United Kingdom** 26,544 17,191 3,664 2,908 0 0 0 By Truck 0 0 Canada 0 0 0 52 78 72 68 73 61 18 Mexico Re-Exports By Vessel 0 0 0 2,164 0 0 0 Argentina 0 Brazil 0 82 0 0 0 0 82 0 0 0 0 0 0 Japan South Korea 0 0 0 82 0 0 0 United Kingdom 0 0 0 222,963 109,002 280,682 151,128 112,462 96,200 182,438 Total LNG Exports CNG Canada 20 39 35 26 17 37 43 **Total CNG Exports** 20 35 26 39 17 37 43 528,210 349,167 481,621 395,424 338,486 395,472 359,159 **Total Exports**

Table 5. U.S. natural gas exports, 2020-2022

				2020
_	April	March	February	January
xports				
Volume (million cubic feet)				
Pipeline				
Canada	71,722	86,579	77,354	99,231
Mexico	138,544	166,550	151,071	160,875
Total Pipeline Exports	210,266	253,130	228,425	260,106
LNG Exports				
By Vessel				
Antigua and Barbuda	0	0	0	0
Argentina	0	0	0	Ö
Bahamas	23	20	13	15
Bangladesh	0	0	0	3,640
Barbados	15	28	26	33
Belgium	3,324	3,724	9,872	6,761
Brazil	0	6,891	10,433	8,438
Chile	14,098	3,216	10,731	6,087
China	21,140	17,699	0	0
Colombia	0	0	1,003	525
Croatia	0	0	0	0
Dominican Republic	1,838	2,872	0	0
Egypt	0	0	0	0.563
France	16,336	23,491	20,520	6,563
Greece Haiti	3,233 8	8,892 9	0 11	11,276 7
India	16,674	17,245	0	3,309
Indonesia	0	17,243	0	3,309
Israel	0	3,197	0	Ö
Italy	3,135	9,895	16,616	6,308
Jamaica	5,770	1	2,914	869
Japan	18,387	21,845	21,360	31,975
Jordan	0	0	0	0
Kuwait	3,297	0	0	0
Lithuania	2,945	0	0	0
Malaysia	0	0	0	0
Malta	0	0	48	2,600
Mexico	0	7,037	3,167	6,764
Netherlands	10,305	13,772	14,099	6,681
Nicaragua	0	0	0	0
Pakistan	3,334	0	3,567	3,323
Panama	2 522	906	3,408	0 3,282
Poland	3,523 10,777	3,583 0	6,677 6,187	3,282
Portugal Singapore	10,777	10,610	0,187	0
South Korea	24,258	28,095	11,071	44,320
Spain	22,943	23,657	20,240	24,412
Taiwan	0	6,987	7,115	9,317
Thailand	11,049	3,783	3,435	0
Turkey	14,030	6,489	24,303	32,637
United Arab Emirates	0	0	0	0
United Kingdom	0	20,202	28,884	30,428
By Truck				
Canada	0	0	0	2
Mexico	23	123	87	122
Re-Exports				
By Vessel	<u>.</u>		<u>-</u>	
Argentina	0	0	0	0
Brazil	0	0	0	0
Japan	0	0	0	305
South Korea	0	0	0	305
United Kingdom	0 210 466	0	0 225 796	350 305
Total LNG Exports CNG	210,466	244,269	225,786	250,305
Canada	35	38	34	33
Total CNG Exports	35 35	38	34 34	33 33
Total Exports	420,767	497,437	454,245	510,444

Table 7. Marketed production of natural gas in selected states and the Federal Gulf of Mexico, 2017-2022 (million cubic feet)

Year and Month	Alaska	Arkansas	California	Colorado	Kansas	Louisiana	Montana	New Mexico	North Dakota	Ohio
2017 Total	344,385	694,676	212,458	1,706,364	219,639	2,139,830	46,311	1,299,732	593,998	1,791,359
2018 Total	341,315	589,985	202,617	1,847,402	201,391	2,832,404	43,530	1,493,082	706,552	2,403,382
2019 Total	329,361	524,757	196,823	1,986,916	183,087	3,212,318	43,534	1,769,086	850,826	2,651,631
2020										
January	30,018	42,187	15,908	178,066	14,623	274,755	3,527	162,016	78,798	203,701
February	28,537	39,093	14,649	166,620	13,636	255,885	3,340	155,323	77,940	190,559
March	29,219	43,677	15,376	175,202	14,486	276,544	3,527	169,244	83,892	203,701
April	27,513	39,748	14,906	168,438	13,595	264,869	3,148	156,722	72,059	193,050
May	27,076	40,463	15,172	163,768	14,012	281,636	2,692	147,782	52,874	199,485
June	25,545	38,742	14,837	159,601	13,321	264,072	2,667	153,276	52,626	193,050
July	26,779	39,855	15,061	167,105	13,674	264,875	3,322	165,335	64,860	201,686
August	26,846	40,295	13,344	165,091	13,504	260,226	3,248	168,311	74,940	201,686
September	26,978	38,734	12,857	162,531	13,030	255,690	3,009	165,008	78,195	195,180
October	29,080	40,172	13,059	164,462	13,461	263,120	3,204	171,376	82,649	201,097
November	29,575	38,565	12,934	159,409	12,917	267,312	3,143	167,213	80,112	194,610
December	31,161	39,452	12,475	160,168	13,097	277,178	3,135	166,561	83,498	201,097
Total	338,329	480,982	170,579	1,990,462	163,356	3,206,163	37,963	1,948,168	882,443	2,378,902
2021										
January	31,632	€39,964	€12,033	€159,820	€12.578	€271,751	€3,214	€179,574	€77.021	€206,660
February	28,365	€30,061	€10,749	€143,416	€9,965	€221,051	€2,790	€151,970	€65,685	€170,668
March	31,481	€39,947	€12,028	€156,534	€12,340	€281,406	€3,144	€187,274	€77,032	€189,405
April	29,514	€37,926	€11,685	€156,009	€12,316	€276,931	€3,096	€184,890	€76,209	€183,444
May	29,005	€38,775	€12,215	€162,200	€12,648	€284,347	€3,226	€196,174	€80,479	€187,668
June	27,715	€37,125	£11,787	€154,405	€12,276	€272,759	€2,932	€190,003	€78,111	€183,602
July	26,280	€38,273	€12,014	€160,065	€12,780	€284,504	€3,151	€201,572	€79,150	€189,223
August	27,864	€38,000	€11,930	€158,380	€12,793	€288,489	€3,168	€206,178	€81,659	€188,396
September	28,534	€36,706	€11,499	€153,067	€12,371	€285,313	€3,127	€203,500	€80,634	€180,630
October	30,458	€37,791	€11,565	€160,130	€12,775	€302,250	€3,249	€212,065	€83,166	€192,556
November	30,735	€36,440	€11,177	€155,466	€12,488	€301,451	€3,110	€209,466	€82,402	€194,200
December	33,039	€38,361	€11,321	€156,842	€12,638	€313,724	€3,039	€205,204	€83,905	€200,184
Total	354,623		€140,003	1,876,335 €1,876,335	147,967 € 147,967	₹3,383,977	€37,247	€2,327,871	₽945,452	€2,266,636
2022										
January	32,865	RE37,302	RE11,308	RE151,645	RE12,255	RE311,659	RE3,033	RE196,234	RE78,716	RE196,005
February	30,014	RE33,432	RE9,470	RE137,943	RE10,870	RE283,544	RE2,738	RE182,669	RE71,646	RE172,837
March	32,452	£37,447	€11,410	£154,747	€12,182	£312,049	€3,132	€222,897	€82,898	€187,871
2022 3-Month YTD	95,330	€108,181	€32,188	€444,335	€35.307	 1907,252	€8,903	€601,800	 233,260	 556,714
2021 3-Month YTD	91,478	109,973	€34,810	€459,770	€34,883	€774,209	€9,148	€518,818	€219,738	1566,733
2020 3-Month YTD	87,775	124,956	45,934	519,887	42,745	807,185	10,394	486,582	240,630	597,961

Table 7. Marketed production of natural gas in selected states and the Federal Gulf of Mexico, 2017-2022 (million cubic feet) – continued

Year and Month	Oklahoma	Pennsylvania	Texas	Utah	West Virginia	Wyoming	Other States	Federal Gulf of Mexico	U.S. Total
2017 Total	2,513,897	5,453,638	7,223,841	315,211	1,514,278	1,590,059	517,698	1,060,452	29,237,825
2018 Total	2,875,787		8,041,010	295,826	1,771,698	1,637,517	485,675	974,863	33,008,867
2019 Total	3,036,052		9,378,489	271,808	2,155,214	1,488,854	456,024	1,015,343	36,446,918
2020									
January	263,734	603,836	843,432	21,944	209,896	124,274	37,391	86,071	3,194,177
February	243,139	569,721	783,094	20,373	198,090	108,722	34,782	81,114	2,984,616
March	257,387		841,347	21,765	210,559	117,977	36,689	87,955	3,196,236
April	235,642		783,283	20,379	204,826	111,744	34,389	80,574	3,011,842
May	217,154		734,176	20,326	212,646	107,288	33,986	64,374	2,927,037
June	222,324		741,401	19,244	212,831	103,890	32,957	62,227	2,873,001
July	226,843		775,851	20,312	220,032	108,679	34,568	67,778	3,021,331
August	226,344	607,221	782,436	19,814	223,208	107,320	33,757	43,988	3,011,580
September	222,010		755,253	19,283	218,893	104,520	30,468	48,900	2,917,569
October	219,403		773,720	20,042	226,064	104,787	31,775	38,702	2,991,827
November	224,327		751,562	19,200	223,428	103,236	31,246	60,496	2,984,528
December	228,057		770,555	19,307	231,845	103,933	32,383	67,085	3,088,701
Total	2,786,366	7,148,295	9,336,110	241,989	2,592,319	1,306,368	404,391	789,262	36,202,446
2021									
January	€221,544	€657,704	€774,497	£19,235	€234,432	€106,649	€33,651	€68,393	€3,110,352
February	€163,094		€588,035	£17,815	€208,571	€96,543	€30,083	€62,325	£2,586,408
March	€220,130		£771,346	€20,356	€227,218	€107,236	£34,338	€72,867	€3,091,762
April	€214,334		€775,796	€19,861	€229,075	€103,470	£33,044	£69,696	€3,035,804
May	€223,372		€798,311	€20,312	€234,118	€105,441	£33,844	€67,642	€3,130,208
June	€213,314		€781,294	£19,587	€227,987	€100,983	€32,490	€67,779	€3,036,055
July	€221,002		€821,587	€20,363	€229,376	€104,558	€33,626	€70,488	€3,150,909
August	€222,329		€820,135	€20,335	£241,373	€102,121	€33,126	€61,046	€3,172,847
September	€216,455		€798,167	£19,841	€216,452	€102,262	€31,895	€35,503	€3,049,920
October	€223,093		€833,481	€20,509	€240.446	€104,250	£33,056	€61,121	€3,219,612
November	€214,361		€809,934	€20,061	€229,812	€101,430	€32,083	€65,329	€3,161,306
December	€218,805		€844,079	€20,609	€241,569	€102,768	€32,693	€67,680	€3,266,272
Total	€2,571,834	€ 7,692,658	₽9,416,660	 238,884	€2,760,429	1,237,709	₹393,92 9	₹769,870	€37,011,455
2022									
January	RE213,419	RE660,345	RE826,679	RE20,836	€234,795	RE100,356	€31,509	RE65,117	RE3,184,080
February	RE192.931		RE741.829	RE18.987	€209.707	RE90.238	RE29.025	RE55.577	RE2,854,829
March	€219,802		€843,140	€21,386	€239,294	€99,523	€31,784	€63,238	€3,210,260
2022 3-Month YTD	€626,152	€1,876,725	€2,411,648	€61,209	€683,797	€290,117	 €92,318	 183,933	₽9,249,169
2021 3-Month YTD	€604,769		€2,133,878	₽ 57,406	€670,221	€310,427	₽98,072	₽ 203,585	₽8,788,522
2020 3-Month YTD	764,260		2,467,873	64,081	618,545	350,973	108,862	255,139	9,375,029

^E Estimated data.

Notes: For 2021 forward, state monthly marketed production is estimated from gross withdrawals using historical relationships between the two. Data for Arkansas, California, Colorado, Kansas, Louisiana, Montana, New Mexico, North Dakota, Ohio, Oklahoma, Pennsylvania, Texas, Utah, West Virginia, Wyoming, and Federal Offshore Gulf of Mexico are individually collected on the EIA-914 report. The "Other States" category comprises states/areas not individually collected on the EIA-914 report (Alabama, Arizona, Federal Offshore Pacific, Florida, Idaho, Illinois, Indiana, Kentucky, Maryland, Michigan, Mississippi, Missouri, Nebraska, Nevada, New York, Oregon, South Dakota, Tennessee, and Virginia). Before 2021, Federal Offshore Pacific is included in California. All data for Alaska are obtained directly from the state. Monthly preliminary state-level data for all states not collected individually on the EIA-914 report are available after the final annual reports for these series are collected and processed. Final annual data are generally available in the third quarter of the following year. The sum of individual states may not equal total U.S. volumes due to independent rounding.

Sources: 2017-2020: U.S. Energy Information Administration (EIA), Natural Gas Annual 2020, Bureau of Safety and Environmental Enforcement (BSEE), IHS Markit, and Enverus. January 2021 through current month: Form EIA-914, Monthly Crude Oil and Lease Condensate, and Natural Gas Production Report; and EIA computations.

 $^{^{\}rm RE}$ Revised estimated data.

https://lngir.cheniere.com/news-events/press-releases/detail/248/cheniere-and-posco-international-sign-long-term-lng-sale

Cheniere and POSCO International Sign Long-Term LNG Sale and Purchase Agreement

Download as PDFMAY 25, 2022 8:00AM EDT

HOUSTON--(BUSINESS WIRE)-- Cheniere Energy, Inc. ("Cheniere" or the "Company") (NYSE American: LNG) announced today that its subsidiary, Cheniere Marketing, LLC ("Cheniere Marketing"), has entered into a liquefied natural gas ("LNG") sale and purchase agreement ("SPA") with POSCO International Corporation ("POSCO International"), a subsidiary of POSCO Holdings, Inc., South Korea's largest steelmaker and owner of South Korea's first private LNG terminal.

Under the SPA, POSCO International has agreed to purchase approximately 0.4 million tonnes per annum ("mtpa") of LNG from Cheniere Marketing on a free-on-board basis for a term of 20 years beginning in late 2026. The purchase price for LNG under the SPA is indexed to the Henry Hub price, plus a fixed liquefaction fee.

"We are pleased to enter into this long-term LNG contract with POSCO International, a key player in the global industrial complex, and we look forward to a successful, long-term relationship with POSCO International as a customer," said Jack Fusco, Cheniere's President and Chief Executive Officer. "The signing of this SPA further evidences the growing demand for long-term LNG supply and highlights Cheniere's leadership in providing flexible, cleaner burning energy supply to meet both the energy security needs and environmental goals of our customers. The SPA is expected to provide additional support to the Corpus Christi Stage III Project, on which we expect to reach FID this summer."

The SPA is subject to Cheniere making a positive final investment decision to construct the Corpus Christi Stage III Project. The Corpus Christi Stage III Project is being developed to include up to seven midscale liquefaction trains with a total expected nominal production capacity of over 10 mtpa.

About Cheniere

Cheniere Energy, Inc. is the leading producer and exporter of liquefied natural gas (LNG) in the United States, reliably providing a clean, secure, and affordable solution to the growing global need for natural gas. Cheniere is a full-service LNG provider, with capabilities that include gas procurement and transportation, liquefaction, vessel chartering, and LNG delivery. Cheniere has one of the largest liquefaction platforms in the world, consisting of the Sabine Pass and Corpus Christi liquefaction facilities on the U.S. Gulf Coast, with total production capacity of approximately 45 mtpa of LNG in operation. Cheniere is also pursuing liquefaction expansion opportunities and other projects along the LNG value chain. Cheniere is headquartered in Houston, Texas, and has additional offices in London, Singapore, Beijing, Tokyo, and Washington, D.C.

For additional information, please refer to the Cheniere website at www.cheniere.com and Quarterly Report on Form 10-Q for the quarter ended March 31, 2022, filed with the Securities and Exchange Commission.

About POSCO International Corporation

POSCO International Corporation is one of South Korea's leading companies and is engaged in the trading of steel, chemical, electronic and automobile products, as well as energy resource and infrastructure development. POSCO International was formerly known as POSCO Daewoo Corporation and changed its name to POSCO International Corporation in March 2019. POSCO International was founded in 1967 and is headquartered in Incheon, South Korea.

Forward-Looking Statements



Multiple Brownfield LNG FIDs Now Needed To Fill New LNG Supply Gap From Mozambique Chaos? How About LNG Canada Phase 2?

Posted Wednesday April 28, 2021. 9:00 MT

The next six months will determine the size and length of the new LNG supply gap that is hitting harder and faster than anyone expected six months ago. Optimists will say the Mozambique government will bring sustainable security and safety to the northern Cabo Delgado province and provide the confidence to Total to quickly get back to LNG development such that its LNG in-service delay is a matter of months and not years. We hope so for Mozambique's domestic situation, but will it be that easy for Total's board to quickly look thru what just happened? Total suspended LNG development for 3 months, restarted development on March 25, but then 3 days of violence led it to suspend development again on March 28, and announce force majeure on Monday April 26. Even if the optimists are right, Mozambique LNG is counted on for LNG supply and the major LNG supply project that are in LNG supply forecasts are now all delayed - Total Phase 1 of 1.7 bcf/d and its follow on Phase 2 of 1.3 bcf/d, and Exxon's Rozuma Phase 1 of 2.0 bcf/d. It is important to remember this 5.0 bcf/d of major LNG supply is being counted in LNG supply forecasts and starting in 2024. At a minimum, we think the more likely scenario is a delay of at least 2 years in this 5.0 bcf/d from the pre-Covid timelines. And this creates a much bigger and sooner LNG supply gap starting ~2025 and stronger outlook for LNG prices. Thermal coal in Asia will play a role in keeping a lid on LNG prices. But there will be the opportunity for LNG suppliers to at least review the potential for brownfield LNG projects to fill the growing supply gap. The thought of increasing capex was a nonstarter six months ago, but there is a much stronger outlook for global oil and gas prices. Oil and gas companies are pivoting from cutting capex to small increases in 2021 capex and expecting for higher capex in 2022. We believe this sets the stage for looking at potential FID of brownfield LNG projects before the end of 2021 to be included in 2022 capex budgets. Mozambique is causing an LNG supply gap that someone will try to fill. And if brownfield LNG is needed, what about Shell looking at 1.8 bcf/d brownfield LNG Canada Phase 2? Cdn natural gas producers hope so as this would mean more Cdn natural gas will be tied to Asian LNG markets and not competing in the US against Henry Hub.

Total declares force majeure on Mozambique LNG, Yesterday, Total announced [LINK] "Considering the evolution of the security situation in the north of the Cabo Delgado province in Mozambique, Total confirms the withdrawal of all Mozambique LNG project personnel from the Afungi site. This situation leads Total, as operator of Mozambique LNG project, to declare force majeure. Total expresses its solidarity with the government and people of Mozambique and wishes that the actions carried out by the government of Mozambique and its regional and international partners will enable the restoration of security and stability in Cabo Delgado province in a sustained manner". Total is working Phase 1 is ~1.7 bcf/d (Train 1 + 2, 6.45 mtpa/train) and was originally expected to being LNG deliveries in 2024. There was no specific timeline for Phase 2 of 1.3 bcf/d (Train 3 + 4, 5.0 mtpa/train), but was expected to follow Phase 1 in short order to keep capital costs under control with a continuous construction process with a potential onstream shortly after 2026.



Total Mozambique Phase 1 and 2

Mozambique LNG: Unlocking world-class gas resources

35/MBtu Cost delivered Asia 4 to 95/b 2025+

Mozambique LNG: Leveraging large scale to lower costs

- Gas composition well adapted to liquefaction

- Well productivity ~30 kboe/d

Mozambique LNG: leveraging large scale to lower costs

- Upstream: subsea to shore

- 2 x 6.4 Mt/y LNG plant < 850 \$/f

- Onshore synergies with Rovuma LNG

- FID June 2019, first LNG in 2024

- Launching studies on train 3&4 in 2020

- 90% volume sold under long term contracts largely oil indexed

Note: Subject to closing

Source: Total Investor Day September 24, 2019

Total's Mozambique force majeure is no surprise, especially the need to the restoration of security and stability "in a sustained manner". Yesterday, Total announced [LINK] "Considering the evolution of the security". No one should be surprised by the force majeure or the sustained manner caveat. SAF Group posts a weekly Energy Tidbits research memo [LINK], wherein we have, in multiple weekly memos, that Total had shut down development in December for 3 months due to the violent and security risks. It restarted development on Wed March 24, violence/attacks immediately resumed for 3 consecutive days, and then Total suspended development on Sat March 27. Local violence/attacks shut development down in Dec, the situation gets settled enough for Total to restart in March, only to be shut down 3 days thereafter. No one should be surprised especially with Total's need to see security and stability "in a sustained manner".

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Does anyone really think Total will risk another quick 2-3 month restart or even in 2021? The Mozambique government will be working hard to convince Total to restart soon. We just find it hard to believe Total board will risk a replay of March 24-27 in 2021. Unfortunately, Mozambique has had internal conflict for years. It reached a milestone to the positive in August 2019. Our SAF Group August 11, 2019 Energy Tidbits memo [LINK] highlighted the signing of a peace pact between Mozambique President Nyusi and leader of the Renamo opposition Momade. This was the official end to a 2013 thru 2016 conflict following a failure to hold up the prior peace pact. At that time, FT reported [LINK] "Mr Nyusi has said that "the government and Renamo will come together and hunt" rebels who fail to disarm. The government has struggled to stem the separate insurgency in the north, which has killed or displaced hundreds near the gas-rich areas during the past two years. While the roots of the conflict remain murky, it is linked to a local Islamist group and appears to be drawing on disaffection over sharing gas investment benefits, say analysts." This is just a reminder this is not a new issue. LNG is a game changer to Mozambique's economic future. It is, but also has been, a government priority to have the security and safety for Total and Exxon to move on their LNG developments. Its hard to believe the Mozambique government will be able to quickly convince Total and Exxon boards that they can be comfortable there is a sustained security/safety situation and they can send their people back in to develop the LNG. Total's board would allow any resumption of development before year end 2021. The last thing Total wants is a replay of March 24-27. The first question is how long will it take before the Total board is convinced its safe to restart. Could you imagine them doing a replay of what just happened? Wait three months, restart development and have to stop again right away? We have to believe that could lead the Total board to believe it is unfixable for years. We just don't think they are to prepared to risk that decision in 3 months. Its why we have to think there isn't a restart approval until at least in 2022 at the earliest ie. why we think the likely scenario is a delay of 2-3 years, and not a matter of months.

Mozambique's security issues pushes back 5.0 bcf/d of new LNG supply at least a couple years. The global LNG issue is that 5 bcf/d of new Mozambique LNG supply (apart from the Eni Coral FLNG of 0.45 bcf/d) won't start up in 2024 and



continuing thru the 2020s. And we believe all LNG forecasts included this 5.0 bcf/d to be in service in the 2020s as Mozambique had been considered the best positioned LNG supply to access Asia after Australia and Papua New Guinea. (i) Eni Coral Sul (Rovuma Basin) FLNG of 0.45 bcf/d planned in service in 2022. [LINK] This is an offshore floating LNG vessel that is still expected to be in service in 2022. (ii) Total Phase 1 to add 1.7 bcf/d with an in service originally planned for 2024. We expect the in service data to be pushed back to at least 2026 assuming Total gives a development restart approval in Dec 2021. In theory, this would only be a 1 year loss of time. However, Total has let services go, the project will be idle for 9 months, it isn't clear if the need to get people out quickly let them do a complete put the project on hold, and how many people will be on site maintaining the status of the development during the force majeure. Also what new procedures and safety will be put in place for a restart. These all mean there will be added time needed to get the project back to where it was when force majeure was declared ie. why we think a 12 month time delay will be more like an 18 month project delay. (iii) Exxon's Rozuma Phase 1 LNG will add 2.0 bcf/d and, pre-Covid, was expected to be in service in 2025. We believe the delays related to security and safety at Total are also going to impact Exxon. We find it highly unlikely the Exxon board would take a different security and safety decision than Total. Pre-pandemic, Exxon's March 6, 2019 Investor Day noted their operated Mozambique Rovuma LNG Phase 1 was to be 2 trains each with 1.0 bcf/d capacity for total initial capacity of 2.0 bf/d with FID expected in 2019 and first LNG deliveries in 2024. The 2019 FID expectation was later pushed to be expected just before the March 2020 investor day. But the pandemic hit, and on March 21, 2020, we tweeted [LINK] on the Reuters story "Exclusive: Coronavirus, gas slump put brakes on Exxon's giant Mozambique LNG plan" [LINK] that noted Exxon was expected to delay the Rovuma FID. There was no timeline, but the expectation was that FID would now be in 2022 (3 years later than original timeline0 and that would push first LNG likely to 2027. (iv) Total Phase 2 was to add 1.3 bcf/d. There was no firm in service date but it was expected to follow closely behind Phase 1 to maintain services. That would have put it originally in the 2026/2027 period. But if Phase 1 is pushed back 2 years, so will Phase 2 so more likely 2028/2029.. (v) Total Phase 1 + 2 and Exxon Rozuma Phase 1 total 5.0 bcf/d and would have been (and still are) in all LNG supply forecasts for the 2020s. (vi) We aren't certain if the LNG supply forecasts include Exxon Rozuma Phase 2, which would be an additional 2.0 bcf/d on top of the 5.0 bcf/d noted above. Exxon Rozuma has always been expected to be at least 2 Phases. This has been the plan since the Anadarko days given the 85 tcf size of the resource on Exxon's Area 4. There was no firm in service data for Phase 2, but it was expected they would also closely follow Phase 1 to maintain services. We expect that original timeline would have been 2026/2027 and that would not be pushed back to 2029/2030. (vii) It doesn't matter if its only 5 bcf/ of Mozambique that is delayed 2 to 3 years, it will cause a bigger LNG supply gap and sooner. The issue for LNG markets is this is taking projects that are in development effectively out of the queue for some period.

Exxon Mozambique LNG

UPSTREAM **MOZAMBIQUE**Five outstanding developments



LNG development on plan

- Area 4 potential for >40 Mta¹ through phased developments
- Coral floating LNG construction under way, on schedule
- 3.4 Mta capacity; start-up 2022
- Next stage: 2 trains x 7.6 Mta capacity
 - LNG offtake commitments secured with affiliate buyers
 - Camp construction contract awarde
 - FID expected 2019; start-up 2024

Exploring new opportunities

- Captured 3 blocks in 2018; access to 4 million gross acres
 - ExxonMobil working interest 60%²
 - Exploration drilling planned for 2020

Source: Exxon Investor Day March 6, 2019

Won't LNG and natural gas get hit by Biden's push for carbon free electricity? Yes, in the US. For the last 9 months, we have warned on Biden's climate change plan that were his election platform and now form his administration's energy transition map. We posted our July 28, 2020 blog "Biden To Put US On "Irreversible Path to Achieve Net-Zero Emissions, Economy-Wide" Is a Major Negative To US Natural Gas in 2020s "[LINK] on Biden's platform "The Biden Plan to Build a Modern, Sustainable Infrastructure and an Equitable Clean Energy Future" [LINK]. Biden's new American Jobs Plan



[LINK] lines up with his campaign platform including to put the US "on the path to achieving 100 percent carbon-free electricity by 2035.". Our July 28, 2020 blog noted that it would require replacing ~60% of US electricity generation with more renewable and it could eliminate ~40% (33.5 bcf/d) of 2019 US natural gas consumption. If Biden is 25% successful by 2030, it would replace ~6.3 bcf/d of natural gas demand. It would be a negative to US natural gas and force more US natural gas to export markets. The wildcard when does US natural gas start to decline if producers are faced with the reality of natural gas being phased out for electricity. The other hope is that when Biden says "carbon-free", its not what ends up in the details of any formal policy statement ie. carbon electricity will be allowed with Biden's push for CCS.

Will Cdn natural gas be similarly hit by if Trudeau move to "emissions free" and not "net zero emissions" electricity? Yes and No. Our SAF Group April 25, 2021 Energy Tidbits memo [LINK] was titled "Bad News For Natural Gas, Trudeau's Electricity Goal is Now 100% "Emissions Free" And Not "Net Zero Emissions". On Thursday, PM Trudeau spoke at Biden's global climate summit [LINK] and looks like he slipped in a new view on electricity than was in last Monday's budget and his Dec climate plan. Trudeau said "In Canada, we've worked hard to get to over 80% emissions-free electricity, and we're not going to stop until we get to 100%." Speeches, especially ones made on a global stage are checked carefully so this had to be deliberate. Trudeau said "emissions free" and not net zero emissions electricity. It seems like this language is carefully written to exclude any fossil fuels as they are not emissions free even if they are linked to CCS. Recall in Liberals big Dec 2020 climate announcement [LINK], Liberals said ""Work with provinces, utilities and other partners to ensure that Canada's electricity generation achieves net-zero emissions before 2050." There is no way Trudeau changed the language unless he meant to do so. And this is a major change as it would seem to indicate his plan to eliminate all fossil fuels used for electricity. If so this would be a negative to Cdn natural gas that would be stuck within Western Canada and/or continuing to push into the US when Biden is trying to switch to carbon free electricity. We recognize that there is still some ambiguity in what will be the details of policy and the Liberals aren't changing to no carbon sourced electricity at all. Let's hope so. But let's also be careful that politicians don't change language without a reason or at least with a view to setting up for some future hit. Plus Trudeau had a big warning in that same speech saying "we will make it law to respect our new 2030 target and achieve net-zero emissions by 2050". They plan to make it the law that Canada has to be on track for the Liberals 2030 emissions targets. This means that the future messaging will be that the Liberals have no choice but to take harder future emissions actions as it is the law. They will be just obeying the law as they will be obligated to obey the law. Everyone knows the messaging will be we have to do more get to Net Zero, that in itself will inevitably mean it will be the law if he actually does move to eliminate any carbon based electricity. So yes it's a negative, that is unless more Cdn natural gas can be exported via LNG to Asia. We believe this would be a plus to be priced against global LNG instead of Henry Hub.

Biden's global climate summit reminded there is too much risk to skip over natural gas as the transition fuel. Apart from the US and Canada, we haven't seen a sea shift to eliminating natural gas for power generation, especially from energy import dependent countries. There is a strong belief that hydrogen and battery storage will one day be able to scale up at a competitive cost to lead to the acceleration away from fossil fuels. But that time isn't yet here, at least not for energy import dependent countries. One of the key themes from last week's leader's speeches at the Biden global climate summit – to get to Net Zero, the world is assuming there wilt be technological advances/discoveries that aren't here today and that have the potential to immediately ramp up in scale. IEA Executive Director Faith Birol was blunt in his message [LINK] saying "Right now, the data does not match the rhetoric – and the gap is getting wider." And "IEA analysis shows that about half the reductions to get to net zero emissions in 2050 will need to come from technologies that are not yet ready for market. This calls for massive leaps in innovation. Innovation across batteries, hydrogen, synthetic fuels, carbon capture and many other technologies. US Special Envoy for Climate John Kerry said a similar point that half of the emissions reductions will have to come from technologies that we don't yet have at scale. UK PM Johnson [LINK] didn't say it specifically, but points to this same issue saying "To do these things we've got to be constantly original and optimistic about new technology and new solutions whether that's crops that are super-resistant to drought or more accurate weather forecasts like those we hope to see from the UK's new Met Office 1.2bn supercomputer that we're investing in." It may well be that the US and other self sufficient energy countries are comfortable going on the basis of assuming technology developments will occur on a timely basis. But, its clear that countries like China, India, South Korea and others are not prepared to do so. And not prepared to have the confidence to rid themselves of coal power generation. This is why there hasn't been any material change in the LNG demand outlook



We expect the IEA's blunt message that the gap is getting wider will be reinforced on May 18. We have had a consistent view on the energy transition for the past few years. We believe it is going to happen, but it will take longer, be a bumpy road and cost more than expected. This is why we believe the demise of oil and natural gas won't be as easy and fast as hoped for by the climate change side. The IEA's blunt warning on the gap widening should not be a surprise as they warned on this in June 2020. Birol's climate speech also highlighted that the IEA will release on May 18 its roadmap for how the global energy sector can reach net zero by 2050. Our SAF Group June 11, 2020 blog "Will The Demise Of Oil Take Longer, Just Like Coal? IEA and Shell Highlight Delays/Gaps To A Smooth Clean Energy Transition" [LINK] feature the IEA's June 2020 warning that the critical energy technologies needed to reduce emissions are nowhere near where they need to be. In that blog, we said "there was an excellent illustration of the many significant areas, or major pieces of the puzzle, involved in an energy transition by the IEA last week. The IEA also noted the progress of each of the major pieces and the overall conclusion is that the vast majority of the pieces are behind or well behind where they should be to meet a smooth timely energy transition. It is important to note that these are just what the IEA calls the "critical energy" technologies" and does not get into the wide range of other considerations needed to support the energy transition. The IEA divides these "critical energy technologies "into major groupings and then ranked the progress of each of these pieces in its report "Tracking Clean Energy Progress" [LINK] by on track, more efforts needed, or not on track". Our blog included the below IEA June 2020 chart.

IEA's Progress Ranking For "Critical Energy Technologies" For Clean Energy Transition

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	 Renewable Power 	Geothermal
	Solar PV	Ocean Power
	 Onshore Wind 	Nuclear Power
Power	 Offshore Wind 	 Natural Gas-Fired Power
	 Hydropower 	 Coal-Fired Power
	 Bioenergy Power Generation 	CCUS in Power
	 Concentrating Solar Power 	
 Fuel Supply 	 Methane Emissions from O&G 	 Flaring Emissions
	Chemicals	 Pulp and Paper
Industry	Iron and Steel	 Aluminum
	Cement	 CCUS in Industry and Transformation
	 Electric Vehicles 	 Transport Biofuels
 Transport 	Rail	Aviation
Transport	 Fuel Consumption of Cars and Vans 	 International Shipping
	 Trucks and Busses 	
	 Building Envelopes 	Lighting
 Buildings 	Heating	 Appliances and Equipment
Danango	Heat Pumps	 Data Centres and Data Transmission Networks
	 Cooling 	
	 Energy Storage 	 Demand Response
 Energy Integration 	 Hydrogen 	 Direct Air Capture
	 Smart Grids 	
Source: IEA		
On Track	 More Efforts Needed 	Not on Track
Source: IEA Tracking Cl	ean Energy Progress, June 2020	

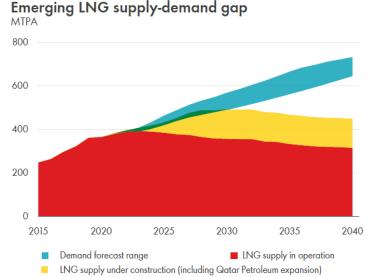
We are referencing Shell's long term outlook for LNG We recognize there are many different forecasts for LNG, but are referencing Shell' LNG Outlook 2021 from Feb 25, 2021 for a few reasons. (i) Shell's view on LNG is the key view for when and what decision will be made for LNG Canada Phase 2. (ii) Shell is one of the global leaders in LNG supply and trading. (iii) Shell provides on the record LNG outlooks every year so there is the ability to compare and make sure the outlook fits the story. It does. (iv) Shell, like other supermajors, has had to make big capex cuts post pandemic and that certainly wouldn't put any bias to the need for more capex.

Shell's March 2021 long term outlook for LNG demand was basically unchanged vs 2020 and leads to a LNG supply gap in mid 2020s Shell does not provide the detailed numbers in their Feb 25, 2021 LNG forecast. We would assume they



would have reflected some delay, perhaps 1 year, at Mozambique but would be surprised if they put a 2-3 year delay in for the 5 bcf/d from Total Phase 1 +2 and Exxon Rozuma Phase 1. Compared to their LNG Outlook 2020, it looks like there was no change for their estimate of global natural gas demand growth to 2040, which looked relatively unchanged at approx. 5,000 bcm/yr or 484 bcf/d. Similarly, long term LNG demand looked unchanged to 2040 of ~700 mm tonnes (92 bcf/d) vs 360 mm tonnes (47 bcf/d) in 2020. In the 2021 outlook, Shell highlighted that the pandemic delayed project construction timelines and that the "lasting impact expected on LNG supply not demand". And that Shell sees a LNG "supply-demand gap estimated to emerge in the middle of the current decade as demand rebounds". Comparing to 2020, it looks like the supply-demand gap is sooner.

Supply-demand gap estimated to emerge in the middle of the current decade



Source: Shell LNG Outlook 2021, Feb 25, 2021

Mozambique delays are redefining the LNG markets for the 2020s: Delaying 5 bcf/d of Mozambique new LNG supply 2-3 years means a much bigger supply gap starting in 2025.. Even if the optimists are right, there are now delays to all major Mozambique LNG supply from LNG supply forecasts. We don't have the detail, but we believe all LNG forecasts, including Shell's LNG Outlook 2021, would have included Total's Phase 1 and Phase 2 and Exxon Rozuma Phase 1. As noted earlier, we believe that the likely impact of the Mozambique security concerns is that these forecasts would likely have to push back 1.7 bcf/d from Total Phase 1 to at least 2026, 2.0 bcf/d Exxon Rozuma Phase 1 to at least 2027, and 1.3 bcf/d Total Phase 2 to at least 2028/2029 with the real risk these get pushed back even further. 5.0 bcf/d is equal to 38 mtpa. These delays would mean there is an increasing LNG supply gap in 2025 and increasingly significantly thereafter. And even if a new greenfield LNG project is FID's right away, it wouldn't be able to step in to replace Total Phase 1 prior startup timing for 2024 or likely the market at all until at least 2027. Its why the decision on filling the gap will fall on brownfield LNG projects.

And does this bigger, nearer supply gap force LNG players to look at what brownfield LNG projects they could advance? A greenfield LNG project would likely take at least until 2027 to be in operations. Its why we believe the Mozambique delays will effectively force major LNG players to look to see if there are brownfield LNG projects they should look to advance. Prior to the just passed winter, no one would think Shell or other major LNG players would be considering any new LNG FIDs in 2021. All the big companies are in capital reduction mode and debt reduction mode. But Brent oil is now solidly over \$60 and LNG prices hit record levels in Jan and the world's economic and oil and gas demand outlook are increasing with vaccinations. And we are starting to see companies move to increasing capex with the higher cash flows. We would not expect any major LNG players to move to FID right away. But we see them watching to see if 2021 plays out to still support this increasing LNG supply gap. And unless new mutations prevent vaccinations from returning the world to normal, we suspect that major LNG players, like other oil and gas companies, will be looking to increase



capex as they approve 2022 budgets. The outlook for the future has changed dramatically in the last 5 months. The question facing Shell and others, should they look to FID new LNG brownfield projects in the face of an increasing LNG supply gap that is going to hit faster and harder than expected a few months ago. We expect these decisions to be looked at before the end of 2021. LNG prices will be stronger, but we expect the limiting cap in Asia will be that thermal coal will be used to mitigate some LNG price pressure.

Back to Shell, does increasing LNG supply gap provide the opportunity to at least consider a LNG Canada Phase 2 FID over the next 9 months? Shell is no different than any other major LNG supplier in always knowing the market and that the oil and gas outlook is much stronger than 6 months ago. No one has been or is talking about this Mozambique impact and how it will at least force major LNG players to look at if they should FID new brownfield LNG projects to take advantage of this increasing supply gap. We don't have any inside contacts at Shell or LNG Canada, but that is no different than when we looked at the LNG markets in September 2017 and saw the potential for Shell to FID LNG Canada in 2018. We posted a September 20, 2017 blog "China's Plan To Increase Natural Gas To 10% Of Its Energy Mix Is A Global Game Changer Including For BC LNG" [LINK]. Last time, it was a demand driven supply gap, this time, it's a supply driven supply gap. We have to believe any major LNG player, including Shell, will be at least looking at their brownfield LNG project list and seeing if they should look to advance FID later in 2021. Shell has LNG Canada Phase 2, which would add 2 additional trains or approx. 1.8 bcf/d. And an advantage to an FID would be that Shell would be able to commit to its existing contractors and fabricators for a continuous construction cycle following on LNG Canada Phase 1 ie. to help keep a lid on capital costs. No one is talking about the need for these new brownfield LNG projects, but, unless Total gets back developing Mozambique and keeps the delay to a matter of months, its inevitable that these brownfield LNG FID internal discussions will be happening in H2/21. Especially since the oil and gas price outlook is much stronger than it was in the fall and companies will be looking to increase capex in 2022 budgets

A LNG Canada Phase 2 would be a big plus to Cdn natural gas. A LNG Canada Phase 2 FID would be a big plus for Cdn natural gas. It would allow another ~1.8 bcf/d of Cdn natural gas to be priced against Asian LNG prices and not against Henry Hub. And it would provide demand offset versus Trudeau if he moves to make electricity "emissions free" and not his prior "net zero emissions". Mozambique may be in Africa, but, unless sustained peace and security is attained, it is a game changer to LNG outlook creating a bigger and sooner LNG supply gap. And with a stronger tone to oil and natural gas prices in 2021, the LNG supply gap will at least provide the opportunity for Shell to consider FID for its brownfield LNG Canada Phase 2 and provide big support to Cdn natural gas for back half of the 2020s. And perhaps if LNG Canada is exporting 3.6 bcf/d from two phases, it could help flip Cdn natural gas to a premium to US natural gas especially if Biden is successful in reducing US domestic natural gas consumption for electricity. The next six months will be very interesting to watch for LNG markets.



Asian LNG Buyers Abruptly Change and Lock in Long Term Supply – Validates Supply Gap, Provides Support For Brownfield LNG FIDs

Posted 11am on July 14, 2021

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.

Sea change in Asian LNG buyers is also the best validation of the LNG supply gap and big to LNG supply FIDs. Has the data changed or have the market participants changed in how they react to the data? We can't recall exactly who said that on CNBC on July 12, it's a question we always ask ourselves. In the LNG case, the data has changed with Mozambique LNG delays and that has directly resulted in market participants changing and entering into long term contracts. We can't stress enough how important it is to see Asian LNG buyers move to long term LNG deals. (i) Validates the sooner and bigger LNG supply gap. We believe LNG markets should look at the last two weeks of new long term deals for Asian LNG buyers as being the validation of the LNG supply gap that clearly emerged post Total declaring force majeure on its 1.7 bcf/d Mozambique LNG Phase 1 that was under construction and on track for first LNG delivery in 2024. Since then, markets have started to realize the Mozambique delays are much more than 1.7 bcf/d. They have seen major LNG suppliers change their outlook to a more bullish LNG outlook and, most importantly, are now seeing Asian LNG buyers changing from trying to renegotiate long term LNG deals lower to entering into long term LNG deals to have security of supply. Asian LNG buyers are cozying up to Qatar in a prelude to the next wave of Asian buyer long term deals. What better validation is there than companies/countries putting their money where their mouth is. (ii) Provides financial commitment to help push LNG suppliers to FID. We believe these Asian LNG buyers are doing much more than validating a LNG supply gap to markets. The big LNG suppliers can move to FID based on adding more LNG supply to their portfolio, but having more long term deals provides the financial anchor/visibility to long term capital commitment from the buyers. Long term contracts will only help LNG suppliers get to FID.

It was always clear that the Mozambique LNG supply delay was 5.0 bcf/d, not just 1.7 bcf/d from Total Phase 1. LNG markets didn't really react to Total's April 26 declaration of force majeure on its 1.7 bcf/d Mozambique LNG Phase 1. This was an under construction project that was on time to deliver first LNG in 2024. It was in all LNG supply forecasts. There was no timeline given but, on the Apr 29 Q1 call, Total said that it expected any restart decision would be least a year away. If so, we believe that puts any actual construction at least 18 months away. There will be work to do just to get back to where they were when they were forced to stop development work on Phase 1. Surprisingly, markets didn't look the broader implications, which is why we posted our 7-pg Apr 28 blog "Multiple Brownfield LNG FIDs Now Needed To Fill New LNG Supply Gap From Mozambique Chaos? How About LNG Canada Phase 2?" [LINK] We highlighted that Mozambique LNG delays were actually 5 bcf/d, not 1.7 bcf/d. And this 5 bcf/d of Mozambique LNG supply was built into most, if not all, LNG supply forecasts. The delay in Total Phase 1 would lead to a commensurate delay in its Mozambique LNG Phase 2 of 1.3 bcf/d. Total Phase 2 was to add 1.3 bcf/d. There was no firm in service date, but it was expected to



follow closely behind Phase 1 to maintain services. That would have put it originally in the 2026/2027 period. But if Phase 1 is pushed back at least 2 years, so will the follow on Phase 2, so more likely, it will be at least 2028/2029. The assumption for most, if not all, LNG forecasts was that Phase 2 would follow Phase 1. Exxon Rozuma Phase 1 of 2.0 bcf/d continues to be pushed back in timeline especially following Total Phase 1. Exxon's Mozambique Rozuma Phase 1 LNG will add 2.0 bcf/d and, pre-Covid, was originally expected to be in service in 2025. The project was being delayed and Total's force majeure has added to the delays. Rozuma onshore LNG facilities are right by Total. On June 20, we tweeted [LINK] on the Reuters report "Exclusive: Galp says it won't invest in Rovuma until Mozambique ensures security" [LINK]. Galp is one of Exxon's partners in Rozuma. Reuters reported that Galp said they won't invest in Exxon's Rozuma LNG project until the government ensures security, that this may take a while, they won't be considering the project until after Total has reliably resumed work on its Phase 1, which likely puts any Rozuma decision until at least end of 2022 at the earliest. Galp has taken any Rozuma Phase 1 capex out of their new capex plans thru 2025 and will have to take out projects in their capex plan if Rozuma does come back to work. This puts Rozuma more likely 2028 at the earliest as opposed to before the original expectations of before 2025. Pre-pandemic, Exxon's March 6, 2019 Investor Day noted their operated Mozambique Rovuma LNG Phase 1 was to be 2 trains each with 1.0 bcf/d capacity for total initial capacity of 2.0 bf/d with FID expected in 2019 and first LNG deliveries sometime before 2025. LNG forecasts had been assuming Exxon Rozuma would be onstream around 2025. The 2019 FID expectation was later pushed to be expected just before the March 2020 investor day. But the pandemic hit, and on March 21, 2020, we tweeted [LINK] on the Reuters story "Exclusive: Coronavirus, gas slump put brakes on Exxon's giant Mozambique LNG plan" [LINK] that noted Exxon was expected to delay the Rovuma FID. There was no timeline, but now, any FID is not expected until late 2022 at the earliest, that would push first LNG likely to at least 2028. What this means is that the Mozambique LNG delays are not 1.7 bcf/d but 5.0 bcf/d of projects that were in all, if not most, LNG supply forecasts. There is much more in our 7-pg blog. But Mozambique is what is driving a much bigger and sooner LNG supply gap starting ~2025 and stronger outlook for LNG prices

One of the reasons why it went under the radar is that major LNG suppliers played stupid on the Mozambique impact. It makes it harder for markets to see a big deal when the major LNG suppliers weren't making a big deal of Mozambique or playing stupid in the case of Cheniere in their May 4 Q1 call. In our May 9, 2021 Energy Tidbits memo, we said we had to chuckle when we saw Cheniere's response in the Q&A to its Q1 call on May 4 that they only know what we know from reading the Total releases on Mozambique and its impact on LNG markets. It's why we tweeted [LINK] "Hmm! \$LNG says only know what we read on #LNG market impact from \$TOT \$XOM MZ LNG delays. Surely #TohokuElectric & other offtake buyers are reaching out to #Cheniere. MZ LNG delays is a game changer to LNG in 2020s, see SAF Group blog. Thx @olympe_mattei @TheTerminal #NatGas". How could they not be talking to LNG buyers for Total and /or Exxon Mozambique LNG projects. In the Q1 Q&A, mgmt was asked about Mozambique and didn't know any more than what you or I have read. Surely, they were speaking to Asian LNG buyers who had planned to get LNG supply from Total Mozambique or Exxon Rozuma Mozambique or both. Mgmt is asked "wanted to just kind of touch on the color use talking about for these supply curve. And are you able to kind of provide any thoughts on the Mozambique and a deferral with the project of that size on 13 and TPA being deferred by we see you have you noticed any impact to the market has is there any impact for stage 3 with that capacity? Thanks." Mgmt replies "No. Look, I only know about the Mozambique delay with what I read as well as what you read that from total and an Exxon. And it's a sad situation and I hope everybody is safe and healthy that were there to experience that unrest but no I don't think it's, again it's a different business paradigm than what we offer. So, we offer a full value product, the customer doesn't have to invest in equity, customer doesn't have to worry about the E&P side of the business because, we've been able to both the by at our peak almost 7 Dee's a day of US NAT gas from almost a 100 different producers on 26 different pipelines and deliver it to our to facilities. So we take care of a lot of what the customer needs".

There are other LNG supply delays/interruptions beyond Mozambique. There have been a number of other smaller LNG delay or existing supply interruptions that add to Asian LNG buyers feeling less secure about the reliability of mid to long term LNG supply. Here are just a few examples. (i) Total Papua LNG 0.74 bcf/d. On June 8, we tweeted [LINK] "Timing update Papua #LNG project. \$OSH June 8 update "2022 FEED, 2023 FID targeting 2027 first gas". \$TOT May 5 update didn't forecast 1st gas date. Papua is 2 trains w/ total capacity 0.74 bcf/d." We followed the tweet saying [LINK] "Bigger #LNG supply gap being created >2025. Papua #LNG originally expected FID in 2020 so 1st LNG is 2 years delayed.



Common theme - new LNG supply is being delayed ie. [Total] Mozambique. Don't forget need capacity>demand due to normal maintenance, etc. Positive for LNG." (ii) Chevron's Gorgon. A big LNG story in H2/20 was the emergence of weld quality issues in the propane heat exchangers at Train 2, which required additional downtime for repair. Train 2 was shut on May 23 with an original restart of July 11, but the repairs to the weld quality issues meant it didn't restart until late Nov. The same issue was found in Train 1 but repairs were completed. However extended downtime for the trains led to lower LNG volumes. Gorgon produced ~2.3 bcf/d in 2019 but was down to 2.0 bcf/d in 2020. (iii) Equinor's Melkoeya 0.63 bcf/d shut down for 18 months due to a fire. A massive fire led to the Sept 28, 2020 shutdown of the 0.63 bcf/d Melkoeya LNG facility in Norway. On April 26, Equinor released "Revised start-up date for Hammerfest LNG" [LINK] with regard to the 0.63 bcf/d Melkoeya LNG facility. The original restart date was Oct 1, 2021 (ie. a 12 month shut down), but Equinor said "Due to the comprehensive scope of work and Covid-19 restrictions, the revised estimated start-up date is set to 31 March 2022". When we read the release, it seemed like Equinor was almost setting the stage for another potential delay in the restart date. Equinor had two qualifiers to this March 31, 2022 restart date. Equinor said "there is still some uncertainty related to the scope of the work" and "Operational measures to handle the Covid-19 situation have affected the follow-up progress after the fire. The project for planning and carrying out repairs of the Hammerfest LNG plant must always comply with applicable quidelines for handling the infection situation in society. The project has already introduced several measures that allow us to have fewer workers on site at the same time than previously expected. There is still uncertainty related to how the Covid-19 development will impact the project progress."

Cheniere stopped the game playing the game on June 30. Our July 4, 2021 Energy Tidbits memo noted that it looks like Cheniere has stopped playing stupid with respect to the strengthening LNG market in 2021. We can't believe they thought they were fooling anyone, especially their competitors. Bu that week, they came out talking about how commercial discussions have picked up in 2021 and it's boosted their hope for a Texas (Corpus Christi) LNG expansion. On Wednesday, Platts reported "Pickup in commercial talks boosts Cheniere's hopes on mid-scale LNG project" [LINK] Platts wrote "Cheniere Energy expects to make a "substantial dent" by the end of 2022 in building sufficient buyer support for a proposed mid-scale expansion at the site of its Texas liquefaction facility, Chief Commercial Officer Anatol Feygin said June 30 in an interview." "As a result, he said, "The commercial engagement, I think it is very fair to say, has really picked up steam, and we are quite optimistic over the coming 12-18 months to make a substantial dent in that Stage 3 commercialization." Platts also reported that Cheniere noted this has been a tightening market all year (ie would have been known by the May 4 Q1 call). Platts wrote "We obviously find ourselves at the beginning of this year and throughout in a very tight market where prices today into Asia and into Europe are at levels that we frankly haven't seen in a decadeplus," Feygin said. "We've surpassed the economics that the industry saw post the Fukushima tragedy in March 2011, and that's happened in the shoulder period." It's a public stance as to a more bullish LNG outlook

But we still see major LNG suppliers like Australia hinting but not outright saying that LNG supply gap is coming sooner. We have to believe Australia will be unveiling a sooner LNG supply gap in their September forecast. On June 28, we tweeted [LINK] on Australia's Resources and Energy Quarterly released on Monday [LINK] because there was a major change to their LNG outlook versus their March forecast. We tweeted "#LNGSupplyGap. AU June fcast now sees #LNG mkt tighten post 2023 vs Mar fcast excess supply thru 2026. Why? \$TOT Mozambique delays. See below SAF Apr 28 blog. Means brownfield LNG FID needed ie. like #LNGCanada Phase 2. #OOTT #NatGas". Australia no longer sees supply exceeding demand thru 2026. In their March forecast, Australia said "Nonetheless, given the large scale expansion of global LNG capacity in recent years, demand is expected to remain short of total supply throughout the projection period." Note this is thru 2026 ie. a LNG supply surplus thru 2026. But on June 28, Australia changed that LNG outlook and now says the LNG market may tighten beyond 2023. Interestingly, the June forecast only goes to 2023 and not to 2026 as in March. Hmmm! On Monday, they said "Given the large scale expansion of global LNG capacity in recent years, import demand is expected to remain short of export capacity throughout the outlook period. Beyond 2023, the global LNG market may tighten, due to the April 2021 decision to indefinitely suspend the Mozambique LNG project, in response to rising security issues. This project has an annual nameplate capacity of 13 million tonnes, and was previously expected to start exporting LNG in 2024." 13 million tonnes is 1.7 bcf/d so they are only referring to Total Mozambique LNG Phase 1. So no surprise the change is Mozambique LNG driven but we have to believe the reason why they cut their forecast off this time at 2023 is that they are looking at trying to figure out what to forecast beyond 2023 in addition to Total Phase 1. And, importantly, we believe they will be changing their LNG forecast for more than Mozambique ie. India



demand that we highlight later in the blog. They didn't say anything else specific on Mozambique but, surely they have to also be delaying the follow on Total Phase 2 of 1.3 bcf/d and Exxon Rozuma Phase 1 of 2.0 bcf/d.

Australia's LNG Outlook: March 2021 vs June 2021 Forecasts

March 2021 LNG Outlook June 2021 LNG Outlook Figure 7.1: LNG demand and world supply capacity Figure 7.1: LNG demand and world supply capacity 500 100 600 500 400 300 60 300 40 0 200 200 100 20 100 2015 2021 2023 2013 2017 2019 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 Australia North Ame South Korea = Africa China Middle East Japan Emerging Asia Europe Rest of world Global supply capacity - World trade Capacity utilisation (rhs) ource: Nexant (2021) World Gas Model; Department of Industry, Science, Energy and Source: Nexant (2021) World Gas Model; Depa Resources (2021) ent of Industry, Science, Energy and

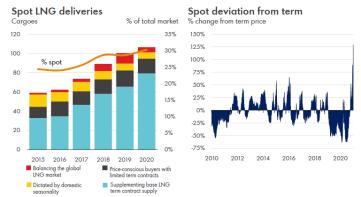
Source: Australia Resources and Energy Quarterly

Clearly Asian LNG buyers did the math, saw the new LNG supply gap and were working the phones in March/April/May trying to lock up long term supply. We wrote extensively on the Total Mozambique LNG situation before the April 26 force majeure as it was obvious that delays were coming to a project counted on for first LNG in 2024. Total had shut down Phase 1 development in December for 3 months due to the violence and security risks. It restarted development on Wed March 24, violence/attacks immediately resumed for 3 consecutive days, and then Total suspended development on Sat March 27. That's why no one should have been surprised by the April 26 force majeure. Asian LNG buyers were also seeing this and could easily do the same math we were doing and saw a bigger and sooner LNG supply gap. They were clearly working the phones with a new priority to lock up long term LNG supply. Major long term deals don't happen overnight, so it makes sense that we started to see these new Asian long term LNG deals start at the end of June.

A big pivot from trying to renegotiate down long term LNG deals or being happy to let long term contracts expire and replace with spot/short term LNG deals. This is a major pivot or abrupt turn on the Asian LNG buyers contracting strategy for the 2020s. There is the natural reduction of long term contracts as contracts reach their term. But with the weakness in LNG prices in 2019 and 2020. Asian LNG buyers weren't trying to extend long term contracts, rather, the push was to try to renegotiate down its long term LNG deals. The reason was clear, as spot prices for LNG were way less than long term contract prices. And this led to their LNG contracting strategy – move to increase the proportion of spot LNG deliveries out of total LNG deliveries. Shell's LNG Outlook 2021 was on Feb 25, 2021 and included the below graphs. The spot LNG price derivation from long term prices in 2019 and 2020 made sense for Asian LNG buyers to try to change their contract mix. Yesterday, Maeil Business News Korea reported on the new Qatar/Kogas long term LNG deal with its report "Korea may face LNG supply cliff or pay hefty price after long-term supplies run out" [LINK], which highlighted this very concept – Korea wasn't worried about trying to extend expiring long term LNG contracts. Maeil wrote "Seoul in 2019 secured a long-term LNG supply contract with the U.S. for annual 15.8 million tons over a 15-year period. But even with the latest two LNG supply contracts, the Korean government needs extra 6 million tons or more of LNG supplies to keep up the current power pipeline. By 2024, Korea's long-term supply contracts for 9 million tons of LNG will expire - 4.92 million tons on contract with Qatar and 4.06 million tons from Oman, according to a government official who asked to be unnamed."



Spot LNG deliveries and Spot deviation from term price



Source: Shell LNG Outlook 2021 on Feb 25, 2021

Asian LNG buyers moving to long term LNG deals provide financing capacity for brownfield LNG FIDs. We believe this abrupt change and return to long term LNG deals is even more important to LNG suppliers who want to FID new projects. The big LNG players like Shell can FID new LNG supply without new long term contracts as they can build into their supply options to fill their portfolio of LNG contracts. But that doesn't mean the big players don't want long term LNG supply deals, as having long term LNG contracts provide better financing capacity for any LNG supplier. It takes big capex for LNG supply and long term deals make the financing easier.

<u>Four Asian buyer long term LNG deals in the last week.</u> It was pretty hard to miss a busy week for reports of new Asian LNG buyer long term LNG deals. There were two deals from Qatar Petroleum, one from Petronas and one from BP. The timing fits, it's about 3 months after Total Mozambique LNG problems became crystal clear. And as noted later, there are indicators that more Asian buyer LNG deals are coming.

Petronas/CNOOC is 10 yr supply deal for 0.3 bcf/d. On July 7, we tweeted [LINK] on the confirmation of a big positive to Cdn natural gas with the Petronas announcement [LINK] of a new 10 year LNG supply deal for 0.3 bcf/d with China's CNOOC. The deal also has special significance to Canada. (i) Petronas said "This long-term supply agreement also includes supply from LNG Canada when the facility commences its operations by middle of the decade". This is a reminder of the big positive to Cdn natural gas in the next 3 to 4 years – the start up of LNG Canada Phase 1 is ~1.8 bcf/d capacity. This is natural gas that will no longer be moving south to the US or east to eastern Canada, instead it will be going to Asia. This will provide a benefit for all Western Canada natural gas. (ii) First ever AECO linked LNG deal. It's a pretty significant event for a long term Asia LNG deal to now have an AECO link. Petronas wrote "The deal is for 2.2 million tonnes per annum (MTPA) for a 10-year period, indexed to a combination of the Brent and Alberta Energy Company (AECO) indices. The term deal between PETRONAS and CNOOC is valued at approximately USD 7 billion over ten years." 2.2 MTPA is 0.3 bcf/d. (iii) Reminds of LNG Canada's competitive advantage for low greenhouse gas emissions. Petronas said "Once ready for operations, the LNG Canada project paves the way for PETRONAS to supply low greenhouse gas (GHG) emission LNG to the key demand markets in Asia."

Qatar Petroleum/CPC (Taiwan) is 15 yr supply deal for 0.16 bcf/d. Pre Covid, Qatar was getting pressured to renegotiate lower its long term LNG contract prices. Now, it's signing a 15 year deal. On July 9, they entered in a new small long term LNG sales deal [LINK], a 15-yr LNG Sale and Purchase Agreement with CPC Corporation in Taiwan to supply it ~0.60 bcf/d of LNG. LNG deliveries are set to begin in January 2022. H.E. Minister for Energy Affairs & CEO of Qatar Petroleum Al-Kaabi said "We are pleased to enter into this long term LNG SPA, which is another milestone in our relationship with CPC, which dates back to almost three decades. We look forward to commencing deliveries under this SPA and to continuing our supplies as a trusted and reliable global LNG provider." The pricing was reported to be vs a basket of crudes.



BP/Guangzhou Gas, a 12-yr supply deal for 0.13 bcf/d. On July 9, there was a small long term LNG supply deal with BP and Guangzhou Gas (China). Argus reported [LINK] BP had signed a 12 year LNG supply deal with Guangzhou Gas (GG), a Chinese city's gas distributor, which starts in 2022. The contract prices are to be linked to an index of international crude prices. Although GG typically gets its LNG from the spot market, it used a tender in late April for ~0.13 bcf/d starting in 2022. BP's announcement looks to be for most of the tender, so it's a small deal. But it fit into the trend this week of seeing long term LNG supply deals to Asia. This was intended to secure deliveries to the firm's Xiaohudao import terminal which will become operational in August 2022.

Qatar/Korea Gas is a 20-yr deal to supply 0.25 bcf/d. On Monday, Reuters reported [LINK] "South Korea's energy ministry said on Monday it had signed a 20-year liquefied natural gas (LNG) supply agreement with Qatar for the next 20 years starting in 2025. South Korea's state-run Korea Gas Corp (036460.KS) will buy 2 million tonnes of LNG annually from Qatar Petroleum". There was no disclosure of pricing.

More Asian buyer long term LNG deals (ie. India) will be coming. There are going to be more Asian buyer long term LNG deals coming soon. Our July 11, 2021 Energy Tidbits highlighted how India's new petroleum minister Hardeep Singh Puri (appointed July 8) hit the ground running with what looks to be a priority to set the stage for more India long term LNG deals with Qatar. On July 10, we retweeted [LINK] "New India Petroleum Minister hits ground running. What else w/ Qatar but #LNG. Must be #Puri setting stage for long term LNG supply deal(s). Fits sea change of buyers seeing #LNGSupplyGap (see SAF Apr 28 blog http://safgroup.ca) & wanting to tie up LNG supply. #OOTT". It's hard to see any other conclusion after seeing what we call a sea change in LNG buyer mentality with a number of long term LNG deals this week. Puri tweeted [LINK] "Discussed ways of further strengthening mutual cooperation between our two countries in the hydrocarbon sector during a warm courtesy call with Qatar's Minister of State for Energy Affairs who is also the President & CEO of @qatarpetroleum HE Saad Sherida Al-Kaabi". As noted above, we believe there is a sea change in LNG markets that was driven by the delay in 5 bcf/d of LNG supply from Mozambique (Total Phase 1 & Phase 2, and Exxon Rozuma Phase 1) that was counted on all LNG supply projections for the 2020s. Puri's tweet seems to be him setting the stage for India long term LNG supply deals with Qatar.

Supermajors are aggressively competing to commit 30+ year capital to Qatar's LNG expansion despite stated goal to reduce fossil fuels production. It's not just Asian LNG buyers who are now once again committing long term capital to securing LNG supply, it's also supermajors all bidding to be able to commit big capex to part of Qatar Petroleum's 4.3 bcf/d LNG expansion. Qatar Petroleum received a lot of headlines following the their June 23 announcement on its LNG expansion [LINK] on how they received bids for double the equity being offered. And there were multiple reports that these are on much tougher terms for Qatar's partners. Qatar Petroleum CEO Saad Sherida Al-Kaabi specifically noted that, among the bidders, were Shell, Total and Exxon. Shell and Total have two of the most ambitious plans to reduce fossil fuels production in the 2020's, yet are competing to allocate long term capital to increase fossil fuels production. And Shell and Total are also two of the global LNG supply leaders. It has to be because they are seeing a bigger and sooner LNG supply gap.

Remember Qatar's has a massive expansion but India alone needs 3x the Qatar expansion LNG capacity. In addition to the competition to be Qatar Petroleum's partners, we remind that, while this is a massive 4.3 bcf/d LNG expansion, India alone sees its LNG import growing by ~13 bcf/d to 2030. The Qatar announcement reminded they see a LNG supply gap and continued high LNG prices. We had a 3 part tweet. (i) First, we highlighted [LINK] "1/3. #LNGSupplyGap coming. big support for @qatarpetroleum expansion to add 4.3 bcf/d LNG. but also say "there is a lack of investments that could cause a significant shortage in gas between 2025-2030" #NatGas #LNG". This is after QPC accounts for their big LNG expansion. The QPC release said "However, His Excellency Al-Kaabi voiced concern that during the global discussion on energy transition, there is a lack of investment in oil and gas projects, which could drive energy prices higher by stating that "while gas and LNG are important for the energy transition, there is a lack of investments that could cause a significant shortage in gas between 2025-2030, which in turn could cause a spike in the gas market." (ii) Second, this is a big 4.3 bcf/d expansion, but India alone has 3x the increase in LNG import demand. We tweeted [LINK] "2/3. Adding 4.3 bcf/d is big, but dwarfed by items like India. #Petronet gave 1st specific forecast for what it means if #NatGas is to be 15%



of energy mix by 2030 - India will need to increase #LNG imports by ~13 bcf/d. See SAF Group June 20 Energy Tidbits memo." (iii) Third, Qatar's supply gap warning is driven by the lack of investments in LNG supply. We agree, but note that the lack of investment is in great part due to the delays in both projects under construction and in FIDs that were supposed to be done in 2019. We tweeted [LINK] "3/3. #LNGSupplyGap is delay driven. \$TOT Mozambique Phase 1 delay has chain effect, backs up 5 bcf/d. See SAF Group Apr 28 blog Multiple Brownfield LNG FIDs Now Needed To Fill New #LNG Supply Gap From Mozambique Chaos? How About LNG Canada Phase 2? #NatGas."

Seems like many missed India's first specific LNG forecast to 2030. Our June 20, 2021 Energy Tidbits memo highlighted the first India forecast that we have seen to estimate the required growth in natural gas consumption and LNG imports if India is to meet its target for natural gas to be 15% of its energy mix by 2030. India will need to increase LNG imports by ~13 bcf/d or 3 times the size of the Qatar LNG expansion. Our June 6, 2021 Energy Tidbits noted the June 4 tweet from India's Energy Minister Dharmendra Pradhan [LINK] reinforcing the 15% goal "We are rapidly deploying natural gas in our energy mix with the aim to increase the share of natural gas from the current 6% to 15% by 2030." But last week, Petronet CEO AK Singh gave a specific forecast. Reuters report "LNG's share of Indian gas demand to rise to 70% by 2030: Petronet CEO" [LINK] included Petronet's forecast if India is to hit its target for natural gas to be 15% of energy mix by 2030. Singh forecasts India's natural gas consumption would increase from current 5.5 bcf/d to 22.6 bcf/d in 2030. And LNG shares would increase from 50% to 70% of natural gas consumption ie. an increase in LNG imports of ~13 bcf/d from just under 3 bcf/d to 15.8 bcf/d in 2030. Singh did not specifically note his assumption for India's natural gas production, but we can back into the assumption that India natural gas production grows from just under 3 bcf/d to 6.8 bcf/d. It was good to finally see India come out with a specific forecast for 2030 natural gas consumption and LNG imports if India is to get natural gas to 15% of its energy mix in 2030. Petronet's Singh forecasts India natural gas consumption to increase from 5.5 bcf/d to 22.6 bcf/d in 2030. This forecast is pretty close to our forecast in our Oct 23, 2019 blog "Finally, Some Visibility That India Is Moving Towards Its Target For Natural Gas To Be 15% Of Its Energy Mix By 2030". Here part of what we wrote in Oct 2019. "It's taken a year longer than we expected, but we are finally getting visibility that India is taking significant steps towards India's goal to have natural gas be 15% of its energy mix by 2030. On Wednesday, we posted a SAF blog [LINK] "Finally, Some Visibility That India Is Moving Towards Its Target For Natural Gas To Be 15% Of Its Energy Mix By 2030". Our 2019 blog estimate was for India natural gas demand to be 24.0 bcf/d in 2030 (vs Singh's 22.6 bcf/d) and for LNG import growth of +18.4 bcf/d to 2030 (vs Singh's +13 bcf/d). The difference in LNG would be due to our Oct 2019 forecast higher natural gas consumption by 1.4 bcf/d plus Singh forecasting India natural gas production +4 bcf/d to 2030. Note India production peaked at 4.6 bcf/d in 2010.

Bigger, nearer LNG supply gap + Asian buyers moving to long term LNG deals = LNG players forced to at least look at what brownfield LNG projects they could advance and move to FID. All we have seen since our April 28 blog is more validation of the bigger, nearer LNG supply gap. And now market participants (Asian LNG buyers) are reacting to the new data by locking up long term supply. Cheniere noted how the pickup in commercial engagement means they "are quite optimistic over the coming 12-18 months to make a substantial dent in that Stage 3 commercialization." Cheniere can't be the only LNG supplier having new commercial discussions. It's why we believe the Mozambique delays + Asian LNG buyers moving to long term deals will effectively force major LNG players to look to see if there are brownfield LNG projects they should look to advance. Prior to March/April, no one would think Shell or other major LNG players would be considering any new LNG FIDs in 2021. Covid forced all the big companies into capital reduction mode and debt reduction mode. But Brent oil is now solidly over \$70, and LNG prices are over \$13 this summer and the world's economic and oil and gas demand outlook are increasing with vaccinations. And we are starting to see companies move to increasing capex with the higher cash flows. The theme in Q3 reporting is going to be record or near record oil and gas cash flows, reduced debt levels and increasing returns to shareholders. And unless new mutations prevent vaccinations from returning the world to normal, we suspect that major LNG players, like other oil and gas companies, will be looking to increase capex as they approve 2022 budgets. The outlook for the future has changed dramatically in the last 8 months. The question facing major LNG players like Shell is should they look to FID new LNG brownfield projects in the face of an increasing LNG supply gap that is going to hit faster and harder and Asian LNG buyers prepared to do long term deals. We expect these decisions to be looked at before the end of 2021 for 2022 capex budget/releases. One wildcard that could force these decisions sooner is the already stressed out global supply chain. We have to believe that discussion there will be pressure for more Asian LNG buyer long term deals sooner than later.



For Canada, does the increasing LNG supply gap provide the opportunity to at least consider a LNG Canada Phase 2 FID over the next 6 months? Our view on Shell and other LNG players is unchanged since our April 28 blog. Shell is no different than any other major LNG supplier in always knowing the market and that the oil and gas outlook is much stronger than 9 months ago. Even 3 months post our April 28 blog, we haven't heard any significant talks on how major LNG players will be looking at FID for new brownfield LNG projects. We don't have any inside contacts at Shell or LNG Canada, but that is no different than when we looked at the LNG markets in September 2017 and saw the potential for Shell to FID LNG Canada in 2018. We posted a September 20, 2017 blog "China's Plan To Increase Natural Gas To 10% Of Its Energy Mix Is A Global Game Changer Including For BC LNG" [LINK]. Last time, it was a demand driven supply gap, this time, it's a supply driven supply gap. We have to believe any major LNG player, including Shell, will be at least looking at their brownfield LNG project list and seeing if they should look to advance FID later in 2021. Shell has LNG Canada Phase 2, which would add 2 additional trains or approx. 1.8 bcf/d. And an advantage to an FID would be that Shell would be able to commit to its existing contractors and fabricators for a continuous construction cycle following on LNG Canada Phase 1 ie. to help keep a lid on capital costs. We believe maintaining a continuous construction cycle is even more important given the stressed global supply chain. No one is talking about the need for these new brownfield LNG projects, but, unless some major change in views happen, we believe its inevitable that these brownfield LNG FID internal discussions will be happening in H2/21. Especially since the oil and gas price outlook is much stronger than it was in the fall and companies will be looking to increase capex in 2022 budgets.

A LNG Canada Phase 2 would be a big plus to Cdn natural gas. LNG Canada Phase 1 is a material natural gas development as its 1.8 bcf/d capacity represents approx. 20 to 25% of Cdn gas export volumes to the US. The EIA data shows US pipeline imports of Cdn natural gas as 6.83 bcf/d in 2020, 7.36 bcf/d in 2019, 7.70 bcf/d in 2018, 8.89 bcf/d in 2017, 7.97 bcf/d in 2016, 7.19 bcf/d in 2015 and 7.22 bcf/d in 2014. A LNG Canada Phase 2 FID would be a huge plus for Cdn natural gas. It would allow another ~1.8 bcf/d of Cdn natural gas to be priced against pricing points other than Henry Hub. And it would provide demand offset versus Trudeau if he moves to make electricity "emissions free" and not his prior "net zero emissions". Mozambique has been a game changer to LNG outlook creating a bigger and sooner LNG supply gap. And with a stronger tone to oil and natural gas prices in 2021, the LNG supply gap will at least provide the opportunity for Shell to consider FID for its brownfield LNG Canada Phase 2 and provide big support to Cdn natural gas for the back half of the 2020s. And perhaps if LNG Canada is exporting 3.6 bcf/d from two phases, it could help flip Cdn natural gas to a premium vs US natural gas especially if Biden is successful in reducing US domestic natural gas consumption for electricity. The next six months will be very interesting to watch for LNG markets and Cdn natural gas valuations. Imagine the future value of Cdn natural gas is there was visibility for 3.6 bcf/d of Western Canada natural gas to be exported to Asia.

• 01 Jun 2022 | 11:25 UTC

Global LNG contracting rush leaves Asian importers in tight spot

Featuring Eric Yep

A resurgence in LNG contracting is expected to result in many more deals being signed in the coming months as LNG importers in Asia and Europe, portfolio players and trading houses look to lock in long-term LNG prices before they start to rise again.

Asian LNG importers are seeking the protection of long-term contracts due to the volatility of spot markets, while European energy companies and utilities are looking to tie up gas supply to replace Russian volumes in the years ahead.

The market has decidedly moved in favor of LNG sellers. The narrative being pushed by LNG producers, both US LNG exporters and oil-linked producers like the Middle East, is that if Asian buyers do not lock in volumes in the next few months for post-2025 supply, they will lose out to Europe.

Some deals between South Korean importers and US LNG suppliers were announced at the World Gas Conference 2022 in Daegu last month, but several more purchases by Asian firms have not been made public. Counterparties are in various stages of negotiating more sale and purchase agreements, both new deals as well as old ones that are being finalized and which are likely to materialize in the coming months.

Japan's gas buyers are being driven by the need to switch out Russian volumes and expiring contracts, Chinese firms are covering spot exposure and securing demand from new LNG terminals, Indian companies need affordable gas to replace spot imports and some Southeast Asian firms are looking to enter the gas market for the first time.

Keeping natural gas prices low and affordable will be key to creating new demand and ensuring the role of gas in decarbonization, several executives said at the recent World Gas Conference in South Korea

Long-term prices

European buyers are hesitant to lock-in firm 20-year SPAs. Their gas requirement is focused in the short- to medium-term, with an eye on accelerating their switch to renewables in the long-

term. They are worried both about the impact of gas on net-zero goals and whether they will even need large volumes of gas for longer than 10 years.

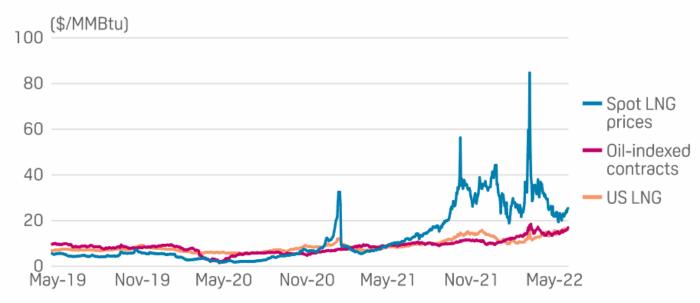
Portfolio players and traders have proposed to step in and assume the volume risk in long-term deals by shifting supply to Asia, but they are likely to demand much lower prices and price slopes than are being offered.

Meanwhile, pricing for long-term contracts appear to be on the rise.

So far, US LNG projects linked to Henry Hub, which have some of the largest LNG expansion capacity to bring onstream from 2025 onward, have benefited the most and signed the most number of SPAs with Asian buyers.

The flexibility and optimality of US LNG cargoes, geographical diversification and the competitiveness of Henry Hub-based prices compared to both oil-indexed and spot LNG in the current market are working strongly in their favor.

LNG PRICE FORMATION HAS EVOLVED RAPIDLY IN RECENT MONTHS



Note: Oil-indexed prices assume 13.5% Dated Brent; US LNG is Henry Hub plus costs, shipping Source: S&P Global Commodity Insights

While US project developers are just happy to be in a sweet spot, Qatar and other oil-linked LNG sellers are making the most of their strong negotiating position and are pushing hard for higher price slopes.

Offers in the market are in the vicinity of 15% Dated Brent, although no deals have been made public at these record levels.

Although US LNG prices may have set the price floor for long-term contracts, assuming oil and spot LNG prices remain high, traditional producers like Qatar and Australia still enjoy a distinct shipping advantage and supply certainty at a time when energy security is paramount.

Spot vs long-term

Any Asian buyer looking for short-term contracts before 2024-2025 is in a precarious situation. Southeast Asian utilities said they had been offered one-year contracts at slopes of as much as 25% Dated Brent for the next couple of years, much higher than their pain threshold of around \$15/MMBtu.

Several executives admitted they were unsure how long the market will remain in favor of producers and argued that keeping natural gas prices low and affordable was key to creating new demand and ensuring the role of gas in decarbonization.

A sustained period of \$20/MMBtu LNG will either incentivize the **energy transition** to renewables, or a reverse fuel switching to coal, depending on the policy framework of local economies.

LNG markets had to eventually tighten as part of the traditional commodity cycle after several years of rock-bottom LNG prices that even saw cargo cancellations to balance supply. The **Ukraine crisis** has only served to speed up the upward price trajectory to peak price levels, several long-term market observers pointed out.

With the number of liquefaction projects going into FID and the amount of new LNG production expected post-2025, the market is quite likely to slip into another period of low spot prices and high LNG supply, exacerbated by the shift to renewables.

This leaves importers with the age-old predicament: if a country has to introduce gas into the energy mix or a utility is planning a large wave of gas-fired power generation after 2025, should it lock in an SPA in the current market or just wait till prices fall again?

Shell to develop Crux project in Western Australia

May 30, 2022

Shell Australia Pty Ltd (Shell Australia) and its joint venture partner, SGH Energy, have taken a final investment decision to approve the development of the Crux natural gas field, off the coast of Western Australia. Crux will provide further supplies of natural gas to the existing Prelude floating liquefied natural gas (FLNG) facility

"This project forms an important part of Shell's integrated gas portfolio," said Wael Sawan, Integrated Gas, Renewables and Energy Solutions Director at Shell. "Natural gas from Crux will play a key role in helping Asian customers move from coal to gas as a cleaner-burning fuel. The project will help us to meet the increasing demand for LNG as the energy market transitions to a lower carbon future.

"The project will also boost our customers' security of supply, which is becoming an ever more significant consideration for global consumers."

"Developing the Crux project reinforces our commitment to Australia, including boosting the regional economy, creating jobs and providing training opportunities," said Shell Australia Chair Tony Nunan. "The use of Prelude's existing infrastructure enables significantly reduced development costs, making Crux competitive and commercially attractive."

The Crux field is in Commonwealth marine waters in the northern Browse Basin, 620 kilometres north-east of Broome. The development will consist of a platform operated remotely from Prelude,. Five wells will be drilled initially, and an export pipeline will connect the platform to Prelude, which is around 160 kilometres to the south-west of Crux.

Construction will start in 2022 and first gas is expected in 2027.

Notes to Editors:

- Global LNG demand is expected to continue to grow significantly. Asia is expected to create a significant part of this increased demand as domestic gas production declines, regional economies grow and energy sources with higher CO₂ emissions are replaced with LNG, helping to tackle concerns over air quality and to help progress towards carbon emissions targets.
- Natural gas has a critical role for many decades to come and plays an important role in the energy transition, enabling the decarbonisation of markets and sectors, both in Australia and internationally.
- The Crux project is operated by Shell Australia in joint venture partnership with SGH Energy.
- The project has been granted a production licence by the National Offshore Petroleum Titles Administrator (NOPTA) and the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) has accepted the Crux Offshore Project Proposal (OPP), being key regulatory approvals.
- Crux will have the capacity to supply the Prelude FLNG facility with up to 550 million standard cubic feet of gas per day (mmscfd).

Cautionary Note

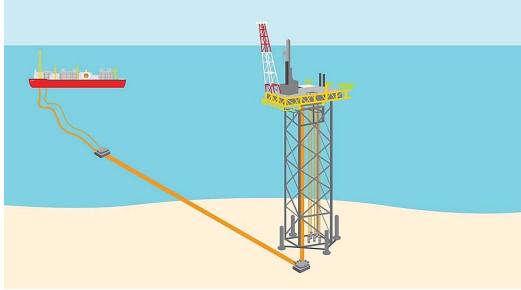
PROJECT OVERVIEW

Shell Australia is proposing to develop the Crux gas field, approximately 190 km off the Kimberley coast of Western Australia and 620 km north-east of Broome.

The Crux project forms an important part of Shell Australia's gas portfolio and remains an important backfill opportunity for the existing Prelude FLNG facility. The project consists of a <u>not normally manned (NNM)</u> platform with five production wells, in ocean waters approximately 165 m deep. The facility will be connected to Prelude via a 160km export pipeline.

Crux will be operated remotely from the Prelude FLNG facility.





Location Map

Project Concept Graphic

Timeline

The project has completed Front End Engineering Design (FEED) and is preparing to evaluate proposals for the Detailed Engineering and Execution phases, followed by the Final Investment Decision (FID).



Project schedule

About Shell

Shell Group has been in Australia since 1901 and has continued to evolve to meet the changing needs of the Australian and international markets. Today, Shell is focused on the exploration, development and production of liquefied natural gas (LNG), domestic gas and associated products. **Learn more here**.

Shell's joint venture partners for the Crux project are **SGH Energy** and **Daigas Group**.

About the OPP

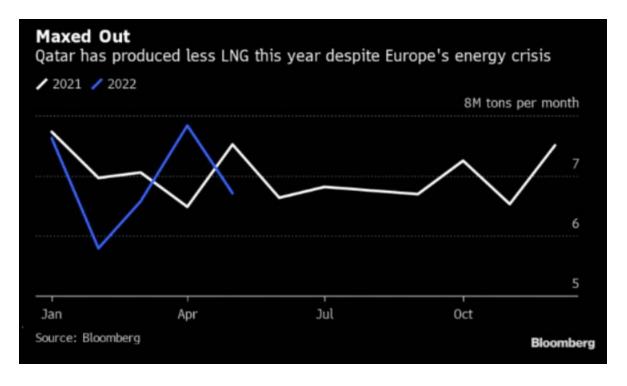
Regulatory approvals

Crux is an offshore project which requires Government approval. The Crux Offshore Project Proposal (OPP) was accepted by the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) in August 2020. Future approvals include activity specific Environment Plans which will be submitted to NOPSEMA.

By Verity Ratcliffe

(Bloomberg) -- Qatar's liquefied natural gas production dropped this year, despite requests from European countries hungry for bigger deliveries to replace Russian fuel. European utilities are scrambling to secure the commodity from producers around the world to reduce dependence on their top supplier after the invasion of Ukraine. The drop in output is partly due to several liquefaction trains being unavailable due to scheduled maintenance.

The Persian Gulf country exported less than 35 million tons of LNG between January and May, down from 36 million tons a year earlier, according to ship-tracking data compiled by Bloomberg. Qatar Energy didn't respond to a request for comment. European nations have tried to tap Qatar for more LNG and the US has attempted to lobby Doha on their behalf. Germany's Economy Minister Robert Habeck visited Qatar in March and received the emir, Sheikh Tamim bin Hamad Al Thani, in Berlin last month, but such efforts yielded modest results.



Qatar has said it won't be able to increase output until its expansion project, currently under construction, starts up. It refuses to sully its reputation as a reliable supplier by diverting cargoes already contracted to Asian buyers to Europe. Its liquefaction plants have a rated capacity of 77 million tons per year, but the country exported almost 84 million tons in 2021.

But while Qatar isn't exporting more LNG this year, it's generating more income from sales. Most of its long-term contracts are linked to oil prices, which were about 60% higher

in the first five months of 2022, compared with a year earlier. Benchmark European gas prices are about five times higher, which has also helped make one of the world's wealthiest countries even richer. Qatar was the world's biggest LNG producer last year, but Australia and the US exported more in May, according to data collected by Bloomberg.

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Pakistan Plans to Sign a Long-Term LNG Deal to Ease Gas Shortage 2022-06-01 08:30:02.698 GMT

By Faseeh Mangi

(Bloomberg) -- Pakistan aims to sign a long-term liquefied natural gas purchase deal in a bid to secure future supply and ease crippling blackouts.

The South Asian nation intends to float a tender to purchase one LNG cargo per month for 10 to 15 years, said Shahid Khaqan Abbasi who is overseeing the energy sector for Prime Minister Shehbaz Sharif. The government is still deciding the timeline for when to issue the tender, which they will use to gauge the market response and pricing, Abbasi said in an interview.

Sharif's government will also speak with LNG suppliers in the Middle East, including Qatar, the UAE, Saudi Arabia and Oman, for a long-term contract, according to Abbasi. Pakistan last week said it's not ruling out a potential gas supply agreement with Russia.

Pakistan depends on overseas LNG for power generation, and was hit particularly hard by the surge in spot prices and supply disruptions. The cash-strapped government resorted to planned blackouts to conserve its dwindling supply of fuel.

Read more: Global Energy Shortage Sets Stage for a Hot and Deadly Summer

Asian LNG spot prices are trading at a seasonal high after Russia's invasion of Ukraine exacerbated an already tight market. Pakistan was forced to purchase several expensive LNG shipments from the spot market to keep the lights on last month. Long-term deals are much cheaper than current spot rates, and may provide some relief for Pakistan's government.

Abbasi, who is a former prime minister and energy minister, signed several long-term LNG supply deals with Qatar, Eni SpA and Gunvor Group in 2016 and 2017.

However, Eni and Gunvor have canceled several scheduled cargoes to Pakistan in the last year, exacerbating the nation's energy shortage and fueling political instability. The suppliers backed out by paying a 30% penalty on the cost of the shipment, which is envisaged in the contracts if they cannot deliver. The government will keep the 30% clause in future deals, said Abbasi, who explained that it is standard in contracts. Pakistan is also open to signing a 30-year contract to make sure it has enough fuel to power its economy well into the future, said Abbasi. Today, the industry's longest deals rarely top 20 years.

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By Ellen Milligan and Jessica Shankleman (Bloomberg) -- Britain is in talks to reopen its biggest natural gas storage site as the war in Ukraine threatens to deepen the nation's energy crisis this winter, according to people familiar with the matter.

The UK government and Centrica Plc are considering stashing the fuel away at the Rough depot before the facility can be converted to store hydrogen in the future, said the people, who asked not to be identified because the information is private. Britain's top energy supplier said in 2017 that it would close Rough, which accounted for about 70% of the country's gas storage capacity.

The talks come just as the war in Ukraine threatens to disrupt supplies to Europe, a move that would have ripple effects in the UK. Some six million British households could face power cuts this winter if Russia cuts gas supplies to the European Union, the Times reported, citing a "reasonable" worst-case scenario drawn up by officials.

"In light of Russia's criminal invasion of Ukraine, it is sensible that all possible options are considered to maintain security of gas supply, and that includes the future of gas storage if required," a government spokesperson said by email. "In the longer-term, we are also exploring options and locations to store clean energy, such as hydrogen."

U.K.'s Lack of Gas Plan Leaves Country at Mercy of Global Market

The UK is facing a cost-of-living crisis, with energy bills soaring and inflation rising to the highest in 40 years. Energy market regulator, Ofgem, expects about 12 million households to be become fuel poor after a cap on energy bills jumps to a record £2,800 in October. Chancellor of the Exchequer Rishi Sunak announced a package of handouts to consumers last week, to help cushion the blow.

The opposition Labour party criticized the government for taking over three years to u-turn on its decision to cut gas storage capacity. "Once again, the Conservative Party has been caught out by a crisis that Labour has warned them about over and over again," said James Murray, Labour's shadow financial secretary to the Treasury.

More households will have difficulties paying their bills in the autumn when energy costs will rise, Derek Lickorish, chair of Utilita Energy Ltd., told Bloomberg Radio. "At the moment we would say probably half our consumers will have difficulty paying bills."

Britain doesn't expect to have to ration electricity this winter, a government spokesperson said Monday, adding that the nation may need to keep its remaining coal-fired power plants open to provide additional backup.

--With assistance from Rachel Morison and Caroline Hepker.

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To view this story in Bloomberg click here: https://blinks.bloomberg.com/news/stories/RCQKORTOAFB4 Rough Gas Storage Site May Be Reopened to Bolster Strategic Reserves 2021-10-27 16:37:18.826 GMT

By Matt Oliver

(Telegraph) -- Britain's biggest energy supplier is in talks with the Government about reopening a mothballed gas storage facility in a bid to protect the industry from surging power costs.

Centrica, the owner of British Gas, is seeking to restore the defunct Rough site off the Yorkshire Coast to boost the country's energy reserves.

It comes after gas prices spiked to as much as 11 times normal levels in the wake of surging demand.

The crisis has triggered 12 bankruptcies among UK energy companies - a wave of failures which will add £100 a year to household bills, according to Chris O'Shea, the chief executive of Centrica.

Rough previously housed 70pc of the UK's natural gas stores but was shut in 2017 when the company deemed it too expensive to maintain.

Speaking to a House of Lords committee, Mr O'Shea said: "We have an asset that we have been talking to the Government about converting back into a storage asset, the Rough field in the North Sea. "I would argue for resilience."

Mr O'Shea is lobbying for the site to get a new lease of life under the UK's plan to achieve "net zero" emissions by 2050.

Rough would eventually be used to store hydrogen, which is set to replace fossil fuels in the 2030s, but Centrica is also keen to use it for natural gas before then.

Mr O'Shea said: "In 2015-17 we realised there would be substantial investment required into the asset to maintain it as a storage asset.

"The returns that we could see didn't justify that investment. What we have been talking to the Government about now is how we make sure, as we move towards a hydrogen economy, that we have the right supply chain."

He claimed the company wanted "no subsidies whatsoever" for the scheme and that it could be paid for by charging consumers through their bills.

Ministers have been accused of leaving the UK "dependent on luck" following a reduction in gas storage capacity over the past decade which means the country cannot turn to reserves when prices rise.

Britain now has space to store just one week's-worth of gas, compared to an estimated 90 days in France and Germany.

The jump in wholesale prices has proved disastrous for energy providers because the amount they are able to charge households is capped,

meaning they are unable to immediately pass costs on.

A total of 12 companies have gone bust since the crisis began, affecting hundreds of thousands of customers who will be transferred to a new supplier. The costs involved will ultimately be added to household bills, which already stand at about £1,000 a year.

Mr O'Shea said: "The current retail market failures will put £100 on the bills of every single home in the UK.

"Whether that is a house in Belgravia or a studio flat in a deprived area of Glasgow, it will be the same amount - and that is the same with the policy costs at the moment.

"If we put these costs on bills at a flat rate then that will not achieve a just transition.

"That is not to say it is easy to simply decide to fund these things from general taxation.

"The Treasury has to balance the books. But we have to have that difficult conversation."

A Government source confirmed Centrica had come forward with proposals for storing hydrogen at Rough, but downplayed the idea the site could be used again for natural gas.

Kwasi Kwarteng, the Business Secretary, has previously dismissed concerns about gas reserves as a "red herring". He said no amount of storage could have mitigated wholesale price rises on the scale reached in the past few months.

The scheme put forward by Centrica would revamp the Rough facility at a reported cost of £1.6bn.

A Government spokesman said that no final decisions have been taken about Rough or other potential hydrogen storage facilities.

He added: "We are continuing to explore the future of the clean energy storage landscape.

"The UK Hydrogen Strategy considers the role of hydrogen storage in greater detail and whether further regulation or support mechanisms are needed to maximise its potential."

-0- Oct/27/2021 16:37 GMT

To view this story in Bloomberg click here: https://blinks.bloomberg.com/news/stories/R1NA6633O5C0

https://www.transmountain.com/news/2022/update-june-2022-capacity-announcement-for-the-trans-mountain-pipeline-system?utm source=Trans+Mountain+Updates&utm campaign=bd9ae99a8b-EMAIL CAMPAIGN 12 2 2021 15 6 COPY 02&utm medium=email&utm term=0 f287e4f791-bd9ae99a8b-30713878

Update: June 2022 Capacity Announcement for the Trans Mountain Pipeline System

Home > News

Tags Operations

Jun. 1, 2022

Total system nominations for the Trans Mountain Pipeline system are apportioned by 11 per cent for June 2022.

What is pipeline 'apportionment' and why is it important?

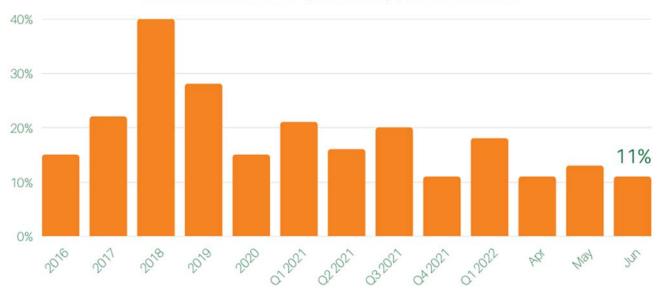
The energy sector around the world works on a monthly cycle. The Trans Mountain Pipeline is part of that cycle. Apportionment describes the amount of demand shippers place on the pipeline in excess of its available capacity. Here's a step-by-step guide to the apportionment determination that's carried out every month for the existing Trans Mountain Pipeline system.

- Each month our shippers submit requests for how much petroleum (crude oil and refined products) they want to ship through the pipeline to service their customers. These requests are called 'nominations'.
- Based on shippers' nominations, we then determine the 'capacity' available on the pipeline for the month.
 Determining pipeline capacity is complex. Capacity is affected by, among other things, the types of products that have been nominated, any pipeline system maintenance activities that will reduce flows that month and carry-over volumes that haven't completed their transit of the pipeline by month's end.
- Based on available pipeline capacity and the volume of shipper nominations we received, we calculate
 apportionment using a method accepted by the Canada Energy Regulator and forming part of our tariff. A
 tariff includes the terms and conditions under which the service of a pipeline is offered or provided,
 including the tolls, the rules and regulations, and the practices relating to specific services.
- If shipper nominations are less than pipeline capacity, the apportionment percentage to that destination is "zero" and all the product volumes nominated by shippers are accepted to be transported that month.
- If shipper nominations exceed pipeline capacity, the apportionment is a percentage greater than zero.

Trans Mountain Pipeline apportionment by the numbers

Apportionment of the Trans Mountain Pipeline system has been a regular monthly occurrence for the past decade. The chart below shows the apportionment for 2016, 2017, 2018, 2019, 2020, 2021 and apportionment to date for 2022.

Trans Mountain Pipeline Apportionment



When a pipeline experiences significant and prolonged apportionment like in the case of the existing Trans Mountain Pipeline, it's one signal that more capacity is needed. Apportionment can bring with it a discounting of prices as producers compete to sell what they can through the pipeline before having to use another pipeline or other modes of transport to another, less profitable market. It can also mean the buyers at the end of the pipeline are forced to source their shortfall of supply from alternate, less desirable sources.

Business case for expansion is strong

There is a strong and clear business case supporting the Trans Mountain Expansion Project. Our shippers have made long-term contract commitments ranging from 15 to 20 years that will underpin the cost of construction and the operating costs. The additional capacity offered by the expansion will be used to supply more crude oil and refined products markets in British Columbia and Washington State and to offshore markets in the Asia Pacific. Pipeline design and operations, including emergency response and preparedness for tanker movements are world-class, providing a safe and reliable supply of petroleum products to the markets served by the Trans Mountain Pipeline.

https://www.cenovus.com/news/news-releases/2022/05-31-22-cenovus-announces-restart-of-west-white-rose-project.html

Cenovus announces restart of West White Rose Project

Calgary, Alberta (May 31, 2022) – Cenovus Energy Inc. (TSX: CVE) (NYSE: CVE) and its partners have agreed to restart the West White Rose Project offshore Newfoundland and Labrador. First oil from the platform is anticipated in the first half of 2026, with peak production anticipated to reach approximately 80,000 barrels per day (bbls/d), 45,000 bbls/d net to Cenovus, by year-end 2029.

"The joint venture owners have worked together to significantly de-risk this project over the past 16 months. As a result, we're confident restarting West White Rose provides superior value for our shareholders compared with the option of abandonment and decommissioning," said Alex Pourbaix, Cenovus President & Chief Executive Officer. "With the project about 65% complete, combined with the work done over the past 16 months to firm up cost estimates and rework the project plan, we are confident in our decision to restart this project in 2023."

The restart decision builds on Cenovus's <u>September 2021 restructuring</u> of its working interests in the White Rose and Terra Nova fields, improving the strategic alignment across the two assets. Cenovus and Suncor, as part of the restructuring, have entered into an agreement whereby Cenovus will decrease its working interest in the White Rose field and satellite extensions while Suncor will take a larger stake, with the approval of the West White Rose project restarting. Cenovus has reduced its stake in the original field to 60% from 72.5% and to 56.375% from 68.875% in the satellite extensions. Nalcor has a 5% working interest in the satellite fields.

Contributing to the decision to restart the project is an amended royalty structure with the Government of Newfoundland and Labrador which provides safeguards to the project's economics in periods of low commodity prices.

The remaining capital required to achieve first oil is expected to be approximately \$2.0 billion to \$2.3 billion net to Cenovus. This includes construction costs of approximately \$1.6 billion to \$1.8 billion net to Cenovus for the completion of the West White Rose full platform, and about \$400 million to \$500 million net to Cenovus for subsea drilling and completions work and the *SeaRose* floating production, storage and offloading (FPSO) vessel's asset life extension. Capital to complete the project is largely offset by deferral of planned decommissioning costs of \$1.6 billion to \$1.8 billion over the next five years that had been assumed in the business plan presented at Cenovus's Investor Day in December 2021.

Included in the West White Rose Project capital estimate is \$120 million net to Cenovus to be spent in 2022 as the company works towards full restart of the West White Rose Project in 2023. This amount will be added to Cenovus's 2022 Corporate Guidance at its next update later this year.

About the West White Rose Project

The West White Rose Project will add an expected 14 years of production to the White Rose field and is about 65% complete. The field's production has tidewater access to global markets and receives Brent-like pricing. Construction includes the completion of the concrete gravity structure and topsides, which

will serve as the drilling platform for the project. Once installed, the platform will be tied into existing infrastructure. A scheduled 70-day drydock program for the *SeaRose* FPSO will proceed in 2024.

Advisory

Presentation Basis

Cenovus presents production volumes on a net to Cenovus before royalties basis, unless otherwise stated.

OFFSHORE

High-netback production with exposure to global oil prices

Atlantic

- Operator of the White Rose field and partner in Terra Nova
- Exposure to Brent-plus pricing
- De-risking portfolio with changes to working interest; proceeding with completion of the West White Rose Project and Terra Nova asset life extension

Asia Pacific

- Long-term, mostly fixed-price contracts with established partnerships
- Asian demand providing opportunities to leverage existing infrastructure for future development





Note: See Advisory.

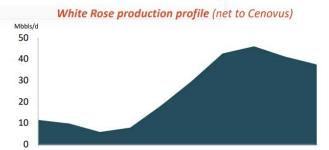
cenovus

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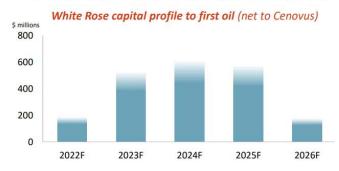
WEST WHITE ROSE PROJECT

Delivering incremental value in the Atlantic region

- Cenovus and partners are proceeding with completion of the West White Rose Project
- Cenovus has reduced its exposure to White Rose growth fields to working interest of ~56.4% (previously from ~68.9%)
- Expected go forward capital expenditures of \$2.0 \$2.3 billion, net to Cenovus, to first oil meet our investment criteria at US\$45 WTI
- First oil expected in 2026, with peak production of 45 Mbbls/d by late 2020's
- Potential for over \$1 billion in expected annual operating margin at US\$60 WTI, with operating costs of \$12 - \$14/bbl



2022F 2023F 2024F 2025F 2026F 2027F 2028F 2029F 2030F 2031F



Note: See Advisory.

https://www.reuters.com/article/petrobras-management/brazils-bolsonaro-may-need-months-to-replace-petrobras-management-sources-idUSL1N2XL0EL

INTEGRATED OIL & GAS

MAY 31, 20221:16 PMUPDATED 20 MINUTES AGO

Brazil's Bolsonaro may need months to replace Petrobras management -sources

By Rodrigo Viga Gaier, Sabrina Valle, Gram Slattery

RIO DE JANEIRO, May 31 (Reuters) - Brazilian President Jair Bolsonaro, seething about fuel prices as his poll standings slip ahead of October's presidential election, has intensified his calls to shake up the board and management of state-run oil company Petrobras.

But it will take at least 45 to 60 days to complete the necessary procedural and bureaucratic steps to install a new board and management, according to four people close to the current executive board. That would leave him just two months before the election to pressure the company to decouple its fuel prices from international market gyrations.

The right-wing Bolsonaro has deposed various Petrobras CEOs for failing to control rising fuel prices, but his hand-picked choices have ended up backing a free-market approach and opposing fuel-price controls, saying these have not worked in the past. The latest surveys show Bolsonaro now trailing by double digits in his reelection campaign.

Last week, Bolsonaro announced he was swapping out current Petrobras Chief Executive José Mauro Coelho after less than 40 days on the job. On Thursday, the president said any senior executives at the company for more than six months may also have to go.

The sources, who requested anonymity to discuss sensitive political and personnel matters, said one major obstacle to the management shakeup is an April decree Bolsonaro signed himself. It requires that new board members, including his latest CEO pick, must have their credentials evaluated by a Petrobras compliance and governance committee.

Only after that assessment can Petrobras schedule an extraordinary shareholders' meeting at which board members would be replaced, the sources said. Brazilian securities law requires that a notice for such a meeting must be sent to shareholders at least 30 days in advance.

Asked about the timeline, Petrobras outlined the procedural steps required to replace the current CEO, which include a shareholder vote on eight of Petrobras' 11 board seats.

Kazakhstan's Crude Production Drops by 220k B/D on Maintenance 2022-05-24 16:52:31.40 GMT

By Julian Lee

(Bloomberg) -- Crude production in the Central Asian nation dropped in recent days, and is likely to fall further as the Kashagan field is halted completely for six weeks of work.

- * Daily production fell to about 227k tons on Sunday and Monday from an average of 256k tons the previous week, according to figures reported by the nation's Information-Analytical Centre of Oil & Gas
- ** That's a drop to about 1.73m b/d from 1.95m, using a conversion factor of 7.3 barrels a ton
- * Output drop is related to maintenance work at the Kashagan field, according to Reuters
- * Maintenance at the Kashagan field was scheduled to begin on June 1 and run until the middle of July
- * Work will lead to a complete stoppage in production at the project, which was running at about 400k b/d
- --With assistance from Nariman Gizitdinov.

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https://www.rbc.ru/opinions/business/30/05/2022/629121949a79475c1eb32a2c

opinion , May 30, 00:01 30 346 Share

Leonid Fedun

New paradigm of the Russian oil industry

The necessary conditions for the domestic oil industry to be able not only to survive, but also to develop, are budgetary and production adaptability, as well as an agreement with our partners in OPEC +

There is a common expression: any crisis is not only tragic problems, but also some opportunities for future development. My experience of coping with the four previous politico-economic upheavals seemed to confirm this - always managed to find solutions that allowed me to remain optimistic and move forward, but this time everything looked different. The expropriation of gold and foreign exchange reserves (GFR) and the escalation of sanctions pressure, the collapse of industrial relations and trade logistics did not leave even a hint of at least some positive. However, now, three months after the start of the special operation in Ukraine, it seems to me that the outlines of a new reality in which the Russian oil industry can not only survive, but even develop, have begun to vaguely appear.

The current economic model of the Russian oil industry took shape in the early 2000s. Privatization, real competition among oil companies, plus a generally favorable price environment created the preconditions for a rapid growth in hydrocarbon production and processing. Moreover, the growth of quality, based on modern technologies that allow you to control the cost of production and increase the depth of processing. But rapid growth has also given rise to problems, including the specter of the so-called Dutch disease, when growing foreign exchange earnings could lead to a strengthening of the ruble and, accordingly, a weakening of export efficiency and the competitiveness of the domestic market. The way out was traditional - the introduction of the so-called budget rule, according to which approximately 50% of all taxes collected from the oil industry were withdrawn to the gold reserves of the Central Bank of Russia and the National Welfare Fund. As a result, if extremely simplified, the mechanism for distributing the revenues of oil companies is as follows: 40% are operating and capital costs plus profit, 30% are revenues to the Russian budget, and 30% are in the country's foreign exchange reserves. The latter are, in fact, loan obligations, mainly by the US Federal Reserve and the EU Central Bank. It turned out that during the existence of the budget rule, about a billion tons of black gold was lent to ensure the responsible obligations of Western governments. Now, as it turned out, there is neither responsibility nor obligations and, accordingly, there are no financial resources accumulated by our country. Their future, as gamers say, is "hidden in the fog of war."

What conclusions follow from this and where is the positive, albeit vague, declared by the author?

First, the entire post-Bretton Woods monetary system of global economic ties has been called into question. Within its framework, the former metropolises, in fact, emitted inflation by issuing unsecured sovereign debt, which were exchanged for goods and raw materials from developing countries. Economic science and consultants from the same metropolises convinced of the inviolability and absolute reliability of such an exchange. Moreover, developing economies were encouraged in every possible way to build up other people's debt obligations in national reserve funds.

At the same time, the fact was hushed up that if you build up other people's sovereign debts, then you lose part of your sovereignty. Iran, Venezuela and now Russia have become a clear illustration of the fact that financial security depends on political expediency. In the coming years, we will see a series of tectonic shifts in the global financial system. The first of these occurred back in 2008, without any connection with the current political realities. It is clear that developing economies with multi-billion dollar foreign exchange savings will need decades to change the paradigm of economic development. But the process has already started. And it would be strange if our country did not actively lead it.

Second, let's ask ourselves: why produce and export more goods than is necessary for dynamic economic growth and current prosperity? To secure the future? But, in my opinion, it is more rational to save unextracted reserves of raw materials for future consumption and create infrastructural reserves than to accumulate doubtful debt obligations, which, moreover, depreciate annually due to devaluation beyond your control. I note right away that with a high degree of probability the need for raw materials will increase in the coming decades and their cost will correlate with real inflation. (By the way, it's very funny to see how those politicians who talked about hydrocarbons as a product with a "doubtful" cost and the onset of a "hydrocarbon-free" era,

export 7-8 million without losses for the state budget, domestic consumption and imports. Let's return to the discussion that took place on the eve of the OPEC+ agreement. What is better - to sell 10 barrels. raw for \$50 or seven, but for \$80? So now. Should we try to maintain pre-crisis export volumes by agreeing to 30% and sometimes even 40% discounts?

At the same time, buyers, under the talk of an oil embargo, will try to institutionalize these discounts with the help of tariff regulation tools.

In the face of a political storm, it is extremely important to keep the OPEC + agreement. Only Arab producers have free capacities capable of partially replacing Russian oil exports in the short term. There is no doubt that it would be wise to coordinate all subsequent steps to optimize oil supplies with our partners under the agreement. Over time, as global demand for hydrocarbons grows and export infrastructure develops, oriented to the east, Russia will have the opportunity to increase oil production again, while maintaining the OPEC + interaction format.

A few words about the Iranian experience of survival under the conditions of total sanctions. The main conclusion is that different weight categories should determine different approaches to adaptation. Russia's share in the global oil balance is three times higher than Iran's. It is very difficult to replace it without serious social upheavals. Therefore, the use of barter deals is a rather dubious measure for our oilmen. It is extremely beneficial for buyers, but not for exporters, although now many consider intergovernmental agreements almost like a panacea.

In my opinion, it is more important to focus on logistical problems. First of all - on insurance and reinsurance of ships and cargoes. The increase in the cost of chartering ships, huge discounts on the cost of consignments, to a certain extent, are associated with sanctions restrictions in carriers' liability insurance.

Another important step could be to increase the capacity of the national tanker fleet, including river-sea tankers, to create alternative transport corridors for Russian oil exports through Turkey, Iran and the countries of Central Asia.

The highly flexible and decentralized Iranian export system should also be mentioned. This experience is undoubtedly useful in the face of increasing economic pressure and "secondary" sanctions.

Thirdly, in the context of the pandemic, and now the sanctions restrictions, our oil companies are forced to adapt to the external situation - either to reduce oil production by shutting down wells and freezing development projects, or to launch them back, increasing production and exports if necessary. Such a flexible system is an undoubted achievement that allows balancing supply and demand in the global market and, consequently, increasing budget revenues for both the country and companies. But this flexibility comes at a price: high costs for shutting down and restarting wells and maintaining infrastructure systems. Unfortunately, the current tax system does not allow them to be taken into account. I understand that the topic of improving the tax system in the Ministry of Finance is, to put it mildly, unpopular. But if we want to adapt the Russian oil industry to the new reality, then sooner or later this will have to be done. What's more, you don't have to think of anything. The existing AIT regime allows maintaining production flexibility and ensuring the budget revenues of the Russian Federation. It just needs to become the dominant fiscal instrument.

As they say, there are times in which you can just live, and there are those in which you have to survive. I really hope that our oil industry will be able not only to survive, but also to develop. The conditions for this are budgetary and operational agility, as well as an agreement with our OPEC+ partners.

about the author



LEONID FEDUN

PhD in Philosophy

The point of view of the authors whose articles are published in the "Opinions" section may not coincide with the opinion of the editors.

Подробнее на РБК:

https://www.rbc.ru/opinions/business/30/05/2022/629121949a79475c1eb32a2c

https://www.wsj.com/articles/chevron-ceo-sees-russian-oil-output-falling-after-exit-of-western-firms-11654344001

Chevron CEO Sees Russian Oil Output Falling After Exit of Western Firms

Russia still has buyers for its oil, but will face difficulty overcoming loss of western technology and capital, Mike Wirth says



Chevron CEO Mike Wirth said talks with big shareholders recently have focused on how the industry is ensuring that the world has enough energy.PHOTO: F. CARTER SMITH/BLOOMBERG NEWS

By Collin EatonFollow

June 4, 2022 8:00 am ET

Russia is still finding a home for much of its oil despite <u>expanding sanctions</u>, but its production likely will diminish following the departure of western oil companies, <u>Chevron</u> Corp. <u>CVX</u> 0.91% ▲ Chief Executive Mike Wirth said.

In a meeting with Wall Street Journal reporters and editors this week, Mr. Wirth noted that many countries continued to buy crude from Russia, one of the world's top oil producers along with the U.S. and Saudi Arabia.

But he said that it would be difficult for Russia to overcome the loss of western technology and capital, noting that other once-large oil producers have seen output fall after sanctions and the pullout of international oil companies.

"If you look at Iran and Venezuela, two other examples of large producers that have come under sanctions and have been pretty well cut off from the same kinds of investments and technology, their productive capacity degrades over time," Mr. Wirth said.

After decades of carving out footholds in Russia's oil business, <u>BP PLC, Shell PLC and Exxon Mobil</u> Corp. <u>said they would exit their operations</u> in the country after Russia's invasion of Ukraine began in late February. A few weeks later, oil-field services giants <u>Halliburton Co., Baker Hughes Co.</u> and <u>Schlumberger Ltd.</u>, which provide equipment and workers needed to extract oil, all <u>said they would suspend</u> new investments in Russia.

Chevron didn't have any sizable operations in Russia and was the least affected major oil company.

The European Union is planning to move forward with a partial embargo of Russian oil, and many western refiners have stopped buying supplies from Russia. Even so, Mr. Wirth said Russian energy products are still finding willing buyers around the world at discounted prices, and so oil-market participants for now are responding to the prospect of reduced supply, rather than a large drop in oil production. Russian oil is still flowing as some shippers and refiners https://doi.org/10.1001/journal.org/

The Organization of the Petroleum Exporting Countries and other oil producers aligned with it this week agreed to <u>an increase in oil production</u> later this summer that was larger than anticipated, which could lead Saudi Arabia to boost output.

President <u>Biden</u> had earlier called for OPEC to increase production in response to rising energy prices, but the group had rebuffed his requests. The new commitments were seen this week as a move that could pave the way for Mr. Biden to visit Saudi Arabia later this month, as the U.S. and the kingdom <u>seek to reset what has recently been a strained relationship</u>.

Mr. Wirth said if Mr. Biden wanted to see global oil supplies rise, Saudi Arabia was among the very few producers with spare capacity to bring more crude to market quickly.

"This is the role Saudi has historically played," Mr. Wirth said. "In the context of the broader relationship and whatever discussions may be ongoing, if that can lead to more supply into the market, that's a positive outcome for world energy markets."

Mr. Wirth, who has been Chevron's CEO since 2018, said while investors are still interested in the San Ramon, Calif.-based oil major's strategy to reduce carbon emissions from its operations, the thrust of the company's discussions with some of its largest shareholders has recently shifted to how the industry is ensuring the world has enough energy.

"We can't just chase only low-carbon energy when that's the popular thing and now when fundamentals are good in our traditional business, we can't just set that aside and say we're just going to drill, drill," he said.

Chevron, he said, is working to find a balance between those two priorities while returning cash to shareholders following several years in which the U.S. oil industry lagged behind the broader market in returns. Chevron in April said that it made \$6.3 billion in profit during the first quarter, its highest in almost a decade, and that it was buying back shares at the upper end of a \$5 billion-to-\$10 billion range set for this year.

"We're back now into better times and we need to return cash to the people who own the company," he said.

Write to Collin Eaton at collin.eaton@wsj.com

29th OPEC and non-OPEC Ministerial Meeting

No 12/2022 Vienna, Austria 02 Jun 2022

The 29th OPEC and non-OPEC Ministerial Meeting was held via videoconference on 2 June 2022. The Meeting noted the most recent reopening from lockdowns in major global economic centers. It further noted that global refinery intake is expected to increase after seasonal maintenance. The Meeting highlighted the importance of stable and balanced markets for both crude oil and refined products.

The Meeting therefore resolved to:

- 1. Reaffirm the decision of the 10th OPEC and non-OPEC Ministerial meeting on 12 April 2020 and further endorsed in subsequent meetings, including the 19th OPEC and non-OPEC Ministerial Meeting on the 18 July 2021.
- 2. Reconfirm the production adjustment plan and the monthly production adjustment mechanism approved at the 19th OPEC and non-OPEC Ministerial Meeting and the decision to adjust upward the monthly overall production by 0.432 mb/d for the month of July 2022.
- 3. Advance the planned overall production adjustment for the month of September and redistribute equally the 0.432 mb/d production increase over the months of July and August 2022. Therefore, July production will be adjusted upward by 0.648 mb/d as per the attached schedule.
- 4. Extend the compensation period until the end of December 2022 as requested by some underperforming countries and request that underperforming countries submit their plans by 17 June 2022. Compensation plans should be submitted in accordance with the statement of the 15th OPEC and non-OPEC Ministerial Meeting.
- 5. Reiterate the critical importance of adhering to full conformity and to the compensation mechanism.
- 6. Hold the 30th OPEC and non-OPEC Ministerial Meeting on 30 June 2022.

Production table

	July 2022 Required	Production
	Algeria	1039
	Angola	1502
9	Congo	320
	Eq.Guinea	125
ı	Gabon	183
ij	Iraq	4580
ĺ	Kuwait	2768
	Nigeria	1799
N	Saudi Arabia	10833
N	UAE	3127
H	Azerbaijan	706
	Bahrain	202
	Brunei	100
ī	Kazakhstan	1680
	Malaysia	585
B	Mexico	1753
ı	Oman	868
	Russia	10833
	Sudan	74
	South Sudan	128
	OPEC 10	26276
	Non-OPEC	16930
	OPEC+	43206

Algeria Angola	June 2022 Required Production	
Algeria Guinea	1023	
Angola	1480	
Congo	315	
Eq.Guinea	123	
Gabon di Arabia	18133	
Iraq ^{UAE}	4509	
Kuwait	2724	
Nigeria nei	1772	
Saudi Arabia	10663	
UAE ^{Malaysia}	3075	
Azerbaijan	696	
Bahrain	1993	
Brunei	99	
Kazakhstan	1655	
Malaysia	57730	
Mexico -	1753	
Oman	855	
Russia	10663	
Sudan	73	
South Sudan	126	
OPEC 10	25864	
Non-OPEC	16694	
OPEC+	42558	

Download document

https://www.whitehouse.gov/briefing-room/statements-releases/2022/06/02/president-biden-statement-on-the-un-mediated-truce-extension-in-yemen/

President Biden Statement on the UN-Mediated Truce Extension in Yemen

JUNE 02, 2022 STATEMENTS AND RELEASES

I welcome the announcement today of a continuation of the truce in the Yemen conflict. The last two months in Yemen, thanks to the truce brokered in April, have been among the most peaceful periods since this terrible war began seven years ago. Thousands of lives have been saved as fighting receded. For the first time in seven years, Yemenis are able to fly from Sana'a to destinations outside Yemen. We have also seen additional fuel ships moving through the port of Hudaydah, helping ease Yemen's fuel crisis. The parties to the conflict have now extended this truce for another two months, and it's important that we work from here to make it permanent.

Ending the war in Yemen has been a priority of my administration. I am grateful for the tireless work of my Special Envoy Tim Lenderking, and the UN's Envoy to Yemen, Hans Grundberg. Their work, however, is not finished. I urge all parties to move expeditiously towards a comprehensive and inclusive peace process. Our diplomacy will not rest until a permanent settlement is in place.

This truce also would not have been possible without cooperative diplomacy from across the region. Saudi Arabia demonstrated courageous leadership by taking initiatives early on to endorse and implement terms of the UN-led truce. Oman played a central role in hosting and facilitating dialogue. Egypt and Jordan opened their airports to flights from Yemen over the past month thereby enabling a key component of the truce process.

The United States will remain engaged in this process over the coming weeks and months. As we continue to support regional diplomacy to de-escalate tensions wherever possible in the Middle East region, the United States is also focused intensively on deterring threats to our friends and partners. Our friends can rely on the United States as the security partner of choice.

https://www.whitehouse.gov/briefing-room/statements-releases/2022/04/01/president-biden-statement-on-un-mediated-truce-in-yemen/

President Biden Statement on UN-Mediated Truce in Yemen

APRIL 01. 2022 STATEMENTS AND RELEASES

I welcome the announcement today of a two-month truce in the Yemen conflict. This initiative is a long-awaited reprieve for the Yemeni people. It entails a halt to all military activities by any party inside Yemen and across its borders, the entry of fuel ships into Hudaydah port, and the renewal of commercial flights to and from Saan'a to agreed destinations. These are important steps, but they are

not enough. The ceasefire must be adhered to, and as I have said before, it is imperative that we end this war. After seven years of conflict, negotiators must undertake the hard and necessary work to reach political compromises that can bring about an enduring future of peace for all the people of Yemen. I am grateful for the leadership role of Saudi Arabia and Oman in bringing this initiative to fruition before the Holy Month of Ramadan. I am also grateful for the hard work of the Yemeni Government and the confidence they have placed in UN-led mediation. The United States of America will work to deter threats to our friends and partners as we continue to strive for de-escalation and peace throughout the region. I wish the people of Yemen a peaceful Ramadan, and assure them of our ongoing commitment to help end this terrible war.

Excerpt from https://www.whitehouse.gov/briefing-room/press-briefings/2022/06/02/press-briefing-by-press-secretary-karine-jean-pierre-and-covid-19-response-coordinator-dr-ashish-jha/

Press Briefing by Press Secretary Karine Jean-Pierre and COVID-19 Response Coordinator Dr. Ashish Jha

JUNE 02, 2022 PRESS BRIEFINGS

James S. Brady Press Briefing Room

MS. JEAN-PIERRE: All right, guys. I have a few things for you at the top.

As the President conveyed earlier, we welcome the announcement today of a continuation of the truce in the Yemen conflict. The last two months in Yemen, thanks to the truce brokered in April, have been among the most peaceful periods since this terrible war began seven years ago. Thousands of lives have been saved as fighting receded.

For the first time in seven years, Yemenis are able to fly from Sana'a to destinations outside of Yemen. We have also seen additional fuel ships moving through the Port of Hudaydah, helping ease Yemen's fuel crisis. The parties to the conflict have now extended this truce for another two months, and it's important that work — that we work from here to make it permanent.

This truce would not happen — has — if it was not — it would not be possible without cooperation — the cooperative diplomacy from across the region. We specifically recognize the leadership of King Salman and the Crown Prince of Saudi Arabia in helping to consolidate the truce. The Omani Sultan also played a central role in hosting and facilitating dialogue. Egypt and Jordan opened their airports to flights from Yemen over the past month, thereby enabling a key component of the truce process.

The United States will remain engaged in this process over the coming weeks and months. Ending the war in Yemen has been a priority of this administration, and we urge all parties to move expeditiously towards a comprehensive and inclusive peace process. Our diplomacy will not rest until a permanent settlement is in place, and we will continue to support regional diplomacy to de-escalation tensions — to de-escalate tensions and deter threats to our friends and partners in the Middle East region.

Q What role did the U.S. play in persuading both OPEC-Plus to increase capacity?

MS. JEAN-PIERRE: That is a decision that O- — OPEC-Plus makes on their own. That is not something that we decide on or that we are involved in. As you know, you've heard us say this before, but we welcome — we do welcome the announcement today.

And, you know, we welcome the important decision that OPEC-Plus made to increase supply by more than 200,000 barrels per day in July and August, based on — on new market conditions. That's the analysis that they make. Right? That's not — that's for them, again, to decide.

This announcement brings forward the monthly production increase that was previously planned to take place in September. You know, the United States will continue to use all tools at our disposal to address energy — energy prices measures.

Q Secondly, does this development, coupled with the extension of the Yemen ceasefire, increase the chances that the President will visit Saudi Arabia?

MS. JEAN-PIERRE: I don't have anything for you. We don't have anything for you on any — any trip or plan for the President, or any trip to announce today. But I can assure you that what the President is focused on, first and foremost, is how his engagements with foreign leaders advance American interests. That is — that's as true with Saudi Arabia as anywhere else.

Just as he has engaged recently with leaders of ASEAN in Asia and this week with the Summit of the Americas as it's coming up next week in Los Angeles, the President will look for opportunities to engage with leaders from the Middle East region. And I just have nothing to announce for you today.

SAF Group created transcript of excerpts from Mike Muller (Head, Vitol Asia) on Gulf Intelligence PODCAST: Daily Energy Markets – June 5th hosted by Sean Evers (Managing Partner, Gulf Intelligence) on June 5, 2022 [LINK]

Items in "Italics" are SAF Group created transcript

At 3:30 min mark, Muller ".. what actually happens to OPEC+ output of course is a different matter. There is a commonly held view that really only the UAE and Saudi have spare capacity. And the debate now focuses on what exactly is that number, what can those two countries produce, sustainably. Because no one really knows, it's subsurface and it's not been tested other than a couple of surge production, high watermarks set by the Saudis to much fanfare, of course, just before Covid struck and those were in the high 12's. But the smart money is of the view that the Saudi current sustainable production limit is somewhere 11 point something and that's a pretty wide range. And yes, the quota gets them to 10.8 and above. And we must remind ourselves that most OPEC+ members are already at their limits and therefore this provides an open door for Saudi and UAE to make up the shortfall. Notably also, some may recall there was a month, which I believe was March, just a few months back, when the Saudi OSPs went very because of the formula and a lot of people felt that was too much at once and there was an undenomination. So I think there is a little up their sleeves as well."

At 25:50 min mark, Muller "Sean, I don't think we would be complete if we didn't talk about Iran a little bit, if I may. You have to take a view that the status quo is this, the US is allowing a certain amount of flows under carve out, which they have given silent okay to, maybe flows to China. And at the same time, there is also a certain amount of Venezuela flow that is condoned. But it would appear like, if we assume the JCPOA is more or less hacked out, that it's a political decision centering around the refusal of the Americans to accede to the request to drop the designation of the republican quard as a terrorist organization. This is a sticking point that is likely to persist. And I think most analysts now don't have any Iranian oil coming back this year. But it is another form of release in terms of oil ready to go now because there is so much being in storage and floating, hundred and something million barrels take your pick regarding where condensate is. Now I think the window of political opportunity for the Biden administration to reach a deal with Iran is already evaporated, if not gone, because we are getting into mid-terms soon. But if the mid-terms are dominated by needing to get gas prices lower in America, turning a somewhat greater blind eye to the sanction barrels flowing out and competing with Russia for that matter, is probably something that you might expect to see. And the US intervention in these flows has always been pretty sparse anyway. So whilst I don't think there is going to be a deal, I think the clamping down and arresting of ships even though there was some going on in the Aegean Sea and Mediterranean just recently and then a reciprocal arrest of ships in the Hormuz area. I think there is a chance that Uncle Sam might allow just allow a little bit more of that oil to flow, which is not good for markets because it creates a three-tier market if you like."

Evers: "Mike just on that point, if you've got those two pieces right – you've got the Iranian leak and now you've got these heavily discounted Russian barrels coming into Asia, coming into China and looking to increase, how should the Saudis and the Gulf Arabs look at that, it that a threat to their market? is it no bid deal over the mid term?"

Muller: "This is where this huge range of views comes in. If you believe things are going to remain pretty tight and there's not enough oil to go around because of spare capacity concerns and the whole underinvestment theme, then those consultants and those experts believe that we need those Iranian to come to the market because there is nowhere else to bring them from. If you believe the Saudis have an extra million barrels a day of spare capacity and there is going to be substantial demand destruction because of recessionary concerns and high commodity prices, then you don't. So take your pick on what perspective."

Prepared by SAF Group https://safgroup.ca/news-insights/

Libya Plans to Export 633K B/D of Crude in June: Program 2022-05-30 11:39:58.367 GMT

By Sherry Su and Prejula Prem (Bloomberg) -- Libya plans to export 19m bbl or 633k b/d of crude in June, according to loading program seen by Bloomberg.

- * Compares with 20.2m bbl or 652k b/d in May
- * Es Sider loadings will be 8.8m bbl in June, unchanged from May
- * Sarir/Mesla exports from Hariga will also be unchanged at 6m bbl in June
- * Amna/Sirtica exports from Las Lanuf will fall to 3m bbl from 3.6m bbl
- * Bouri loadings set at 600k bbl, vs 1.2m bbl in May
- * Al-Jurf loadings unchanged at 600k bbl
- * No exports of Sharara, Mellitah, Zueitina, Abu Attifel, Brega in May and June as export terminals remain closed

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8 hrs

A leak in the Sarir field line, Tobruk, leads to a loss of 22,000 barrels per day.

Due to the delay in budgets and the inability of the company's management to maintain the oil transmission lines in all the company's fields, as well as its affiliated facilities, which led to a leak in the fire bed line near the poster station 10 km and a loss of 22000 thousand barrels per day

As the company's management regrets the occurrence of such problems due to the delay in budgets, which would provide the company's ability to maintain all lines, stations and facilities transporting from fields to export ports, as well as carrying out chemical treatments for transmission lines, and it was not possible to download the smart brush to measure the thickness of the lines and take the necessary action regarding them.

The company's management also reports that all measures and steps have been taken by the relevant departments to stop this leakage.

The company's management thanks the Eighth Infantry Brigade of the General Command for informing about this leak and for providing assistance in it.

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https://www.globaltimes.cn/page/202206/1267260.shtml

Beijing enters mop-up phase after latest COVID-19 outbreak; students expected to return to school soon

By Global Times Published: Jun 04, 2022 08:27 PM Updated: Jun 04, 2022 08:18 PM



Shoppers walk through the re-opened Taikoo Li mall in Sanlitun, downtown Beijing on May 29, 2022. Major shopping malls in the city's Chaoyang district announced they had reopened starting from Sunday morning, with anti-epidemic measures in place. Beijing has effectively brought the latest COVID-19 epidemic under control. Photo: IC

Beijing has entered the mop-up phase after the latest outbreak of COVID-19, Beijing government spokesperson said at a news conference on Saturday. Students in Beijing are also expected to return to school in the near future provided there is no resurgence of the virus, according to officials.

Beijing reported 12 infections from 12 am to 3 pm Saturday, all detected within quarantined persons, with no cases found through community screenings.

A total of 1,812 infections have been reported in Beijing since the current round of the outbreak began on April 22. 1,442 have been cured and 378 are currently receiving treatment in hospitals.

The number of daily infections in Beijing has continued to decline, with the number of cured cases far higher than the number of new infections, Beijing government spokesperson Xu Hejian said, noting that the latest round of outbreak has entered its mop-up phase.

Officials also reminded residents that they should not lower their guard as there are still scattered cases found communities.

Residents have been asked not to leave Beijing during the Dragon Boat Festival holiday unless it's essential, not to visit medium- and high-risk areas for COVID-19, and not to gather for meals or parties.

In addition, small businesses and employees affected by the outbreak will receive government subsidies, officials confirmed.

Chaoyang district, the district with the most reported infections throughout this round of outbreak, announced that it will provide support to employees of service-based businesses that have suspended operations, and provide certain living allowances and lost-work subsidies for members of the public who contracted COVID-19 in business establishments.

Chaoyang district began mass remote work on May 5, which extended until May 30.

Students who have been home-based and taking classes online since the outbreak began are also expected to return to campuses in the near future.

"The return to school will start as soon as possible after gaokao, China's college entrance exams, if the situation of the epidemic is relatively under control," Li Yi, a spokesperson for the Beijing Municipal Education Commission, said on a radio program Friday. "The resumption of classes for grade-9 students will be prioritized. If conditions permit, the simultaneous resumption of classes for all grades of middle school, elementary school and kindergarten will not be ruled out either."

Beijing's 2022 gaokao will be held from June 7 to 10.

China's shipping industry readies for surge in demand as Shanghai restarts its export machine

- Export volumes are predicted to jump at Shanghai Port, the world's busiest in terms of container throughput, as the city reopens after a two-month lockdown
- Demand for ocean freight services and container shipping costs are expected to tick up as firms from Shanghai and surrounding areas rush to get goods out

Ji Siqi Published: 11:00pm, 3 Jun, 2022



Shanghai port is the world's busiest in terms of container throughput. Photo: Xinhua

China's shipping industry is bracing for an uptick in demand and freight costs as manufacturing activity in Shanghai roars back to life following the end of a two-month lockdown.

The Port of Shanghai is the world's busiest in terms of container throughput and a major gateway for goods produced in nearby manufacturing hubs.

Although it was operational during the citywide lockdown, capacity was largely restrained because of the reduced availability of goods.

Since April, most exports have been shipped from the nearby Port of Ningbo, but Shanghai Port has seen volume return in recent weeks, local shipping agents said.

"Lots of export cargo is again going through Shanghai now. Shanghai and Ningbo are 50/50," said Xu, a shipping agent based in Jiangsu province who gave only his surname.

The spot rate for 40-foot containers on the Asia-US west coast route continues to decrease, falling by 6 per cent to US\$10,762 this week due to low levels of exports.

The rate is at the lowest level since July last year and has fallen by more than 30 per cent since the start of the lockdown, though it is still 33 per cent higher than at the same time last year, according to Freightos Baltic Index.

Xu expects a small rise in container shipping costs following Shanghai's reopening, as exporters rush to send goods. But there would be no big fluctuations in prices because the traditional peak season for shipping – from late August to Lunar New Year eve – has yet to arrive, he added.

"There were not too many shipments being stranded [during the lockdowns], as Shanghai Port remained operational while Ningbo Port undertook the major export task, and the railway and inland ports also shared the burden," he said.

Ningbo Port completed 3.97 million twenty-foot equivalent units (TEUs) of container throughput in May, increasing 14.5 per cent year on year, the port said.

The May container throughput volume for Shanghai Port was 3.4096 million TEU, a year-on-year decrease of 10 per cent. Average daily throughput in May was 7 per cent higher than April, according to data from the Ministry of Transport, showing a slight improvement.

Judah Levine, head of research at Freightos, said Shanghai's reopening is likely to cause an increase in ocean demand and freight volumes, with carriers reportedly increasing capacity in anticipation.

"Despite the fall in spot rates, long-term transpacific contract rates have continued to increase, suggesting that demand remains strong among large importers, or at least that they are willing to pay more for the hope of more secure space through longer-term commitments as peak season begins," Levine said on Wednesday.

Bottlenecks on roads around Shanghai had been one of the biggest obstacles for businesses over the past two months, but a customer advisory from Danish shipping giant Maersk on Wednesday said trucking efficiency to and from the city will be gradually improved now the Covid-19 outbreak is under control.

Congestion at the port of Shanghai is also steadily normalising, though the level remains high for this time of the year, according to data from VesselsValue, a shipping data provider.

The average waiting time for tankers, bulkers and containerships was 34 hours at the end of May, down from a peak of 66 hours at the height of the outbreak in late April, VesselsValue data showed.

Up to 260,000 TEU of export cargo was not shipped from Shanghai in April because of the lockdown, and the delayed shipments will have to be sent as supply chains are reactivated, according to a note from British maritime consulting company Drewry last month.

"Given that the summer peak season is normally busier, anyway, the Shanghai rebound is likely to support a strong peak season and new capacity shortages," the note said.

Excerpt from Seeking Alpha transcript [LINK]

JPMorgan Chase & Co. (JPM) CEO Jamie Dimon Presents at Bernstein 38th Annual Strategic Decisions Conference (Transcript)

Jun. 01, 2022 2:28 PM ET

Unidentified Analyst

And on that front, what degree of difficulty do you attach to the task at hand in front of the Fed right now? And you mentioned storm clouds.

Jamie Dimon

Yes

Unidentified Analyst

Maybe you could talk about --

Jamie Dimon

I'm going to change the storm cloud because I said there were three things that we're going through, which are, I hate the word unprecedented, which are kind of unprecedented. And you got to put this in the back of your mind, when you haven't -- when you're seen things that have never happened before, then you have to question your ability to predict, okay. One is huge growth in this country driven by fiscal and monetary stimulation. That isn't a normal recovery, okay, and that fiscal stimulation is still in the pocketbooks of consumers, they're spending it, they're spending at very strong levels. And the data is completely distorted. It's distorted by inflation, it's distorted by -- they went from goods back to services, it's distorted by all these things; but jobs are plentiful, wages are going up, consumers are spending, the lower-income folks, not quite as much as before, but everybody else it looks like they have \$2 trillion dollars more, savings rate drop. I don't think that's going to stop their spending the six or nine months. And so, that to me is the bright clouds out there or -- but it's different. The Fed has to meet this now with raising rates and QT. And the new part of this isn't the raising rates, it's the QT. The QT has -- we've never had QE before like this.

Therefore, we've never had QT like this. So, you're looking at something they could be writing in the history books on for 50 years; what was QE, what worked, what didn't work? I think a lot of parts of QE backfired. I think the negative rates was probably a huge mistake for a whole bunch of different reasons I won't bore you with now. But they got to raise rates, and mind you, they have to do QT. They do not have a choice because there's so much liquidity in the system; they have to remove some of the liquidity to stop the speculation, to reduce home prices, stuff like that. And you've never been through QT, so, all the major buyer -- if you -- look, if you go back to 2010 and say, "Who are all the major buyers of treasures?"

All that time it was central banks, foreign exchange managers, banks who were topping up their liquidity profiles, because we had to for regulations. All three, it's -- it won't happen, the go-around. Banks are topped up, foreign exchange managers are topped up, the central bank would be selling, not buying, and governments have much for fiscal deficit to finance. That's a huge change in the flow of funds around the world. I don't know what the effect of that is. I'm prepared for -- and you're talking about minimum huge volatility. And the third thing is Ukraine; that you've not had a European land war since 1945, okay. And you -- and the complexity of Ukraine is we don't know the outcome.

I always make a list, you know, you predict the outcome. Well, you couldn't predict the outcome of Vietnam, Korea, Afghanistan, Iraq, and 10 other conflagrations; all wrong. Wars go bad. They go south, they have unintended consequences. And this happens to be really in the commodity markets of the world; wheat, oil, gas, and stuff like that which, in my view, will continue. We're not taking the proper actions to protect Europe from what's going to happen in oil in the short-run, and we're not taking the proper actions to protect you all what's going to oil in the next five years, which means it almost has to go up the price. We're not investing enough money to keep oil -- remember, and for all those who love climate change, if oil prices go to \$175 or \$150, which I kind of think is in the cards, to tell you the truth.

You know, not in the immediate run, but down the road, then CO2 won't go down, which is everyone predicts because people buy less oil and gas. It's going to go up because all those other countries out there, the poor countries who need oil and gas to feed and heat their citizens, will turn off -- will not buy oil and gas, they'll buy coal, that's what's going to happen. CO2 will go up, it's won't come down. And we're not dealing with these challenges. So, those three things; fiscally induced growth, QT, Ukraine war, so I'm going to change the storm clouds out there because I -- look, I'm an optimist. I said there's storm clouds, they're big storm clouds, they're -- it's a hurricane.

It's, we -- right now it's kind of sunny, things are doing fine, everyone thinks the Fed can handle this. That hurricane is right out there down the road coming our way. We just don't know if it's a minor one or Superstorm Sandy or -- yes, Sandy or Andrew, or something like that. And it's -- see, you better brace yourself. So, JPMorgan is bracing ourselves, and we're going to be very conservative in our balance sheet. And with all this capital uncertainty, we're going to have to take actions. And I kind of want to shed non-operating deposits again, which we can do in size to protect ourselves so we could serve clients in bad times. And so, that's the environment we're dealing with. And I'm -- I think it's okay to hope that it will all end up okay; I hope it, that's my goldilocks, I hope, who the hell knows.

Comparing the three mobility indicators

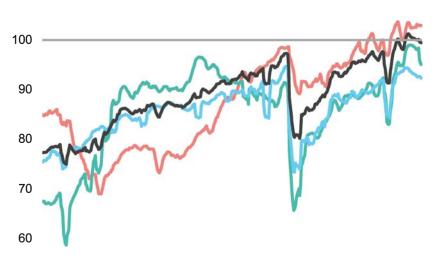
High fuel prices deter EU drivers, as mobility metrics fell

The Apple Mobility reports were discontinued on April 14, 2022. We will resume updating TomTom congestion data, which was previously updated to March

Google mobility index

Indexed to Jan – Feb 2020 (seven-day moving average)





50			
Mar 2021	Jul 2021	Nov 2021	Mar 2022

	Latest	Week ∆	Four-week Δ
Asia Pacific	103.0	0.4 (+0%)	-0.6 (-0.6%)
World	99.5	-0.7 (-0.7%)	-0.6 (-0.6%)
Americas	92.4	-0.7 (-0.7%)	-0.8 (-0.8%)
Europe	95.1	-3.4 (-3.5%)	0.0 (-0.0%)

Source: Google Community Mobility Report, BloombergNEF. Note: Data exclude China and Russia. Calculation includes retail & recreation, workplaces and transport hubs. Data updated to May 28. The world/regional index is weighted by the 2019 road fuels demand of each country.

TomTom congestion index

Indexed to the peak congestion of the average week in 2019 (five-day weekday moving average)



	Latest	Week Δ	Four-week Δ
Asia Pacific	81.6	-4.4 (-5.1%)	12.0 (+17.3%)
Europe	90.5	-15.5 (-14.6%)	-8.3 (-8.4%)
North America	69.4	-6.3 (-8.3%)	-8.7 (-11.1%)

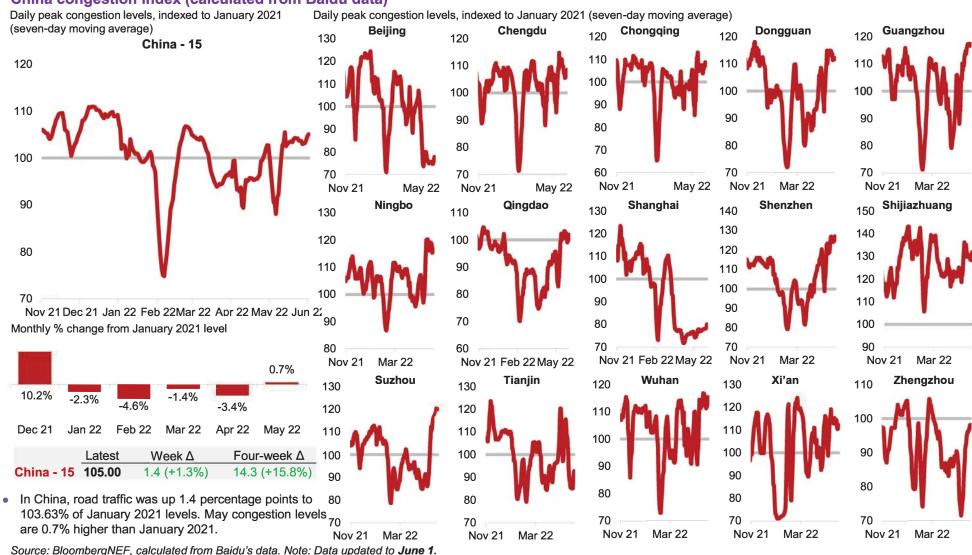
Source: TomTom, BloombergNEF. Note: Asia Pacific excludes China. Data updated to June 1.

China (Baidu)

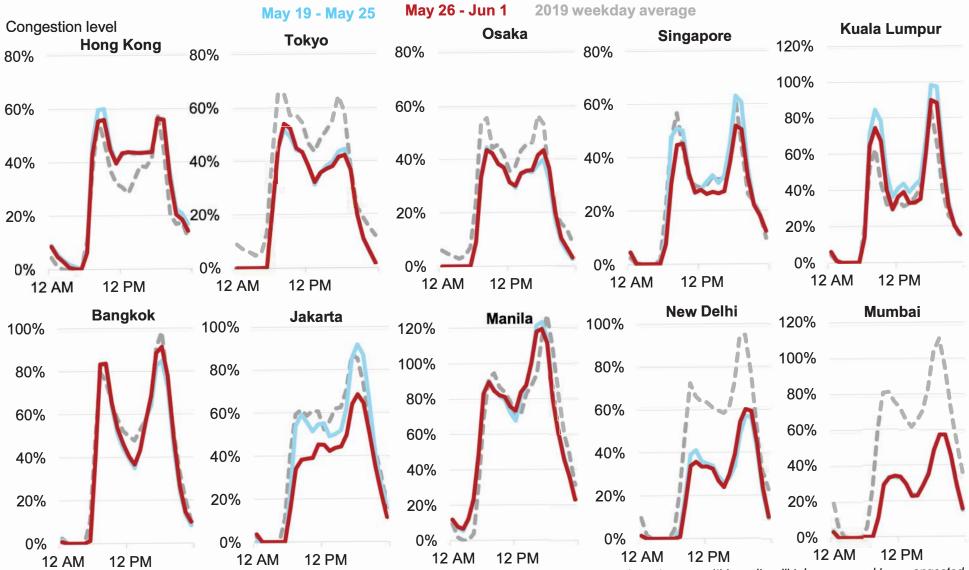
May congestion levels posted gains with news of lockdown restrictions easing

• City-level charts start from November 1, 2021. They display, in alphabetical order, the 15 cities with the highest number of vehicle registrations (excluding two- and three-wheelers). The China-15 congestion level is calculated by taking the weighted average of the congestion levels in the 15 cities and their vehicle registration numbers.

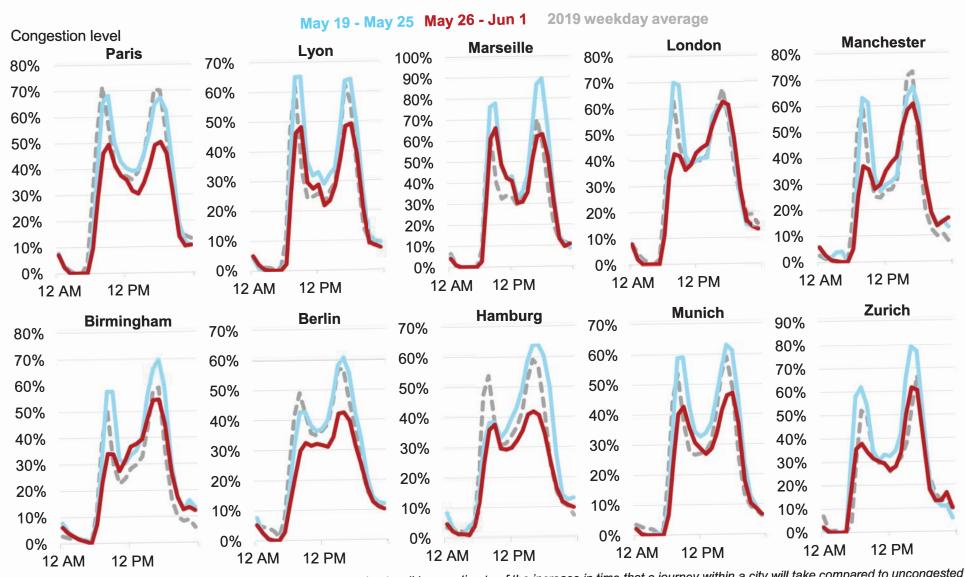
China congestion index (calculated from Baidu data)



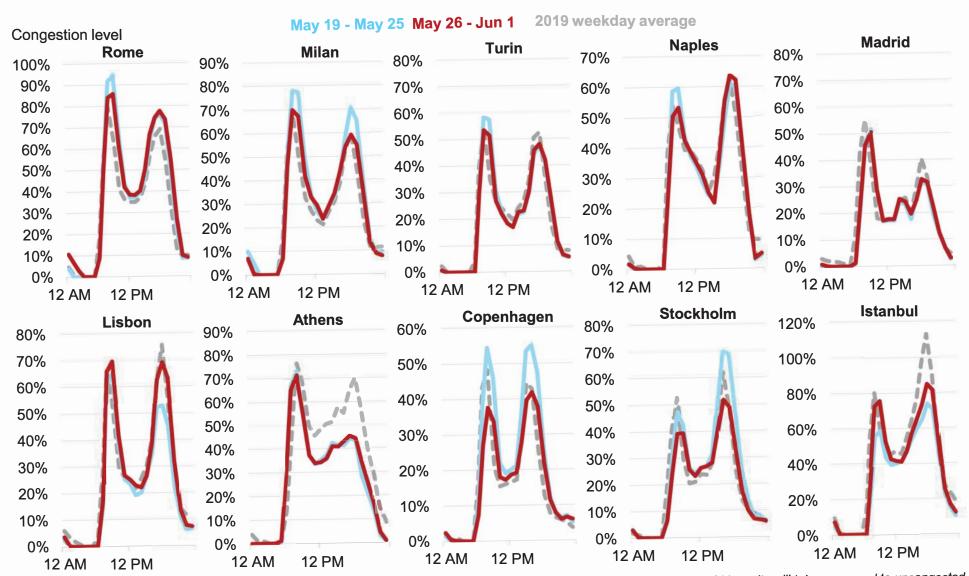
Major Asian cities (TomTom)



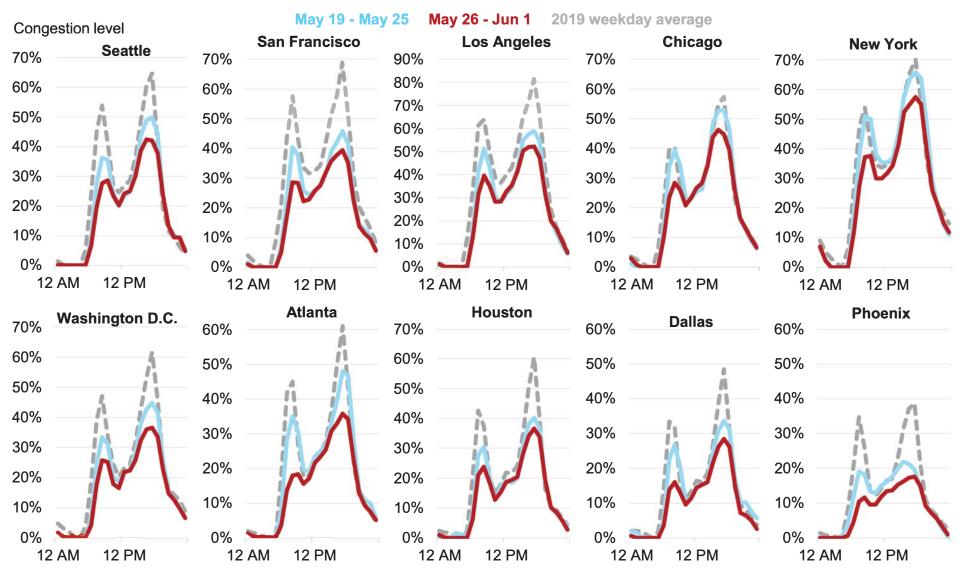
Major European cities (1/2) (TomTom)



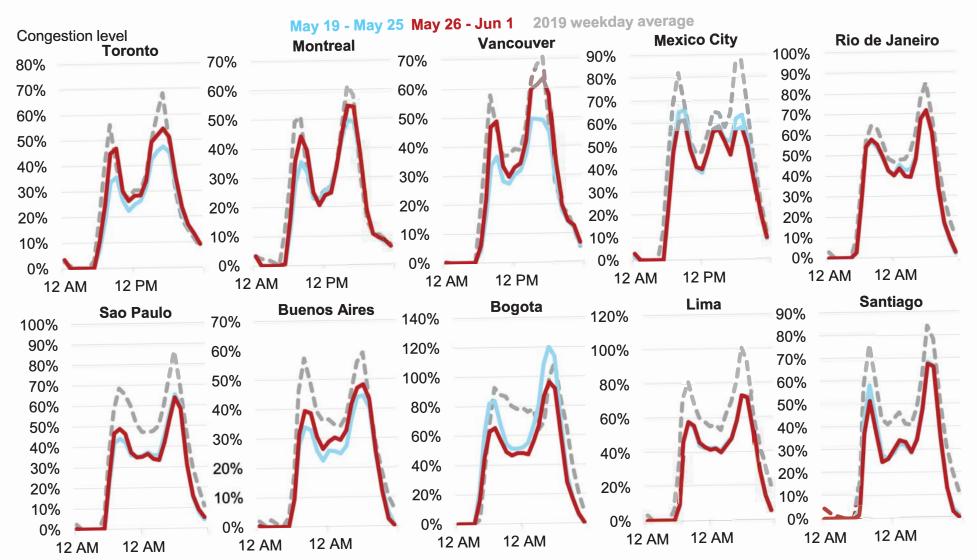
Major European cities (2/2) (TomTom)



Major Americas cities (1/2) (TomTom)



Major Americas cities (2/2) (TomTom)



US Oil Indicators Weekly

Takeaways: West Texas Intermediate front-month crude prices jumped to a new two-month high this week at just under \$115 per barrel as of Friday, May 27. US production held flat at 11.9 million barrels per day according to this week's Energy Information Administration report – the 12 million barrel mark remains elusive, even as the rig count continues to soar.

Optimism surrounding the trajectory of gasoline and jet fuel demand after last week's EIA report looks to have been fleeting, with implied demand figures for both fuels sliding this week. Jet fuel demand continues to hover around 90% of 2019 levels and gasoline demand is falling further behind the seasonal average as weekly product supplied once again slipped below 9 million barrels a day.

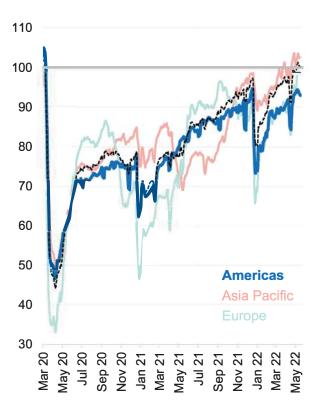
	Frequency	Source	Snapshot: May 27, 2022
Overall market indicators:			
Mobility	Daily	Google mobility	Mobility metrics fell across the Americas last week while flatlining around the rest of the world
Economic activity	Daily	New York MTA, Moovit, OpenTable, Prodco	NYC vehicle entries have surged to a new pandemic high amid stagnant subway ridership; US restaurant activity remains in line with 2019 levels
Crude oil prices	Daily	Bloomberg	WTI prices look to be closing the week on a strong note, with front-month contracts nearing a two-month high at just below \$115 per barrel
Oil demand:			
Road congestion & gasoline	Weekly, Hourly	US EIA, TomTom	Gasoline demand is showing signs of strain, falling further behind the seasonal average as product supplied once again slipped below 9 million barrels a day
Air travel & jet fuel	Daily	US TSA, FlightStats	Jet fuel demand continues to hover just under 90% of 2019 levels. The coming weeks will test whether travel can match typical seasonal gains amid high prices
Refinery operations	Daily	US EIA	US refiners are running at full tilt ahead of summer driving season. Gulf refiners boosted run rates to 97.4% last week the highest level since January 2020
Crude/product inventories	Weekly	US EIA	Crude inventories resumed their slide. Stockpiles at Cushing, Oklahoma, fell for a third straight week and dipped below 25 million barrels
Oil production	Weekly	US EIA	US crude production was unchanged, stuck at 11.9 million barrels a day for a second week, despite a continuing increase in the oil-focused rig count

Source: BloombergNEF. Note: Green signals an upturn from the disruption caused by Covid-19, red indicates downturn, orange indicates no/mixed change. In most cases, the colors are indicative of changes from the prior week.

Mobility metrics fell across the Americas last week while flatlining around the rest of the world

Google mobility index

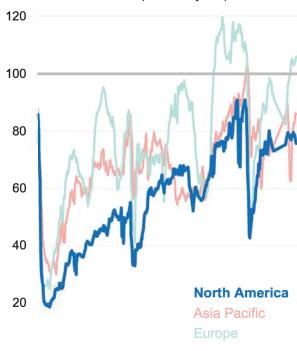
Indexed to Jan - Feb 2020 (seven day MA)



Source: Google Community Mobility Report, BloombergNEF. Note: Data exclude China and Russia. Calculation includes retail & recreation, workplaces, transport hubs. The world/regional index is weighted by the 2019 road fuels demand of each country. **Data updated to May 21.**

TomTom congestion index

Indexed to Jan 13, 2020 (seven day MA)

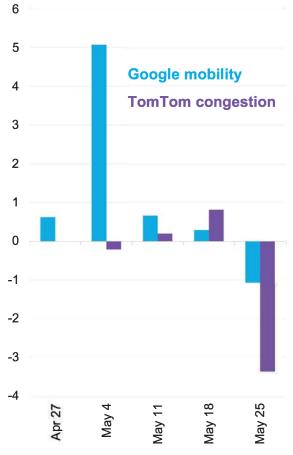


Mar 20
May 20
Jul 20
Sep 20
Jan 21
May 21
Jul 21
Sep 21
May 21
May 22
Mar 22
May 22

Source: BloombergNEF, TomTom Traffic Index. Note: 'Peak congestion index' is calculated by BNEF. Index is the arithmetic daily average of the hourly weekday peak congestion data of various cities within the region, compared to the 2019 average values. **Data updated to May 25.**

Americas week-on-week change

Weekly change in respective indexed value



Note: TomTom data not available for March 16 – April 22 as noted above.

Gasoline demand

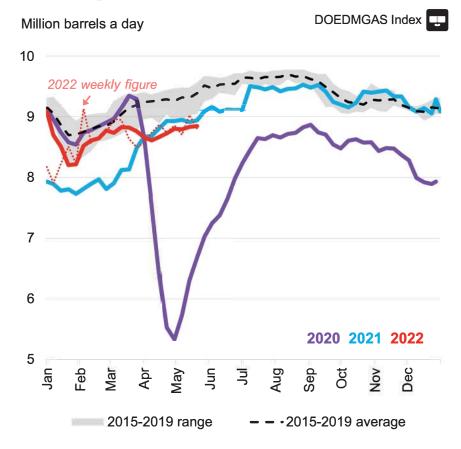
For more data on congestion around the world, see the BNEF Covid-19 Indicators: Road Traffic





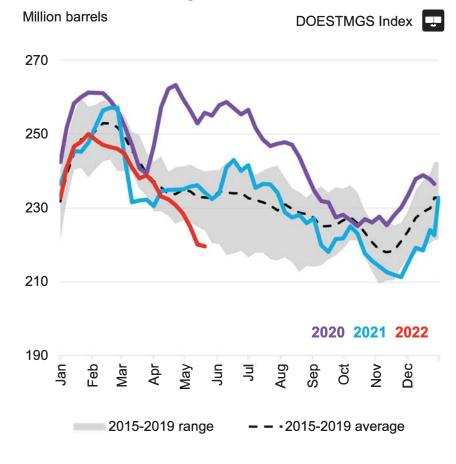
Gasoline demand is showing signs of strain, falling further behind the seasonal average as product supplied once again slipped below 9 million barrels a day

Implied gasoline demand*



Source: BloombergNEF, EIA; Note: *Based on the four-week moving average, except the 2022 weekly figure

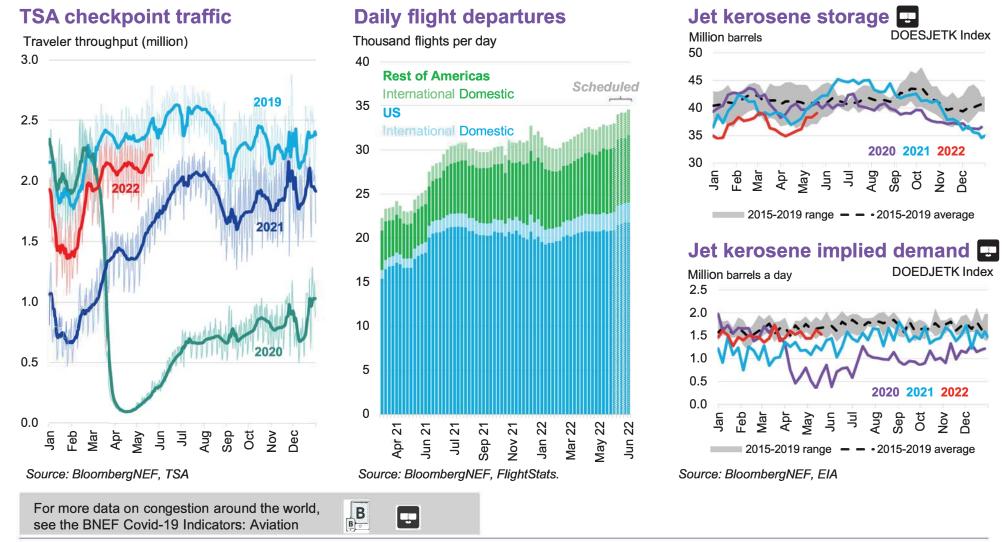
Gasoline inventory



Source: BloombergNEF, EIA

Jet fuel demand

Jet fuel demand continues to hover just under 90% of 2019 levels. The coming weeks will test whether travel can match typical seasonal gains amid high prices



Caixin China General Manufacturing PMI Press Release 2022.05





Caixin China General Manufacturing PMI™

Manufacturing sector conditions deteriorate at softer pace in May

May survey data signalled a move towards more stable operating conditions across China's manufacturing sector, as firms signalled notably softer falls in both production and new orders. Firms also registered a slower reduction in purchasing activity, though supply chain delays remained severe overall. Prices data meanwhile showed that the rate of input price inflation moderated but remained strong, but efforts to attract new business led to a renewed fall in selling prices.

Companies were more cautious around the 12-month outlook for output in May, with overall optimism slipping to a five-month low amid concerns over the longevity of COVID-19 restrictions and the war in Ukraine.

At 48.1 in May, the headline seasonally adjusted *Purchasing Managers' Index* TM (PMI^{TM}) – a composite indicator designed to provide a single-figure snapshot of operating conditions in the manufacturing economy – rose from a 26-month low of 46.0 in April and signalled a third successive monthly deterioration in business conditions. That said, the rate of decline was modest overall.

Helping to move the headline index upwards was a softer reduction in production during May. The rate of contraction eased notably compared to that seen in April, though was nonetheless the second-sharpest recorded since February 2020. Where lower output was reported, firms often attributed this to the ongoing pandemic and subsequent restrictions that had disrupted operations and logistics.

Total new orders fell for the third month running, albeit at a reduced rate. Notably, the latest drop in sales was the slowest seen over this period and only mild, with some firms noting a relative improvement in demand conditions since April. Underlying data indicated that weaker foreign demand was a key factor weighing on new business, as export orders continued to fall markedly, which some firms linked to difficulties in shipping items to clients.

Average suppliers' delivery times meanwhile continued to lengthen sharply in May, though delays were not as widespread as those seen in April. Panellists frequently mentioned that COVID-19 restrictions had weighed heavily on logistics and transport.

In line with the trend seen for output, purchasing activity fell at a slower, but still marked, rate in May. At the same time, inventories of both finished goods and purchased items fell at mild rates as firms looked to streamline stocks amid relatively muted demand conditions.

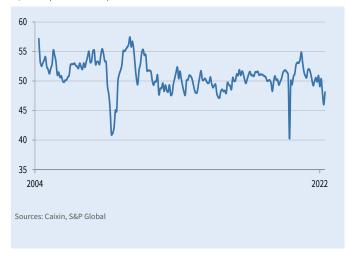
Lower production requirements and staff resignations meanwhile led to a further drop in employment across China's manufacturing sector. Disruptions to operations due to measures to contain the COVID-19 virus meanwhile led to a further increase in backlogs of work.

The rate of input cost inflation moderated for the second month in a row in May, but remained sharp overall. Firms often mentioned that expenses had risen due to higher costs for raw materials, transport and fuel. At the same time, selling prices fell for the first time in five months amid efforts to stimulate client demand. Though modest, the rate of discounting was the quickest seen since April 2020.

Business confidence regarding the 12-month outlook for production slipped to its lowest for five months in May. While many firms were confident of a strong post-pandemic recovery, others cited concerns over the time it will take to contain the virus as well as the Ukraine war.

China General Manufacturing PMI

sa, >50 = improvement since previous month

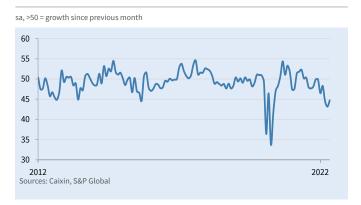


Key findings:

Output and new orders both decline at slower rates Suppliers' delivery times continue to lengthen markedly Output charges fall, despite further rise in costs

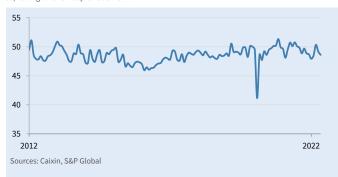


New Export Orders Index



Employment Index





Commenting on the China General Manufacturing PMI™ data, Dr. Wang Zhe, Senior Economist at Caixin Insight Group said:

"In May, the Caixin China General Manufacturing PMI came in at 48.1, up from 46 the previous month. Covid outbreaks in several regions across China continued to weigh on the economy. But the rate of contraction in manufacturing was lower than the previous month.

"Both manufacturing supply and demand contracted further. As the latest wave of outbreaks hasn't subsided, both supply and demand in the market have yet to improve. Both the gauges for output and total new orders rose in May from the previous month, but remained in negative territory. Demand was slightly stronger than supply. Overseas demand remained subdued. The measure for new export orders remained in contractionary territory for 10 consecutive months in May as Covid-19 outbreaks continued to impact transportation and logistics.

"Manufacturing employment weakened further. In nine of the past 10 months, the measure for employment was in contractionary territory. Notably, unlike most other gauges, the employment measure fell further into negative territory in May. Employment in the investment goods sector was especially weak. Market demand was also weak. Employers did not have strong motivation to increase hiring.

"Performance of the measures for input and output prices diverged. The prices of raw materials, fuel and freight remained high, adding to the cost pressure on manufacturers. The consumer goods sector was hit especially hard. The gauge for input prices remained in expansionary territory for 24 consecutive months. By comparison, the gauge for output prices fell into negative territory, dropping to its lowest since April 2020 due to weak market demand.

"Logistics was far from being normalized. Affected by the outbreaks and related control measures, the gauge for suppliers' delivery times was well below 50 in May and hit the second lowest since March 2020. Quantity of purchases further declined due to fallout from the outbreaks. Inventories of raw materials and finished goods also declined.

"Entrepreneurs remained optimistic. The measure for future output expectations fell to its lowest in five months in May and was lower than the long-term average. Overall, entrepreneurs were confident that the epidemic will be brought under control, but they still worried whether society and the economy can quickly return to normal. Also, they were concerned about the ongoing war between Russia and Ukraine.

"Overall, activity in the manufacturing sector improved in May, but stayed in contractionary territory as local Covid outbreaks continued. Demand was slightly stronger than supply. And domestic demand was slightly stronger than overseas demand, though both were in negative territory. The epidemic's impact on market supply and demand has transmitted to the labor market, which further weakened. Supply chains were disrupted, and logistics times lengthened further. The gap between costs and output prices further squeezed enterprises' profitability.

"The negative effects from the latest wave of domestic outbreaks may surpass those of 2020. It's necessary for policymakers to pay attention to employment and logistics. Removing obstacles in supply and industrial chains and promoting resumption of work and production will help to stabilize market entities and protect the labor market. Also, the government should not only offer support to the supply side, but also put subsidies for people whose income has been affected by the epidemic on the agenda."



Survey methodology

The Caixin China General Manufacturing PMI™ is compiled by S&P Global from responses to questionnaires sent to purchasing managers in a panel of around 500 private and state-owned manufacturers. The panel is stratified by detailed sector and company workforce size, based on contributions to GDP. For the purposes of this report, China is defined as mainland China, excluding Hong Kong SAR, Macao SAR and Taiwan

Survey responses are collected in the second half of each month and indicate the direction of change compared to the previous month. A diffusion index is calculated for each survey variable. The index is the sum of the percentage of 'higher' responses and half the percentage of 'unchanged' responses. The indices vary between 0 and 100, with a reading above 50 indicating an overall increase compared to the previous month, and below 50 an overall decrease. The indices are then seasonally adjusted.

The headline figure is the Purchasing Managers' Index™ (PMI). The PMI is a weighted average of the following five indices: New Orders (30%), Output (25%), Employment (20%), Suppliers' Delivery Times (15%) and Stocks of Purchases (10%). For the PMI calculation the Suppliers' Delivery Times Index is inverted so that it moves in a comparable direction to the other indices.

Underlying survey data are not revised after publication, but seasonal adjustment factors may be revised from time to time as appropriate which will affect the seasonally adjusted data series.

For more information on the survey methodology, please contact: economics@ihsmarkit.com.

Survey dates and history

Data were collected 12-23 May 2022. Data were first collected April 2004.

About PMI

Purchasing Managers' Index™ (PMI™) surveys are now available for over 40 countries and also for key regions including the eurozone. They are the most closely watched business surveys in the world, favoured by central banks, financial markets and business decision makers for their ability to provide up-to-date, accurate and often unique monthly indicators of economic trends.

https://ihsmarkit.com/products/pmi.html

About Caixin

Caixin is an all-in-one media group dedicated to providing financial and business news, data and information. Its multiple platforms cover quality news in both Chinese and English. Caixin Insight Group is a high-end financial research, data and service platform. It aims to be the builder of China's financial infrastructure in the new economic era.

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We are widely sought after by many of the world's leading organizations to provide credit ratings, benchmarks, analytics and workflow solutions in the global capital, commodity and automotive markets. With every one of our offerings, we help the world's leading organizations plan for tomorrow, today.

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Excerpt https://seekingalpha.com/article/4515872-united-airlines-holdings-inc-ual-ceo-scott-kirby-presentsbernstein-38th-annual-strategic

United Airlines Holdings, Inc. (UAL) CEO Scott Kirby Presents at Bernstein 38th Annual Strategic Decisions Conference - (Transcript)
Jun. 01, 2022 8:33 PM ET<u>United Airlines Holdings, Inc. (UAL)</u>



SA Transcripts

Scott Kirby

I'm going to go back to it again because this is a question we get, I'll start with the second one. Is the pricing so high that it's going to destroy demand? We're at the point in the last curve.

David Vernon

It's a much more.

Scott Kirby

And the short answer is no. We're back to 2014 pricing. By the way, 2013, '12, '11, '10, were higher everywhere you go back. We're just back to normal pricing. It feels like high pricing today because we're comparing to an artificial low coming off of the pandemic. The pandemic was the aberration, -like just -- this is back to the headline. We're returning to normal. The pandemic was the aberration. If you go look at this compared to a pandemic out of it and look at the pricing today, we're back to 2014 levels. We're back to normal levels.

I can also tell you that's sort of the macro view. The micro view, like I almost used the chart today, I decided not to do it because it was such a negative day in the market and figure out why waste it. But the chart would have shown you more about what -- it would have been actual data for June, July, August, September. Like -- we don't have great data further out you get, but I can tell you for sure, there is not a hint of evidence of weakness or any pricing resistance in our data. That doesn't mean it won't show up, something could change and happen. But there's not even a hint of that in the micro data.

Second -- the first part of the question was about corporate. And what we see is a real recovery. I think in the first week of the year, business travel was down 85%, but we're now approximately flat on business RASM contribution to 2019.

Now are we've guided to RASM up 23% to 25% in the quarter. That means leisure is obviously outperforming because business is flat, but it's on an up slope. And if you dig into the data more, it's really interesting, what you find is see this sort of chart that has an exponential increase in travel. companies sort of gradually come back and they're putting along. And then the is an inflection point where it really goes north. As they start -- I think, starting to realize, like I personally have, how important it is to travel to reconnect and get out and do things.

The other thing that I think is interesting, all this discussion about will business travel ever come back certainly when the pandemic first started, we were in a minority -- not just a minority of one and believing business travel will come back. I think a lot more people believe that today. But as people evolve, they said, we'll get back to visiting customers and clients when we can because we need to do that.

We need to be out front of our clients, we need to sell. But we're never going to do the internal company meetings that we did before. What we find is in a post-pandemic world, particularly in a world where you're allowing people to be hybrid workplace and not in the office all the time. Companies do more of that travel and intend to continue doing more of it because the only way to maintain if you're not all in the office all the time together, those getting off site where you're just with the people you work with for immersed in the culture for a longer period of time is even more important. And we already see that in our data.

So business travel is still -- to me, it's part of the investment story for airlines. By the way, the other way I think about it is on all this, like we're 300 basis points away in the second quarter, about 300 basis points away from our 2019 operating margin. That is in spite of the fact that fuel is at the current price is a \$10 billion incremental expense. That is in spite of the fact that the 777s have been grounded this quarter.

That is despite of the fact that business travel is still ramping. That is despite the fact that long-haul international to Europe, is not going to reach 100% until the testing requirement is removed. And in spite of the fact that Asia is still mostly shut down. We just got five things that are more than likely to get better, and we're almost back to 2019 levels. That's why we're so bullish.

David Vernon

Okay. But if you think about this notion of consumers eventually maybe not being able to take a fair increase and business travel kind of filling into that. The other dynamic that I'd love to dig into is the impact of premium and how you guys are approaching the premiumization I've heard?

Scott Kirby

Well, first, I can't help. I think your premise is wrong. I've been looking -- I started in my aviation career and economists at American Airlines. And I've looked at the economic analysis, 200 different times about price elasticity and demand, it's about minus 0.5. Let's deal with the old CEB business and leisure we're minus 0.7, minus 0.3, so it averages up to minus 0.5. All that -- which means when prices go up, revenue goes up, when prices go down, revenue goes down. Demand is inelastic for aviation.

So anyway, that was the premise. So I had to start with that. It's just -- I think it's a point that people miss for airlines. And by the way, while aviation revenues as a percentage of GDP are about 0.9% in the last few years before the pandemic, they used to be more like 1.4% back in the day.

So if you're worried about pricing as destroying demand, you're betting against history as being the reason. There's plenty of other things that can go wrong. I'm not saying there aren't, but that's like that's not the one that's going to cause this to be a problem.

In terms of premium, it is interesting, a premium demand -- premium leisure demand, in particular, is really -- has been strong throughout the pandemic. I think it's going to be sustainably strong. Once you start traveling in business class to Europe, it's hard to go back to flying in Coach and I'm sure that's -- and if you look across -- I look at a lot of other industries too, you see that that's not unique to airlines.

The Grand Wailea is almost impossible to get into unless you know someone, I know that because I'm trying to go and fortunately, I know Chris, that helped. But it's almost impossible to get into places like that and the prices are through the roof. I think that is step function increase -- we got -- people got used to it. We're not going back.

JUNE 1, 2022

Albany, NY

Governor Hochul Announces Start of Statewide Gas and Diesel Tax Holiday

Suspension of Certain Taxes on Motor Fuel and Diesel Motor Fuel Extends through December

Initiative to Provide an Estimated \$609 Million in Relief for Working Families and Businesses

25 Counties Have Elected to Cap Local Sales Tax per Gallon for More Savings

Governor Kathy Hochul today announced the suspension of certain taxes on motor fuel and diesel motor fuel takes effect today, Wednesday, June 1, 2022. The motor fuel excise tax, State sales tax, and Metropolitan Commuter Transportation District sales tax on motor fuel and diesel motor fuel will remain suspended through the end of the year. This fuel taxes suspension will provide a reduction of at least \$0.16 per gallon statewide, with some counties providing additional savings per gallon.

"Fuel prices have surged in recent months, hurting working families and small businesses the most, and it is crucial that we provide New Yorkers relief," **Governor Hochul said.** "By suspending certain fuel taxes for the next seven months, New York is providing some \$609 million in direct relief to New Yorkers -- a critical lifeline for those who need it most. At a time when families are struggling because of economic headwinds and inflation, we will continue to take bold action to reduce the economic burden on New Yorkers and get money back in their pockets."

Counties Contribute to Additional Savings

Twenty-five counties across the State have also taken action to set temporary caps on the sales tax charged per gallon of gas and diesel. This program was authorized as part of the State's FY 2023 Enacted Budget.

Beginning today, Delaware, Dutchess, Erie, Monroe, Putnam, Rockland, Saratoga, Schenectady, Ulster, Wayne and Yates counties will collect tax only on the first \$2

charged per gallon of gas and diesel, regardless of the actual price at the pump. Seneca County had previously capped its local sales tax in the same manner, and continues to.

Allegany, Broome, Cattaraugus, Chautauqua, Jefferson, Livingston, Nassau, Niagara, Oneida, Onondaga, Oswego, Suffolk and Westchester counties will collect tax only on the first \$3 charged per gallon of gas and diesel, regardless of the actual price at the pump.

These actions will save New Yorkers additional cents per gallon with each customer's specific savings depending on the local sales tax rate and the difference between the price per gallon and the local cap. You can view the local sales tax rates on certain motor fuels in your county here.

Information for Distributors, Wholesales, and Retailers

Governor Hochul had previously directed distributors, wholesales, and retailers of motor fuel and highway diesel motor fuel to prepare for the upcoming suspension of these taxes. Those businesses can learn more here.

Senate Majority Leader Andrea Stewart-Cousins said, "New Yorkers have been picking up the tab for economic hardships due to geopolitical conflicts and a global pandemic. That is why we suspended the fuel tax and, starting today, are giving workers and families a break that they deserve and allowing them to keep their hard-earned money in their pockets. I am proud to have led the Senate Majority in working with Governor Hochul and Speaker Heastie to support New York consumers during these uncertain economic times."

Assembly Speaker Carl Heastie said, "As gas prices continues to hit record highs, the Assembly Majority remains committed to delivering relief for New York's families and small businesses. I am hopeful that this suspension of the gas tax by the state and certain counties will alleviate some economic pressure as families prepare for their summer vacations and businesses rebound from the economic impacts of the pandemic."

Suffolk County Executive Steve Bellone said, "There is no doubt that families across Long Island have been feeling the pain at the pump and today relief is here. Suffolk County's gas tax cap, combined with New York State's cap, will put money back in our residents' pockets and provide drivers with much needed relief at the pump. Every penny

matters and we will continue to do what we can to help our residents through these difficult times."

Broome County Executive Jason Garnar said, "As one of the only Southern Tier counties to cap the tax on gasoline, we will now have some of the lowest fuel prices in the state. I encourage all drivers passing through Broome County and our neighbors in Tioga and Chenango to stop here to fill their tanks. I appreciate the Governor's leadership, and my partners on the County Legislature for taking quick action that helps put money back in the pockets of our residents."

Schenectady County Legislature Chairman Anthony Jasenski said, "Cutting the State and County gas tax is the right thing to do for our families, many of whom are struggling to make ends meet due to the increasing costs of food, fuel and other necessities. While the root cause of the challenges facing our residents is beyond our control, the state and county must act to do what we can to help mitigate those challenges. We thank Governor Hochul for taking this this step to provide some relief for our residents, and for giving Schenectady County the ability to do so as well."

Westchester County Executive George Latimer said, "All Westchester County drivers thank Governor Hochul for her leadership in reducing the pain at the pump. Saving money on your car trips each day can make a big difference - and that difference can significantly add up over time especially during summer driving months. Here in Westchester County we are doing what we can locally, and state wide all New Yorkers appreciate this important and timely savings."

Oneida County County Executive Anthony Picente said, "Skyrocketing inflation is having a devastating impact on the budgets of working families and people need help. Together, with the Board of Legislators, we capped our county's gas sales tax at \$3 per gallon, and combined with the state's gas tax suspension, that will result in a current savings of approximately 25 cents per gallon for our residents. It is our hope that this action will provide some measure of relief to those struggling to make ends meet during these tumultuous economic times."

Ulster County Executive Pat Ryan said, "We know the pressure everyone is feeling right now with record fuel prices and record inflation, and that's why we're proud to have cut the county gas tax by 50%. I want to thank Governor Hochul for her leadership on

this issue. Together, we are aggressively working to meet the urgency of the moment to provide relief for Ulster County residents.

Yates County Legislature Chairwoman Leslie Church said, "The Yates County Legislature is happy to join with the nine other counties in New York State that capped the local sales tax on gasoline at the \$2 per gallon maximum. Because inflation is currently so high and purchasing fuel is such a necessity, a break at the pump was a logical choice to give an immediate financial break to our residents, as well as the many visitors to our County."

Supervisor Theodore T. Kusnierz, Jr. said, "Saratoga County is pleased to join with New York State to provide this extra bit of relief to motorists. Whether it's savings at the pump or providing the lowest property tax rate and the lowest sales tax rate in all of New York State, Saratoga County is taking every step possible to reduce the burden of the nationwide inflation crisis on our taxpayers."

Supervisor Daniel L. Pangrazio said, "Livingston County relies on the generation of sales tax as part of its operating budget. However, the skyrocketing price of fuel and additional tax generated from that should not come at the expense of our residents. Gasoline sales generate a significant percentage of our overall sales tax collection, so while we struggle with our own rising costs, please know that this measure by your County Board of Supervisors is a call to action to help."

Contact the Governor's Press Office

Contact us by phone:

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TIPRO NEWS RELEASES AND STATEMENTS

MAY 20, 2022

TEXAS UPSTREAM EMPLOYMENT GROWS, AS MORE INDUSTRY JOBS ADDED BY TEXAS ENERGY COMPANIES

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Austin, Texas - Citing the latest Current Employment Statistics (CES) report from the U.S. Bureau of Labor Statistics (BLS), the Texas Independent Producers and Royalty Owners Association (TIPRO) today highlighted new employment figures showing another consecutive month of positive job growth for the Texas upstream sector in 2022. According to TIPRO's analysis, direct Texas upstream employment for April 2022 totaled 190,400, an increase of 5,200 jobs from March numbers, subject to revisions. Texas upstream employment in April 2022 represented an increase of 26,700 positions compared to April 2021, including an increase of 4,300 positions in oil and natural gas extraction and 22,400 jobs in the services sector.

The Houston metropolitan area, the largest region in the state for industry employment, added 1,100 upstream jobs last month compared to March, for a total of 66,100 direct positions, according to TIPRO. Houston metro upstream employment in April 2022 represented an increase of 7,700 jobs compared to April 2021, including an increase of 3,300 positions in oil and natural gas extraction and 4,400 jobs in the services sector.

TIPRO once again noted strong job posting data for upstream, midstream and downstream sectors for the month of April in line with rising employment, showing a continued demand for talent and increasing exploration and production activities in the Texas oil and natural gas industry. According to the association, there were 11,313 active unique job postings for the Texas oil and natural gas industry in April of 2022.

Among the 14 specific industry sectors TIPRO uses to define the Texas oil and natural gas industry, Support Activities for Oil and Gas Operations once again ranked the highest in April for unique job listings with 3,069 postings, followed by Crude Petroleum Extraction (1,510) and Oil and Gas Field Machinery and Equipment Manufacturing (1,069). The leading three cities by total unique oil and natural gas job postings were Houston (3,931), Midland (1,184) and Odessa (514),

The top three companies ranked by unique job postings in April were Baker Hughes with 650 positions, National Oilwell Varco (586) and Weatherford International (487), according to TIPRO's analysis. Of the top ten companies listed by unique job postings last month, five companies were in the services sector, followed by four companies in midstream and one in oil and natural gas extraction.

Top posted industry occupations for April included heavy tractor-trailer truck drivers (474), software developers and software quality assurance analysts and testers (258), and personal service managers (251). Top qualifications for unique job postings included Commercial Driver's License (552), Master of Business Administration (179) and Bachelor of Science in Business (178). When analyzing education and experience requirements for unique industry job postings last month, TIPRO reports that 37 percent required a high school diploma or GED, 37 percent a bachelor's degree and 7 percent listed an associate degree as a role requirement.

TIPRO also highlighted that the Railroad Commission of Texas issued a total of 946 original drilling permits in April 2022, which compared to a total of 1,176 original drilling permits in March 2022 and 732 in April 2021. According to the U.S. Energy Information Administration (EIA), oil output in the Permian Basin in Texas and New Mexico is due to rise 88,000 barrels per day (bpd) to a record 5.219 million bpd in June as producers respond to higher commodity prices and the call to increase domestic production to address supply shortages.

Meanwhile, this week the U.S. House of Representatives voted 217-207 to pass a bill that gives the Federal Trade Commission (FTC) the authority to investigate energy companies for alleged price gouging as prices at gas pumps nationwide hit record highs. The vote was largely down party lines with four Democrats -- Representatives Kathleen Rice of New York, Stephanie Murphy of Florida, Jared Golden of Maine and Lizzie Fletcher of Texas -- joining all Republicans in voting against the legislation.

TIPRO's President Ed Longanecker referred to this action as more political theater from policymakers unwilling to take responsibility for the impact of their own failed energy policies. "Prices are not set by some shadowy cabal of companies," said Longanecker. "Over the past three decades, there have been more than 100 investigations and lawsuits brought by consumers, the FTC and states' attorneys general alleging such conspiracies in the gasoline market, none of which have shown even a hint of wrongdoing from domestic producers."

"Texas operators are responding to the call to increase production, despite facing numerous challenges, including inflationary pressures, workforce shortages and an adversarial federal policy environment," Longanecker added. "Instead of politicians interrogating oil and gas executives, making false accusations and pushing for more taxes and regulations on American producers, it's time to stop politicizing energy security and create a coherent strategy to address our current and future energy needs," Longanecker concluded.



SAF Group created transcript of 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 https://twitter.com/wef/status/1529483914103779328

Items in "italics" are SAF Group created transcript

At 35:50 min mark, Dalio "..... so when we are looking at the circumstances, we're now in a new era. We wish that there's coordination. We've lived in an era where we were global. And the way resources were allocated was where was it more cost efficient. So if it was cost efficient here, you would send the capital, you would build it there. And that would raise employment and so on. And that's what we've come to believe is a fair system.

But that's only because we've gotten used to that. But if you go back and look at history, and today, many people would believe that's not a fair system. So here we are in the fragmented world that we're in. So the resource allocation system is no longer economic. The resource allocation is political and ideological. So when we ask ourselves and we wish for cooperation, it's understandable that we won't get cooperation because there is a risk there is conflicts. There's an internal conflict of civil war so how do we redistribute the wealth within our country so we will have that within the country. Well, there's a helluva fight over that. So there's the willingness to fight over that. The same is true internationally. So what is America first, what is that in terms of that.

And so I think we have to understand, we have to keep in mind that when we say we are going to cooperate or should, in a world where self-sufficiency, because we could go to war, becomes important. The efficiencies are no longer the most important things. Survival is the most important thing. The possibility of a war is an important thing.

And it changes behaviour in ways that are logical, but maybe undesirable for those of us who are in a perspective that we believe we should be in this together. And how do we work together. So I think it's all understandable. So that depreciates the value of money. We are going to have more conflict. We're going to have more inflation. Inflation causes domestic political conflict. So it will be a big issue in the 2022 elections and the 2024 elections, that's just how the machine works. In the meantime, we have, and the war in Ukraine and Russia. And, with China, is understandable in terms of the big powers conflict.

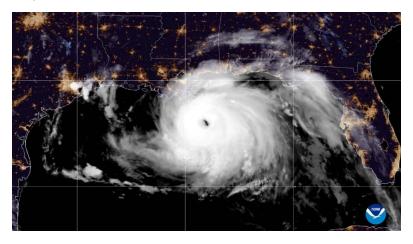
So we see the world, if you read history and you see this happen over and over again. You see the world is now breaking up into sides. It's like there are allied powers and there are axis powers, and there are neutral powers. And those ideologies become the dominant consideration. So it's entirely possible, 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. So as a mechanic, who is looking at next year and the year after and where we are in that thing, I'm just saying it's undesirable. And the unimaginable is becoming increasingly probable."

Prepared by SAF Group https://safgroup.ca/news-insights/

NOAA predicts above-normal 2022 Atlantic Hurricane Season

Ongoing La Niña, above-average Atlantic temperatures set the stage for busy season ahead

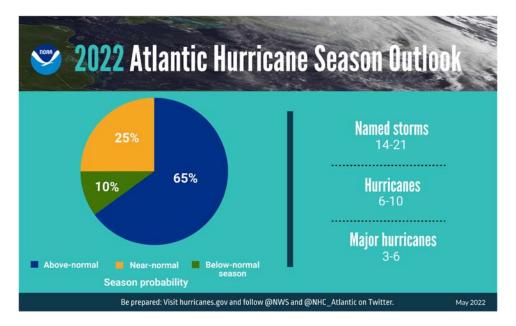
May 24, 2022



A visible satellite image of Hurricane Ida approaching land in the Gulf of Mexico taken by NOAA's GOES-16 (GOES East) satellite at 4:10 am (EDT) on August 29, 2021. (NOAA)

Forecasters at NOAA's <u>Climate Prediction Center</u>, a division of the National Weather Service, are predicting above-average hurricane activity this year — which would make it the seventh consecutive above-average hurricane season. NOAA's outlook for the 2022 Atlantic hurricane season, which extends from June 1 to November 30, predicts a 65% chance of an above-normal season, a 25% chance of a near-normal season and a 10% chance of a below-normal season.

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 6 major hurricanes (category 3, 4 or 5; with winds of 111 mph or higher). NOAA provides these ranges with a 70% confidence.



A summary infographic showing hurricane season probability and numbers of named storms predicted from NOAA's 2022 Atlantic Hurricane Season Outlook. (NOAA)

Download Image

"Early preparation and understanding your risk is key to being hurricane resilient and climate-ready," said Secretary of Commerce Gina M. Raimondo. "Throughout the hurricane season, NOAA experts will work around-the-clock to provide early and accurate forecasts and warnings that communities in the path of storms can depend on to stay informed."

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. An enhanced west African monsoon supports stronger African Easterly Waves, which seed many of the strongest and longest lived hurricanes during most seasons. The way in which climate change impacts the strength and frequency of tropical cyclones is a continuous area of study for NOAA scientists.



A summary graphic showing an alphabetical list of the 2022 Atlantic tropical cyclone names as selected by the World Meteorological Organization. The official start of the Atlantic hurricane season is June 1 and runs through November 30. (NOAA)

Download Image

"As we reflect on another potentially busy hurricane season, past storms — such as Superstorm Sandy, which devastated the New York metro area ten years ago — remind us that the impact of one storm can be felt for years," said NOAA Administrator Rick Spinrad, Ph.D. "Since Sandy, NOAA's forecasting accuracy has continued to improve, allowing us to better predict the impacts of major hurricanes to lives and livelihoods."

Additionally, NOAA has enhanced the following products and services this hurricane season:

- To improve the <u>understanding and prediction</u> of how hurricanes intensify, NOAA's Atlantic
 Oceanographic and Meteorological Lab and Pacific Marine Environmental Lab will operate
 five <u>Saildrone uncrewed surface vehicles</u> during the peak of the 2022 hurricane season and coordinate
 for the first time with <u>uncrewed ocean gliders</u>, <u>small aircraft drone systems</u>, and <u>NOAA Hurricane</u>
 <u>Hunter aircraft</u> to measure the ocean, atmosphere and areas where they meet.
- The <u>Hurricane Weather Research and Forecast Modeling System</u> and <u>Hurricanes in a Multi-scale Ocean-coupled Non-hydrostatic model</u>, which have shown significant skill improvements in terms of storm track and intensity forecasts, have been successfully transitioned to the newest version of the <u>Weather and Climate Operational Supercomputing System</u>, allowing for uninterrupted operational forecasts.
- The <u>Excessive Rainfall Outlook</u> (ERO) has been experimentally extended from three to five days of lead time, giving more notice of rainfall-related flash flooding risks from tropical storms and hurricanes. The ERO forecasts and maps the probability of intense rainfall that could lead to flash flooding within 25 miles of a given point.
- In June, NOAA will enhance an <u>experimental graphic</u> that depicts the Peak Storm Surge Forecast when storm surge watches or warnings are in effect. Upgrades include an updated disclaimer and color coding that illustrates the peak storm surge inundation forecast at the coast. This tool is currently only available in the Atlantic basin.

"Hurricane Ida spanned nine states, demonstrating that anyone can be in the direct path of a hurricane and in danger from the remnants of a storm system," said FEMA Administrator Deanne Criswell. "It's important for everyone to understand their risk and take proactive steps to get ready now by visiting Ready.gov and Listo.gov for preparedness tips, and by downloading the FEMA App to make sure you are receiving emergency alerts in real-time."

NOAA's outlook is for overall seasonal activity and is not a landfall forecast. In addition to the Atlantic seasonal outlook, NOAA has also issued seasonal hurricane outlooks for the <u>eastern</u>

<u>Pacific</u> and <u>central Pacific</u> hurricane basins. NOAA's Climate Prediction Center will update the 2022

Atlantic seasonal outlook in early August, just prior to the historical peak of the season.

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Macron warns of threat to global economy from energy crisis

French president urges world leaders to act on climate change with more financial pledges ahead of COP26 summit

Leila Abboud in Paris and Leslie Hook in London YESTERDAY

President Emmanuel Macron has warned that an energy crisis threatens the world's post-pandemic recovery, calling for leaders at a G20 summit in Rome this weekend to work together to stabilise supplies.

In an interview, the French president also urged bigger financial commitments towards the fight against global warming on the eve of the COP26 climate summit in Scotland, and for particular attention to be paid to a deal to phase out coal power.

The G20 needed to co-ordinate between energy producers and consuming countries to prevent a supply breakdown this winter, which risked "extreme tensions both economically and socially", Macron said.

"In the coming weeks and months, we need to get better visibility and stability on prices so tension on the energy prices doesn't generate uncertainties, and undermine the global economic recovery," he told the Financial Times in the Elysée Palace. "What we expect is to have co-ordination to avoid soaring prices."

Global energy costs have surged this year, disrupting industry and hitting consumers with higher prices. Eurozone inflation surged in October to a 13-year-high of 4.1 per cent, according to a flash estimate published by the EU's statistics arm on Friday.

"I don't think we're going to be able to lower prices given tensions on the demand side," Macron said. "But what we need to avoid is to have a break in supply [and further] increases in prices, particularly as we're moving into the winter period for the northern hemisphere."

Emmanuel Macron: 'I don't think we're going to be able to lower [gas] prices given tensions on the demand side' © Magali Delporte/FT

Rapid economic recovery from the pandemic has pushed up energy prices "almost too rapidly" which risked "weighing on economic growth and putting a burden on households", Macron said.

France and a number of other EU governments have sought to protect consumers and businesses with billions in aid and price freezes.

Concerns have mounted that Russia's state-backed gas producer Gazprom has kept storage levels unusually low in western Europe, exacerbating fears over supplies and driving up prices.

Asked whether he blamed high European energy prices on Russia, Macron said: "I have no evidence that there's been manipulation of prices and I'm not accusing anybody. These are trading relations. They shouldn't be used for geopolitical reasons."

Asked about Gazprom's power over Europe, Macron said: "It's not a matter of whether we're too dependent on a company or not, it's how do we create alternatives. And the only alternatives are to have European renewables and of course, European nuclear."

France is the EU's biggest user of nuclear power, contrasting with a move away from atomic power by Germany and some other countries.

Macron called for Europe to develop a more diverse gas supply but also to speed up a transition away from fossil fuels, which will be necessary to slow rising temperatures and tame the climate disruptions caused by global warming.

"What is happening now is ironic, because we are building a system where in the medium and long term fossil energy will cost more and more, that's what we want [to fight climate change]," he said. "The problem is that industries and households will need to be accompanied in this transition . . . or it won't be sustainable."

The French president, who is facing national elections in April, has been a vocal advocate of multilateralism. He has pushed for more co-operation globally and at EU level to reach deals on issues including international taxation and global warming.

"The first subject for the G20 is to accelerate the exit from coal power" Emmanuel Macron

Against a backdrop of global tensions, a supply chain crisis and the Covid-19 pandemic, Macron said the G20 had a responsibility to work together, especially to help low-income countries. He urged leaders at the Rome summit to agree a plan for faster vaccine delivery to developing countries.

"France has always stressed the importance of maintaining multilateralism, but we have to get concrete results from it," he said.

The leaders of China, Russia and Japan will not attend the summit in Rome in person this weekend because of Covid-19 concerns and an election in Japan.

Macron said the G20 meeting, which is being hosted by Italian leader Mario Draghi on the eve of COP26, would also give countries a chance to hammer out more ambitious plans to fight climate change.

"When we'll be meeting in Rome, the major challenge is to ensure that members of G20 can usefully contribute in Glasgow, to making this COP26 a success," he said. "Nothing can be taken for granted before a COP," he added.

"The first subject for the G20 is to accelerate the exit from coal power," he said. G20 leaders expect a heated debate this weekend over including a pledge to end international coal financing.

"We need the G20 to go right through to the eradication of all international financing of coal-fired power plants," Macron said.

Macron also called for rich countries, particularly the US, to commit more financially to help developing countries meet their climate goals. And he called on China to bring forward the date at which it will peak emissions, from 2030, to 2025.

"So as not to lose more time, we have to do as much as is absolutely possible in terms of financing, and encourage the US administration so that they can convince Congress to front-load its financing."

Another issue will be to hold countries to their emissions targets for 2030 and 2050. "Our objective is to get maximum results from all countries," he said. "This pathway is possible, even if it's a challenge, especially for emerging countries which at the same time are trying to recover from the Covid crisis."

Macron also urged the G20 leaders to do more to help vaccinate the world against Covid-19. The group should end vaccine export bans, increase its donations of vaccine doses, and support vaccine production in Africa, he said.

"Every French person has given one vaccine to somebody else in the world," he said, referring to the roughly 60m doses that were on the way to Covax, the World Health Organisation's procurement scheme for low-income countries. "If everybody in the G20 could do that we would get to the 20 per cent of the population vaccinated. This is vital," he said.

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S&P Dow Jones Indices Announces Changes to the S&P/TSX Composite Index

Toronto, Ontario, June 3, 2022 – As a result of the quarterly review, S&P Dow Jones Indices will make the following changes in the S&P/TSX Composite Index prior to the open of trading on Monday, June 20, 2022:

S&P/TSX COMPOSITE INDEX – June 20, 2022									
	COMPANY	GICS SECTOR	GICS SUB-INDUSTRY						
ADDED	Athabasca Oil Corporation (TSX:ATH)	Energy	Oil & Gas Exploration & Production						
ADDED	Definity Financial Corporation (TSX:DFY)	Financials	Property & Casualty Insurance						
ADDED	Filo Mining Corp. (TSX:FIL)	Materials	Diversified Metals & Mining						
ADDED	Precision Drilling Corporation (TSX:PD)	Energy	Oil & Gas Drilling						
ADDED	Pason Systems Inc (TSX:PSI)	Energy	Oil & Gas Equipment & Services						
ADDED	Spartan Delta Corp. (TSX:SDE)	Energy	Oil & Gas Equipment & Services						
DELETED	Cascades Inc (TSX:CAS)	Materials	Paper Packaging						
DELETED	Docebo Inc. (TSX:DCBO)	Information Technology	Application Software						
DELETED	DELETED Hut 8 Mining Corp. (TSX:HUT)		Application Software						
DELETED	DELETED Lion Electric Company (TSX:LEV)		Construction Machinery & Heavy Trucks						
DELETED	Martinrea International Inc (TSX:MRE)	Consumer Discretionary	Auto Parts & Equipment						
DELETED	WELL Health Technologies Corp. (TSX:WELL)	Health Care	Health Care Services						

For more information about S&P Dow Jones Indices, please visit www.spdji.com

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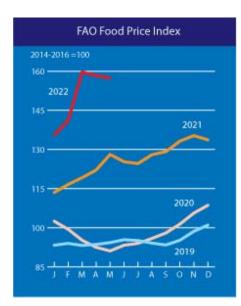
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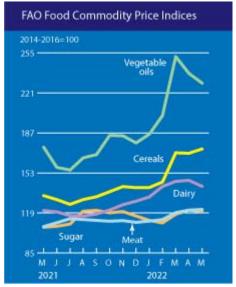
FAO Food Price Index

The FAO Food Price Index (FFPI) is a measure of the monthly change in international prices of a basket of food commodities. It consists of the average of five commodity group price indices weighted by the average export shares of each of the groups over 2014-2016. <u>A feature article</u> published in the June 2020 edition of the Food Outlook presents the revision of the base period for the calculation of the FFPI and the expansion of its price coverage, to be introduced from July 2020. <u>A November 2013 article</u> contains technical background on the previous construction of the FFPI.

The FAO Food Price Index fell for the second consecutive month in May

Release date: 03/06/2022





- » The **FAO Food Price Index*** (FFPI) averaged 157.4 points in May 2022, down 0.9 points (0.6 percent) from April, marking the second consecutive monthly decline, though still 29.2 points (22.8 percent) above its value in the corresponding month last year. The drop in May was led by declines in the vegetable oil and dairy price indices, while the sugar price index also fell to a lesser extent. Meanwhile, cereal and meat price indices increased.
- » The **FAO Cereal Price Index** averaged 173.4 points in May, up 3.7 points (2.2 percent) from April and as much as 39.7 points (29.7 percent) above its May 2021 value. International wheat prices rose for a fourth consecutive month, up 5.6 percent in May, to average 56.2 percent above their value last year and only 11 percent below the record high reached in March 2008. The steep increase in wheat prices was in response to an export ban announced by India amidst concerns over crop conditions in several leading exporting countries, as well as reduced production prospects in Ukraine because of the war. By contrast, international coarse grain prices declined by 2.1 percent in May but remained 18.1 percent above their value a year ago. Slightly improved crop conditions in the United States of America, seasonal supplies in Argentina and the imminent start of Brazil's main maize harvest led maize prices to decline by 3.0 percent; however, they remained 12.9 percent above their level of May 2021. Similarly, international sorghum prices also fell in May, declining by 3.1 percent, while spillover from the strength in wheat markets and concerns over crop conditions in the European Union boosted barley prices by 1.9 percent. International rice prices increased for the fifth successive month in May. Quotations strengthened in all the major market segments, but monthly increases were least pronounced (2.6 percent) for the most widely traded Indica varieties, amid ample supplies, especially in India.
- » The **FAO Vegetable Oil Price Index** averaged 229.3 points in May, down 8.3 points (3.5 percent) month-on-month, yet remaining markedly above its year-earlier level. The monthly decline mainly reflects lower prices across palm, sunflower, soy, and rapeseed oils. International palm oil prices weakened moderately in May. Apart from demand rationing, the removal of Indonesia's short-lived export ban on palm oil exerted additional downward pressure on prices, although a further price drop was contained by lingering uncertainties over the country's export prospects. Meanwhile, world price quotations for sunflower oil fell from recent record highs, with stocks continuing to accumulate in Ukraine owing to logistical bottlenecks. International soy and rapeseed oil prices also declined somewhat in May, chiefly weighed by sluggish import demand in view of elevated costs in recent months.

- » The **FAO Dairy Price Index** averaged 141.6 points in May, down 5.1 points (3.5 percent) from April, marking the first decline after eight consecutive monthly increases, but still 20.5 points (16.9 percent) higher than its level in May of last year. World prices of all milk products fell, with milk powders declining the most, underpinned by lower buying interests on market uncertainties stemming from the continued lockdown in China, despite the persistent global supply tightness. Butter prices also dropped significantly due to weaker import demand in tandem with some improvements to supplies from Oceania and limited internal sales in Europe. Meanwhile, robust retail sales and high demand from restaurants ahead of the summer holidays in the Northern Hemisphere prevented cheese prices from falling significantly, despite weakened global import demand.
- » The **FAO Meat Price Index*** averaged 122.0 points in May, up 0.6 points (0.5 percent) from April, setting a new all-time high, driven by a steep rise in world poultry meat prices, more than offsetting declines in pig and ovine meat values. In May, poultry meat prices rose, reflecting the continued supply chain disruptions in Ukraine and recent cases of avian influenza amid a surge in demand in Europe and the Middle East. Meanwhile, international bovine meat prices remained stable, as increased supplies from Brazil and Oceania were adequate to meet persistently high global demand. By contrast, world pig meat prices fell on high export availabilities, especially in Western Europe, amid lacklustre internal demand and expectations for releasing pig meat from the EU Commission's Private Storage Aid scheme. International prices of ovine meat also dropped, reflecting the impact of currency movements.
- » The **FAO Sugar Price Index** averaged 120.3 points in May, down 1.3 points (1.1 percent) from April, marking the first decline after sharp increases registered in the previous two months. The recent monthly decline in international sugar price quotations was triggered by limited global import demand and good global availability prospects, mostly stemming from a bumper crop in India. The weakening of the Brazilian Real against the US dollar and lower ethanol prices resulted in further downward pressure on world sugar prices. However, uncertainties over the current season's outturn in Brazil, the world's largest sugar exporter, prevented more substantial price declines.
- * Unlike for other commodity groups, most prices utilized in the calculation of the FAO Meat Price Index are not available when the FAO Food Price Index is computed and published; therefore, the value of the Meat Price Index for the most recent months is derived from a mixture of projected and observed prices. This can, at times, require significant revisions in the final value of the FAO Meat Price Index which could in turn influence the value of the FAO Food Price Index.



FAO food price index								
		Food Price Index ¹	Meat ²	Dairy ³	Cereals 4	Vegetables Oils 5	Sugar ⁶	
2004		65.6	67.6	69.8	64.0	69.6	44.3	
2005		67.4	71.8	77.2	60.8	64.4	61.2	
2006		72.6	70.5	73.1	71.2	70.5	91.4	
2007		94.3	76.9	122.4	100.9	107.3	62.4	
2008		117.5	90.2	132.3	137.6	141.1	79.2	
2009		91.7	81.2	91.4	97.2	94.4	112.2	
2010		106.7	91.0	111.9	107.5	122.0	131.7	
2011		131.9	105.3	129.9	142.2	156.5	160.9	
2012		122.8	105.0	111.7	137.4	138.3	133.3	
2013		120.1	106.2	140.9	129.1	119.5	109.5	
2014		115.0	112.2	130.2	115.8	110.6	105.2	
2015		93.0	96.7	87.1	95.9	89.9	83.2	
2016		91.9	91.0	82.6	88.3	99.4	111.6	
2017		98.0	97.7	108.0	91.0	101.9	99.1	
2018		95.9	94.9	107.3	100.8	87.8	77.4	
2019		95.1	100.0	102.8	96.6	83.2	78.6	
2020		98.1	95.5	101.8	103.1	99.4	79.5	
2021		125.7	107.7	119.1	131.2	164.9	109.3	
2021	May	128.1	107.4	121.1	133.7	174.9	106.8	
	June	125.3	110.7	119.9	130.3	157.7	107.7	
	July	124.6	114.1	116.7	126.3	155.5	109.6	
	August	128.0	113.4	116.2	130.4	165.9	120.5	
	September	129.2	112.7	118.1	132.8	168.6	121.2	
	October	133.2	112.0	121.5	137.1	184.8	119.1	
	November	135.3	112.5	126.0	141.4	184.6	120.2	
	December	133.7	111.0	129.0	140.5	178.5	116.4	
2022	January	135.6	112.1	132.6	140.6	185.9	112.7	
	February	141.1	113.4	141.5	145.3	201.7	110.5	
	March	159.7	119.3	145.8	170.1	251.8	117.9	
	April	158.3	121.4	146.7	169.7	237.5	121.5	
	May	157.4	122.0	141.6	173.4	229.3	120.3	

- 1 Food Price Index: Consists of the average of 5 commodity group price indices mentioned above, weighted with the average export shares of each of the groups for 2014-2016: in total 95 price quotations considered by FAO commodity specialists as representing the international prices of the food commodities are included in the overall index. Each sub-index is a weighted average of the price relatives of the commodities included in the group, with the base period price consisting of the averages for the years 2014-2016
- 2 Meat Price Index: Based on 35 average export unit values/market prices of four meat types (bovine, pig, poultry and ovine) from 10 representative markets. Within each meat type, export unit values/prices are weighted by the trade shares of their respective markets, while the meat types are weighted by their average global export trade shares for 2014-2016. Quotations for the two most recent months may consist of estimates and be subject to revision.
- 3 Dairy Price Index: Computed using 8 price quotations of four dairy products (butter, cheese, SMP and WMP) from two representative markets. Within each dairy product, prices are weighted by the trade shares of their respective markets, while the dairy products are weighted by their average export shares for 2014-2016.
- 4 Cereals Price Index: Compiled using the International Grains Council (IGC) wheat price index (an average of 10 different wheat price quotations), the IGC maize price index (an average of 4 different maize price quotations), the IGC barley price index (an average of 5 different barley price quotations), 1 sorghum export quotation and the FAO All Rice Price Index. The FAO All Rice Price Index is based on 21 rice export quotations, combined into four groups consisting of Indica, Aromatic, Japonica and Glutinous rice varieties. Within each varietal group, a simple average of the relative prices of appropriate quotations is calculated; then the average relative prices of each of the four rice varieties are combined by weighting them with their (fixed) trade shares for 2014-2016. The Cereal Price Index combines the relative prices of sorghum, the IGC wheat, maize and barley price indices (re-based to 2014-2016) and the FAO All Rice Price Index by weighing each commodity with its average export trade share for 2014-2016.
- 5 Vegetable Oil Price Index: Consists of an average of 10 different oils weighted with average export trade shares of each oil product for 2014-2016.
- 6 Sugar Price Index: Index form of the International Sugar Agreement prices with 2014-2016 as base.

https://calgaryherald.com/news/local-news/a-staff-drought-tourists-returning-to-banff-but-workers-arent-sayemployers

'A staff drought': Tourists returning to Banff, but workers aren't, say employers

Some hotels are offering free accommodation to attract workers while many employers dangle benefits like free ski and golf passes

Author of the article:

Bill Kaufmann

Publishing date: Jun 03, 2022 • 1 hour ago • 3 minute read • Join the conversation



A view of the town of Banff in 2017. PHOTO BY POSTMEDIA FILE

Labour shortages are as common in Banff as an elk sighting, says Michel Dufresne.

That's especially true now that tourists are returning to the mountain park area after two gruelling years of pandemic and restrictions, said the director of the Job Resource Centre in Banff and Canmore.

"There's always a shortage of workers, but now what we see is a staff drought," said Dufresne. "I've been in this business a long time and I've never seen anything like it."

With a limited local labour pool, the Bow Valley tourist area has traditionally depended on workers from Australia, Europe and Eastern Canada. But when COVID-19 throttled international tourism, those workers moved on and have been slow to return, said Dufresne.

"We lost those people at the beginning of the pandemic but that was OK. That 50 per cent reduction in the workforce reflected the 50 per cent reduction in business," he said, adding it's a problem across the country.

"But now two years later, restrictions have lifted and those workers are not coming back."

A working holiday visa program launched in December that many expected to bear fruit hasn't, he said.

The area is short 1,000 to 2,000 workers, said Dufresne, impacting seasonal businesses such as retail, hotels and restaurants, along with local and federal governments.

Some employers have begun to offer higher pay, but working conditions and often crowded living arrangements can be obstacles to hiring.

The operator of the 54-year-old Grizzly House said he's particularly short-staffed in the back of his restaurant.

"I've done 40 hours as a dishwasher this week," said Francis Hopkins. "The shortage of entry-level hospitality workers is severe."

Hopkins said he offers competitive wages and affordable staff accommodations, "but I'm not really sure if that makes a difference at all."

Some hotels, he said, are offering free accommodation to attract workers, while many employers dangle "quality of lifestyle" benefits like free ski and golf passes.

Many workers have drifted away to take on new pursuits, said Meesh Souliere, general manager of Banff Avenue Brewing Co.

"A lot of people went back to school during the pandemic, that's really been a thing," she said.

Her restaurant is short on management and kitchen staff, though that's not unusual for Banff, said Souliere.

She said that's a situation facing many establishments that haven't seen the usual return of working holiday visa holders.

"We usually get a lot more of those, but we're starting to see that now," said Souliere.

This is all happening at a time when Banff seems to be returning to a more normal summer tourist season.

"Though we can still definitely use more international travellers. We're seeing lots of Canadians and Americans coming."

In the last few months, the Banff area workforce has been down 20 to 40 per cent of what's needed, though university students are now beginning to arrive, said Darren Reeder, executive director of the Banff Lake Louise Hospitality Association.

"But in late July, early August, we see a huge, unmitigated exodus of talent, people wanting to travel before going back to school," he said.

The industry, he said, hasn't recovered since suffering an unprecedented blow two years ago.

"How could you ever predict 80 per cent of the (staff) would be gone in 10 days ... People were promised shifts they didn't get, were beaten down mentally and left," said Reeder.

"We were the first affected and last to recover."

One way to ensure a more stable temporary foreign workforce is to grant the hospitality industry the same time- and money-saving application exemptions given to the agriculture sector, said Reeder.

"But the bottom line is, we've got to build a bigger (domestic) talent pipeline. We've got to convince Canadian kids they can grow into these hospitality positions and become entrepreneurs."

BKaufmann@postmedia.com

Twitter: @BillKaufmannjrn

SAF

What will will Israel do vs Iran if no #JCPOA & advancing nuke capability. #Biden letting some (maybe a little more) Iran #Oil hit market was okay at \$55, but \$120 is big help to Iran finances. 1 mmbd @\$65 delta = \$1b more every 15 days. Thx @michaelwmuller @sean_evers #OOTT

SAF Group created transcript of excerpts from Mike Muller (Head, Vitol Asia) on Gulf Intelligence PODCAST: Daily Energy Markets – June 5th hosted by Sean Evers (Managing Partner, Gulf Intelligence) on June 5, 2022 [LINK]



Items in "Italics" are SAF Group created transcript

At 25:50 min mark, Muller "Sean, I don't think we would be complete if we didn't talk about Iran a little bit, if I may, You have to take a view that the status guo is this, the US is allowing a certain gmount of flows under carve out, which they have given silent okey to, maybe flows to China. And at the same time, there is also a certain amount of Venezueli flow that is condoned. But it would appear like, if we assume the ICPOA is more or less hacked out, that it's a political decision centering around the refusal of the Americans to accede to the requests to drap the designation of the republican guard as a terrorist organization. This is a staking point that is likely to persist. And I think most analysts now don't have any iranian all coming back this year. But it is another form of release in terms of oil ready to go now because there is so much being in storage and floating, hundred and something million barrels take your pick regarding where condensate is. Now! I think the window of political apportunity for the Biden administration to reach a deal with train is already evaporated. If not gone, because we are getting into mid-terms soon. But if the mid-terms are dominated by needing to et gas price slower in America, turning a somewhat greater billed eye to the sanction barrels flowing out and competing with Russia for that matter, is probably something that you might expect to see. And the US intervention in these flows has always been aretty sparse anyway. So whilst I don't think there is aging to be a deal, I think the clamping down and arresting of ships even though there was some going on in the Aegens Sea and Mediterranean just receptly and then a reciprocal arrest of ships in the Hormus area. I think ther is a chance that Unick Sam might allow just allow a little bit more of that oil to flow, which is not good for markets because it creates at three-tier market if you like.

Evers: "Mike just on that point, if you've got those two pieces right – you've got the Iranian leak and now you've got these heavily discounted Russian barrels coming into Asia, coming into Ching and looking to increase, how should the Saudis and the Gulf Arabs look at that, it that a threat to their market? It is no bild deal over the mid term?"

Muller: "This is where this huge range of views comes in. If you believe things are going to remain pretty tight and there's not enough oil to go around because of spare capacity concerns and the whole underinvestment theme, then those consultants and those experts believe that we need those trainan to come to the market because there is nowhere else to bring them from. If you believe the Saudis have an extra million barrels a day of spare capacity and there is going to be suistantial demand destruction because of recessionary concerns and high commodity prices, then you don't. So take worm rick on what perspective."

Prepared by SAF Group https://safgroup.ca/news-insights/

SAF

Dan Tsubouchi @Energy_Tidbits · 3h

Buckle up! #Vitol Asia head @michaelwmuller "smart money is of the view that the Saudi current sustainable production limit is somewhere 11 point something", a huge gap vs "surge" KSA #Oil of high 12's mmbd. Very bullish for oil as demand keeps going up. Thx @gulf_intel. #OOTT

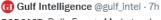
SAF Group created transcript of excerpts from Mike Muller (Head, Vitol Asia) on Gulf Intelligence PODCAST: Daily Energy Markets – June 5th hosted by Sean Evers (Managing Partner, Gulf Intelligence) on June 5, 2022 [LINK]



Items in "Italics" are SAF Group created transcript

At 3:30 min mark, Muller "... what actually happens to OPEC+ output of course is a different matter. There is a commonly held view that really only the UAE and Saudi have spare capacity. And the debate now focuses on what exactly is that number, what can those two countries produce, sustainably, Because no one really knowe, it's subsurface and it's not been tested other than a couple of surge production, high watermarks set by the Saudis to much fanfare, of course, just before Covid struck and those were in the high 12's. But the smart money is of the view that the Saudi current sustainable production limit is somewhere 11 point something and that's a pretty wide range. And yes, the quota gest them to 10.8 and above. And we must remind ourselves that most OPEC+ members are already at their limits and therefore this provides an open door for Saudi and UAE to make up the shortfall. Notably also, some may recall there was a month, which I believe was March, just a few months back, when the Saudi OSPs went very because of the formula and a lot of people felt that was too much at once and there was an undenomination. So I think there is a little up their sleeves as

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PODCAST: Daily Energy Markets - June 5

-bit.ly/3PZVzDE

@michaelwmuller @vitolnews @Columbia @CrystolEnergy #OOTT #OPEC #energy #oilmarkets #analytic @AdnocGroup @vitolnews ...

Dan Tsubouchi @Energy_Tidbits · 11h

Positive for #Oil. "Beijing has entered the mop-up phase after the latest outbreak of COVID-19, Beijing government spokesperson said at a news conference on Saturday" "number of daily infections in Beijing has continued to decline". #OOTT

Stay informed

This Tweet links to a China state-affiliated media website. Find out more



globaltimes.cn

Beijing enters mop-up phase after latest COVID-19 outbreak; students... Beijing has entered the mop-up phase after the latest outbreak of COVID-19, Beijing government spokesperson said at a news conferenc...

Dan Tsubouchi @Energy_Tidbits · 19h

Race to lock up long term LNG supply. Sounds like more Asian #LNG buyer deals are coming. Note @SPGCILNG @ericyep comment "several more purchases by Asian firms have not been made public" "likely to materialize in the coming months". #NatGas #LNG looks good for 2020s. #OOTT

S&P Global Commodity Insights LNG @SPGCILNG - Jun 1

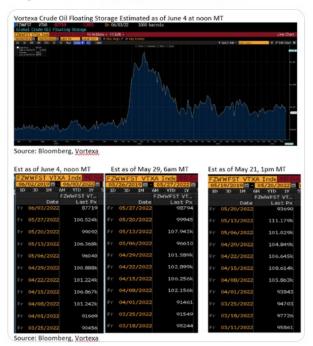
While Asian #LNG importers are seeking the protection of long-term contracts due to the volatility of spot markets; European energy companies & utilities are looking to tie up #gas supply to replace Russian volumes in the years ahead | by @ericyep: okt.to/VkllwK

#ONGT

SAF



#Vortexa crude **#Oil** floating storage at 06/03 est 87.72 mmb, -12.8 mmb WoW vs revised up 100.52 mmb as of 05/27. Below 90 mmb, but prior 2 mths mostly in 100-105 mmb range. ie. crude oil floating storage has moved to higher levels. Thx @Vortexa @TheTerminal #OOTT



Dan Tsubouchi @Energy_Tidbits · 21h

SAF

Wouldn't it be great to see pictures of some youth teams playing at Camp Nou next week and then see some of them 10 years later playing in Camp Nou for @FCBarcelona or one of the other @LaLigaEN teams?



10

Dan Tsubouchi @Energy_Tidbits · Jun 3

1/2. Buckle up! #Oil #NatGas to be strong for 2020s. Until #Biden EU etc admit #EnergyTransition wasn't working pre RUS, \$CHV CEO is dreaming for "an honest conversation, a pragmatic and balanced conversation about the relationship between energy and economic prosperity .. #OOTT

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Dan Tsubouchi @Energy_Tidbits · Jun 3

2/2. "... national security and environmental protection. We need to recognize that all of those matter and we can't over index on just one." Assuming EVs etc will lead to reliable, affordable, available energy isn't actually a plan. Thx @adsteel @Chevron CEO Wirth. #OOTT



SAF Group created transcript of excerpts from Chevron CEO Mike Wirth with Bloomberg's Alix Steel on June 3, 2022. https://www.bloomberg.com/news/videos/2022-06-03/s/chevron-ceo-on-oil-demand-costs-refinery-closures-video Items in "failes" are SAF Group created transcript.

At 5:45 min mark, Wirth "... you're right about these bottlenecks in refining. We've seen refineries close. When I began my career, there were more than 250 refineries in the US, today there's half of that number. And we've seen refineries close around the world. We've seen China stop exporting products. Obviously, Russia exports have diminished as well. And so many of the sources of product that normally flow into markets have been constrained and we're seeing very strong demand as I mentioned earlier and that's resulting in a lot of upward pressure on prices"

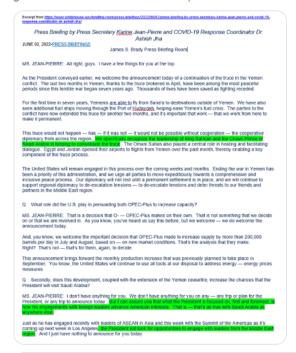
Steel "so if you go and talk to President Biden or the White House next week, what would you want to tell them because, in essence, no matter what price signals you are getting from the market, the world is moving to phase out the products those refiners would use. That's places you in a tough spot". With "it puts the industry in a difficult spot because building a refinery is a multi billion dallar process. It may take a decade. We haven't had a refinery build in the United States since the 1970s. My personal view is there will never be another refinery build in the United States. You're looking at committing capital 10 years out, that will need decades in which to offer a return to our shareholders, in a policy environment where governments around the world are saying we don't want these products to be used in the future. And so there really is a different. We receive immed signals in these policy discussions. And my message would be we need to sit down and have an honest conversation, a praymatic and balanced conversation about the relationship between energy and economic prosperity, national security and environmental protection. We need to recognize that all of those matter and we can't over index on just one."

Prepared by SAF Group https://safgroup.ca/news-insights/

Dan Tsubouchi @Energy_Tidbits · Jun 3

SAF

US compliments keep getting better & now specifically praise #MBS. "We specifically recognize the leadership of King Salman and the Crown Prince of Saudi Arabia in helping to consolidate the truce". Wonder what KSA will get in this trade besides Biden's mea culpa? #OOTT



- Dan Tsubouchi @Energy_Tidbits · Jun 3

Hmm! More setting stage for Biden/#MBS meet."no direct plans at the moment. But let me tell you that I have been engaged in trying to work with how we can bring more stability & peace to the Middle East" #Biden to @JohnKingCNN. Note his June 2 lauding Saudi leadership. #OOTT twitter.com/Energy_Tidbits...

...

More #Oil #NatGas companies added to S&P TSX Composite Index effective open of trading on Mon June 20. \$ATH Athabasca Oil, \$PD Precision Drilling, \$PSI Pason Systems, and \$SDE Spartan Delta. #OOTT

spglobal.com/spdji/en/docum...

S&P Dow Jones Indices
A Division of S&P Global PRESS RELEASE

S&P Dow Jones Indices Announces Changes to the S&P/TSX Composite Index

Toronto, Ontario, June 3, 2022 – As a result of the quarterly review, S&P Dow Jones Indices will make the following changes in the S&P/TSX Composite Index prior to the open of trading on Monday, June 20, 2022:

	S&P/TSX COMPOSITE	INDEX - June 2	20, 2022				
	COMPANY	GICS SECTOR	GICS SUB-INDUSTRY				
ADDED	Athabasca Oil Corporation (TSX:ATH)	Energy	Oil & Gas Exploration & Production				
ADDED	Definity Financial Corporation (TSX:DFY)	Financials	Property & Casualty Insurance				
ADDED	Filo Mining Corp. (TSX:FIL)	Materials	Diversified Metals & Mining				
ADDED	Precision Drilling Corporation (TSX:PD)	Energy	Oil & Gas Drilling				
ADDED	Pason Systems Inc (TSX:PSI)	Energy	Oil & Gas Equipment & Services				
ADDED	Spartan Delta Corp. (TSX:SDE)	Energy	Oil & Gas Equipment & Services				
DELETED	Cascades Inc (TSX:CAS)	Materials	Paper Packaging				
DELETED	Docebo Inc. (TSX:DCBO)	Information Technology	Application Software				
DELETED	Hut 8 Mining Corp. (TSX:HUT)	Information Technology	Application Software				
DELETED	Lion Electric Company (TSX:LEV)	Industrials	Construction Machinery & Heavy Trucks				
DELETED	Martinrea International Inc (TSX:MRE)	Consumer Discretionary	Auto Parts & Equipment				
DELETED	WELL Health Technologies Corp. (TSX:WELL)	Health Care	Health Care Services				

For more information about S&P Dow Jones Indices, please visit www.spdji.com

Dan Tsubouchi @Energy_Tidbits · Jun 3

...

Hmm! More setting stage for Biden/#MBS meet."no direct plans at the moment. But let me tell you that I have been engaged in trying to work with how we can bring more stability & peace to the Middle East" #Biden to @JohnKingCNN. Note his June 2 lauding Saudi leadership. #OOTT

w - Dan Tsubouchi @Energy_Tidbits ⋅ Jun 2

Looks like #WhiteHouse is in setup phase for #Biden to meet #MBS.

Note difference how #WhiteHouse describes Saudi role in Yemen truce today vs Apr 1. MBS must be chuckling. But can Saudi really do much to force #Oil lower if China reopens & RUS oil keeps going lower? #OOTT

https://www.whitehouse.gov/briefing-room/statements-releases/2022/06/02/president-biden-statement-on-the-un-mediated-truce-extension-in-yemen/

President Biden Statement on the UN-Mediated Truce Extension in Yemen

JUNE 02, 2020-INTERVENT INTERPRETAKES

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Ending the war in Yemen has been a priority of my administration. I am gusteful for the tricless work of my Special Envoy Tim Landoning, and the UN's Envoy to Yemen, Yama Grundberg, Then work, however, in on thinshed. I uppe all parties to move expeditiously towards a comprehensive and inclusive peace process. Our diplomacy will not rest until a permanent settlement to in place.

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can rely on the United States as the security partner of choice.

President Biden Statement on UN-Mediated Truce in Yemen

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Dan Tsubouchi @Energy_Tidbits · Jun 3

Global mobility metrics fall as drivers feel impact of high #Gasoline prices at the same time as high food prices. Exception is China where overriding factor is relaxation of some Covid restrictions. Thx @BloombergNEF Claudio Lubis, @WayneTanMing,

@DavidDo26949144. #OOTT



Dan Tsubouchi @Energy_Tidbits • Jun 3

Positive for #Oil if #Biden open goes to kiss the ring? Maybe Saudi delivers more oil, but is this the best indicator that won't be #JCPOA & keeps 1 mmbd or so Iran oil off the market? Sorry won't be enough if he signs JCPOA & then visit #MBS, or visit MBS & sign JCPOA. #OOTT

w - Dan Tsubouchi @Energy_Tidbits ⋅ Jun 2

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Note difference how #WhiteHouse describes Saudi role in Yemen truce today vs Apr 1. MBS must be chuckling. But can Saudi really do much to force #Oil lower if China reopens & RUS oil keeps going lower? #OOTT

https://www.whitehouse.gov/briefing-room/statements-releases/2022/06/02/president-biden-statement-on-the-un-mediated-truce-extension-in-versi

President Biden Statement on the UN-Mediated Truce Extension in Yemen

I wecknow the ammountement loday of a continuation of the trace in the "enten conflict. The last two months in Yemen, thanks to the trace brickered in Agrit, have been among the most pescaled precised since this territor was been among the most pescaled precised since this territor was been among the result precised. For the first time in severy years, Yemens are able to by from Sanar's to destinations custade Yemen. We have also seen additional fine steps enough the opt of the Adaptive, the Agric and Sanar's and Sanar's support and the severy thanks and its important that we work.

Ending the war in Yemen has been a psiority of my administration. I am grateful for the tireless work of my Special Envoy Tim Lenderking, and the UN's Envoy to Yemen, Hans Grandberg. Their work, however, is not finished. I urge all parties to move expeditiously towards a comprehensive and inclusive peace process. Our dejournacy will not est until a permanent elettiment is in judge.

The time about the process process without cooperative diplomacy from across the region. See Section 2019, and a section across the region is a section of the contract of the found process. Egypt and Josephine Charles appoint to fights from Y when cover the past month thereby enabling a key component of the fruit process.

The United States will remain engaged in this process over the coming weeks and months. As we continue to support regional diplomacy to de-escalate fensions wherever possible in the Middle East region, the United States is also focused intensively on determing threats to our friends and partners. Our friends carriery on the United States is a security partner of choice.

https://www.whitchouse.gov/briefing-room/statements-releases/2022/04/01/president-biden-statement-on-un-mediated-/ruce-in-verner

President Biden Statement on UN-Mediated Truce in Yemen

APRIL 01, 2022-announcement today of a two-month truce in the Yemen conflict. This initiative is a long-available reprieve for the Yemeni people. It entails a habit all military activities by any party inside Yemen and across its borders, the entry of best ships into Hudaydian port, and the remewal of commercial flights bo and military activities by any party inside Yemen and across its borders, the entry of best ships into Hudaydian port, and the remewal of commercial flights bo and them disavers to applicate them are producted them as an exposure them are producted them as a thing them are producted to the producted them are producted to the producted to the producted them are producted to the producted to the producted to the producted them are producted to the producted to

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President Biden Statement on the UN-Mediated Truce Extension in Yemen

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President Biden Statement on UN-Mediated Truce in Yemen

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Dan Tsubouchi @Energy_Tidbits · Jun 2 SAF

For those not near their laptop, @EIAgov weekly #Oil #Gasoline #Distillates inventory as of May 27 just out. Compared below vs @APlenergy yesterday and expectations. Prior to release, WTI was \$114.80. #OOTT

Inventory May 27: EIA, Bloomberg Survey Expectations, API

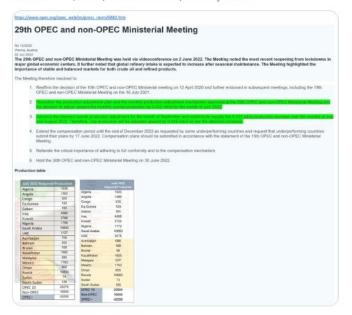
s)	EIA	Expectations	
	-5.07	-2.10	
	-0.71	-0.10	
	-0.53	0.75	
	-6.31	-1.45	

mmercial so builds in impact of 5.4 mmb draw from SPR for Ma d in the oil data, Cushing had a build of 0.26 mmb for May 27 we Bloomberg

SAF Group https://safgroup.ca/news-insights/

Dan Tsubouchi @Energy_Tidbits · Jun 2

Who besides Saudi, UAE, Kuwait, maybe Iraq can deliver higher production? I pasted the #OPEC+ June quota besides new July quota so you can see by country changes for new +0.648 mmb/d increase for July ie. Russia is +170,000 b/d to 10.833 mmb/d for July #OOTT



SAF @Amena_Bakr for the reporting #OOTT

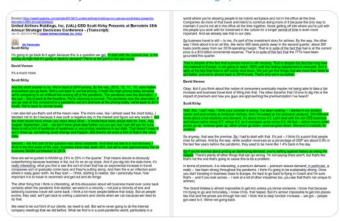
Amena Bakr @Amena_Bakr · Jun 2

The meeting lasted 11 minutes and there is no sign of a press conference $\# \mathsf{OOTT}$

Show this thread

Dan Tsubouchi @Energy_Tidbits · Jun 2

Support for #Oil. \$UAL CEO asked if pricing will destroy demand. "not a hint of evidence of weakness or any pricing resistance" "we just got 5 things that are more likely to get better and we're almost back to 2019 levels. That's why we're so bullish".Thx @SeekingAlpha. #OOTT



SAF

Dan Tsubouchi @Energy_Tidbits · Jun 2

Expected path well south of offshore Gulf of Mexico #Oil #NatGas wells. and Gulf Coast refineries and export terminals for oil, petroleum products and LNG. #OOTT

Breaking Weather by AccuWeather 🤣 @breakingweather - Jun 2

A tropical system brewing just to the east of Mexico in the western Caribbean Sea may head toward Florida this weekend: bit.ly/3m8fT88

Dan Tsubouchi @Energy_Tidbits · Jun 1 SAF

#LNG #NatGas looks good for 2020s."Some deals between South Korean importers and US LNG suppliers were announced at the World Gas Conference 2022 in Daegu last month, but several more purchases by Asian firms have not been made public" reports @SPGlobal @ericyep.

S&P Global Commodity Insights LNG @SPGCILNG - Jun 1

While Asian #LNG importers are seeking the protection of long-term contracts due to the volatility of spot markets; European energy companies & utilities are looking to tie up #gas supply to replace Russian volumes in the years ahead | by @ericyep: okt.to/VkllwK

#ONGT

Dan Tsubouchi @Energy_Tidbits · Jun 1 SAF

Overshadowed by his hurricane, better brace yourself comment, #JamieDimon "We're not investing enough money to keep oil -- remember, and for all those who love climate change, if oil prices go to \$175 or \$150, which I kind of think is in the cards, to tell you the truth" #OOTT

Dan Tsubouchi @Energy_Tidbits · Jun 1 SAF

Brent now down \$3.45 to \$112.84 on this @ftenergy report Saudi will produce more oil if Russia oil output sinks. #OOTT

🖭 FT Energy 🕗 @ftenergy - Jun 1

Saudi Arabia ready to pump more oil if Russian output sinks under ban on.ft.com/3ak7N9S

Dan Tsubouchi @Energy_Tidbits · Jun 1

SAF Time for election goodies. US elections on Nov 8 also incl races for governor incl New York."Gov Hochul announces start of statewide gas and #Diesel tax holiday" "will provide a reduction of at least \$0.16 per gallon statewide", #OOTT #Gasoline



governor.ny.gov

Governor Hochul Announces Start of Statewide Gas and Diesel Tax H... Governor Hochul announced the suspension of certain taxes on motor fuel and diesel motor fuel takes effect today, Wednesday, June 1, 2022. SAF

SAF

Sounds like Pakistan wants a long term, but not too long, discounted #LNG supply deal from Russia? in LNG supply short outlook for 2020s, only want 10-15 yr terms so effectively eliminating supply like Qatar, maybe others. Thx @FaseehMangi. #NatGas #OOTT

r when to issue the tender, which they Middle East, including Qatar, the UAE, Saudi Arabia Pakistan depends on overseas LNG for power generation, and was hit particularly hard by the surge in spot prices and supply disruptions. The cash-strapped government resorted to planned blackouts to conserve its dwindling supply of fuel. Read more: Global Energy Shortage Sets Stage for a Hot and Deadly Summer Asian LNG spot prices are trading at a seasonal high after Russia's invasion of Ukraine exacerbated an already tight market. Pakistan was forced to purchase several expensive LNG shipments from the spot market to keep the lights on last month. Long-term deals are much cheaper than current spot rates, and may provide some relief for Pakistan's government. Abbasi, who is a former prime minister and energy minister, signed several long-term LNG supply deals with Qatar, Eni SpA and Gunvor Group in 2016 and 2017. However, Eni and Gunvor have canceled several scheduled cargoes to Pakistan in the last year, exacerbating the nation's energy shortage and fueling political instability. The suppliers backed out by paying a 30% penalty on the cost of the shipment, which is envisaged in the contracts if they cannot deliver. The government will keep the 30% clause in future deals, said Abbasi, who explained that it is standard in contracts. Pakistan is also open to signing a 30-year contract to make sure it has enough fuel to power its economy well into the future said Abhasi. Today the industry's longest deals rarely

Dan Tsubouchi @Energy_Tidbits · May 31

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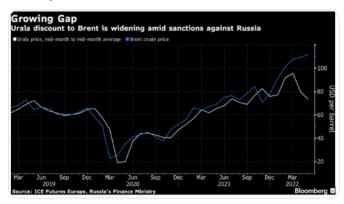
China Caixin PMI for May 48.1 vs Est 49.0 & April 46.0. "May survey data signalled a move towards more stable operating conditions across China's manufacturing sector, as firms signalled notably softer falls in both production and new orders." Thx @IHSMarkitPMI #OOTT



Dan Tsubouchi @Energy_Tidbits · May 31

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RUS Urals blend \$73.24/b mid-Apr to mid-May, 32% discount to Brent reports @ja_herron. This is #Lukoil Fedun's concern, see \(\bigcap \) May 30 thread on his op-ed. It's why one way or another, expect RUS #Oil exports lower. Oil looks good for 2020s. #OOTT twitter.com/business/statu...



⊶- **Dan Tsubouchi** @Energy_Tidbits · May 30

1/2 #Lukoil Fedun "Should we try to maintain pre-crisis export volumes by agreeing to 30% and sometimes even 40% discounts? At the same time, buyers, under the talk of an oil embargo, will try to institutionalize these discounts with the help of tariff regulation tools" #OOTT Show this thread

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If Saudi gives in & cranks up #Oil, it means less surplus capacity & any major interruption means big price spike. Then remember key concept - any near term oil supply surprise is almost always to the downside. It may be small but Libya oil leak leads to loss of 22,000 bpd #OOTT



SAF SACO

Positive for #Oil. Brazil is a key non-OPEC+ supply growth areas for 2022/23. #Bolsonaro's shake up of board & mgmt has to have some impact on plan execution. Maybe +0.27 mmbd YoY or 2022 is being executed? But should be risk for +0.13 mmbd for 2023. #OOTT reuters.com/article/petrob...

U.S. Energy Information Administration S	p. 1011-1-0-	201		94. 1149	2022				2023				Year		
	01	Q2 T	Q3	04	Q1 T	Q2 T	Q3 T	04	91 T	02 1	03 1	04	2021	2022	2023
Worth America	25.16	24.36	29.33	27.48	26.94	27.90	28.11	28.66	28.94	29.09	29.33	29.71	26.04	27.63	29.27
anada	5.62	6.37	5.49	5.68	5.69	5.66	5.74	5.85	5.92	5.88	5.90	5.91	5.54	5.74	5.90
Menico	1.93	1.95	1.90	1.92	1.91	1.92	1.90	1.86	1.90	1.87	1.83	1.79	1.92	1.90	1.85
Inted States	17.62	19.05	18:94	19.67	19.33	20.02	20.47	20.95	21.11	21.34	21.62	22.00	10.00	20.20	21.52
Sentral and South America	5.64	6.29	6.69	5.79	6.85	6.69	7.14	6-01	6.25	7.00	7.35	6.04	6.10	6.58	6.87
logentina	0.65	0.69	0.73	0.74	0.76	0.74	0.77	0.70	0.80	0.78	0.81	0.03	0.70	-0.76	0.81
State	3.22	2.89	4.21	3.42	2.36	E10	4.47	3.69	3.49	428	4.52	# 00°	3.69	0.00	4.09
Colombia	0.77	0.74	0.77	0.77	0.77	0.75	0.74	0.73	0.69	0.67	0.66	0.65	0.76	0.75	0.67
Equador	0.61	0.50	0.49	0.41	0.48	0.53	0.53	0.53	0.54	0.56	0.58	0.60	0.48	0.62	0.87
Other Central and S. America	0.48	0.45	0.49	0.46	0.48	0.57	0.63	0.66	0.73	0.72	0.73	0.73	0.47	0.59	0.73
	4.34	3.83	4.12	4.13	4.09	413	4.05	428	4.34	4.28	4.30	451	4.10	414	4.19
Europe															
Rohiniy	2.11	1.90	2.06	2.05	1.98	2.04	2.05	2.20	2.36	2.32	2.32	2.42	2.03	2.07	2.34
Inted Kingdom	1.08	0.81	0.92	0.93	0.98	0.97	0.86	0.94	0.93	0.92	0.84	0.94	0.94	0.94	0.91
turasia	13.38	13.61	13.56	14.23	14.34	12.75	12.55	12.52	12.43	12.19	72.08	12.06	13.70	13 (3	12.19
kzertejan	0.76	0.70	0.71	0.71	0.70	0.72	0.73	0.72	0.72	0.69	0.68	8.70	0.72	0.72	0.70
Cazalhistan	1.87	1.86	1.72	2.61	2.01	7.75	1.97	2.01	2.03	7.93	1.94	2.01	1.87	1.92	1.90
Russia	10.42	10.71	10.80	11.16	11.30	9.92	9.54	8.43	9.31	9.20	9.09	6.99	10.78	10.04	9.15
Turkmenetan	0.24	0.24	0.24	0.24	0.23	0.22	0.23	0.23	0.24	0.54	0.24	6.54	0.24	0.23	0.24
Other Europia	0.10	0.50	0.10	0.10	0.12	0.13	0.14	0.13	0.13	0.13	0.13	0.13	0.10	0.13	0.13
Middle East	2.10	3.13	3.17	2.11	3.22	3.25	3.26	226	3.22	3.23	3.23	3.22	3.16	3.24	3.22
men	0.96	0.97	0.98	1.01	1.04	7.05	1.05	1.05	1.04	1.04	1.04	1.04	0.98	1.05	1.04
Dotar	1.80	1.82	1.63	1.83	1.86	2.00	1.60	1.90	1.86	1.00	1.95	1.86	1.02	1.00	1.89
hall and Daniel	9.18	9.10	9.05	8.95	9.25	9.16	9.10	9.22	9.20	9.19	9.17	9.19	9.07	9.20	9.19
Asia and Oceania	0.46	0.42	9.49	0.48	0.45	0.40	0.47	0.40	0.47	0.46	0.45	0.45	0.45	0.47	0.46
Tree	4.99	6.03	5.01	4.93	5.19	5.05	5.05	5.00	5.07	510	5.09	5.14	4.99	5.00	5.10
nda	0.90	0.89	0.89	0.88	0.90	0.69	6.90	0.90	0.90	0.88	0.88	0.89	0.89	0.90	0.49
	0.88	0.85	0.86	0.85	0.85	0.86	0.85	0.85	0.84	0.84	0.83	0.82	0.86	0.85	0.83
ndonesia	0.66	0.62	0.67	0.88	0.62	0.60	0.63	0.65	0.65	0.65	0.64	0.64	0.61	0.62	0.65
Authoritis	0.00	0.82	0.20	0.21	0.20	0.20	0.19	0.16	0.18	0.18	0.17	0.17	0.61	0.19	0.18
- Martin	9.21	0.21	*20	0.21	0.20	0.20	0.19	0.10	0.70	0.10	0.17	6.17	0.21	0.19	0.10
Mirica	1.48	1.47	1.41	1.41	1.39	1.42	1.43	1.43	1.43	1.43	1.42	1.42	1.44	1.42	1.42
fayor	0.66	0.67	9.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66
Fouth Sudan	0.16	0.16	0.16	0.16	0.15	0.17	0.10	0.10	0.19	0.19	0.19	0.20	0.16	0.17	0.19
Total non-OPEC liquids	62.27	63.81	64.26	65.17	65.08	65.00	65.70	45.90	65.85	66.54	66.87	66.95	63.91	65.44	66.50
OPEC sen-erude liquids	6.26	6.39	6.44	5.44	5.56	5.43	8.48	8.52	5.56	5.43	5.48	5.52	5.38	5.50	5.50
Von-OPEC + OPEC non-crude	67.54	69.19	69.79	70.61	70.64	70.43	71.18	71.48	71.41	71.98	72.35	72.47	69.29	70.94	72.06
Unplanned non-CPEC Production Outages		0.50	0.80	0.86	0.76				-		-		0.70		
OPEC = Organization of the Petroleum Exporting Cou- tre United Arab Eminates, Venezuela. Notes: EM completed modeling and analysis for this in the approximate break between historical and forecas (apply includes production of crude oil (including less).	eport on Mi	ny 5, 2022 shown wi	th Nistence	al data pres	lod in bold	estimate	and fore	osts mit	ales.		s, Soluti A	rabia,			

SAF

Buckle up! Oct 30, 2021 was the #MacronMoment when just before #COP26m, the went on and #Macron realized & warned the #EnergyTransition was setting the stage for high medium/long term #Oil #NatGas prices. This was before Russia! #Oil #NatGas looks good for 2020s. #OOTT

- Dan Tsubouchi @Energy_Tidbits · Oct 30, 2021

Oops, #Macron on #EnergyTransition "ironic, because we are building a system where in the medium & long term fossil energy will cost more & more, that's what we want to [to fight climate change]". 2020s will be very good for #Oil #NatGas prices. Great report @labboudles #OOTT twitter.com/labboudles/sta...

Excerpt https://www.ft.com/content/8385f5d8-b045-46a7-a822-47a9ba09e219

Macron warns of threat to global economy from energy crisis

French president urges world leaders to act on climate change with more financial pledges ahead of COP26 summit



Leila Abboud in Paris and Leslie Hook in London YESTERD/

D ** €

Macron called for Europe to develop a more diverse gas supply but also to speed up a transition away from fossil fuels, which will be necessary to slow rising temperatures and tame the climate disruptions caused by global warming.

"What is happening now is ironic, because we are building a system where in the medium and long term fossil energy will cost more and more, that's what we want [to fight climate change]." he said. "The problem is that industries and households will need to be accompanied in this transition... or it won't be sustainable."

Reminder #Centrica was already looking to reopen Rough #NatGas storage in Oct. The #EnergyTransition was already going to take longer, be bumpy & cost a lot more. RUS has just made it worse. Positive for #Oil #NatGas for the 2020s, #OOTT

Excerpt SAF Group Oct 31, 2021 Energy Tidbits memo

Natural Gas – Centrica talking about reopening its Rough UK natural gas storage

Natural Gas – Centrica talking about reopening its Rough UK natural gas storage
There was another good example of why energy, in this case natural gas, will cost a lot more under the
Energy Transition. Reportedly, there are discussions to look to restart Centrica's Rough gas storage site
that shut down four years ago. So 4 years ago, it wasn't worth spending the capex to fix the problems,
but now it may now be worth spending the capex. It's a good example that illustrates why natural gas
prices and energy should be higher in the 2020s. On Wednesday, Bloomberg reported "Rough Gas
Storage Site May Be Reopened to Boister Strategic Reserves. Britain's briggest energy supplier is in talks
with the Government about reopening a mothballed gas storage facility in a bid to protect the industry
from surging power costs. Centrica, the owner of British Sas, is seeking to restore the defunct Rough
site off the Yorkshire Coast to boost the country's energy reserves. It comes after gas prices spiked to as
nuch as 11 times normal levels in the wake of surging demand." Centrica reportedly talking about going
back in to fix Rough storage so it can be restarted first as the major UK gas storage facility and then over
time to hydrogen. And Centrica reportedly says don't need govt subsidies to do so, just can charge out to
customers. This was abandoned because the cost to fix it wasn't worth it in 2017. The reality check is
that the costs to fix it douly have to be way higher than before. Yet Centrica can now make the math
work by charging customers. Je, the costs of using storage are going much higher. Our Supplemental
Documents package includes the Bloomberg report.

Contrica shut dewn LIK Israeret are storage Rough in 2017.

nents package includes the Bloomberg report.

Centrica shut down UK largest gas storage, Rough, in 2017

Our October 10, 2021 Energy Tidbits just happened to include a recap of Centrica shutting down its Rough UK gas storage in 2017. At that time, we wrote "One of the big criticism on the UK natural gas system is that there is a lack of gas storage. In September, Energy UK estimated there was 141 bgf in UK natural gas storage and wrote [LINK] "British has over 4bern of storage capacity that can be called upon to deliver over one quarter of national gas demand on a coid winter's day. Gas is sent to storage facilities throughout the summer and at other times of the year to make sur we have gas supplies available when we need them." UK natural gas storage was much higher in 2017. In 2017. Centrica ceased operations at the largest UK gas storage facility, Rough, Our July 2, 2017 Energy Tibits noted that, at the time of its cessation, Centrica estimated there was 183 pcf of recoverable cushion gas. They had massive problems with the storage that led to pre tax charge of £176 in 2016 results. Made the decision to shut if down in early 2017. We went back and couldn't see what the "working gas" level was prior to the problems. But Rough was the largest UK storage and believed to have represented something like 70% of the storage send out capacity. Rough was a depleted reservoir being used for storage. As a rule of thumb, we would use 650°C spit between cushion gas and working gas. So its probably reasonable to roughly assume working gas was about the same at 183 bcf. The closing of Rough is why UK has relatively low natural gas storage.

Source: SAF Group https://safgroup.ca/news-insights/

The Telegraph 🤣 @Telegraph · May 31

Kwasi Kwarteng and Centrica are in talks over the revival of ageing structure telegraph.co.uk/business/2022/...

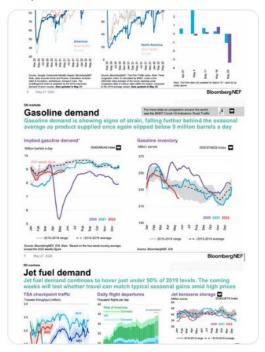
SAF

Dan Tsubouchi @Energy_Tidbits · May 31

Buckle Up! EU new sanctions on RUS #Oil #PetroleumProducts. @CroftHelima estimates "The sanctions will impact 1.2-1.5 mb/d of oil by year-end and ~1 mb/d of refined products exports by Q1'23". As seen in 2022, the impact on #Oil, #Diesel, #JetFuel will be global. #OOTT

SAF

Price response. US #Gasoline #JetFuel consumption "implied demand figures for both fuels sliding this week" writes @BloombergNEF . Thx BNEF Danny Adkins. #OOTT



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Dan Tsubouchi @Energy_Tidbits · May 30

SAF

1/2 #Lukoil Fedun "Should we try to maintain pre-crisis export volumes by agreeing to 30% and sometimes even 40% discounts? At the same time, buyers, under the talk of an oil embargo, will try to institutionalize these discounts with the help of tariff regulation tools" #OOTT

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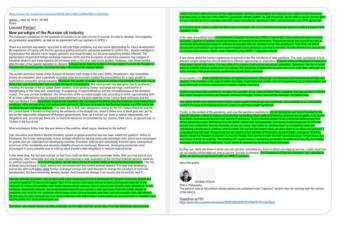
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Dan Tsubouchi @Energy_Tidbits · May 30

2/2. #Lukoil Fedun "But this flexibility comes at a price: high costs for shutting down and restarting wells and maintaining infrastructure systems." How much is RUS #Oil capacity being hit? One way or another, looks like

less RUS exports, a big positive for #Oil in 2020s. #OOTT



Dan Tsubouchi @Energy_Tidbits · May 29

if you are looking for 15-page Google Translate of Shanghai's 50 pt action plan for accelerating econoic recovery & revitalization, pls see Supplemental Documents packge of May 29 Energy Tidbits Memo, go to news/insights section of SAF website safgroup.ca/news-insights/ #OOTT

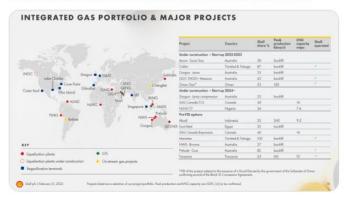
- Dan Tsubouchi @Energy_Tidbits · May 29

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

shanghai.gov.cn/nw12344/202205...

Dan Tsubouchi @Energy_Tidbits · May 29

#Shell FIDs Crux project, it's not new #LNG export capacity, rather it's #NatGas supply to backfill for existing Prelude 0.47 bcf/d capacity. With AGM done, will we see FID for #LNGCanada Phase 2 expansion that would add 0.72 bcf/d for Shell share? #OOTT_shell.com/media/news-and...



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SAF .

Our weekly SAF May 29, 2022 Energy Tidbits memo is posted on our SAF Group website. This 42-pg energy research memo expands upon & covers more items than tweeted this week. See news/insights section of SAF website #Oil #OOTT #LNG #NatGas #EnergyTransition safgroup.ca/news-insights/

