

Appendix B

Metric and Thermal Conversion Tables

Metric conversions

Table B1 presents summary statistics for natural gas in the United States for 2020 through 2024 in metric units of measure. We show volumes in cubic meters, instead of cubic feet, and prices in nominal dollars per thousand cubic meters, instead of dollars per thousand cubic feet. We have converted the data in this table from the data that appear in Table 1 of this report. For metric equivalents, 1 cubic foot of natural gas equals approximately 0.0283 cubic meters of natural gas. Volumetric data in thermal units are available in Table B2. The complete historical data in thermal units are available in the [Monthly Energy Review](#).

Thermal conversions

Table B2 presents the thermal (British thermal unit) conversion factors and the converted data for natural gas supply and disposition from 2020 through 2024.

Thermal conversion factors

- **Additions to storage.** We assume additions to both underground and LNG storage have the same heat content as consumption.
- **Balancing item.** We calculate this conversion factor by subtracting the total heat content of all other items of supply from the heat content of total disposition (from Table B2) and dividing the difference by the balancing item quantity.
- **Consumption.** The thermal conversion factor for total consumption (lease fuel, plant fuel, pipeline fuel, and deliveries to consumers) is the average heat content for deliveries to end users as reported on Form EIA-176, *Annual Report of Natural and Supplemental Gas Supply and Disposition*. We obtain the average heat content of consumption in the electric power sector from Form EIA-923, *Power Plant Operations Report*.
- **Dry production.** We assume this conversion factor to be the same as the thermal conversion factors for consumption.
- **Marketed production.** We calculate the conversion factor by adding the total heat content of dry production to the total heat content of natural gas plant liquid (NGPL) production and dividing the resulting sum by the total quantity of dry production and NGPL production.
- **Natural gas plant liquids production.** This conversion factor is in Appendix A of this publication.
- **Supplemental gas supplies.** We assume this conversion factor is the same as that for consumption.
- **Withdrawals from storage.** We assume both underground and LNG storage withdrawals to have the same heat content as consumption.

Table B1. Summary statistics for natural gas in the United States, metric equivalents, 2020-2024

	2020	2021	2022	2023	2024
Production (million cubic meters)					
Gross withdrawals					
Natural gas wells	188,119	174,003	168,882	158,981	156,009
Oil wells	123,545	124,839	128,097	127,953	129,217
Coalbed wells	23,322	21,602	20,812	20,003	19,414
Shale gas wells	818,358	859,709	919,682	978,637	994,190
Total gross withdrawals	1,153,343	1,180,154	1,237,472	1,285,575	1,298,830
Non-marketed disposition					
Repressuring	101,386	105,377	106,998	106,259	109,173
Vented and flared	9,607	8,149	7,693	9,181	9,491
Nonhydrocarbon gases removed	8,195	9,338	9,095	8,077	8,305
Total non-marketed disposition	119,188	122,863	123,786	123,516	126,969
Dry production					
Marketed production	1,034,155	1,057,290	1,113,686	1,162,059	1,171,861
NGPL production, gaseous equivalent	76,730	79,530	87,061	95,861	103,610
Total dry production	957,425	977,760	1,026,626	1,066,198	1,068,251
Supply (million cubic meters)					
Dry production	957,425	977,760	1,026,626	1,066,198	1,068,251
Receipts at U.S. borders					
Imports	72,241	79,513	85,634	82,910	89,044
Intransit receipts	10,880	10,549	6,909	4,444	5,999
Withdrawals from storage					
Underground storage	96,614	106,503	118,212	93,305	103,877
LNG storage	971	1,201	1,751	1,162	1,287
Supplemental gas supplies	1,788	1,870	2,072	2,443	2,721
Balancing item	-16,020	-10,546	-14,965	-712	-11,075
Total supply	1,123,899	1,166,850	1,226,239	1,249,749	1,260,104
Disposition (million cubic meters)					
Consumption	866,568	867,790	914,405	922,901	936,039
Deliveries at U.S. borders					
Exports	149,645	188,381	195,568	215,492	218,226
Intransit deliveries	5,014	5,326	4,241	1,179	834
Additions to storage					
Underground storage	101,652	104,147	110,374	108,767	103,746
LNG storage	1,020	1,205	1,651	1,410	1,259
Total disposition	1,123,899	1,166,850	1,226,239	1,249,749	1,260,104
Consumption (million cubic meters)					
Lease fuel	37,727	38,796	39,978	41,334	41,544
Pipeline and distribution use	28,893	32,040	35,461	35,351	36,181
Plant Fuel	14,694	13,611	13,238	13,444	13,716
Delivered to consumers					
Residential	132,366	133,561	140,572	128,115	124,283
Commercial	89,557	93,136	99,410	94,323	93,952
Industrial	232,566	237,144	241,517	242,186	242,952
Vehicle fuel	1,392	1,543	1,835	1,703	1,802
Electric power	329,374	317,958	342,394	366,445	381,610
Total delivered to consumers	785,253	783,343	825,727	832,772	844,599
Total consumption	866,568	867,790	914,405	922,901	936,039
Delivered for the account of others (million cubic meters)					
Residential	17,211	16,925	17,339	15,406	15,066
Commercial	41,861	42,930	44,898	43,109	44,381
Industrial	202,182	205,496	209,226	209,917	209,975

See footnotes at end of table.

	2020	2021	2022	2023	2024
Number of consumers					
Residential	71,540,659	71,951,957	72,525,043	^R 73,275,155	73,719,064
Commercial	5,627,762	5,613,615	5,621,186	^R 5,653,260	5,658,114
Industrial	184,466	182,207	181,002	^R 178,477	177,803
Average annual consumption per Consumer (thousand cubic meters)					
Commercial	16	17	18	17	17
Industrial	1,261	1,302	1,334	^R 1,357	1,366
Average price for natural gas (dollars per thousand cubic meters)					
Imports	72.99	133.41	223.68	117.19	72.67
Exports	130.76	225.31	340.54	^R 192.64	158.15
Citygate	121.18	212.64	242.59	196.42	150.26
Delivered to consumers					
Residential	380.57	430.22	520.95	^R 543.69	512.23
Commercial	264.32	310.56	399.82	^R 390.02	355.49
Industrial	117.42	192.27	271.57	^R 160.00	143.85
Electric power	87.93	191.76	265.21	123.60	101.35

^R Revised data.

^a Pipeline and distribution use volumes include line loss, defined as known volumes of lost natural gas that were the result of leaks, damage, accidents, migration, and/or blow down.

Source: U.S. Energy Information Administration (EIA), Form EIA-176, *Annual Report of Natural and Supplemental Gas Supply and Disposition*; Form EIA-857, *Monthly Report of Natural Gas Purchases and Deliveries to Consumers*; Form EIA-914, *Monthly Crude Oil and Lease Condensate, and Natural Gas Production Report*; Form EIA-910, *Monthly Natural Gas Marketer Survey*; Form EIA-816, *Monthly Natural Gas Liquids Report*; Form EIA-64A, *Annual Report of the Origin of Natural Gas Liquids Production*; Form EIA-191, *Monthly Underground Gas Storage Report*; Office of Fossil Energy and Carbon Management, U.S. Department of Energy, *Natural Gas Imports and Exports*; Form EIA-923, *Power Plant Operations Report*; the Bureau of Safety and Environmental Enforcement (BSEE); state and federal agencies; state-sponsored public record databases; Form EIA-23, *Annual Survey of Domestic Oil and Gas Reserves*; PointLogic Energy; Enverus; and EIA estimates based on historical data.

Note: The United States equals the 50 states and District of Columbia. Totals may not equal sum of components because of independent rounding. Prices are in nominal dollars. U.S. prices represent the weighted average of the states in each sector.

Table B2. Thermal conversion factors and data, 2020-2024

	2020	2021	2022	2023	2024
Conversion factor (Btu per cubic foot)					
Production					
Marketed	1,145	1,146	1,149	1,157	1,167
NGPL production	2,499	2,489	2,488	2,501	2,510
Total dry production	1,037	1,037	1,036	1,036	1,037
Supply					
Dry production	1,037	1,037	1,036	1,036	1,037
Receipts at U.S. borders					
Imports	1,025	1,025	1,025	1,025	1,025
Intransit receipts	1,025	1,025	1,025	1,025	1,025
Withdrawals from storage					
Underground storage	1,037	1,037	1,036	1,036	1,037
LNG storage	1,037	1,037	1,036	1,036	1,037
Supplemental gas supplies	1,037	1,037	1,036	1,036	1,037
Balancing item	1,037	1,037	1,036	1,036	1,037
Total supply	NA	NA	NA	NA	NA
Disposition					
Consumption	1,037	1,037	1,036	1,036	1,037
(Electric power)	1,033	1,034	1,033	1,033	1,034
(Other sectors)	1,039	1,039	1,038	1,038	1,037
Deliveries at U.S. borders					
Exports	1,009	1,009	1,009	1,009	1,009
Intransit deliveries	1,009	1,009	1,009	1,009	1,009
Additions to storage					
Underground storage	1,037	1,037	1,036	1,036	1,037
LNG storage	1,037	1,037	1,036	1,036	1,037
Total disposition	NA	NA	NA	NA	NA
Summary data (billion Btu)					
Production					
Marketed	41,832,331	42,796,036	45,208,416	47,473,354	48,306,446
NGPL production	6,770,191	6,989,177	7,648,296	8,465,428	9,185,692
Total dry production	35,062,141	35,806,859	37,560,120	39,007,925	39,120,754
Supply					
Dry production	35,062,141	35,806,859	37,560,120	39,007,925	39,120,754
Receipts at U.S. borders					
Imports	2,614,955	2,878,160	3,097,585	2,998,674	3,221,793
Intransit receipts	393,815	381,851	250,094	160,848	217,150
Withdrawals from storage					
Underground storage	3,538,146	3,900,280	4,324,921	3,413,651	3,804,117
LNG storage	35,554	43,977	64,066	42,510	47,116
Supplemental gas supplies	65,482	68,487	75,804	89,367	99,653
Balancing item	-705,885	-539,589	-699,925	-196,251	-580,542
Total supply	41,004,208	42,540,026	44,672,665	45,516,724	45,930,042
Disposition					
Consumption	31,734,860	31,779,598	33,454,423	33,765,254	34,278,969
(Electric power)	12,015,570	11,610,358	12,490,567	13,367,938	13,934,646
(Other sectors)	19,719,290	20,169,240	20,963,855	20,397,317	20,344,323
Deliveries at U.S. borders					
Exports	5,332,240	6,712,482	6,968,590	7,678,524	7,775,927
Intransit deliveries	177,158	189,789	151,103	42,010	29,732
Additions to storage					
Underground storage	3,722,613	3,814,017	4,038,138	3,979,339	3,799,298
LNG storage	37,335	44,140	60,411	51,597	46,116
Total disposition	41,004,208	42,540,026	44,672,665	45,516,724	45,930,042

^{NA} Not available.

^R Revised data.

^a Pipeline and distribution use volumes include line loss, defined as known volumes of lost natural gas that were the result of leaks, damage, accidents, migration, and/or blow down. Source: U.S. Energy Information Administration (EIA), Form EIA-176, Annual Report of Natural and Supplemental Gas Supply and Disposition; Form EIA-857, Monthly Report of Natural Gas Purchases and Deliveries to Consumers; Form EIA-914, Monthly Crude Oil and Lease Condensate, and Natural Gas Production Report; Form EIA-816, Monthly Natural Gas Liquids Report; Form EIA-64A, Annual Report of the Origin of Natural Gas Liquids Production; Form EIA-191, Monthly Underground Gas Storage Report; Office of Fossil Energy and Carbon Management, U.S. Department of Energy, Natural Gas Imports and Exports; Form EIA-923, Power Plant Operations Report; the Bureau of Safety and Environmental Enforcement (BSEE); state and federal agencies; state-sponsored public record databases; Form EIA-23, Annual Survey of Domestic Oil and Gas Reserves; PointLogic Energy; Enverus; and EIA estimates based on historical data.

Note: See accompanying text for conversion factor documentation. Items appearing in parentheses are subsets of other items for which data are shown in this table and are not involved in the summing of supply and disposition. Totals may not equal sum of components because of independent rounding.