

Energy Tidbits

Microsoft: Massive Datacenters Make AI Industrial Revolution Possible but Won't Say What Fuels Will Provide 24/7 Power

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

billion cubic feet

	-			_	Supplemental		Net		
	Gross	Marketed	NGPL	Dry gas	gaseous	Net	storage	Balancing	
Year and month	withdrawals	production p	production ^a	production ^b	fuels ^c	imports	withdrawals ^d	item ^e	Consumption
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									
	P2 50/	₽2 201	₽250	₽2 051	6	215	₽1 ∩1/	в 7 <i>1</i>	P3 E03
Fobruary	₽2 270	R2 010	₽230 ₽220	R2,551	5	-313	672	R-74	R2 052
March	R2 665	R2 295	#220 #257	R2 0291	5	200	171	R //	R2 792
Anril	R3 579	R3 210	R251	R2 959	6	-300	_220	R-44	R2 358
May	R3 683	R3 319	R259	R3 060	6	-342		R-44 R-28	R2,330
lune	R3 555	R3 222	252	R2 970	6	-325	_332	R_2	2 3 17
luly	R3 716	R3 356	R262	R3 094	6	-303	_187	R_21	R2 590
August	R3 716	R3 378	R264	R3 114	6	-322	-213	R-18	R2 567
September	R3 658	R3 319	R259	R3 060	6	-293	-446	R-34	R2 294
October	R3 800	R3 424	268	R3 156	6	-315	-432	R-53	R2 362
November	R3 703	R3 318	200	R3 058	6	R-309	78	R-65	R2 769
December	R3 763	R3 379	R264	R3 115	6	R-306	588	R-25	R3 379
Becchiber					0		500	·· 2J	
Total	¤43,701	≈39,32 9	3,075	≈36,255	73	R-3,882	₽280	R-434	r32,292
2023									
lanuary	r3 840	r3 447	r283	R3 163	R10	-333	R466	R16	R3 323
February	R3 459	R3 105	R255	R2 850	R9	-331	R409	R28	R2 965
March	R3,859	R3.486	R287	R3,200	R10	-401	R231	R-13	R3.026
April	R3,719	R3.344	R275	R3.069	9	-400	R-275	R25	R2.428
Mav	R3.871	R3.496	R287	R3.208	R10	-422	R-461	R-15	R2.320
June	R3.726	R3.371	R277	R3.094	R10	-376	R-351	R-7	R2.369
July	R3.821	R3.490	R287	R3.204	R10	-378	R-139	R-24	R2.672
August	R3.832	R3,515	R289	R3.226	R10	-388	R-139	R-30	R2.679
September	R3.744	R3.405	R280	R3.125	R10	-396	R-331	R-27	R2.382
October	R3.890	R3.515	R289	R3.226	R10	-421	R-328	R-40	R2,446
November	R3.822	R3.450	R284	R3.166	10	-403	R70	R-12	R2.831
December	₹3,968	R3,565	R293	R3,272	R10	-432	R292	R35	R3,178
Total	¤45,551	¤41,190	≈3,386	R37,803	117	-4,681	^R -555	^R -64	≈32,61 9
2024									
January	€3,872	re3,478	269	re3,209	12	-351	844	R-8	R3,707
February	€3,723	€3,348	276	€3,072	10	-385	263	R15	R2,974
March	£3,880	re3,486	304	€3,182	10	-425	46	R-12	R2,801
April	€3,716	€3,352	301	€3,051	10	-345	-256	₽-61	R2,398
May	€3,834	re3,461	314	€3,148	10	-408	-363	R-52	R2,336
June	€3,731	€3,386	301	€3,084	9	-380	-254	R-27	R2,433
July	€3,890	 €3,536	306	re3,229	R10	-337	-120	r-36	r2,747
August	re3,850	re3,508	312	re3,196	10	-389	-79	R-18	R2,720
September	re3,706	RE3,363	307	re3,056	8	-392	R-251	R5	r2,427
October	€3,892	€3,513	321	€3,192	9	-395	-329	-42	2,436
2024 10-month	⊧38.094	⊧34.432	3.011	€31.420	99	-3.807	-497	-236	26.979
2023 10-month	37,760	34.174	2,810	31,365	97	-3,846	-918	-87	26,611
2022 10-month	36.234	32.633	2.551	30.082	61	-3.268	-386	-345	26.144
			,	,		-,	,	2.14	

^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 2023 include underground storage and liquefied natural gas storage. Data for January 2024 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): 115 for 2023; 94 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: 2019-2023: U.S. Energy Information Administration (EIA), *Natural Gas Annual 2023*. January 2024 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 2023 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.

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

	2024 10-month	2023 10-month	2022 10-month	Ostabar	Cantanhan	A		2024
	YTD	YTD	YTD	October	September	August	July	June
Exports Volume (million cubic feet)								
Canada	800.938	824.783	770.733	71.752	R69.683	65.952	66.314	66.541
Mexico	1,989,496	1,887,949	1,759,003	200,794	205,539	220,693	217,872	203,735
Total pipeline exports	2,790,434	2,712,732	2,529,736	272,546	R275,222	286,645	284,187	270,277
LNG								
Exports								
By vessel								
Antigua and Barbuda	58	37	19	8	2	7	6	12
Argentina	51,838	76,921	66,939	0	0	4,270	11,310	10,114
Banamas	421	432	412	43	54	45	54	42
Bangladesn	26,109	17,650	12,663	9,918	0,328	24	10	3,294
Balaium	239	72 456	76 071	34	23	24	81	20
Brazil	40,041	21 22/	70,971	12 /0/	5,572 21 797	16 727	2 5 2 1	14 000
Chile	47.862	31,324	30 131	13,494	21,787	3 695	10.640	7 101
China	195 853	133 697	72 359	11 821	R31 621	28 150	29 700	17 042
Colombia	45.002	23.008	5,703	5.326	9,766	5,160	1.376	953
Croatia	47.238	42.394	65.961	10.186	0	3.654	0	6.784
Dominican Republic	76.058	61.938	44.179	9.688	5.242	9.625	3.152	10.812
Egypt	85,923	0	0	21,700	10,957	14,658	24,297	14,310
El Salvador	0	1	0	0	0	0	0	0
Finland	13,181	32,372	0	0	0	0	3,432	3,212
France	292,054	393,306	482,433	43,083	24,388	8,293	14,207	6,630
Germany	181,542	170,785	0	14,707	21,633	14,167	14,262	17,970
Greece	33,444	31,139	65,740	8,172	0	1,651	1,208	3,702
Haiti	77	92	106	0	0	10	11	20
India	245,509	139,822	98,241	27,366	31,990	24,876	28,326	28,782
Indonesia	3,266	3,157	2,817	428	605	1,030	0	771
Italy	148,763	152,746	105,837	17,527	17,217	21,124	3,965	17,597
Jamaica	13,729	8,447	1,232	1,146	3,523	1	1,409	475
Japan	285,285	257,833	164,288	30,025	R32,183	30,289	30,453	27,862
Joruan	38,874	3,282	E7 019	U 7 2 2 2	7,110	3,403	13,537	3,954
Lithuania	12 22	53,103	70 222	2,557	5,051	2 209	2 22/	6 029
Malaysia	18 226	01,924	70,223	9,963 N	0,878	3,208	7 366	0,938
Malta	2 336	2 592	2 345	0	0	<u> </u>	2 336	0
Mexico	6,611	10.001	3,292	2,550	0	751	2,550	33
Netherlands	402.200	503.748	317.792	28.768	48.864	37.494	22.461	34.890
Pakistan	0	0	3,074	0	0	0	0	0
Panama	17,092	15,707	9,676	0	2,382	1,945	0	2,375
Philippines	3,645	3,378	0	0	0	0	0	3,645
Poland	108,224	114,273	110,066	10,866	14,417	11,026	16,541	17,301
Portugal	58,276	66,707	55,826	3,070	6,435	6,188	6,314	3,743
Singapore	44,956	23,320	22,980	3,920	0	6,791	3,329	3,371
South Korea	262,144	214,452	253,963	21,279	[₽] 25,698	42,728	24,150	44,575
Spain	164,749	236,595	366,365	7,021	14,107	20,877	12,532	17,364
l aiwan	101,559	94,316	93,943	9,622	9,647	9,828	12,857	5,923
	100,589	48,077	25,988	10,743	0	10,917	14,037	6,811
Lipited Arab Emiratos	99,273	0,539	142,057	24,106	0	0	0	0
	1/15 8//	3/2 330	318/137	13 581	3 5 7 5	13 801	3 703	6 3 9 8
By truck	145,044	542,550	510,457	15,501	5,575	15,651	5,705	0,558
Canada	56	70	68	0	9	8	7	10
Mexico	112	558	1,238	0	4	8	12	14
Re-exports			2,200		•			
By vessel								
United Kingdom	607	0	0	0	0	0	0	0
Total LNG exports	3,580,318	3,533,830	3,223,075	376,200	363,030	363,574	323,873	356,423
CNG								
Canada	679	1	2	54	59	58	67	73
Total CNG exports	679	1	2	54	59	58	67	73
Total exports	6,371,432	6,246,562	5,752,813	648,800	№638,310	650,277	608,126	626,772

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

Exports Volume (million cubic feet) Pipeline Canada Mexico Total pipeline exports LNG Exports By vessel	May 66,528 212,089 278,618 8 17,470 52	April 72,527 190,852 263,380 5	March 115,589 182,425 298,014	February 113,960 169,930 283,891	January 92,090 185,566 277.656	Total 1,025,017 2,241,553	December 111,267 174 602	November 88,967
Exports Volume (million cubic feet) Pipeline Canada Mexico Total pipeline exports LNG Exports By vessel	66,528 212,089 278,618 8 17,470 52	72,527 190,852 263,380 5	115,589 182,425 298,014	113,960 169,930 283,891	92,090 185,566 277.656	1,025,017 2,241,553	111,267 174 602	88,967
Volume (million cubic feet) Pipeline Canada Mexico Total pipeline exports LNG Exports By vessel	66,528 212,089 278,618 8 17,470 52	72,527 190,852 263,380 5	115,589 182,425 298,014	113,960 169,930 283,891	92,090 185,566 277.656	1,025,017 2,241,553	111,267 174 602	88,967
Pipeline Canada Mexico Total pipeline exports LNG Exports By vessel	66,528 212,089 278,618 8 17,470 52	72,527 190,852 263,380 5	115,589 182,425 298,014	113,960 169,930 283,891	92,090 185,566 277.656	1,025,017 2,241,553	111,267	88,967
Canada Mexico Total pipeline exports LNG Exports By vessel	66,528 212,089 278,618 8 17,470 52	72,527 190,852 263,380	115,589 182,425 298,014	113,960 169,930 283,891	92,090 185,566 277.656	2,241,553	111,267	88,967
Total pipeline exports LNG Exports By vessel	212,089 278,618 8 17,470 52	263,380	298,014	283,891	277.656	2,241,555	1/4 nu /	1 70 000
LNG Exports By vessel	8 17,470 52	5	230,014	203,091	2//.030	2 266 570	295 960	267 060
Exports By vessel	8 17,470 52	5			,	3,200,370	203,005	207,505
By vessel	8 17,470 52	5						
	8 17,470 52	5						
Antigua and Barbuda	17,470 52		3	7	2	47	6	4
Argentina	52	8,674	0	0	0	76,921	0	0
Bahamas		39	35	34	42	499	32	34
Bangladesh	0	3,289	3,281	0	0	24,147	3,257	3,240
Barbados	1/	16	29	3/	22	11	11	0
Beigium	U F 0.41	3,247	6,899	9,386	14,255	97,017	14,272	10,288
	5,941	5 4 4 1	6 / 20	0,180	8,292	21 217	3,708	3,303
China	25 863	10.025	17 376	16 312	7 9//	173 247	13 9/9	25 601
Colombia	436	1 444	7 974	6 101	6 4 6 5	32 014	7 162	1 844
Croatia	3.570	0	10.202	3.377	9.464	55.439	3.050	9,995
Dominican Republic	5,946	12.446	4.552	7.106	7.489	73.761	3.177	8.647
Egypt	0	0	0	0	0	0	0	0
El Salvador	0	0	0	0	0	1	0	0
Finland	3,321	3,215	0	0	0	38,469	2,762	3,335
France	19,797	37,672	60,572	49,363	28,049	492,906	40,692	58,907
Germany	26,177	21,479	17,060	16,715	17,371	204,605	19,439	14,382
Greece	5,182	0	3,240	3,136	7,153	39,426	8,287	0
Haiti	10	3	0	6	16	113	13	8
	45,269	20,843	13,842	13,530	10,685	164,325	17,062	/,441
	432	14.040	10.256	11 / EE	24 767	3,157	21 202	207 22
lamaica	10,014	14,040	10,250	590	6 5 7 6	9 0 197,010	21,205	25,760
lanan	41 155	22 227	28 923	22 827	19 340	310 190	27 461	24 896
Jordan	3.676	3.652	3.477	0	0	3.282	0	0
Kuwait	7.216	0	7.207	3.175	0	35.185	0	0
Lithuania	0	0	3,641	7,174	1,083	55,332	3,409	0
Malaysia	7,166	0	0	0	0	0	0	0
Malta	0	0	0	0	0	2,592	0	0
Mexico	3,190	0	0	87	0	13,661	3,660	0
Netherlands	37,694	47,486	57,169	45,501	41,873	588,557	48,658	36,150
Pakistan	0	0	0	0	0	3,141	3,141	0
Panama	0	3,265	3,448	0	3,677	19,565	328	3,530
Philippines	14 262	2 5 7 6	2 6 9 5	10 702	E 746	0,823	10.962	3,445
Portugal	14,303	5,570	2,002	10,702	0 5/40	77 055	10,802	2 204
Singanore	4,200 6 851	3 617	2,952	5,304 6 851	2,505	2,000	2,943 N	5,204 N
South Korea	28,401	17,457	21.023	16,193	20.640	275,779	35,187	26,140
Spain	8.399	10.127	21.849	13.660	38.812	269.504	15.629	17.280
Taiwan	10,256	13,347	10,374	13,151	6,555	104,075	6,655	3,104
Thailand	7,289	19,342	14,737	8,809	7,904	59,477	3,818	7,581
Turkiye	0	3,057	8,963	20,454	42,693	156,403	42,304	27,560
United Arab Emirates	3,064	0	0	0	0	0	0	0
United Kingdom	7,100	6,887	13,663	34,117	42,928	450,181	60,209	47,642
By truck								
Canada	15	8	0	0	0	85	7	7
Mexico	13	14	12	14	21	604	20	26
Re-exports								
Lipited Kingdom	0	0	0	607	0	0	0	0
Total LNG exports	367 723	303.776	369 898	359 563	396 260	4.343 027	422 935	386 262
CNG	307,723		333,030	333,303	555,200	-,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	2,535	550,202
Canada	62	68	77	78	81	1	0	0
Total CNG exports	62	68	77	78	81	1	Ō	0
Total exports	646,403	567,223	667,989	643,532	673,998	7,609,597	708,805	654,230

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

							2023	
	October	September	August	July	June	May	April	March
Exports								
Volume (million cubic feet)								
Pipeline								
Canada	66,936	76,619	68,390	76,567	75,320	77,984	75,674	106,178
Mexico	200,466	202,402	213,050	208,625	204,115	193,623	169,179	177,653
Total pipeline exports	267,402	279,021	281,440	285,193	279,435	271,608	244,853	283,832
LNG								
Exports								
By vessel							2	
Antigua and Barbuda	/	/	5	4	3	3	3	2 2 4 2
Argentina	0	0	0	11,162	22,663	26,930	11,536	2,343
Bahamas	34	51	4/	4/	45	45	43	53
Bangladesn	U	0	7,095	0	3,624	3,561	0	0
Barbados	20.775	12 007	2 2 2 2	0	0	2 000	0	0 052
Beigium	20,775	13,697	3,303	0	6,953	3,809	4,844	8,053
Brazii	3,720	6,561	3,287	7 1 4 4	8,628	4,196	3,598	1,334
China	19.012	10 222	3,005	7,144	4,011	6,419	2 4 2 6	7,271
Colombia	18,013	10,222	2 1 4,2 5 2	35,337	20,201	2,595	3,420	5,132
Croatia	0,069	10,522	3,149	10 121	0	2,047	2 162	2 604
Dominican Bonublic	0 0 0 0 0 0	6 724	3,025	6.076	7 4 4 2	2,952	5,105	5,094
Eavet	0,020	0,754	10,055	0,070	7,445	7,871	0,901	0/0
El Salvador	0	0	0	1	0	0	0	0
Einland	0	7 057	6 6 2 0	2 666	1 6 2 2	6 0 2 5	0	6 462
France	54 072	32,016	3/ 332	20 5 8 9	1,022	51 355	53 211	28 5 8 1
Germany	17 001	17 228	20 709	17 2/15	15 769	16.002	18 5/16	20,301
Greece	17,501	1 968	4 700	17,245	2 92/	10,002	3 905	24,041
Haiti	8	1,500	4,700	8	2,524	12	3,505	3,130
India	12 608	24 452	12 712	20 /0/	1/ / 22	7 1 / 0	1/ 525	10 220
Indonesia	13,098	// 24,432	766	1 007	14,400	7,140	14,585	10,230
Italy	6 850	22 094	21 519	13 923	13 959	18 845	17 378	13 699
lamaica	1 831	4 038	21,010	1 443	3	289	31	540
lanan	24,357	33,375	31.302	44.016	28.031	31,208	13.687	20.102
lordan	0	0	01,002	3,282	0	01,200	0	0
Kuwait	0	6.636	3.289	7.081	10.670	3.802	3.707	0
Lithuania	6.476	10.666	7.005	3.375	3.629	7.048	3.412	3.599
Malavsia	0	0	0	0	0	0	0	0
Malta	0	0	0	0	0	0	0	0
Mexico	1,776	0	0	1,954	0	0	0	3,051
Netherlands	49,701	39,745	53,596	53,296	45,866	64,538	60,234	61,017
Pakistan	0	0	0	0	0	0	0	0
Panama	0	3,196	0	3,295	0	3,289	0	3,209
Philippines	3,378	0	0	0	0	0	0	0
Poland	14,213	14,121	10,550	3,635	18,046	17,422	7,165	7,236
Portugal	7,125	6,135	6,660	9,845	3,194	10,424	4,237	6,133
Singapore	3,279	6,649	3,384	0	10,009	0	0	0
South Korea	28,224	24,112	34,932	16,462	17,044	10,958	24,734	10,807
Spain	49,792	10,234	20,023	34,106	12,274	12,266	13,680	38,096
Taiwan	6,686	13,201	14,117	13,090	6,848	10,262	9,774	10,311
Thailand	7,538	0	14,793	7,463	4,242	0	4,225	4,249
Turkiye	4,507	3,531	0	0	0	0	13,908	11,866
United Arab Emirates	0	0	0	0	0	0	0	0
United Kingdom	24,900	7,464	3,655	0	0	25,242	75,836	70,499
By truck								
Canada	0	16	8	8	17	7	7	7
Mexico	27	35	19	25	34	26	58	96
Re-exports								
By vessel								
United Kingdom	0	0	0	0	0	0	0	0
Total LNG exports	384,403	346,604	353,059	349,292	327,872	366,774	375,843	366,552
CNG								
Canada	0	0	0	0	0	0	0	*
Iotal CNG exports	0	0	0	0	0	0	0	*
i otal exports	651,805	625,625	634,499	634,485	607,307	638,382	620,697	650,384

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

		2023						2022	
	February	January	Total	December	November	October	September	August	
Exports									
Volume (million cubic feet)									
Canada	95.691	105.422	R962.160	R100.003	R91.423	72.738	61.926	75.220	
Mexico	152,807	166,028	2,078,627	158,638	160,986	171,766	169,159	182,596	
Total pipeline exports	248,498	271,450	R3,040,787	R258,641	R252,410	244,505	231,086	257,816	
LNG									
Exports									
By vessel		· · · ·							
Antigua and Barbuda	2	4	22	1	2	2	3	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	
Argentina	2,287	0	66,939	0	0	0	0	2,202	
Banamas	27	2 260	12 662	42	35	40	43	53	
Barbados	0	5,509	12,005	0	0	0	0	0	
Bolgium	7 2 2 2	2 6 4 0	<u>95</u> 90 245	2 274	1	7 100	0 165	2 5 90	
Brazil	7,322	3,040	71 008	3,274	0	3 / 30	9,105	10 5/2	
Chile	0	3 307	30 131	0	0	0	3 365	10,542	
China	2.565	17.896	96.659	6.992	17.308	22.598	10.275	10.272	
Colombia	0	0	5.703	0	0	3.699	0	606	
Croatia	6,006	2,913	77,286	6,204	5,122	2,922	9,073	7,824	
Dominican Republic	3,514	3,643	50,824	6,644	0	3,469	3,196	3,357	
Egypt	0	0	0	0	0	0	0	0	
El Salvador	0	0	0	0	0	0	0	0	
Finland	0	0	329	329	0	0	0	0	
France	39,457	34,124	571,399	38,311	50,655	41,959	57,943	33,885	
Germany	8,229	14,314	7,113	7,112	1	0	0	0	
Greece	6,781	3,207	69,031	2,869	421	4,424	0	10,763	
Haiti	11	8	115	9	0	0	8	11	
India	14,064	6,956	122,518	14,139	10,138	7,005	10,528	10,265	
Indonesia	17.555	805	6,579	3,256	505	625	509	967	
Italy	17,555	6,925	116,034	6,992	3,205	0	8,355	15,462	
Jamaica	14 05 9	17 606	1,510	20 5 25	24 206	10 694	240	20 156	
Japan	14,038	17,090	209,220	20,555	24,390	10,084	7,005	20,130	
Kuwait	0	0	57.018	0	0	3 299	7 038	6 4 1 5	
Lithuania	0	6 713	77 212	3 281	3 708	7 072	3 541	7 579	
Malaysia	0	0,715	0	0	0	,,0,2	0	,,,,,,,,	
Malta	0	2.592	5.273	0	2.928	0	0	0	
Mexico	0	3,219	3,832	539	0	0	0	0	
Netherlands	39,301	36,453	378,329	39,893	20,645	39,703	30,924	50,020	
Pakistan	0	0	3,074	0	0	0	0	0	
Panama	0	2,718	13,759	249	3,833	0	0	0	
Philippines	0	0	0	0	0	0	0	0	
Poland	10,347	11,538	127,404	13,885	3,453	7,095	16,917	6,885	
Portugal	6,138	6,816	69,583	10,025	3,732	7,005	5,806	3,202	
Singapore	0	0	22,980	0	0	6,628	0	0	
South Korea	22,672	24,507	292,732	24,700	14,069	38,844	19,736	36,033	
Taiwan	52,138	13,987	420,037	33,847	20,445	20,309	21,203	20,140	
Thailand	1 8 2 9	3,471	25 988	9,203	3,392	9,041	3,733	3 607	
Turkive	13 444	39 283	192.067	17 979	31 430	10 333	5 458	3,007	
United Arab Emirates	0	0	152,007	1,,5,5	0	0	0	0	
United Kingdom	71.702	63.032	464,462	69.332	76.693	46.040	51.467	21.263	
By truck	, -				-,	-,		,	
Canada	0	0	76	8	0	19	0	0	
Mexico	106	133	1,552	160	153	175	94	103	
Re-exports									
By vessel									
United Kingdom	0	0	0	0	0	0	0	0	
Iotal LNG exports	326,275	337,155	3,865,643	339,960	302,608	309,823	295,379	300,215	
CNG					÷		÷	<u>٦</u>	
	*	*	2	0	*	1	*	*	
Total exports	E74 772	608 605	RE 006 /22	PE09 601	REEE 019	EEA 220	526 A65	EE9 021	
	5/4,//5	000,003	~0,500,43Z	~390,0UI	~333,010	554,528	520,405	330,031	

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

							2022
	July	June	May	April	March	February	January
xports							
Volume (million cubic feet)							-
Pipeline							
Canada	69,774	70,105	79,214	80,475	105,074	74,630	81,577
Mexico	189,652	182,995	186,003	176,447	169,885	155,032	175,467
Total pipeline exports	259,426	253,100	265,217	256,922	274,958	229,662	257,045
LNG							
Exports							
By vessel							
Antigua and Barbuda	2	3	2	3	2	0	2
Argentina	9,448	25,246	20,111	9,933	0	0	0
Bahamas	45	47	42	34	43	31	34
Bangladesh	0	0	3,346	0	3,421	5,896	0
Barbados	0	0	0	0	34	31	28
Belgium	0	7,023	3,441	7,341	17,743	7,691	13,786
Brazil	5,192	3,857	15,303	3,448	2,236	10,660	17,322
Chile	6,917	0	9,943	3,530	3,214	0	3,162
China	784	7,329	0	10,217	7,527	3,357	0
Colombia	0	912	0	0	0	0	486
Croatia	4,600	7,925	8,543	6,763	3,358	5,870	9,084
Dominican Republic	6,532	5,838	4,964	3,645	6,530	0	6,647
Egypt	. 0	. 0	0	0	0	0	0
El Salvador	0	0	0	0	0	0	0
Finland	0	0	0	0	0	0	0
France	53.443	37.564	47.150	56.343	64.415	39.646	50.084
Germany	0	0	0	0	0	0	0
Greece	12.922	9.633	12.650	1.336	4.116	8.094	1.802
Haiti	8	13	9	11	10	16	20
India	13,902	10.653	7,152	14,223	10.438	7,210	6.866
Indonesia	10,002	0	0	0	0	717	0
Italy	9,914	7,137	21,696	15,519	7.088	13,629	7.037
lamaica	121	48	144	135	92	111	86
lanan	18 189	21 561	24 024	13 231	17 697	10 214	21 527
lordan	10,100	0	0	0	0	0	
Kuwait	5 382	8 105	14 204	7 298	0	5 277	0
Lithuania	7 947	6 729	11 237	13 770	5 700	3 1 3 1	3 518
Malaysia	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	0,725	0	0	0	0	0
Malta		0	0	0	0	2 345	
Mexico	0	3 292	<u>0</u>	0	<u>0</u>	0	0
Netherlands	32 637	34 420	28 902	28 395	24 922	31 591	16 279
Pakistan	0	0,420	20,502	3 074		0	0
Panama	0	623	1 102	1 536	0	3 069	3 255
Philippines	0	025	1,152	1,550	0	3,005	
Poland	17 780	14 282	18 224	13 882	3 8 3 1	7 475	3 695
Portugal	£ /17	5 5 8 2	3 888	6 632	10 728	2 702	2,055
Singanoro	6 275	2 252	 	0,032	6 725	<u>3,703</u>	2,000
South Korea	2/2/0	3,332	17 529	12 012	10 7 20	27 / 20	21 92/
South Koled	24,342	20,004	10 227	10,010	19,209	20 250	10 270
Taiwan	0 252	6 2039	15 075	95/1	12 161	6 115	49,319
Thailand	<u>کر</u> درج م	6 0 2 0	2 /10	3,341	12,101	/ 000	2 400
Turkiyo	0	0,920	5,419	6 6 2 7	16 620	4,000	3,490
Linited Arab Emirator	0	7,542	1,201	0,037	10,029	45,097	45,081
		2 2 2 2	10 609	20 77	EC 700	0 2E 201	60.000
	3,/9/	3,320	10,608	39,175	50,799	25,301	00,060
Dy LIUCK	^	0		4 🗖		A	10
	U 70	8	<u>ک</u>	15	U	4	13
IVIEXICO	/6	105	115	122	144	157	148
ke-exports							
By Vessel							
United Kingdom	0	0	0	0	0	0	0
Iotal LNG exports	300,415	300,659	351,448	330,463	364,116	316,766	353,791
CNG			<u>-</u>	<u>-</u>			
Canada	1	*	0	0	*	0	0
LOTAL CNG exports	1	*	0	0	*	0	0
Patal and exports	FFA 444	FF3 -22	CAC 22-	F07 865	COO	FAC 199	646 000

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

million cubic feet

								New	North	
Year and month	Alaska	Arkansas	California	Colorado	Kansas	Louisiana	Montana	Mexico	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	R36,108	11,347	R155,025	R12,487	 ₹319,456	R3,127	R202,816	R81,493	R192,820
February	30,014	32,336	r9,834	R140,864	R11,111	R291,489	₽2,984	R189,015	₹75,874 R	₹174,160 R
March	32,473	36,319	11,603	R158,669	R12,456	R320,683	R3,401	R223,947	R88,143	R192,820
April	30,910	35,043	R11,390	R153,558	R12,353	R324,968	R3,172	R221,445	₹68,657	R183,900
May	31,677	35,781	11,593	R155,849	12,826	R348,787	R3,191	R228,546	81,340	R190,030
June	R28,645	34,299	R11,304	R149,172	R12,323	R338,419	R3,249	R221,430	86,437	R183,900
July	R29,657	35,096	11,734	R153,898	R12,672	R351,681	R3,443	R234,177	90,288	R195,300
August	R29,378	35,394	R11,497	R155,149	R12,826	R359,381	R3,605	R237,367	R89,772	R195,300
September	29,288	R34,212	R11,117	R151,600	R11,875	R355,577	R3,550	R238,649	R90,625	R189,000
October	R31,123	R35,113	R10,941	R157,117	R13,011	R375,337	R3,634	R249,206	r93,104	R194,680
November	30,934	R33,571	R10,939	R151,447	R12,233	R366,103	R3,301	R240,317	R85,733	R188,400
December	36,181	₹32,954	₽11,150	R150,507	R11,778	R370,560	R3,121	R252,399	₽76,725	₽194,680
Total	≈373,145	¤416,225	№134,449	№1,832,855	№147,950	₽4,122,441	≈39,778	₽2,739,31 4	№1,008,191	₽2,274,990
2023										
lanuary	R33 421	R34 453	R10 996	R152 136	R12 024	R373 945	r3 446	R256 011	R83 385	R194 370
February	R30 342	R30 847	R10 026	R135 623	R10 777	R348 917	R3 179	R232 537	R80 634	R175 560
March	R32,703	R34.034	R10.897	R151.023	R11.963	R373.801	R3.475	R267,559	R90,155	R194.370
April	R31,338	R32,543	R10.788	R147.372	R11.577	R364.374	R3.410	R260.013	R89,209	R180,600
May	31.288	R33.333	R11.288	R153.712	R11.839	R388.879	R3,444	R264.455	R93.302	R186.620
June	28,991	R31.966	R10.852	R149.514	R10.831	R352.890	R3.409	R248.872	R91.957	R180.600
July	28.478	R32.773	R11.256	R154.036	R11.531	R369.282	R3.537	R264.955	R97.825	R188.480
August	26,756	₹32.651	R11.290	R158.091	₹11.469	R370.702	₹3,594	R270.459	R98.293	R188.480
September	28,784	₹31,590	R10,884	R151,642	R11,129	R356,402	r3,494	R262,838	r98,009	R182,400
October	31,535	R32,303	R11,207	R157,812	R11,439	R360,543	₹3,481	R269,150	R100,059	R184,760
November	30,734	₹31,135	R10,478	₹154,436	R11,040	R337,809	₹3,110 R3,110	R271,951	₹98,543	R178,800
December	33,356	R31,908	R10,740	R160,387	R11,284	R328,639	R3,594	R291,257	R103,914	R184,760
Total	¤367,726	R389,535	№130,703	№1,825,784	R136,903	R4,326,182	₽41,172	¤3,160,057	№1,125,285	R2,219,800
2024										
lanuary	34 077	F29 234	RE10 467	RE155 520	E10 083	RE339 874	RE3 479	RE275 883	RE90 410	E179 681
February	31 472	£29,231	RE9 736	RE149 906	E10.092	RE329 656	RE3 324	RE273 270	RE94 975	E179 998
March	33 621	E31 746	RE10 452	RE161 168	E10 747	RE332 501	RE3 594	RE295 598	RE99 605	E184 582
April	31,174	E30,219	RE10.038	RE152,832	£10.076	RE301,188	RE3.521	RE283,580	RE98,986	£180.272
May	31,962	£31.054	RE10,408	RE156,156	€10.604	RE294.426	RE3.613	RE295,480	RE103,132	E190.090
June	28,952	€29.676	RE10.151	RE148.863	€10.190	RE283.146	RE3.534	RE290.287	RE99.139	€177.260
July	29.235	€30.367	RE10.431	RE154.838	€10.509	RE306.916	RE3.639	RE305.769	RE101.740	€179.163
August	28.358	€30,274	RE10.266	re154.804	RE10.429	RE300,965	RE3,710	RE311.738	RE104.408	RE178.420
September	28,593	€28.261	RE9.820	RE147.707	RE10.026	re275.993	re3.494	RE303.926	RE102.317	RE180.466
October	30,771	€28,983	€10,063	 €156,962	€10,502	€281,226	€3,668	€318,389	€101,169	€183,089
2024 10-month	308 216	E299 589	E101 832	E1 538 755	E103 259	E3 045 841	E35 525	E2 953 920	E995 879	E1 813 019
2023 10-month	303 636	326 492	109 485	1,510 961	114 579	3.659 735	34 468	2,596 849	927 878	1,856 240
2022 10-month	306.029	349,700	112,360	1,530,900	123,939	3.385.778	33,355	2,246,597	845,732	1,891,910
	000,020	2.5,700	,000	_,,		0,000,770	20,000	_,0,001	0.0,702	_,

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

million cubic feet - continued

					West		Other	Federal Gulf	U.S.
Year and month	Oklahoma	Pennsylvania	Texas	Utah	Virginia	Wyoming	states	of Mexico	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	R215,662	r657,816	R847,645	₽20,717	₽226,703	R89,840	R30,973	r64,214	R3,201,112
February	R195,598	₽577,435	¤799,216	R18,508	r204,087	r78,594	¤31,216	₽56,646	¤2,918,981
March	R225,065	r634,530	R903,718	21,502	₽232,882	r87,976	r34,239	r64,336	R3,284,763
April	¤226,077	r614,765	¤890,511	¤21,262	₽228,776	r86,473	r31,384	r65,439	R3,210,082
May	₽235,431	r638,730	₽901,144	R22,311	₽242,538	R85,609	r32,058	r61,940	R3,319,380
June	¤231,641	R616,815	¤866,181	¤21,771	¤235,176	R85,396	¤31,597	r64,142	¤3,221,895
July	₽239,384	r644,242	R894,212	¤22,650	₽246,199	R90,191	r34,769	r66,255	¤3,355,846
August	R239,248	r635,607	R911,877	₽23,543	₽248,685	R87,751	R33,177	₹68,061 R	R3,377,619
September	R239,497	₹618,560 R	R903,382	¤21,852	₽239,638	R83,709	R32,613	r64,597	R3,319,341
October	R243,362	r637,253	₽923,341	R21,548	₽246,749	R88,913	r33,277	R66,181	r3,423,890
November	R235,551	R613,196	R895,059	R21,512	₽246,577	R85,592	R32,816	r64,316	R3,317,599
December	¤236,551	₽624,618	₽928,299	R22,340	R247,072	r83,349	R32,314	₽64,351	₽3,378,949
Total	₽2,763,06 9	₹7,513,567	R10,664,585	¤259,516	r2,845,082	¤1,033,391	≈390,43 4	r770,477	≈39,329,457
2023									
January	R250.070	₹647.752	R930.571	R22.104	R260.054	R81.325	R31.219	R69.534	R3.446.816
February	217.813	₹573.008	R841.082	 19.853 ₽	R235.493	₹70.926	R27.703	R60.952	₹3.105.273
March	240,498	₹642.123	R978.064	R21.737	R259.694	₹78.974	R29.431	₹65.744	R3.486.246
April	232,276	₹615,702	R925,233	R22,229	R249,680	₹76,111	R31,427	₹60,025	R3,343,907
May	237,558	r644,096	R979,931	R24,762	R259,536	R83,554	R30,265	₹57,898	R3,495,761
June	233,220	R623,171	R942,885	R23,972	R258,764	R79,838	R41,037	₹57,931 R	R3,370,699
July	238,429	r639,632	R980,036	r24,804	r272,998	R80,518	R30,778	₹61,119	R3,490,469
August	236,507	r639,063	R994,723	r24,943	r272,948	R81,606	R31,775	r61,470	R3,514,820
September	234,235	₹610,159	R965,927	R24,360	R261,345	₹78,460 R	R31,625	R62,186	R3,405,470
October	239,892	R637,666	R1,000,510	R25,547	R273,356	R85,063	R29,950	R60,609	R3,514,879
November	229,910	r646,134	R975,636	R25,656	R270,110	R86,248	R30,193	₹58,217	R3,450,139
December	235,522	R673,806	R1,012,242	R26,531	R276,376	r87,874	R31,837	R61,105	R3,565,133
Total	¤2,825,931	¤7,592,313	R11,526,840	¤286,497	¤3,150,35 4	№970,496	¤377,241	R736,792	R41,189,612
2024									
January	€225,757	€666,020	re971,691	re26,241	€287,332	re82,729	re31,348	re58,697	re3,478,424
February	€219.966	€617.929	RE942.015	re24.035	€269.068	re79.137	re29,468	re53,990	RE3.347.813
March	€232.361	€601.193	re1.010.214	RE25.659	€284.527	re83.206	re30,942	re54,480	RE3.486.197
April	€228,427	€583,413	RE970.578	re24.842	€276.228	re77.765	RE31.568	re57.262	RE3.351.969
May	€239,125	€602,978	re1,020,619	re25,689	£280,999	re79,854	re32,455	re52,766	RE3,461,412
June	€230,102	€611,021	RE995,725	re24,817	£277,988	re78,454	re31,342	re54,893	RE3,385,539
July	€235,477	€649,924	re1,028,874	RE25,666	€293,443	re80,377	re31,842	re57,691	RE3,535,900
August	re229,163	re621,102	re1,040,664	re25,147	re289,965	re78,721	re31,839	re57,841	RE3,507,813
September	re222,034	re589,530	re1,001,508	re24,506	re281,416	re76,705	re29,942	re46,980	re3,363,224
October	€230,223	€614,155	€1,055,232	€26,047	€293,264	€80,693	€31,773	€57,045	€3,513,254
2024 10-month YTD	⊧2,292,636	€6,157,265	10,037,121	⊧252,649	⊧2,834,232	₽797,643	⊧312,517	⊧551,645	⊧34,431,543
2023 10-month YTD	2,360,498	6,272,372	9,538,962	234,310	2,603,868	796,375	315,211	617,470	34,174,340
2022 10-month YTD	2,290,966	6,275,752	8,841,226	215,665	2,351,432	864,451	325,305	641,811	32,632,909

^R Revised data.

RE Revised estimated data.

^E Estimated data.

Source: 2019-2023: U.S. Energy Information Administration (EIA), Natural Gas Annual 2023, Bureau of Safety and Environmental Enforcement (BSEE), IHS Markit, and Enverus. January 2024 through current month: Form EIA-914, Monthly Crude Oil and Lease Condensate, and Natural Gas Production Report; and EIA computations.

Note: For 2024 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 2024, 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.

Executive Summary

October 2024

Summary

In October 2024, the United States exported 648.8 Bcf and imported 262.6 Bcf of natural gas, which resulted in 386.2 Bcf of net exports.

U.S. LNG Exports

The United States exported 376.2 Bcf (58.0% of total U.S. natural gas exports) of natural gas in the form of liquefied natural gas (LNG) to 32 countries.

- Europe (194.8 Bcf, 51.8%), Asia (127.5 Bcf, 33.9%), Latin America/ Caribbean (32.3 Bcf, 8.6%), Africa (21.7 Bcf, 8.6%)
- 3.6% increase from September 2024
- 2.1% decrease from October 2023
- 88.6% of total LNG exports went to non-Free Trade Agreement countries (nFTA), while the remaining 11.4% went to Free Trade Agreement countries (FTA).

U.S. LNG exports to the top five countries of destination accounted for 40.8% of total U.S. LNG exports.

France (43.1 Bcf, 11.5%), Japan (30.0 Bcf, 8.0%), Netherlands (28.8 Bcf, 7.6%), India (27.4 Bcf, 7.3%), and Turkiye (24.1 Bcf, 6.4%).

U.S. Imports and Exports by Pipeline and Truck with Mexico

The United States exported 200.8 Bcf of natural gas to Mexico and imported less than 0.1 Bcf of natural gas from Mexico, which resulted in 200.8 Bcf of net exports.

- 2.3% decrease from September 2024
- 0.2% increase from October 2023

U.S. Imports and Exports by Pipeline and Truck with Canada

The United States exported 71.8 Bcf of natural gas to Canada and imported 262.6 Bcf of natural gas from Canada, which resulted in 190.8 Bcf of net imports.

- 4.1% increase from September 2024
- 10.7% increase from October 2023

U.S. Natural Gas Imports & Exports

Monthly Summary

U.S. Natural Gas Imports & Exports by Mode of Transport (October 2024)



1a. Monthly Summary: U.S. Natural Gas Imports & Exports by Mode of Transport

Volume (Bcf)		Monthly		Percentag	e Change
Mode of Transport	Oct 2024	Sep 2024	Oct 2023	Oct 2024 vs. Sep 2024	Oct 2024 vs. Oct 2023
Exports					
LNG by Vessel	376.1	363.0	384.3	4%	-2%
Pipeline	272.5	275.2	267.4	<1%	2%
Truck	<0.1	<0.1	<0.1	-24%	-19%
LNG by ISO Container	<0.1	<0.1	<0.1	45%	67%
Total	648.8	638.3	651.8	2%	<1%
Imports					
LNG by Vessel	0	2.1	0	-100%	-
Pipeline	262.5	253.1	239.1	4%	10%
Truck	<0.1	<0.1	0.2	41%	-61%
LNG by ISO Container	0	0	0	_	-
Total	262.6	255.2	239.3	3%	10%
Net Exports	386.2	383.1	412.5	<1%	-6%

Notes

- Natural gas imports & exports by truck included compressed natural gas (CNG) and liquefied natural gas (LNG).

- Does not include LNG Re-Exports or Puerto Rico LNG Imports or Exports. See Table 6 for LNG Re-Exports and Table 8 for Puerto Rico LNG Imports.
- Totals may not equal sum of components because of independent rounding.
- not applicable(-).

U.S. Natural Gas Imports & Exports

Year-to-Date and Annual Summary

U.S. Natural Gas Imports & Exports



1b. Year-to-Date and Annual Summary: U.S. Natural Gas Imports & Exports by Mode of Transport

Volume (Bcf)	Year-	to-Date (Ja	n-Oct)		Annua	
Mode of Transport	YTD 2024	YTD 2023	% Change	2023	2022	% Change
Exports						
LNG by Vessel	3,578.7	3,532.2	1%	4,341.2	3,861.9	12%
Pipeline	2,790.4	2,712.7	3%	3,266.6	3,040.8	7%
Truck	0.8	1.0	-11%	1.1	2.0	- 43%
LNG by ISO Container	0.8	1.0	-18%	1.1	2.1	-48%
Total	6,370.8	6,246.9	2%	7,610.0	6,906.8	10%
Imports						
LNG by Vessel	13.6	10.5	29%	13.2	23.5	-44%
Pipeline	2,630.7	2,474.5	6%	3,015.7	3,104.0	-3%
Truck	0.9	2.1	-56%	2.4	2.1	14%
LNG by ISO Container	0	0	-	0	0	-
Total	2,645.2	2,487.1	6%	3,031.2	3,129.6	-3%
Net Exports	3,726.3	3,759.8	<1%	4,578.8	3,777.1	21%

Notes

- Does not include LNG Re-Exports or Puerto Rico LNG Imports or Exports. See Table 6 for LNG Re-Exports and Table 8 for Puerto Rico LNG Imports and Exports.
- Totals may not equal sum of components because of independent rounding.
- not applicable(-)

U.S. Liquefied Natural Gas (LNG) Imports & Exports by Vessel and ISO Container



2a. Monthly Summary: U.S.-Produced LNG Exports by Mode of Transport and Point of Exit

Volume (Bcf)		Monthly		Percentag	e Change	No. of Cargos	No. of Countries	% nFTA	% Spot
Point of Exit	Oct 2024	Sep 2024	Oct 2023	Oct 2024 vs. Sep 2024	Oct 2024 vs. Oct 2023	Oct 2024	Oct 2024	Oct 2024	Oct 2024
LNG Exports by Vessel									
Sabine Pass, LA	128.9	121.1	132.4	6%	-3%	39	19	91%	0%
Freeport, TX	69.0	63.0	64.0	10%	8%	21	12	90%	10%
Corpus Christi, TX	66.8	64.6	63.4	3%	5%	20	16	89%	0%
Cameron, LA	53.7	51.9	59.5	3%	-10%	20	16	83%	0%
Cameron (Calcasieu Pass), LA	38.6	34.9	47.9	10%	-19%	12	9	83%	73%
Cove Point, MD	12.7	17.6	10.7	- 28%	19%	5	4	97%	0%
Elba Island, GA	6.4	6.9	6.5	-7%	-2%	2	2	100%	0%
Altamira, Tamaulipas, MX	<0.1	2.9	0	-98%	-	1	1	100%	0%
Total	376.1	363.0	384.3	4%	-2%	120	29	89%	9%
LNG Exports by ISO Container									
Ft. Lauderdale, FL	<0.1	<0.1	<0.1	45%	73%	31	3	100%	0%
Jacksonville, FL	0	0	0	-	-	-	0	0%	0%
Miami, FL	0	0	<0.1	-	-100%	-	0	0%	0%
Newark, NJ	0	0	0	-	-	-	0	0%	0%
Port of Savannah, GA	0	0	0	-	-	-	0	0%	0%
Total	<0.1	<0.1	<0.1	45%	67%	31	3	100%	0%
Total LNG Exports	376.2	363.0	384.4	4%	-2%	-	32	89%	9%

Notes

 Some cargos might be split cargos. Split cargos refer to a single shipment of LNG where portions of the cargo have different transactional characteristics.

- Totals may not equal sum of components because of independent rounding.
- not applicable(-).

U.S.-Produced LNG Exports

Year-to-Date and Annual Summary



2b. Year-to-Date and Annual Summary: U.S.-Produced LNG Exports by Mode of Transport and Point of Exit

Volume (Bcf)	Year-to	-Date (Jan	-Oct)		Annual		No. of Cargos	No. of Countries	% nFTA	% Spot
Point of Exit	YTD 2024	YTD 2023	% Change	2023	2022	% Change	YTD 2024	YTD 2024	YTD 2024	YTD 2024
LNG Exports by Vessel										
Sabine Pass, LA	1,252.4	1,216.2	3%	1,488.1	1,475.0	<1%	376	34	84%	0%
Corpus Christi, TX	606.7	613.4	-1%	742.0	753.3	-1%	195	33	89%	0%
Cameron, LA	539.9	534.5	1%	656.5	660.4	<1%	195	32	81%	0%
Freeport, TX	471.1	473.7	<1%	605.0	301.0	101%	165	26	78%	9%
Cameron (Calcasieu Pass), LA	409.9	398.5	3%	490.1	317.8	54%	124	28	88%	43%
Cove Point, MD	208.8	206.3	1%	250.7	245.9	2%	71	15	91%	0%
Elba Island, GA	86.4	89.7	-4%	108.7	108.4	<1%	37	12	92%	0%
Altamira, Tamaulipas, MX	3.7	0	-	0	0	-	3	3	80%	0%
Total	3,578.7	3,532.2	1%	4,341.2	3,861.9	12%	1,166	38	85%	6%
LNG Exports by ISO Container										
Ft. Lauderdale, FL	0.8	1.0	-18%	1.1	2.1	-48%	294	4	100%	0%
Miami, FL	<0.1	<0.1	-19%	<0.1	<0.1	-43%	-	2	100%	0%
Port of Savannah, GA	<0.1	0	-	0	0	-	-	1	100%	0%
Jacksonville, FL	0	0	-	0	<0.1	-100%	-	0	0%	0%
Newark, NJ	0	0	-	0	<0.1	-100%	-	0	0%	0%
Total	0.8	1.0	-18%	1.1	2.1	-48%	315	6	100%	0%
Total LNG Exports	3,579.5	3,533.2	1%	4,342.3	3,864.0	12%	-	42	85%	6%

Notes

- Some cargos might be split cargos. Split cargos refer to a single shipment of LNG where portions of the cargo have different transactional characteristics.

- Totals may not equal sum of components because of independent rounding.

not applicable(-).

5

U.S.-Produced LNG Exports

Monthly Summary

U.S.-Produced LNG Exports by Region of Destination (October 2024)



3a. Monthly Summary: U.S.-Produced LNG Exports by Mode of Transport and Region of Destination

Volume (Bcf)		Monthly Percentage Change		No. of Cargos	No. of Countries	% nFTA	% Spot		
Region of Destination	Oct 2024	Sep 2024	Oct 2023	Oct 2024 vs. Sep 2024	Oct 2024 vs. Oct 2023	Oct 2024	Oct 2024	Oct 2024	Oct 2024
LNG Exports by Vessel									
Europe	194.8	160.9	256.3	21%	-24%	62	13	100%	13%
Asia	127.5	148.4	105.2	-14%	21%	40	10	80%	3%
Latin America/ Caribbean	32.2	42.7	22.8	-25%	41%	12	5	45%	21%
Africa	21.7	11.0	0	98%	-	6	1	100%	0%
Total	376.1	363.0	384.3	4%	-2%	120	29	89%	9%
LNG Exports by ISO Container									
Latin America/ Caribbean	<0.1	<0.1	<0.1	45%	67%	31	3	100%	0%
Total	<0.1	<0.1	<0.1	45%	67%	31	3	100%	0%
Total LNG Exports	376.2	363.0	384.4	4%	-2%	-	32	89 %	9%

Notes

- Some cargos might be split cargos. Split cargos refer to a single shipment of LNG where portions of the cargo have different transactional characteristics.

- Totals may not equal sum of components because of independent rounding.

not applicable(-).

- The world region classification is based on the United Nation standard country or area codes for statistical use (M49). For classification purposes, Turkiye is grouped into Europe.

U.S.-Produced LNG Exports

Year-to-Date and Annual Summary

U.S.-Produced LNG Exports by Region of Destination



3b. Year-to-Date and Annual Summary: U.S.-Produced LNG Exports by Mode of Transport and Region of Destination

Volume (Bcf)	Year-to-Date (Jan-Oct)			Annual			No. of Cargos	No. of Countries	% nFTA	% Spot
Region of Destination	YTD 2024	YTD 2023	% Change	2023	2022	% Change	YTD 2024	YTD 2024	YTD 2024	YTD 2024
LNG Exports by Vessel										
Europe	1,780.2	2,299.9	-23%	2,860.7	2,662.4	7%	555	15	100%	7%
Asia	1,363.1	974.2	40%	1,186.1	956.2	24%	423	14	75%	3%
Latin America/ Caribbean	349.5	258.1	35%	294.4	243.3	21%	164	8	45%	8%
Africa	85.9	0	-	0	0	-	24	1	100%	21%
Total	3,578.7	3,532.2	1%	4,341.2	3,861.9	12%	1,166	38	85%	6%
LNG Exports by ISO Container										
Latin America/ Caribbean	0.8	1.0	-18%	1.1	2.1	-48%	314	5	100%	0%
Europe	<0.1	0	-	0	<0.1	-100%	-	1	100%	0%
Total	0.8	1.0	-18%	1.1	2.1	-48%	315	6	100%	0%
Total LNG Exports	3,579.5	3,533.2	1%	4,342.3	3,864.0	12%	-	42	85%	6%

Notes

- Some cargos might be split cargos. Split cargos refer to a single shipment of LNG where portions of the cargo have different transactional characteristics.

- Totals may not equal sum of components because of independent rounding.

- not applicable(-).

- The world region classification is based on the United Nation standard country or area codes for statistical use (M49). For classification purposes, Turkiye is grouped into Europe.

https://lngir.cheniere.com/news-events/press-releases/detail/310/cheniere-achieves-first-lng-at-thecorpus-christi-stage-3

Cheniere Achieves First LNG at the Corpus Christi Stage 3 Project

Download as PDF December 30, 2024 8:05am EST

HOUSTON--(BUSINESS WIRE)-- Cheniere Energy, Inc. ("Cheniere" or the "Company") (NYSE: LNG) today announced that liquefied natural gas ("LNG") was produced for the first time from the first train ("Train 1") of the Company's Corpus Christi Stage 3 Liquefaction Project ("CCL Stage 3"). The commissioning process continues, and Cheniere expects substantial completion of Train 1 to be achieved at the end of the first quarter of 2025, over six months ahead of the guaranteed completion date. Upon substantial completion, Bechtel Energy, Inc. ("Bechtel") will transfer care, custody and control of the completed train to Cheniere.

Full notice to proceed on CCL Stage 3 was issued to Bechtel by Cheniere in June 2022. CCL Stage 3 consists of seven midscale trains, with an expected total production capacity of over 10 million tonnes per annum ("mtpa") of LNG. As of November 30, 2024, overall project completion for CCL Stage 3 was 75.9%, which reflects engineering 96.8% complete, procurement 97.2% complete, subcontract work 87.7% complete and construction 39.2% complete. Upon substantial completion of all seven trains of CCL Stage 3, the expected total production capacity of the Corpus Christi liquefaction facility will be over 25 mtpa of LNG.

About Cheniere

Cheniere Energy, Inc. is the leading producer and exporter of LNG in the United States, reliably providing a clean, secure, and affordable solution to the growing global need for natural gas. Cheniere is a full-service LNG provider, with capabilities that include gas procurement and transportation, liquefaction, vessel chartering, and LNG delivery. Cheniere has one of the largest liquefaction platforms in the world, consisting of the Sabine Pass and Corpus Christi liquefaction facilities on the U.S. Gulf Coast, with total production capacity of approximately 45 mtpa of LNG in operation and an additional 10+ mtpa of expected production capacity under construction. Cheniere is also pursuing liquefaction expansion opportunities and other projects along the LNG value chain. Cheniere is headquartered in Houston, Texas, and has additional offices in London, Singapore, Beijing, Tokyo, and Washington, D.C.

For additional information, please refer to the Cheniere website at <u>www.cheniere.com</u> and Quarterly Report on Form 10-Q for the quarter ended September 30, 2024, filed with the Securities and Exchange Commission.

Forward-Looking Statements

https://www.newswire.ca/news-releases/venture-global-s-plaquemines-lng-achieves-historic-first-lng-production-864874088.html

Venture Global's Plaquemines LNG Achieves Historic First LNG Production

VENTURE GLOBAL LNG

News provided by Venture Global LNG

Dec 14, 2024, 03:31 ET

America's 8th LNG export facility reaches production 30 months from FID

ARLINGTON, Va., Dec. 14, 2024 /CNW/ -- Today, Venture Global announced it has reached first LNG production at the company's second facility, Plaquemines LNG, in Port Sulphur, Louisiana. Achieving this milestone for a 20 MTPA nameplate capacity project 30 months from its Final Investment Decision (FID) makes Plaquemines LNG one of the two fastest greenfield projects to reach first production, along with Venture Global's first facility Calcasieu Pass. Once fully operational, Plaquemines LNG will be among the largest facilities in the world.

"Venture Global is proud to have a world-class team wholly dedicated to our company's mission of innovating to provide reliable, low-cost, LNG to the world. Because of their hard work and commitment, Venture Global is executing on our promise to deliver much-needed LNG to our allies and strengthen global energy security and reliability. Reaching first LNG at Plaquemines at this pace will enable the United States to remain the top exporter of LNG in the world. Between current and planned facilities, Venture Global is prepared to invest \$50 billion in energy projects based in the United States which will create jobs, support local economies, strengthen the balance of trade and unleash much needed US LNG supply to our allies," said **Venture Global CEO & Co-Founder Mike Sabel**.

Plaquemines LNG reached a Final Investment Decision on Phase One in May 2022, and on Phase Two in March 2023. Because of Venture Global's unique configuration and construction approach, Plaquemines will produce and export LNG while construction and commissioning continues for the remainder of the project's 36 trains and associated facilities, unlocking significant additional US LNG supply years faster than any other new suppliers of LNG to the rapidly growing global market. This incremental supply has proven to be a valuable geopolitical asset for the United States especially in recent years during a time of historically tight global LNG markets and project delays.

About Venture Global

Venture Global is a long-term, low-cost provider of U.S. LNG sourced from resource rich North American natural gas basins. Venture Global's business includes assets across the LNG supply chain including LNG production, shipping and regasification. Venture Global's first facility, Calcasieu Pass, commenced producing LNG in January 2022. The company's second facility, Plaquemines LNG, achieved first production of LNG in December 2024. The company is currently constructing and developing over 100 MTPA of nameplate production capacity to provide clean, affordable energy to the world. Venture Global is developing Carbon Capture and Sequestration (CCS) projects at each of its LNG facilities.

SOURCE Venture Global LNG

September 3, 2024

North America's LNG export capacity is on track to more than double by 2028

North America liquefied natural gas export capacity by project (2016-2028) eia billion cubic feet per day history forecast Cedar LNG 25 Port Arthur projects under Woodfibre LNG construction **Rio Grande** 20 Canada Golden Pass Mexico Energia Costa Azul Fast LNG Altamira FLNG2 **United States** ING Canada 15 existing export capacity Corpus Christi Stage III Plaquemin United States Fast LNG Altamira FLNG1 Mexico 10 Calcasieu Pass Freeport Elba Island Cameron 5 Corpus Christi Cove Point Sabine Pass 0 2016 2018 2020 2022 2024 2026 2028

This TIE was updated September 6, 2024 to clarify a data point.

North America's liquefied natural gas (LNG) export capacity is on track to more than double between 2024 and 2028, from 11.4 billion cubic feet per day (Bcf/d) in 2023 to 24.4 Bcf/d in 2028, if projects currently under construction begin operations as planned. Between 2024 and 2028, we estimate LNG export capacity will grow by 0.8 Bcf/d in Mexico, 2.5 Bcf/d in Canada, and 9.7 Bcf/d in the United States from a total of 10 new projects that are currently under construction in the three countries.



North America liquefied natural gas export facilities, existing and under construction

Note: Bcf/d=billion cubic feet per day; LNG=liquefied natural gas; FLNG=floating liquefied natural gas

Mexico. Farlier this year, developers completed one of the two Floating ING production units (FING1) of the Fast Altamira ING

Data source: U.S. Energy Information Administration, *Liquefaction Capacity File*, and trade press Note: Export capacity shown is project's baseload capacity. Online dates of LNG export projects under construction are estimates based on trade press. LNG=liquefied natural gas; FLNG=floating liquefied natural gas

Mexico. Earlier this year, developers completed one of the two Floating LNG production units (FLNG1) of the Fast Altamira LNG project with a capacity of 0.2 Bcf/d and are currently constructing two projects with a combined LNG export capacity of 0.6 Bcf/d—<u>Fast LNG Altamira</u> FLNG2 offshore on Mexico's east coast, and Energía Costa Azul, located on Mexico's west coast.

- Fast LNG Altamira consists of two Floating LNG production units (FLNG), each with a capacity to liquefy up to 0.199 Bcf/d of natural gas, located off the coast of Altamira, in the state of Tamaulipas, Mexico. Natural gas from the United States delivered via the <u>Sur de Texas-Tuxpan</u> pipeline will supply these units. The FLNG1 unit started production this summer, and the <u>first LNG</u> <u>cargo</u> from this facility was shipped in August 2024. The FLNG2 unit is still under construction.
- The Energía Costa Azul LNG export terminal (0.4 Bcf/d export capacity) is located at the site of the existing LNG regasification (import) terminal in Baja California in western Mexico. Developers proposed an expansion of this project in Phase 2 by 1.6 Bcf/d. This project will be supplied with natural gas from the Permian Basin in the United States.

Developers have proposed other LNG export projects, all for Mexico's west coast, including <u>Saguaro</u> <u>Energia LNG</u> (2.0 Bcf/d capacity), <u>Amigo LNG</u> (1.0 Bcf/d capacity), <u>Gato Negro LNG</u> (0.6 Bcf/d capacity), <u>Salina Cruz LNG</u> (0.4 Bcf/d capacity), and <u>Vista Pacifico LNG</u> (0.5 Bcf/d capacity), with a combined capacity of 4.5 Bcf/d; however, none of these projects have reached a final investment decision or started construction.

Canada. Currently, three LNG export projects with a combined capacity of 2.5 Bcf/d are under construction in British Columbia on Canada's west coast. Developers of LNG Canada (1.8 Bcf/d export capacity) plan to start LNG exports from Train 1 in the summer 2025. <u>Woodfibre LNG</u> (export capacity 0.3 Bcf/d) targets the startup of LNG exports in 2027. <u>Cedar LNG</u>—a FLNG project with capacity to liquefy up to 0.4 Bcf/d—<u>made a final investment decision</u> in June 2024 and expects to start LNG exports in 2028. These projects will be supplied with natural gas from western Canada.

In addition, the <u>Canada Energy Regulator (CER) has authorized</u> four LNG export projects, including an expansion of LNG Canada, with a combined proposed LNG export capacity of 4.1 Bcf/d.

United States. Five LNG export projects are currently under construction with a combined export capacity of 9.7 Bcf/d—Plaquemines (Phase I and Phase II), Corpus Christi Stage III, Golden Pass, Rio Grande (Phase I), and Port Arthur (Phase I). Developers expect to produce the first LNG from Plaquemines LNG and Corpus Christi LNG Stage III and ship first cargoes from these projects by the end of 2024.

Principal contributor: Victoria Zaretskaya **Data visualization:** Jim O'Sullivan

Tags: natural gas, international, exports/imports, United States, liquid fuels, LNG (liquefied natural gas), map, Canada, Mexico, capacity

SUMMARY

About Our Annual Outlook

Accuracy, reliability, and neutrality are GasBuddy's mission when price forecasting, and it's achieved with the independent analysis featured in this 2025 Fuel Price Outlook. Note that this outlook speculates potential impacts of production, supply and demand changes, and a change in leadership in Washington.

With a new White House administration, uncertainties over policies such as tariffs and geopolitical tensions arise. This uncertainty, as well as the fluid state of the global economy, fiscal policy by central banks to tame inflation, and the timing of interest rate cuts could alter the direction of the economy, shifting fundamentals in significant ways.

Fuel markets are complex. This analysis is intended to take current factors and speculate on how events may impact gasoline prices in the future. GasBuddy works to make these forecasts as reliable as possible and to be understood by anyone with little to no background in oil and petroleum markets or economics.



Outlook assembled by

Patrick De Haan, head of petroleum analysis, has been called one of the most accurate fuel forecasters in the U.S. by the *San Jose Mercury News*. He has nearly two decades of experience analyzing fuel markets and has earned recognition as one of the most accurate forecasters of gas prices in the U.S. His insights are frequently sought after by media outlets to explain trends in fuel pricing, market volatility, and energy policies. De Haan is also a co-host of Over a Barrel, a podcast exploring the dynamics of the fuel industry and its impact on consumers.





REVIEW

GasBuddy Fuel Price Outlook Accuracy

To provide transparency about the accuracy of our Fuel Price Outlook, included are the outcomes of prior forecasts. GasBuddy's 2024 forecast saw one of the lowest margins of error since we began our forecasts in 2012, with a margin of error of 1.48%. Our 2024 Outlook was released December 28, 2023, projecting prices as far out as 369 days once it was publicly released. Since 2012, GasBuddy's forecast has been above the actual outcome nine of twelve years, with three years (2018, 2021, and 2023) in which the forecast was lower than the actual outcome. 2024's Outlook saw the third lowest margin of error of any yearly outlook issued by GasBuddy, with continued uncertainty over Russia's war on Ukraine, as well as a global economy that started to see various central banks lower interest rates as inflation rates cool.



GasBuddy Yearly Fuel Price Outlook, Forecast vs. Actual



2025 Gasoline Forecast

National Average

	Range of Possible	Average
January	\$2.92 - \$3.19	\$3.06
February	\$2.94 - \$3.28	\$3.11
March	\$3.18 - \$3.41	\$3.30
April	\$3.24 - \$3.67	\$3.46
Мау	\$3.34 - \$3.55	\$3.45
June	\$3.27 - \$3.48	\$3.38
July	\$3.21 - \$3.39	\$3.30
August	\$3.19 - \$3.56	\$3.38
September	\$3.07 - \$3.29	\$3.18
October	\$2.98 - \$3.21	\$3.10
November	\$2.89 - \$3.14	\$3.02
December	\$2.81 - \$2.97	\$2.89
Yearly U.S. Average		\$3.22



The above table reflects the predicted U.S. national average by month. Individual states will vary based on their location and taxes. California, for example, tends to be considerably higher than average while states like Texas and Oklahoma are considerably lower. Numbers reflect the lowest and highest likely daily national average price in the given month, with the predicted monthly average in bold. (\$/gal)



2025 Gasoline Forecast: Select Holidays

National Average

	Range of Possible	Confidence Level
New Year's Day	\$2.92 - \$3.13	95%
Martin Luther King, Jr. Day	\$2.97 - \$3.18	85%
President's Day	\$3.09 - \$3.28	75%
Easter	\$3.44 - \$3.72	70%
Memorial Day	\$3.38 - \$3.68	75%
July Fourth	\$3.31 - \$3.58	80%
Labor Day	\$3.26 - \$3.69	65%
Columbus Day	\$3.13 - \$3.34	70%
Halloween	\$3.03 - \$3.25	75%
Veterans Day	\$2.95 - \$3.21	80%
Thanksgiving	\$2.89 - \$3.18	80%
Christmas	\$2.83 - \$3.14	75%



The above table reflects the predicted U.S. national average by month. Individual states will vary based on their location and taxes. California, for example, tends to be considerably higher than average while states like Texas and Oklahoma are considerably lower. Numbers reflect the lowest and highest likely daily national average price in the given month, with the predicted monthly average in bold. (\$/gal)



2025 Gasoline Forecast





2025 Gasoline Forecast



2025 Projected Total U.S. Gasoline Spending: \$410.8 billion					
2019	\$372.2 billion	2022	\$526.3 billion		
2020	\$280.0 billion	2023	\$479.2 billion		
2021	\$408.4 billion	2024	\$423.1 billion		



2025 Gasoline Forecast



2025 Projected Average Household Gasoline Spending: \$2,252						
2016	2016 \$1,580 2019 \$1,952 2022 \$2,715					
2017	\$1,781	2020	\$1,294	2023	\$2,445	
2018	\$2,034	2021	\$1,979	2024	\$2,234	



Highest Daily Average Gas Price, Select Cities: 2025

City	Highest Daily Average
Atlanta	\$3.41 - \$3.65
Boston	\$3.57 - \$3.89
Chicago	\$4.03 - \$4.49
Cleveland	\$3.61 - \$3.86
Dallas/Ft. Worth	\$3.40 - \$3.64
Denver	\$3.41 - \$3.65
Detroit	\$3.67 - \$3.93
Houston	\$3.12 - \$3.34
Los Angeles	\$5.13 - \$5.82
Miami	\$3.61 - \$3.86
Minneapolis	\$3.38 - \$3.62
New York City	\$3.73 - \$3.99
Orlando	\$3.60 - \$3.85
Philadelphia	\$3.68 - \$3.95
Phoenix	\$4.28 - \$4.59
Sacramento	\$5.11 - \$5.73
San Francisco	\$5.32 - \$5.96
Seattle	\$4.87 - \$5.14
St. Louis	\$3.49 - \$3.74
Tampa	\$3.60 - \$3.85
Washington, DC	\$3.65 - \$3.93





Yearly State Average: 2025

State	2025 Average (\$/gal)		
Alabama	\$2.82-\$3.18	Montana	\$3.12-\$3.51
Alaska	\$3.59-\$4.04	Nebraska	\$2.92-\$3.29
Arizona	\$3.32-\$3.73	Nevada	\$3.80-\$4.28
Arkansas	\$2.77-\$3.11	New Hampshire	\$3.05-\$3.43
California	\$4.50-\$5.07	New Jersey	\$3.06-\$3.44
Colorado	\$2.95-\$3.32	New Mexico	\$2.92-\$3.29
Connecticut	\$3.17-\$3.56	New York	\$3.22-\$3.63
Delaware	\$3.08-\$3.47	North Carolina	\$2.97-\$3.34
Florida	\$3.12-\$3.51	North Dakota	\$2.96-\$3.33
Georgia	\$2.98-\$3.35	Ohio	\$3.06-\$3.45
Hawaii	\$4.40-\$4.95	Oklahoma	\$2.70-\$3.04
Idaho	\$3.25-\$3.66	Oregon	\$3.68-\$4.14
Illinois	\$3.42-\$3.84	Pennsylvania	\$3.33-\$3.75
Indiana	\$3.13-\$3.53	Rhode Island	\$3.06-\$3.44
lowa	\$2.92-\$3.28	South Carolina	\$2.85-\$3.21
Kansas	\$2.82-\$3.17	South Dakota	\$2.91-\$3.27
Kentucky	\$2.92-\$3.29	Tennessee	\$2.80-\$3.15
Louisiana	\$2.75-\$3.09	Texas	\$2.76-\$3.10
Maine	\$3.13-\$3.52	Utah	\$3.20-\$3.61
Maryland	\$3.18-\$3.58	Vermont	\$3.16-\$3.55
Massachusetts	\$3.10-\$3.49	Virginia	\$3.06-\$3.44
Michigan	\$3.20-\$3.60	Washington	\$3.98-\$4.48
Minnesota	\$2.98-\$3.35	West Virginia	\$3.07-\$3.45
Mississippi	\$2.69-\$3.03	Wisconsin	\$2.97-\$3.34
Missouri	\$2.86-\$3.22	Wyoming	\$2.98-\$3.35



Forecasting Volatility

The volatility of fuel prices remains a critical topic in economic and energy discussions, with a range of factors influencing the unpredictable nature of global and domestic fuel markets. Geopolitical tensions, changes in U.S. presidential administrations, seasonal disruptions and structural industry challenges all contribute to the fluctuating prices consumers experience at the pump. These factors do not operate in isolation but often intersect, amplifying their effects on the economy and consumer behavior.

Geopolitical Tensions and Fuel Price Volatility

One of the most significant drivers of fuel price volatility is geopolitical tension. Oil markets are highly sensitive to global events, particularly those occurring in major oil-producing regions. For example, conflicts in the Middle East, such as those involving Iran or Saudi Arabia, can threaten the stability of oil supply routes, like the Strait of Hormuz, through which a significant percentage of the world's oil is transported. Disruptions or even the threat of conflict in such regions can cause oil prices to spike as markets react to potential supply shortages.

In addition, geopolitical sanctions imposed on oil-exporting nations, such as Russia or Venezuela, can limit global oil supply. The recent sanctions on Russian oil following its invasion of Ukraine, for instance, caused widespread disruptions in global energy markets, forcing many nations to seek alternative sources. This created upward pressure on prices as demand outpaced available supply, further illustrating how political actions reverberate across fuel markets.

Influence of U.S. Presidential Policies

The transition to a new U.S. president can bring policy shifts, but their direct influence on oil markets is often overstated. U.S. oil companies primarily follow market economics, such as global supplydemand balances and profit potential, rather than presidential directives. Policies emphasizing renewable energy or stricter environmental regulations may affect long-term investment trends but have limited short-term impact on domestic oil production. For example, while President Biden's administration has prioritized climate initiatives, U.S. oil production has remained resilient due to favorable market conditions.

Continued on the next page



Forecasting Volatility

However, some presidential decisions can have targeted impacts. For instance, President-elect Trump's potential tariffs on Canada and Mexico could disrupt critical supply chains and create significant economic consequences if implemented. Similarly, decisions to release oil from or replace oil to the Strategic Petroleum Reserve (SPR) may provide only temporary relief, as the SPR has a finite capacity, and its impact on global prices fades over time. OPEC policies, rather than U.S. presidential actions, typically wield greater influence on oil and gas prices. While presidential diplomacy with OPEC could be a factor in future policy considerations, OPEC ultimately prioritizes its own interests over those of the U.S.

Seasonal Factors: Hurricane Season and Refinery Constraints

Seasonal disruptions, particularly those associated with hurricane season, add another layer of unpredictability to fuel prices. The U.S. Gulf Coast is home to a significant concentration of oil refineries and infrastructure. Hurricanes can force refineries to shut down, disrupt production, and damage critical infrastructure, causing temporary supply shortages. For example, Hurricane Harvey in 2017 led to widespread refinery closures along the Gulf Coast, which resulted in a rapid increase in gasoline prices across the country.

The aging infrastructure of U.S. refineries also exacerbates this volatility. Many refineries operate at or near capacity, leaving little room to adjust to sudden disruptions. Maintenance issues, unexpected breakdowns, or delays in upgrading facilities can reduce output, further tightening the supply-demand balance. On the global stage, however, refining capacity has improved in recent years. Major projects in Asia and the Middle East have added significant capacity. Saudi Arabia's Jazan refinery and China's Zhejiang Petrochemical have contributed to this growth, helping to offset reductions in U.S. refining capacity and easing global supply constraints.

Current Events and Economic Volatility

Current events, such as pandemics, wars, or economic downturns, further influence fuel markets. The COVID-19 pandemic provides an impactful example. The initial lockdowns in 2020 caused a collapse in demand for oil, leading to historically low prices and even temporary negative oil prices as storage facilities filled up. However, the subsequent economic recovery saw a rapid rebound in demand, outpacing supply and causing prices to surge.

Continued on the next page



Forecasting Volatility

Similarly, economic instability, such as inflation or recessions, can indirectly impact fuel prices. High inflation erodes consumer purchasing power, potentially reducing demand for fuel. Conversely, during periods of robust economic growth, increased industrial activity and consumer travel can drive up demand and prices.

Less Predictable Factors: Market Speculation and Global Transitions

Beyond these more tangible influences, speculative trading in oil markets adds another dimension of unpredictability. Traders often react to news or anticipated events, sometimes driving prices higher or lower in ways that deviate from fundamental supply-demand dynamics. For instance, fears of a recession may lead traders to sell oil futures, pushing prices down, even if immediate demand remains strong.

Global energy transitions, such as the shift toward renewable energy and the adoption of electric vehicles (EVs), also contribute to long-term uncertainties. While these transitions are expected to reduce reliance on fossil fuels, the pace of adoption and the ability of renewables to meet growing energy demands remain uncertain. In the short term, these transitions can create volatility as markets adjust to changing energy landscapes.

Content continues on next page



https://news.cgtn.com/news/2024-12-31/Full-text-of-President-Xi-Jinping-s-2025-New-Year-address-1zMHVlOadgY/p.html

Full text of President Xi Jinping's 2025 New Year address

Politics21:50, 31-Dec-2024

CGTN

On New Year's eve, Chinese President Xi Jinping delivered his 2025 New Year address through China Media Group and the Internet. The following is the full text of the address:

Greetings to everybody! Time flies fast, and the new year will be with us shortly. I extend my best wishes to you all from Beijing.

In 2024, we have together journeyed through the four seasons. Together, we have experienced winds and rains and seen rainbows. Those touching and unforgettable moments have been like still frames showing how extraordinary a year we have had.

We have proactively responded to the impacts of the changing environment at home and abroad. We have adopted a full range of policies to make solid gains in pursuing high-quality development. China's economy has rebounded and is on an upward trajectory, with its GDP for the year expected to pass the 130 trillion yuan mark. Grain output has surpassed 700 million tons, and China's bowls are now filled with more Chinese grain. Coordinated development across regions has gained stronger momentum, and mutually reinforcing advances have been made in both new urbanization and rural revitalization. Green and low-carbon development has been further enhanced. Indeed, a more beautiful China is unfolding before us.

We have fostered new quality productive forces in light of actual conditions. New business sectors, forms and models have kept emerging. For the first time, China has produced more than 10 million new energy vehicles in a year. Breakthroughs have been made in integrated circuit, artificial intelligence, quantum communications and many other fields. Also for the first time, the Chang'e-6 lunar probe collected samples from the far side of the moon. The Mengxiang drilling vessel explored the mystery of the deep ocean. The Shenzhen-Zhongshan Link now connects the two cities across the sea. The Antarctic Qinling Station is now in operation on the frozen continent. All this epitomizes the lofty spirit and dreams of the Chinese people to explore stars and oceans.

This year, I have visited many places across the country and seen how our people enjoy their enriching lives. I saw the big, red Huaniu apples in Tianshui, Gansu and the fishing boats in Aojiao Village, Fujian loaded with their catches. I watched the millenium-old "Eastern Smile" in the Maiji Mountain Grottoes, and I learned more about good-neighborliness passed from generation to generation in Liuchixiang Alley. I enjoyed the hustle and bustle in Tianjin's Ancient Culture Street, and I saw how the people in Yinchuan's mixed-ethnic residential communities live together as one family. The concerns of the people about jobs and incomes, elderly and child care, education and medical services are always on my mind. This year, basic pension has been raised, and mortgage rates have dropped. Cross-province direct settlement of medical bills has been expanded, making it easier for people to seek medical treatment across the

country. And consumer goods trade-in programs have improved people's lives... All these are real benefits to our people.

In the Paris Olympics, Chinese athletes raced to the top and achieved their best performance in Olympic Games held overseas, fully demonstrating the vigor and confidence of young Chinese. The PLA Navy and Air Force celebrated their 75th birthdays, and our servicemen and women are full of drive. When floods, typhoons and other natural disasters struck, members of the Communist Party of China and officials stepped forward to lead disaster relief efforts, and our people were of one mind and reached out to each other. People in all fields – workers, builders and entrepreneurs, among others – are working hard to fulfill their dreams. I presented awards to recipients of national medals and honorary titles. The honor belongs to them; it also belongs to every hard-working person who has lived up to their responsibilities.

In a world of both transformation and turbulence, China, as a responsible major country, is actively promoting global governance reform and deepening solidarity and cooperation among the Global South. We are making deeper and more substantive advances in high-quality Belt and Road cooperation. The Beijing Summit of the Forum on China-Africa Cooperation was a full success. We put forward China's vision at the Shanghai Cooperation Organization, BRICS, APEC, G20 and other bilateral and multilateral forums. We have contributed greatly to the maintenance of world peace and stability.

We celebrated the 75th anniversary of the founding of New China. With deep affection, we looked back at the sea change that has taken place across China since the birth of the People's Republic. Nurtured by our 5,000-plus years of continuous civilization, our country, China, is engraved not only on the bottom of the ancient bronze ritual wine vessel of He Zun, but also in the heart of every Chinese. At its Third Plenary Session, the 20th Central Committee of the Communist Party of China sounded a clarion call for further deepening all-round reform. We will march forward in great strides to advance reform and opening up as the trend of our times. We will surely embrace even broader prospects in pursuing Chinese modernization in the course of reform and opening up.

In 2025, we will fully complete the 14th Five-Year Plan. We will implement more proactive and effective policies, pursue high-quality development as a top priority, promote greater self-reliance and strength in science and technology, and maintain sound momentum in economic and social development. The Chinese economy now faces some new conditions, including challenges of uncertainties in the external environment and pressure of transformation from old growth drivers into new ones. But we can prevail with our hard work. As always, we grow in the wind and rain, and we get stronger through hard times. We must be confident.

Of all the jobs in front of us, the most important is to ensure a happy life for our people. Every family hopes that their children can have a good education, their seniors can enjoy good elderly services, and their youngsters can have more and better opportunities. These simple wishes are our people's aspirations for a better life. We should work together to steadily improve social undertakings and governance, build a harmonious and inclusive atmosphere, and settle real issues, big or small, for our people. We must bring more smiles to our people and greater warmth to their hearts.

On the eve of the 25th anniversary of Macao's return to the motherland, I visited the city again, and I was gratified to see the new progress and changes there. We will unswervingly implement the policy of "One

Country, Two Systems" to maintain long-term prosperity and stability in Hong Kong and Macao. We Chinese on both sides of the Taiwan Straits belong to one and the same family. No one can ever sever the bond of kinship between us, and no one can ever stop China's reunification, a trend of the times.

As changes unseen in a century accelerate across the world, it is important to rise above estrangement and conflict with a broad vision, and care for the future of humanity with great passion. China will work with all countries to promote friendship and cooperation, enhance mutual learning among different cultures, and build a community with a shared future for mankind. We must jointly create a better future for the world.

Dreams and wishes may be far, but they can be fulfilled with dedicated pursuit. On the new journey of Chinese modernization, everyone is a key actor, every effort counts, and every ray of light shines.

Splendor adorns our motherland, and starlight graces every home. Let us greet the new year with hope. May our great country enjoy harmony and prosperity! May all your dreams come true! May you all have a new year of happiness and peace!

Source(s): Xinhua News Agency
https://www.yicaiglobal.com/news/consumption-growth-in-chinas-smaller-county-level-citiesoutstrips-the-big-metropolises

China's Smaller Cities Beat Big Metropolises for Consumption Growth, Data Shows

Lin Jing

DATE: Dec 27 2024

/ SOURCE: Yicai



China's Smaller Cities Beat Big Metropolises

for Consumption Growth, Data Shows

(Yical) Dec. 27 -- Consumption in China's county-level cities and rural areas is growing faster than that in the bigger first- and second-tier municipalities thanks to an expanding middle class with more spending power, according to the latest data.

Only six out of China's 31 provincial-level regions logged more than 5 percent growth in the retail sales of consumer goods in the first three quarters from a year earlier, according to the National Bureau of Statistics.

These were Xizang Autonomous Region, Henan province, Hunan province, Shandong province, Jiangxi province and Hubei province, and most of them are in the less-developed central and western parts of the country with lower urbanization rates.

This far outstripped the national average of 3.3 percent growth in the first nine months to CNY35.3 trillion (USD4.9 trillion), according to NBS' figures.

County-level cities have maintained relatively rapid economic expansion in recent years as they become destinations of substantial industrial transfers, thanks to the development of urban clusters and metropolitan circles in the country.

Municipalities with significant potential for urbanization have seen notable increases in consumption growth. In the first 11 months, <u>Zhoukou</u> in Henan province logged a 6.6 percent rise in its sales of consumer goods, while Nanyang in Henan province recorded a 6.1 percent jump and Hengyang in Hunan province witnessed a 6.9 percent surge.

Compared to large cities with higher housing prices and living costs, small and medium-sized metropolises offer residents a life with less pressure and more leisure time. Thus, the middle class in county towns is pursuing a more refined style of consumption.

The volume of on-demand retail orders in county-level and other lower tier cities, which refers to instant delivery of online orders from brick-and-mortar outlets in the vicinity, jumped 54 percent in the first eight months year on year, according to data released at the <u>Meituan</u> Instant Retail Industry Conference in October.

Meituan is also putting more focus on county-level economies, the Beijing-based company said during its third-quarter earnings call.

Other well-known brands are also developing strategies to enter county-level cities. For example, fast food chain KFC has developed a "small town mini-store model," to lower the investment needed to open new outlets. By streamlining menus and optimizing equipment, the Kentucky-based firm has reduced costs to as little as CNY500,000 (USD68,518) per new store, making it KFC's store model with the lowest investment cost.

Editor: Kim Taylor

Embargoed until 0945 CST (0145 UTC) 2 January 2025

Caixin China General Manufacturing PMI®

Manufacturing sector expansions continues at end of 2024

China's manufacturing sector continued to expand in the final month of 2024. That said, the degrees to which new orders and production rose were both softer. Overall sales were dampened by falling export orders. Employment levels also declined, as business optimism eased. Chinese manufacturers also lowered their selling prices, opting to absorb price increases to support sales.

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 – fell to 50.5 in December, down from 51.5 in November. Posting above the 50.0 neutral mark, the latest data signalled that conditions in the manufacturing sector improved for a third consecutive month. The fall in the PMI however indicated that the pace of growth eased since November and was marginal overall.

Manufacturing production in China increased for a fourteenth successive month in December. That said, the rate of expansion decelerated to a marginal pace as new order growth slowed. While improvements in underlying demand and successful business development efforts led to incoming new orders rising for a third straight month, the rate of growth eased on the back of softening external demand. Indeed, export orders contracted after increasing at the fastest pace in seven months in November.

Meanwhile, higher new orders led to a third monthly increase in purchasing activity. Stocks of purchases rose in tandem, with anecdotal evidence highlighting intentions of safety stock building among some manufacturers. Despite higher buying activity, vendor performance improved for the first time since May (albeit only marginally). Postproduction inventory also accumulated in December, rising for a seventh successive month. The rate of expansion eased, however, as production growth slowed.

Rising new orders led to another round of backlog accumulation at the end of year. The rate of accumulation eased to a marginal level, however. As a result of softening capacity pressure, manufacturing headcounts fell again in December though at the softest pace in the current four-month sequence.

Turning to prices, average selling prices declined for the first time since September. Although the rate of decline was modest, this contrasted with another increase in input prices. Panellists indicated that they had absorbed cost increases and further lowered selling prices to support sales. Export charges also declined in December.

Finally, business confidence eased in the latest survey period. Chinese manufacturers were the least upbeat since September. This was as concerns about the outlooks for growth and trade, especially amidst the US tariffs threat, challenged hopes for new product- and policy-driven sales growth in the new year.

China General Manufacturing PMI



Sources: Caixin, S&P Global PMI

Key findings:

New orders and output growth both slow from November

Employment down marginally

Average selling prices decline despite rising input prices



New Export Orders Index



Employment Index



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 50.5 in December, down 1 point from November and marking the third straight month of expansion.

"Supply and demand expanded. Manufacturers' output and demand continued to grow as the market improved. The gauge for output stayed in expansionary territory for the 14th consecutive month, while total new orders rose for the third straight month. However, both grew at a slower clip as the production and sales of investment goods fell.

"Exports dragged on demand amid mounting uncertainties stemming from the overseas economic environment and global trade. The corresponding indicator was in contractionary territory for the fourth time in the past five months.

"Employment continued to shrink. Improved market conditions over the past few months failed to boost the labor market. Manufacturers maintained a cautious approach to hiring, keeping employment in contraction for the fourth straight month. Companies producing investment products and intermediate goods experienced a more significant reduction in the workforce, while employment at consumer goods producers remained stable.

"Backlogs of work continued to grow amid rising demand, with the corresponding gauge staying in expansionary territory for the third straight month.

"Higher input costs were accompanied by lower output prices. Input costs increased for the third consecutive month, driven by rising raw material prices, albeit to a limited extent. By contrast, output prices fell for the fourth time in the past six months as the market remained competitive, pushing companies to cut prices to boost sales. Noticeably, the gauge was in contractionary territory nine times last year.

"Supplier logistics accelerated moderately with the subindex entering expansionary territory for the first time since May. Manufacturers' purchases and inventories of raw materials and finished goods continued to increase, although at a slower pace than in the previous month.

"Business optimism weakened. Concerns among surveyed companies focused on the economic recovery outlook and the trade conflict between China and the U.S. Future output expectations continued to grow, but the gauge dropped by more than 3 points from November.

"Overall, in December, supply and demand expanded. Businesses purchased more to add to their stocks. However, external demand was sluggish and the job market underwent a notable contraction. Prices on the sales front were weak and market optimism was diminished.

"Since late September, the synergy of existing policies and additional stimulus measures has continued to act on the market, producing more positive factors. The economy in general remains stable, on the path to achieving the main goals set for this year.

"That said, it is worth noting that prominent downward pressures remain, with tepid domestic demand and mounting unfavorable external factors. Meanwhile, employment remains sluggish and profit margins have been squeezed, leading to a decline in market optimism. In December, some of the Caixin manufacturing PMI survey's gauges declined, suggesting more time is needed to assess the consistency and effectiveness of previous policy stimulus.

"The external environment is expected to be more complex this year, requiring early policy preparation and instant response. In addition, future policy efforts should focus more on increasing household income and improving people's livelihoods, with particular attention paid to increasing socially disadvantaged groups' ability and willingness to spend."

2. A World with Lower Oil Prices?

The world has the ambition to wean itself off most of its fossil fuel use as it aims to limit global warming, and as many as 196 countries have signed on to this mission in the form of the Paris Agreement of 2015.

Airlines have been on this course since 2016 when the United Nation's specialized agency for civil aviation, ICAO (International Civil Aviation Organization), created the world's first sectoral global market-based measure to reduce emissions from international air transportation. IATA and ICAO committed to reaching net-zero CO2 emissions by 2050 in 2021 and 2022, respectively, making air transportation uniquely aligned across the private and public sectors.

Fossil-based jet fuel is the largest cost component of airlines, representing around 30% of total costs in 2024 for the industry globally. The challenge for the airline industry is to replace this with mostly renewable fuel, known as sustainable aviation fuel, or SAF. Airlines' quest for renewable alternatives is not unique to our industry. It concerns each and every industry in the global economy. As of 2023, coal, oil, and natural gas comprise 80% of the global energy mix (2023).¹ This share needs to decline to around 20% on the 2050 horizon. We are all part of the global energy transition, and all parts of the global economy must find renewable and cleaner energy alternatives to fossil fuels in their products and processes.

Airlines cannot use solar or wind energy, the cheapest energies in the world today,² to fly aircraft. Airlines still need liquid fuel to combust for propulsion, and the switch from fossil fuel to SAF involves a staggering price increase, as SAF is between 2-5 times more expensive than fossil-based jet fuel. In our Financial Roadmap,³ we estimate that the fuel share of airlines' costs could reach 45% in 2050. Clearly, this SAFjet fuel price differential must shrink for air transportation's wholesale energy-source shift to occur. This will not happen unless policymakers focus on implementing long-term plans for the whole economy's decarbonization and implementing incentives reflecting all economic sectors' requirements. Airlines are an integral part of that whole, and importantly, solving air transportation's challenges will go a long way toward solving those of the broader economy. Any savings on the fossil fuel bill can, of course, help airlines pay for SAF and assist public and private sector investors in raising the necessary capital to enable future production of SAF and other decarbonization levers. At the time of writing, the Brent crude oil price stood at USD 74 per barrel, which is about USD 20 lower than a year ago, a 20% decrease. The US presidential election result adds a further downward bias to the oil price (Box 1), as the President elect Donald Trump has promised to "drill baby, drill". It is, therefore, important to consider the possible implications of lower oil prices on the global economy and the airline industry, especially in the context of the global energy transition.

Lower oil prices can lower inflation

The most direct impact of lower oil prices is seen in headline consumer price inflation (Chart 1). In September, the energy component of the US consumer price index (CPI) fell by 6.8% year-on-year (YoY), allowing the all-items CPI inflation to moderate to 2.4% YoY, while excluding food and energy, the rate of inflation was 3.3% YoY. Depending on how transitory central banks might deem the lower oil prices to be, the lower headline inflation should allow for more monetary policy easing, all things being equal.



Chart 1: Average US consumer prices, 2000-2024, % YoY

Source: Macrobond, US Bureau of Labor Statistics

¹ IEA, World Energy Outlook 2024, data for 2023.

² IEA, Renewables 2023 report.

³ IATA Finance – Net Zero CO2 Emissions Roadmap (September 2024).

Sustainable Aviation Fuel and CORSIA

Sustainable Aviation Fuel (SAF) is of critical importance in the aviation industry's decarbonizing efforts. How much of the world's total renewable energy production will be in the form of SAF will depend on the production pathway, operators' optimization of the product mix at refineries, and policy drivers. According to our estimates, SAF production has been around 1 Mt in 2024. The airline industry has consumed all of the SAF produced at a hefty price tag of USD 2,350 per tonne (or 3.1x jet fuel) in 2024, adding an incremental USD 1.7 billion to the industry fuel bill. In 2025, we estimate that SAF production could rise to 2 Mt and or 0.6% of airlines' total fuel consumption, adding USD 3.8 billion to the fuel bill at USD 2,500 per tonne (or 3.8x conventional jet fuel).

Over the past two years, the aviation industry has signed 96 SAF offtake agreements to support the ramp-up of SAF production and secure supply (Chart 30). Of these, 70 are

Chart 30: Number of SAF offtake agreements, as of June 2024

binding purchase commitments, and 26 are non-binding. Globally, 70 airlines, three aircraft manufacturers, and one airport publicly announced at least one SAF purchase agreement as of June 2024.

An additional cost will come from the carbon offsetting and reduction scheme for international aviation (CORSIA), a global market-based carbon offsetting mechanism designed to stabilize international aviation emissions. We estimate that the air transport industry will offset between 23 and 37 million tonnes of CO2 under CORSIA in 2024, costing airlines between USD 460 million and USD 925 million. For 2025 we forecast that the industry will offset between 36 and 55 million tonnes of CO2 at a cost USD 540 million and USD 1,375 million price range (Chart 31). In our forecast we use the mid-point of these two estimates (Table 7).



Source: IATA Sustainability and Economics

Chart 31: CORSIA offsetting requirements forecast (Sep24), million tonnes of CO2



Source: IATA Sustainability and Economics

Press Release

ATA Truck Tonnage Index Contracted 1.9% in November

Dec 24, 2024

Measure of Trucking Activity Continues a Seesaw Pattern

Washington — Trucking activity in the United States contracted in November, according to the American Trucking Associations' advanced seasonally adjusted For-Hire Truck Tonnage Index, just the second decrease since July.



"The frustratingly choppy freight environment continued in November," said **ATA Chief Economist Bob Costello.** "Since hitting a low in January of this year, tonnage is up a total of 1.1%, but the path has been fraught with nice gains one month only to come back down the next. The good news is that the overall trend this year is up, albeit at a slow rate."

In November, the ATA advanced seasonally adjusted For-Hire Truck Tonnage Index equaled 112.5 compared with 114.6 in October. The index, which is based on 2015 as 100, was down 1% from the same month last year.

The not seasonally adjusted index, which calculates raw changes in tonnage hauled, equaled 109.6 in November, 9.6% below October.

The seasonally adjusted decrease follows a sequential 1.2% gain in October, which was unchanged from the November 19 press release.

Trucking serves as a barometer of the U.S. economy, representing 72.6% of tonnage carried by all modes of domestic freight transportation, including manufactured and retail goods. Trucks hauled 11.46 billion tons of freight in 2022. Motor carriers collected \$940.8 billion, or 80.7% of total revenue earned by all transport modes.

Both indices are dominated by contract freight, as opposed to traditional spot market freight. The tonnage index is calculated on surveys from its membership and has been doing so since the 1970s. This is a preliminary figure and subject to change in the final report issued around the 5th day of each month. The report includes month-to-month and year-over-year results, relevant economic comparisons, and key financial indicators.

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Texas Upstream Employment Dips in November After Five Consecutive Months of Growth

Austin, Texas – Citing the latest Current Employment Statistics (CES) report from the U.S. Bureau of Labor Statistics (BLS), the Texas Independent Producers and Royalty Owners Association (TIPRO) today highlighted new employment figures showing a decline in upstream employment in Texas in the month of November following five months of consecutive growth. According to TIPRO's analysis, direct Texas upstream employment for November totaled 194,400, a decrease of 1,500 industry positions from October employment numbers, subject to revisions. This represented a decline of 600 jobs in Oil and Gas Extraction and 900 in the Services sector. TIPRO notes that employment fluctuations are normal and demand for talent remains high in the Texas oil and natural gas industry.

TIPRO's new workforce data yet again indicated strong job postings for the Texas oil and natural gas industry. According to the association, there were 10,157 active unique jobs postings for the Texas oil and natural gas industry last month, including 3,047 new postings. In comparison, the state of California had 3,476 unique job postings in November, followed by New York (2,530), Florida (1,784), Pennsylvania (1,340) and Oklahoma (1,521). TIPRO reported a total of 51,420 unique job postings nationwide last month within the oil and natural gas sector.

Among the 19 specific industry sectors TIPRO uses to define the Texas oil and natural gas industry, Gasoline Stations with Convenience Stores led in the ranking for unique job listings in November with 2,563 postings, followed by Support Activities for Oil and Gas Operations (2,319) and Crude Petroleum Extraction (690). The leading three cities by total unique oil and natural gas job postings were Houston (2,538), Midland (717) and Odessa (396), said TIPRO.

The top three companies ranked by unique job postings in November were Cefco (1,218), Love's (634) and John Wood Group (329), according to the association. Of the top ten companies listed by unique job postings last month, five companies were in the services sector, two in the gasoline stations with convenience stores category, two midstream companies, and one oil and gas operator. Top posted industry occupations for November included first-line supervisors of retail sales workers (626), general maintenance and repair workers (302) and customer service representatives (283). The top posted job titles for November included customer service representatives (245), store managers (245), and maintenance people (181).

Top qualifications for unique job postings included valid Driver's License (1,692), Commercial Driver's License (CDL) (278) and Transportation Worker Identification Credential Card (181). TIPRO reports that 41 percent of unique job postings had no education requirement listed, 34 percent required a bachelor's degree and 26 percent required a high school diploma or GED. There were 1,666 advertised salary observations (16 percent of the 10,157 matching postings) with a median salary of \$62,300. The highest percentage of advertised salaries (26 percent) were in the \$90,000 to \$519,000 range.

Additional TIPRO workforce trends data:

- A sample of industry job postings in Texas for November 2024 can be viewed here.
- The top three posting sources in November included <u>www.indeed.com</u> (4,247), <u>www.simplyhired.com</u> (2,715) and <u>www.dejobs.org</u> (2,278).

TIPRO also highlights tax contributions by the oil and gas industry for essential government coffers. In November, Texas energy producers paid \$488 million in oil production taxes, according to recent data released by the Texas comptroller's office. Producers last month also paid \$157 million to the state in natural gas production taxes. Production taxes paid by the oil and natural gas industry are used to support major revenue streams for the state, including public education funding, the State Highway Fund, the Rainy Day Fund and other vital parts of the state budget.

Looking to the new year, TIPRO notes new production forecasts by the U.S. Energy Information Administration (EIA) showing sustained growth in U.S. crude oil production for 2025. U.S. crude oil production next year is projected to average 13.5 million barrels per day (b/d). This will follow recordbreaking production in August, when an average of 13.4 million b/d of crude oil was produced in the United States. Domestic production of natural gas is also forecasted to go up in the next year, driven by higher output from the Permian Basin. Higher prices and increased demand from nearby new liquefied natural gas (LNG) export projects that will be ramping up production are expected to help support and boost the production of natural gas in 2025.

A long-awaited study by the U.S. Department of Energy (DOE) was released this week examining the impact of U.S. LNG exports. While Energy Secretary Jennifer Granholm <u>states</u> the agency's assessment "reinforces that a business as usual approach is neither sustainable nor advisable," there's a multitude of <u>inaccuracies</u> that skew DOE's synopsis of the LNG industry. Texans for Natural Gas (TNG), a TIPRO education campaign, has reported on <u>LNG export trends</u> and the many <u>positive contributions</u> over the years. "Business as usual" for Texas' LNG industry has spurred economic growth and infrastructural development at home while simultaneously supporting affordable and reliable energy access for global allies. DOE's study reaffirms the Biden Administration's track record of politics over providing a secure energy future.

TIPRO also has voiced disappointment over the many unsuccessful attempts to pass the *Energy Permitting Reform Act of 2024* (EPRA) in Congress. In the U.S., gaining permits to build energy infrastructure and connecting it to the electric grid is harder today than at any point in recent memory. Projects built between 2018 and 2022 face an average wait time of <u>four years</u> before they can connect to the grid, up from less than two years for projects built between 2000 and 2007. Unclear and overlapping mandates, poor coordination among federal agencies and unnecessarily long timelines are just some of the many hurdles energy projects face in development.

TIPRO says permitting reform has fallen out of consideration for the Continuing Resolution (CR). With a Republican-controlled House and Senate, policymakers will likely revamp their strategy in the Spring and TIPRO remains hopeful that these challenges will be adequately addressed in the near-term.

"The continued success of the U.S. oil and natural gas industry relies heavily on providing a stable regulatory environment for domestic production and the build out of energy infrastructure," said Ed Longanecker, president of TIPRO. "Despite facing numerous challenges in recent years from a policy standpoint, our industry has managed to overcome many obstacles to continue providing affordable and reliable energy in order to meet growing global demand. The impact of those policies vary greatly within our industry, however, and TIPRO looks forward to working with the new administration to unleash the true potential of the U.S. oil and gas industry and will advocate accordingly on behalf of our members," concluded Longanecker.

Microsoft

Microsoft On the Issues

The Golden Opportunity for American Al

Jan 3, 2025 | Brad Smith, Vice Chair & President of Microsoft

A vision for technology success during the next four years

As we usher in a New Year, we will welcome a new president into the White House as well as a golden opportunity for American technology and economic competitiveness. Not since the invention of electricity has the United States had the opportunity it has today to harness new technology to invigorate the nation's economy. In many ways, artificial intelligence is the electricity of our age, and the next four years can build a foundation for America's economic success for the next quarter century.

At Microsoft, we see a three-part vision for America's technology success. This starts with advances and investments in worldleading American AI technology and infrastructure. Second, the country needs to champion skilling programs that will enable widespread AI adoption and enhanced career opportunities across the economy. Finally, the United States must focus on exporting American AI to our allies and friends, bolstering our domestic economy and ensuring that other countries benefit from AI advancements.

The country has a unique opportunity to pursue this vision and build on the foundational ideas set for AI policy during President Trump's first term. Achieving this vision will require a partnership that unites leaders from government, the private sector, and the country's educational and non-profit institutions. At Microsoft, we are excited to take part in this journey.

Technology as a foundation for economic growth

Since the mid-1700s, the world has witnessed great leaps forward through major industrial revolutions, each driven by groundbreaking technology. The steam engine ignited the world's first industrial revolution in the United Kingdom, intensifying economic growth through subsequent and rapid advances in ironworking.

The second industrial revolution, starting in the late 1800s, catapulted the United States to global economic leadership. Americans uniquely harnessed the power of electricity across the economy, including by transforming machine tooling to build the world's largest manufacturing-based economy.

The third industrial revolution emerged in the latter half of the 1900s, fueled by computer chips and software. Once again, the United States led the world in this new technological era, giving rise to new companies that included Microsoft itself, which will celebrate its 50th anniversary this April.

Each of these eras was marked by what economists call a General-Purpose Technology, or GPT. In contrast to single-purpose products, GPTs boost innovation and productivity across the economy. Ironworking, electricity, machine tooling, computer chips, and software all rank among history's most impactful GPTs.

World-leading AI technology and infrastructure

As we look into the future, it's clear that artificial intelligence is poised to become a world-changing GPT. Al promises to drive innovation and boost productivity in every sector of the econom</mark>y. The United States is poised to stand at the forefront of this new technology wave, especially if it doubles down on its strengths and effectively partners internationally.

America's technological strength has always been rooted in the private sector. Today, the United States leads the global AI race thanks to the investment of private capital and innovations by American companies of all sizes, from dynamic start-ups to well-established enterprises. At Microsoft, we've seen this firsthand through our partnership with OpenAI, from rising firms such as Anthropic and xAI, and our own AI-enabled software platforms and applications. Across the nation, a new generation of AI firms is emerging, each capitalizing on rapid advances in AI models and chips, moving now from Graphics Processing Units (GPUs) to AI Accelerators with Tensors. And across the economy, software programs are being redesigned to operate as AI-enabled applications.

None of this progress would be possible without new partnerships founded on large-scale infrastructure investments that serve as the essential foundation of AI innovation and use. In FY 2025, Microsoft is on track to invest approximately \$80 billion to build out AI-enabled datacenters to train AI models and deploy AI and cloud-based applications around the world. More

than half of this total investment will be in the United States, reflecting our commitment to this country and our confidence in the American economy.

Our success, however, depends on a broad and competitive technology ecosystem, much of which is based on open-source development. This includes our longstanding competitors, chip suppliers, applications companies, systems integrators, service providers, and the millions of software developers who use our products to create customized solutions working for our customers. The massive datacenters that make all this possible are being built by construction firms, steel and other manufacturers, and innovative advances in electricity and liquid cooling, all reliant on large numbers of skilled electricians and pipefitters, including members of organized labor unions. Together, all these groups have enabled the technology sector to become an economic backbone for the United States and the world.

Since the Second World War, America's technological innovation has been driven by research and development (R&D) based on two critical ingredients. The first is sustained support for basic research. While a few tech companies invest substantial sums in basic research, as we do through Microsoft Research (MSR), most world-leading basic research is pursued by academics at American universities, often based on funding from the National Science Foundation and other federal agencies. Driven by curiosity rather than a profit motive, this research often leads to unexpected but profound discoveries that are published publicly.

The second ingredient is a sustained commitment to investments in product development by companies of all sizes. The United States, more than any other country, has mastered the process of moving new ideas quickly from universities to the private sector. This success rests on healthy investments in both R and D, recognizing that basic research is often publicly funded and typically in universities, while product development is robustly and privately funded through companies. It's the combination of the two that makes American R&D so successful.

The incoming Administration can strengthen these foundational elements, building on the work from President Trump's first term. In 2019, the President approved an executive order designed to strengthen America's lead in artificial intelligence. It rightly focused on federal investments in AI research and making federal data and computing resources more accessible. Five years later, President Trump and Congress should expand on these efforts to support advancing America's AI leadership. More funding for basic research at the National Science Foundation and through our universities is one good place to start.

AI skilling

Skilling was a centerpiece of President Trump's 2019 AI Executive Order. It prioritized AI within existing federal educational grants and fellowship programs to help build a bigger pipeline of skilled AI researchers and practitioners. It also highlighted the importance of integrating AI technologies into educational curricula and called for the development of apprenticeship and skills programs, particularly in STEM fields, to ensure that American workers are well-prepared for the future.

This focus was prescient, as five years later, AI skilling has become a necessity for the nation. AI is reshaping the nature of work and the future of jobs. This mirrors the lessons from prior industrial revolutions. Ir onworking in the 1700s spread rapidly in the United Kingdom because technical associations and apprenticeships enabled workers to master new skills. Machine tooling in the late 1800s spread quickly in the United States because land grant colleges expanded the number of mechanical engineers. And digital technology spread swiftly in the U.S. in the second half of the twentieth century because new computer science departments in American colleges and universities produced the software developers the nation needed. In sum, one of the most important elements in spreading a GPT across an economy is the skilling infrastructure that equips both current and future workers with the capabilities needed to put new technology to work.

AI, like all new technologies, will disrupt the economy and displace some jobs. But as we've worked on skilling initiatives during the past few years, our confidence has grown that AI will create new opportunities that will outweigh many of the challenges ahead. If used well, AI will help lower the barriers to entry for many professions, replace rote tasks, and create a foundation for human creativity that builds on AI tools.

start new businesses and create new jobs. Along the way, Al can boost productivity in every sector of the economy, adding to the country's opportunity for economic growth.

Al is already becoming a tool to enable small business owners with fewer staff to compete in new ways with larger companies. And it offers the best opportunity so far this century to help high school grads and others with less post-secondary education to reverse the growing economic inequality that has gripped the nation since the early 1990s.

The key will be to develop a national AI talent strategy that equips Americans of all ages and backgrounds with the opportunity to acquire the AI skills needed for economic advancement. A key opportunity for most people will be to develop an AI fluency that will enable them to use AI in their jobs, much as they use laptops, smartphones, software applications, and the internet today.

There is a lesson here from the recent past. A big part of Microsoft's 50-year history has been tied to the creation of knowledge workers that drive the modern services economy of the United States and many other countries. The PC/Mobile era has created a global economy with more than a billion such workers. During the next quarter century, we believe AI can help create the next billion AI-enabled jobs, reaching not just services but manufacturing, transportation, agriculture, government, and every other part of the economy.

In this new AI era, some individuals will want and need deeper training. Some of this will happen on the job, through online platforms such as LinkedIn Learning, or at a community college or four-year institution. For some people, this training will build upon existing disciplines like computer and data science, potentially evolving into a new generation of AI engineering. Other individuals will take business classes that will equip them to help design or manage the integration of AI systems into the business processes that support organizations across the private, public, and non-profit sectors.

Companies across the tech sector are already playing an important part. For instance, in 2025 alone, Microsoft is on a path to train 2.5 million American students, workers, and community members with the AI skills to land new jobs, pursue new careers, and build new businesses.

Our work is providing us with a broad perspective and a firm belief that now is the time for the country to pursue a new national goal to make AI skilling accessible and useful for every American. By definition, this will require a very broad range of partnerships, spanning across geographic, organizational, economic, and political divides.

This is why our work focuses in part on community colleges. In every part of the United States, they are integral to American workforce development, offering accessible, affordable, and flexible education. We're already partnering with the National AI Consortium for Community Colleges to provide industry-aligned AI curriculum. And we're developing faculty training through AI Bootcamps that will help prepare students with in-demand skills that meet regional workforce needs.

We've also developed new AI training programs for teachers. And we're partnering with workforce agencies to enhance AI skills and career guidance through a Microsoft Copilot for Career Navigators initiative, which provides tools to effectively support communities in the AI-driven economy.

Our goal is to reach every corner of the country, including rural communities. The National 4-H AI Skills Partnership will use Minecraft Education to introduce AI concepts and increase AI fluency for 1.4 million youth. And with the Future Farmers of America's FarmBeats for Students program, we are helping young people use AI to advance precision agriculture.

One conclusion jumps out from our work more than anything else: Al offers not only new tools for people's work but also new ways to help people learn almost anything. We have the opportunity as a country to equip all Americans with the skills needed to use AI to pursue higher-paying jobs and more successful careers. This should be our national north star.

Al exports

A third critical priority for 2025 is the promotion of American Al exports. President Trump's 2019 executive order rightly emphasized the need to promote an international environment that "opens markets for American AI industries while protecting our technological advantage in AI and protecting our critical AI technologies from acquisition by strategic competitors and adversarial nations." Since then, the advent of generative AI has increased the importance of this priority.

Even more critically, the rapid development of China's AI sector has heightened competition between American and Chinese AI, with much of this likely to play out during the next four years in international markets around the world.

While the U.S. government rightly has focused on protecting sensitive AI components in secure datacenters through export controls, an even more important element of this competition will involve a race between the United States and China to spread their respective technologies to other countries. Given the nature of technology markets and their potential network effects, this race between the U.S. and China for international influence likely will be won by the fastest first mover. Hence, the United States needs a smart international strategy to rapidly support American AI around the world.

This fundamental lesson emerges from the past 20 years of telecommunications equipment exports. Initially, American and European companies such as Lucent, Alcatel, Ericsson, and Nokia built innovative products that defined international standards. But as Huawei invested in innovation and China's government subsidized sales of its products, especially across the developing world, adoption of these Chinese products outpaced the competition and became the backbone of numerous countries' telecommunications networks. This created the technology foundation for what later became an important issue for the Trump Administration in 2020, as it grappled with the presence of Huawei's 5G products and their implications for national and cybersecurity.

As we enter the second half of the decade, <mark>early signs suggest the Government of China is interested in replicating its</mark> successful telecommunications strategy. China is starting to offer developing countries subsidized access to scarce chips, and it's promising to build local AI datacenters. The Chinese wisely recognize that if a country standardizes on China's AI platform, it likely will continue to rely on that platform in the future.

The best response for the United States is not to complain about the competition but to ensure we win the race ahead. This will require that we move quickly and effectively to promote American AI as a superior alternative. And it will need the involvement and support of American allies and friends.

The United States currently has multiple advantages. American companies currently have better technology, from chips to Al models to software applications. In addition, many U.S. companies, including Microsoft, have invested heavily in building Al that is more trustworthy than most products from China. We are designing Al technology that protects cybersecurity, privacy, digital safety, and other responsible uses of Al. And we are making this technology available around the world through datacenters that meet the U.S. Government's highest cyber and physical security standards.

Increasingly, this is also backed by strong international regulatory cooperation among the North American, European, and Asian and Pacific democracies. If the Trump Administration can build upon the best AI steps that have emerged in the past four years through international AI diplomacy, including the G7, the United States will offer the world a compelling value proposition.

Equally important, American tech companies and private capital markets are investing heavily to spread American Al platforms around the world. And building on the historic Abraham Accords of President Trump's first term, the United States is forging stronger technology and economic ties with key nations and sovereign investors in the Middle East. All this is creating a powerful approach that far exceeds what the United States and Europe had available to counter Chinese government subsidies in the telecommunications space.

Microsoft itself represents this effort more than any other single entity. Last year, we announced with national leaders that we intend to invest more than \$35 billion in 14 countries within three years to build trusted and secure AI and cloud datacenter infrastructure. This is part of a global infrastructure that now reaches 40 countries, including in the Global South, where China has frequently focused so many of its Belt and Road investments. To enhance our capabilities, we are partnering with the UAE's sovereign AI company, G42, to bring AI infrastructure to Kenya. And we're working with Blackrock and MGX to create an international investment fund to add up to \$100 billion of additional funding for AI infrastructure and the AI supply chain.

Other companies are accelerating their investments as well. Firms like Google, Amazon, and others are investing heavily. And more private capital is joining in.

We should expect China's government to spend public funds on international subsidies to support the adoption of its technology, especially in places like Africa, Asia, and Latin America. <mark>But it will be difficult for China to match America's private sector investments and these international capital funds.</mark>

Put in this context, the most important priority for the U.S. Government won't be to match Chinese subsidies with American public spending, although there may be some parts of the developing world where development banks and foreign aid may have a role to play. Instead, the most important U.S. public policy priority should be to ensure that the U.S. private sector can continue to advance with the wind at its back. The United States cannot afford to slow its own private sector with heavy-handed regulations. The country instead needs a pragmatic export control policy that balances strong security protection for AI components in trusted datacenters with an ability for U.S. companies to expand rapidly and provide a reliable source of supply to the many countries that are American allies and friends.

Causes for American Optimism

In sum, as we look to the four years ahead, there are many reasons to be optimistic about the role of American AI.

As a nation, we have a solid AI technology foundation fueled by the world's most robust and innovative private sector. With a thoughtful approach to government policy, we can sustain our leadership through well-funded basic research at the nation's universities and broad support for private sector innovation.

Our strong educational system can spread new AI skills to work that will energize our economy. Technology platforms and nonprofits can help people use AI to enhance their careers. We have the world's most dynamic business sector that excels in adopting new technology. If the Trump Administration can develop a strong national AI talent strategy and use AI to make the government itself more effective and efficient, it will put the country on a promising path.

Finally, the United States is in a strong position to win the essential race with China by advancing international adoption of American AI. American products are more trusted than their Chinese counterparts, and our private sector is unmatched in its ability to invest in infrastructure around the world. With a balanced and common-sense approach to export control policy, the United States can solidify the diplomatic relations that will be critical to global AI adoption.

The key to the future is to bring together the best of what we can offer across American society, from across our private sector, educational and non-profit institutions, and government. Teamwork based on technology collaboration will build the foundation for a golden AI opportunity—and for the next generation of American prosperity.

New car sales in 2024: 9 out of 10 new passenger cars were electric cars

New car sales in 2024 landed just above last year, ending with 128,691 new first-time registered passenger cars. This is 1.4 per cent more than in 2023. Of all new passenger cars, 114 400 were electric cars, which corresponds to 89 per cent. Thus, only 10 percent remains before the 2025 goal of all new passenger cars being zero-emission cars is reached.

02-Jan-2025

In total, 2024 ended with 9 out of 10 new passenger cars being electric, and although the 2025 goal has not been reached, no other country is close to such a high share of electric cars. The share increased from 82.4 per cent in 2023 to 88.9 per cent in 2024, and

in December alone, 13,652 new passenger cars were registered, 12.1 per cent more than in the same month in 2023. The share of electric cars in December 2024 was 85.5 percent, compared to 73.5 percent in the same month the year before. Throughout 2024, the electric car share of new car sales in individual months has been well over 90 percent, with September as a record month with a whopping 96.4 percent.

Distribution per fuel in 2024 and 2023

Drivstoff	Antall 2024	Andel 2024	Antall 2023 🔺	Andel 2023
Hydrogen	9	0,0%	2	0,0%
Diesel Plugin Hybrid	17	0,0%	200	0,2%
Bensin-PETROL	986	0,8%	1 493	1,2%
Diesel	2 938	2,3%	3 117	2,5%
Bensin Hybrid	6 869	5,3%	7 584	6,0%
Bensin Plugin Hybrid	3 472	2,7%	9 969	7,9%
Elektrisitet	114 400	88,9%	104 588	82,4%
Totalsum	128 691	100,0%	126 953	100,0%

Tabell: OFV • Kilde: OFV Statistikk/ Statens vegvesen • Last ned data • Last ned bilde • Laget med Datawrappe

- Incentives crucial to achieving the 2025 goal

- The figures and the share increase show that the last few percent to reach the 2025 goal can be difficult to pull off. This sends a clear message to the government that it is absolutely crucial to maintain incentives that provide benefits when buying electric cars, if the government and the Storting are to achieve the goal they have set themselves," says Øyvind Solberg Thorsen, Director General of the Norwegian Road Traffic Information Council (OFV).

- The spurt for new car sales in 2024 was very exciting after a sluggish 2023 that followed the record years of 2021 and 2022. We almost hit the mark with our forecast of 130,000 new passenger cars in 2024, and thus got a slight increase from the previous year. Although there was more momentum in new car sales in the second half of the year, economic challenges characterized the whole of 2024," says Solberg Thorsen, who believes that many people postponed or dropped their new car purchases, probably in anticipation of interest rate cuts and increased purchasing power.

"We are now looking towards an economic brightening, and many new and exciting car brands and models are on their way to Norway in 2025. If the electric car incentives are maintained, new car sales can gain momentum and contribute to us reaching the 2025 goal. Many of the new models have a price and equipment level that suits many people's needs and wallets," he says. The tendency over the past couple of years has been that we are now buying less and cheaper new cars than when interest rates and price levels were far lower, and there are many indications that this will also affect new car sales in 2025.

The 20 best-selling car models of 2024

	Modell	Antall 2024	Andel 2024	Antall 2023	Andel 2023
1	Tesla Model Y	16 858	13,1%	23 088	18,2%
2	Tesla Model 3	7 264	5,6%	2 083	1,6%
3	Volvo EX30	7 229	5,6%	6	0,0%
4	Volkswagen ID.4	7 222	5,6%	6 614	5,2%
5	Toyota bZ4X	6 007	4,7%	5 395	4,2%
6	Skoda Enyaq	4 610	3,6%	5 740	4,5%
7	Nissan Ariya	3 772	2,9%	2 606	2,1%
8	Volkswagen ID.3	3 634	2,8%	3 1 4 1	2,5%
9	Toyota Yaris	3 523	2,7%	3 582	2,8%
10	Audi Q4 e-tron	3 449	2,7%	2 688	2,1%
11	Hyundai Kona	3 278	2,5%	2 991	2,4%
12	MG MG4	2 652	2,1%	1 622	1,3%
13	BMW i4	2 160	1,7%	1 782	1,4%
14	Toyota Corolla	2 122	1,6%	1 911	1,5%
15	Volkswagen ID.7	2 073	1,6%	122	0,1%
16	BMW iX1	1 897	1,5%	2 415	1,9%
17	Ford Mustang Mach-E	1 855	1,4%	3 792	3,0%
18	Toyota RAV4	1 761	1,4%	3 457	2,7%
19	Hyundai IONIQ 5	1 692	1,3%	1 566	1,2%
20	Nissan Leaf	1 608	1,2%	2 471	1,9%

Tabell: OFV • Kilde: OFV Statistikk/ Statens vegvesen • Last ned data • Last ned bilde • Laget med Datawrapper

Well-known brands top

Well-known car brands dominate the first five places on the registration statistics in 2024: Tesla received a superb first place with a market share of 18.9 percent, followed by Volkswagen, Toyota, Volvo and BMW.

- Despite many new makes and models, most people choose car brands they already have a relationship with, or that they are familiar with. In 2025, it will be particularly exciting to see whether new Chinese car brands and models will have a stronger position among new car buyers," says Solberg Thorsen. Only Tesla has established a solid market share faster than the Chinese car brands, which together took over 10 percent of the new car market in 2024.

	Merke	Antall 2024	Andel 2024	Antall 2023	Andel 2023
1	Tesla	24 259	18,9%	25 408	20,0%
2	Volkswagen	14 000	10,9%	13 704	10,8%
3	Toyota	13 678	10,6%	15 754	12,4%
4	Volvo	11 118	8,6%	8 882	7,0%
5	BMW	6 952	5,4%	5 961	4,7%
6	Skoda	6 533	5,1%	7 735	6,1%
7	Hyundai	5 782	4,5%	5 481	4,3%
8	Audi	5 501	4,3%	4 661	3,7%
9	Nissan	5 484	4,3%	5 185	4,1%
10	MG	4 591	3,6%	3 317	2,6%
11	Mercedes-Benz	4 021	3,1%	5 1 5 9	4,1%
12	Ford	3 545	2,8%	4 479	3,5%
13	BYD	2 669	2,1%	1 383	1,1%
14	Polestar	2 053	1,6%	1 832	1,4%
15	XPeng	1 962	1,5%	777	0,6%
16	Peugeot	1 939	1,5%	2 370	1,9%
17	Mazda	1 608	1,2%	1 493	1,2%
18	Porsche	1 523	1,2%	492	0,4%
19	Kia	1 509	1,2%	2 375	1,9%
20	Lexus	1 498	1,2%	1 300	1,0%

The 20 best-selling car brands in 2024

Tabell: OFV • Kilde: OFV Statistikk/ Statens vegvesen • Last ned data • Last ned bilde • Laget med Datawrapper

Half a million changes of ownership

2024 ended with just over 500,000 passenger cars changing hands, which was 1.4 per cent fewer than in 2023. In any case, the second-hand market is in every way Norway's largest car shop.

- There has been steady and good momentum in the second-hand market over time. The fact that the number has decreased slightly, compared to low new car sales over the past two years<mark>, shows that many have chosen to keep the car they already have, or choose used rather than new," says Solberg Thorsen</mark>. There are also more and more electric cars in the second-hand

market, <mark>and in 2024, 21.5 percent of all changes of ownership were electric cars – an increase in number of 11.6 percent</mark> compared to 2023.

In total, just over 6,000 passenger cars were second-hand imported to Norway in 2024, compared to just over 4,000 in 2023. Of all second-hand imported passenger cars, almost 63 per cent were electric cars – divided between well-known brands and models that already have a good foothold with Norwegian car buyers.

The 10 best-selling car models in December - number

	Modell	Antall	Andel	
1	Tesla Model Y	1 932		14,2%
2	Tesla Model 3	1 067	7,8%	
3	Volkswagen ID.4	678	5,0%	
4	Volvo EX30	606	4,4%	
5	Volkswagen ID.7	543	4,0%	
6	Toyota Corolla	436	3,2%	
7	Skoda Enyaq	425	3,1%	
8	Porsche Macan	409	3,0%	
9	Toyota Yaris	403	3,0%	
10	Nissan Ariya	332	2,4%	

Tabell: OFV • Kilde: OFV Statistikk/Statens vegvesen • Last ned bilde • Laget med Datawrapper

The 10 best-selling car brands in December - number

	Merke	Antall	Andel
1	Tesla	3 003	22,0%
2	Volkswagen	1 525	11,2%
3	Volvo	1 454	10,7%
4	Toyota	1 185	8,7%
5	BMW	923	6,8%
6	Mercedes-Benz	784	5,7%
7	Skoda	614	4,5%
8	Audi	540	4,0%
9	Hyundai	455	3,3%
10	Porsche	451	3,3%

Tabell: OFV • Kilde: OFV Statistikk/Statens vegvesen • Last ned bilde • Laget med Datawrapper

Decline in van sales - and fewer electric cars

The number of first-time registered new vans decreased by 4.1 per cent in 2024, compared with 2023. A total of 27 496 new vans were registered. The share of electric cars was 29.6 percent, compared to 30.9 in 2023. There are still almost seven out of ten who choose a new diesel van.

The supply of electric vans is constantly improving, but many businesses still believe that the usability is not good enough to meet the needs.

- Price, range and other factors contribute to this. If we are to get closer to the zero-emission target in 2025, which also includes light vans, it is not enough to increase taxes on diesel vans. A reintroduction and improvement of the Enova support would be a better instrument. But without that, there is no reason to believe that we will come close to one hundred percent electric vans for a long time," says Øyvind Solberg Thorsen.





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			VOLU	NTARY AF	NOUNCE	MENT				
		PRODUCI	FION AND	SALES VC	DLUME FC	JR DECEN	1BER 2024			
This announcement i	is made volum	tarily by BYI) Company L	imited (the "C	ompany").					
The Board of the Co	mpany is plea	sed to annour	ice that the to	tal production	and sales vol	ume of the Co	impany for the	e month of De	scember 2024	(Units):
		Pr	oduction Vol	ume				Sales Volun	ne	
Items	December 2024	December 2023	Year-to-date December 2024	Year-to-date December 2023	Percentage Year on Year	December 2024	December 2023	Year-to-date December 2024	Year-to-date December 2023	Percentage Year on Year
New energy vehicle	466,441	308,972	4,304,073	3,045,231	41.34%	514,809	341,043	4,272,145	3,024,417	41.26%
 Passenger vehicle 	460,719	308,107	4,281,084	3,033,662	41.12%	509,440	340,178	4,250,370	3,012,906	41.07%
- Battery electric vehicle	189,759	176,373	1,777,965	1,589,571	11.85%	207,734	190,754	1,764,992	1,574,822	12.08%
 Plug-in hybrid electric vehicle 	270,960	131,734	2,503,119	1,444,091	73.34%	301,706	149,424	2,485,378	1,438,084	72.83%

			oduction Vol	ume				Sales Volun	ne	
Items	December 2024	December 2023	Year-to-date December 2024	Year-to-date December 2023	Percentage Year on Year	December 2024	December 2023	Year-to-date December 2024	Year-to-date December 2023	Percentage Year on Year
- Commercial vehicle	5,722	865	22,989	11,569	98.71%	5,369	865	21,775	11,511	89.17%
– Bus	1,375	805	5,580	4,705	18.60%	1,375	805	5,580	4,705	18.60%
- Others	4,347	60	17,409	6,864	153.63%	3,994	60	16,195	6,806	137.95%
Total	466,441	308,972	4,304,073	3,045,231	41.34%	514,809	341,043	4,272,145	3,024,417	41.26%
Note: The oversea sales vc The installed capaci GWh. The cumulativ GWh. The cumulativ and be subject to Company carefully	olume of New ty of NEV pov ve installed caj e production a adjustment a when it is pu	Energy Passe wer battery an pacity for the and sales vol nd final con blished.	nger Vehicle and energy stor year 2024 wa umes above afirmation. Sh	achieved 57,1. age battery of is approximate are unaudited areholders a	54 units of the the Company ly 194.705 G I figures and nd potential	company fo for the mont Wh. Wh. have not bee investors ar	r the month o th of Decemb en confirmed e advised to	of December 2 er 2024 was a by the Com read the fin By By	(1024. upproximately pany's audito ancial results ancial results order of the F order of the F Nang Chuan- <i>Chairman</i>	23.495 of the soard fu

As at the date of this announcement, the Board of directors of the Company comprises Mr. Wang Chuan-fu being the executive director, Mr. Lv Xiang-yang and Mr. Xia Zuo-quan being the non-executive directors, and Mr. Cai Hong-ping, Mr. Zhang Min and Ms. Yu Ling being the independent non-executive directors.

By Ari Natter

(Bloomberg) -- The Biden administration loosened some stringent safeguards on a tax credit worth billions of dollars for hydrogen production, after companies argued the rules would stifle domestic manufacturing of the fuel. The tax credit created by President Joe Biden's signature climate law now includes a carve-out, sought by companies including Constellation Energy Corp., that will benefit some existing nuclear power plants, according to final rules released by the Treasury Department Friday.

The rules, which were released in draft form in December 2023, also provide pathways for hydrogen made from natural gas with carbon capture systems, methane and renewable natural gas to receive the tax credit.

The credit, which provides as much as \$3 per kilogram for production, is meant to spur a domestic industry for the cleanburning fuel, which advocates say is critical for lowering carbon dioxide emissions in the production of steel, cement and heavy transportation. The rules surrounding subsidies for it have been the subject of intense lobbying over what projects can qualify, with producers such as Plug Power Inc. pressing for changes.

Read More: Hydrogen Subsidy Worth Billions Includes Strict Green Rules

"The extensive revisions we've made in this final rule provide the certainty that hydrogen producers need to keep their projects moving forward and make the United States a global leader in truly green hydrogen," John Podesta, senior climate adviser to Biden, said in a statement.

Constellation shares rose as much as 4.8% in New York on Friday. Plug Power shares climbed as much as 5.6%. "It's enough to make me happy. It's progress," Andy Marsh, Plug's chief executive officer, said in an interview. "We can do business a lot easier with what they put in place." As proposed, the most lucrative credits will go to projects powered by wind, solar, or other renewable generating plants that were added to the grid within three years of the hydrogen plant starting operations. But in a change to the rule, producers have an additional two years to fulfill the requirement that the clean energy be generated at the same time as the gas.

The new rules allow some nuclear reactors to count as a clean energy source. They also include electricity from states that have "robust" greenhouse emission caps paired with clean electricity standards, including California and Washington. In addition, methane made from natural gas using carbon capture and sequestration is included. Policymakers also expanded the eligibility of kinds of renewable natural gas that can be used, including methane from wastewater, animal manure and coal mines.

Read More: Exxon Memo Reveals Plan to Secure Billions in Hydrogen Subsidies

The final rule "affords project developers the basis for evaluating opportunities to scale clean hydrogen deployments," Frank Wolak, president of the Fuel Cell and Hydrogen Energy Association, said in a statement.

But the US Chamber of Commerce said the new rules fell short and noted the incoming Trump administration would have the opportunity to change them.

"While the rule provides some of the additional flexibility we sought, especially in recognizing the importance of natural gas as a cornerstone of a hydrogen economy, we believe that it still will leave billions of dollars of announced projects in limbo," said Marty Durbin, president of the Chamber's Global Energy Institute.

The changes drew praise from mainstream environmental groups such as the Natural Resources Defense Council, which said the final rules were "an important step towards a truly clean hydrogen industry."

"The rule maintains key protections that minimize dangerous air and climate pollution from electrolytic hydrogen production while also protecting US taxpayers and electricity consumers," said Erik Kamrath, a hydrogen advocate for the group. But the deep green environmental group Earthjustice criticized the rules for allowing "significant loopholes for dirty hydrogen producers to enjoy the benefits of this important climate program."

"The Biden administration's tax guidance supports clean hydrogen projects that by and large do not worsen climate and health-harming pollution, but more protections are needed," Chris Espinosa, the group's legislative director for climate & energy, said in a statement.

To contact the reporter on this story: Ari Natter in Washington at <u>anatter5@bloomberg.net</u> To contact the editors responsible for this story: Joe Ryan at <u>jryan173@bloomberg.net</u> Simar Khanna, Christine Buurma Green Hydrogen Prices Will Remain High for Decades, BNEF Warns 2024-12-23 13:00:02.430 GMT

By David R Baker

(Bloomberg) -- Green hydrogen has been touted by politicians and business leaders alike as a key fuel for a carbon-free future. But it will remain far more expensive than previously thought for decades to come, according to a new estimate from BloombergNEF.

Hydrogen companies worldwide are already struggling with canceled projects and sluggish demand. In the US, billions of dollars of projects have been stalled waiting for President Joe Biden's administration to issue final rules for a tax credit meant to spur production.

Read More: Green Hydrogen Hype Fades as High Costs Force Project Retreat

BNEF had in the past forecast steep declines in the price of green hydrogen, which is made by splitting it from water with machines called electrolyzers running on renewable power. But in its forecast published Monday, the firm more than tripled its 2050 cost estimate, citing higher future costs for the electrolyzers themselves. BNEF now forecasts green hydrogen to fall from a current range of \$3.74 to \$11.70 per kilogram to \$1.60 to \$5.09 per kilogram in 2050.

For comparison, the most common form of hydrogen used today — stripped from natural gas, with the carbon emissions vented into the atmosphere — costs from \$1.11 to \$2.35 per kilogram, according to BNEF. The research firm expects prices for such "gray" hydrogen to remain largely the same through mid-century. "The higher costs for producing green hydrogen without any subsidies or incentives means it will continue to be challenging to decarbonize hard-to-abate sectors, such as chemicals and oil refining, with hydrogen produced via electrolysis powered by renewables," said BNEF analyst Payal Kaur.

Those industries along with steel mills and power plants have been tagged as possible end users of the gas. But doing so would require expensive new equipment, which has stunted demand.



Only two markets — China and India — are likely to see green hydrogen become cost-competitive, according to BNEF. There, the cleaner fuel will reach a comparable price to gray hydrogen by 2040.

The forecast puts Biden's goal of driving US hydrogen costs down to \$1 per kilogram by 2031 out of reach. Many analysts consider that price essential to convincing potential customers to start using the fuel. BNEF took an in-depth look at how green hydrogen will fare in New York, Texas and Utah. The report found that Texas will create the cheapest green hydrogen but costs will only fall from \$7.22 per kilogram today to \$4.82 in 2030. If Biden's planned tax credit of \$3 per kilogram is included, Texas hydrogen costs could fall below \$1 by 2040, according to the forecast.

Read More: Why Almost Nobody Is Buying Green Hydrogen The fate of US hydrogen policies remains uncertain, with President-elect Donald Trump set to take office in January. Although industry executives remain hopeful he will continue many of Biden's initiatives — in part because oil companies are interested in hydrogen — Trump has said little about it. His threatened tariffs on imported products could boost the price of foreign-made electrolyzers, but BNEF's price forecast did not take tariffs or subsidies into account.

Slow hydrogen demand growth, meanwhile, has forced companies worldwide to scale back their ambitions. Equinor ASA, Shell PLC and Origin Energy Ltd. all canceled hydrogen production projects this year due to a lack of buyers.

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To view this story in Bloomberg click here: https://blinks.bloomberg.com/news/stories/SOY6S2DWLU68 Green Hydrogen Goes From Hyped to Humbled on Eye-Popping Costs 2024-12-21 07:00:00.1 GMT

By William Mathis

(Bloomberg) -- A raft of projects to produce green hydrogen, a fuel billed as critical to reaching net zero, have been abandoned this year as expectations for tumbling costs failed to materialize.

Governments and major energy companies have touted the gas as a way to clean up a swath of industries. But the uneconomic cost of production has forced multiple developers to scrap plans, leaving the nascent sector struggling to attract the billions of dollars it needs to meaningfully cut carbon emissions.

"There's been a reality check in terms of the costs that hydrogen projects entail," said Gniewomir Flis, an independent hydrogen analyst. "The industry has over-promised and underdelivered. It's only natural that there is a sort of swing back and a natural cooling of some of the excesses that were promised."



Green hydrogen, made by using renewable electricity to split molecules in water, has been promoted as a potential solution to cut emissions from just about anything that currently relies on coal or natural gas, such as steel production, shipping and even home heating. "Hydrogen is the Swiss army knife of energy," Eric Toone, technical lead on the investment committee of Breakthrough Energy Ventures, said this month on Bloomberg's Zeropodcast. "If you have enough hydrogen and it's cheap enough, you can do anything." Low-carbon versions of the fuel can also be produced using equipment to capture emissions, or potentially by extracting it directly out of the ground.

But development has remained more expensive than many expected. Analysts at BloombergNEF increased their cost estimates for green-hydrogen projects in the US and European Union by 55% this year, compared with 2022 forecasts. That's down to design and engineering processes that proved more complex than initially thought. In Europe, a jump in power prices also drove up input costs.



As a result, hydrogen produced using clean energy costs four times as much as that made from natural gas, according to BNEF. Hardly surprising, then, that the majority of projects don't have a single customer stepping up to purchase the fuel. And without willing buyers, there can be no output.

Read More: Almost Nobody Is Buying Hydrogen, Dashing Its Green Power Hopes

"Commercial development of the offtake market of liquid efuels has progressed significantly slower than expected," Orsted A/S Chief Executive Officer Mads Nipper said earlier this year when he scrapped plans for a \$175 million Swedish plant to produce shipping fuel from hydrogen. "We have not been able to make long-term offtake contracts at sustainable prices." Other projects that have gone by the wayside include a hydrogen-ammonia export plant in Tasmania and more than a dozen early-stage developments planned by UK oil major BP Plc.

Shrinking Market

A year ago, the industry hype had triggered a wave of new

hires. Ross Thomson, a managing consultant at recruiter Ably Resources Ltd. in Glasgow, saw huge demand for executive and engineering roles, and said his firm was seeking to fill more than 30 hydrogen-related jobs at a time. Now, it's less than a dozen.

"There was quite a big drive for hiring, but over the last couple of months there's been a decrease," Thomson said in an interview. "I'm a strong believer hydrogen will take off, but not in the next few years."

It would certainly help if state support were better planned and expedited. While governments have broadly trumpeted hydrogen's potential, wrangling over the specifics of subsidies has slowed progress. In the EU, it took years for bureaucrats to define what qualifies as green hydrogen. The US, whose Inflation Reduction Act allows for generous aid, has gone through a similar process.

There are signs of modest growth in the sector. Clean hydrogen production is set to triple this year versus 2023. But that's still only enough to meet about 1% of demand. Most hydrogen is currently made with natural gas or coal, generating carbon emissions in the process.

"We've seen what doesn't work so far so we can focus on what does," said Sami Alisawi, a hydrogen analyst at BNEF. "The hype is gone. Now you could say the real work begins."

--With assistance from Gina Turner.

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Hydrogen explained What is hydrogen?

Hydrogen is the simplest element. Each atom of hydrogen has only one proton. Hydrogen is also the most abundant element in the universe. Stars such as the sun consist mostly of hydrogen. The sun is essentially a giant ball of hydrogen and helium gases.

Hydrogen occurs naturally on earth only in compound form with other elements in liquids, gases, or solids. Hydrogen combined with oxygen is water (H₂O). Hydrogen combined with carbon forms different compounds—or hydrocarbons—found in natural gas, coal, and petroleum.



The sun is essentially a giant ball of hydrogen gas undergoing fusion into helium gas. This process causes the sun to produce vast amounts of energy.

Source: NASA (public domain)

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Hydrogen is the lightest element. Hydrogen is a gas at normal temperature and pressure, but hydrogen condenses to a liquid at minus 423 degrees Fahrenheit (minus 253 degrees Celsius).

Hydrogen is an energy carrier

Energy carriers allow the transport of energy in a usable form from one place to another. Hydrogen, like electricity, is an energy carrier that must be produced from another substance. Hydrogen can be produced—separated—from a variety of sources including water, fossil fuels, or biomass and used as a source of energy or fuel. Hydrogen has the highest energy content of any common fuel by weight (about three times more than gasoline), but it has the lowest energy content by volume (about four times less than gasoline).

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

Last updated: January 20, 2022



NEWS RELEASE MARKET SENSITIVE INFORMATION Embargoed until 0955 CET (0855 UTC) 2 January 2025

HCOB Germany Manufacturing PMI[®]

Manufacturing sector ends 2024 in disappointing fashion as declines in output and new orders accelerate

Key findings: HCOB Germany Manufacturing PMI at 42.5 (Nov: 43.0). 3-month low. HCOB Germany Manufacturing PMI Output Index at 41.7 (Nov: 43.1). 3-month low. Growth expectations for year ahead remain muted

Data were collected 5-16 December 2024.

Germany's manufacturing sector ended 2024 on a disappointing note, recording sharp and accelerated declines in both output and new orders, the latest HCOB PMI[®] survey showed. There were further cutbacks to employment and inventories as firms adjusted to the weaker demand environment, albeit with the rates of decline easing in each case. Growth expectations amongst goods producers remained muted, and even weakened slightly from the month before, reflecting political uncertainty and concerns for the German economy.

As for the supply side, latest data showed a continued improvement in input leads times as well as further downward pressure on purchase prices. The decline in costs did however ease slightly, as was also the case for factory gate charges.

The headline **HCOB Germany Manufacturing PMI**[®] is a gauge of overall business conditions derived from measures of new orders, output, employment, supplier delivery times and stocks of purchases. At 42.5 in December, down from readings of 43.0 in both October and November, the PMI signalled a sharp and slightly accelerated decline in business conditions at the end of the final guarter of 2024.

The drop in the headline index was driven mainly by faster falls in both output and new orders, its two weightiest components. Production volumes decreased at the second-quickest rate in the past 14 months in December, led by a particularly steep downturn in the intermediate goods sector.

The rate of decline in new orders was likewise one of the fastest observed in 2024. Qualitative evidence gathered by the survey highlighted headwinds to demand from market uncertainty and excess stock levels at customers. Export orders were down markedly on the month, albeit falling at a slower rate than in November and that of total new business, to suggest that the domestic market was a key source of weakness.

Backlogs dropped sharply once again in December, and at a slightly quicker rate than the month before. With firms able to complete orders more quickly than they were received, there was further scope to reduce staffing capacity during the month. Employment fell markedly and for the eighteenth month running, although the rate of decline did ease to the weakest since August.

It was a similar story for stock levels. The weak demand environment led manufacturers to reduce holdings of both pre- and production inventories. However, whilst still substantial by historical standards, the rate of depletion of input stocks slowed to the weakest for ten months.

A further sharp – albeit slightly slower – decrease in manufacturers' purchasing activity in December contributed to yet another improvement in input delivery times, as surveyed firms commented on spare capacity among suppliers and better material availability. Moreover, vendor performance improved to the greatest extent since last August.





Average prices paid for purchases decreased for the twenty-third month running in December. Surveyed firms attributed this to not only discounts from suppliers, but also lower energy and raw material costs. That said, the latest decline in overall input prices was the weakest for four months. Average factory gate charges meanwhile fell markedly but at the slowest rate since last September.

Manufacturers' year-ahead growth expectations were revised down slightly since November and continued to run well below the long-run average. Alongside concerns about political uncertainty, firms identified threats to the outlook from weakness in the construction and automotive sectors.

Comment

Commenting on the PMI data, Dr. Cyrus de la Rubia, Chief Economist at Hamburg Commercial Bank, said:

"The situation in the manufacturing sector is still pretty grim. Production is on a steep decline, and new orders keep slumping, making it clear that the industry won't be coming out of recession anytime soon. Our nowcast model, which includes the HCOB PMI among other factors, suggests that industrial value added likely fell by 0.9% in the fourth quarter compared to the previous quarter. The shrinking order backlog since June 2022 suggests that the new year won't start much better either.

"Looking back, it has been a lost year for the manufacturing sector. The PMI stayed continuously in recessionary territory, companies kept cutting staff month after month, and order backlogs fell across the board. The only slightly positive note is that staff reductions in recent months have led to a slight increase in labor productivity. However, this increase isn't enough to turn things around.

"The manufacturing slump is widespread across different sectors. Intermediate goods took the biggest hit in December, with the corresponding PMI dropping like a rock to the lowest level of the year. Things are not looking much better for the investment goods sector either, as its PMI has been stuck in recessionary territory all year long. Given that both of these sectors are heavily exposed to tariffs threatened by the US, it's hard to imagine a sustainable recovery in the coming quarters.

"After two-and-a-half years of deteriorating business conditions in the manufacturing sector, this trend might end in the second half of 2025. By then, Germany should have a new government, and the current wait-and-see attitude towards investment and consumption could change. But finding support for this thesis in the numbers is difficult. The index for future production is barely above 50, suggesting that companies expect to produce only slightly more in a year than they do today."



'08 '09 '10 '11 '12 '13 '14 '15 '16 '17 '18 '19 '20 '21 '22 '23 '24 Sources: HCOB, S&P Global PMI.



-Ends-

Bloomberg Billionaires Index – Top 50 as of Dec 31, 2024

Name	Rank	Worth	Chg	1D	Chg YTD	3M Range •
1) Elon Musk	1	442.1B		-9.8B	213.1B	- + - • -
2) Jeff Bezos	2	240.6B		-2.3B	63.7B	•
3) Mark Zuckerberg	3	209.3B		-3.0B	81.2B	
4) Larry Ellison	4	193.2B		3.0B	70.3B	
5) Bernard Arnault	5	175.6B		-2.1B	-31.9B	-•
6) Larry Page	6	170.1B		-1.3B	43.7B	- + - + -
7) Sergey Brin	7	160.0B		-1.2B	40.0B	
8 Bill Gates	8	159.7B		-1.4B	19.0B	
9 Steve Ballmer	9	147.6B		-1.9B	16.8B	-•
10) Warren Buffett	10	141.6B		-1.4B	21.8B	•••
11) Michael Dell	11	124 . 5B		-2.5B	46.1B	
12) Jensen Huang	12	120.1B	1	343.7M	76.1B	
13) Jim Walton	13	112.6B		-1.2B	40.0B	• •
14) Rob Walton	14	110.2B		-1.1B	39.0B	
15) Alice Walton	15	109.5B		-1.2B	39.4 B	
10 Amancio Ortega	16	101.7B	I	-616.3M	14.28	8 ● →
17) Mukesh Ambani	17	90.6B		-646.8M	1 -5.7E	8
18) Gautam Adani	18	80.1B		3.5B	-4.28	3 -●◆
19 Carlos Slim	19	79.2B		-2.5B	-26.18	● →
20) Francoise Bettencourt Meye	20	73.9B		-1.6B	-25.78	3 ●◆
21) Julia Flesher Koch & family	21	73 .0 B		-356.7M	1 6.5E	● →
22) Charles Koch	22	65.7B		-334.9M	1] 3.3E	● ◆
23) Zhong Shanshan	23	55.1B		-70.5M	-12.68	3
24) Changpeng Zhao	24	55.0B		-1.6B	20.7E	
25) Thomas Peterffy	25	53.8B		11.5M	28.18	→
20 Stephen Schwarzman	26	53.3B		-468.7M	10.9E	
27) Tadashi Yanai	27	51.1B		-330.7	M 12.8	B — 🌒 –
28) Ma Huateng	28	48.5B		51.8	13.8	В — • —
29 Jeff Yass	29	46.0B		-95.81	4 6.1	B 🔶
30) Alain Wertheimer	30	44.6B		-283.7	M -2.5	B — • –
31) Gerard Wertheimer	31	44.6B		-283.7	M -2.5	B — • –
32) Zhang Yiming	32	43.9B		N.A	1.6	B 🔶 🔶
33) Shiv Nadar	33	43.4B		711.8	4 9.5	B●
34) Jacqueline Badger Mars	34	43.2B		-286.3	MI -3.4	B
35) John Mars	35	43.2B		-286.3	MI -3.4	B
36) Abigail Johnson	36	42.0B		-453.3	M 5.4	В — • –
37) Ken Griffin	37	41.5B		-153.9	M 5.0	
38) MacKenzie Scott	38	40.4B		-346.4	MI 4.7	
39) Len Blavatnik	39	39.1B		-313.5	MI -1.7	В
40 Shapoor Mistry & family	40	38.9B		-189.5	M 3.6	B •
41) Lukas Walton	41	38.9B		-403.	.OM 13	5.3B
42) Zelig Yuquii	42	38.8B		020.		
43) Klaus-Michael Kuehne	43	38.8B		-136.	-5 -5	0.4B
44) Minam Adelson & family	44	37.1B		-548.	3M 3	0.0B
45) Eric Schmidt	45	36.6B		-263.		6.9B
40 Giovanni Ferrero & family	46	35.9B		-263.	.8M 2	.2B • •
4)) Jack Ma	47	34.4B		-214.	.1M 4	.3B ●◆
48) Phil Knight & family	48	34.2B		-614.	.0M] -8	3.3B ● ◆
49) Colin Huang	49	33.3B		-1.	1B -18	3.3B ● ◆
50) He Xiangjian	50	32 . 8B		-116.	.8M 8	6.8B — •
El Gorman Larroa & family	C 1	27 00		000	OM 1 2	
Bloomberg Billionaires Index – Top Canadians as of Dec 31, 2024



China issues interim measures for flexible retirement system; move 'to ease elderly care burden, improve efficiency'

By Chi Jingyi Published: Jan 01, 2025 08:31 PM





Senior citizens have meals at a canteen for elderly people at a community in Jin'an District of Fuzhou, capital of southeast China's Fujian Province. File Photo:Xinhua

China on Wednesday announced interim measures for the implementation of a flexible retirement system to enforce the previously adopted policy of incrementally raising the statutory retirement age, the Xinhua News Agency reported. The measures stipulated the procedures for applying for flexible retirement and the requirements for receiving basic pensions, among other details.

The measures were released to implement the decision on gradually raising the statutory retirement age adopted in September by Chinese lawmakers, according to a notice published by the Ministry of Human Resources and Social Security, the Organization Department of the CPC Central Committee and the Ministry of Finance.

The decision, marking the first adjustment in the arrangement since the 1950s, said that starting from January 1, 2025, the statutory retirement age for men will be gradually raised from 60 to 63 in the course of 15 years, while that for women cadres will be raised from 55 to 58, and that for women blue-collar workers will be raised from 50 to 55, according to Xinhua.

"The retirement policy has been in place for a long time. After about 70 years, the population, economy and social situations in China have undergone earth-shaking changes. Therefore, the previous statutory retirement age is inconsistent with the current national conditions and future economic and social development," Yuan Xin, a vice president of the China Population Association and a professor at Nankai University, told the Global Times on Wednesday.

In the next five to 10 years, China will rapidly enter a severely aging society, and <mark>the retirement reform will have positive</mark> significance for easing the burden of elderly care, improving the efficiency of human resources use and reducing the burden of <mark>the entire social and economic operation</mark>, Li Changan, a professor at the Academy of China Open Economy Studies at the University of International Business and Economics, told the Global Times on Wednesday.

The implementation of the flexible retirement system is an important part of the gradual delay of the statutory retirement age reform in China, which is conducive to adapting to the diversified needs of workers and meeting the needs of different working and living arrangements, persons in charge from the three departments said in a statement published on Wednesday.

"The interim measures clarified the flexible retirement procedures, rights and interests protection and other contents, and put

forward requirements for optimizing social security handling services," read the statement.

Back in July, the resolution adopted at the third plenary session of the 20th CPC Central Committee revealed that in line with the principle of voluntary participation with appropriate flexibility, China will advance reform to gradually raise the statutory retirement age in a prudent and orderly manner.

Adhering to such a principle, employees can choose to retire early or late in a flexible way on the basis of the statutory retirement age specified in the decision, said the statement.

"A gradual extension of the statutory retirement age means that the scale of the labor force released in the short term is limited and the impact on the job market is small," Yuan said.

In terms of the influence on the labor market, Li noted that the total number of people implementing delayed retirement is relatively small compared with China's huge workforce of more than 740 million. "The difference between the jobs of the young and the old is obvious, which means the extension of the statutory retirement age will have very limited impact on young people," Li said.

"Extending the statutory retirement age is common in most countries, and many developed countries have raised it to over 65," Li said.

Yuan echoed Li by saying that extending retirement age is a common practice in the international community to deal with aging problem.

"Most developed countries are still pursuing further reforms on retirement extension. The basic principles to be followed include gradualism, combination with life span, setting transition period, flexibility and voluntariness, incentive mechanism and gender parity, which are worth learning," said Yuan.

sar ____ Dan Tsubouchi 🤣 @Energy_Tidbits · 2h

Forgot to include these Nov graphs of how Trump crushed Venezuela oil production and exports to US.

Positive to #Oil if Trump reverts to what he did in his first term.

#OOTT



Dan Tsubouchi 🤣 @Energy_Tidbits · 2h Import Venezuela #Oil before Trump takes over.

VEN oil exports to US in Dec hit 295 kbd, highest since Trump 1.0 stopped US oil imports from VEN. Thx @lkassai

Makes sense Chevron is getting as much oil as possible into Gulf Coast in Dec/early Jan in case Trump stops VEN oil Show more



Dan Tsubouchi 🤣 @Energy_Tidbits · 19h

Looks like really cold coming up will stay colder than normal but just not as cold as forecasts look out for two weeks.

...

Updated @NOAA 3-7 day, 6-10 day and 8-14 day temperature outlooks.



#NatGas #OOTT

SAF

Dan Tsubouchi 🤣 @Energy_Tidbits · 22h

AI Data Center Dirty Little Secret.

Don't want to specifically say only new **#NatGas** and expanded **#Coal** can provide electricity in scale in next decade to power their increasing 24/7 power needs for this "great leap forward" historic industrial revolution.

Microsoft Pres "The Show more

SAF ---



Could be big positive but too early to celebrate.

Vortexa crude #Oil floating storage is -18.81 mmb WoW to very low 48.15 mmb as of Jan 3. BUT Dec 27 revised +13.25 mmb.

Asia at 15.75 mmb is very low but Dec 27 revised +7.47 mmb to 32.00 mmb.

Sat am are Vortexa 1st estimates for Fri floating so get updated both up and down.

Even if small upward revisions, especially in Asia, would be a big positive.

Thx @vortexa @business #OOTT



Source: Bloomberg, Vortexa

Posted Jan 4, 9am	MT	1	Dec 28	, 9an	n MT		Dec 21, 9	am MT
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Source: Bloomberg, Vortexa

Vortexa crude oli fioatie	ng storage by region			Inginal Posted	RecentPice	
Region	Lars 3/26	Dec 27/24	Work	Dec 37/34	Jun 33/23	June 3 yes June 25/23
Asia	15.75	32.00	-36.25	24.53	73.8	-57.50
NothSea	0.90	0.65	0.29	0.65	4.71	-3.77
<i>Europe</i>	2.88	4.09	-1.21	4.58	6.05	-3.17
Madefail	8.42	12.70	-4.29	88.9	6.58	1.82
WestAfrica	8.81	6.95	2.68	3.48	7.62	2.19
US Golf Ceast	6.00	0.00	0.00	0.00	1.02	-1.02
Other	10.36	10.08	-0.23	30.63	29.42	-19.06
Slobal Tarial	48.15	66.96	-18.81	\$3.75	128.66	-80.51
Vaniovo crude oil Realiz	ng stangetplasted an	Bloomberg Rem M7	on Jam A			

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

SAF -

Dan Tsubouchi 🥝 @Energy_Tidbits - Jan 4 Winter is why Saudi #Oil exports are up.

Oil exports highest in 9 mths at ~6.33 mmbd in Dec vs 6.16 mmbd in Nov. Thx @JLeeEnergy

See my <u>11/10/23 post: @MoEnergy_Saudi</u> Abdulaziz reminded less use of oil for electricity for A/C in winter frees up more oil for export.

#OOTT

Dan Tsubouchi 🤣 @Energy_Tidbits · Nov 10, 2023 Agreed, he is explaining Saudi Oil 101. Summer heat = more #Oil used to generate electricity for A/C ie. less for export. Show more Excerpt SAF Group Oct 22, 2023 Energy Tidbits memo Oil: Saudi use of oil for electricity up big in August jg., less oil available for export The key seasonal theme for Saudi oil exports is that, all things being equal. Saudi can export more oil in winter months as it uses less oil for electricity and, conversely, it would have less oil for export in summer months as it uses more oil for It uses less oil for electricity and, conversely, it would have less oil for export in summer months as it uses more oil for electricity, ite, air conditioning. Note that a normal peak to trough decline is ~000,000 bid. If there is less oil used for electricity, then there is more oil for export and vice versa. The JODI data for Saudi Arabia oil supply and demand for August <u>[LIN6]</u> was updated on Monday. Saudi used more oil for electricity in August vs. July. Both July and Aug were hot, but we expect the increased oil for electricity demands due to it being hot even in the <u>infigitime</u> tows that were even in the low 30C every night <u>(ii)</u>, more air conditioning electricity demand to sleep. Oil used for electricity generation in August was 726,000 bid (vs. August 2022 of 664,000 bid) and July was 582,000 bid (vs. July 2022 of 661,000 bid). Also note that this year fits the normal trough-to-peak swing of 400,000 bid. The low was 312,000 bid in <u>Aug</u> and we just saw 726,000 bid in Aug. Below are the Acct/Weather Temp maps for Riyadh for August and July. Figure 40: Saudi Arabia Direct Use of Crude Oil for Electricity Generation. 710 110 100 Api May Jun Jul Aug Den Out Falls This the same for the Source: JODI, SA Figure 41: Riyadh Temperature Recaps for August (top) and July (bottom) Source: AccuWeather Prepared by SAF Group https://safgroup.ca/news-insights/

SAF ----

Dan Tsubouchi @ @Energy_Tidbits · Jan 4 AAA National average gasoline prices +\$0.03 WoW to \$3.06 on Jan 4,+\$0.03 MoM & -\$0.03 YoY.

California average prices +\$0.02 WoW to \$4.37, -\$0.03 MoM & -\$0.34 YoY

Looks like national average prices aren't going to get back to below \$3. Last was May 11, 2021.

Thx @AAAnews #OOTT



SAF

Dan Tsubouchi 🤣 @Energy_Tidbits · Jan 4

Xmas Europe air travel above pre-Covid didn't last.

Air travel always dips down post Xmas rush. But +0.8% vs pre-Covid on Dec 26 is now -2.6% below pre-Covid on Jan 2.

7-day moving average as of: Jan 2: -2.6% below pre-Covid Dec 26: +0.8% Dec 19: -2.4% Dec 12: -3.6%... Show more



Dan Tsubouchi 😵 @Energy_Tidbits · Jan 3 Big continuing win for Cdn #Oil cash flows.

Increasing tanker exports post June 2024 start 590,000 b/d TMX kept WCS less WTI differentials from normal S/O/N widening, and continue to stay narrow.

WCS less WTI diffs: 01/03/25: \$12.05 01/03/24: \$18.25 01/03/23: \$26.50... Show more



• • •

Dan Tsubouchi 🤣 @Energy_Tidbits · Jan 3 321 crack spreads +\$0.43 WoW to \$16.48 on Jan 3.

WTI +\$3.36 WoW to \$73.96.

Reminds WTI is impacted more by global #Oil moves (ie. potential that Russia/Iran barrels are being impacted by sanctions) than by crack spreads.

Thx @business #OOTT



Dan Tsubouchi @ @Energy_Tidbits · Jan 3 Trump's promised Day 1 Executive Orders.

Write out offshore windmills.

Terminate Biden's insane EV mandate.

See my - 11/06/24 transcript of his 05/11/24 campaign speech.

Pasted in both transcripts this time

Show more

Murphy's 157 windmills They ruin the environmen...

Dan Tsubouchi 🤣 @Energy_Tidbits - Jan 3

×1 …

...

What else but #NatGas #Coal generation can step in to fill gap over next decade if less Offshore Wind Generation in US under Trump?

Surely Trump tells UK "Get rid of Windmills!" in North Sea can't be positive for any new US offshore wind that require federal approvals.

#OOTT

SAF -

	Donald J. Trump 🤣 @realDonaldTrump · (ôh		_1
The U.K Windmi	c. is making a very bi ils! agcc.co.uk/news	ig mistake. Open up -article/apache	the North Sea. Get c.co.uk blames windfall tax es plans to exit Nor n Apache has annour lorth Sea because th hade its UK operation omic".	as it th Sea need plans to windfall
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SAF

Dan Tsubouchi ? @Energy_Tidbits · Jan 2 Dirty little secret.

Norwegians are buying way more ICE than BEV, just have to do it in the used car market.

Headline: Norway says 89% of NEW passenger car sales are BEV.

BUT if include used car sales, 51% are pure petrol + diesel, increasing to 65% incl petrol + diesel HEV, Show more

Norway New + Used Car	Sales for 202	24				
	New Car S	ales	Used Car S	ales	Total Car S	ales
	Volume	Share	Volume	Share	Volume	Share
tydrogen	9	0.0%	66	0.0%	75	0.0%
Sases	0	0.0%	17	0.0%	17	0.0%
Diesel Plugin Hybrid	17	0.0%	2,570	0.5%	2,587	0.4%
Diesel Hybrid	0	0.0%	218	0.0%	218	0.0%
Diesel	2,938	2.3%	191,932	38.4%	194,870	31.0%
Bensin (Petrol)	986	0.8%	127,265	25.4%	128,251	20,4%
Sensin (Petrol) Hybrid	6,869	5.3%	23,843	4.8%	30,712	4.9%
Bensin (Petrol) Plugin Hybrid	3,472	2.7%	46,516	9.3%	49,988	7.9%
Elektrisitel	114,400	88.9%	107,668	21.5%	222,068	35.3%
fotal	128,691	100.0%	500,095	100.0%	628,786	100.0%
ource: OFV Norwegian Road Traffic In	formation Council					
Prepared by SAF Group https://sa	fgroup.ca/insights/	energy-tidbits/				

Dan Tsubouchi 🤣 @Energy_Tidbits - Jan 2

"The situation in the [Germany] manufacturing sector is still pretty grim. Production is on a steep decline, and new orders keep slumping, making it clear that the industry won't be coming out of recession anytime soon."

HCOB Manufacturing PMI: Dec 42.5. Nov 43.0. Oct 43.0. Sept Show more



SAF

Dan Tsubouchi @ @Energy_Tidbits · Jan 2 For those like me that weren't at their laptops at 9am MT, @ElAgov released #Oil #Gasoline #Distillates inventory as of Dec 27. Table below compares EIA data vs @business analyst survey expectations and vs @APlenergy estimates Tuesday. #OOTT

(million barrels	s)	EIA	Expectations	API
Oil		-1.18	-2.50	-1.40
Gasoline		7.73	1.00	2.20
Distillates		6.41	-1.00	5.70
		12.96	-2.50	6.50
	Infinerolat. So ex	ciudes a 10.0	THIND DUILD IN OF IVIO	I UIE DEC ZI WEEK

Dan Tsubouchi 🥝 @Energy_Tidbits · Jan 1

SAF

×1 ····

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Was big Nov boost for export orders from China smaller & export oriented firms a one-time shot to get those goods in US before Trump on Jan 20?

"export orders contracted after increasing at the fastest pace in 7 months in Nov"

"business optimism weakened focused on the Show more



SAF Dan Tsubouchi @ @Energy_Tidbits · Jan 1 China starts gradual raise of retirement age but will still be well below western countries.

"starting from Jan 1, 2025, the statutory retirement age for men will be gradually raised from 60 to 63 in the course of 15 years, while that for women cadres will be raised from 55 to Show more



SAF-

Dan Tsubouchi 🔮 @Energy_Tidbits · Jan 1 Good map of Russia #NatGas flows to Europe via Ukraine pipeline map courtesy of @priazrocha @Dan_Hornak @a_shiryaevskaya.

They also reminded its was five decades of gas transit to Europe via Ukraine.

#OOTT



×1 …

Dan Tsubouchi 🤣 @Energy_Tidbits · Jan 1

Breaking!

SAF

PHEVs keep dominating BEVs in China.

Don't forget NEVs = BEVs + PHEVs

BYD Dec/YTD Dec 31: BEV: 207,734, +8.9% YoY. 1,764,992, +12.1% YoY PHEV: 301,706, +101.9% YoY. 2,485,378, +72.8% YoY.

Show more

...

BYD New Energy Ver	Dec-24	· Dec 2024	Dec-23	% Share	Volume &	% change
BEV	207,734	40.4%	190,754	55.9%	16,980	8.99
HEV	301,706	58.6%	149,424	43.8%	152,282	101.99
Commercial Vehicle - Bus	1,385	0.3%	805	0.2%	580	72.09
Commercial Vehicle - Others	3,994	0.8%	60	0.0%	3,934	6,556.79
fotal	514,819	100.0%	341,043	100.0%	173,776	51.09
	YTD Dec 24	% Share	YTD Dec-23	% Share	Volume ∆	% change
IEV	1,764,992	41.3%	1,574,822	52.1%	190,170	12.19
HEA	2,485,378	58.2%	1,438,084	47.5%	1,047,294	72.89
Commercial Vehicle - Bus	5,580	0.1%	4,705	0.2%	875	18.69
Commercial Vehicle - Others	16,195	0.4%	6,806	0.2%	9,389	138.09
Prepared by SAF Group		for December	2024, posted o	an 1, 2020		
Arepared by SAF Group	hi 🤣 @En EV/PHEV E.	ergy_Tidb 101 - The	vits · Sep 4	4, 2024 ly just mo	ore fuel e	fficient
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x1 ...

End, at least for now, of Russian Gazprom #NatGas via pipeline to Europe via Ukraine.

Was steady at ~1.5 bcf/d up until the last day.

Fortunately, not too cold today across Europe. Thx @timeanddate

#OOTT

01

as no technical and legal possibility of performing s across Ukraine.

1, 2025, at 8 am (Moscow time), the following doc December 30, 2019, expired: the agreement azprom and Naftogaz of Ukraine for arrangement smission of Russian gas across Ukrainian territory reement of cooperation between the GTS operator nd Ukraine, i.e. Gazprom and Gas Transmission Sys F Ukraine.

repeatedly and expressly stated refusal of the Ukr tend said agreements, Gazprom has been deprived nical and legal possibility of supplying gas for trar tine starting from January 1, 2025. At 8 am (Mosco s of Russian gas for its transmission across Ukrain ed

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Well respected, with a great gasoline price forecast track record, @GasBuddyGuy forecasts 2025 national average gasoline prices to average \$3.22, down vs \$3.33 in 2024.

Reminds that there is seasonality to gasoline prices ie. a springtime spike and low to close 2025.

#OOTT



SAF Dan Tsubouchi 🤣 @Energy_Tidbits · Dec 31, 2024 Bloomberg Billionaires Index as of Dec 31/24.

Shout-out to @ChipYVR!

He bet on himself. Left a cushy job at Dome Petroleum in early 80s to start from scratch to build a clothing empire.

I'm sure all of his former oil patch co-workers couldn't be happier for him.



SAF Dan Tsubouchi 🤣 @Energy_Tidbits · Dec 31, 2024 Russia Gazprom to Europe via Ukraine to halt after today. ×1 …

Delivering 1.3 bcf/d today via Sudzha station, was solid 1.5 bcf/d until today.

Last week, "Putin stated there will definitely not be a new contract..."

Good thing @ECMWF forecast turning warmer.

#OOTT #NatGas



SAF ---- Dan Tsubouchi 🤣 @Energy_Tidbits · Dec 30, 2024

x1 ...

3rd month of expansion, albeit barely, after 5 mths of contraction for China "official" manufacturing PMI.

Key wildcard still to come what happens with Trump.

Dec 50.1 vs est 50.2 Nov 50.3 Oct 50.1 Sept 49.8 Aug 49.1... Show more



SAF Dan Tsubouchi @ @Energy_Tidbits · Dec 30, 2024 Great day for #NatGas and #NatGas stocks.

Henry Hub +\$0.52 to \$3.90 so far.

Far from normal expectations as this in the face of knowing week to Dec 28 was warmer than normal and week to Jan 4 also forecast warmer than normal.

Thx @business #OOTT



Dan Tsubouchi @ Energy_Tidbits · Dec 30, 2024 For those who weren't around when Carter beat Ford in 1976.

...

Very different electoral map.

California was still solidly Republican.

Carter, the 1st southern President, swept the south

NE was a jump ball.

... Show more

SAF







SAF ---- Dan Tsubouchi 🤣 @Energy_Tidbits · Dec 29, 2024

Henry Hub opened trading tonight +\$0.30 to \$3.68 on the outlook for colder than normal temperatures in more populous eastern half of Lower 48.

#NatGas #OOTT

