

Appendix B

Metric and Thermal Conversion Tables

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Metric Conversions

Table B1 presents Summary Statistics for Natural Gas in the United States for 2003 through 2007 in metric units of measure. Volumes are shown in cubic meters instead of cubic feet. Prices are shown in nominal 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 2003 through 2007. 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 2006. 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 the Energy Information Administration's (EIA) Form EIA-176, "Annual Report of Natural and Supplemental Gas Supply and Disposition." Average heat content of consumption in the Electric Power Sector is obtained from Form EIA-906, "Power Plant Report," prior to 2007, and from Form EIA-923, "Power Plant Operations Report," thereafter.
- *Deliveries at U.S. Borders.* The 2003 conversion factor has been applied to volumes reported through 2007. 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, 2003-2007

	2003	2004	2005	2006	2007
Number of Wells Producing at End of Year	393,327	406,147	425,887	^R 440,516	452,768
Production (million cubic meters)					
Gross Withdrawals					
From Gas Wells	506,356	506,454	494,748	^R 509,577	530,629
From Oil Wells	176,617	172,292	169,476	^R 156,860	165,699
Total	682,973	678,746	664,223	^R666,438	696,328
Repressuring	100,462	104,819	104,759	92,453	107,274
Vented and Flared	2,778	2,730	3,372	^R 3,666	4,269
Nonhydrocarbon Gases Removed	14,122	18,523	20,136	20,698	17,902
Marketed Production	565,611	552,674	535,956	^R 549,621	566,884
Extraction Loss	24,800	26,238	24,820	25,657	26,344
Total Dry Production	540,811	526,435	511,136	^R523,964	540,540
Supply (million cubic meters)					
Dry Production	540,811	526,435	511,136	^R 523,964	540,540
Receipts at U.S. Borders					
Imports	111,675	120,589	122,924	118,542	130,472
Intransit Receipts	20,682	16,693	15,776	14,568	15,085
Withdrawals from Storage					
Underground Storage	87,746	85,986	86,553	70,590	94,154
LNG Storage	1,754	1,448	1,417	956	1,548
Supplemental Gas Supplies	1,917	1,709	1,804	1,871	1,788
Balancing Item	-1,090	10,108	3,803	^R 1,739	-4,344
Total Supply	763,495	762,968	743,413	^R732,229	779,244
Disposition (million cubic meters)					
Consumption	630,800	633,985	623,271	^R 614,041	652,625
Deliveries at U.S. Borders					
Exports	19,253	24,186	20,632	20,500	23,289
Intransit Deliveries	18,357	14,127	13,002	13,786	13,081
Additions to Storage					
Underground Storage	93,211	89,198	84,995	82,806	88,714
LNG Storage	1,874	1,471	1,513	1,096	1,535
Total Disposition	763,495	762,968	743,413	^R732,229	779,244
Consumption (million cubic meters)					
Lease Fuel	21,475	20,716	21,417	^R 22,172	23,597
Pipeline and Distribution Use	16,749	16,033	16,538	^R 16,543	17,638
Plant Fuel	10,305	10,374	10,058	10,165	10,345
Delivered to Consumers					
Residential	143,831	137,869	136,679	^R 123,701	133,579
Commercial	90,033	88,603	84,920	^R 80,194	85,435
Industrial	202,477	205,094	186,816	^R 184,403	187,595
Vehicle Fuel	517	581	648	^R 672	708
Electric Power	145,413	154,717	166,196	176,190	193,727
Total Delivered to Consumers	582,272	586,863	575,258	^R565,160	601,045
Total Consumption	630,800	633,985	623,271	^R614,041	652,625
Delivered for the Account of Others (million cubic meters)					
Residential	13,374	12,333	11,925	10,731	12,360
Commercial	31,422	31,834	29,732	^R 29,117	32,118
Industrial	157,689	156,563	141,884	^R 141,213	145,828

See footnotes at end of table.

Table B1. Summary Statistics for Natural Gas in the United States, Metric Equivalents, 2003-2007 —
Continued

	2003	2004	2005	2006	2007
Number of Consumers					
Residential	61,871,450	62,496,134	63,616,827	^R 64,166,280	64,927,174
Commercial	5,152,177	5,139,949	5,198,028	^R 5,273,379	5,305,599
Industrial.....	205,514	209,058	206,223	^R 193,830	194,868
Average Annual Consumption per Consumer (thousand cubic meters)					
Commercial	17	17	16	15	16
Industrial.....	985	981	906	^R 951	963
Average Price for Natural Gas (nominal dollars per thousand cubic meters)					
Wellhead (Marketed Production)	172.48	192.74	258.88	^R 225.75	224.97
Imports	182.64	205.02	286.87	^R 242.93	242.62
Exports	195.62	215.13	268.15	^R 241.18	244.21
City Gate	206.67	234.76	306.12	303.93	286.84
Delivered to Consumers					
Residential.....	340.21	379.66	448.45	^R 485.01	461.27
Commercial	296.75	333.02	400.55	^R 423.70	399.92
Industrial.....	208.11	230.65	302.34	^R 278.06	271.09
Vehicle Fuel.....	218.45	252.78	322.80	^R 308.05	298.24
Electric Power	196.70	215.77	299.18	251.09	258.15

^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-895A, "Annual Quantity and Value of Natural Gas Production Report"; Form EIA-914, "Monthly 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"; FERC Form 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-920, "Combined Heat and Power Plant Report"; Form EIA-923, "Power Plant Operations Report"; Form EIA-886, "Annual Survey of Alternative Fueled Vehicle Suppliers and Users"; and EIA estimates.

Table B2. Thermal Conversion Factors and Data, 2003-2007

	2003	2004	2005	2006	2007
Conversion Factor (Btu per cubic foot)					
Production					
Marketed.....	1,106	1,105	1,105	1,103	1,104
Extraction Loss	2,747	2,666	2,660	2,639	2,648
Total Dry Production.....	1,031	1,027	1,029	1,028	1,029
Supply					
Dry Production	1,031	1,027	1,029	1,028	1,029
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.....	1,031	1,027	1,029	1,028	1,029
LNG Storage.....	1,031	1,027	1,029	1,028	1,029
Supplemental Gas Supplies.....	1,031	1,027	1,029	1,028	1,029
Balancing Item	1,062	986	998	^R 883	1,078
Total Supply	NA	NA	NA	NA	NA
Disposition					
Consumption.....	1,031	1,027	1,029	1,028	1,029
(Electric Power).....	1,025	1,027	1,028	1,028	1,028
(Other Sectors)	1,033	1,027	1,029	1,028	1,029
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.....	1,031	1,027	1,029	1,028	1,029
LNG Storage.....	1,031	1,027	1,029	1,028	1,029
Total Disposition.....	NA	NA	NA	NA	NA
Summary Data (billion Btu)					
Production					
Marketed.....	22,096,437	21,563,252	20,905,283	^R 21,412,487	22,106,475
Extraction Loss	2,405,837	2,470,407	2,331,218	2,390,781	2,463,893
Total Dry Production.....	19,690,599	19,092,845	18,574,065	^R 19,021,706	19,642,582
Supply					
Dry Production	19,690,599	19,092,845	18,574,065	^R 19,021,706	19,642,582
Receipts at U.S. Borders					
Imports.....	4,042,343	4,365,022	4,449,560	4,290,938	4,722,771
Intransit Receipts	748,637	604,255	571,044	^R 527,315	546,039
Withdrawals from Storage					
Underground Storage.....	3,194,794	3,118,553	3,145,239	2,562,662	3,421,438
LNG Storage.....	63,870	52,503	51,490	^R 34,693	56,270
Supplemental Gas Supplies.....	69,805	61,995	65,538	67,907	64,963
Balancing Item	-40,864	351,936	134,025	^R 54,220	-162,973
Total Supply	27,769,185	27,647,108	26,990,961	^R 26,559,441	28,291,090
Disposition					
Consumption.....	22,967,073	22,993,478	22,648,904	^R 22,291,811	23,715,599
(Electric Power).....	5,263,596	5,611,284	6,035,829	^R 6,396,319	7,032,968
(Other Sectors)	17,703,478	17,382,193	16,613,075	^R 15,895,492	16,682,631
Deliveries at U.S. Borders					
Exports.....	686,042	861,825	735,158	730,474	829,856
Intransit Deliveries	654,099	503,394	463,278	^R 491,239	466,096
Additions to Storage					
Underground Storage.....	3,393,758	3,235,053	3,088,628	3,006,128	3,223,775
LNG Storage.....	68,213	53,359	54,993	39,790	55,764
Total Disposition.....	27,769,185	27,647,108	26,990,961	^R 26,559,441	28,291,090

^R Revised data.

^{NA} Not available.

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-895A, "Annual Quantity and Value of Natural Gas Production Report"; Form EIA-914, "Monthly

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-920, "Combined Heat and Power Plant Report"; Form EIA-923, "Power Plant Operations Report"; Form EIA-886, "Annual Survey of Alternative Fueled Vehicle Suppliers and Users"; and EIA estimates.