Energy Tidbits

Netanyahu: "*Israel Will Not Agree to Hamas's Demand" and "Hamas Remains Entrenched in its Positions*"

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Table 1. Summary of natural gas supply and disposition in the United States, 2019-2024

billion cubic feet

Year and month	Gross withdrawals	Marketed production	NGPL production[a]	Dry gas production[b]	Supplemental gaseous fuels[c]	Net imports	Net storage withdrawals[d]	Balancing item[e]	Consumption[f]
2019 total	**40,780**	**36,447**	**2,548**	**33,899**	**61**	**-1,916**	**-503**	**-408**	**31,132**
2020 total	**40,730**	**36,521**	**2,710**	**33,811**	**63**	**-2,734**	**-180**	**-357**	**30,603**
2021 total	**41,677**	**37,338**	**2,809**	**34,529**	**66**	**-3,845**	**83**	**-188**	**30,646**
2022									
January	3,628	3,235	252	2,983	6	-315	1,013	-95	3,593
February	3,266	2,914	227	2,687	5	-288	673	-17	3,059
March	3,663	3,282	256	3,026	6	-380	171	-43	2,781
April	3,568	3,199	250	2,950	6	-342	-220	-33	2,360
May	3,695	3,332	260	3,072	6	-386	-412	-39	2,241
June	3,565	3,232	252	2,980	6	-325	-332	-13	2,317
July	3,736	3,375	263	3,112	6	-303	-187	-46	2,583
August	3,730	3,392	265	3,128	6	-322	-213	-39	2,559
September	3,669	3,330	260	3,071	6	-293	-446	-50	2,288
October	3,814	3,438	268	3,170	6	-315	-432	-66	2,364
November	3,712	3,327	259	3,067	6	-308	78	-77	2,767
December	3,755	3,370	263	3,107	6	-304	588	-21	3,376
Total	**43,802**	**39,428**	**3,075**	**36,353**	**73**	**-3,880**	**281**	**-539**	**32,288**
2023									
January	[E]3,820	[E]3,429	270	[E]3,159	7	-333	456	[R]15	[R]3,303
February	[E]3,456	[E]3,103	247	[E]2,856	6	-331	399	[R]19	[R]2,949
March	[E]3,858	[E]3,475	286	[E]3,189	6	-401	224	[R]-4	[R]3,014
April	[E]3,729	[E]3,362	283	[E]3,079	5	-400	-269	5	2,421
May	[E]3,869	[E]3,500	289	[E]3,210	6	-422	-452	-27	2,315
June	[E]3,720	[E]3,375	278	[E]3,098	4	-376	-344	[R]-20	[R]2,363
July	[E]3,827	[E]3,495	290	[E]3,205	6	-378	-134	[R]-33	2,666
August	[E]3,850	[E]3,534	294	[E]3,240	5	-388	-133	[R]-51	[R]2,673
September	[E]3,761	[E]3,426	291	[E]3,135	3	-396	-323	-46	2,373
October	[E]3,909	[E]3,537	302	[E]3,235	3	-421	-321	-58	2,438
November	[E]3,841	[E]3,469	292	[E]3,177	5	-403	65	[R]-21	2,823
December	[RE]3,994	[RE]3,592	292	[RE]3,300	6	-432	284	[R]11	3,169
Total	**[RE]45,633**	**[RE]41,296**	**3,413**	**[RE]37,883**	**63**	**-4,682**	**-548**	**[R]-210**	**[R]32,507**
2024									
January	[RE]3,867	[RE]3,474	269	[RE]3,205	6	-350	844	[R]-8	3,696
February	[E]3,714	[E]3,340	276	[E]3,064	5	-385	262	22	2,969
2024 2-month YTD	**[E]7,580**	**[E]6,814**	**545**	**[E]6,270**	**11**	**-735**	**1,106**	**14**	**6,666**
2023 2-month YTD	**[E]7,275**	**[E]6,532**	**517**	**[E]6,015**	**13**	**-664**	**855**	**34**	**6,252**
2022 2-month YTD	**6,895**	**6,150**	**480**	**5,670**	**11**	**-603**	**1,686**	**-112**	**6,652**

[a] We derive monthly natural gas plant liquid (NGPL) production, gaseous equivalent, 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*.

[b] Equal to marketed production minus NGPL production.

[c] We only collect supplemental gaseous fuels data on an annual basis except for the Dakota Gasification Co. coal gasification facility, which provides data each month. We calculate the ratio of annual supplemental fuels (excluding Dakota Gasification Co.) to the sum of dry gas production, net imports, and net withdrawals from storage. We apply this ratio to the monthly sum of these three elements. We add the Dakota Gasification Co. monthly value to the result to produce the monthly supplemental fuels estimate.

[d] Monthly and annual data for 2019 through 2022 include underground storage and liquefied natural gas storage. Data for January 2023 forward include underground storage only. Appendix A, Explanatory Note 5, contains a 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): 91 for 2022; 184 for 2021; 207 for 2020; and -8 for 2019. Appendix A, Explanatory Note 7, contains a full discussion of balancing item calculations.

[f] Consists of pipeline fuel use, lease and plant fuel use, vehicle fuel, and deliveries to consuming sectors as shown in Table 2.

[R] Revised data.

[RE] Revised estimated data.

[E] Estimated data.

Source: 2019-2022: U.S. Energy Information Administration (EIA), *Natural Gas Annual 2022*. January 2023 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*. Table 7 includes detailed source notes for Marketed Production. Appendix A, Notes 3 and 4, includes discussion of computation and estimation procedures and revision policies.

Note: Data for 2019 through 2022 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.

Table 2. Natural gas consumption in the United States, 2019-2024

billion cubic feet, or as indicated

Year and month	Lease and plant fuel[a]	Pipeline and distribution use[b]	Delivered to consumers: Residential	Commercial	Industrial	Electric power	Vehicle fuel	Total	Total consumption	Heating value[c] (Btu per cubic foot)
2019 total	**1,823**	**1,018**	**5,019**	**3,515**	**8,417**	**11,288**	**53**	**28,291**	**31,132**	**1,038**
2020 total	**1,851**	**1,020**	**4,674**	**3,163**	**8,213**	**11,632**	**49**	**27,731**	**30,603**	**1,037**
2021 total	**1,851**	**1,131**	**4,717**	**3,289**	**8,375**	**11,229**	**54**	**27,663**	**30,646**	**1,037**
2022										
January	154	137	958	551	826	961	6	3,302	3,593	1,038
February	139	116	791	464	729	815	5	2,804	3,059	1,038
March	157	105	588	385	761	779	6	2,519	2,781	1,036
April	153	88	384	276	706	748	5	2,120	2,360	1,035
May	159	83	201	183	684	925	6	1,999	2,241	1,034
June	154	86	124	146	655	1,146	5	2,076	2,317	1,033
July	161	97	110	144	665	1,400	6	2,325	2,583	1,033
August	162	96	103	141	677	1,375	6	2,302	2,559	1,035
September	159	85	114	150	653	1,122	5	2,044	2,288	1,036
October	164	88	242	223	692	950	6	2,112	2,364	1,036
November	159	104	513	353	729	903	5	2,504	2,767	1,036
December	161	128	835	492	761	993	6	3,087	3,376	1,041
Total	**1,883**	**1,212**	**4,964**	**3,509**	**8,537**	**12,118**	**65**	**29,193**	**32,288**	**1,036**
2023										
January	E164	E124	799	475	R770	967	E5	R3,015	R3,303	1,039
February	E148	E111	R684	R424	708	870	E4	R2,690	R2,949	1,038
March	E166	E113	633	408	R757	932	E5	R2,735	R3,014	1,036
April	E161	E91	338	253	706	869	E4	2,170	2,421	1,035
May	E167	E87	197	183	681	996	E5	2,061	2,315	1,034
June	E161	E89	129	149	R654	1,176	E4	R2,113	R2,363	1,034
July	E167	E100	111	143	669	1,471	E5	2,399	2,666	1,035
August	E169	E100	104	145	R688	1,462	E5	R2,404	R2,673	1,035
September	E164	E89	113	146	665	1,191	E4	2,120	2,373	1,034
October	E169	E92	227	224	706	1,016	E5	2,178	2,438	1,035
November	E166	E106	493	R346	743	965	E4	R2,551	2,823	1,037
December	E172	E119	656	413	791	1,014	E5	2,878	3,169	1,038
Total	E**1,972**	RE**1,221**	R**4,483**	R**3,310**	R**8,538**	**12,930**	E**53**	R**29,314**	R**32,507**	**1,036**
2024										
January	E166	E139	919	535	802	1,131	E5	3,392	3,696	1,039
February	E159	E111	646	416	718	914	E4	2,698	2,969	1,039
2024 2-month YTD	E**325**	E**250**	**1,565**	**951**	**1,520**	**2,045**	E**9**	**6,090**	**6,666**	**1,039**
2023 2-month YTD	E**312**	E**235**	**1,483**	**899**	**1,478**	**1,837**	E**9**	**5,706**	**6,252**	**1,039**
2022 2-month YTD	**294**	**254**	**1,749**	**1,015**	**1,555**	**1,776**	**11**	**6,105**	**6,652**	**1,038**

[a] We only collect plant fuel data and lease fuel data annually. We estimate monthly lease and plant fuel use from monthly marketed production by assuming that the preceding annual percentage remains constant for the next 12 months.

[b] We base published pipeline and distribution use data on reports collected on an annual basis. We estimate monthly pipeline and distribution use data from monthly total consumption (excluding pipeline and distribution use) by assuming that the preceding annual percentage remains constant for the next 12 months. Pipeline and distribution use volumes include line loss, defined as known volumes of natural gas that were the result of leaks, damage, accidents, migration, and/or blow downs, as well as fuel used in liquefaction and regasification.

[c] Heating value is the average number of British thermal units per cubic foot of natural gas as reported on EIA-857 and EIA-176. Appendix A, Explanatory Note 11, contains further information.

[R] Revised data.

[RE] Revised estimated data.

[E] Estimated data.

Source: 2019-2022: U.S. Energy Information Administration (EIA): Form EIA-857, *Monthly Report of Natural Gas Purchases and Deliveries to Consumers*; state and federal agencies; EIA estimates based on historical data; and *Natural Gas Annual 2022*. January 2023 through current month: Form EIA-914, *Monthly Crude Oil and Lease Condensate, and Natural Gas Production Report*; Form EIA-857; Form EIA-923, *Power Plant Operations Report*. Appendix A, Explanatory Note 6, contains an explanation of computation procedures and revision policy.

Note: Data for 2019 through 2022 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. Appendix A, Explanatory Note 6, contains a definition of sectors.

Table 5. U.S. natural gas exports, 2022-2024

volumes in million cubic feet; prices in dollars per thousand cubic feet

	2024 2-month YTD	2023 2-month YTD	2022 2-month YTD	2024 February	2024 January	2023 Total	2023 December
Exports							
Volume (million cubic feet)							
Pipeline							
Canada	207,071	201,113	156,207	114,539	92,532	1,026,097	111,869
Mexico	354,549	318,835	330,499	169,473	185,076	2,241,553	174,602
Total pipeline exports	**561,620**	**519,948**	**486,706**	**284,012**	**277,608**	**3,267,651**	**286,471**
LNG							
Exports							
By vessel							
Antigua and Barbuda	2	5	2	0	2	47	6
Argentina	0	2,287	0	0	0	76,921	0
Bahamas	76	69	65	34	42	499	32
Bangladesh	0	3,369	5,896	0	0	24,147	3,257
Barbados	59	0	59	37	22	11	11
Belgium	23,641	10,963	21,478	9,386	14,255	97,017	14,272
Brazil	14,473	0	27,981	6,180	8,292	38,595	3,708
Chile	7,218	3,307	3,162	3,522	3,696	31,217	0
China	24,256	20,461	3,357	16,312	7,944	173,247	13,949
Colombia	12,566	0	486	6,101	6,465	32,014	7,162
Croatia	12,841	8,919	14,953	3,377	9,464	55,439	3,050
Dominican Republic	14,595	7,157	6,647	7,106	7,489	73,761	3,177
El Salvador	0	0	0	0	0	1	0
Finland	0	0	0	0	0	38,858	2,762
France	77,412	73,581	89,731	49,363	28,049	492,696	40,692
Germany	34,086	22,543	0	16,715	17,371	204,605	19,439
Greece	10,290	9,988	9,896	3,136	7,153	39,426	8,287
Haiti	22	19	36	6	16	113	13
India	24,215	21,021	14,075	13,530	10,685	164,325	17,062
Indonesia	0	805	717	0	0	3,157	0
Italy	36,222	24,480	20,666	11,455	24,767	197,513	21,283
Jamaica	7,164	268	197	588	6,576	9,048	480
Japan	42,167	31,755	31,741	22,827	19,340	310,190	27,461
Jordan	0	0	0	0	0	3,282	0
Kuwait	3,175	0	5,277	3,175	0	35,185	0
Lithuania	8,257	6,713	6,649	7,174	1,083	55,332	3,409
Malta	0	2,592	2,345	0	0	2,592	0
Mexico	87	3,219	0	87	0	13,661	3,660
Netherlands	87,375	75,754	47,869	45,501	41,873	588,557	48,658
Pakistan	0	0	0	0	0	3,141	3,141
Panama	3,677	2,718	6,324	0	3,677	19,565	328
Philippines	0	0	0	0	0	6,823	0
Poland	16,448	21,885	11,170	10,702	5,746	139,635	10,862
Portugal	18,887	12,953	6,571	9,384	9,503	73,158	2,945
Singapore	10,045	0	0	6,851	3,194	23,320	0
South Korea	36,832	47,180	49,313	16,193	20,640	275,779	35,187
Spain	52,473	46,125	88,738	13,660	38,812	269,202	15,629
Taiwan	19,705	10,028	12,326	13,151	6,555	104,075	6,655
Thailand	16,713	5,567	8,370	8,809	7,904	59,477	3,818
Turkiye	63,147	52,727	88,778	20,454	42,693	156,403	42,304
United Kingdom	77,046	134,734	85,361	34,117	42,928	450,694	60,209
By truck							
Canada	0	0	17	0	0	85	7
Mexico	35	239	304	14	21	604	20
Re-exports							
By vessel							
United Kingdom	607	0	0	607	0	0	0
Total LNG exports	**755,813**	**663,430**	**670,557**	**359,553**	**396,260**	**4,343,415**	**422,935**
CNG							
Canada	0	*	0	0	0	1	0
Total CNG exports	**0**	*****	**0**	**0**	**0**	**1**	**0**
Total exports	**1,317,433**	**1,183,378**	**1,157,263**	**643,565**	**673,868**	**7,611,067**	**709,406**

See footnotes at end of table.

Table 5. U.S. natural gas exports, 2022-2024

volumes in million cubic feet; prices in dollars per thousand cubic feet – continued

	2023						
	November	October	September	August	July	June	May
Exports							
Volume (million cubic feet)							
Pipeline							
Canada	89,446	66,936	76,619	68,390	76,567	75,320	77,984
Mexico	179,002	200,466	202,402	213,050	208,625	204,115	193,623
Total pipeline exports	**268,448**	**267,402**	**279,021**	**281,440**	**285,193**	**279,435**	**271,608**
LNG							
Exports							
By vessel							
Antigua and Barbuda	4	7	7	5	4	3	3
Argentina	0	0	0	0	11,162	22,663	26,930
Bahamas	34	34	51	47	47	45	45
Bangladesh	3,240	0	0	7,095	0	3,624	3,561
Barbados	0	0	0	0	0	0	0
Belgium	10,288	20,775	13,697	3,363	0	6,953	3,809
Brazil	3,563	3,720	6,561	3,287	0	8,628	4,196
Chile	0	0	0	3,065	7,144	4,011	6,419
China	25,601	18,013	10,222	14,252	35,337	20,261	6,593
Colombia	1,844	6,689	10,322	3,149	0	0	2,847
Croatia	9,995	0	10,542	3,023	10,121	0	2,932
Dominican Republic	8,647	8,826	6,734	10,055	6,076	7,443	7,871
El Salvador	0	0	0	0	1	0	0
Finland	3,335	0	7,057	6,630	3,666	1,622	6,935
France	58,907	53,559	32,016	34,332	20,589	45,569	51,658
Germany	14,382	17,901	17,228	20,709	17,245	15,769	16,002
Greece	0	0	1,968	4,700	0	2,924	4,498
Haiti	8	8	10	9	8	6	12
India	7,441	13,698	24,452	13,713	20,494	14,488	7,140
Indonesia	0	0	489	766	1,097	0	0
Italy	23,786	6,850	22,094	21,519	13,923	13,959	18,542
Jamaica	122	1,831	4,038	3	1,443	3	289
Japan	24,896	24,357	33,375	31,302	44,016	28,031	31,208
Jordan	0	0	0	0	3,282	0	0
Kuwait	0	0	6,636	3,289	7,081	10,670	3,802
Lithuania	0	6,476	10,666	7,005	3,375	3,629	7,048
Malta	0	0	0	0	0	0	0
Mexico	0	1,776	0	0	1,954	0	0
Netherlands	36,150	49,701	39,745	53,596	53,296	45,866	64,538
Pakistan	0	0	0	0	0	0	0
Panama	3,530	0	3,196	0	3,295	0	3,289
Philippines	3,445	3,378	0	0	0	0	0
Poland	14,500	14,213	14,121	10,550	3,635	18,046	17,422
Portugal	3,204	7,125	6,437	6,660	9,845	3,194	10,424
Singapore	0	3,279	6,649	3,384	0	10,009	0
South Korea	26,140	28,224	24,112	34,932	16,462	17,044	10,958
Spain	17,280	49,792	9,933	20,023	34,106	12,274	12,266
Taiwan	3,104	6,686	13,201	14,117	13,090	6,848	10,262
Thailand	7,581	7,538	0	14,793	7,463	4,242	0
Turkiye	27,560	4,507	3,531	0	0	0	0
United Kingdom	47,642	25,414	7,464	3,655	0	0	25,242
By truck							
Canada	7	0	16	8	8	17	7
Mexico	26	27	35	19	25	34	26
Re-exports							
By vessel							
United Kingdom	0	0	0	0	0	0	0
Total LNG exports	**386,262**	**384,403**	**346,604**	**353,059**	**349,292**	**327,872**	**366,774**
CNG							
Canada	0	0	0	0	0	0	0
Total CNG exports	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Total exports	**654,710**	**651,805**	**625,625**	**634,499**	**634,485**	**607,307**	**638,382**

See footnotes at end of table.

Table 5. U.S. natural gas exports, 2022-2024

volumes in million cubic feet; prices in dollars per thousand cubic feet – continued

	2023					2022	
	April	March	February	January	Total	December	November
Exports							
Volume (million cubic feet)							
Pipeline							
Canada	75,674	106,178	95,691	105,422	959,630	98,718	90,179
Mexico	169,179	177,653	152,807	166,028	2,078,627	158,638	160,986
Total pipeline exports	**244,853**	**283,832**	**248,498**	**271,450**	**3,038,257**	**257,355**	**251,165**
LNG							
Exports							
By vessel							
Antigua and Barbuda	3	2	2	4	22	1	2
Argentina	11,536	2,343	2,287	0	66,939	0	0
Bahamas	43	53	27	42	489	42	35
Bangladesh	0	0	0	3,369	12,663	0	0
Barbados	0	0	0	0	93	0	1
Belgium	4,844	8,053	7,322	3,640	80,245	3,274	0
Brazil	3,598	1,334	0	0	71,998	0	0
Chile	0	7,271	0	3,307	30,131	0	0
China	3,426	5,132	2,565	17,896	96,659	6,992	17,308
Colombia	0	0	0	0	5,703	0	0
Croatia	3,163	3,694	6,006	2,913	77,286	6,204	5,122
Dominican Republic	6,901	876	3,514	3,643	50,824	6,644	0
El Salvador	0	0	0	0	0	0	0
Finland	0	6,850	0	0	329	329	0
France	53,211	28,581	39,457	34,124	571,399	38,311	50,655
Germany	18,546	24,841	8,229	14,314	7,113	7,112	1
Greece	3,905	3,156	6,781	3,207	69,031	2,869	421
Haiti	11	8	11	8	115	9	0
India	14,585	10,230	14,064	6,956	122,518	14,139	10,138
Indonesia	0	0	0	805	6,579	3,256	505
Italy	17,378	13,699	17,555	6,925	116,034	6,992	3,205
Jamaica	31	540	161	107	1,516	147	137
Japan	13,687	20,102	14,058	17,696	209,220	20,535	24,396
Jordan	0	0	0	0	0	0	0
Kuwait	3,707	0	0	0	57,018	0	0
Lithuania	3,412	3,599	0	6,713	77,212	3,281	3,708
Malta	0	0	0	2,592	5,273	0	2,928
Mexico	0	3,051	0	3,219	3,832	539	0
Netherlands	60,234	61,017	39,301	36,453	378,329	39,893	20,645
Pakistan	0	0	0	0	3,074	0	0
Panama	0	3,209	0	2,718	13,759	249	3,833
Philippines	0	0	0	0	0	0	0
Poland	7,165	7,236	10,347	11,538	127,404	13,885	3,453
Portugal	4,237	6,133	6,138	6,816	69,583	10,025	3,732
Singapore	0	0	0	0	22,980	0	0
South Korea	24,734	10,807	22,672	24,507	292,732	24,700	14,069
Spain	13,680	38,096	32,138	13,987	426,657	33,847	26,445
Taiwan	9,774	10,311	6,557	3,471	106,738	9,203	3,592
Thailand	4,225	4,249	1,829	3,738	25,988	0	0
Turkiye	13,908	11,866	13,444	39,283	192,067	17,979	31,430
United Kingdom	75,836	70,499	71,702	63,032	464,462	69,332	76,693
By truck							
Canada	7	7	0	0	76	8	0
Mexico	58	96	106	133	1,552	160	153
Re-exports							
By vessel							
United Kingdom	0	0	0	0	0	0	0
Total LNG exports	**375,843**	**366,941**	**326,275**	**337,155**	**3,865,643**	**339,960**	**302,608**
CNG							
Canada	0	*	*	*	2	0	*
Total CNG exports	**0**	*****	*****	*****	**2**	**0**	*****
Total exports	**620,697**	**650,773**	**574,773**	**608,605**	**6,903,902**	**597,316**	**553,774**

See footnotes at end of table.

Table 5. U.S. natural gas exports, 2022-2024

volumes in million cubic feet; prices in dollars per thousand cubic feet – continued

	2022						
	October	September	August	July	June	May	April
Exports							
Volume (million cubic feet)							
Pipeline							
Canada	72,738	61,926	75,220	69,774	70,105	79,214	80,475
Mexico	171,766	169,159	182,596	189,652	182,995	186,003	176,447
Total pipeline exports	**244,505**	**231,086**	**257,816**	**259,426**	**253,100**	**265,217**	**256,922**
LNG							
Exports							
By vessel							
Antigua and Barbuda	2	3	2	2	3	2	3
Argentina	0	0	2,202	9,448	25,246	20,111	9,933
Bahamas	40	43	53	45	47	42	34
Bangladesh	0	0	0	0	0	3,346	0
Barbados	0	0	0	0	0	0	0
Belgium	7,190	9,165	3,589	0	7,023	3,441	7,341
Brazil	3,439	0	10,542	5,192	3,857	15,303	3,448
Chile	0	3,365	0	6,917	0	9,943	3,530
China	22,598	10,275	10,272	784	7,329	0	10,217
Colombia	3,699	0	606	0	912	0	0
Croatia	2,922	9,073	7,824	4,600	7,925	8,543	6,763
Dominican Republic	3,469	3,196	3,357	6,532	5,838	4,964	3,645
El Salvador	0	0	0	0	0	0	0
Finland	0	0	0	0	0	0	0
France	41,959	57,943	33,885	53,443	37,564	47,150	56,343
Germany	0	0	0	0	0	0	0
Greece	4,424	0	10,763	12,922	9,633	12,650	1,336
Haiti	0	8	11	8	13	9	11
India	7,005	10,528	10,265	13,902	10,653	7,152	14,223
Indonesia	625	509	967	0	0	0	0
Italy	0	8,355	15,462	9,914	7,137	21,696	15,519
Jamaica	144	240	110	121	48	144	135
Japan	10,684	7,005	20,156	18,189	21,561	24,024	13,231
Jordan	0	0	0	0	0	0	0
Kuwait	3,299	7,038	6,415	5,382	8,105	14,204	7,298
Lithuania	7,072	3,541	7,579	7,947	6,729	11,237	13,770
Malta	0	0	0	0	0	0	0
Mexico	0	0	0	0	3,292	0	0
Netherlands	39,703	30,924	50,020	32,637	34,420	28,902	28,395
Pakistan	0	0	0	0	0	0	3,074
Panama	0	0	0	0	623	1,192	1,536
Philippines	0	0	0	0	0	0	0
Poland	7,095	16,917	6,885	17,780	14,282	18,224	13,882
Portugal	7,005	5,806	3,202	6,412	5,582	3,888	6,632
Singapore	6,628	0	0	6,275	3,352	0	0
South Korea	38,844	19,736	36,033	34,342	25,054	17,538	13,813
Spain	26,369	21,263	26,140	34,396	29,639	40,337	40,259
Taiwan	9,041	9,753	8,901	9,353	6,892	15,975	9,541
Thailand	0	3,673	3,607	0	6,920	3,419	0
Turkiye	10,333	5,458	0	0	7,542	7,281	6,637
United Kingdom	46,040	51,467	21,263	3,797	3,326	10,608	39,775
By truck							
Canada	19	0	0	0	8	8	15
Mexico	175	94	103	76	105	115	122
Re-exports							
By vessel							
United Kingdom	0	0	0	0	0	0	0
Total LNG exports	**309,823**	**295,379**	**300,215**	**300,415**	**300,659**	**351,448**	**330,463**
CNG							
Canada	1	*	*	1	*	0	0
Total CNG exports	**1**	*****	*****	**1**	*****	**0**	**0**
Total exports	**554,328**	**526,465**	**558,031**	**559,842**	**553,760**	**616,665**	**587,385**

See footnotes at end of table.

Table 5. U.S. natural gas exports, 2022-2024

volumes in million cubic feet; prices in dollars per thousand cubic feet – continued

	2022		
	March	February	January
Exports			
Volume (million cubic feet)			
Pipeline			
Canada	105,074	74,630	81,577
Mexico	169,885	155,032	175,467
Total pipeline exports	**274,958**	**229,662**	**257,045**
LNG			
Exports			
By vessel			
Antigua and Barbuda	2	0	2
Argentina	0	0	0
Bahamas	43	31	34
Bangladesh	3,421	5,896	0
Barbados	34	31	28
Belgium	17,743	7,691	13,786
Brazil	2,236	10,660	17,322
Chile	3,214	0	3,162
China	7,527	3,357	0
Colombia	0	0	486
Croatia	3,358	5,870	9,084
Dominican Republic	6,530	0	6,647
El Salvador	0	0	0
Finland	0	0	0
France	64,415	39,646	50,084
Germany	0	0	0
Greece	4,116	8,094	1,802
Haiti	10	16	20
India	10,438	7,210	6,866
Indonesia	0	717	0
Italy	7,088	13,629	7,037
Jamaica	92	111	86
Japan	17,697	10,214	21,527
Jordan	0	0	0
Kuwait	0	5,277	0
Lithuania	5,700	3,131	3,518
Malta	0	2,345	0
Mexico	0	0	0
Netherlands	24,922	31,591	16,279
Pakistan	0	0	0
Panama	0	3,069	3,255
Philippines	0	0	0
Poland	3,831	7,475	3,695
Portugal	10,728	3,703	2,868
Singapore	6,725	0	0
South Korea	19,289	27,489	21,824
Spain	59,224	39,359	49,379
Taiwan	12,161	6,115	6,211
Thailand	0	4,880	3,490
Turkiye	16,629	43,697	45,081
United Kingdom	56,799	25,301	60,060
By truck			
Canada	0	4	13
Mexico	144	157	148
Re-exports			
By vessel			
United Kingdom	0	0	0
Total LNG exports	**364,116**	**316,766**	**353,791**
CNG			
Canada	*	0	0
Total CNG exports	*	**0**	**0**
Total exports	**639,074**	**546,428**	**610,836**

See footnotes at end of table.

Table 7. Marketed production of natural gas in selected states and the Federal Gulf of Mexico, 2019-2024

million cubic feet

Year and month	Alaska	Arkansas	California	Colorado	Kansas	Louisiana	Montana	New Mexico	North Dakota	Ohio
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 total	**339,337**	**481,205**	**155,979**	**1,996,740**	**163,362**	**3,205,574**	**38,191**	**1,965,533**	**887,445**	**2,389,629**
2021 total	**354,660**	**448,283**	**136,034**	**1,890,260**	**152,986**	**3,443,767**	**38,719**	**2,237,165**	**999,094**	**2,278,731**
2022										
January	32,865	36,087	11,347	155,786	12,478	318,772	3,119	199,405	81,490	190,930
February	30,014	32,336	9,814	141,557	11,122	290,031	2,977	184,452	75,867	172,453
March	32,473	36,319	11,603	159,101	12,465	319,562	3,370	218,272	88,106	190,930
April	30,910	35,043	11,384	153,816	12,347	324,537	3,175	216,047	68,665	181,993
May	31,677	35,781	11,593	154,313	12,826	348,337	3,170	222,902	81,340	188,060
June	28,644	34,299	11,296	149,081	12,302	336,152	3,208	215,334	86,437	181,993
July	29,654	35,096	11,734	153,856	12,659	348,334	3,367	228,003	90,288	193,328
August	29,380	35,394	12,177	155,140	12,814	351,777	3,544	229,728	89,688	193,328
September	29,288	34,211	11,260	151,515	11,854	348,817	3,491	231,482	90,550	187,092
October	31,122	35,112	11,520	156,992	13,008	365,742	3,560	250,312	93,103	190,335
November	30,934	33,568	11,095	151,304	12,206	357,021	3,266	239,821	85,482	184,195
December	36,181	32,951	11,396	150,558	11,764	355,708	2,461	251,472	76,605	190,335
Total	**373,141**	**416,196**	**136,220**	**1,833,019**	**147,846**	**4,064,791**	**38,709**	**2,687,231**	**1,007,621**	**2,244,971**
2023										
January	33,391	E34,788	E11,055	E151,849	E11,783	E363,863	E3,538	E254,905	E83,384	E198,189
February	30,726	E31,085	E10,042	E135,238	E10,528	E352,464	E3,233	E233,411	E80,766	E174,917
March	32,676	E34,429	E10,900	E150,138	E11,441	E370,158	E3,565	E268,590	E88,736	E199,571
April	31,313	E32,911	E10,652	E146,856	E11,228	E363,538	E3,475	E259,515	E88,066	E187,566
May	31,288	E33,689	E11,243	E152,690	E11,555	E379,548	E3,577	E263,626	E92,326	E191,104
June	28,991	E32,280	E10,795	E149,138	E10,817	E345,747	E3,469	E252,650	E92,129	E179,766
July	28,478	E33,094	E11,217	E155,584	E10,985	E363,583	E3,551	E264,909	E96,906	E189,040
August	26,756	E32,973	E11,217	E157,964	E11,293	E365,347	E3,654	E270,933	E97,655	E195,216
September	28,784	E31,874	E10,827	E152,177	E10,902	E351,720	E3,535	E265,057	E98,252	E188,594
October	31,535	E32,602	E10,908	E157,416	E11,305	E360,678	E3,579	E271,482	E100,209	E186,975
November	30,734	E31,377	E10,272	E154,244	E10,869	E343,826	E3,376	E270,985	E98,324	E185,717
December	33,356	RE32,093	RE10,619	RE160,934	RE10,952	RE345,516	RE3,621	RE288,346	RE103,484	RE186,819
Total	**368,027**	**RE393,193**	**RE129,747**	**RE1,824,228**	**RE133,657**	**RE4,305,988**	**RE42,174**	**RE3,164,408**	**RE1,120,237**	**RE2,263,473**
2024										
January	34,077	RE29,151	RE10,457	RE155,458	RE10,098	RE339,637	RE3,459	RE275,684	RE89,654	RE180,625
February	31,472	E29,664	E9,721	E150,217	E10,107	E329,639	E3,319	E273,297	E94,115	E180,927
2024 2-month YTD	**65,549**	**E58,815**	**E20,178**	**E305,675**	**E20,205**	**E669,276**	**E6,778**	**E548,981**	**E183,769**	**E361,552**
2023 2-month YTD	**64,117**	**E65,872**	**E21,098**	**E287,087**	**E22,311**	**E716,327**	**E6,771**	**E488,316**	**E164,150**	**E373,106**
2022 2-month YTD	**62,878**	**68,423**	**21,161**	**297,343**	**23,600**	**608,804**	**6,096**	**383,857**	**157,357**	**363,382**

See footnotes at end of table.

Table 7. Marketed production of natural gas in selected states and the Federal Gulf of Mexico, 2019-2024

million cubic feet – continued

Year and month	Oklahoma	Pennsylvania	Texas	Utah	West Virginia	Wyoming	Other states	Federal Gulf of Mexico	U.S. total
2019 total	**3,036,052**	**6,896,792**	**9,378,489**	**271,808**	**2,155,214**	**1,488,854**	**456,024**	**1,015,343**	**36,446,918**
2020 total	**2,673,207**	**7,168,902**	**9,813,035**	**241,965**	**2,567,990**	**1,206,122**	**435,117**	**791,491**	**36,520,826**
2021 total	**2,555,430**	**7,647,068**	**9,949,156**	**239,422**	**2,675,145**	**1,109,416**	**401,892**	**780,632**	**37,337,860**
2022									
January	216,347	657,613	878,743	20,719	234,795	89,680	30,986	64,105	3,235,266
February	196,621	577,251	795,295	18,516	209,707	78,589	31,234	56,642	2,914,480
March	225,203	634,328	903,364	21,502	239,344	87,991	34,249	64,273	3,282,454
April	226,464	614,569	880,176	21,243	235,580	86,485	31,383	65,402	3,199,218
May	235,497	638,527	918,979	22,306	247,179	85,606	32,053	61,895	3,332,041
June	231,202	616,619	881,753	21,786	240,568	85,970	31,592	64,090	3,232,326
July	239,209	644,039	920,414	22,646	251,625	89,886	34,763	66,176	3,375,077
August	238,619	635,404	937,041	23,549	255,603	87,801	33,420	67,976	3,392,383
September	238,112	618,364	925,985	21,849	245,734	83,339	32,595	64,875	3,330,414
October	245,755	637,050	941,968	22,103	251,647	88,939	33,226	66,250	3,437,743
November	234,562	613,000	910,587	21,297	255,298	85,621	32,901	64,414	3,326,572
December	236,429	624,415	934,211	22,675	253,533	82,730	32,644	64,307	3,370,376
Total	**2,764,019**	**7,511,179**	**10,828,515**	**260,192**	**2,920,613**	**1,032,634**	**391,046**	**770,406**	**39,428,350**
2023									
January	[E]241,437	[E]646,645	[E]935,962	[E]22,310	[E]256,931	[E]79,538	[E]31,536	[E]67,666	[E]3,428,769
February	[E]217,813	[E]572,742	[E]842,907	[E]18,969	[E]231,585	[E]69,492	[E]27,372	[E]59,490	[E]3,102,781
March	[E]240,498	[E]642,354	[E]961,177	[E]22,752	[E]266,638	[E]78,520	[E]27,921	[E]64,871	[E]3,474,934
April	[E]232,276	[E]619,656	[E]932,661	[E]22,593	[E]256,029	[E]75,109	[E]30,110	[E]58,454	[E]3,362,007
May	[E]237,558	[E]648,124	[E]982,394	[E]24,031	[E]268,279	[E]81,880	[E]30,706	[E]56,290	[E]3,499,909
June	[E]233,220	[E]627,912	[E]949,437	[E]24,338	[E]266,083	[E]80,375	[E]31,225	[E]57,076	[E]3,375,450
July	[E]238,429	[E]643,265	[E]985,195	[E]24,165	[E]279,996	[E]70,816	[E]32,548	[E]63,043	[E]3,494,802
August	[E]236,507	[E]648,577	[E]996,400	[E]25,154	[E]282,678	[E]79,142	[E]32,273	[E]59,986	[E]3,533,722
September	[E]234,235	[E]616,784	[E]966,776	[E]24,587	[E]268,946	[E]78,776	[E]31,376	[E]62,802	[E]3,426,002
October	[E]239,892	[E]640,992	[E]999,974	[E]25,742	[E]284,310	[E]85,128	[E]32,256	[E]61,707	[E]3,536,693
November	[E]229,910	[E]643,405	[E]974,811	[E]25,583	[E]282,583	[E]84,830	[E]30,876	[E]57,038	[E]3,468,760
December	[RE]235,522	[RE]669,263	[RE]1,012,273	[RE]26,418	[RE]295,117	[RE]87,440	[E]31,385	[RE]59,102	[RE]3,592,260
Total	**[RE]2,817,297**	**[RE]7,619,721**	**[RE]11,539,966**	**[RE]286,642**	**[RE]3,239,174**	**[RE]951,046**	**[E]369,584**	**[RE]727,526**	**[RE]41,296,088**
2024									
January	[RE]225,771	[RE]659,337	[RE]971,921	[RE]26,324	[RE]288,005	[RE]84,943	[RE]30,998	[RE]58,815	[RE]3,474,414
February	[E]220,219	[E]611,661	[E]937,514	[E]24,130	[E]269,694	[E]80,732	[E]28,890	[E]54,617	[E]3,339,934
2024 2-month YTD	**[E]445,990**	**[E]1,270,998**	**[E]1,909,435**	**[E]50,454**	**[E]557,699**	**[E]165,675**	**[E]59,888**	**[E]113,431**	**[E]6,814,348**
2023 2-month YTD	**[E]459,250**	**[E]1,219,388**	**[E]1,778,869**	**[E]41,279**	**[E]488,515**	**[E]149,030**	**[E]58,908**	**[E]127,156**	**[E]6,531,549**
2022 2-month YTD	**412,967**	**1,234,865**	**1,674,038**	**39,235**	**444,503**	**168,269**	**62,220**	**120,747**	**6,149,747**

[RE] Revised estimated data.

[E] Estimated data.

Source: 2019-2022: U.S. Energy Information Administration (EIA), *Natural Gas Annual 2022*, Bureau of Safety and Environmental Enforcement (BSEE), IHS Markit, and Enverus. January 2023 through current month: Form EIA-914, *Monthly Crude Oil and Lease Condensate, and Natural Gas Production Report*; and EIA computations.

Note: For 2023 forward, we estimate state monthly marketed production from gross withdrawals using historical relationships between the two. We collect 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 individually 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 2023, Federal Offshore Pacific is included in California. We obtain all data for Alaska 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 because of independent rounding.

The Benefits of U.S. LNG Are Clear

Facilitates Decarbonization

- Enables decarbonization from coal-to-gas switching
- Supports deployment of renewable energy
- Underpins role of the U.S. in worldwide emissions reductions

80-99%
Less air pollutant emissions vs. coal[1]

47-57%
Less GHG emissions vs. coal[2]

~8.5 GT
Record high global coal use in 2023

~700 MT
Reduction in CO_2 emissions from coal-to-gas switching[3]

Enhances Energy Security & Economic Development

- Supports developing economies' ability to grow while transitioning to cleaner-burning, affordable, & more reliable energy production
- Taps abundant & low-cost natural resources while stabilizing domestic gas markets

CHENIERE

 # 1 Supplier
of LNG to Europe in 2022 & 2023 thanks to destination flexibility

1 LNG Cargo
Energy to provide heat for ~1 million people for a winter month in Europe[4]

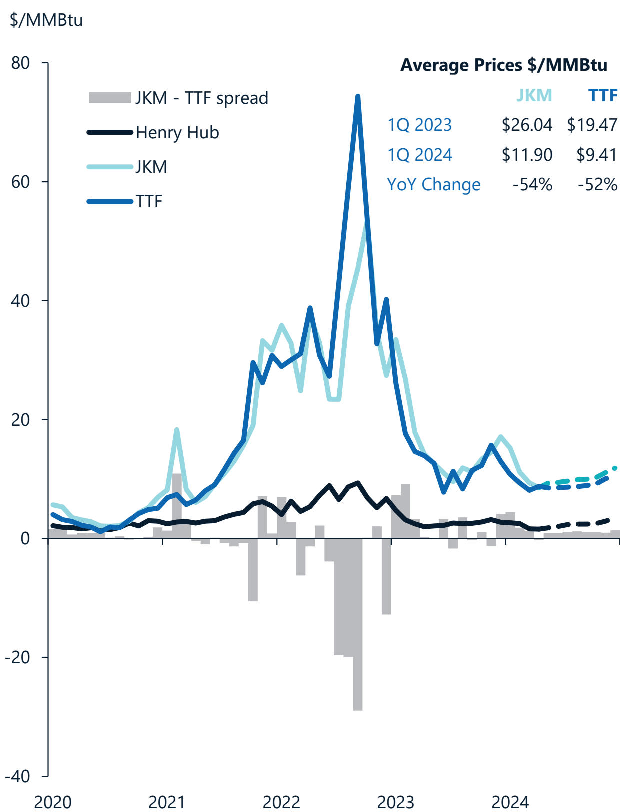
~30% Lower
Average heat rate of natural gas vs. coal & petroleum[5]

>75%
of total U.S. natural gas resource economic <$4/MMBtu[6]

1. ~82% less Nitrogen Oxides, ~99% less Sulfur Dioxides, ~100% less mercury emissions. National Energy Technology Laboratory (2016); National Petroleum Council (2011). Compares emissions when used in combined-cycle power plants.
2. Roman-White et al., 2021, LNG Supply Chains. Reflects estimates in China. Compares emissions when used for power generation on a life-cycle basis.
3. Globally, from 2011-2020. IEA (July 2019), The Role of Gas in Today's Energy Transitions. Additional provisional data provided in February 2021.
4. Estimate for U.K. / Germany based on publicly available government data.
5. EIA (2022). Reflects average operating heat rates for electric power plants in the utility and independent power producer sectors.
6. S&P Global Platts (2023).

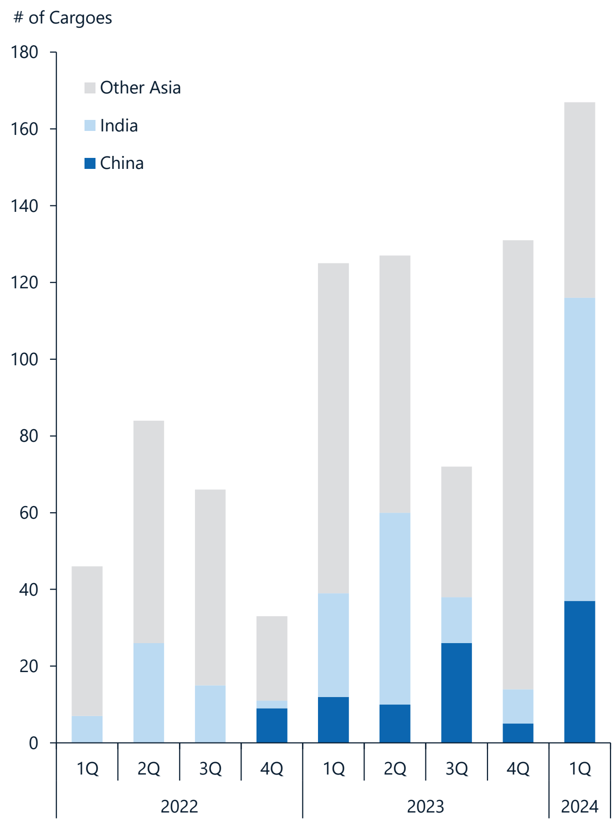
LNG Trade Highlights Emergence of Price Sensitive Buyers

Global Gas Price Benchmarks



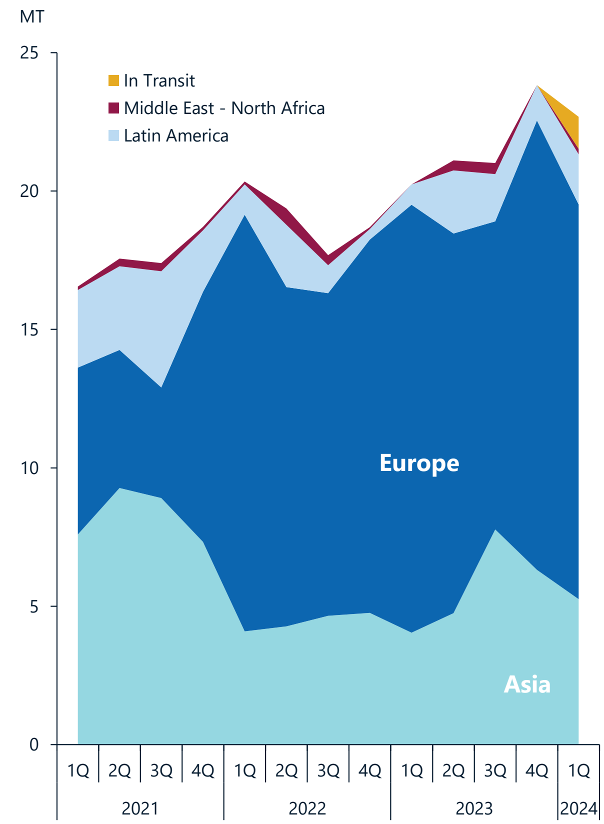
	JKM	TTF
1Q 2023	$26.04	$19.47
1Q 2024	$11.90	$9.41
YoY Change	-54%	-52%

Tenders Awarded for Asia Delivery[1]



Source: ICIS.

U.S. LNG Exports by Destination

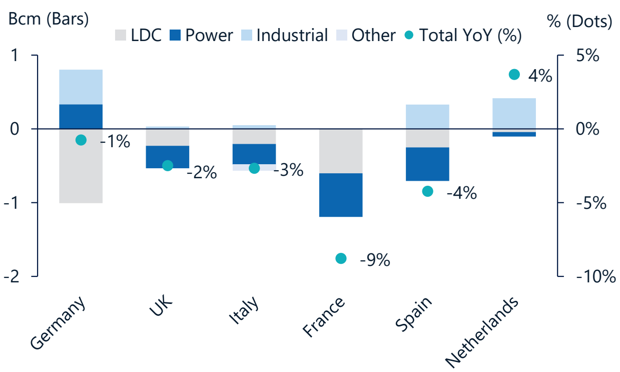


Source: Kpler, ICIS, CME, ICE, S&P Global.

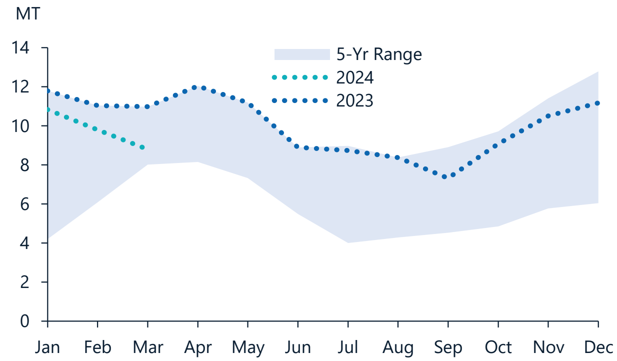
1. Cheniere Research interpretation of Independent Commodity Intelligence Service (ICIS) data. Chart includes both short and long-term tenders and excludes swaps.

Market Beginning to Shift from Europe to Asia

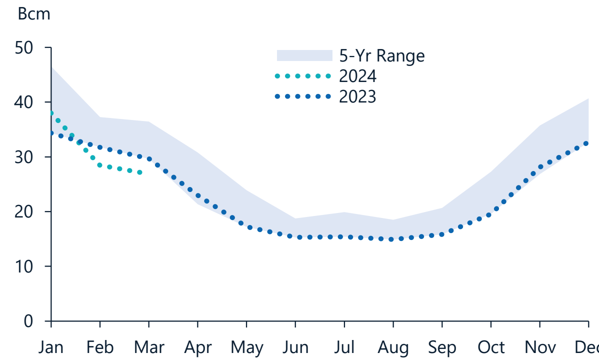
Gas Demand in Key Markets YoY Variance



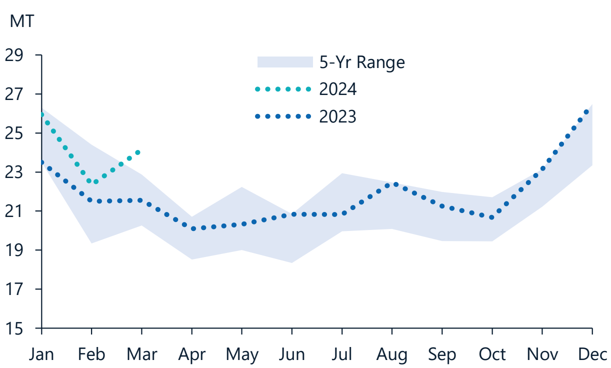
LNG Imports to Europe[1]



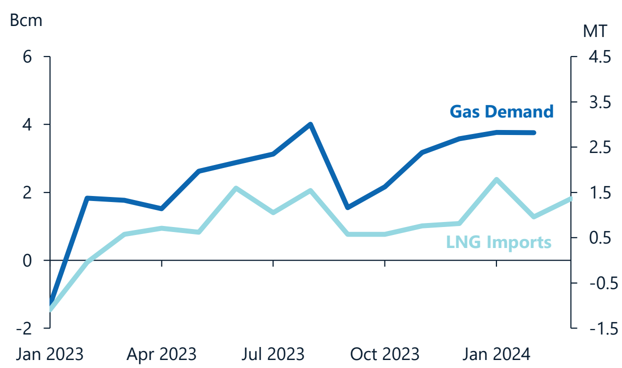
Gas Demand in Key European Markets[2]



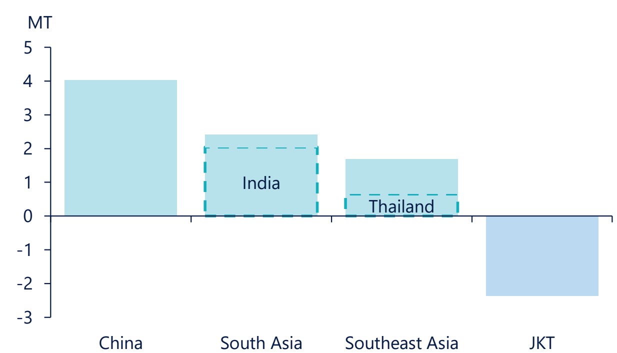
LNG Imports to Asia



China Gas & LNG Demand YoY Variance



Asia LNG Imports YoY Variance

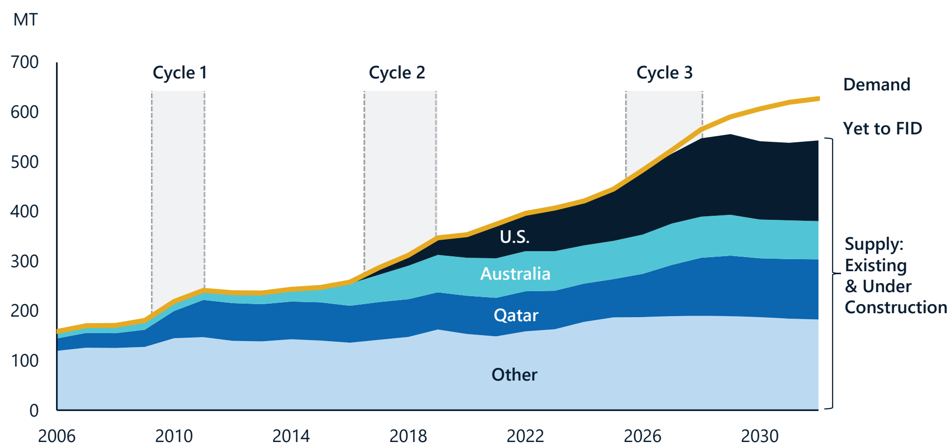


Source: Cheniere Research, Kpler, Commodity Essentials, SIA.

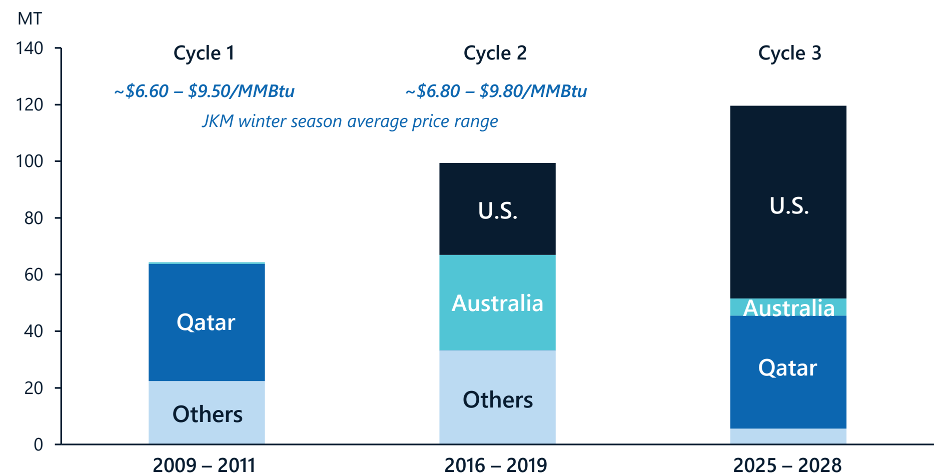
1. Europe LNG imports include Turkey.
2. European gas demand include data from Italy, Spain, United Kingdom, Germany, France and the Netherlands.

Market Outlook for the Third LNG Supply Cycle

Cyclicality of LNG Supply



Third LNG Supply Cycle vs. Previous Supply Cycles



	2009 – 2011	2016 – 2019	2025 – 2028
% Increase[1]			
	36%	37%	27%
CAGR			
	17%	11%	8%
Regas Capacity[2]			
	638 MT	919 MT	~1,360 MT

Latent Demand Factors

- ✓ European demand return
- ✓ New markets
- ✓ Infrastructure growth
- ✓ Declining domestic production
- ✓ New sectors (shipping)
- ✓ Coal displacement

We expect today's larger, more flexible global LNG marketplace to absorb new capacity additions efficiently

Source: Cheniere Research, Wood Mackenzie.
1. % increase = growth / overall trade in the first year of supply cycle.
2. Regas capacity represents end of period numbers. Historical regas data sourced from GIIGNL; forecast is Cheniere's interpretation of Wood Mackenzie numbers. Includes regas capacity in operation, under construction and in development.

CHENIERE

Q1/24 CALL

Q - Joshua Stone {BIO 23767285 <GO>}

Yeah, thanks, and good afternoon.

Two questions please. One on LNG You'd be connected in the press with a couple of transactions that would expand your LNG portfolio. I understand you won't be able to comment but maybe more broadly why now would be the right time to add to your LNG portfolio through acquisition and how you would ensure you get a fair value given what it seems to be a competitive process. And second question on the departure from the from the power market in China.

Maybe just talk about what was it about this business that led your decision to depart. Also curious you haven't exited the EV charging business. So is it the case that maybe you don't see the need to integrate between your power business and your EV charging business for the portfolio more broadly. Thank you.

A - Wael Sawan {BIO 17559980 <GO>}

Thank you, Josh. I'll take the first one. Sinead, if you want to take the power market. I suspect I have a sense of the deals that you have referenced there Josh that are being talked about in the press.

I'd sort of be -- I'd separate them. I think one for example been talked about Ruwais LNG in Abu Dhabi. That's one which Abu Dhabi is developing on a on a greenfield basis. I won't give any specific comments other than to say organic opportunities to continue to grow our LNG portfolio opportunities that potentially can add more supply points to the portfolio in attractive locations where the carbon intensity is low and the value potential is high are very much down the lane that we want to continue to grow.

We have a fundamental conviction that this is not an LNG sprint of a few years but that LNG will be required for decades to come. And this is why continuing to find those differentiated opportunities is something we will look at. We are indeed not looking at big M&A in that space. Whenever we're looking at LNG opportunities we're looking at bolt-ons to our existing port for you where we feel that the capabilities we have the portfolio, we have the positions that we have built up over the years would allow us to be able to unlock more value than maybe a seller would be.

And so we would be looking at any of these opportunities of course being creative to our overall delivery as as an energy business for, for sure. I'll leave it at that. Maybe Sinead, you should may.

Q - Henry Tarr {BIO 7026283 <GO>}

Hi, there, and thanks for taking my questions. Two quick ones. One on LNG Canada, again, posted this, the impairment. Does that have any implications for a second phase of that project or not really, either from a returns perspective or anything else? And then, secondly, could you give a quick update on Pennsylvania and the cracker, that would be great? Thank you.

A - Wael Sawan {BIO 17559980 <GO>}

Okay. I'm happy to cover both. And, Henry, I talked earlier about Pennsylvania. So maybe I'll just quickly connect that back up again. So on the Pennsylvania one, I tried to reference the strategic advantage of our cracker there, multiple dimensions, supply, demand, as well as the fiscal advantage. Two of the three polyethylene trains up and running. The third one is -- has some technical issues, which we are working through and expected to be up and running by the first quarter of next year.

LNG Canada, I'll use the same frame. LNG Canada continues to be an advantaged asset, a really advantaged asset. You have, in essence, a captive export scheme for Western Canadian gas. You have a demand, a market, the Asian market that is within proximity. And you have, in essence, the cleanest, the lowest carbon intensity LNG out there in the market, all coming together at a good point in time for those volumes to, all of which will

Q2|23 CALL

be full flexibility portfolio volumes for us, something which we, of course, like a lot. All that coming together around middle of this year.

That's a project that now is over 75% complete on the midstream, over 90% complete on the pipeline. So it's coming along nicely. All the major units are either at the plant or are en route to the plant. So knock on wood, all seems to be going well.

Phase 2 is going to -- the impairment itself does not impact at all our view on Phase 2. In fact, all the reasons that Sinead, explained around this being more driven by accounting and of course, while the asset itself is very attractive for us, a big part of the attraction is also the optimization opportunities that full flex LNG cargos offers us in a portfolio like ours. And that doesn't change, of course.

And so what we will do is we will wait for the joint venture to have put their best proposal forward, and with the other joint venture partners, we will assess it and make a decision at the time. Thank you for the question. Can we go to the next question, please, Dan?

https://www.convenience.org/Topics/Fuels/Changing-Seasons-Changing-Gas-Prices

Seasonal Gas Prices Explained

From refinery maintenance to consumer demand, seasonal fuel production affects gasolines prices at the dispenser.

February 28, 2024 3 min read

Traditionally, gasoline prices are at their lowest during the first week of February and then begin to climb, often peaking right before Memorial Day. Seasonal increases in demand plus a transition to unique fuel blends put pressure on gas prices each spring.

Since 2000, gasoline prices have increased about 50 cents from the seasonal low at the beginning of February to the seasonal high in mid-May. Here's a timeline of events that can affect gas prices during the first half of the year.

February: Refinery Maintenance

U.S. demand for gasoline is generally at its lowest during the first two months of the year, so refinery maintenance, known as a "turnaround," is often scheduled during the first quarter. A turnaround is a planned, periodic shut down (total or partial) of a refinery process unit or plant to perform maintenance, overhaul and repair operations and to inspect, test and replace materials and equipment.

Refineries undergo turnarounds roughly once every four year so about 25% of refineries undergo a turnaround each spring. Another reason for scheduling turnarounds is that they allow refineries to retool for summer-blend fuels.

March-April: Refineries Switch to Summer-Blend Production

The U.S. Environmental Protection Agency (EPA) defines April to June as the "transition season" for fuel production. Refineries lead this transition and switch over to summer-blend production in March and April.

Gasoline blends used in the summer months are different than the blends used in the winter. In the winter, fuels have a higher Reid vapor pressure, meaning they evaporate more easily and allow cars to start in colder weather. In the warm summer months, these evaporative attributes would lead to increased emissions and the formation of smog.

There are also more fuels to produce during the transition season. In the winter months, only a few fuels are used across the United States. However, because of various state or regional requirements, 14 different fuel specifications are required for the summer months. Refineries must produce enough fuel for each area to ensure there are no supply shortages, and that can complicate the production and distribution of fuels.

Summer-blend fuel is also more expensive to make than winter-blend fuel. First, the production process takes longer and, second, the overall yield of gasoline per barrel of oil is lower. These complexities add as much as 15 cents per gallon to the cost to produce these higher-grade fuels.

May-June: Deadlines for Terminals and Retailers

The May 1 compliance deadline for terminals to fully purge their systems of winter-blend fuels is considered one of the biggest factors in seasonal price increases. This regulatory requirement can lead to lower inventories at the terminal, which also puts upward pressure on gas prices. It can also take fuels refined in the Gulf Coast several weeks to reach storage terminals throughout the country, which is why it's important to have summer-blend fuel at terminals and storage facilities by May 1. This date is the most important reason that seasonal gas prices tend to peak in May.

In most areas of the country that require summer-blend fuels, retailers have until June 1 to switch to summer-grade gas.

February-August: Summer Drive Season and Increased Demand

Demand can play a role in elevating seasonal gas prices. Gas demand increases a few percentage points each month beginning in February and peaks in August. Total fuel demand is 10% to 15% greater in August than in February, and any stress to the system—such as a refinery or pipeline outage—can cause a supply/demand imbalance and affect prices.

September: A Welcome Change

As gasoline demand decreases and temperatures cool, retailers are able to switch to selling winter-blend fuel beginning September 15. While these winter-blend fuels are cheaper to produce, the complications of the switchover can result in a temporary bump in price. Weather conditions, such as hurricanes, can also affect gas prices in the late summer to fall months.

Unlike in the spring, the change to winter-blend fuel is not required. However, because winter-blend fuel costs less, retailers often sell the fuel blend to remain price competitive. Not all retailers begin selling this fuel on September 15; many make the switch when their inventories are low.

By the end of September, gas prices generally decrease as the switchover processes and demand continues to fall. And despite conspiracy theories, lower gas prices do not correlate to pre-election politics.

In California, the season for summer-blend fuels is longer than the rest of the country. Both Northern and Southern California's summer-blend requirements run through the end of October. This exacerbated supply issues within the state in early October 2012, when fires at two large refineries limited state-specific production and caused wholesale and retail gas prices to spike to record levels.

Meanwhile, demand for distillate fuel (diesel fuel and home heating oil) begins to increase in September because of both greater diesel fuel demand related to the harvest and greater home heating oil demand because of the colder weather.

Exceptions to the Rule

Summer-blend fuel requirements may be relaxed in times of emergencies or when potential shortages are possible.

In 2005, NACS worked with Congress to give the EPA the authority to waive certain regulations affecting the motor fuels system in times of emergency. The EPA's immediate use of these waivers is critical to bringing the entire fuel supply chain into operation as quickly and safely as possible. For example, this flexibility allowed winter blends of gasoline to enter into the market in 2017 before the traditional transition date of September 15 in response to Hurricanes Harvey, Irma and Maria.

Update: May 2024 Capacity Announcement for the Trans Mountain Pipeline System

May 2, 2024

Total system nominations for the Trans Mountain Pipeline system are apportioned by 0 percent for May 2024.

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.

https://www.transmountain.com/news/2024/trans-mountain-announces-milestones-of-commercial-service-for-expanded-system

Trans Mountain Announces Milestones of Commercial Service for Expanded System

Tags Operations Expansion Project

May 1, 2024

May 1, 2024, signifies the commercial commencement date for the Expanded System. As of today, all deliveries for shippers will be subject to the Expanded System tariff and tolls, and tankers will be able to receive oil from Line 2 by mid-May.

Line fill on the Expanded System continues, and is expected to be completed within the next few weeks. Both the existing and expanded pipelines are now able to transport crude oil and Trans Mountain has the ability to load cargoes from all three berths. As of April 30, 2024, the expanded pipeline is 70 per cent full by volume, and 69 per cent complete by distance.

Recent milestones of the Trans Mountain Expansion Project include:

- The “Golden Weld”: On April 11, 2024, at 8:11 pm MST, the Golden Weld occurred near the Mountain 3 Horizontal Directional Drill in the Fraser Valley between Hope and Chilliwack, BC. The Coquihalla – Hope region has some of the most difficult terrain, rugged conditions and sensitive areas along the entire pipeline route.
- First Oil: On April 16, 2024, oil was loaded into Line 2 from Edmonton Terminal at approximately 11:00 am MST.
- Mechanical Completion: On April 30, 2024, the last of the 42 Leave to Open (LTO) decisions from the Canada Energy Regulator (CER) were granted. This followed various submissions by Trans Mountain including required testing results, inspections and safety information to demonstrate the pipeline and associated facilities could be safely opened for operation. The receipt of the last LTO decision officially marks mechanical completion.

“Trans Mountain has demonstrated that challenging, long linear infrastructure can be built in Canada,” said Dawn Farrell, President and CEO, Trans Mountain Corporation. “With our project management team and contractors, we were able to build 988 kilometres of new pipeline, 193 kilometres of reactivated pipeline, 12 new pump stations, 19 new storage tanks, and three new berths at Westridge Marine Terminal in Burnaby. We did this while adhering to the highest environmental, safety and social standards including respecting and working with local First Nations and Métis communities throughout the entire process.”

Trans Mountain would like to thank our many contractors and partners including First Nations and Métis communities, local and provincial governments, our parent company Canada Development Investment Corporation (CDEV), our customers, community stakeholders, regulators, and our employees who contributed to this success as we enter operations of our expanded pipeline system.

Pemex Oil Refining Jumps to Highest Since 2016 Ahead of Election
2024-04-29 14:34:49.486 GMT
By Lucia Kassai
(Bloomberg) -- Pemex's oil refining climbed in March to the highest in almost 8 years as outgoing President Andres Manuel Lopez Obrador seeks to make good on this promise of weaning the country off of costly fuel imports, according to company data compiled by Bloomberg.
* Pemex's 6 refineries in Mexico operated at 65.3% of capacity in March, highest since June 2016; rates remained above 50% of capacity for the fourth straight month
** The six refineries have capacity to process 1.627m b/d of crude, according to Pemex; company didn't disclose data for its new Olmeca refinery, also known as Dos Bocas, which started operations in September
** Refinery is expected to start producing diesel in May, two months later than previously estimated
* Utilization rates may fall in coming months after Pemex reported fires at two of its refineries in April
** Read more: Mexico to Sell More Oil After Fires Upend Plan to Curb Exports
* NOTE: Refineries boosted oil processing ahead of the presidential election in June
* Here's the data by refinery:

Refinery	March (b/d)	m/m	y/y	Capacity use	NOTE
Cadereyta	159,502	-3.5%	18%	58.0%	
Madero	130,615	14%	63%	68.7%	highest since Feb. 2016
Tula	246,571	-1.9%	3.8%	78.3%	
Salamanca	137,293	3.5%	12%	62.4%	highest since Jan. 2023
Minatitlan	150,862	7.9%	83%	52.9%	
Salina Cruz	237,076	80%	16%	71.8%	highest since April 2018
Dos Bocas	not available				
Total	1,061,918	14%	23%	65.3%	

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To view this story in Bloomberg click here:
https://blinks.bloomberg.com/news/stories/SCPI13T0AFB4

https://rbnenergy.com/almost-there-nigerias-dangote-refinery-faces-a-long-slow-ramp-up

Almost There - Nigeria's Dangote Refinery Likely Facing A Long, Slow Ramp-Up

Thursday, 05/02/2024 Published by: Kristen Hays

The new 650-Mb/d Dangote refinery in Nigeria instantly became Africa's largest and the world's seventh-largest by capacity when it finally began processing crude into diesel and aviation fuels in January after years of delays and cost overruns. Long touted as Nigeria's ticket to ending refined fuels imports by supplying its own markets — with plenty to spare for exports — the Dangote facility could substantially impact trade flows and global supply if it lives up to years of homegrown ballyhoo. In today's RBN blog, we will examine Dangote's long road to production, and why we see a slow ramp-up to full capacity through 2026.

In Here I Go Again, Part 1 of this series, we examined the outlook of RBN's downstream consulting group, Refined Fuels Analytics (RFA), for the Dos Bocas refinery under development by Mexico's state-owned Petróleos Mexicanos (Pemex), as full-operation dates for it (and Dangote) are important factors in global refining margins and relative tightness of international refined products markets (see We Just Disagree). Both new refineries have significant potential to impact global refined products markets, with claims that they can sharply reduce or eliminate dependence on fuel imports in Mexico and Nigeria, but both also have significant startup and operational risks with uncertain prospects for long-term success.

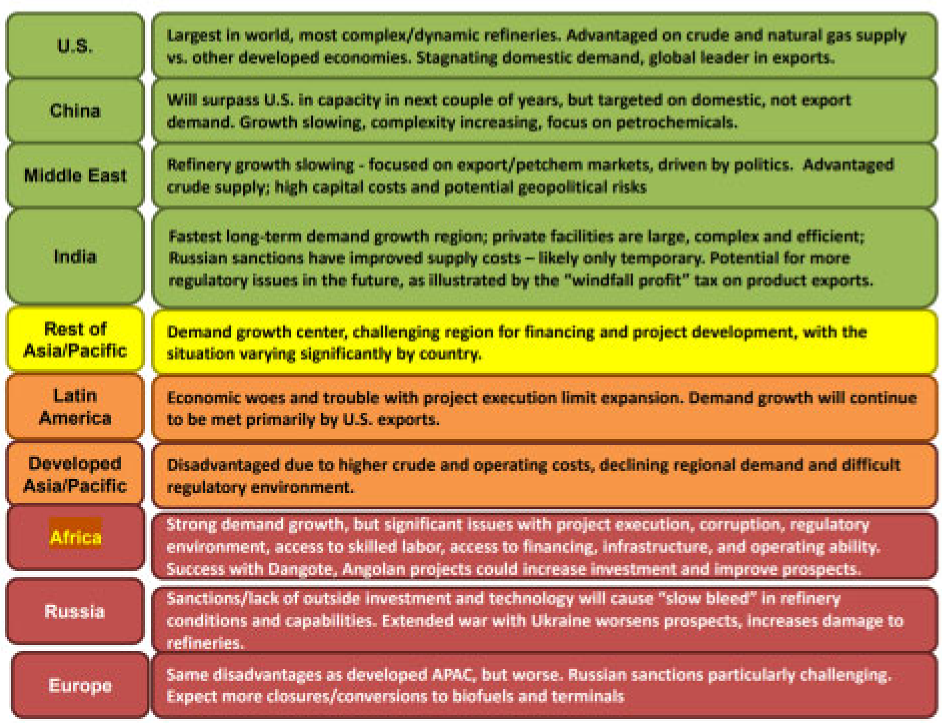
Figure 1. Dangote Refinery near Lagos, Nigeria. Source: RBN

That said, we are a bit more optimistic about Dangote's future prospects than those of Dos Bocas, as noted in our most recent Future of Fuels report. Originally proposed in 2013, Dangote (refinery icon in Figure 1) has been touted as facilitating Nigeria's debut as a refined-fuels-independent country and even a net fuel exporter. While Nigeria is Africa's leading oil producer with about 1.5 MMb/d of crude and liquids production in 2023 per the Energy Information Administration (EIA), the nation — with a population of about 230 million — relies on imported refined fuels, largely from Europe and to a lesser extent the U.S., because its domestic refining capabilities cannot meet the country's demand. Nigeria's total nameplate refining capacity, not including Dangote, is about 445 Mb/d, which could meet most domestic demand if the four refineries operated by the Nigerian National Petroleum Corporation (NNPC), Nigeria's state-owned oil company, ran reliably. They don't. Those plants have largely been shut for years, and a string of oil ministers' predictions of resuming stable operations for a decade or more haven't come to fruition. We are skeptical of Dangote's prospects for reaching full capacity this year. RFA expects the plant to ramp up to only an effective 20% of its nameplate capacity on average in 2024, 50% next year and the remaining 30% in 2026 given Dangote's scale, unusual operations makeup, the country's iffy track record when it comes to reliable refinery performance, and the operators' lack of experience.

Before we dig further into Nigeria's refining woes and our skepticism that Dangote will reverse its refining fortunes, let's step back to examine how we see the global refinery capacity landscape. Last year net global refinery capacity additions reached a decades-high of 2 MMb/d, stemming largely from projects that had been delayed during the height of COVID. That said, those additions didn't make up for a lack of capacity additions coupled with significant closures in the previous four years. We expect another 1.1 MMb/d of refining capacity to be added in 2024 — again, more catch-up after COVID delays — but project activity declines significantly in subsequent years. And as more refinery shutdowns occur, we see a net increase of less than 1.3 MMb/d during the entire four-year period from 2025-28.

This outlook on refinery capacity additions is the lowest RFA has had since the team began analyzing refining projects 15 years ago. Notable factors driving that decline include energy transition initiatives, which have favored greener projects like renewable diesel (see Driver's Seat) or otherwise repurposing refining units over traditional refining when choosing capital investments, as well as expectations that global refined product demand will hit a peak over the next several years. Uncertainty also looms with the timing, and possible eventual success, of some key projects in the short term — such as Dangote — while long-term policy shifts eye more investment in alternatives. For example, China and Saudi Arabia, two of the major players in adding refinery capacity over the past 20 years, have made a pronounced and what appears to be a long-term shift from fuels-focused projects. Such policies also depend on difficult-to-predict political developments and attitudes toward how climate change crosses paths with petroleum usage (see Figure 2 below).

Global Regional Refining Comparison



U.S.	Largest in world, most complex/dynamic refineries. Advantaged on crude and natural gas supply vs. other developed economies. Stagnating domestic demand, global leader in exports.
China	Will surpass U.S. in capacity in next couple of years, but targeted on domestic, not export demand. Growth slowing, complexity increasing, focus on petrochemicals.
Middle East	Refinery growth slowing - focused on export/petchem markets, driven by politics. Advantaged crude supply; high capital costs and potential geopolitical risks
India	Fastest long-term demand growth region; private facilities are large, complex and efficient; Russian sanctions have improved supply costs – likely only temporary. Potential for more regulatory issues in the future, as illustrated by the "windfall profit" tax on product exports.
Rest of Asia/Pacific	Demand growth center, challenging region for financing and project development, with the situation varying significantly by country.
Latin America	Economic woes and trouble with project execution limit expansion. Demand growth will continue to be met primarily by U.S. exports.
Developed Asia/Pacific	Disadvantaged due to higher crude and operating costs, declining regional demand and difficult regulatory environment.
Africa	Strong demand growth, but significant issues with project execution, corruption, regulatory environment, access to skilled labor, access to financing, infrastructure, and operating ability. Success with Dangote, Angolan projects could increase investment and improve prospects.
Russia	Sanctions/lack of outside investment and technology will cause "slow bleed" in refinery conditions and capabilities. Extended war with Ukraine worsens prospects, increases damage to refineries.
Europe	Same disadvantages as developed APAC, but worse. Russian sanctions particularly challenging. Expect more closures/conversions to biofuels and terminals

Figure 2. Global Regional Refining Comparison. Source: RFA

So, now back to Nigeria's plans. The $19 billion Dangote oil refinery's cost was originally estimated at $9 billion, and construction began in 2016. NNPC bought a 20% stake in the project for $2.76 billion in 2021. The refinery is part of a larger petrochemical complex in the Lekki Free Zone near Lagos, Nigeria's largest city. Dangote Oil Refinery is a subsidiary of Dangote Group, West Africa's largest conglomerate, chaired by its namesake, Aliko Dangote, Africa's wealthiest person for the 13th consecutive year, per

Forbes. The conglomerate includes Nigeria's largest cement manufacturer; the continent's largest urea and ammonia fertilizer plant; coal mining; sugar and salt refining; polypropylene sack manufacturing; terminal and bulk cargo operations; a truck manufacturing joint venture; and tomato and rice farming. That's not necessarily a thumb in every pie, but it's still a lot of pies, with some production of actual pie ingredients.

We see Africa and India taking the lead in net global refining capacity increases (such as they are) through 2028. Led by Dangote's startup and several smaller, grassroots plants in Angola, Africa is seen adding more than 1 MMb/d of capacity, while India adds more than 900 Mb/d with seven medium-sized, mostly brownfield, expansions at state-owned refineries. At full capacity, Dangote would produce about 240 Mb/d of gasoline and 190 Mb/d of middle distillates. But Dangote's sheer scale and single-train design (including by far the largest atmospheric crude unit in the world) is a concern. A single-train design means the refinery has one crude distillation unit (CDU) to receive incoming crude oil and distill it into hydrocarbons that will be processed further in other units, like a fluid catalytic cracking unit that "cracks" those liquids into smaller hydrocarbons and processes them into gasoline, or a hydrocracker that does the same for processing liquids into primarily diesel and jet fuels. In addition to the technology risk implicit in such a large and unproven unit, if that single CDU shuts down, there's no backup. Saudi Aramco Mobil Refinery Company (SAMREF) Ltd. — a joint venture of Saudi Aramco and ExxonMobil — has a single-train, 400-Mb/d facility in Yanbu, Saudi Arabia, but Dangote is by far the largest globally with a single train. Typically, major refineries have multiple CDUs, like Motiva Enterprise's 630-Mb/d refinery in Port Arthur, TX, which has three such units — 90 Mb/d, 200 Mb/d and 350 Mb/d. The 350-Mb/d unit started up in 2012 as part of a major expansion of the refinery, and the multiple units allow some crude distillation and fuel processing to continue if one or two shut down. A CDU shutdown at Dangote would leave the refinery's downstream units with nothing to process.

That unique aspect of Dangote's design as well as NNPC's poor refining operations history raises more concerns about finding enough experienced engineers, process technicians, electricians, board operators, oil journeymen, pipeline supervisors, power plant managers and more to keep the plant running. Dangote has reportedly sought experienced operators from India, home to Reliance's Jamnagar refinery, the world's largest with a capacity of 1.24 MMb/d. However, Nigeria's own refineries, as noted earlier, have been largely shut for years. NNPC contracted with Maire Tecnimont SpA to restore Nigeria's 210-Mb/d Port Harcourt facility in an upgrade aimed at bringing it back online this year, and there have been some indications of progress. Shell's Nigerian unit in February announced it has resumed supplying oil to the Port Harcourt refinery, and NNPC in January opened bids for private management of the facility, per Bloomberg. Daewoo has a contract to restore the now-inoperable 110-Mb/d Kaduna plant to 60% of its nameplate capacity and NNPC also aims to rehabilitate its inoperable Warri refinery. Last year Heineken Lokpobiri, Nigeria's current minister for petroleum resources, said NNPC aimed to bring its refineries back online by the end of 2024. His predecessors have made similar pronouncements about restoring Nigeria's refining capabilities, but lack of follow-through, whatever the reason — paltry investment, corruption, vandalism — engenders little confidence that the latest promises are any different.

RFA isn't alone in its expectation that Dangote won't reach full capacity, or progress beyond just crude distillation and operate some of the downstream units, this year. In a February 2024 report, the International Monetary Fund (IMF) noted a more pessimistic path to full capacity, with 100 Mb/d in 2024, 200 Mb/d in 2025 and 300 Mb/d in 2026-27, though the IMF noted that the plant could reach its full potential faster than assumed in that baseline. Dangote has had major delays, cost overruns, and has yet to live up to its hype. Its potential to do what NNPC-run refineries have not — namely, meet domestic demand and export any excess, upending refined product imports — will keep many eyes closely watching. But the refinery poised to knock Motiva's Texas refinery down a step to the world's eighth-largest still has plenty of hurdles between great expectations and reality.

"Almost There" was written by Randy Newman and appears as the fourth song on *The Princess and the Frog (Original Motion Picture Soundtrack)*. The song is performed by Anika Noni Rose in the movie and on the soundtrack album. Rose is the voice of the character Tiana in the film. The song is featured in a scene in the movie where Taina and her mother Eudora are at the New Orleans restaurant Tiana dreams of opening. "Almost There" was nominated for Best Original Song at the 82nd Academy Awards. The song has been covered by artists such as Yvonne Catterfeld, Evynne Hollens, Svetlana, and Punk Rock

Factory. Personnel on the record were: Anika Noni Rose (vocals), and unnamed musicians conducted by Randy Newman.

The Princess and the Frog (Original Motion Picture Soundtrack) was recorded in Los Angeles and written, arranged, conducted and produced by Randy Newman. The score features zydeco, jazz, blues, gospel, and other idioms that represent New Orleans music. The songs are sung by various artists that performed the voices of characters in the film such as Anika Noni Rose, Dr. John, Jim Cummings and Randy Newman. Released in November 2009, the soundtrack album went to #80 on the Billboard 200 Albums chart and has been certified Platinum by the Recording Industry Association of America. One single was released from the LP.

Randy Newman is an American singer, songwriter, arranger, composer, and conductor. He has released 15 studio albums, 23 soundtrack albums, two live albums, five compilation albums, and 12 singles. He has won two Academy Awards, three Emmy Awards, and seven Grammy Awards. He is a member of the Rock and Roll Hall of Fame, Songwriters Hall of Fame, and has a Governor's Award from the Recording Academy. He is the recipient of a Max Steiner Film Music Achievement Award and has a star on the Hollywood Walk of Fame. Newman continues to write and score music for films and theater.

Anika Noni Rose is an American actress and singer. She has been featured in 26 motion pictures, 38 television shows, and 17 theater productions. She is best known for her role as Tiana in the 2009 Disney animated feature, *The Princess and the Frog*. She has received an Obie Award, a Tony Award, and a Disney Legend Award. She continues to act and sing.

04/30/2024 06:05:31 [BN] Bloomberg News

Russian Oil Flows Edge Lower With Moscow Readying Sanctions Test

Shipments dropped for a second week, but remain above year–to–date average

By Julian Lee

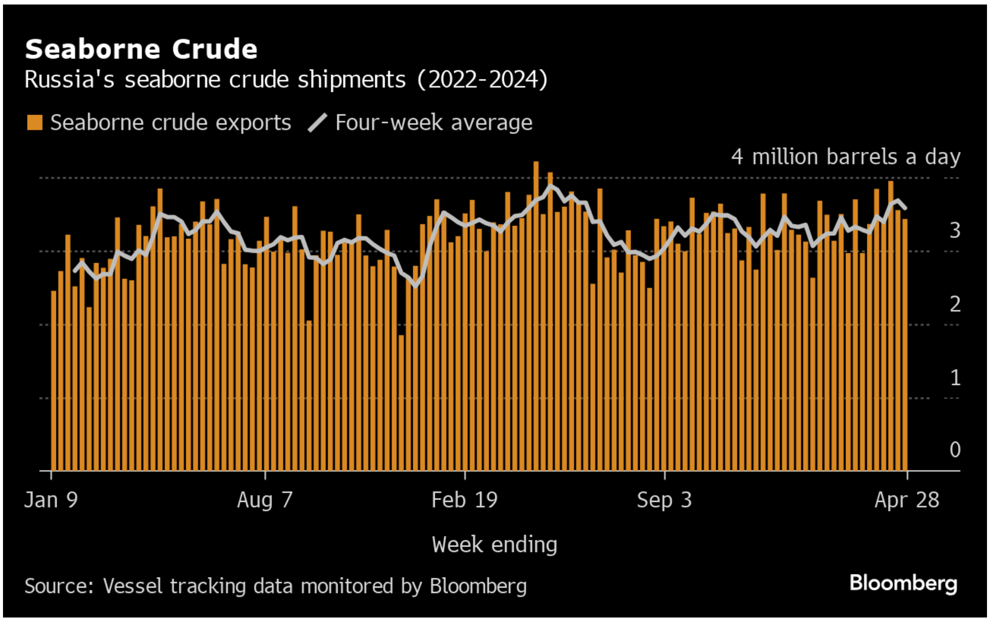
(Bloomberg) –– Russia's crude flows fell for a second week in the seven days to April 28, with fewer vessels leaving the key ports of Primorsk on the Baltic and Kozmino on the Pacific. The four–week average was also down.

Despite the declines, crude shipments remain above their average for the year so far, with domestic oil processing still under pressure as refineries that have barely recovered from Ukrainian drone attacks enter seasonal maintenance.

Russia is stepping up efforts to undermine US–led sanctions on its tanker fleet. India looks like it may again accept cargoes delivered on vessels belonging to state–controlled shipper Sovcomflot PJSC, which the Asian nation's refiners had shunned previously. The first Sovcomflot tanker of Urals crude in several months is headed to the Indian port of Paradip, following a fuel oil cargo delivered to the port of Sikka last week.

The country is also beginning to put tankers individually sanctioned by the US Treasury Department back to work. The SCF Primorye, cited by the US in October for breaching a Group of Seven price cap, loaded Urals at Novorossiysk on the Black Sea last week, and is sailing toward the Suez Canal. It's the first sanctioned vessel to load Russian barrels after being listed and could pave the way for others.

The moves come as an organization at the heart of the global insurance industry said the cap on the price of Russian oil is becoming increasingly unenforceable, offering one of the most direct criticisms yet of measures that were meant to deprive the Kremlin of petrodollars. The gross value of Russia's crude exports in the four weeks to April 28 was down by about $38 million to $1.92 billion a week from the period to April 21.



The backlog of Russia's Sokol crude that built up after being turned away by Indian refiners has now almost disappeared. About 9.1 million barrels, half of the total, have been delivered to refineries in China. Another 7 million barrels eventually found their way back to India. Two cargoes have been delivered to Pakistan.

That leaves just 1.4 million barrels still to be delivered. Half of those are heading back to India after being discharged onto a smaller vessel from the tanker that had been storing them since January. The rest are still on a vessel anchored in the Strait of Malacca, suggesting they could also eventually end up in India.

Crude Shipments

A total of 31 tankers loaded 24 million barrels of Russian crude in the week to April 28, vessel-tracking data and port agent reports show. That was down by about 840,000 barrels, from the revised figure for the previous week.

Tankers Loading Crude at Russian Terminals

30 tankers loaded Russian crude in the week to April 28

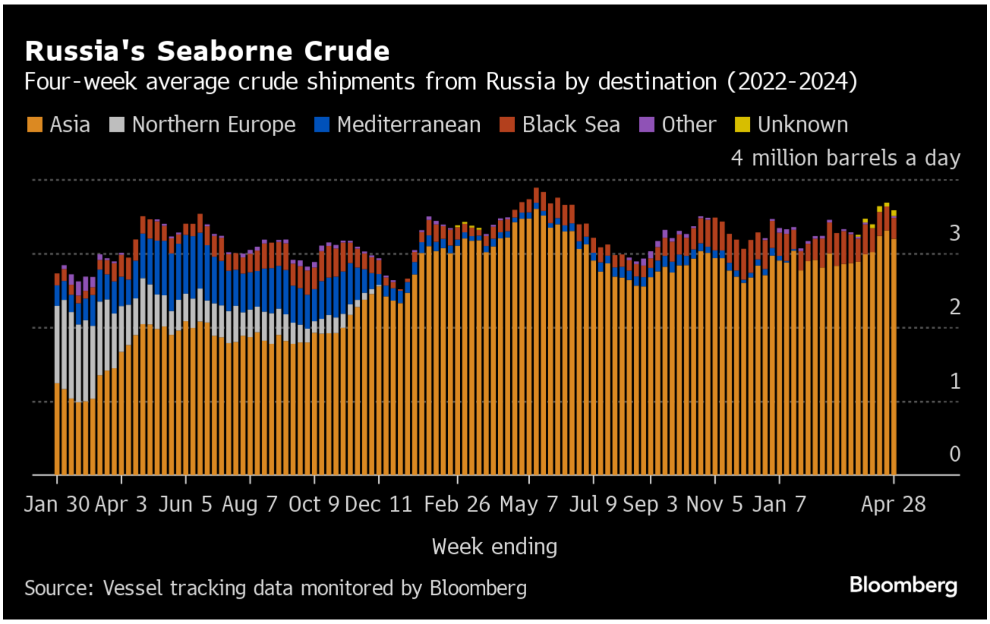
Week ending	April 28	April 21	April 14
Primorsk (Baltic)	10	11	10
Ust-Luga (Baltic)	6	6	7
Novorossiysk (Black Sea)	3	2	5
Murmansk (Arctic)	2	2	2
Kozmino (Pacific)	8	9	9
De Kastri (Pacific)	2	2	2
Prigorodnoye (Pacific)	0	1	1
Total	**31**	**33**	**36**

Source: Vessel tracking data monitored by Bloomberg
Note: Based on date of completion of cargo loading. Excludes ships loading cargoes identified as Kazakhstan's KEBCO grade.

Bloomberg

Russia's seaborne crude flows in the week to April 28 fell by 120,000 barrels a day to 3.43 million from a revised 3.55 million for the week to April 21. The less volatile four-week average was down by 100,000 barrels a day at 3.58 million.

The drop was driven by fewer shipments from Primorsk and two of the Pacific ports, partly offset by higher shipments through the port of Novorossiysk on the Black Sea.



Weekly shipments were about 30,000 barrels a day below Russia's April target, which is part of the OPEC+ alliance's broader effort to curb supplies and support prices. The four-week average was about 120,000 barrels a day above the target.

Russia said it would cut crude exports during April by 121,000 barrels a day from their average May–June level as part of the wider OPEC+ initiative, as Moscow shifts more of the burden onto production targets, which are preferred by other members of the group. Seaborne shipments in the first three months of the year exceeded Russia's target level for that period by just 16,000 barrels a day.

Crude Shipments
Russian crude shipments in million barrels a day

	To April 28	To April 21
Weekly shipments	3.431	3.551
Four-week average shipments	3.580	3.682
May-June average shipments	3.583	3.583
April target to meet OPEC+ commitment	3.462	3.462
Weekly shipments versus OPEC+ target	**-0.031**	**0.089**
Four-week shipments versus OPEC+ target	**0.118**	**0.220**

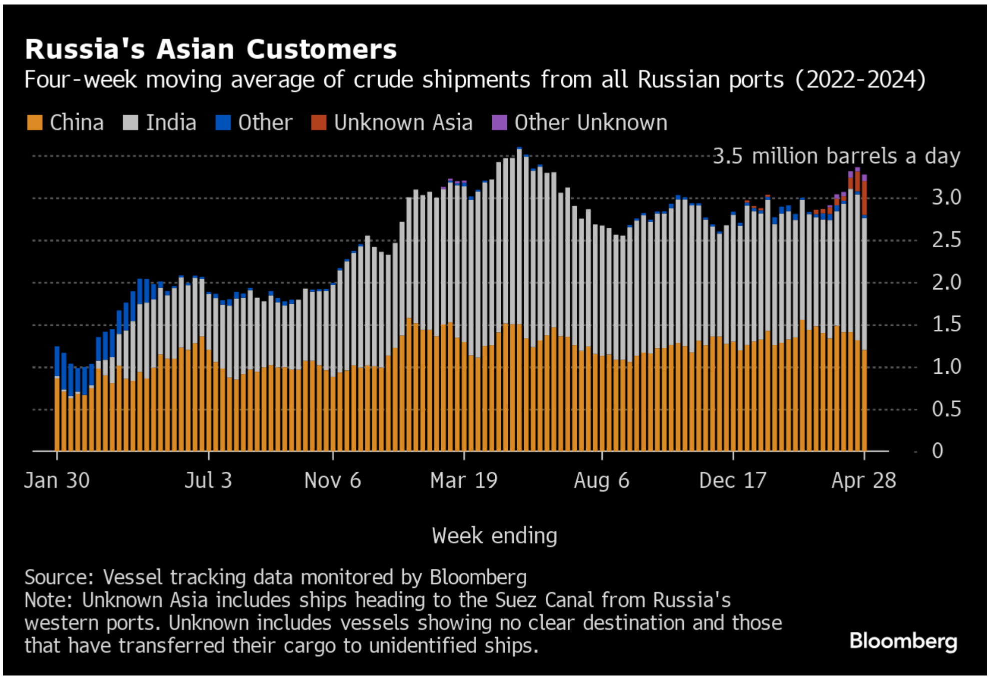
Source: Vessel tracking data compiled by Bloomberg
Note: Positive numbers in the last two rows reflect exports above target
Bloomberg

No cargoes of Kazakhstan's KEBCO were loaded at Ust–Luga or Novorossiysk during the week.

Flows by Destination

- ### Asia

Observed shipments to Russia's Asian customers, including those showing no final destination, edged lower to 3.27 million barrels a day in the four weeks to April 28, from a revised 3.36 million in the previous four–week period.



About 1.2 million barrels a day of crude was loaded onto tankers heading to China. The Asian nation's seaborne imports are boosted by about 800,000 barrels a day of crude delivered from Russia by pipeline, either directly, or via Kazakhstan.

Flows on ships signaling destinations in India averaged about 1.56 million barrels a day.

Both the Chinese and Indian figures are likely to rise as the discharge ports become clear for vessels that are not currently showing final destinations.

The equivalent of about 400,000 barrels a day was on vessels signaling Port Said or Suez in Egypt. Those voyages typically end at ports in India or China and show up as "Unknown Asia" until a final destination becomes apparent.

The "Other Unknown" volumes, running at about 80,000 barrels a day in the four weeks to April 28, are those on tankers showing no clear destination. Most originate from Russia's western ports and go on to transit the Suez Canal, but some could end up in Turkey. Others may be moved from one vessel to another, with most such transfers now taking place in the Mediterranean, or more recently off Sohar in Oman.

Crude Shipments to Asia
Shipments of Russian crude to Asian buyers in million barrels a day

4 weeks ending	China	India	Other	Unknown Asia	Other Unknown	Total
March 24, 2024	1.33	1.40	0.07	0.08	0.03	2.91
March 31, 2024	1.48	1.35	0.07	0.08	0.05	3.04
April 7, 2024	1.41	1.52	0.04	0.05	0.05	3.07
April 14, 2024	1.41	1.70	0.00	0.13	0.08	3.31
April 21, 2024	1.31	1.73	0.04	0.23	0.05	3.36
April 28, 2024	1.20	1.56	0.04	0.40	0.08	3.27

Source: Vessel tracking data compiled by Bloomberg

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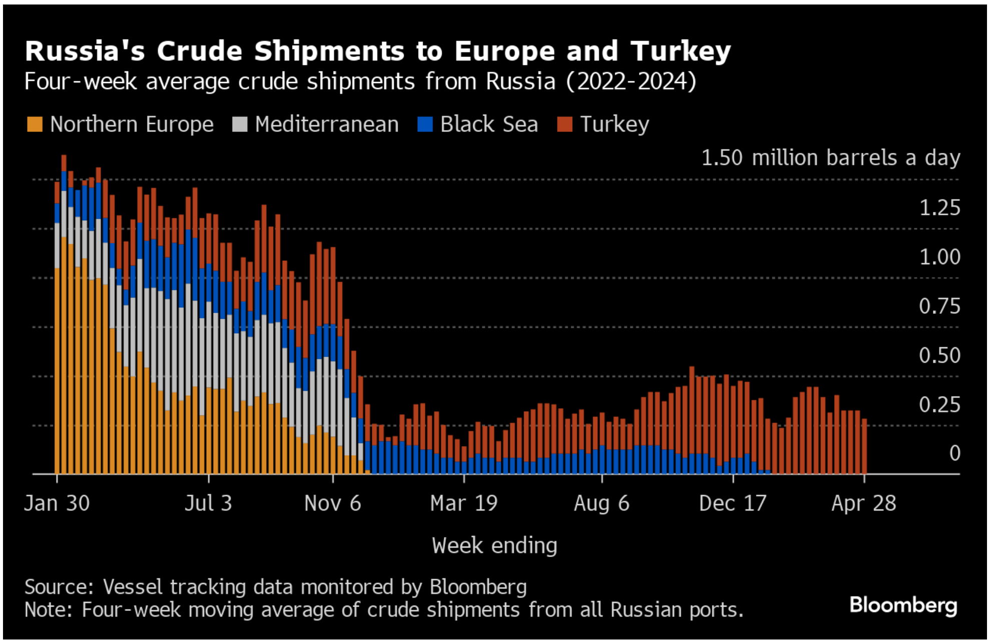
- **Europe and Turkey**

Russia's seaborne crude exports to European countries have ceased, with flows to Bulgaria halted at the end of last year.

Turkey is now the only short-haul market for shipments from Russia's western ports, with flows in the four weeks to April 28 slipping to a 12-week low of about 280,000 barrels a day.

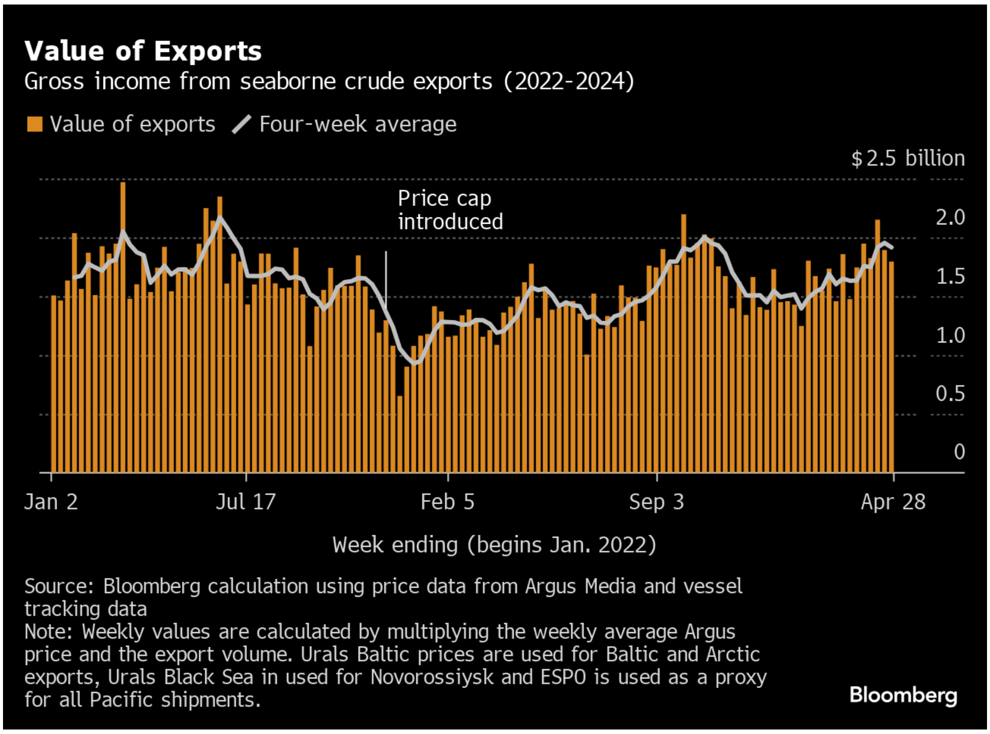


Export Value

The gross value of Russia's crude exports fell back to $1.8 billion in the seven days to April 28 from a revised $1.89 billion in the period to April 21. Four-week average income was also down, falling by about $38 million to

$1.92 billion a week, aided by higher oil prices. The four-week average is still below its peak of $2.17 billion a week, reached in the period to June 19, 2022.

During the first four weeks after the Group of Seven nations' price cap on Russian crude exports came into effect in early December 2022, the value of seaborne flows fell to a low of $930 million a week, but soon recovered.



NOTES

This story forms part of a weekly series tracking shipments of crude from Russian export terminals and the gross value of those flows. The next update will be on Tuesday, May 7.

All figures exclude cargoes identified as Kazakhstan's KEBCO grade. Those are shipments made by KazTransoil JSC that transit Russia for export through Novorossiysk and Ust-Luga and are not subject to European Union sanctions or a price cap. The Kazakh barrels are blended with crude of Russian origin to create a uniform export stream. Since Russia's invasion of Ukraine, Kazakhstan has rebranded its cargoes to distinguish them from those shipped by Russian companies.

Vessel-tracking data are cross-checked against port agent reports as well as flows and ship movements reported by other information providers including Kpler and Vortexa Ltd.

If you are reading this story on the Bloomberg terminal, click here or a link to a PDF file of four-week average flows from Russia to key destinations.

−−With assistance from Sherry Su.

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Revolution Leader

Revolution Leader reveals preparations for fourth round of escalation against Zionist-American enemy

Revolution Leader reveals preparations for fourth round of escalation against Zionist-American enemy

[02/May/2024]

SANA'A May 2. 2024 (Saba) -The revolution leader , Sayyed Abdul-Malik Badr Al-Din Al-Houthi, revealed preparations for a fourth round of Yemeni escalation against the Zionist-American enemy if the persistence of the rights of the Palestinian people in the Gaza Strip and the occupied territories continues.

Sayyed, Abdul-Malik Badr Al-Din Al-Houthi said, in a speech this afternoon about the latest developments on the Yemeni, Palestinian and regional arena: “We are preparing for a fourth round of escalation. If the Zionist enemy continues to be stubborn, along with the American, against the Palestinian people, then there is a fourth round of escalation for which we are preparing to confront this usurping enemy .""

He added: "The Yemeni people have come a long way from one stage to another in the process of escalation and development of military capabilities in the face of the forces of global hegemony and arrogance led by America, Britain and the Zionist entity, and their aggression against the Yemeni and Palestinian peoples."

The leader of the revolution called on the Yemeni people to stage a major exit tomorrow, Friday, in the capital, Sana'a, and the rest of the provinces, to the approved squares, and according to the usual procedures for continuing solidarity with the Palestinian people, supporting their just cause, and supporting their valiant resistance.

He expressed his hope that the demonstrations and marches in the capital, Sana'a, and the provinces, tomorrow, Friday, would be an honorable and great millions of people, as it was in the past weeks, and that it would be confirmed and announced in preparation for the fourth round of escalation, warning the Americans against continued intransigence and the continuation of the barbaric aggression against the Palestinian people in the Gaza Strip and the continuation of the siege of Palestine.

He continued: "The exit of two million people tomorrow will warn the Americans against their continued stubbornness and the continuation of the aggression and siege against the Palestinian people in the Gaza Strip, as the consequences of the American-Zionist stubbornness will cause the fires to rage more and more."

Sayyed, Leader stressed the necessity of the million people attend of in the marches tomorrow, Friday, as this is important and required... indicating that the Yemeni people, with their great stance, steadfastness, and support for the people and the Palestinian cause in this round, will qualify - Allah willing - for what is greater in military and popular action, and for what is greater and more effective in the upcoming tours that are a must.

He described the demonstrations in last Friday's marches as large and honorable, with millions in 181 marches in the capital, provinces and districts... considering the steadfastness and continuity of the Yemeni people as an embodiment of the faith and human values of the people and their loyal tribes.

The position of the Yemeni people is considered distinct. Because they took a full stance, militarily and popularly, with spending and donations, despite the difficult circumstances that the people of Yemen are going through in light of the continued American-Saudi-Emirati aggression and blockade for nine years.

The revolution leader pointed out that summer courses and activities educate the younger generation on principles, values, and correct orientations, and are concerned with the nation’s issues and sanctities.

He said: "If the round of negotiations in Gaza succeeds, and the situation calms down, that does not mean the end of the battle and conflict with the enemy, but rather it means the completion of a round of escalation, and when we reach the end of this round with the Israeli enemy, the conflict with the Israeli enemy will continue."

He pointed out that the conflict with the Zionist enemy is inevitable, because it is in a state of occupation, usurpation, aggression, crime and injustice, and the conflict with the enemy will not end unless it is removed from all of the land of Palestine and cleansing it...

Pointing out that the completion of rounds or the obtaining of certain truces does not mean the end of the conflict with the Zionist enemy.

Sayyed, Abdul Malik Badr Al-Din Al-Houthi affirmed that the Yemeni people will continue, and will never stop, as long as this round of Zionist aggression and tyranny continues, and they will be at the side of the Palestinian people under the slogan, “You are not alone, and we are with you until victory.”

He also stressed that the Yemeni people’s standing with the Palestinian people will continue in this round, and will qualify for the next rounds in a way that is greater and greater until the divine promise that is coming will inevitably be fulfilled with the victory of the oppressed servants of Allah and the end of the Zionist enemy’s control over Palestine.

The revolution Leader spoke about the direct and influential Yemeni front that clearly affected Umm al-Rashrash, as well as the Red Sea operations in preventing the crossing of Zionist ships linked to the usurping entity, in addition to American and British ships heading to the occupied Palestinian ports.

He indicated that the Yemeni armed forces carried out, this week, eight operations in the Gulf of Aden and the Arabian Sea, all the way to the Indian Ocean, and southern Palestine, with 33 ballistic and winged missiles and a drone, targeting six ships linked to the Israeli, American and British enemy.

He explained that the total number of targeted ships linked to the Zionist and American enemies reached 107 ships, and an American MQ9 armed reconnaissance plane was shot down in the airspace of Sa'ada, the third during this period.

He pointed out that the total number of operations carried out, since the beginning of“Al-Aqsa Flood” battle, amounted to 156 operations at sea and in southern occupied Palestine, carried out with 606 ballistic and winged missiles and drones since the beginning of the operation to support “Al-Aqsa Flood” operation, and enemy targets in occupied Palestine were bombed with 111 Between a ballistic missile, a winged aircraft, and a drone.

Sayyed, Abdul-Malik Badr Al-Din Al-Houthi addressed the enemies’ deep annoyance and anxiety over the Yemeni operations that extended to the Indian Ocean, stressing that the Americans, British, or Israelis may not have expected these operations with their long reach to the Indian Ocean, and with moving targets.

He stated that the American was astonished by the level of Yemeni technology, and also by the level of tactics in carrying out the Yemeni military operations to target Zionist, American and British ships... stressing that the American failed miserably even to prevent military operations from hitting the targets, despite his efforts to prevent the launching of missiles and drones and his extensive monitoring. .

He said: “Experts realize that our naval operations are complex and important, and are based on advanced capabilities, and American-British newspapers quoted experts, officers, and leaders who feared the Yemeni capabilities, their extent, and their accuracy in attacking.” He considered the Red Sea a small pond in view of the vastness of the Indian Ocean.

He added: “One of the experts’ questions is: How was Yemen able to monitor naval targets and target moving ones, when they have no naval fleet or satellites?” Pointing out that the enemies are astonished by the important and influential development of Yemeni military operations in the Indian Ocean.

He reported that the American had reached the point of announcing the award of awards and medals to encourage soldiers to participate in the fighting in the Red Sea after they evaded... stressing that the losses of the Americans and the British were continuing and rising, and the economic losses of America and Britain would double now that they were facing the dilemma of the Indian Ocean.

The leader of the revolution stated that the enemies became very worried after the strikes pursued them after they retreated from the Red Sea to the Road of Good Hope... pointing in this regard to the withdrawal of 10 American and eight European warships from the Red Sea, which is due to a feeling of despair and failure to prevent Yemeni operations, or Limit it.

He went on to say: “The enemies now see themselves shooting without result or effect, and in a state of extreme fear and enormous financial cost,” indicating that American stubbornness and its insistence on continuing the crimes of genocide against the Palestinian people is what brought it to this great cost.

He touched on the recent American acknowledgment that the Yemeni operations were linked to Gaza issue, despite his previous attempt to deny this fact, while most countries commented on the events in the Red Sea and affirmed their connection to supporting the Palestinian people in Gaza and the occupied territories.

Sayyed, Abdulmalik Badr Al-Din Al-Houthi confirmed that the American admitted that stopping the aggression and siege on Gaza would extinguish - as he expressed it - other fires in the region... reiterating that the correct solution is to restore stability to the region in general and get the American and British out of the dilemma.

He touched on the American-British attacks on Yemen and their operations, which amounted to 452 air strikes and naval bombardments, indicating that the number of martyrs in Yemen in the battle of “The Promised Conquest and Holy Jihad” reached 40 martyrs and 35 wounded.

He praised the important developments in a number of African countries that moved with real revolutions against American and European hegemony, pointing out that what is happening in Niger and other countries is conscious movement that signals important signs of expelling American bases and liberation from control.

The leader of the revolution also confirmed that awareness of colonial policies is expanding more and more, and is extending to many countries to liberate themselves from American hegemony.

He said: "In the international reality, many countries are increasingly moving away from American hegemony and control, and we hope that some Arab countries will adopt this trend."

He pointed out that the liberal trend in Latin America, the African continent, and a number of continents is part of global changes in human reality... reviewing what African countries have suffered for centuries from European occupation, oppression, and power.

He said: “In the Islamic world and the Arab countries, we are more affected by America’s hostile policies in the service of Zionism,” stressing that it was first for Arabs and Muslims to move consciously against American hegemony and control.

Sayyed. Abdulmalik Badr Al-Din Al-Houthi reiterated that the American-Saudi aggression that continues to this day, and has not stopped completely or with a clear agreement, is a reaction to the liberal orientation of the Yemeni people, who presented a model of liberation and courage from American hegemony, and embodied their faith affiliation by supporting the Palestinian people.

He recalled the suffering of the Palestinian people as a result of the American-Zionist-European aggression against Gaza, adding, “Nearing the end of the seventh month, the Israeli enemy continues its brutal aggression against Gaza, adopting genocide as a daily behavior.”

He pointed out that talk about mass graves in Gaza has become widespread, and there are 140 graves made by the Zionist enemy. He explained that the Zionist enemy executed hundreds and buried them in mass graves, and committed the crime of genocide against patients and medical personnel, while the siege has become a means of genocide, which the Israeli enemy relied on it, and the Americans helped him in that.

The leader of the revolution pointed out that one of the American methods to circumvent efforts to lift the siege on Gaza is to throw aid, most of which is expired, and some of it is candy... stressing that the American seeks, under the title of the floating dock, to have a military presence for himself and the British.

He said: “The American wants to control through the sea corridor the aid provided to the Palestinian people in the Gaza Strip, and has ambitions for wealth.” He explained that the American opposes the ceasefire and wants the genocide to continue in Gaza, and despite this there is an awakening of conscience among the student community.

He added: "Two weeks ago, students took action in 79 American universities, and their activity expanded to other universities to demand an end to the aggression against Gaza. The student movement began through more than 120 student organizations, and included elite universities in America and extended to European universities."

The leader of the revolution confirmed that the entities and organizations supporting the enemy had gone crazy over the student movement, and Netanyahu described them as “Nazis.” The peaceful student activity was exposed by the American authorities, and the falsehood of their titles was dropped because they did not tolerate that activity.

He stated that the world is witnessing the extent of cruelty, excessive violence, and attempts at humiliation and intimidation during the arrest of unarmed students and some university professors in America, and the arrests and intimidation operations in American universities have become more like a military attack on students by dozens of thugs.

He reviewed the violations committed by the American regime, including the arrest of peaceful demonstrators in American universities, including the handcuffing and humiliation of a woman with the rank of professor, which reveals American deception and lip service to rights and freedoms, its use of helicopters to intimidate students in universities, and the use of rubber bullets in some universities by the American regime’s thugs. .

The leader of the revolution continued: “It is very unfortunate that there is no activity like that of American university students in most Arab countries, because the silence applied in most Arab countries is shameful, and is completely inconsistent with the nature of belonging to Islam and human responsibility.”

He stated that the American concern over the student movement and the violent response to the demonstrators confirms the impact of this movement... expressing condemnation and denunciation of the American authorities' barbaric treatment of peaceful demonstrators, and this will be recorded in America's brutal behavior.

He said: "America supports Israel without restrictions, and we hope that the student movement will put pressure to stop its fundamental role in the continuation of the aggression against Gaza." He stressed the steadfastness of Mujahideen and the Gaza community was met with failure of the Israeli enemy in achieving its goals.

He added: "What astonished both the Americans and the Israelis was the missile bombardment from Gaza, and from the first area invaded by the enemy towards Ashkelon." Pointing out that the growing steadfastness in Gaza must bear great fruit, which is the fulfillment of the divine promise despite the extent of the Arab and Islamic disappointment.

Sayyed. Abdul-Malik Badr Al-Din Al-Houthi pointed out that the letters of the Zionist prisoners held by Al-Qassam caused a violent shock in the enemy's audience, and they testify to the extent of the failure of the Zionist aggression... stressing that the Zionist enemy is suffering heavy losses due to the steadfastness of the Palestinian resistance in Gaza.

He added: "The Israeli enemy's debts have reached an unprecedented level, and prices have risen due to the steadfastness of Gaza and the support fronts. The total damage in the agricultural sector has reached 70 percent, according to enemy media, and 40 percent of farmers have lost their jobs. There is a complete recession in the real estate sector, and losses are estimated at more than $20 billion.

He stated that there is a new wave this week of rising prices of food and pharmaceutical commodities in the enemy entity, and there are additional waves that they promise.

The leader of the revolution addressed the Lebanon front, which is witnessing continuous qualitative operations by Hezbollah, with a qualitative escalation, and their impact on the enemy is great and increasing. He stressed that the operations in northern Palestine had an economic impact on the entity by damaging its factories, and that damage extended to multiple aspects.

https://www.saba.ye/en/news3324044.htm

Revolution Leader confirms endeavor to expand & strengthen Yemeni operations in Indian Ocean

[25/April/2024]
SANA'A April 25. 2024 (Saba) - The revolution leader , Sayyed Abdul-Malik Badr al-Din al-Houthi, affirmed the endeavor to expand and strengthen Yemeni military operations in the Indian Ocean in a way that was not in the minds and calculations of the Americans, the British, the Israelis, and perhaps all countries of the world.

Sayyed Abdulmalik Badr al-Din al-Houthi said in his speech today,Thursday, about the latest developments in Palestine and regional developments, "There is a continuous effort to expand and strengthen Yemeni military operations in its new theater, which it extended to in the Indian Ocean, opposite the Gulf of Aden, in a way that was never in the minds and calculations of the Americans, the British, and the Israelis and perhaps all countries of the world."

He called on the Yemenis to go out in their millions tomorrow, Friday, in the squares in the capital, Sana'a, and the provinces, according to the approved arrangements, in response to God, in loyalty to the Palestinians in Gaza , the occupied territories, and in support of the nation's central and primary cause.

He added, "What we hope from our dear people, with their faith, loyalty, and piety to God Almighty, is to continue with great momentum in the squares, and to continue the mobilization, considering that the chanting of millions of Yemeni people for Gaza is the chanting of the throats of honest and patient men with the slogan, 'You are not alone,' with determination and not just a chant in Air, rather, they are words that express a position and a decision, and he is with you until victory."

He continued, "Millions going out in the squares is appropriate for our people because it embodies the credibility of faith affiliation," stressing the necessity of going beyond the enemies' view of free peoples to witness a reality that does not accept weakness, retreat, or boredom. He pointed out that "the enemies' assessment of our peoples is that they suffer from boredom and weak memory." "Tame the events and do not react again except to harsher and more difficult events."

He added, "In the face of the war of genocide, systematic starvation, and siege in Gaza, it is not appropriate for us to put down flags, sit in houses, and refrain from even attending in the squares, simply because of boredom, laziness, or inappropriate apathy that has no place at all in bearing faith and human values."

Sayyed Leader went on to say, "The values of our people are authentic and have been carried by generation after generation, and this is evident in what we see in the squares from people up to the age of eighty, carrying great interaction, determination, patience, a great desire , motivation to attend and participate in support of Palestine and Gaza."

He continued, "There is a continuous presence in the countryside despite the difficulty of the rough roads, but citizens are keen to attend and participate effectively , go out to participate in marches and demonstrations."

The Yemeni exit was considered to embody the faith affiliation to raise the banner of jihad for the sake of God and the comprehensive movement at all levels of boycotting American, Zionist , European goods , products, the continuation of donations and weekly exit.

Sayyed Leader urged everyone to bear the responsibility to maintain their stance in supporting the Palestinians in Gaza and the occupied territories, stressing that the scenes of genocide in Gaza are enough for anyone who has a shred of conscience left to go out to the squares, even every day, not just on Friday.

The revolution leader explained that the million-man protest last week took place in 173 marches, despite the rainfall in the capital, Sana'a, and some provinces.

The Yemeni people had never demonstrated such a million-man protest at this level, week after week, continuously.

He stressed the continuation of mobilization activities in military preparation, training and military rehabilitation at the level of suffering of the Palestinians, and it is important to continue following the events in Palestine and not ignore them as if they are events that do not concern us.

He added, "There are children who participate with responsibility, a sense of humanity, and an unparalleled readiness. If our people were allowed to go to Palestine , safe roads and corridors were opened for them, our people would move in the hundreds of thousands to the battle fronts.

Likewise, if the Americans were involved and opened a ground battle, thousands, tens, and hundreds of thousands of those who belong to the faith and are fortunate would be seen moving." With the honor of the Prophet's Medal for their loyalty, patience, determination, steadfastness, masculinity, chivalry, pride, stance, and presence where the situation and responsibility require attendance in the arenas."

He reviewed the ongoing Yemeni front facing the American-British Zionist enemy, stressing that the number of ships targeted by the Yemeni armed forces reached 102 ships during 202 days of the American-Zionist-European aggression against Gaza, and the rate of Yemeni operations in targeting ships linked to the Israeli enemy reached one ship every two days. .

He reiterated the inability of the American , British enemy and those cooperating with them, despite continuous and intensive monitoring, to provide protection for the movement of ships linked to the Zionist enemy. He considered targeting 102 ships linked to the enemy an important achievement, a large number, and evidence of the extent of effectiveness and success with the support and assistance of God Almighty, granting him victory and empowerment.

Sayyed Abdul-Malik Badr al-Din al-Houthi stated that the port of Umm al-Rashrash (Eilat) was completely disrupted, as acknowledged by the person who describes himself as the executive director of that Israeli port, and the enemy's exports shrank by 22 percent and its imports by more than 40 percent due to the effects of the port's complete disruption, with the Zionists themselves admitting that activity had stopped. The port of Eilat due to its closure by the Houthis, as they are called.

He said, "The Zionists confirm that Eilat cannot live without the Red Sea, and they acknowledge the impact of the missile attacks and marches."

He discussed the effects of the American and British aggression on Yemen on both America and Britain in terms of the level and nature of military deployment in the Red Sea, adding, "Over the past decades, the American has been roaming the seas, safe and reassured that no one will dare to target him."

He also confirmed that the American was accustomed to intimidating others through scenes of his military battleships, but he was met with a different attitude by the Yemeni people and their armed forces. He pointed out that the American naval presence had shrunk, and many of its warships had disappeared and were scattered on the outskirts of the Red Sea.

Sayyed Abdul-Malik stated that the movement of American ships that were passing through the Red Sea decreased by 80 percent, and this is a great victory and achievement, with God's help, because the American changed its movement to distant routes such as the Indian Ocean, and despite that, it faces an increasing danger day after day.

He pointed out that the Americans resorting to distant sea routes affects their economy through delayed goods, the cost of shipping, maritime transport insurance, and high prices. He pointed out that insurance operations per ship for some companies in America amounted to 50 million dollars, and this is unprecedented and represents a real problem for the United States of America.

He added, "American and British battleships do not dare to settle in areas expected to be targeted by missiles," considering the naval confrontation with the American and British forces as a major victory for the Yemeni people.

The revolution leader stated that the Americans had come to depend in their movement at sea on concealment and shielding themselves from the Europeans and pushing them into areas where they did not dare to be present, expressing the hope that the remaining European naval vessels would withdraw from the Red Sea after some of them withdrew.

He pointed out that the American aggression against Yemen is draining Washington financially and affecting it economically in the context of our naval operations, which have not decreased as the American claims to present this as an achievement, but rather the movement of its naval ships is what has decreased by 80 percent.

He reviewed the British's continuing losses in the interception without results, as is the case with the American, stressing that there was a significant decline in the maritime movement of the British, who built their economy at the expense of people's wealth by plundering, seizing, and controlling them.

He stated that the British economic losses are mounting, and his reports inside Britain reveal the level of escalating losses, and the British Chamber of Commerce revealed that the Yemeni operations led to damage affecting 55 percent of exporters in Britain, and this is a major victory because of the British foolishness.

Sayyed Abdulmalik Badr Al-Din Al-Houthi confirmed that Yemen operations led to a 300 percent increase in container shipping costs in Britain and significant delays in the delivery of goods, and affected cash flow difficulties in Britain, according to the British Chamber of Commerce.

He stated that Britain, along with the United States, has proven a miserable failure in trying to stop or limit Yemeni attacks, with senior British naval officers admitting to their media outlets that it is difficult to confront deadly and fast Yemeni weapons.

He pointed out that the Americans and Europeans depend on unjustly plundering the wealth of others and impose economic policies that are destructive and harmful to other peoples. He also pointed out that the American seeks to implicate others when he talks about what is happening in the Red Sea. The world should not deal with the Americans, the British, and the Israelis as if they depend on Lying and slander.

He said, "We seek to reassure the rest of the countries as long as they do not support the Zionist enemy and are not involved in the aggression against our country," stressing that there is no point in the American-British aggression against Yemen to support the Israeli enemy and the continuation of genocide crimes in Gaza.

The revolution leader reiterated that the solution for the Americans and the British is to stop the genocide crimes in Gaza and end the siege against the Palestinians.

He also stressed that the enemies are starving the Palestinians in Gaza Strip and are trying to prevent the necessary bread and food from reaching them to satisfy their hunger. He explained that the prolonged aggression and siege on Gaza will have an impact on the enemies' economic situation.

He said, “Insisting on an aggressive policy is not in the interest of the enemy peoples, but rather for the sake of the Zionists, and it is also an injustice to the Palestinian people.” He stressed that the Yemeni operations in support of the Palestinian people are effective, influential, important, and useful participation in the battle with the Zionist-American enemy.

Sayyed Abdul-Malik Badr al-Din al-Houthi recalled the crimes and genocidal wars that the Palestinian people have been exposed to for 202 days, indicating that the percentage of martyrs and wounded in Gaza reached six percent of the Gaza Strip's population, which is a high percentage and may be one of the highest percentages in the current era in terms of killing and war occurring genocide.

He considered the barbaric Zionist aggression against the Palestinians in Gaza Strip an aggression that targeted the Gaza Strip community in general, indicating that the Israeli enemy targeted the Palestinians with all means of genocide through killing, starvation, and spreading epidemics.

He explained that the Israeli enemy is getting creative with its means , methods to kill people in Gaza Strip every day, and has used audio recordings such as “Catch us,” “Help us,” and children's screams from drones to lure the people of Gaza to target them and commit more brutal massacres.

The revolution leader pointed out that the Zionist enemy has turned hospitals into mass graves and is carrying out cold-blooded executions of health personnel and patients. He said, "We have not heard of crimes among the events in any country of the world with the level of horrific crime practiced by the usurping enemy."

He reviewed the brutal crimes committed by the Zionists, including mutilating corpses and stealing their organs in the mass graves that were discovered in the Nasser Medical Complex, and their continuation of the widespread method of starvation, and Kamal Adwan Hospital receiving 50 children daily due to drought and lack of food.

He reported that the Zionist enemy's attacks in the West Bank are daily, including killing, kidnapping, destroying, burning houses, and displacing people, describing the robberies, seizures, and usurpations of lands by the Israeli enemy as unprecedented in the West Bank over a period of 30 years.

Sayyed Abdulmalik Badr Al-Din Al-Houthi reported that the Zionist enemy is trying to take advantage of his so-called holidays to storm Al-Aqsa Mosque, desecrate it, and attack the worshipers.

He stressed that the American is a partner of the enemy entity in all its horrific crimes against the Palestinians, just as it is a partner in the siege, starvation, killing, destruction, genocide crimes, and what the Israeli enemy is doing is with the full and comprehensive support of the American.

He also stated that the recent American support for the Zionist enemy is support for the continuation of the crimes of murder, bulldozing , comprehensive destruction in Gaza, and with the massive American support with weapons and money, the usurping enemy entity continues to move extensively in all paths of support at all levels.

The revolution leader promised the American role in the aggression against Palestine as if the battle were his battle... explaining that the American is pressuring the brothers in Qatar in an attempt to push them, through their mediation, to adopt the American Zionist vision and to put pressure on the Hamas movement.

He stated that the negative American role has reached the extent of supporting the Zionist enemy to targeting any activity within America itself, when some of the American people move to object to the crimes of genocide, and they are dealt with with complete cruelty.

He pointed out that the American does not respect its laws, its constitution, or any titles it raises and brags about, such as democracy and freedom of opinion and expression. He added, “Once there is a demand within America to stop the crimes of genocide against the Palestinian people, the American cannot bear to listen to these voices.”

He continued, "With the demonstrations and sit-ins at prominent American universities, the American role with the Israeli enemy became clear, and the authorities dealt with the demonstrations and protests at American universities in a bad manner that goes beyond all considerations."

Sayyed Abdulmalik Badr al-Din al-Houthi touched on the criticism of the American President and American officials of the protesters in American universities to the point of threatening their presidents , officials with dismissal and expulsion, indicating that the American tended to militarize the universities with large numbers of police and arrest their students in an abusive manner.

He stressed that the titles and rights that the American raised for university students ended in the face of the demand to stop the genocide crimes in Gaza, and the voices accepted by the official authorities in America became those who support the crimes of genocide and call for the extermination of the Palestinian people.

He denounced the emergence of voices that supported the bombing of the Palestinian people with nuclear bombs from within the US House of Representatives, noting that European countries raise the label of anti-Semitism against those who demand an end to the crimes of genocide against the Palestinian people.

The revolution leader pointed out that there is a tendency in Germany to adopt a law that considers mere criticism of the Israeli enemy to be anti-Semitism, and the title of anti-Semitism is not raised in the West except when the issue relates to the Zionist enemy, and within a Zionist vision of confiscating the rights of the Palestinians.

He considered the American and European effort to ban claims under the pretext of anti-Semitism a scandal to the Americans , the followers of Zionism and their addresses. He pointed out that the movement in more than 100 Western and European cities is of great importance even though it is facing a major propaganda and media campaign.

He said, "There is an American-Western effort to prevent the conscious movement that has begun to awaken to the horror of what is happening in Palestine, but it is growing , expanding, and the talk of some European countries with the term 'the right of the Palestinian people to establish a Palestinian state' remains according to Western standards."

Sayyed Abdulmalik Badr al-Din al-Houthi added, "When the West talks about the right of the Palestinian people to have a state, it assumes that it is based on a small part of the Palestinian people's land and most of it is confiscated for the benefit of the Zionist enemy."

He explained that the West relies in fighting the Palestinian people on their right, and that the headlines of “establishing a Palestinian state” are merely deceptive headlines. He added, “Some European countries have been greatly embarrassed by the scale of what is happening in Gaza and have a fair political position.”

He pointed out that despite the failure of most Islamic countries, the Palestinian people in Gaza and their mujahideen are steadfast, and stressing that the continuation of the mujahideen operations in the north and center of the Gaza Strip is a great, legendary and unparalleled steadfastness and an honorable and great page in the pages of jihad, sacrifices and struggle of the Palestinian people.

He continued, "The continuation of missile attacks on enemy settlements clearly indicates the extent of the cohesion of the resistance and the extent of its effectiveness." He pointed out that the steadfastness of the Palestinian people in the face of the crimes of genocide is great steadfastness.

The Revolution Leader praised the great cohesion of the Palestinian people and their Mujahideen, which is an important and essential factor in confronting the Zionist enemy supported by America and Europe.

He stressed that the Zionist enemy is in a state of clear failure, and its media describes it as a scandal, a defeat, and a failure, for the enemy entity and its American partner... Pointing out that the enemies failed to achieve any image of an actual victory in Gaza, as they neither recovered their prisoners nor eliminated the Palestinian resistance.

He praised the state of cohesion of the Mujahideen factions in Gaza Strip and their adaptation to the tactics and methods of the enemy, which is suffering huge losses in its strength and personnel, explaining that the phenomenon of mentally ill people within the enemy entity is a striking phenomenon, and they are in the position of the criminal aggressor.

He touched on the effects of the psychological state that is expanding among the enemy to the point that one of them describes his soldiers as ducks in the line of fire, and a quarter of Israelis have sought help from a mental health specialist since October 7, according to companies operating in health care services.

Sayyed Abdul-Malik Badr al-Din al-Houthi referred to reports about the intention of senior officers in the enemy army to resign after the resignation of the head of the Zionist intelligence service, in addition to the continuation of demonstrations by the families of prisoners from the enemy after his failure to expel them through his aggression and crimes.

He considered the opposing immigration of the Zionists to be one of the strategic effects of the steadfastness of the Palestinian people in Gaza Strip, adding, “The thinking of half the Zionists about immigrating and leaving Palestine reflects an existential crisis and an admission that they are mere usurpers and occupiers.”

He touched on the Lebanese front, where there is a major escalation and intense operations by Hezbollah on its important and direct front, where it is harassing the Zionist enemy, describing Hezbollah’s operations as precise, purposeful, effective, and devastating to the occupying enemy gangs.
The revolution leader stated that hundreds of thousands of usurping occupiers in northern Palestine face a very big problem in fear of being present in northern Palestine, and there is an unprecedented disruption to factories and companies in northern occupied Palestine, and this has a major impact on the economy of the Zionist enemy.
He confirmed that the impact of Hezbollah's operations had increased significantly, as they had become very annoying to the Zionist enemy, and no Israeli means were useful to stop the Hezbollah front or dissuade it from continuing its large and great role in supporting the Palestinian people.

https://www.rudaw.net/english/kurdistan/030520244

Oil companies welcome formation of joint Erbil-Baghdad committees

yesterday at 11:26

Rudaw

ERBIL, Kurdistan Region - The Association of the Petroleum Industry of Kurdistan (APIKUR) on Friday said it welcomes the recent formation of two joint committees between Erbil and Baghdad to work on the resumption of the Kurdistan Region's oil exports which have been halted for over a year.

"APIKUR welcomes the formation of the Baghdad-Erbil committees, recently announced by the Iraqi Minister of Oil with the stated goal to restore oil exports through the Iraq Türkiye pipeline. We are awaiting official notification of international oil companies' role in these critical negotiations." Myles B. Caggins, the association's spokesperson, said in a statement.

Iraqi Oil Minister Hayyan Abdul Ghani told reporters on Thursday that two joint Baghdad-Erbil committees have been formed to resolve the contract situation between Erbil and the international oil companies (IOCs) as they are production-sharing contracts - agreements he said are incompatible with the Iraqi constitution.

The committees will meet next week to work towards resuming the flow of oil, he added.

Oil exports from the Kurdistan Region through the Iraq-Turkey pipeline have been halted since March 23, 2023 after a Paris-based arbitration court ruled in favor of Baghdad against Ankara, saying the latter had breached a 1973 agreement by allowing Erbil to begin independent oil exports in 2014.

Before the halt, around 400,000 barrels a day were being exported by Erbil through Ankara, in addition to some 75,000 barrels of Kirkuk's oil.

"There has not yet been an agreement with the Kurdistan Regional Government on handing over the oil produced in the Region to the federal oil ministry," the Iraqi oil minister said on Thursday, adding that there are "differences regarding contracts signed with the international companies."

Iraqi Prime Minister Mohammed Shia' al-Sudani visited the US in mid-April, meeting with US President Joe Biden. The resumption of Kurdistan Region's oil exports was one of the topics discussed.

Sudani and Biden "affirmed the importance of ensuring Iraqi oil can reach international markets and expressed their desire to reopen the Iraq-Turkiye Pipeline," according to a joint statement between the two leaders following their meeting.

https://english.news.cn/20240430/1fb81d6afc8943e5985bb6c66c923804/c.html

20th CPC Central Committee to hold 3rd plenary session in July

Source: Xinhua
Editor: huaxia
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BEIJING, April 30 (Xinhua) -- The third plenary session of the 20th Communist Party of China (CPC) Central Committee will be held in Beijing in July, according to a decision made at a CPC Central Committee Political Bureau meeting on Tuesday.

According to the main agenda of the session, the Political Bureau will report its work to the Central Committee, and the session will primarily study issues concerning further comprehensively deepening reform and advancing Chinese modernization.

The Political Bureau meeting also analyzed the current economic situation and economic work, and deliberated a document on policies and measures for continuously advancing the high-quality integrated development of the Yangtze River Delta.

Xi Jinping, general secretary of the CPC Central Committee, presided over the meeting.
Reform and opening up is an effective instrument for the cause of the Party and the people to make great strides in keeping up with the times, the meeting said.

The current and future periods are critical for building a strong country and realizing national rejuvenation on all fronts through a Chinese path to modernization. China's reform must continue in the face of complex international and domestic situations, a new round of scientific and technological revolution and industrial changes, and the new anticipation of the people, according to the meeting.
Deepening reform is essential to upholding and improving the socialist system with Chinese characteristics and modernizing China's governance system and capacity, the meeting said.

It is also essential to implementing the new development philosophy and better adapting to the evolution of the principal contradiction facing Chinese society, ensuring that all the people share the benefits of modernization more fully and fairly, coping with major risks and challenges, winning the strategic initiative in the increasingly fierce international competition and building a stronger Marxist party, the meeting noted.

The whole Party must put reform in a more prominent position and deepen reform in all respects with a focus on promoting Chinese modernization, the meeting said.

The meeting stressed that further deepening reform in all respects requires efforts to free the mind, liberate and develop social productive forces, as well as unleash and enhance social vitality.

Further comprehensive reform should be led by reform of the economic system, with advancing social equality and justice and improving people's well-being as both the starting point and the ultimate goal, and more focuses should be put on system integration, addressing priorities and achieving concrete outcomes, so as to provide powerful driving force and institutional guarantees for Chinese modernization, the meeting added.

Noting that the economy has secured a good start this year, the meeting cautioned against challenges, such as insufficient demand, high operation pressure facing enterprises, and an external environment that is more complicated, grimmer and more uncertain.

China's economy still has a solid foundation, plenty of advantages, strong resilience and huge potential, the meeting said, calling for efforts to strengthen confidence in economic work.

The country should front-load efforts to effectively put the established macro policies in place, and well implement a proactive fiscal policy and a prudent monetary policy.

Ultra-long special treasury bonds should be issued at an early stage and put in good use, while the issuance and utilization of special-purpose bonds should be expedited.

It is necessary to flexibly employ policy tools such as interest rates and reserve requirement ratios to increase support for the real economy and reduce the overall financing cost of the society, the meeting noted.

The meeting stressed the need to assess the consistency of macro policy orientation, advance large-scale equipment renewals and trade-ins of consumer goods, introduce more consumption scenarios, promote people-centered new urbanization, and implement a new mechanism for cooperation between the government and private capital, while fully stimulating private investment.

The meeting also called for efforts to develop new quality productive forces according to local conditions, cultivate and strengthen emerging industries, proactively plan and build future industries, make use of advanced technologies to empower the transformation and upgrading of traditional industries, actively develop venture capital, and strengthen patient capital.

The country should actively expand trade in intermediate goods, service trade, digital trade, and cross-border e-commerce exports, support private enterprises in expanding overseas markets and intensify efforts to attract and use foreign investment. ■

Caixin China General Manufacturing PMI®

Business conditions improve amid fastest rise in new work in 14 months

The improvement in Chinese manufacturing sector conditions extended into the start of the second quarter, according to the latest PMI® data. Greater new work inflows, including from abroad, supported faster output growth in April. As a result, manufacturers raised their purchasing activity and inventory holdings.

That said, firms remained cautious with hiring even as backlogs accumulated. Average selling prices also declined even as input costs increased, whilst optimism in the future eased since March.

The headline seasonally adjusted Purchasing Managers' Index™ (PMI) – a composite indicator designed to provide a single-figure snapshot of operating conditions in the manufacturing economy – rose to 51.4 in April, up from 51.1 in March. This indicated a sixth successive monthly improvement in the health of the sector, with growth the most pronounced in 14 months.

Underpinning the latest acceleration in manufacturing sector growth was better demand conditions. Incoming new orders expanded at the fastest pace in over a year, supported by improvements in underlying demand conditions and marketing efforts from manufacturers. Additionally, new orders from abroad expanded at the fastest pace for nearly three-and-a-half years. Global market demand improved at the start of the second quarter, according to panellists.

In turn, Chinese manufacturers raised their production levels at the fastest pace since May 2023, though that still resulted in additional backlog accumulation. Sub-sector data revealed that the investment goods sector recorded the fastest growth across the measures of new orders, output, and backlogs.

Purchasing activity meanwhile rose in line with higher production, further contributing to higher stocks of purchases in April. Anecdotal evidence revealed that some manufacturers also raised their holdings of raw material and semi-finished items for safety stock building. The level of post-production inventories similarly rose in April. Although marginal, this marked the first increase in warehouse goods in three months.

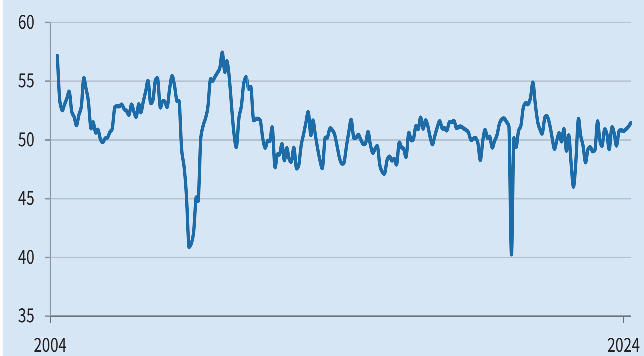
Despite rising new work inflows and capacity pressures, Chinese manufacturers remained cautious with hiring. Employment levels fell for an eighth straight month in April amidst resignations and redundancies due to restructuring efforts.

Additionally, average charges also declined alongside export charges even as input price inflation renewed in April. The rate at which average input costs rose was the fastest since October 2023 with higher metals, oil and other input material costs often mentioned by panellists. However, increased competition and promotional efforts aimed at supporting sales limited Chinese manufacturers' pricing power.

Finally, sentiment among Chinese manufacturers remained positive at the start of the second quarter with firms staying hopeful that sales can rise as economic conditions improve. That said, the level of confidence eased from March to a four-month low amidst concerns over rising costs and increased competition.

China General Manufacturing PMI

sa, >50 = improvement since previous month



Sources: Caixin, S&P Global PMI

Key findings:

Production expands at most pronounced pace since May 2023

New export orders rise at the quickest pace in nearly three-and-a-half years

Selling prices fell again despite highest cost inflation in six months

New Export Orders Index

sa, >50 = growth since previous month

Sources: Caixin, S&P Global PMI

Employment Index

sa, >50 = growth since previous month

Sources: Caixin, S&P Global PMI

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

"The Caixin China General Manufacturing PMI came in at 51.4 in April, up 0.3 points from the previous month, the highest reading since February 2023. It also marked the sector's sixth consecutive month of growth as the overall market continued to improve.

"Both supply and demand expanded at a faster pace amid the market upturn. In April, manufacturers' output and total new orders continued to grow, with the corresponding subindexes reaching new highs since May 2023 and February 2023, respectively. The increase in external demand was even more notable, with the gauge for new export orders hitting a high not seen since November 2020. Investment goods outperformed both consumer and intermediate goods in terms of supply as well as demand at home and abroad.

"Employment declined slightly. Similar to previous months, the sector's labor market remained contracted despite an overall market rally. Businesses remained reluctant to hire, keeping the corresponding subindex in contraction for the eighth consecutive month. In addition, backlogs of work rose on increased demand.

"Price levels remained low. Although the gauge for input costs reached a six-month high, the cost increase was limited. Some surveyed companies reported rising prices for metals, crude oil and other raw materials. On the sales front, intense market competition led businesses to slash prices, resulting in output prices declining for the fourth straight month.

"Supplier logistics continued to improve. In April, transportation and logistics operated efficiently, reflected in shortened supplier delivery times. Manufacturers were more willing to restock amid the market upturn, marked by increases in purchase quantity as well as inventories of raw materials and finished goods.

"Optimism was sustained. Surveyed companies were confident that market conditions would continue to improve, producing steady sales growth over the next year. Future output optimism continued to grow, albeit at a rate about 1 point lower than in March.

"Overall, in April, the manufacturing sector continued to improve, with accelerated expansion in supply and demand, sweetened by exceptional performance in overseas demand. Logistics and transportation functioned smoothly. Purchase quantity and inventories increased on a positive outlook among businesses. However, employment was yet to show improvement, and price levels remained low, particularly on the sales side, eating into profits.

"China's economic performance in the first quarter surpassed market expectations, with steady growth in manufacturing and a gradual recovery in consumption. The strong start to the year is consistent with the Caixin Manufacturing PMI, which has remained in the expansionary territory for six straight months.

"Across different product categories, consumer goods were no longer the best performer as investment goods gained momentum in April with increased production and sales, showing signs of the improved downstream gradually benefiting upstream markets.

"Weak expectations remain one of the major hurdles facing economic development, leading to increasing pressure on employment and a greater risk of deflation. Therefore, consistent efforts should be made to ensure earlier policies are implemented effectively and promptly, maintaining the current economic recovery momentum and eventually improving overall market expectations."

https://www.iata.org/en/pressroom/2024-releases/2024-05-02-01/

Date: 2 May 2024

German Passenger Tax Increase to Weaken Economy & Hamper Decarbonization

Geneva - The International Air Transport Association (IATA) sharply criticized the increase in German aviation taxes, which will weaken the German economy and damage aviation's ability to decarbonize.

On 1 May, German taxes on flying increased by 19% to between EUR 15.53 and EUR 70.83 per passenger, depending on the route. The tax will make Germany less competitive in key economic areas such as exports, tourism, and jobs. It will further affect Germany's air transport recovery from the pandemic, which is one of the slowest in the EU. Germany's international passenger numbers, for example, are still 20% below pre-pandemic levels.

"When Germany's economic performance is anemic at best, denting its competitiveness with more taxes on aviation is policy madness. The government should be prioritizing measures to improve Germany's competitive position and encouraging trade and travel. Instead, they have gone for a short-term cash-grab which can only damage the economy's long-term growth," said Willie Walsh, IATA's Director General.

IATA also warned that the tax increase will hamper the industry's efforts to decarbonize. Aviation has a goal of reaching net-zero CO2 emissions by 2050 and sustainable aviation fuels (SAF) are vital to this effort. The German government coalition agreement originally stated that revenues from aviation taxes would directly fund production of SAF, but this commitment has been broken. In addition, weakening the German air transport industry with this tax makes it harder for airlines to invest in SAF, in a more fuel-efficient fleet and other decarbonization efforts. Furthermore, the German government appears sympathetic to the European Taxation Directive which would add a tax on jet fuel.

"The German government appears to have an unhealthy obsession with aviation taxes. On top of increasing the passenger tax, it is also in favor of a European jet fuel tax which will make it even more expensive to do business in Germany or for families to go on holiday. Our survey of air travelers in Germany shows deep skepticism about government claims for 'green taxes'. 75% agreed with the statement "Taxation is not the way to make aviation sustainable" and 72% agreed that "Green taxes are just government greenwashing". Time and again, we see taxation that was supposed to help the industry decarbonize be stolen and then lost in the general budget. And money taken out of the industry means that it has less money to invest in other decarbonization measures," said Walsh.

For more information, please contact:

Corporate Communications

Market environment

The global economy continues to demonstrate a certain strength amid increasingly confrontational geopolitics and high interest rates. Economic growth is expected to be around 2.5% in 2024, according to Oxford Economics, an upward revision from their forecasts at the beginning of the year. Growth is becoming increasingly balanced as activity improves in manufacturing. The Global Manufacturing Purchasing Managers Index (PMI) moved into expansionary territory (above the 50 threshold) in Q1. Moreover, manufacturing export orders and orders-to-inventories ratios have continued to rise at the start of 2024, providing near-term support for logistics demand.

The US consumer remains the bright spot in the global economy. Robust labour market conditions and real wage gains have contributed to a 2% increase in US goods consumption in Q1 y/y. In contrast, the European economy faced stagnation in Q1. Despite a strong labour market and wages growing above inflation, European consumers remain more cautious. Retail sales (excluding food and fuel) in the Euro Area were down 0.6% over the year in January-February, in line with downbeat sentiment. The growth outlook in China has slightly improved, driven by stronger-than-expected industrial production and exports, the latter supported by improved cost competitiveness. However, consumer demand remains subdued as households face the property market deleveraging.

Despite abundant risks to supply chains, demand for container trade increased in Q1 2024. Global container demand is estimated to have grown between 7-9% y/y, with all import regions contributing positively. The figure surprised on the upside. Import growth was strongest in North America, Latin America and Oceania. The top-3 fastest growing verticals in Q1 are retail, tech and lifestyle. Global container demand growth is expected to remain positive in coming quarters, but likely at a slower pace. On the export side, Chinese exports stand out with y/y growth around 16%. On the supply side, growth remained sustained in Q1 2024, driven by significant deliveries. At the end of the quarter the nominal fleet was 9.6% larger than at the same time in 2023, while inactive capacity dropped to levels not seen since the first half of 2022. The influx of newbuild capacity and the decline in the inactive fleet helped carriers tackle the pressure from the Red Sea/Gulf of Aden situation. As a result, spot rates, measured by the Shanghai Container Freight Index (SCFI), declined gradually after peaking in mid-January. The SCFI stood at USD 1,731 in the last week of March.

Global air freight forwarding demand growth turned positive in Q1, estimated between 4-5% y/y, after seven quarters of contraction. Improvements in demand resulted from a modal shift from container trade in reaction to the Red Sea/Gulf of Aden situation, a surge in e-commerce and favourable base effects. Trade in Far East Asia has driven growth, particularly Chinese exports, which grew 17% y/y in the first two months of 2024. Lifestyle and retail have rebounded in recent months, growing double-digits y/y. Global supply increased 11.5% y/y in Q1, driven by a strong inflow of belly capacity, but it did not curtail rates.

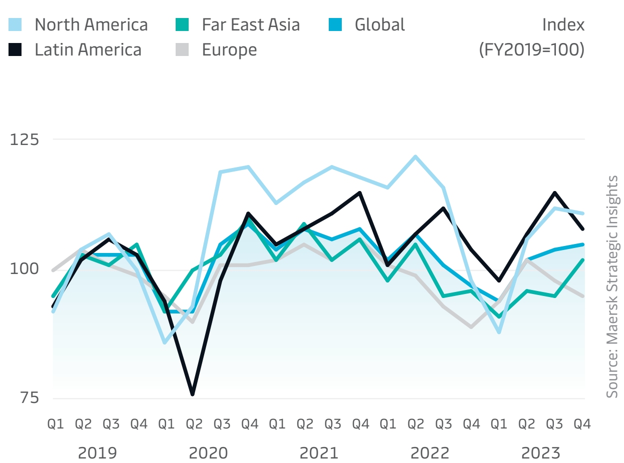
Global rates, measured by the TAC index, declined 25% y/y in Q1, but followed an upward trajectory during the quarter and exceeded 2 USD/kg by the end of March.

North America road freight volumes declined in Q1, however demand appears to have bottomed out. The supply side of North America road freight, however, is more challenged with carrier numbers still elevated compared to pre-pandemic trends. Excess supply in the trucking market has kept downwards pressure on Full Truckload (FTL) rates, although better supply/demand balance has held Less Than Truckload (LTL) rates up. Demand for road freight services in Europe has been similarly weak, weighed down by a manufacturing industry that is lagging behind the global recovery. Rate development has been stronger as costs rise, with spot rates up 7% across the region and contract prices gaining 1% y/y, according to Transporeon.

Warehouses vacancy rates have risen to 5.8% in the US (Cushman and Wakefield), up from 3.6% in Q1 2023. While demand growth remained positive in Q1, it has slowed after two years of rapid expansion. New construction starts fell 50% y/y according to the same source, and a thinning pipeline is likely to keep a higher floor under rents. In Europe, warehousing vacancy rates have likely risen, although a slowdown in new supply over the coming quarters means further rises in vacancies will be contained.

The global economy remained resilient in Q1 to the shock from the Red Sea/Gulf of Aden situation, and so did the logistics industry. Demand for container trade is still expected to grow between 2.5-4.5% in 2024, however, the strong start to the year places expectations closer to the upper side of the range. With no end in sight to existing conflicts, looming trade tensions, uncertainty on the economy and threats from climate events, risks are skewed to the downside.

Container trade volumes, by import region



https://www.bp.com/en_us/united-states/home/news/press-releases/bps-archaea-energy-brings-online-its-largest-modular-rng-plant-to-date-in-kansas.html

bp's Archaea Energy brings online its largest modular RNG plant to date in Kansas

Release date: 30 April 2024

- The plant can convert 9,600 standard cubic feet of landfill gas per minute into lower-carbon renewable natural gas (RNG).
- Plant is expected to produce enough renewable natural gas to heat up to 38,000 homes annually, according to the EPA Landfill Gas Energy Benefits Calculator.

HOUSTON – Today, bp's Archaea Energy (NYSE: BP) announced the official startup of its largest original Archaea Modular Design (AMD) renewable natural gas (RNG) plant to date in Shawnee, Kansas, just outside of Kansas City. The plant, which is fully-owned by Archaea, is located next to a large, privately-owned landfill.

Landfill gas, a natural byproduct of the decomposition of waste in landfills, is a form of greenhouse gas. Using the AMD, the Shawnee plant captures the gas from the landfill and converts it to renewable natural gas. The Shawnee plant, which is three times the size of Archaea's first AMD plant in Medora, Indiana brought online in October 2023, can process 9,600 standard cubic feet of landfill gas per minute (scfm) into RNG – enough gas to heat around 38,000 homes annually, according to the EPA's Landfill Gas Energy Benefits Calculator.

Starlee Sykes, CEO Archaea Energy: "This represents another significant milestone for Archaea. A plant of this size can have a positive impact in capturing emissions from a landfill and providing our customers with lower carbon fuel. We are excited to be operating in Kansas – a state with an exceptional record in renewable energy."

Traditionally, RNG plants have been custom built, but the AMD allows plants to be built on skids with interchangeable components. Using a standardized modular design leads to faster builds than previous industry standards. AMD plants are designed to come in three sizes – 3,200 scfm; 6,400 scfm; and 9,600 scfm.

After purchasing Archaea Energy, bp is now the largest producer of RNG in the US. In 2023, bp's global biogas supply volumes were up 80% year-on-year, reflecting the Archaea uplift.

About Archaea Energy

Archaea Energy, a bp-owned company, is the largest RNG producer in the U.S., with an industry-leading platform and expertise in developing, constructing, and operating RNG facilities to capture waste emissions and convert them into low carbon fuel. Additional information is available at bp.com/archaea.

About bp

bp is investing in America's energy system as we transition from an international oil company to an integrated energy company. With $150 billion invested in the US since 2005, it employs more than 30,000 people and support more than 300,000 jobs. bp has a bigger footprint in the United States than anywhere else in the world and is proud to be a trusted partner for secure, affordable and reliable energy. To learn more, please visit bpAmerica.com.

BP's $4.1 Billion Bet on Renewable Natural Gas Gets Underway (1)
2023-10-04 16:18:18.118 GMT
By Jennifer A Dlouhy
(Bloomberg) -- The fields of southern Indiana are an unlikely proving ground for BP Plc's $4.1 billion bet on renewable natural gas.
There, in the small, rural town of Medora, a first-of-its-kind modular facility will start operating on Wednesday, converting waste gas released from decomposing trash in the area's landfill into a pipeline-ready product. BP hopes the facility is just the start of things to come: The company has five more modular facilities on track to go online this year and plans to commission as many as 20 around the country annually.
The work will yield both environmental and economic benefits, by keeping a potent greenhouse gas out of the atmosphere and selling it as an energy source, said Starlee Sykes, chief executive officer of Archaea Energy, the RNG producer BP purchased last year.
"Rather than letting that go into the atmosphere and create odors for communities, we're going to capture that gas, refine it and sell that gas back into the pipeline," she said. "Our goal is to make a large, material business that's going to be a strong profit center for BP."
The facility represents the next phase of the British oil giant's push into RNG, as the company looks to leverage Archaea's modular designs to rapidly deploy facilities across the US. The plants, generally prebuilt in Pennsylvania, can be installed in nine months instead of the 18 to 24 months it would typically take to construct them on site.

Conservationists have warned renewable natural gas is far from a long-term solution to fight climate change, since the product is still a greenhouse gas — and an especially powerful one at that, pound for pound at least 84 times more powerful than carbon dioxide at warming the atmosphere in the first 20 years after it's released. When burned to produce electricity or heat, landfill-harvested methane produces carbon dioxide just like its fossil-based cousin.
The Medora plant is firing up amid surging interest in RNG, which is increasingly valued not just for helping oil companies shrink the carbon intensity of their products and hit net-zero targets — but also its economic benefits. RNG, converted from the mix of methane, carbon dioxide and other materials wafting from cow manure at farms and trash at landfills, is chemically no different from conventional natural gas. That means it can be transported in pipelines, compressed to power trucks or burned to generate electricity.
And while it is generally more expensive to produce than fossil-based methane, producers of RNGcan tap into a suite of incentives, including credits under California's Low Carbon Fuel Standard and the federal Renewable Fuel Standard that mandates the use of alternatives beyond gasoline and diesel. An alternative fuel tax credit worth 50 cents per gallon and an

investment tax credit that was expanded in last year's climate law — which can be worth as much as 50% of project costs — can provide additional support.

The incentives are helping drive the oil industry's embrace of renewable natural gas. Last November, Shell Plc said it was buying Nature Energy Biogas A/S for nearly $2 billion — an acquisition that would make Shell the largest European producer of RNG. Chevron Corp. has worked with Brightmark LLC to produce dairy biomethane to fuel long-haul trucks.

Read More: Shell Buys Nature Energy in $2 Billion Push Into Biogas

Some environmentalists argue it's a false solution. Burning methane from landfills and manure ponds to produce energy is better for the climate than letting it escape unfettered into the atmosphere. But some of that methane will still leak from processing equipment and pipelines. What's more, critics argue, relatively small amounts of RNG are harvested at each site — even as the operations effectively prolong the world's reliance on natural gas.

But US policymakers have weighed moves that could expand RNG's value, including a plan that would award Renewable Fuel Standard credits for using electricity generated from the gas to charge electric vehicles.

Renewable natural gas production offers both short- and long-term gains, said Amy Myers Jaffe, director of New York University's Energy, Climate Justice and Sustainability Lab.

That includes being part of a negative-emissions strategy, if carbon dioxide is captured when RNG is burned to generate electricity, she said.

"Right now you're at least taking some methane out of the atmosphere," she said, and "long-term, when you put sequestration to it, it's a serious solution."

BP is aiming to boost biogas supply volumes roughly sixfold by the end of the decade, to about 70,000 barrels of oil equivalent per day. And the modular system deployed in Medora is key to that trajectory. With each passing minute at the Medora plant, some 3,200 cubic feet of landfill gas will be processed, with nitrogen and carbon dioxide stripped out and burned off. Ultimately, some 1,000 cubic feet of renewable natural gas will be produced every 60 seconds and sent into pipelines.

That's just a small sliver of BP's overall natural gas production, at roughly 6.8 billion cubic feet per day worldwide, according to Bloomberg data. BP's Archaea has another 80 projects waiting behind it.

--With assistance from Kevin Crowley.

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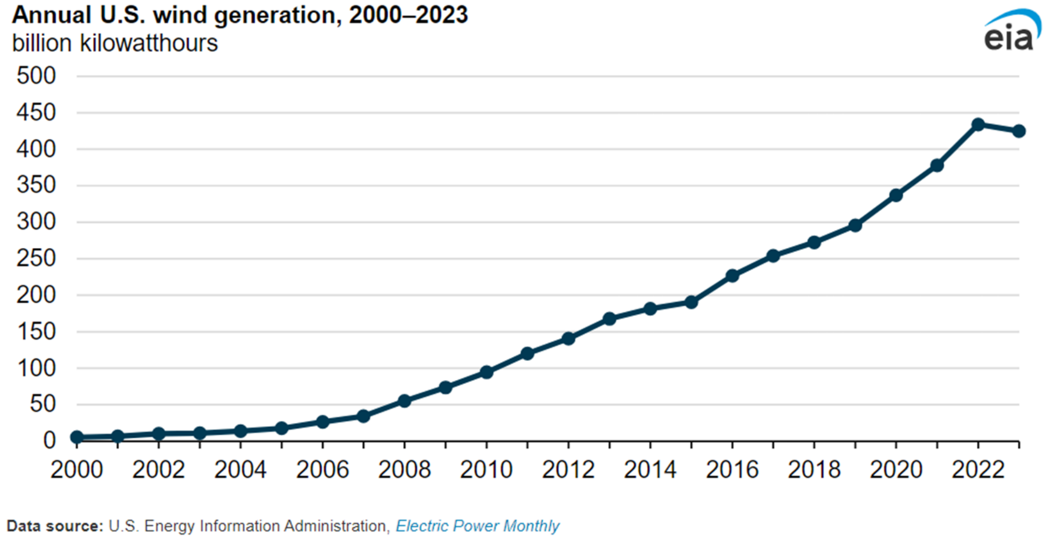
https://www.eia.gov/todayinenergy/detail.php?id=61943
APRIL 30, 2024

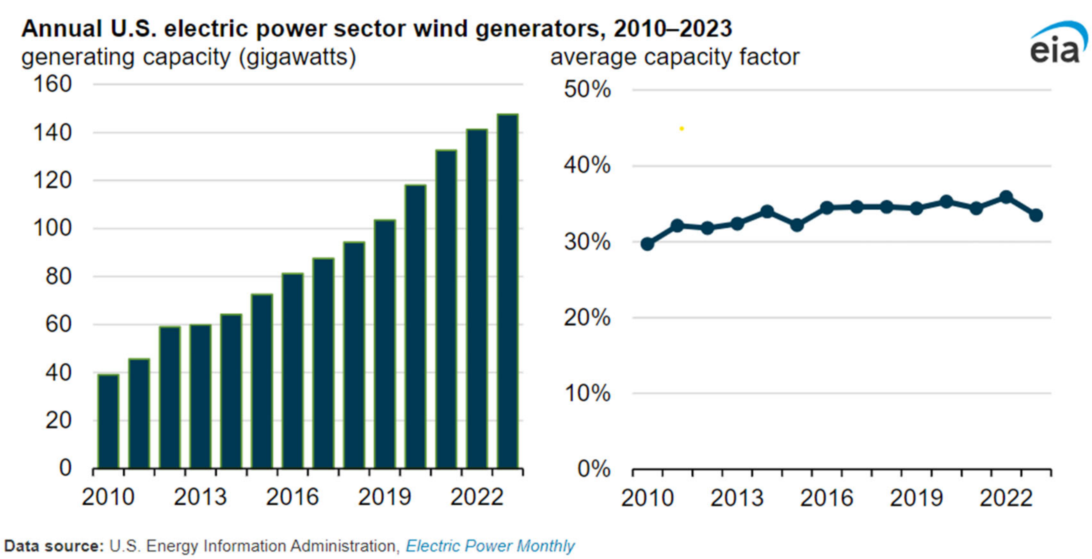
Wind generation declined in 2023 for the first time since the 1990s



U.S. electricity generation from wind turbines decreased for the first time since the mid-1990s in 2023 despite the addition of 6.2 gigawatts (GW) of new wind capacity last year. Data from our *Power Plant Operations Report* show that U.S. wind generation in 2023 totaled 425,235 gigawatthours (GWh), 2.1% less than the 434,297 GWh generated in 2022.

U.S. wind capacity increased steadily over the last several years, more than tripling from 47.0 GW in 2010 to 147.5 GW at the end of 2023. Electricity generation from wind turbines also grew steadily, at a similar rate to capacity, until 2023. Last year, the average utilization rate, or capacity factor, of the wind turbine fleet fell to an eight-year low of 33.5% (compared with 35.9% in 2022, the all-time high).

The 2023 decline in wind generation indicates that wind as a generation source is maturing after decades of rapid growth. Slower wind speeds than normal affected wind generation in 2023, especially during the first half of the year when wind generation dropped by 14% compared with the same period in 2022. Wind speeds increased later in 2023, and wind generation from August through December was 2.4% higher than during the same period in 2022. Wind speeds had been stronger than normal during 2022.



The decline in wind generation in 2023 was not uniform across the United States. Wind generation decreased the most in the upper Midwest, which includes the East North Central Census Division and West North Central Census Division. Wind generation in the East North Central Census Division declined by 6% compared with 2022, and it declined in the West North Central Census Division by 8%. The Mountain Census Division reported a smaller reduction of 2%. These three census divisions account for half of the installed wind capacity in the United States.

Wind generation in 2023 in other regions of the United States was slightly higher than in 2022. The West South Central Census Division had 3% more wind generation in 2023, and the Pacific Coast Census Division had 1% more. Wind generation in Texas, which has the largest wind generation fleet in the United States, increased by 4.4% in 2023. Texas had an installed wind capacity of 40.7 GW in 2023, accounting for 28% of the national total.

Principal contributors: Mark Morey, Scott Jell https://twitter.com/Vibhuti_D_Garg/status/1785248605030265002

1. Installed Capacity

First Quarter (1Q) 2024 Update:

India added a record total power generating capacity of **13,669 megawatts (MW)** in **1Q 2024** (January – March), with renewables accounting for **71.5%** of all new capacity additions (**Table 1**). With these additions, India's cumulative power generation capacity reached nearly **442 gigawatts (GW)** by the end of March 2024.

Among renewables, solar and wind recorded the majority of capacity additions, accounting for **62.1% and 8.4%,** respectively, of the total capacity added during the quarter.

India also expanded its nuclear power capacity with the commissioning of Unit 4 (**700MW**) of Nuclear Power Corporation of India Limited (NPCIL)'s Kakrapar Atomic Power project on 31 March 2024.

India recorded a net coal power capacity addition of **3,193MW** during 1Q, one of the highest in recent quarters, taking the total installed base of coal power capacity close to **218GW** or **49.2%** of the total installed power generation capacity. Coal capacity additions are from state undertakings that include commissioning of:

- Unit 2 (**660MW**) of NTPC's North Karanpura supercritical thermal power project at Tandwa, Jharkhand, in March 2024;
- Tamil Nadu's biggest coal power unit (**800MW**) at the North Chennai Super Critical Thermal Power Station by Tengedco in March 2024;
- **Two units of 660MW** each by Uttar Pradesh Rajya Vidyut Utpadan Nigam Ltd. (UPRVUNL) at OBRA-C and Jawaharpur in Uttar Pradesh in February 2024; and
- Unit 2 (**800MW**) of NTPC's Telangana STPP in February 2024.

Despite the coal capacity additions in 1Q 2024, given the increasing renewable power capacity installations in recent years, the coal capacity's share in total power capacity dropped under 50% for the first time. This is in line with the Government of India's target of establishing 50% cumulative power generation capacity from non-fossil fuel based sources by 2030.[1]

Record power capacity installations of 13.7GW in 1Q 2024; Renewables accounted for 71.5% of new capacity additions; In a first, coal slips under 50% of total installed capacity

Table 1: Installed power generation capacity, by source (MW), 1Q 2024

Energy Source	As on 31 December 2023	As on 31 March 2024	Change (MW)	% of New Capacity Added
Wind Power	44,736	45,887	1,150	8.4
Solar Power*	73,318	81,814	8,495	62.1
Small Hydro	4,987	5,003	17	0.1
Biomass	10,262	10,355	94	0.7
Waste-to Energy*	583	586	3	0.0
Large Hydro	46,910	46,928	18	0.1
Nuclear	7,480	8,180	700	5.1
Coal (+ Lignite)	214,396	217,589	3,193	23.4
Gas	25,038	25,038	0	0.0
Diesel	589	589	0	0.0
Total	**428,300**	**441,969**	**13,669**	**100.0**

Source: Central Electricity Authority, GoI; IEEFA
**Includes grid and off-grid capacities*

[1] A moving target in terms of absolute capacity numbers as India will likely add power generation capacity from all sources to meets its growing electricity demand.

And so we were out of the market for a period of time. We did about $3 billion in share repurchases. A run rate to hit the $17.5 billion, which is what we've kind of guided to this year, would be more like $4.4 billion, right? So our program will naturally dial up our execution so that we're on track to complete the $17.5 billion share repurchase program on a standalone basis. And then I would remind you that we said we anticipate taking that program pace up to $20 billion annually after we close the pioneer acquisition.

So we feel really good about where our balance sheet is at and our consistent capital allocation strategy and that that will drive long-term returns for shareholders.

A - Darren W Woods {BIO 17692013 <GO>}

And I would just add to Kathy's points that, and just remind everybody, if you look at where we stand today, and Jason made the point that we're deviating from our peers in terms of continuing to generate cash and drive down net debt, that's anchored in the strategy that we've put in place in 2018, which is find advantaged projects and invest in those to grow the earnings power of the business. And that's now beginning to manifest itself. And so I think you got to have a long-term view on this, having a robust balance sheet to make sure that we're positioned.

When opportunities come along and we see clear advantages to invest, that we have the capability to do that. Thanks for the question.

Q - Jason Gabelman {BIO 18730121 <GO>}

Yep, got it, thanks.

Operator

The next question is from Ryan Todd of Piper Sandler.

Q - Ryan Todd {BIO 15158570 <GO>}

Thanks. Maybe one on chemicals. I mean, your chemicals businesses, the two segments continue to show kind of modestly better than expected recovery along the bottom or off the bottom here. Is this more of a feedstock tailwind that we're seeing in the near term? Are you seeing any improvements that are noticeable in terms of demand and overall global supply demand? And I guess in the meantime, while things are weak, what are you managing to do with your product mixer operations to drive relative performance there in chemicals?

A - Darren W Woods {BIO 17692013 <GO>}

Yeah, sure, Ryan, I'll take that.

First thing I would say is if you look at the chemical business and kind of the margin indicators that we use to judge to judge the health of the chemical businesses. We are at a historic kind of bottom-of-cycle number, and so I think it's a very challenging chemical market today, as I know many of you know. But even in that very challenged market, we are continuing to deliver very good results. And I think if you compare similar markets that were even close to these bottom-of-cycle conditions, we were in a very different place in the past with respect to earnings than we find ourselves today, where we delivered close to $800 million of earnings this quarter, despite the very difficult market conditions.

Those market conditions are driven more by supply than demand, frankly. We're continuing to see growth in demand, not as high as we've seen historically, but continued good growth. And frankly, in the first quarter, saw some of that pick up. The challenge has been the supply that's come on to meet that growth.

And so that is depressing overall industry margins. As you know the investments that we make and the way we run our business is to make sure that we're advantaged versus the average chemical player. And so even in these markets that are set by other capacity, the work that we've done to position ourselves in a more advantaged position than competition continues to deliver a value we can see that with the growth, not only in the high-value products, which are coming on with our projects, and frankly, that growth is in line with what we had expected. So we're continuing to see the demand for the high-value products that we've invested in.

But we're also seeing it in our base volume, value in those with respect to how we've positioned ourselves. And we're seeing advantages in the structural cost reduction. So I would tell you, every part of what we've been doing to improve the earnings power of the organization is manifesting itself in our chemical business and showing up in differentiating earnings. And feed, to your point, feed advantages play an important role in that.

So that's, yet again, another advantage that we have versus the typical industry player. But that is reflective of the broader strategy that we have. So I think we feel good about where we're at in a very difficult market. Our view is that those market conditions are going to be with us for a little while here going forward.

But we also feel like we're well-positioned to be successful there. And as that shakes out, and some of the less able competitors have no success in this space, we'll see growth continue to move, and eventually, we'll see margins pick back up, and we'll be very well-positioned.

A - Kathryn A Mikells {BIO 3743077 <GO>}

And just the other thing I'd add to that is I think if you look at our chemical business's performance and compare that to peers and other players, you see the differentiation and the excellent execution execution really coming through. We're in clearly bottom-of-cycle conditions right now, and yet we're still generating pretty good earnings and cash flow in our chemical business.

And then I would just mention that, as Darren noted, our footprint tends to be North American weighted, and so if you just look at our PE and PP footprint, we're heavily North American weighted and relatively lightly weighted to Asia compared to the rest of industry. And Asia is especially at very, very bottom-of-cycle conditions.

Q - Ryan Todd {BIO 15158570 <GO>}

Great. Thanks, both of you.

Operator

The next question is from Steven Richardson of EverCore ISI .

Q - Steven Richardson {BIO 15036459 <GO>}

Good morning. Darren, I was wondering if you could talk a little bit about the Baytown project, and maybe just if you could give us a little bit more on what your view of adequate incentives there would be. If the PTC on green hydrogen was extended to blue, would that be sufficient to sanction the project? And then, , sorry, just as a follow-on to that, as you talk about a level playing field across a technology neutrality, is your view that, a new, gray hydrogen ATR should get some sort of incentive? Maybe you could just give us the context of how you're thinking about that project and what it needs to move forward.

Thank you.

A - Darren W Woods {BIO 17692013 <GO>}

Yeah, sure. I'm happy to do that, Steve. What I would say is, , it's a-- that work we're doing to develop it is, I think, demonstrating the difficulty of starting brand-new businesses and value chains where none exist, in that we're kind of simultaneously trying to build demand, trying to build supply, and then trying to, in the early days of this market, establish financial incentives to do that.

And those are the three core key variables to a successful business, all kind of basically being generated for the first time in this space along this value chain. So I just put that out there as it's a challenging construct, but, frankly, one that plays to our strengths and the ability to look along the entire value chain. And we are uniquely situated to manage each piece of that. There are very few, if any, companies out there that have a portfolio and capabilities that extend end-to-end along this value chain.

So I feel good about what we're doing there and the work that we've put in place. And, frankly, it looks to me like a very viable project. We are continuing to progress that. But it will require that the necessary incentives are in place with respect to what's required with incentives.

I would say the IRA and the incentives that were developed as part of the IRA are enough to do that. The challenge is taking the IRA, which I believe rightly focused on carbon intensity and incentivizing carbon intensity, translating that legislation into regulation. And if the regulation reflects the intent of that legislation and writes the rules focused on carbon intensity, that will be enough to justify and to incentivize and give us a return on this investment. That's--we don't focus so much on the green, the blue, and, color schemes.

We instead focus on how can we meet what is ultimately the objective here, which is to reduce the CO2 associated with the production of these products. And we think all the work we've been doing in our facilities, in our feedstock, and decarbonizing those contributes to that. And so we feel like we're well-positioned with the existing set of incentives as long as those incentives are fairly reflected in the regulations. In a level playing field, what I mean by that is staying focused on carbon intensity and ignoring colors.

Q - Steven Richardson {BIO 15036459 <GO>}

Very clear. Thank you.

A - Darren W Woods {BIO 17692013 <GO>}

Okay.

Operator

The next question is from John Royall of JP Morgan.

Q - John Royall {BIO 17723205 <GO>}

Hi. Good morning. Thanks for taking my question. So I just had a question about the refinery sale in France.

I know you have a very ambitious program for growth in the downstream business, but you have been trimming and high-grading a bit with some asset sales. Other majors are also reducing their European footprint in refining. Can you just speak to how strategic the remaining European portfolio is? And could we see some more assets shake out in European downstream?

A - Darren W Woods {BIO 17692013 <GO>}

Yeah, sure. I would tell you what you're seeing with the sale in France is really the latest in what's been a fairly long trend with us focused on high-grading refineries, too.

Refineries that have the capability to address a broad suite of products and high-value products. And so integrated facilities that make not only petroleum products but also make chemicals and lubricants and basically a broad array of high-value products. And so we've been, over time, focused on that. They need to be advantaged sites.

They need to be-- We have a cost-to-supply curve. I think you all have heard me talk about this many times across all of our businesses, but we look around the world and make sure make sure that our facilities are on a low cost of supply so that as the margins move up and down that we never become the marginal supplier. And having an integrated facility helps with that, but it also acts as a hedge to make sure that we're not dependent on any one sector for the success of one of our manufacturing facilities. The reorganizations that we put in place have helped greatly we're working on bringing that gas to shore. Our expectation is we'll have that, brought up sometime end of 2024.

Obviously, the government's working on the receiving end of that gas and responsible for putting in the power station. That's an independent project that's developing. We're also working on the distribution system, and so it's really-- I think the impact of that will come when we get both pieces together and get that linked up and effectively delivering power to the market.

Operator

The next question is from Paul Cheng of Scotiabank.

Q - Paul Cheng {BIO 17337436 <GO>}

Thank you. Hi. Good morning. Darren, in the presentation, you talked about the direct air capture.

Can you give us some idea the-- And you're saying that you aim to reduce the cost by half, and that won't be sufficient. So what will be needed in order. How much is the actual cost reduction from the current level in order for that to be competitive or that to be a real business for you? And also, can you talk about how your approach or technology is different than what's currently in the market, especially one of your competitors in the US.? They already have a-- they said that they have a commercial operation ready, and it's going to come on stream very soon.

Thank you.

A - Darren W Woods {BIO 17692013 <GO>}

Yeah. Sure. Good morning, Paul.

Yeah. What I would say with--Oo, may I start with the last point of your comment, which is, yeah, there are alternatives out there today versus what we're working on. The issue is the cost associated with them, and we're not looking at what we can commercialize in the short term based on what I would say is a very narrow market of limited customers who are willing to pay a very high price to demonstrate a level of decarbonization. We're focused on how we can make this technology broadly applicable at a cost that society can afford.

So that's we are very focused on the long term, not the short term, and our view is the available technologies today don't meet the cost requirements, and that's, somewhere between the $600,000 per ton of CO_2 removed, and our view is if you try to apply that across the emissions challenge the planet has, the world won't be able to pay for that. So we've got to find a reduction. Our cost -- we've set an initial target of cutting the cost in half just because that is a significant step change, recognizing it won't be enough, but if we can get the technology-- If we can develop the technology to a point that we're successful there, that gets us on this path and demonstrates the value of the concepts that we're developing to keep on going and drive further down. With respect to the technology and how it compares to what's commercially available out there, I would say part of the reason why this is proprietary technology is today it's proprietary, and so I'm going to keep it that way.

I would say it is a brand-new approach. There are others who are out there working on new approaches as well, which, frankly, we're happy about. This is a tough challenge to break, and I'm not pretending like we're going to be the ones to solve it, but I am confident that we will give it our all, applying our capabilities. Others are doing that.

As I said in my prepared remarks that we posted, if there's a breakthrough, it doesn't so much matter who has the breakthrough. I think we're going to have a role to play, because once we have a technology that gets to the right cost level, you're going to need global deployment at scale. And my suspect that the technology that will be required for the future, lower-cost direct air capture, will be different than what we've got today and will require some of the technical capabilities that we have. So I see a role for us in the future if this nut gets cracked.

We feel good about what we've seen so far, but we're very early into it, and we're hopeful that we'll make the progress that we're aspiring to and continue to drive the cost down. To your last point, you asked, I think, to me, if it's going to be affordable, you've got to get into the $100-ish a ton of CO_2 to start talking about broad deployment around the world. I think that's ultimately where we need to get to.

A - Unidentified Speaker

Thank you, everybody, for joining the call and for your questions today.

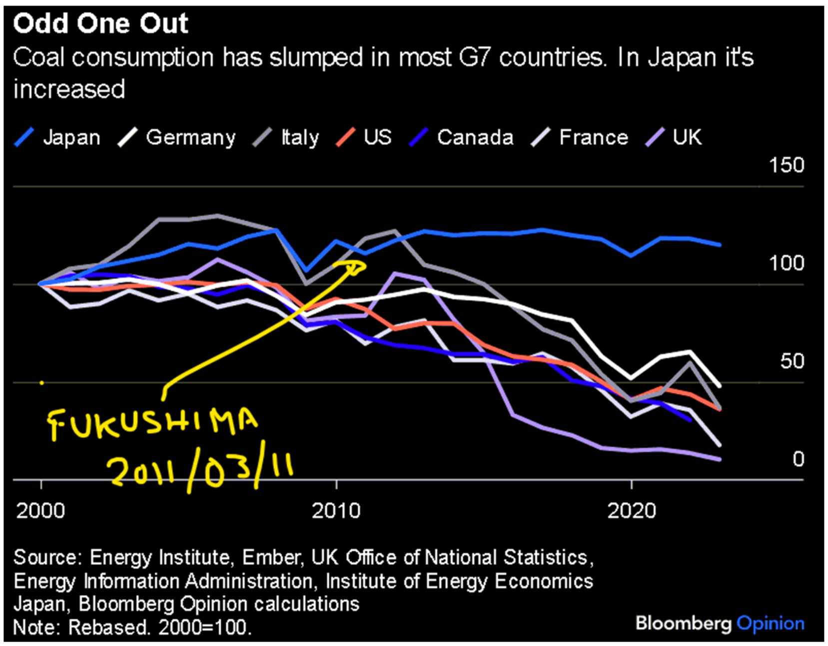
We will post the transcript of our Q&A session on our investor website next week. Additionally, we look forward to connecting again on May 29th for our annual shareholders meeting. Now, let me turn it back to the operator to close the call.

Operator

This concludes today's call.

We thank everyone again for their participation. The Event has Ended

The Dog Ate Japan’s Plan to Phase Out Coal Power: David Fickling
2024-05-01 20:00:30.962 GMT
By David Fickling
(Bloomberg Opinion) -- With blistering speed, the rich countries that built their wealth on coal-powered industrialization are turning their backs on dirty energy.
Coal consumption in the UK, the cradle of the Industrial Revolution, fell last year to less than 10% of its levels a decade earlier, and dropped by nearly a third year-on-year in January and February, according to government data. At one point last month, fossil power as a whole dipped as low as 2.4% of electricity generation in Britain, the news site Carbon Brief noted. In the US, coal usage fell 17% during 2023, and will drop another 12% by 2025. In the European Union, the slump in coal power generation last year came to 26%.
There’s one notable exception to that brightening picture: Japan.

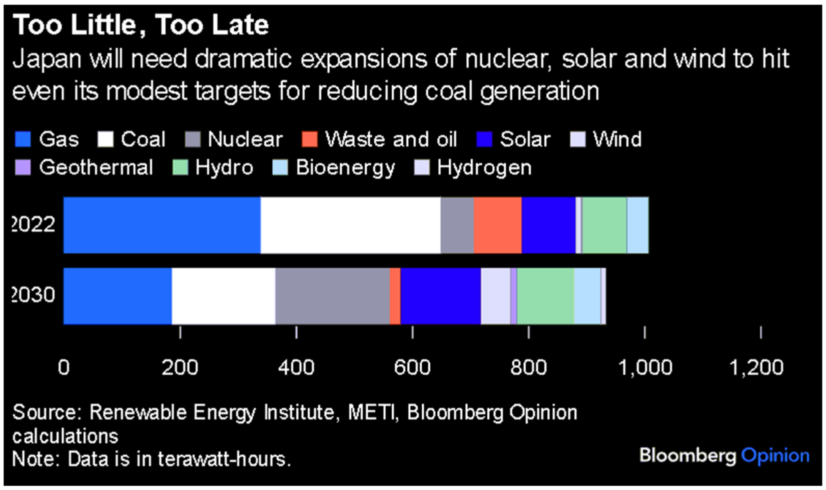


That’s making the country increasingly isolated among wealthy democracies. Ministers at the Group of Seven meeting in Turin this week promised to phase out coal generation by 2035, a target that might have seemed fantastical a decade ago but now appears well within reach almost everywhere.
Japan was only able to sign onto the statement with a “dog-ate-my-homework” strategy, depending on weasel words to cover up for the absence of any serious strategy to wean itself off solid fuel.
Previously, the G7’s statements have only made vague gestures toward a “predominantly decarbonized power sector by 2035,” placing no hard deadlines on a coal phaseout. As cheaper renewables (and, in the US, gas) have driven more and more soot from the power mix, ambitions have risen.
The UK will switch off its last coal generator in October and France’s final two plants will power down about the same time. Italy will follow suit next year, while Canada’s target is for 2030. Germany is legally required to close coal by 2038 but

is hoping to bring that date forward to 2030. The US last week published new rules requiring any plants that hope to be operating in 2039 to be capturing 90% of their emissions by 2032, a death knell for remaining stations.

The situation is very different for Japan which, far from closing down coal plants, is still opening them.

At Yokosuka south of Tokyo, the country's biggest power producer JERA Co. has opened two 650 megawatt units since June. At Matsushima near Nagasaki, Electric Power Development Co., or J-Power, will start work later this year refitting one of its plants to operate using gasified coal, a technology that promises only marginal emissions reductions.



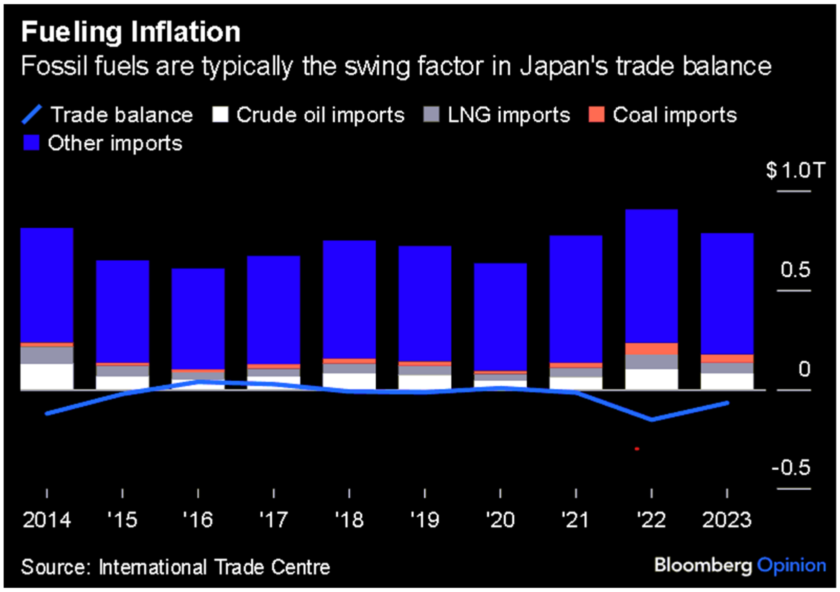
Under the country's current strategic energy plan, coal will still account for about 19% of generation in 2030 — producing emissions roughly equivalent to those from Argentina, the Philippines, or the whole of West Africa. That's likely to be a significant underestimate of the actual figure, since it depends on heroic assumptions about Tokyo's ability to restart nuclear generators shuttered after the 2011 Tohoku earthquake and tsunami, as well as breakneck growth in wind, solar, hydro and geothermal power.

Japan managed to sign on to the G7 statement using the most transparent of fictions. The promise is only to phase out "unabated generation," an ill-defined term that Tokyo is trying to drive an 80,000 ton coal ship through the middle of.

Abatement technologies are those that reduce power plant emissions by more than 90%, according to the UN's Intergovernmental Panel on Climate Change, though you won't find that definition in the dictionary. The quixotic strategies being explored by Japan — coal gasification and co-firing of ammonia and hydrogen in thermal generators — are unlikely to achieve more than about 20% savings, and have never been tested on a commercial scale.

When Japan is serious about its energy policy, it makes firm plans — as with its recent push for LNG importers to sign decades-long supply deals. The absence of such contracts commensurate with its purported carbon storage and hydrogen procurement needs exposes its fig leaf of a coal phase-out

policy.
That’s a failure not just in climate terms, but in terms of basic security and economics. At a time when a weakening yen is pushing up the cost of living and sparking speculation that the government is intervening in currency markets, fossil fuels still amount to between a quarter and a third of the total import bill.



Japan’s dependence on imported oil, gas and coal has been a pressing national concern for more than a century, one the government still tracks by analysis of the country’s meager energy self-sufficiency ratio. With Asian nations teetering on the edge of maritime clashes in the waters through which close to 85% of Japan’s power supply travels, it’s more of a risk than ever.
Even Australia is now heading toward a 2038 coal phaseout. When that happens, Japan will find itself — alongside its neighbors Taiwan and South Korea — as one of the only rich countries still burning the dirtiest fuel. That commitment is impoverishing its people, risking its security and damaging the climate. It’s not too late to change course.
More from Bloomberg Opinion:
* How Japan Became the Land That the Energy Transition Forgot: David Fickling
* How a Fading Japan Regained Its Superpowers: Gearoid Reidy
* Trump Is Scaring Republicans Away From Saving the Planet: Mary Ellen Klas

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Bird Flu Virus Infections in Humans

Español | Other Languages

Print

Information about the latest developments around avian influenza A(H5N1) is available at Bird Flu Current Situation Summary.

Although avian (bird) influenza (flu) A viruses usually do not infect people, there have been some rare cases of human infection with these viruses. Illness in humans from avian influenza virus infections have ranged in severity from no symptoms or mild illness to severe disease that resulted in death. Avian influenza A(H7N9) virus and highly pathogenic avian influenza (HPAI) A(H5N1) and A(H5N6) viruses have been responsible for most human illness from avian influenza viruses reported worldwide to date, including the most serious illnesses with high mortality.

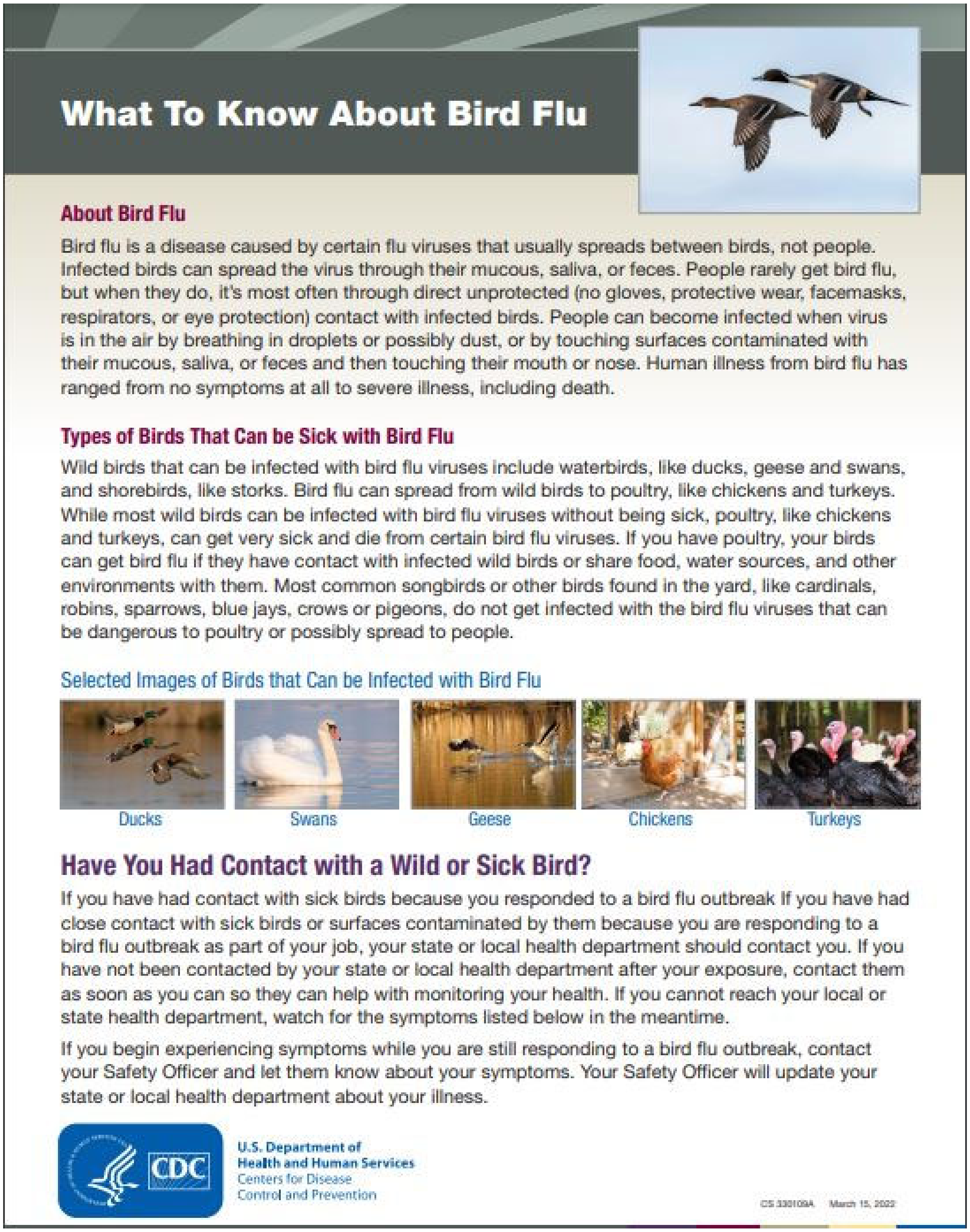
Infected birds shed avian influenza viruses through their saliva, mucous and feces. Other animals infected with avian influenza viruses may have virus present in respiratory secretions, different organs, blood, or in other body fluids, including animal milk. Human infections with avian influenza viruses can happen when virus gets into a person's eyes, nose or mouth, or is inhaled. This can happen when virus is in the air (in droplets, small aerosol particles, or possibly dust) and deposits on the mucus membranes of the eyes or a person breathes it in, or possibly when a person touches something contaminated by viruses and then touches their mouth, eyes or nose.

Avian influenza viruses have been detected in many other species. Avoid contact with surfaces that appear to be contaminated with animal feces, raw milk, litter, or materials contaminated by birds or other animals with suspected or confirmed avian influenza virus infection. CDC has information about precautions to take with wild birds, poultry and other animals.

CDC has guidance for specific groups of people with exposure to poultry and other potentially infected animals, including poultry or dairy workers, for example, and people responding to bird flu outbreaks. Additional information is available at Information for People Exposed to Birds Infected with Avian Influenza Viruses of Public Health Concern.

In late March 2024, a human case of influenza A(H5N1) virus infection was identified after exposure to dairy cattle presumably infected with bird flu. Some bird flu infections of people have been identified in which the source of infection was unknown.

The spread of bird flu viruses from one infected person to a close contact is very rare, and when it has happened, it has only spread to a few people. However, because of the possibility that bird flu viruses could change and gain the ability to spread easily between people, monitoring for human infection and person-to-person spread is extremely important for public health.



What To Know About Bird Flu

About Bird Flu

Bird flu is a disease caused by certain flu viruses that usually spreads between birds, not people. Infected birds can spread the virus through their mucous, saliva, or feces. People rarely get bird flu, but when they do, it's most often through direct unprotected (no gloves, protective wear, facemasks, respirators, or eye protection) contact with infected birds. People can become infected when virus is in the air by breathing in droplets or possibly dust, or by touching surfaces contaminated with their mucous, saliva, or feces and then touching their mouth or nose. Human illness from bird flu has ranged from no symptoms at all to severe illness, including death.

Types of Birds That Can be Sick with Bird Flu

Wild birds that can be infected with bird flu viruses include waterbirds, like ducks, geese and swans, and shorebirds, like storks. Bird flu can spread from wild birds to poultry, like chickens and turkeys. While most wild birds can be infected with bird flu viruses without being sick, poultry, like chickens and turkeys, can get very sick and die from certain bird flu viruses. If you have poultry, your birds can get bird flu if they have contact with infected wild birds or share food, water sources, and other environments with them. Most common songbirds or other birds found in the yard, like cardinals, robins, sparrows, blue jays, crows or pigeons, do not get infected with the bird flu viruses that can be dangerous to poultry or possibly spread to people.

Selected Images of Birds that Can be Infected with Bird Flu

Ducks | Swans | Geese | Chickens | Turkeys

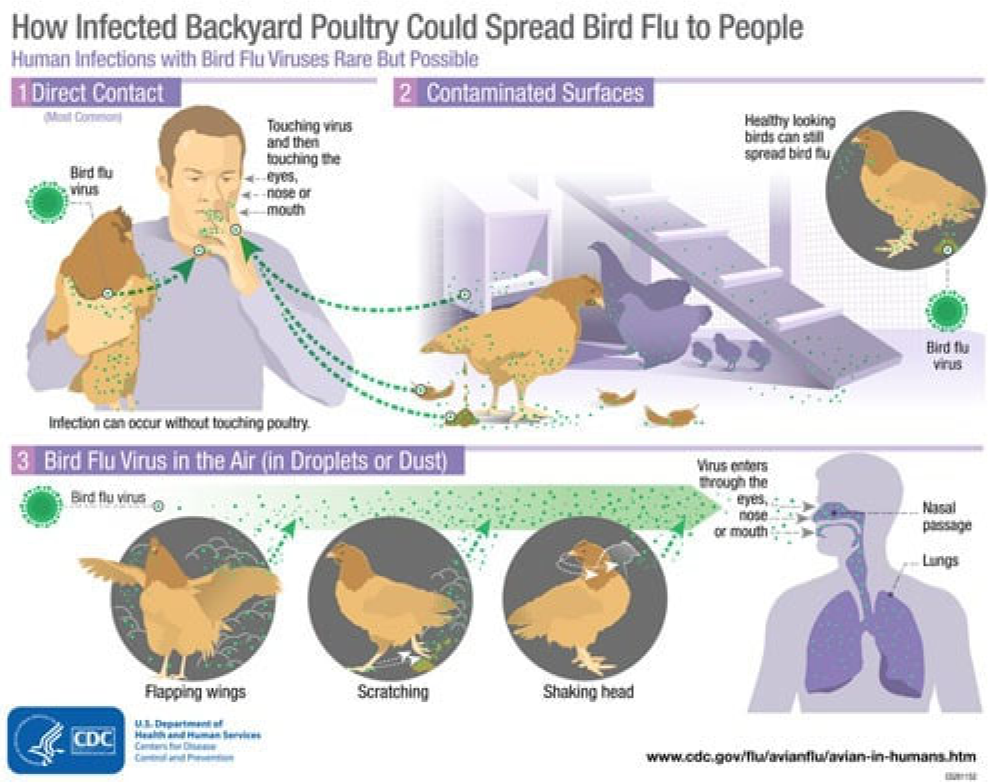
Have You Had Contact with a Wild or Sick Bird?

If you have had contact with sick birds because you responded to a bird flu outbreak If you have had close contact with sick birds or surfaces contaminated by them because you are responding to a bird flu outbreak as part of your job, your state or local health department should contact you. If you have not been contacted by your state or local health department after your exposure, contact them as soon as you can so they can help with monitoring your health. If you cannot reach your local or state health department, watch for the symptoms listed below in the meantime.

If you begin experiencing symptoms while you are still responding to a bird flu outbreak, contact your Safety Officer and let them know about your symptoms. Your Safety Officer will update your state or local health department about your illness.

CDC
U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

[What To Know About Bird Flu [154 KB, 2 pages]]
[Spanish [267 KB, 2 pages]]



[Avian Influenza Transmission Infographic [555 KB, 2 pages]
Spanish [531 KB, 2 pages]
Simplified Chinese [581 KB, 2 pages]

Signs and Symptoms of Avian Influenza A Virus Infections in Humans

The reported signs and symptoms of bird flu virus infections in humans have ranged from no symptoms or mild illness [such as eye redness (conjunctivitis) or mild flu-like upper respiratory symptoms], to severe (such as pneumonia requiring hospitalization) and included fever (temperature of 100ºF [37.8ºC] or greater) or feeling feverish*, cough, sore throat, runny or stuff nose, muscle or body aches, headaches, fatigue, and shortness of breath or difficulty breathing. Less common signs and symptoms include diarrhea, nausea, vomiting, or seizures.

*Fever may not always be present

Detecting Bird Flu Avian Influenza A Virus Infection in Humans

Bird flu virus infection in people cannot be diagnosed by clinical signs and symptoms alone; laboratory testing is needed. Bird flu virus infection is usually diagnosed by collecting a swab from the upper respiratory tract (nose or throat) of the sick person. Testing is more accurate when the swab is collected during the first few days of illness.

For critically ill patients, collection and testing of lower respiratory tract specimens also may lead to diagnosis of bird flu virus infection. However, for some patients who are no longer very sick or who have fully recovered, it may be difficult to detect bird flu virus in a specimen.

CDC has posted guidance for clinicians and public health professionals in the United States on appropriate testing, specimen collection, and processing of samples from patients who might be infected with avian influenza A viruse

DEPARTMENT OF FINANCE
OFFICE OF THE DIRECTOR

Gavin Newsom ▪ Governor

1021 O Street, Suite 3110 ▪ Sacramento CA 95814 ▪ www.dof.ca.gov

STATE'S POPULATION INCREASES WHILE HOUSING GROWS PER NEW STATE DEMOGRAPHIC REPORT

FOR IMMEDIATE RELEASE:
April 30, 2024

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SACRAMENTO—For the first time since 2020, California has once again experienced positive population growth in 2023: driven by decreased mortality and a rebound in legal foreign immigration, California's population in 2023 grew by just over 67,000 (an annual rate of 0.17 percent) to 39,128,162, according to new data released today by the California Department of Finance.

The State's return to growth results from the combination of several factors:

- Foreign legal immigration continued to rebound from the pandemic, with a net gain of 114,200 persons in 2023 compared to 90,300 in 2022 -- near pre-pandemic levels.

- Greater domestic in-migration and slowed domestic out-migration. Net domestic migration no longer offsets the population gains from natural increase and international migration. Net migration from California in 2023 dropped in two years to roughly one-fourth of its rate in 2021.

- Natural increase – the net result of births minus deaths -- increased from 106,700 in 2022 to 118,400 in 2023 as the number of deaths decline from their pandemic peak.

With immigration processing backlogs largely eliminated and deaths returning to long-term trends, a stable foundation for continued growth has returned. As net domestic migration has receded to its lower rates of the 2010s, California is likely to experience slower but positive growth for the near future.

Reinforcing the growth in population, statewide housing growth increased to 0.79 percent in 2023. California added 115,933 housing units on net, including 22,802 accessory dwelling units (ADUs), to bring total housing in the state to 14,824,827 units. New construction represents 109,391 housing units with 55,242 single family housing units, 52,937 multi-family housing units, and 1,212 mobile homes.

The report contains preliminary year-over-year January 2024 and revised January 2021 through January 2023 population data for California cities, counties, and the state. These estimates are based on information through January 1, 2024. Significant changes over the year include:

- The population increased in 31 counties, largely in the Bay Area, Central Valley, and the Inland Empire. Los Angeles County and Orange County grew by 0.05 and 0.31 percent in population, respectively.

- Five counties had growth above one percent: Sutter (1.9 percent), Imperial (1.8 percent), Glenn (1.4 percent), Yuba (1.1 percent), and San Benito (1.1 percent), due to housing gains. The next largest in percentage growth were San Joaquin (0.96 percent), Madera

(0.9 percent), Tulare (0.9 percent), Monterey (0.8 percent), and Merced (0.7 percent) counties.

- Nine of the ten Counties with populations over 1 million saw increases in population comprising 72 percent of the state's total population. Riverside County led with an increase of 13,800.

- The top five cities where housing production drove population growth include: Paradise (16.1 percent) in Butte County, Lathrop (5.4 percent) in San Joaquin County, Emeryville (5.0 percent) in Alameda County, Orland (4.9 percent) in Glenn County, and Shafter (4.3 percent) in Kern County.

County housing highlights include:

- Yuba had the highest housing growth (2.0 percent) of all counties, followed by: Placer, Madera, Butte, San Benito, Glenn, Tulare, Yolo, Riverside, and Solano.

- Eleven counties gained housing at or above 1.0 percent.

- Ranked by net housing gains, Los Angeles (21,698), San Diego (5,720), Unincorporated Riverside County (2,458), San Francisco (2,277), and Oakland (1,972) added the most housing units in 2023.

- Larger densely populated urban areas built most of the multi-family housing throughout the state. Los Angeles led the state gaining 14,207 multi-family units, comprising 65.5 percent of their net housing growth, followed by San Diego (4,255 for 74.4 percent), San Francisco (2,019 for 88.7 percent), and Oakland (1,674 for 84.9 percent).

- Conversely, single family housing is more likely to be built further inland in typically more suburban cities. Cities with a high proportion of single-family growth include Roseville (1,315 for 96.3 percent), Menifee (1,180 for 100 percent), Bakersfield (1,074 for 89.4 percent), and Fresno (963 for 65.8 percent). Accessory Dwelling Units (ADUs) are included in the single-family category of housing and comprised 19.7 percent of the state's new housing, adding 22,802 units.

Also of note in the report:

- 254 jurisdictions gained population, while 283 lost population, and two had no change.
- Of the ten largest cities in California, seven gained population: Led by Bakersfield (0.8 percent, or 3,274) and Fresno (0.7 percent, or 3,884).
- Accessory dwelling unit production increased by 10.3 percent, with the state adding 22,802 ADUs in 2023.

- Group quarters represent 2.4 percent (926,900) of the total state population. This population includes those living in college dormitories (275,000) and in correctional facilities (164,000). In 2023, California's group quarters population decreased by 469 people or 0.05 percent. The college dormitory population grew by 4,800 (1.8 percent). Correctional facilities declined in population in 2023 by 4,300 people (-2.6 percent) across federal, state, and local facilities. Due to significant increases in the college dormitory population, several jurisdictions saw gains in population due to this population. The City of Marina in Monterey County grew by 1.9 percent due to a 1.0 percent increase at California State University at

Monterey Bay. The City of San Marcos in San Diego County grew by 1.2 percent due to a 3.4 percent increase at CSU San Marcos.

State prisons are generally located in remote areas; as a result, increases or decreases can account for significant changes in their respective area populations. For example, prison declines led to population decreases in California City (-11.8 percent) in Kern County, Tehachapi (-7.4 percent) in Kern County, and Crescent City (-3.5 percent) in Del Norte County. Other cities saw increases in their populations due to changes in this population. For example, Calipatria (4.6 percent) in Imperial County, Avenal (4.4 percent) in Kings County, and Folsom (2.7 percent) in Sacramento County.

Background Information:

These population estimates are produced annually by Finance for use by local areas to calculate their annual appropriations limit. The State Controller's Office uses Finance's estimates to update their population figures for distribution of state subventions to cities and counties, and to comply with various state codes. Additionally, estimates are used for research and planning purposes by federal, state, and local agencies, the academic community, and the private sector.

Changes to the housing stock are used in the preparation of the annual city population estimates. Estimated occupancy of housing units and the number of persons per household further determine population levels. Changes in city housing stock result from new construction, demolitions, housing unit conversions, and annexations. The sub-county population estimates are then adjusted to be consistent with independently produced county estimates.

Comparing Census Bureau's recently released July 1, 2023 estimates with Finance's January 1, 2024 estimates should generally be avoided since they refer to different points in time. In addition, there are numerous differences between the two series including the effects of natural disasters, changes in migration patterns, and accelerating slowdown in births.

All Finance population and housing estimates are benchmarked to a decennial census. The estimates in this report are benchmarked to the 2020 decennial census.

To explore the data interactively, click on the following link:

Population and Housing 2024 Dashboard

Related population reports are available on the Department's website:
http://www.dof.ca.gov/Forecasting/Demographics/

# # #

Department of Finance
Demographic Research Unit
Population Estimates for California Cities

10 Largest Cities

	City	Population January 1, 2024	Percent Change 23-24
1.	Los Angeles	3,814,318	0.3
2.	San Diego	1,385,379	0.1
3.	San Jose	969,491	-0.1
4.	San Francisco	843,071	0.1
5.	Fresno	546,971	0.7
6.	Sacramento	520,407	0.2
7.	Long Beach	458,813	-0.2
8.	Oakland	425,093	-0.5
9.	Bakersfield	411,109	0.8
10.	Anaheim	340,160	0.3

10 Fastest Growing Cities with Populations Over 30,000

	City	Population January 1, 2024	Percent Change 23-24
1.	Lathrop	37,033	5.4
2.	Stanton	40,297	3.6
3.	Folsom	88,023	2.7
4.	Manteca	90,917	2.7
5.	Mountain View	86,535	2.5
6.	Coachella	43,173	2.4
7.	Beaumont	57,416	2.0
8.	Menifee	111,560	2.0
9.	Merced	91,837	1.9
10.	Yuba City	70,256	1.8

10 Cities Under 300,000 with the Largest Numeric Change

	City	Population January 1, 2024	Numeric Change 23-24
1.	Manteca	90,917	2,365
2.	Folsom	88,023	2,325
3.	Menifee	111,560	2,159
4.	Mountain View	86,535	2,072
5.	Garden Grove	171,024	1,978
6.	Chico	109,589	1,950
7.	Lathrop	37,033	1,895
8.	Victorville	138,202	1,856
9.	Clovis	126,133	1,772
10.	California City	13,079	-1,743

E-1: City/County/State Population Estimates with Annual Percent Change
January 1, 2023 and 2024

JURISDICTION	Total Population 1/1/23	1/1/24	Percent Change
CALIFORNIA	39,061,058	39,128,162	0.2
Alameda	1,650,656	1,641,869	-0.5
Alameda	77,237	78,071	1.1
Albany	20,354	20,325	-0.1
Berkeley	125,181	125,327	0.1
Dublin	72,681	72,917	0.3
Emeryville	12,686	13,314	5.0
Fremont	230,713	229,250	-0.6
Hayward	160,699	159,770	-0.6
Livermore	85,235	84,828	-0.5
Newark	47,762	46,635	-2.4
Oakland	427,305	425,093	-0.5
Piedmont	10,878	10,782	-0.9
Pleasanton	76,861	75,960	-1.2
San Leandro	87,984	87,098	-1.0
Union City	67,279	66,432	-1.3
Balance of County	147,801	146,067	-1.2
Alpine	1,183	1,179	-0.3
Amador	39,924	39,611	-0.8
Amador	196	193	-1.5
Ione	8,842	8,856	0.2
Jackson	4,933	4,867	-1.3
Plymouth	1,063	1,061	-0.2
Sutter Creek	2,589	2,553	-1.4
Balance of County	22,301	22,081	-1.0
Butte	206,579	205,928	-0.3
Biggs	1,951	1,853	-5.0
Chico	107,639	109,589	1.8
Gridley	7,235	6,935	-4.1
Oroville	18,841	18,129	-3.8
Paradise	9,205	10,691	16.1
Balance of County	61,708	58,731	-4.8
Calaveras	44,899	44,842	-0.1
Angels City	3,604	3,587	-0.5
Balance of County	41,295	41,255	-0.1
Colusa	21,831	21,743	-0.4
Colusa	6,429	6,447	0.3
Williams	5,568	5,528	-0.7
Balance of County	9,834	9,768	-0.7
Contra Costa	1,145,274	1,146,626	0.1
Antioch	115,282	115,632	0.3
Brentwood	64,496	64,811	0.5
Clayton	10,687	10,683	0.0
Concord	121,663	121,513	-0.1

JURISDICTION	Total Population 1/1/23	1/1/24	Percent Change
Danville	42,736	42,567	-0.4
El Cerrito	25,409	25,700	1.1
Hercules	26,202	26,063	-0.5
Lafayette	24,823	24,808	-0.1
Martinez	36,425	36,439	0.0
Moraga	16,858	16,784	-0.4
Oakley	44,929	45,736	1.8
Orinda	19,231	19,191	-0.2
Pinole	18,278	18,192	-0.5
Pittsburg	74,736	75,085	0.5
Pleasant Hill	33,447	33,352	-0.3
Richmond	113,122	112,735	-0.3
San Pablo	31,163	31,088	-0.2
San Ramon	82,754	82,525	-0.3
Walnut Creek	69,010	69,433	0.6
Balance of County	174,023	174,289	0.2
Del Norte	26,586	26,345	-0.9
Crescent City	5,763	5,564	-3.5
Balance of County	20,823	20,781	-0.2
El Dorado	188,067	188,583	0.3
Placerville	10,527	10,540	0.1
South Lake Tahoe	20,703	20,790	0.4
Balance of County	156,837	157,253	0.3
Fresno	1,010,914	1,017,431	0.6
Clovis	124,361	126,133	1.4
Coalinga	17,191	17,107	-0.5
Firebaugh	8,480	8,415	-0.8
Fowler	7,163	7,367	2.8
Fresno	543,087	546,971	0.7
Huron	6,119	6,348	3.7
Kerman	16,950	17,256	1.8
Kingsburg	12,908	13,042	1.0
Mendota	12,462	12,531	0.6
Orange Cove	9,453	9,516	0.7
Parlier	14,382	14,368	-0.1
Reedley	25,376	25,653	1.1
Sanger	26,286	26,357	0.3
San Joaquin	3,620	3,616	-0.1
Selma	24,395	24,371	-0.1
Balance of County	158,681	158,380	-0.2
Glenn	28,330	28,736	1.4
Orland	8,141	8,537	4.9
Willows	6,317	6,321	0.1
Balance of County	13,872	13,878	0.0
Humboldt	134,597	133,100	-1.1

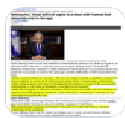
Dan Tsubouchi @Energy_Tidbits · 32m

Will any Biden Admin appear on cable news today? If so, what will they say?

Netanyahu seems clear.

IF so, we will get a chance to see how much of the ~$7 drop in Brent is really due to a Hamas/Israel deal being close.

#OOTT

> **Dan Tsubouchi** @Energy_Tidbits · 42m
>
> 
>
> Breaking!
>
> Still critical differences between Israel & Hamas
>
> Netanyahu "*Israel will not agree to Hamas's demands...*

3 · 699

Dan Tsubouchi @Energy_Tidbits · 42m

Breaking!

Still critical differences between Israel & Hamas

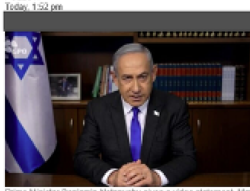
Netanyahu "*Israel will not agree to Hamas's demands, which mean surrender, and will continue the fighting until all its goals are achieved*".
And Hamas "r*emains entrenched in its positions*."

Thx @Lazar_Berman
#OOTT

https://www.timesofisrael.com/liveblog_entry/netanyahu-israel-will-not-agree-to-a-deal-with-hamas-that-demands-end-to-the-war/
LIVE UPDATE FROM THE LIVEBLOG OF SUNDAY, MAY 5, 2024

Netanyahu: Israel will not agree to a deal with Hamas that demands end to the war

By LAZAR BERMAN
FOLLOW
Today, 1:52 pm



Prime Minister Benjamin Netanyahu gives a video statement, May 5, 2024 (Screen grab via Government Press Office)

Amid swirling rumors over the weekend of international pressure on Israel to agree to an effective end to the war in Gaza as part of a hostage release deal, Prime Minister Benjamin Netanyahu releases a video statement emphasizing in no uncertain terms that Israel will not accept an end to the campaign and the withdrawal of IDF troops from the Strip.

"Israel cannot accept this," he says. "We are not ready to accept a situation in which the Hamas battalions come out of their bunkers, take control of Gaza again, rebuild their military infrastructure, and return to threatening the citizens of Israel in the surrounding communities, in the cities of the south, in all parts of the country."

"Israel will not agree to Hamas's demands, which mean surrender, and will continue the fighting until all its goals are achieved,' says Netanyahu, repeating a message he has expressed throughout the war.

Keep Watching

Netanyahu says accepting Hamas's demands would only bring the next conflict closer, and would allow Hamas to carry out another massacre in the future.

The prime minister stresses that Israel is still open to a deal, but Hamas "remains entrenched in its positions."

Senior officials from the US, Qatar, and Egypt are in Cairo, as are Hamas officials. Netanyahu decided not to send a delegation at this stage.

1 · 2 · 7 · 1.4K

SAF

Dan Tsubouchi @Energy_Tidbits · 4h

Time to buy a Generac in western US states.

👎 warning from Berkshire Greg Abel on dramatic change in operating assets.

Old: fundamental goal keep the power on.

New: Situations where prioritize de-energizing the assets ie. if a wildfire encroaching, turn off systems.

...

Show more

11 5 11 2.3K

SAF

Dan Tsubouchi @Energy_Tidbits · 5h

Buffett "*But I don't mind at all, under current conditions, building the cash position. I think, when I look at the alternative of what's available n the equity markets and I look at the composition of what's going on in the world, we find it quite attractive*"

Canada?

#OOTT

> **Dan Tsubouchi** @Energy_Tidbits · 8h
>
> Race will be on this weekend to figure out what 🇨🇦 stock and sector Warren Buffett is looking at right now.
>
> #OOTT x.com/CNBC/status/17...

5 5 11 3.6K

SAF

Dan Tsubouchi @Energy_Tidbits · 6h

US gasoline prices flat WoW at $3.66.

Now +$0.09 MoM and $0.09 YoY.

California -$0.04 WoW, +$0.16MoM to $5.36.

Reminder US gas prices normally seasonally increase into June.

Biden doesn't want $4 gas in election year.

...

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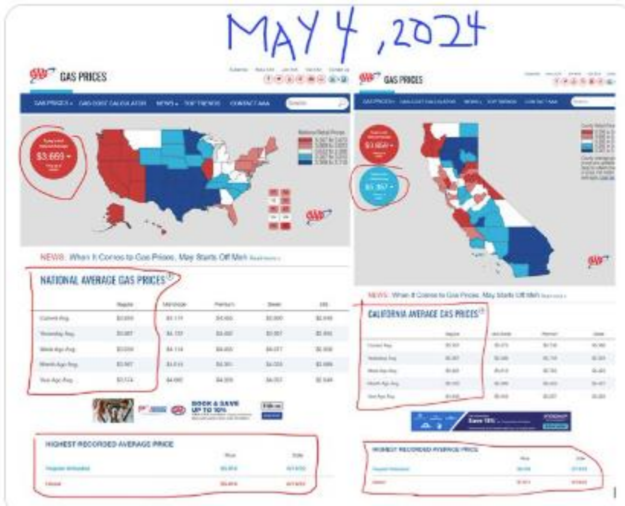


2 3 11 1.1K

SAF

Dan Tsubouchi @Energy_Tidbits · 7h

Daily Europe air traffic still below Covid.

7-day average got to 1.5% below Covid on Apr 22, but is back to 2.9% below as of May 2. Vs 3.2% below as of Apr 25. 3.2% below Apr 18, 3.7% below Apr 11, 6.2% below Apr 4 and 7.0% below as of Mar 28.

Thx @eurocontrol. #OOTT

1 3 960

Dan Tsubouchi @Energy_Tidbits · 8h

Race will be on this weekend to figure out what 🇨🇦 stock and sector Warren Buffett is looking at right now.

#OOTT

CNBC @CNBC · 10h

Warren Buffett hinted that Berkshire Hathaway was evaluating a possible investment opportunity north of the border.

"We do not feel uncomfortable in any way shape or form putting our money into Canada. In fact, we're actually looking at one thing now," ...
Show more

4 6 17 8.6K

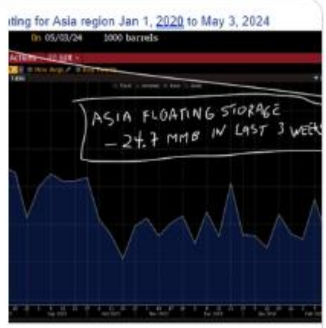
Dan Tsubouchi @Energy_Tidbits · 11h

#Oil floating storage -35 mmb in last 3 wks to 57.78 mmb May 3. Lowest since Covid.

Incl Asia -25 mmb, was this Iran slashing prices to clear floating storage?

Crude on water may be big with avoiding Red Sea BUT floating storage is low.

Thx @vortexa @business #OOTT



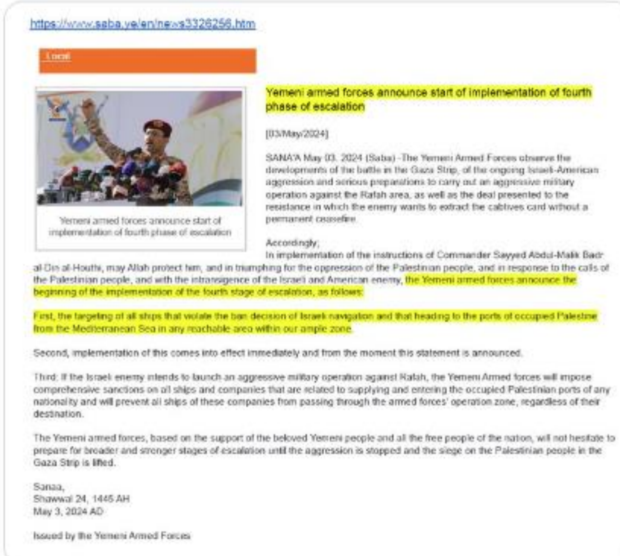
3 7 25 2.4K

Dan Tsubouchi @Energy_Tidbits · May 3

Houthis expanding target range to incl all ships linked to Israel "*heading to the ports of occupied Palestine from the Mediterranean Sea in any reachable area within our ample zone*." ie. relief ships.

So far Houthis have been delivering on target threat areas.

#OOTT



https://www.saba.ye/en/news3326256.htm

Local

Yemeni armed forces announce start of implementation of fourth phase of escalation

Yemeni armed forces announce start of implementation of fourth phase of escalation

[03/May/2024]

SANA'A May 03, 2024 (Saba) - The Yemeni Armed Forces observe the developments of the battle in the Gaza Strip, of the ongoing Israeli-American aggression and serious preparations to carry out an aggressive military operation against the Rafah area, as well as the deal presented to the resistance in which the enemy wants to extract the captives card without a permanent ceasefire.

Accordingly;

In implementation of the instructions of Commander Sayyed Abdul-Malik Badr al-Din al-Houthi, may Allah protect him, and in triumphing for the oppression of the Palestinian people, and in response to the calls of the Palestinian people, and with the intransigence of the Israeli and American enemy, the Yemeni armed forces announce the beginning of the implementation of the fourth stage of escalation, as follows:

First, the targeting of all ships that violate the ban decision of Israeli navigation and that heading to the ports of occupied Palestine from the Mediterranean Sea in any reachable area within our ample zone.

Second, implementation of this comes into effect immediately and from the moment this statement is announced.

Third: If the Israeli enemy intends to launch an aggressive military operation against Rafah, the Yemeni Armed forces will impose comprehensive sanctions on all ships and companies that are related to supplying and entering the occupied Palestinian ports of any nationality and will prevent all ships of these companies from passing through the armed forces' operation zone, regardless of their destination.

The Yemeni armed forces, based on the support of the beloved Yemeni people and all the free people of the nation, will not hesitate to prepare for broader and stronger stages of escalation until the aggression is stopped and the siege on the Palestinian people in the Gaza Strip is lifted.

Sanaa,
Shawwal 24, 1445 AH
May 3, 2024 AD

Issued by the Yemeni Armed Forces

4 4 2.7K

Dan Tsubouchi @Energy_Tidbits · May 3

321 crack spreads narrowed $1.39 WoW to $27.59.

1st time below $28 since mid Feb when WTI was $76-$79.

Still solid margins for refiners to support current oil but not necessarily point to higher oil prices ahead.

Thx @business
#Oil #OOTT

3 3 13 2.3K

SAF

Dan Tsubouchi @Energy_Tidbits · May 3

AI/Data Centers = More #NatGas

TC Energy, think 6 to 8 bcf/d of added gas demand to 2030 from data centers. Reliability requirements drive increased appreciation for #NatGas in data centers.

Direction of travel for #NatGas looking good for next decade or more!

#OOTT

TRP Q1 CALL

FINAL TRANSCRIPT
TC Energy Corp (TRP CN Equity)

2024-05-03

Q - Robert Hope (BIO 19755366 <GO>)

Good morning. I want to ask a question on increasing power demand driving increasing gas demand, which you noted in your prepared remarks. You know, how are you seeing this kind of manifest itself across your system and what opportunities does it provide in both your gas and pipeline, or gas, pipeline, and power business? And, I guess, you know, as a kind of an offset there would be, you know, could we see, you know, renewed interest in, you know, additional power investments, you know, on a longer-term basis? And kind of what does this mean for the Ontario storage project?

A - Stanley (Stan) Chapman (BIO 18900312 <GO>)

Good morning, Rob. This is Stan. I will start and then pass it over to Annesley. I want to make sure that you all have a proper appreciation for the really strong growth story that's going on right now. Due to the operational excellence that our teams have demonstrated, we're seeing record deliveries across all of our jurisdictions. You know, in Canada, flows on the NGTL system are up 5% quarter-over-quarter, including strong deliveries not only to power generators, but also within the oil sands. In Mexico, our flows are up 13% quarter-over-quarter, led by higher volumes on both our Sur de Texas system and the Topolobampo system.

And similarly, across the U.S., our throughput was up 5% quarter-over-quarter, with new record deliveries to power generators leading the way. Our power generation deliveries were up over 11% quarter-over-quarter. Matter of fact, over the past six months, six of our 13 pipelines in the U.S. set new record peak day deliveries, again just showing the demand for the assets that we have, and we're well-positioned to continue to capture that growth with projects like our Heartland Project on the ANR system that we announced last quarter.

DATA CENTERS TO ADD 6-8 BCF/D BY 2030

Somebody's probably going to ask you about data centers in particular, so it's probably a good time to bring that up right now. We do see a meaningful load in growth opportunity and increased demand in coming years due to data centers. When we look and do the math, we think somewhere between 6 Bcf to 8 Bcf of increased gas demand between now and 2030 is more than reasonable. But there are also higher forecasts out there that exceed 10 Bcf a day. Reliability requirements associated with data centers are also driving increased appreciation for the role that natural gas is going to play in supporting those loads as well.

RELIABILITY NEEDS NAT GAS

We believe that much of the data center load is likely to materialize behind LDCs, as opposed to be directly connected to our mainline pipes. And given that, and given our best-in-class pipeline footprint, which happens to connect to eight of the 10 largest LDCs across the U.S., it's just a reinforcement of our strategy to increase connectivity with LDCs via both permittable, constructable, and quarter expansions with long-term take or pay contracts, particularly in data center hungry areas like Virginia and Wisconsin. So, if you notice, the disproportionate amount of the projects that we announced over the past couple of quarters are in those two states, and that's why.

7 · 8 · 37 · 6.4K

SAF

Dan Tsubouchi @Energy_Tidbits · May 3

Great recap of India installed power capacity at 03/31/24. Thx @Vibhuti_D_Garg @ieefa_institute

Solar ramping up, coal still #1 by far, #NatGas stuck.

Coal 49.2% of total capacity.
Solar 18.5%
Hydro 11.7%
Wind 10.4%
Natural Gas 5.7%...
Show more

Vibhuti Garg @Vibhuti_D_Garg · Apr 30

2024 has certainly started with a bang.

India witnessed record of 13.6 GW out of which solar power capacity installation of 8.4 GW in 1Q 2024
Despite addition of 3.2 GW coal capacity, coal's share in total pow...
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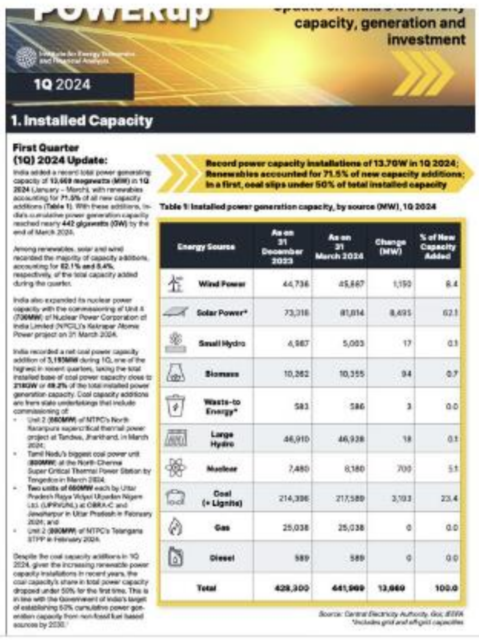


POWERup

capacity, generation and investment

Institute for Energy Economics and Financial Analysis

1Q 2024

1. Installed Capacity

First Quarter (1Q) 2024 Update:

India added a record total power generating capacity of 13,669 megawatts (MW) in 1Q 2024 (January – March), with renewables accounting for 71.5% of all new capacity additions (Table 1). With these additions, India's cumulative power generation capacity reached nearly 442 gigawatts (GW) by the end of March 2024.

Among renewables, solar and wind recorded the majority of capacity additions, accounting for 62.1% and 8.4%, respectively, of the total capacity added during the quarter.

India also expanded its nuclear power capacity with the commissioning of Unit 4 (700MW) of Nuclear Power Corporation of India Limited (NPCIL)'s Kakrapar Atomic Power project on 31 March 2024.

India recorded a net coal power capacity addition of 3,193MW during 1Q, one of the highest in recent quarters, taking the total installed base of coal power capacity close to 218GW or 49.2% of the total installed power generation capacity. Coal capacity additions are from state undertakings that include commissioning of:

- Unit 2 (660MW) of NTPC's North Karanpura supercritical thermal power project at Tandwa, Jharkhand, in March 2024;
- Tamil Nadu's biggest coal power unit (800MW) at the North Chennai Super Critical Thermal Power Station by Tangedco in March 2024;
- Two units of 660MW each by Uttar Pradesh Rajya Vidyut Utpadan Nigam Ltd. (UPRVUNL) at OBRA-C and Jawaharpur in Uttar Pradesh in February 2024; and
- Unit 2 (800MW) of NTPC's Telangana STPP in February 2024.

Despite the coal capacity additions in 1Q 2024, given the increasing renewable power capacity installations in recent years, the coal capacity's share in total power capacity dropped under 50% for the first time. This is in line with the Government of India's target of establishing 50% cumulative power generation capacity from non-fossil fuel based sources by 2030.[1]

Record power capacity installations of 13.7GW in 1Q 2024; Renewables accounted for 71.5% of new capacity additions; In a first, coal slips under 50% of total installed capacity

Table 1: Installed power generation capacity, by source (MW), 1Q 2024

Energy Source	As on 31 December 2023	As on 31 March 2024	Change (MW)	% of New Capacity Added
Wind Power	44,736	45,887	1,150	8.4
Solar Power*	73,318	81,814	8,495	62.1
Small Hydro	4,987	5,003	17	0.1
Biomass	10,262	10,355	94	0.7
Waste-to Energy*	583	586	3	0.0
Large Hydro	46,910	46,928	18	0.1
Nuclear	7,480	8,180	700	5.1
Coal (+ Lignite)	214,396	217,589	3,193	23.4
Gas	25,038	25,038	0	0.0
Diesel	589	589	0	0.0
Total	428,300	441,969	13,669	100.0

Source: Central Electricity Authority, GoI, IEEFA
*Includes grid and off-grid capacities

2 4 8 2.3K

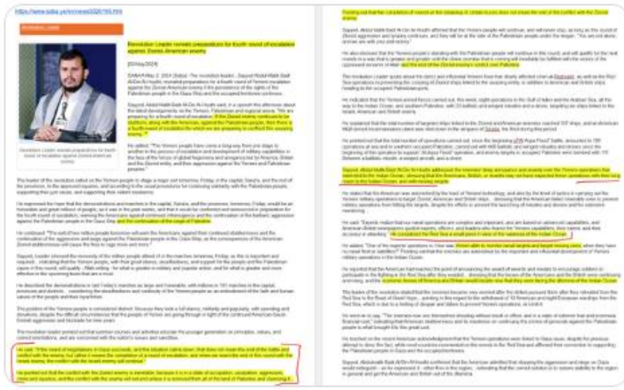
Dan Tsubouchi @Energy_Tidbits · May 3

Houthis don't plan to go away.

Even if Hamas ceasefire, "*conflict with the enemy will not end unless it is removed from all of the land of Palestine*"

Reminds of increasing challenge for US/UK "*Red Sea a small pond in view of the vastness of the India Ocean*"

#OOTT



1 2 1 1.1K

Dan Tsubouchi @Energy_Tidbits · May 3

LNG Macro 101 from @Cheniere

Huge emissions cuts when #NatGas replaces coal

Low LNG prices brings out price sensitive buyers, not just India

EU gas demand down. 2nd warmest JFM ever

"*More flexible global LNG marketplace to absorb new capacity additions efficiently*"...

Show more

2 9 20 3.3K

Dan Tsubouchi @Energy_Tidbits · May 3

India electricity/urbanization tidbit.

Increasing income = more people buying air conditioning.

"Peak demand which used to happen during morning or evening hours now is hitting right in the afternoon"
@Vibhuti_D_Garg , Director - South Asia, @ieefa_institute to @sean_evers...
Show more

> **Gulf Intelligence** @gulf_intel · May 3
>
> How might India's post-election energy demand surge impact global oil markets and pricing dynamics?
>
> @Vibhuti_D_Garg, Director - South Asia, @ieefa_institute
> ...
> Show more

1 · 5 · 10 · 1.5K

Dan Tsubouchi @Energy_Tidbits · May 3

"Chevron says Gorgon LNG production train offline after fault", repairs "expected to take a number of weeks" , remaining 2 trains producing at full rates reports @SStapczynski.

See 👇 Gorgon LNG is 3-trains, each ~0.7 bcf/d for total ~2.1 bcf/d capacity.

#OOTT #LNG

an australian icon

the gorgon project

Gorgon is one of the world's largest LNG projects and the largest single resource project in Australia's history.

Located on Barrow Island – a Class A Nature Reserve – Gorgon comprises a three-train, 15.6 million tonnes per annum LNG facility and a domestic gas plant with the capacity to supply 300 terajoules of gas per day to Western Australia.

~2.1 BCF/D FOR 3 TRAINS

The Gorgon Project will remain an important pillar of the Australian economy for decades to come as it continues to meet global demand for cleaner-burning fuel.

The Gorgon Project is located on Barrow Island, around 60 kilometres off the northwest coast of Western Australia.

4 · 21 · 20 · 22K

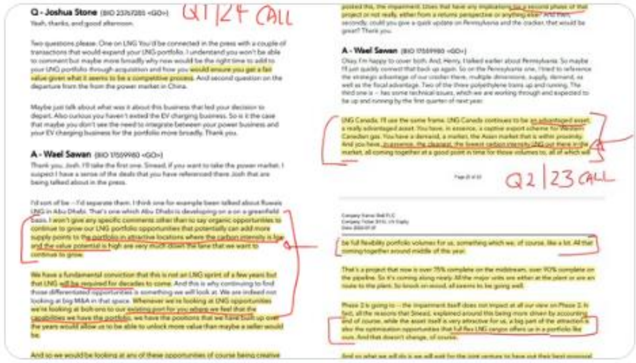
Dan Tsubouchi @Energy_Tidbits · May 2

Seems like Shell CEO Sawan was describing LNG Canada 1.8 bcf/d Phase 2.

Q1 Q&A today, Sawan's LNG growth focus on organic, low carbon intensity, attractive, grow its #LNG portfolio, etc.

Sounds like Sawan's 👇 07/28/23 Q2/23 Q&A description of LNG Canada incl Phase 2.

#OOTT



> **Dan Tsubouchi** @Energy_Tidbits · Jul 28, 2023
>
> 
>
> Feels like FID is when, not if.
>
> #Shell CEO Sawan on #LNGCanada 1.8 bcfd Phase 2.
> "*while the asset itself is very attractive for us, a big part of the attraction is also the optimization opportunitie...*

9 · 5 · 17 · 6.3K

Dan Tsubouchi @Energy_Tidbits · May 2

Sounds promising!

"*... if you think about how the [Cancer vaccine] technology is working .....we believe now there is a lot of data demonstrating that the platform of our [Cancer] vaccine treatment is working across...*" Moderna CEO.

Thx @JoeSquawk for focusing on cancer!.

1 · 1.3K

Dan Tsubouchi @Energy_Tidbits · May 2

Positive economic outlook read thru but risks more to downside.

"*Global container demand growth is expected to remain positive in coming quarters, but likely at a slower rate*" Maersk market environment.

"*growth outlook in China has slightly improved driven by .. exports*"...

Show more

1 3 4 1.6K

Dan Tsubouchi @Energy_Tidbits · May 2

No visible near-term end to #Houthis disrupting Red Sea shipping.

"*... conditions in the Red Sea remain entrenched ..... we now expect these conditions to stay with us for most of the year*" Maersk CEO Clerc.

#OOTT

Maersk Q1 results in line with expectations amid ongoing Red Sea disruptions

2 May 2024

Financial Results

Share

A/V Maersk arriving at Tanjung Pelepas PTP in Malaysia, February 2024

Copenhagen, Denmark – A.P. Moller - Maersk (Maersk) delivered a first quarter in line with expectations showing a strong recovery in earnings compared to the fourth quarter of 2023. Results were driven by a good performance in Terminals and the combination of higher demand and a prolonged Red Sea crisis. As these conditions are expected to continue well into the second half of the year, Maersk lifts the lower end of its guidance range and now expects underlying EBIT at USD -2.0 to 0.0bn.

> " We had a positive start to the year with a first quarter developing precisely as we expected. Demand is trending towards the higher end of our market growth guidance and conditions in the Red Sea remain entrenched. This not only supported a recovery in the first quarter compared to the previous quarter, but also provide an improved outlook for the coming quarters, as we now expect these conditions to stay with us for most of the year. However, we still anticipate the high number of new vessels being delivered during this and next year to eventually offset these factors and put the ocean markets under renewed pressure. We therefore relentlessly continue to pursue our cost agenda with the aim of rolling back the disruption linked cost in Ocean and restoring margins in Logistics & Services. This work on cost, helped by our strong value proposition, is crucial in supporting our customers through the ongoing volatility and build a more resilient business.
>
> Vincent Clerc
> CEO of Maersk

2 4 2 1.6K

SAF

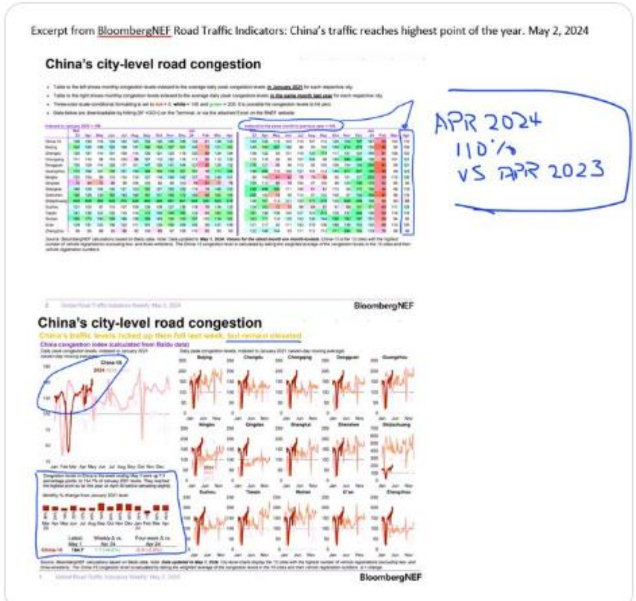
Dan Tsubouchi @Energy_Tidbits · May 2

Positive indicator for China recovery is more traffic in China cities.

China Baidu city-level road congestion tor Top 15 cities Apr 2024 was 110% of Apr 2023. Mar 2024 was 100% of Mar 2023.

Note May Day 1-5 holiday will see plunge in city traffic.

Thx @BloombergNEF #OOTT



1 · 4 · 6 · 2.3K

SAF

Dan Tsubouchi @Energy_Tidbits · May 2

Saudi GDP challenge.

Needs to to keep #Oil prices solid **AND** add back its 1 mmb/d voluntary cut.

9 mmb/d and $80/90 oil isn't enough for GDP growth.

Needs China recovery to pick up.

Thx @business for base graph.

...

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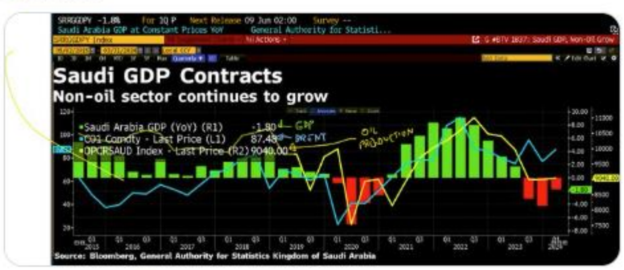
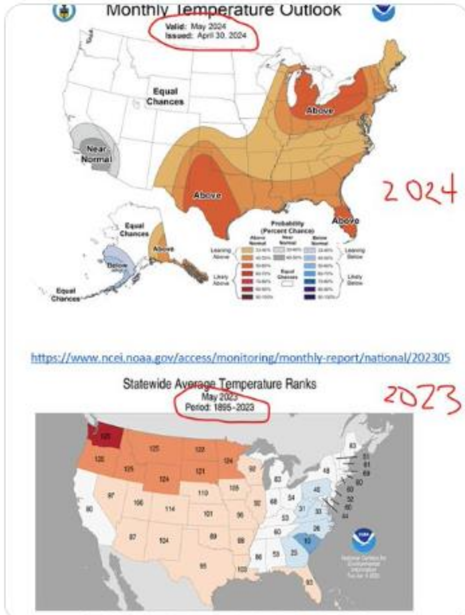


3 · 2 · 6 · 1.2K

Dan Tsubouchi @Energy_Tidbits · May 1

30-day @NOAA temp outlook calls for above normal temps for May in East half & South incl Texas ie. more populous areas. Hope some support for #NatGas demand.

May 2023 was 11th hottest in last 129 yrs, very hot in West but was below normal in more populous east coast.
#OOTT



SAF

Dan Tsubouchi @Energy_Tidbits · May 1

TMX a big positive for Cdn #Oil for years!

Cenovus CEO McKenzie "... *TMX pipeline. This critical pieces of --- with this critical piece of infrastructure now complete, we anticipate light-heavy differentials will remain narrow for years while excess egress capacity exists*"
#OOTT

CENOVUS CEO ON TMX

FINAL TRANSCRIPT
Cenovus Energy Inc (CVE CN Equity)

2024-05-01

We'll also be starting up two additional well pads at Sunrise later this year, supporting the base production and the start of production growth in 2025. And we also continue to optimize our turnaround schedule and as such we have advanced some of the work out of our planned Q3 turnaround at Christina Lake into Q2. The impact of our planned outages can be found in the maintenance table in the news release.

We're also looking forward to the important milestone for our industry with the imminent start-up of the TMX pipeline. This critical piece of -- with this critical piece of infrastructure now complete, we anticipate light-heavy differentials will remain narrow for years while excess egress capacity exists. And in our conventional gas business, production volumes remained relatively consistent to around 121,000 BOE per day. And as a reminder, we test all opportunities at the bottom of the pricing cycle and we continue to progress our capital program with a focus on safe execution and cost reductions.

Canada Energy Regulator @CER_REC · Apr 30

We have approved the final pipeline leave to open application for the Trans Mountain Expansion Project. The pipeline is now authorized to carry crude oil from #StrathconaCounty, #Alberta to #Burnaby, #BritishColumbia: ow.ly/J8eg50RsRKR #TMEP #TMX

6 20 4.5K

SAF

Dan Tsubouchi @Energy_Tidbits · May 1

"*The market is not priced in that risk*" of US cutting off Russian uranium supply said Cameco CFO Isaac on yesterday's Q1 call.

Lot more in the Cameco Q1 call on the #EnergyTransition.

FINAL TRANSCRIPT
Cameco Corp (CCO CN Equity)
2024-04-30

contracts are changing in terms of tenor volume and timeframes. And it sounds like that's becoming perhaps more important than the actual volumes secured in the term market, which so far at GBP26 million or so year-to-date is kind of sort of underwhelming when we look at what is replacement rate and what we did actually last year. Would that be a fair comment?

A - Tim Gitzel (BIO 15158316 <GO>)

Grant, please.

A - Grant Isaac (BIO 16627051 <GO>)

Yes. Sorry, Tim. Ralph, I might characterize it by just saying more to come. When we evaluate the types of conversations that we're involved in, in our pipeline, it is indicating a lot of security of supply interest, and we're presuming it's a leading indicator for what you might see in the term market. So, we are expecting strong contracting volumes through 2024.

If there are any delays, it might be reflective of perhaps two things. One is a bit of uncertainty around where some of these legislative efforts are going with respect to things like Russian supply. We're very close to seeing legislation in the U.S. that legislation, I think, has been well planned from a utility supply point of view, unless, of course, the Russians retaliate to that legislation by restricting supply in the immediate term.

The market is not priced in that risk. But that's maybe causing a bit of a pause or maybe a slowdown, I would say, in final negotiations for term material out past that 2028 phase-out window.

And the second thing is, don't forget we have a bunch of new customers as a result of this bifurcation, multifurcation in the market. Customers in Central and Eastern Europe who were traditionally captive to Russian supply and not accustomed, actually, to buying components in a big way, receiving instead a fabricated fuel bundle from the Russians.

And there is a learning curve to go up for this demand, to kind of learn how to buy the uranium and the conversion and the enrichment and the fabrication services, as well as the outage services. So, it's kind of the learning effects of new customers combined with maybe this overhang of legislative challenges or opportunities in the market, maybe causing a bit of pause. But the underlying security of supply sentiment is growing stronger and stronger, Ralph.

Q - Ralph M. Profiti (BIO 6300635 <GO>)

Quite helpful. Thanks everyone.

A - Tim Gitzel (BIO 15158316 <GO>)

Thanks, Ralph.

> **Ari Natter** @AriNatter · Apr 30
> Replying to @AriNatter
>
> Senate Passes Russian Uranium Import Ban, Sending Bill to Biden | Bloomberg
> bloomberg.com/news/articles/... (free link)

2 · 3 · 6 · 2.5K

SAF

Dan Tsubouchi @Energy_Tidbits · May 1

Math for Renewable Natural Gas.

New bp Archaea RNG is to process 9,600 landfill gas/min.

Missing key data point 👇 @jendlouhyhc 10/04/23 on last bp module. processes 3,200 cf/min to get 1,000 cf/min RNG.

Therefore 9,600/min = 4.32 mmcf/d RNG, fraction of a shale well....
Show more

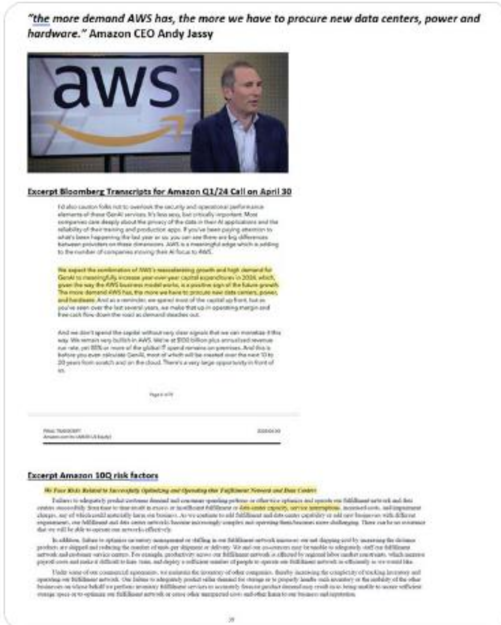
1 · 1 · 4 · 1.2K

Dan Tsubouchi @Energy_Tidbits · May 1

More Power Please!

"t*he more demand AWS has, the more we have to procure new data centers, power and hardware."* Amazon CEO Jassy on Q1 call.

Need #NatGas for baseload or else risk service interruptions when wind doesn't blow or sun doesn't shine.
#OOTT



***"the more demand AWS has, the more we have to procure new data centers, power and hardware."* Amazon CEO Andy Jassy**

Excerpt Bloomberg Transcripts for Amazon Q1/24 Call on April 30

I'd also caution folks not to overlook the security and operational performance elements of these GenAI services. It's less sexy, but critically important. Most companies care deeply about the privacy of the data in their AI applications and the reliability of their training and production apps. If you've been paying attention to what's been happening the last year or so, you can see there are big differences between providers on these dimensions. AWS is a meaningful edge which is adding to the number of companies moving their AI focus to AWS.

We expect the combination of AWS's reaccelerating growth and high demand for GenAI to meaningfully increase year-over-year capital expenditures in 2024, which, given the way the AWS business model works, is a positive sign of the future growth. The more demand AWS has, the more we have to procure new data centers, power, and hardware. And as a reminder, we spend most of the capital up front, but as you've seen over the last several years, we make that up in operating margin and free cash flow down the road as demand steadies out.

And we don't spend the capital without very clear signals that we can monetize it this way. We remain very bullish in AWS. We're at $100 billion plus annualized revenue run rate, yet 85% or more of the global IT spend remains on premises. And this is before you even calculate GenAI, most of which will be created over the next 10 to 20 years from scratch and on the cloud. There's a very large opportunity in front of us.

Excerpt Amazon 10Q risk factors

1 · 1 · 1 · 1.2K

Dan Tsubouchi @Energy_Tidbits · May 1

Americans still spending on experiences, but more CEOs seeing signs of US consumer is weakening.

Weaker:
McDonalds
Starbucks
Clorox
Amazon
Mondelez
YUM....
Show more

1 · 2 · 3 · 2.8K

Dan Tsubouchi @Energy_Tidbits · May 1

Gulf Coast #Oil stocks were +6.8 mmb WoW.

One factor, earlier @ikassai on @business TOPLive warned "*crude inventories on the Gulf Coast may build as fuelmakers hoarded a bit more Cdn oil than usual ahead of the start of the expanded TMX*"

#OOTT

Table 9. U.S. and PAD District Weekly Estimates
(Thousand Barrels per Day Except Where Noted) — Continued

Product/Region	Current Week 4/26/24	Last Week 4/19/24	Year Ago 4/28/23	2 Years Ago 4/29/22[1]	Four-Week Averages 4/26/24	Four-Week Averages 4/28/23
Refiner and Blender Net Production						
Residual Fuel Oil	359	241	308	252	361	302
East Coast (PADD 1)	59	64	38	37	62	36
Midwest (PADD 2)	23	34	27	36	27	28
Gulf Coast (PADD 3)	204	92	165	65	196	165
Rocky Mountain (PADD 4)	12	13	7	10	12	10
West Coast (PADD 5)	61	48	71	104	65	63
Propane/Propylene[9]	2,796	2,823	2,480	2,316	2,757	2,462
East Coast (PADD 1)	245	247	284	264	249	277
Midwest (PADD 2)	545	572	499	439	553	480
Gulf Coast (PADD 3)	1,755	1,750	1,443	1,377	1,704	1,460
PADDs 4 and 5	251	254	254	236	251	246
Ethanol Plant Production						
Fuel Ethanol	987	954	976	969	995	982
East Coast (PADD 1)	12	10	12	10	11	12
Midwest (PADD 2)	930	903	922	915	941	931
Gulf Coast (PADD 3)	25	19	24	24	22	23
Rocky Mountain (PADD 4)	11	11	14	13	11	12
West Coast (PADD 5)	9	11	4	9	10	4
Stocks (Million Barrels)[10]						
Crude Oil (including SPR)[11]	827.2	819.3	824.6	965.7	--	--
Commercial	460.9	453.6	459.6	415.7	--	--
East Coast (PADD 1)	8.3	8.3	7.5	8.2	--	--
Midwest (PADD 2)	120.7	119.9	120.0	105.5	--	--
Cushing, Oklahoma[12]	33.5	32.4	33.6	28.8	--	--
Gulf Coast (PADD 3)	261.6	254.8	264.9	231.8	--	--
Rocky Mountain (PADD 4)	24.8	25.1	25.5	23.1	--	--
West Coast (PADD 5)	45.5	45.5	51.7	47.1	--	--
Alaska In-Transit[13]	2.2	4.0	5.0	5.7	--	--
SPR[14]	366.3	365.7	364.9	550.0	--	--

Dan Tsubouchi @Energy_Tidbits · May 1

26: EIA, Bloomberg Surve
EIA Expectation
7.27 -2.5
0.34 -1.0
-0.73 1.0
6.88 -2.5
excludes a +0.6 mmb build in
, Cushing had a 1.09 mmb bu
tps://safgroup.ca/news-insight

For those not near their laptop, @EIAgov just released #Oil #Gasoline #Distillates inventory as of Apr 26 at 8:30am MT. Table below compares EIA data vs @businessexpectations and vs @APIenergy yesterday. Prior to release, WTI was $81.10. #OOTT

1 2 5 1.6K

Dan Tsubouchi @Energy_Tidbits · 8s

For those not near their laptop, @EIAgov just released #Oil #Gasoline #Distillates inventory as of Apr 26 at 8:30am MT. Table below compares EIA data vs @businessexpectations and vs @APIenergy yesterday. Prior to release, WTI was $81.10. #OOTT

Oil/Products Inventory Apr 26: EIA, Bloomberg Survey Expectations, API

(million barrels)	EIA	Expectations	API
Oil	7.27	-2.50	4.91
Gasoline	0.34	-1.02	-1.48
Distillates	-0.73	1.00	-2.19
	6.88	-2.52	1.24

Note: Oil is commercial. So excludes a +0.6 mmb build in SPR for the Apr 26 week
Note: Included in the oil data, Cushing had a 1.09 mmb build for Apr 26 week
Source EIA, Bloomberg
Prepared by SAF Group https://safgroup.ca/news-insights/

Dan Tsubouchi @Energy_Tidbits · 3h

Online returns now $1T!

"*this next 12 mths, it [online returns] will be over $1 trillion. That is bigger than the cosmetics industry and the alcohol business put together*"
@johnpauldejoria on his latest, Vendidit, to @BeckyQuick @SquawkCNBC

1 · 1 · 3 · 1K

Dan Tsubouchi @Energy_Tidbits · 3h

Energy Transition 101.

Every added MW of wind needs an added MW of #NatGas to fill in when the wind doesn't blow.

@nationalgriduk: Wind and NatGas almost identical for past yr. NatGas slightly less for past wk due to solar up vs past yr.

#OOTT

1 · 4 · 6 · 1.7K

SAF

Dan Tsubouchi @Energy_Tidbits · Apr 30

Today #G7 commits to phase out existing unabated coal power generation during 1st half of 2030s.

See yesterday's tweet on Alberta has already been phasing out coal generation from 38% of capacity in 2016 and down to 6% in 2023

#NatGas #OOTT #EnergyTransition

Excrpt
https://www.g7italy.it/wp-content/uploads/G7-Climate-Energy-Environment-Ministerial-Communique_Final.pdf

G7 ITALIA

Climate, Energy and Environment Ministers' Meeting Communiqué
(Turin, April 29-30, 2024)

c) *Accelerating efforts towards the phase out of unabated coal power generation and decarbonization of power systems* – We welcome the IEA findings that energy related CO_2 emissions and coal demand in G7 countries reached record low levels in 2023 – in the case of coal demand, levels not seen since 1900 - while GDP has grown more than three times. Despite this encouraging achievement, and noting the analysis of the IEA's Net-zero Roadmap report showing that to meet the Paris Agreement, phase out of unabated coal is needed by 2030s in advanced economies and by 2040 in all other regions in its scenario, and that no new unabated coal power plant should be built we note with concern that emissions from global existing coal assets – on their own – would tip the world across the 1.5°C limit. Recognizing the need to prioritize concrete and timely steps towards the goal of accelerating phase out of unabated coal power generation, in a timeframe consistent with keeping a limit of 1.5°C temperature rise within reach and noting with concern the latest evidence from the IEA that global coal fired power generation capacity increased by 1.6 percent to more than 2.2 TW and estimates that over 500GW of potential new coal capacity under development outside of advanced economies, we reiterate our call in line with the 2023 G7 Leaders' Statement for other countries and partners to join us in ending permitting and construction of new unabated coal fired power plants as soon as possible, recognizing the work of the Powering Past Coal Alliance and noting the work of those

6

G7 ITALIA

joining the Coal Transition Accelerator to facilitate these goals. To this end, we call on the IEA to report in 2025 on actions to phase out unabated coal fired power generation globally and broader international progress needed on no new unabated coal power plants to keep 1.5°C within reach as part of the efforts to transition away from fossil fuels.
Recalling our Sapporo commitment on prioritizing concrete and timely steps towards the goal of accelerating the phase out of domestic unabated coal power generation in a manner consistent with keeping a limit of 1.5°C temperature rise within reach, and reaffirming in this context our respective existing phase out dates
We commit also to:

i. phase out existing unabated coal power generation in our energy systems during the first half of 2030s or in a timeline consistent with keeping a limit of 1.5°C temperature rise within reach, in line with countries' net-zero pathways;
ii. reduce as much as possible, in the meanwhile, the utilization of unabated coal power generation plants in our energy systems to a level consistent with keeping the limit of 1.5°C temperature rise within reach;
iii. take concrete and timely steps in this regard as part of the policies that inform and implement the next NDC;
iv. promote cooperation with countries and international partners including the financial sector towards the end of the approval of new unabated coal-fired power plants globally as soon as possible;
v. call on private finance institutions to continue working with governments to enable the transitioning away from unabated coal power and end support for new unabated coal power.

SAF **Dan Tsubouchi** @Energy_Tidbits · Apr 29

Topical tomorrow.

Reports G7 communique is to incl shut down all #Coal plants by 2035.

...

3 4 7 3.1K

Dan Tsubouchi @Energy_Tidbits · Apr 30

China Politburo signals near-term support for economy.

Recognizes still challenges.

"*country should front-load efforts ...*"

"necessary to flexibly employ policy tools such as interest rates & reserve requirement ratios ..""

".. introduce more consumption scenarios ..."...

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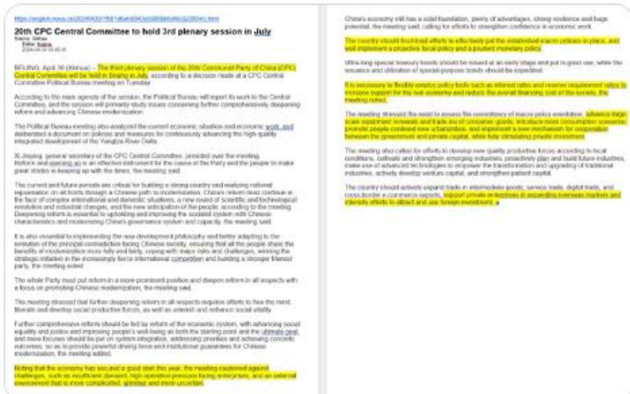

20th CPC Central Committee to hold 3rd plenary session in July

2 · 6 · 2K

Dan Tsubouchi @Energy_Tidbits · Apr 29

6th straight mth of expansion for China smaller & export oriented firms.

China Caixin Manufacturing PMI
Apr 51.4 (est 51.0)
Mar 51.1
Feb 50.9
Jan 50.8
Dec 50.8
Nov 50.7
Oct 49.5. ...

Show more


Caixin China General Manufacturing PMI®

Business conditions improve amid fastest rise in new work in 14 months

1 · 3 · 3 · 1.8K

Dan Tsubouchi @Energy_Tidbits · Apr 29

China recovering.

2nd mth of expansion in Official China Manufacturing PMI after 5 negative mths.

Apr 50.4 (est 50.3)
Mar 50.8
Feb 49.1
Jan 49.2
Dec 49.0...
Show more

1 · 7 · 13 · 3K

Dan Tsubouchi @Energy_Tidbits · Apr 29

No #shrinkflation for Pizza!

"In a time where people are pinching pennies, pizza is a great way to feed a family. You really can't do it for less than that" BofA Sara Senatore to @JoeSquawk.

Domino's CEO Q1 call "*We saw the largest growth in our lower income cohorts...*"

1 · 2 · 1.4K

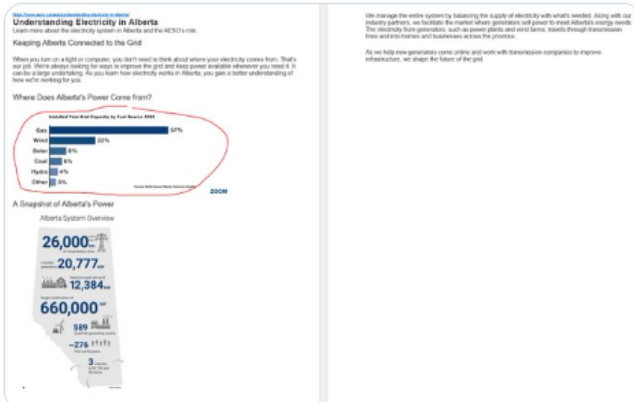
Dan Tsubouchi @Energy_Tidbits · Apr 29

Topical tomorrow.

Reports G7 communique is to incl shut down all #Coal plants by 2035.

Alberta: coal was 38% of power generation capacity in 2016, but down to 6% in 2023.

#OOTT #NatGas



1 3 6 5.3K

Dan Tsubouchi @Energy_Tidbits · Apr 29

Here's why US #Oil imports from Mexico are at all time lows.

Pemex finally ramping up refinery crude runs = less oil for export.

Also why Biden needs to keep Chevron Venezuela oil flowing to Gulf Coast.

Thx @lkassai. #OOTT

3 13 2.5K

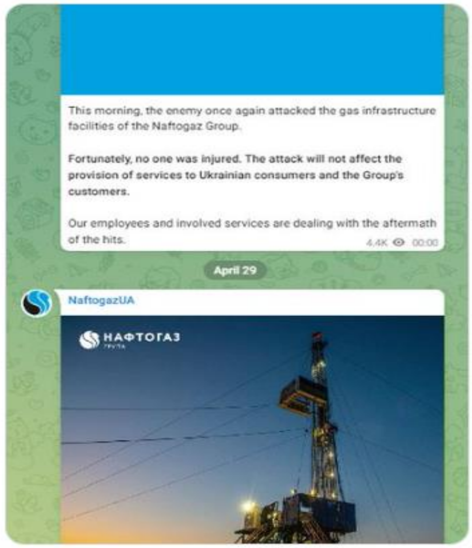
Dan Tsubouchi @Energy_Tidbits · Apr 29

Naftogaz Telegram check

No update on any #NatGas infrastructure impact from the ***"hits"*** from Russia attack

Q1 #NatGas production +12% YoY and highest since invasion.

#OOTT



1 · 1.1K

Dan Tsubouchi @Energy_Tidbits · Apr 28

ICYMI

China auto stocks up today.

China to give one-time subsidy of as much as 10,000 yuan ($1,380) to consumers who trade in their old
vehicles and buy a newer model, and a 7,000 yuan who trade in new vehicles. See 👇 @Lindadalew report.

#OOTT

By Linda Lew
(Bloomberg) -- China will give a one-time subsidy of as much as 10,000 yuan ($1,380) to consumers who trade in their old vehicles and buy a newer model.
Drivers who trade in electric vehicles or hybrids registered before 2018, or gasoline cars that don't comply with China's 2007 emissions standards, and purchase a new qualifying vehicle will get 10,000 yuan, the Ministry of Commerce said in a statement Friday. Customers who trade in newer vehicles will receive 7,000 yuan, it said.
Read More: China's Booming EV Industry at Center of Xi's Big Stimulus Plan
The program, which runs until the end of 2024, is part of Beijing's latest effort to boost consumption to accelerate economic growth that's been hurt by a property crisis and weak consumer sentiment. Cars are just one pillar of the sweeping program, which aims to upgrade equipment across heavy industry to household white goods.
Provincial and municipal governments will lead the facilitation of disbursing the subsidy, according to the statement, which warned authorities not to set up 'white lists' that give preference to factors like location and technical specifications.

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Phoebe Sedgman

2 · 4 · 11 · 2K

Dan Tsubouchi @Energy_Tidbits · Apr 28

CO2 Math. See 👇 09/21/21 tweet.

EPA: 4.6 tonnes CO2/yr per passenger car

Today OXY CEO says Direct Air Capture project to remove 500,000 tonnes CO2/yr reports @Amena__Bakr

Equal to CO2 from ~110,000 cars.

Vs 292.3 million registered cars in US. Hedges...

Show more

> **Dan Tsubouchi** @Energy_Tidbits · Sep 21, 2021
>
> World needs massive cuts to #CO2 emissions & need demonstration projects like this to show it can be done. But world's biggest project can remove 4,000 tonnes CO2/yr only offsets <900 cars, EPA est typcial car emits ~4.6 tonnes CO2/yr. #EnergyTransition will be hugely expensive. x.com/nowthisimpact/...

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Green Vehicle Guide

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- Learn About Green Vehicles
- Help Make Transportation Greener
- Vehicles and Greenhouse Gases - EPA's Role
- Find A SmartWay Vehicle

Greenhouse Gas Emissions from a Typical Passenger Vehicle

A typical passenger vehicle emits about 4.6 metric tons of carbon dioxide per year. This number can vary based on a vehicle's fuel, fuel economy, and the number of miles driven per year. Click on the questions below to learn more about this estimate and see answers to common questions about greenhouse gas emissions from passenger vehicles.

- How much tailpipe carbon dioxide (CO2) is created from burning one gallon of fuel?
- How much tailpipe carbon dioxide (CO2) is emitted from driving one mile?
- What are the average annual carbon dioxide (CO2) emissions of a typical passenger vehicle?
- Are there other sources of greenhouse gas (GHG)

Calculation Details and More Information about GHG Emissions from a Typical Passenger Vehicle

Greenhouse Gas Emissions from a Typical Passenger Vehicle (PDF) (5 pp, 507 K, EPA-420-F-18-008 March 2018, About PDF)

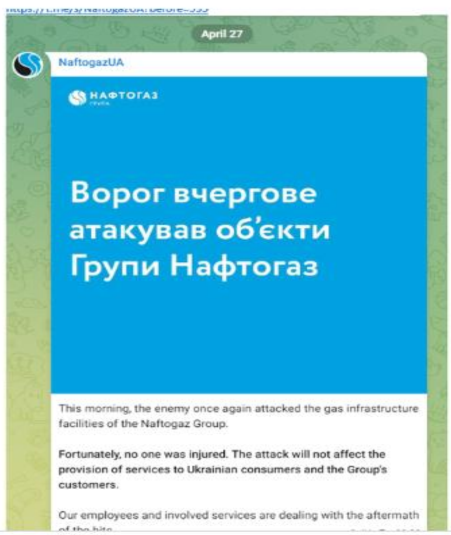
3 · 1 · 3K

Dan Tsubouchi @Energy_Tidbits · Apr 28

Just checked Naftogaz Telegram to see if any update to the 👇 Apr 27 post. There are no new postings on the Russian "***hits***" to Ukraine natural gas infrastructure.

#OOTT #NatGas

> **Dan Tsubouchi** @Energy_Tidbits · Apr 28
>
> ICYMI.
>
> Naftogaz confirms multiple Russia ***"hits***" on Ukraine #NatGas infrastructure at undisclosed locations with undisclosed damage.
>
> ...
>
> Show more



3 2 2.7K