

Appendix B

Metric and Thermal Conversion Tables

Appendix B

Metric and Thermal Conversion Tables

Metric Conversions

Table B1 presents Summary Statistics for Natural Gas in the United States for 2001 through 2005 in metric units of measure. Volumes are shown in cubic meters instead of cubic feet. Prices are shown in dollars per thousand cubic meters instead of dollars per thousand cubic feet. The data in this table have been converted from the data that appear in Table 1 of this report.

Thermal Conversions

Table B2 presents the thermal (Btu) conversion factors and the converted data for natural gas supply and disposition from 2001 through 2005. A brief documentation for the thermal conversion factors follows:

- *Marketed Production.* The conversion factor is calculated by adding the total heat content of dry production to the total heat content of extraction loss and dividing the resulting sum by the total quantity of dry production and extraction loss (see below).
- *Extraction Loss.* The conversion factor is obtained from Appendix A of this publication.
- *Dry Production.* The conversion factor is assumed to be the same as the thermal conversion factors for consumption (see below).
- *Receipts at U.S. Borders.* The 2003 conversion factor has been applied to volumes reported through 2005. Intransit receipts are assumed to have the same average heat content as imports.
- *Withdrawals from Storage.* Both underground and LNG storage withdrawals are assumed to have the same heat content as consumption (see below).
- *Supplemental Gas Supplies.* This conversion factor is assumed to be the same as that for consumption (see below).
- *Balancing Item.* This conversion factor is calculated 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." Average heat content of electric utility consumption is obtained from EIA's Electric Power Annual. The factor for nonutility consumption is calculated by subtracting the total heat content of electric utility consumption from the heat content of total consumption and dividing the difference by the quantity of nonutility consumption (total consumption less electric utility consumption).
- *Deliveries at U.S. Borders.* The 2003 conversion factor has been applied to volumes reported through 2005. Intransit deliveries are assumed to have the same average heat content as exports.
- *Additions to Storage.* Additions to both underground and LNG storage are assumed to have the same heat content as consumption (see above).

Table B1. Summary Statistics for Natural Gas in the United States, Metric Equivalents, 2001-2005

	2001	2002	2003	2004	2005
Number of Gas and Gas Condensate Wells					
Producing at End of Year	373,304	387,772	393,327	^R 406,147	425,303
Production (million cubic meters)					
Gross Withdrawals					
From Gas Wells	513,368	503,894	506,356	^R 506,454	495,553
From Oil Wells	180,417	174,047	176,617	^R 172,292	169,560
Total	693,785	677,942	682,973	^R678,746	665,113
Repressuring	95,451	97,839	100,462	104,819	104,980
Vented and Flared	2,744	2,808	2,778	^R 2,730	3,372
Wet After Lease Separation	595,589	577,294	579,733	^R 571,196	556,761
Nonhydrocarbon Gases Removed	13,103	14,220	14,122	^R 18,523	20,136
Marketed Production	582,486	563,074	565,611	^R 552,674	536,625
Extraction Loss	27,014	27,099	24,800	26,238	24,820
Total Dry Production	555,472	535,975	540,811	^R526,435	511,805
Supply (million cubic meters)					
Dry Production	555,472	535,975	540,811	^R 526,435	511,805
Receipts at U.S. Borders					
Imports	112,614	113,705	111,675	120,589	122,924
Intransit Receipts	15,267	16,670	20,682	16,693	16,075
Withdrawals from Storage					
Underground Storage	65,375	88,849	87,746	85,986	86,553
LNG Storage	1,004	1,212	1,754	1,448	1,366
Supplemental Gas Supplies	2,444	1,925	1,917	^R 1,709	1,804
Balancing Item	3,804	-378	-1,090	^R 10,108	9,380
Total Supply	755,981	757,959	763,495	^R762,968	749,907
Disposition (million cubic meters)					
Consumption	629,728	651,486	630,800	^R 633,985	629,801
Deliveries at U.S. Borders					
Exports	10,570	14,618	19,253	24,186	20,632
Intransit Deliveries	16,279	15,021	18,357	14,127	13,002
Additions to Storage					
Underground Storage	98,125	75,602	93,211	89,198	84,995
LNG Storage	1,280	1,232	1,874	^R 1,471	1,478
Total Disposition	755,981	757,959	763,495	^R762,968	749,907
Consumption (million cubic meters)					
Lease Fuel	21,164	20,688	21,475	20,716	21,417
Pipeline and Distribution Use	17,697	18,885	16,749	^R 16,033	16,559
Plant Fuel	10,510	10,831	10,305	10,374	10,058
Delivered to Consumers					
Residential	135,109	138,436	143,831	^R 137,869	136,095
Commercial	85,594	89,033	90,033	^R 88,603	87,825
Industrial	207,965	212,580	202,477	^R 205,094	191,021
Vehicle Fuel	412	423	517	581	630
Electric Power	151,277	160,610	145,413	^R 154,717	166,196
Total Delivered to Consumers	580,357	601,082	582,272	^R586,863	581,767
Total Consumption	629,728	651,486	630,800	^R633,985	629,801
Delivered for the Account of Others (million cubic meters)					
Residential	10,248	11,999	13,374	^R 12,333	11,826
Commercial	29,069	32,407	31,422	^R 31,834	31,253
Industrial	164,626	164,316	157,689	^R 156,563	145,532

See footnotes at end of table.

Table B1. Summary Statistics for Natural Gas in the United States, Metric Equivalents, 2001-2005 —
Continued

	2001	2002	2003	2004	2005
Number of Consumers					
Residential	60,286,364	61,107,254	61,871,450	^R 62,496,134	63,573,466
Commercial	4,996,446	5,064,384	5,152,177	^R 5,139,949	5,196,428
Industrial	217,026	205,915	205,514	^R 209,058	205,217
Average Annual Consumption per Consumer (thousand cubic meters)					
Commercial	17	18	17	17	17
Industrial	958	1,032	985	^R 981	931
Average Price for Natural Gas (dollars per thousand cubic meters)					
Wellhead (Marketed Production)	141.12	104.07	172.48	192.74	259.00
Imports	156.44	111.06	182.64	205.02	286.87
Exports	147.97	120.48	195.62	215.13	268.15
Pipeline and Distribution Use	125.48	--	--	--	--
City Gate	202.02	146.51	206.67	234.76	306.08
Delivered to Consumers					
Residential	340.23	278.75	340.21	^R 379.66	453.38
Commercial	297.58	234.11	296.75	^R 333.02	409.28
Industrial	185.06	141.96	208.11	^R 230.65	302.46
Vehicle Fuel	233.08	180.03	218.45	^R 252.78	321.09
Electric Power	162.80	129.96	196.70	215.77	299.47

-- Not applicable.

^R Revised data.

Notes: The United States equals the 50 States and District of Columbia. Totals may not add due to independent rounding.

Sources: Energy Information Administration (EIA), Form EIA-176, "Annual Report of Natural and Supplemental Gas Supply and Disposition"; Form EIA-895, "Monthly and Annual Quantity and Value of Natural Gas Production Report"; Form EIA-857, "Monthly Report of Natural Gas Purchases and Deliveries to Consumers"; 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 FERC-423, "Monthly Report of Cost and Quality of Fuels for Electric Plants"; Form EIA-423, "Monthly Cost and Quality of Fuels for Electric Plants Report"; Form EIA-191M, "Monthly Underground Gas Storage Report"; Office of Fossil Energy, U.S. Department of Energy, *Natural Gas Imports and Exports*; the U.S. Minerals Management Service; Form EIA-906, "Power Plant Report"; Form EIA-886, "Annual Survey of Alternative Fueled Vehicle Suppliers and Users"; and EIA estimates.

Table B2. Thermal Conversion Factors and Data, 2001-2005

	2001	2002	2003	2004	2005
Conversion Factor (Btu per cubic foot)					
Production					
Marketed.....	1,105	1,106	1,106	^R 1,105	1,104
Extraction Loss	2,687	2,671	2,747	2,666	2,660
Total Dry Production.....	1,028	1,027	1,031	1,027	1,029
Supply					
Dry Production	1,028	1,027	1,031	1,027	1,029
Receipts at U.S. Borders					
Imports.....	1,023	1,022	1,025	1,025	1,025
Intransit Receipts	1,023	1,022	1,025	1,025	1,025
Withdrawals from Storage					
Underground Storage.....	1,028	1,027	1,031	1,027	1,029
LNG Storage.....	1,028	1,027	1,031	1,027	1,029
Supplemental Gas Supplies.....	1,028	1,027	1,031	1,027	1,029
Balancing Item	1,050	792	1,062	^R 986	1,017
Total Supply	NA	NA	NA	NA	NA
Disposition					
Consumption.....	1,028	1,027	1,031	1,027	1,029
(Electric Power).....	^R 1,026	^R 1,020	1,025	1,027	1,029
(Other Sectors)	^R 1,029	1,029	1,033	1,027	1,029
Deliveries at U.S. Borders					
Exports.....	1,010	1,008	1,009	1,009	1,009
Intransit Deliveries	1,010	1,008	1,009	1,009	1,009
Additions to Storage					
Underground Storage.....	1,028	1,027	1,031	1,027	1,029
LNG Storage.....	1,028	1,027	1,031	1,027	1,029
Total Disposition.....	NA	NA	NA	NA	NA
Summary Data (billion Btu)					
Production					
Marketed.....	22,728,539	21,994,760	22,096,437	^R 21,563,252	20,929,607
Extraction Loss	2,562,971	2,555,921	2,405,837	2,470,407	2,331,218
Total Dry Production.....	20,165,568	19,438,839	19,690,599	^R19,092,845	18,598,389
Supply					
Dry Production	20,165,568	19,438,839	19,690,599	^R 19,092,845	18,598,389
Receipts at U.S. Borders					
Imports.....	4,068,409	4,103,803	4,042,343	4,365,022	4,449,560
Intransit Receipts	551,557	601,654	748,637	604,255	581,866
Withdrawals from Storage					
Underground Storage.....	2,373,330	3,222,383	3,194,794	3,118,553	3,145,239
LNG Storage.....	36,463	43,953	63,870	62,503	49,655
Supplemental Gas Supplies.....	88,729	69,815	69,805	^R 61,995	65,538
Balancing Item	143,621	-10,566	-40,864	^R 351,936	336,726
Total Supply	27,427,677	27,469,881	27,769,185	^R27,647,108	27,226,974
Disposition					
Consumption.....	22,861,305	23,628,203	22,967,073	^R 22,993,478	22,886,197
(Electric Power).....	^R 5,481,200	^R 5,786,470	5,263,596	^R 5,611,284	6,039,350
(Other Sectors)	^R 17,380,105	^R 17,841,734	17,703,478	^R 17,382,193	16,846,846
Deliveries at U.S. Borders					
Exports.....	377,011	520,363	686,042	861,825	735,158
Intransit Deliveries	580,619	534,706	654,099	503,394	463,277
Additions to Storage					
Underground Storage.....	3,562,265	2,741,930	3,393,758	3,235,053	3,088,628
LNG Storage.....	46,476	44,679	68,213	^R 53,359	53,714
Total Disposition.....	27,427,677	27,469,881	27,769,185	^R27,647,108	27,226,974

^{NA} Not available.^R Revised data.

Notes: 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 due to independent rounding.

Sources: Energy Information Administration (EIA), Form EIA-895, "Monthly and

Annual Quantity and Value of Natural Gas Production Report"; Form EIA-176, "Annual Report of Natural and Supplemental Gas Supply and Disposition"; Form EIA-64A, "Annual Report of the Origin of Natural Gas Liquids Production"; Office of Fossil Energy, U.S. Department of Energy, Natural Gas Imports and Exports; Form EIA-191M, "Monthly Underground Gas Storage Report"; Form EIA-906, "Power Plant Report"; Form EIA-886, "Annual Survey of Alternative Fueled Vehicle Suppliers and Users"; and EIA estimates.