

Overview

During 2000, the U.S. natural gas industry provided a record high volume of gas to consumers - 22.5 trillion cubic feet. Industrial sector and commercial sector consumption achieved their highest levels ever. All sources of gas supply increased activity during 2000 to satisfy the demand. Marketed production increased over 1999 levels and attained the highest production level since 1980 but remained below levels reached in the 1970's. Net imports were 3.5 trillion cubic feet, also a record high. Net withdrawals from storage were the highest level of inventory change ever measured. Increased prices accompanied the strong demand and supply activity. Natural gas prices re-

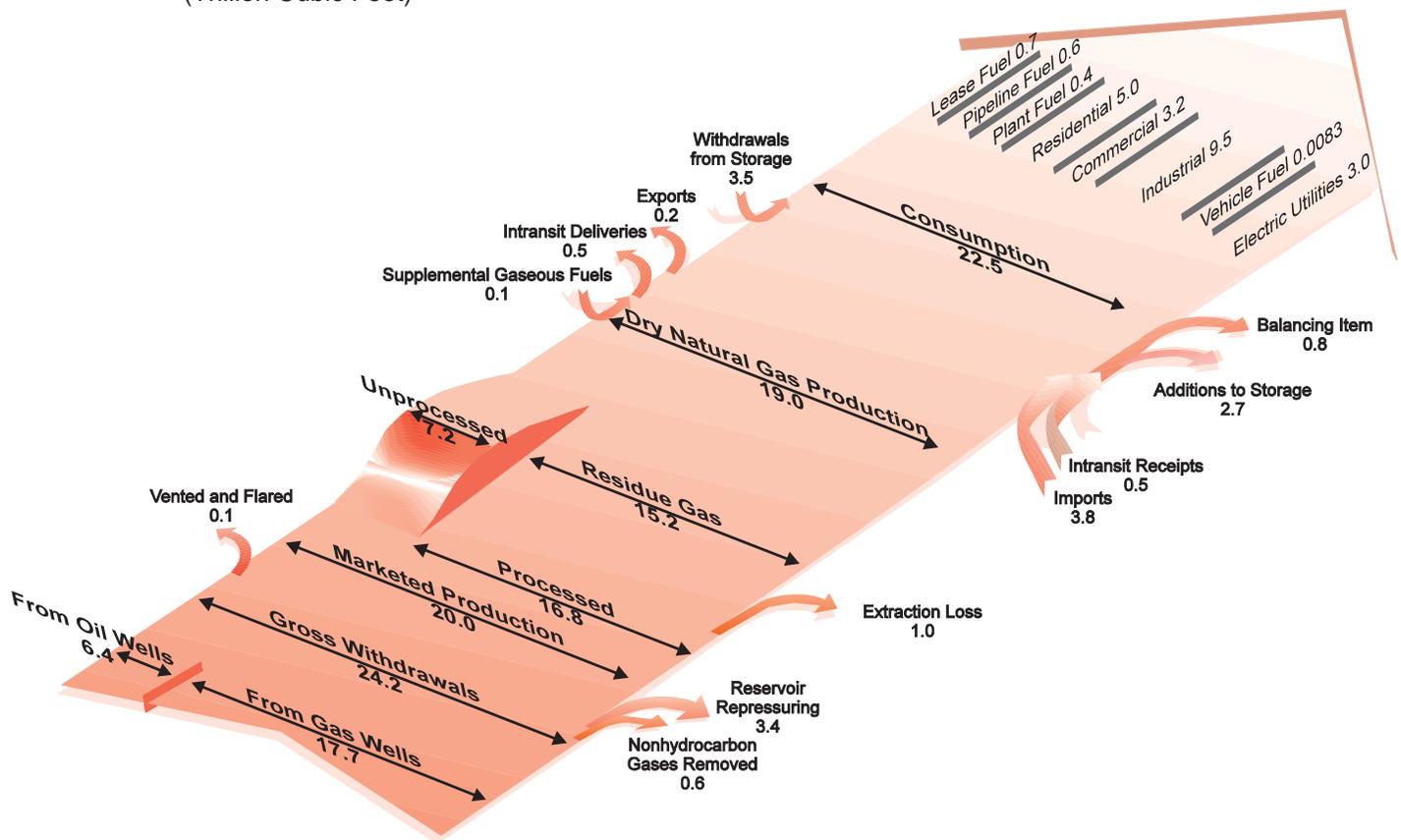
ceived at the wellhead as well as those paid by the four end-use sectors reached nominal dollar highs in 2000 but remained below their constant-dollar highs set in 1984.

Some of the national highlights for 2000 were:

Production

- Marketed natural gas production in 2000 was 20.0 trillion cubic feet, a 1 percent increase over the level in 1999. This is the first year since 1980 that marketed production has exceeded 20.0 trillion cubic feet.

Figure 1. Natural Gas Flow Diagram, 2000
(Trillion Cubic Feet)



Note: Totals may not equal sum of components 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 Quantity and Value of Natural Gas Report"; Form EIA-816, "Monthly Natural Gas Liquids Report"; Form EIA-759, "Monthly Power Plant Report"; Office of Fossil Energy, U.S. Department of Energy, Natural Gas Imports and Exports; and the U.S. Minerals Management Service.

- Four states continue to account for the majority of the natural gas produced in the United States comprising 73 percent of the total in 2000: Texas (31 percent), Louisiana (25 percent), Oklahoma (8 percent), and New Mexico (8 percent). Louisiana and Kansas had the largest declines in marketed production volumes, 4 and 5 percent respectively. The states with the largest increases in marketed production during 2000 were New Mexico and Wyoming — both increasing by 12 percent.
- Marketed natural gas production from state and Federal waters was 5.5 trillion cubic feet in 2000, a 3 percent decline from 1999. Louisiana had the largest volume of offshore natural gas production with 3.8 trillion cubic feet.
- The national average wellhead price was \$3.68 per thousand cubic feet in 2000, which was 68 percent higher than in 1999. In 2000, wellhead price increased in every producing state.

Imports and Exports

- Net imports continued to increase in 2000 reaching a new record level of 3.5 trillion cubic feet, approximately 16 percent of total U.S. consumption.
- Pipeline imports from Canada and Mexico comprise 94 percent of total U.S. imports. During 2000, Canadian imports increased 5.2 percent. Imports from Mexico decreased significantly in 2000 to 12 billion cubic feet and accounted for less than one percent of total imports.
- Liquefied natural gas (LNG) imports increased by over 38 percent in 2000, reaching 226 billion cubic feet (6 percent of total U.S. imports). Eight countries supply LNG imports to the U.S.: Algeria, Australia, Indonesia, Nigeria, Oman, Qatar, Trinidad and the United Arab Emirates. The new liquefaction facility in Trinidad became the largest supplier of LNG to the United States in 2000. This facility almost doubled the volume that it supplied in 1999. Algeria, which had been the major supplier in previous years, had a 38 percent reduction in shipments. Qatar, in its second year of exporting to the United States, more than doubled its shipments to 46 billion cubic feet in 2000.
- With large increases similar to wellhead prices in 2000, the average price for total pipeline imports was \$3.98. Historically, prices of LNG imports have been higher than those for Canadian and Mexican

pipeline imports. In 2000, prices of LNG imports increased, but the average price for total LNG imports was \$3.50, below the price of pipeline imports.

- Natural gas pipeline and LNG exports increased in 2000. Natural gas exports to Canada increased to 73 billion cubic feet in 2000, an 88 percent increase. The average price of exports to Canada was \$3.66 per thousand cubic feet, 56 percent above the 1999 price. Approximately 30 percent of total U.S. exports are delivered to Canada.
- LNG and pipeline exports are also delivered to Mexico. Natural gas pipeline exports to Mexico increased to 105 billion cubic feet in 2000. The price increased from \$2.27 in 1999 to \$4.26 in 2000. LNG exports to Mexico increased 52 percent in 2000 but remained at very small volumes — 418 million cubic feet. About 43 percent of total U.S. natural gas exports are delivered to Mexico.
- While LNG exports to Japan increased only 3 percent to 66 billion cubic feet in 2000, they represent 27 percent of total U.S. exports. The average price of LNG exports to Japan was \$4.31 per thousand cubic feet in 2000.

Storage

- Total underground natural gas storage capacity remained almost unchanged in 2000. Approximately 82 percent of total storage capacity in the United States is made up of depleted natural gas or oil fields. Aquifer reservoirs and salt caverns represent 15 and 2 percent of U.S. storage capacity, respectively. Michigan, Illinois, West Virginia, Texas, and Pennsylvania account for almost half of all U.S. storage capacity. Illinois accounts for 59 percent of aquifer capacity and Texas accounts for 55 percent of salt cavern capacity.
- Net storage withdrawals during 2000 were 829 million cubic feet, a record level of inventory change during a year.

Consumption

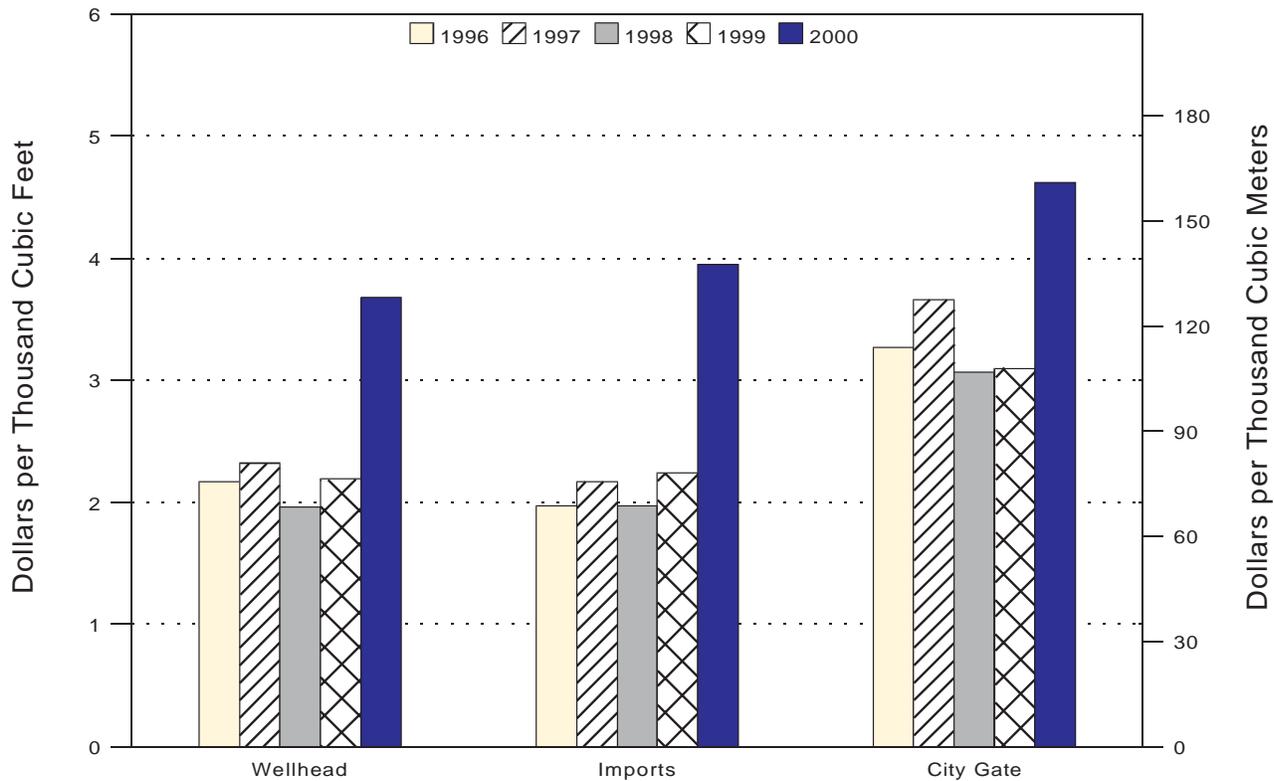
- Total natural gas consumption in 2000 was 22.5 trillion cubic feet - an increase of 4.3 percent over 1999 consumption. Consumption in 2000 exceeded the previous high of 22.1 trillion cubic feet set in 1972. These levels were the result of a combination of strong economic and generation activity throughout 2000 and cold weather in late 2000.

- All end-use sectors except the electric utility sector increased their consumption of natural gas during the year. The industrial sector experienced the largest volumetric increase, followed by the residential and commercial sectors. The percentage increases in the three sectors from 1999 to 2000 were almost identical at 5.6 percent. The industrial sector, which includes non-utility generators of electricity, is the largest consuming sector — followed by the residential and commercial sectors. Consumption in the industrial and commercial sectors set records in 2000. The decline in electric utility sector consumption was primarily due to the declining number of regulated electricity generators.
- The three states which led in residential consumption of gas in 2000 were California, Illinois, and New York. The same states, though in a different order, were the leaders for commercial sector consumption — New York, California, and Illinois. The states of Texas, California, and Louisiana accounted for the largest volumes of gas consumed in the industrial sector while Texas, Florida, and Louisiana were the leading states for consumption by electric utilities.
- The average price paid by the residential sector increased from \$6.69 per thousand cubic feet in 1999 to \$7.76 in 2000, an increase of 16 percent. Although the price paid by the residential sector is the highest among the four end-use sectors, the absolute price increase from 1999 was the lowest among the end-use sectors.
- Prices increased between 1999 and 2000 by 24 percent in the commercial sector (to \$6.59 per thousand cubic feet), by 45 percent in the industrial sector (to \$4.48 per thousand cubic feet), and by 67 percent in the electric utility sector (to \$4.38 per thousand cubic feet).

Changes to Tables in the *Natural Gas Annual 2000*

- Data on natural gas imports and exports by point of entry and exit are presented on Tables 10 and 11.
- Percent distribution of natural gas supply and disposition in Table 40 are now shown for dry production and total consumption.
- Dry production data are now presented in the Census Divisions (Tables 30-39) and State Tables (Tables 42-92) graphic boxes.
- Production figures for the State of Wyoming have been revised for 1998 and 1999 to reflect corrected reports for venting and flaring of natural gas. Gross withdrawals in the State contain carbon dioxide which is removed from the gas stream at a natural gas processing plant. Without a market for those removed volumes, the carbon dioxide is vented. Those volumes had been incorrectly reported as natural gas.

Figure 2. Selected Average Prices of Natural Gas in the United States, 1996-2000



Sources: Energy Information Administration (EIA), Form EIA-857, "Monthly Report of Natural Gas Purchases and Deliveries to Consumers"; Office of Fossil Energy, U.S. Department of Energy, Natural Gas Imports and Exports; and Form EIA-895, "Monthly Quantity and Value of Natural Gas Report".

Table 1. Summary Statistics for Natural Gas in the United States, 1996-2000

	1996	1997	1998	1999	2000
Number of Gas and Gas Condensate Wells					
Producing at End of Year.....	301,811	310,971	316,929	^R 302,421	306,239
Production (million cubic feet)					
Gross Withdrawals					
From Gas Wells.....	17,737,334	17,844,046	^R 17,728,520	^R 17,590,187	17,720,142
From Oil Wells.....	6,376,201	6,368,631	^R 6,379,608	^R 6,232,524	6,433,220
Total.....	24,113,536	24,212,677	^R24,108,128	^R23,822,711	24,153,362
Repressuring.....	-3,510,753	-3,491,542	^R -3,427,045	^R -3,292,564	-3,434,062
Vented and Flared.....	-272,117	-256,351	^R -103,019	^R -110,285	-100,048
Wet After Lease Separation.....	20,330,666	20,464,784	^R 20,578,064	^R 20,419,863	20,619,251
Nonhydrocarbon Gases Removed.....	-518,425	-598,691	^R -616,715	^R -615,014	-616,964
Marketed Production.....	19,812,241	19,866,093	^R 19,961,348	^R 19,804,848	20,002,287
Extraction Loss.....	-958,178	-963,759	-937,798	^R -972,614	-1,015,542
Total Dry Production.....	18,854,063	18,902,334	^R19,023,550	^R18,832,234	18,986,745
Supply (million cubic feet)					
Dry Production.....	18,854,063	18,902,334	^R 19,023,550	^R 18,832,234	18,986,745
Receipts at U.S. Borders					
Imports.....	2,937,413	2,994,173	3,152,058	3,585,505	3,781,603
Intransit Receipts.....	536,333	548,000	481,581	486,468	451,374
Withdrawals from Storage					
Underground Storage.....	2,911,327	2,824,245	2,377,344	^R 2,771,535	3,498,205
LNG Storage.....	69,287	69,517	54,365	^R 36,179	51,473
Supplemental Gas Supplies.....	109,455	103,153	102,189	^R 98,249	85,773
Balancing Item.....	217,114	61,024	^R -333,942	^R -896,753	-826,974
Total Supply.....	25,634,990	25,502,445	^R24,857,145	^R24,913,417	26,028,199
Disposition (million cubic feet)					
Consumption.....	21,966,616	21,958,660	^R 21,277,205	^R 21,619,616	22,546,944
Deliveries at U.S. Borders					
Exports.....	153,393	157,006	159,007	163,415	243,716
Intransit Deliveries.....	536,333	516,620	459,461	494,544	516,566
Additions to Storage					
Underground Storage.....	2,905,592	2,800,294	2,903,585	2,597,509	2,684,285
LNG Storage.....	73,057	69,865	57,887	^R 38,333	36,689
Total Disposition.....	25,634,990	25,502,445	^R24,857,145	^R24,913,417	26,028,199
Consumption (million cubic feet)					
Lease Fuel.....	799,629	776,306	^R 771,366	^R 679,480	726,149
Pipeline Fuel.....	711,446	751,470	635,477	^R 645,319	644,444
Plant Fuel.....	450,033	426,873	401,314	399,509	404,059
Delivered to Consumers					
Residential.....	5,241,414	4,983,772	4,520,276	^R 4,725,672	4,991,678
Commercial.....	3,158,244	3,214,912	2,999,491	^R 3,044,658	3,217,674
Industrial.....	8,870,422	8,832,450	8,686,147	^R 9,005,873	9,511,565
Vehicle Fuel.....	2,932	4,424	5,079	5,685	8,281
Electric Utilities.....	2,732,496	2,968,453	3,258,054	^R 3,113,420	3,043,094
Total Delivered to Consumers.....	20,005,508	20,004,012	19,469,047	^R19,895,308	20,772,291
Total Consumption.....	21,966,616	21,958,660	^R21,277,205	^R21,619,616	22,546,944
Delivered for the Account of Others (million cubic feet)					
Residential.....	49,148	61,013	105,128	225,198	374,758
Commercial.....	706,667	939,332	990,265	^R 1,031,794	1,194,914
Industrial.....	7,151,885	7,272,947	7,339,353	^R 7,438,048	7,786,982
Electric Utilities.....	1,871,496	1,932,394	2,152,846	2,136,894	2,020,590

See footnotes at end of table.

Table 1. Summary Statistics for Natural Gas in the United States, 1996-2000 (Continued)

	1996	1997	1998	1999	2000
Number of Consumers					
Residential.....	55,263,673	56,186,958	57,321,746	^R 58,223,229	59,478,980
Commercial.....	4,720,227	4,761,409	5,044,497	^R 5,010,189	5,090,586
Industrial.....	206,049	238,961	231,438	^R 230,053	235,064
Average Annual Consumption per Consumer (thousand cubic feet)					
Commercial.....	669	675	595	^R 608	632
Industrial.....	43,050	36,962	37,531	^R 39,147	40,464
Average Prices for Natural Gas (dollars per thousand cubic feet)					
Wellhead (Marketed Production).....	2.17	2.32	^R 1.96	^R 2.19	3.68
Imports.....	1.97	2.17	1.97	2.24	3.95
Exports.....	2.97	3.02	2.45	2.61	4.10
Pipeline Fuel.....	2.27	2.29	2.01	^R 1.88	2.94
City Gate.....	3.27	3.66	3.07	3.10	4.62
Delivered to Consumers					
Residential.....	6.34	6.94	6.82	6.69	7.76
Commercial.....	5.40	5.80	5.48	5.33	6.59
Industrial.....	3.42	3.59	3.14	3.10	4.48
Vehicle Fuel.....	4.34	4.44	4.59	4.34	5.54
Electric Utilities.....	2.69	2.78	2.40	2.62	4.38

^R = Revised data.
Notes: Beginning in 1987, prices for gas delivered to consumers are calculated using only onsystem sales data. No imputations are made for prices of gas delivered for the account of others. In previous years, prices were calculated using reported values and values imputed for gas delivered for the account of others. The United States includes the 50 states and the District of Columbia. Totals may not equal sum of components due to independent rounding. Beginning in 1996, consumption of natural gas for agricultural use was classified as industrial use. In 1995, agricultural use was classified as commercial use.

Sources: Energy Information Administration (EIA), Form EIA-176, "Annual Report of Natural and Supplemental Gas Supply and Disposition"; Form EIA-895, "Monthly Quantity and Value of Natural Gas Report"; Form EIA-857, "Monthly Report of Natural Gas Purchases and Deliveries to Consumers"; Form EIA-816, "Monthly Natural Gas Liquids Report"; Form EIA-64A, "Annual Report of the Origin of Natural Gas Liquids Production"; Form EIA-759, "Monthly Power Plant Report"; Form FERC-423, "Underground Gas Storage Report"; Office of Fossil Energy, U.S. Department of Energy, *Natural Gas Imports and Exports*; and the U.S. Minerals Management Service.

Figure 3. Natural Gas Supply and Disposition in the United States, 2000
(Trillion Cubic Feet)

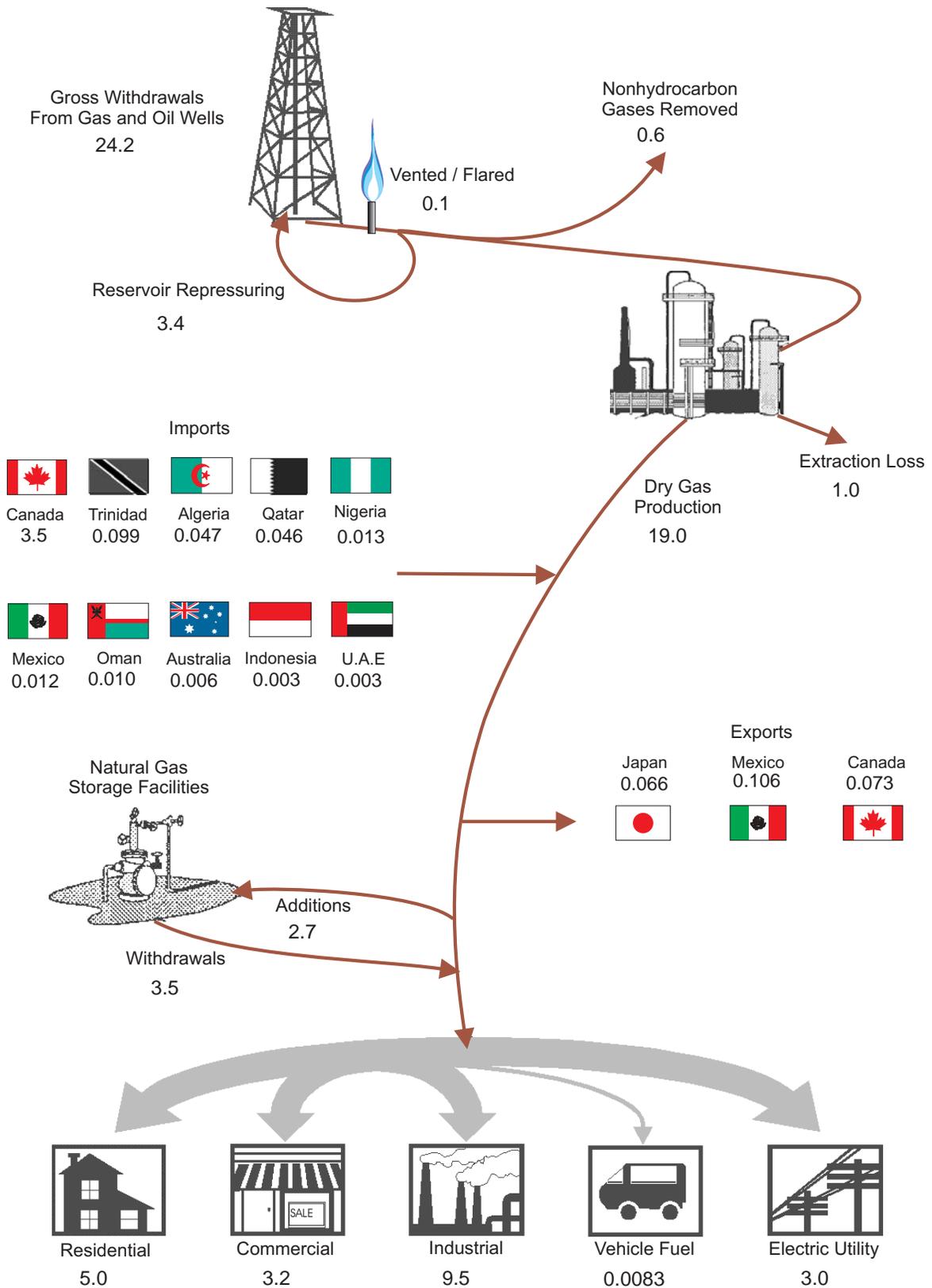


Table 2. Natural Gas Production, Transmission, and Consumption by State, 2000
(Million Cubic Feet)

State	Marketed Production	Extraction Loss	Balancing Item ^a	Net Interstate Movements ^b	Net Movements Across U.S. Borders ^c	Net Storage Changes ^c	Supplemental Gas Supplies	Consumption
Alabama	522,610	24,086	36,480	-198,818	0	-714	0	336,901
Alaska	458,995	39,324	73,144	0	-65,610	0	0	427,206
Arizona	368	0	35,370	178,077	-9,099	0	0	204,716
Arkansas	171,642	377	-29,844	109,180	0	-3,033	0	253,635
California	376,580	11,063	18,700	1,903,159	-13,152	-47,726	0	2,321,949
Colorado	752,985	29,105	-196,429	-195,047	0	-8,613	4,772	345,789
Connecticut	0	0	-91,527	217,766	0	-471	20	126,731
D.C.	0	0	-695	34,120	0	0	0	33,424
Delaware	0	0	9,066	43,107	0	83	6	52,095
Florida	6,491	1,354	-394	523,997	0	0	0	528,740
Georgia	0	0	-43,053	442,386	0	-1,126	73	400,531
Hawaii	0	0	73	0	0	0	2,769	2,841
Idaho	0	0	932	-760,660	830,351	-361	0	70,984
Illinois	189	42	-80,264	1,073,753	0	-24,535	1,955	1,020,126
Indiana	899	0	3,584	561,632	0	-4,373	5,583	576,071
Iowa	0	0	-68,813	287,948	0	-13,613	44	232,792
Kansas	525,729	44,200	19,773	-214,192	0	-34,047	0	321,157
Kentucky	81,545	1,416	-102,805	216,996	0	-30,198	10	224,528
Louisiana	5,068,863	164,908	60,432	-3,671,089	127,198	-96,201	0	1,516,697
Maine	0	0	-35,611	-79,367	123,521	12	6	8,538
Maryland	34	0	-9,230	214,110	0	-4,722	319	209,954
Massachusetts	0	0	-19,811	248,768	98,838	-7,480	26	335,301
Michigan	296,556	5,322	-68,513	1,112,200	-564,177	-146,588	12,423	929,756
Minnesota	0	0	29,388	-604,669	928,332	-1,270	101	354,422
Mississippi	88,558	11,377	208,012	-3,496	0	-1,853	0	283,551
Missouri	0	0	6,976	276,919	0	-567	972	285,433
Montana	69,936	272	-23,357	-792,097	798,420	-13,911	0	66,542
Nebraska	1,218	0	-93,613	212,371	0	-4,499	339	124,814
Nevada	7	0	25,984	157,063	0	-17	0	183,071
New Hampshire	0	0	-3,132	-14,574	38,289	-102	180	20,865
New Jersey	0	0	13,531	576,160	0	7	3,889	593,573
New Mexico	1,687,416	110,411	-119,872	-1,222,957	0	561	0	233,615
New York	17,757	0	-220,470	616,190	832,762	-9,586	858	1,256,683
North Carolina	0	0	-9,859	238,304	0	-722	2	229,169
North Dakota	52,426	6,021	9,652	-109,382	60,718	0	49,190	56,583
Ohio	105,125	78	56,649	668,358	0	-48,330	1,386	879,770
Oklahoma	1,612,890	96,787	-228,405	-845,206	0	-88,353	0	530,845
Oregon	1,214	0	-10,784	234,306	0	-4	2	224,743
Pennsylvania	200,907	586	-61,084	516,220	0	-47,411	261	703,129
Rhode Island	0	0	-9,833	87,362	0	-812	0	78,341
South Carolina	0	0	-10,872	165,868	0	-63	63	155,122
South Dakota	1,652	0	-3,639	41,986	0	4	13	40,007
Tennessee	1,150	0	-32,928	296,292	0	-1,839	13	266,366
Texas	6,205,249	380,535	166,369	-1,913,125	-71,667	-127,251	0	4,133,542
Utah	269,285	12,795	-70,924	-27,783	0	-6,537	0	164,319
Vermont	0	0	439	0	9,980	0	7	10,426
Virginia	71,545	0	-32,832	232,580	0	-324	493	272,111
Washington	0	0	-53,677	-10,363	347,992	-1,842	0	285,794
West Virginia	264,139	10,398	3,153	-154,652	0	-42,171	0	144,413
Wisconsin	0	0	12,171	379,900	0	-40	0	392,111
Wyoming	1,088,328	65,085	115,421	-1,049,603	0	-8,063	0	97,126
Total	20,002,287	1,015,542	-826,974	0	3,472,695	-828,704	85,773	22,546,944

^a Balancing Item volumes are equal to Total Disposition (net storage changes plus extraction loss plus consumption) minus Total Supply (marketed production plus net interstate movements plus net movements across U.S. borders plus supplemental gas supplies).

^b Positive numbers denote net receipts; negative numbers denote net deliveries.
^c Negative numbers indicate withdrawals from storage in excess of additions to storage and are, therefore, additions to total supply.

Note: Totals may not equal sum of components 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 Quantity and Value of Natural Gas Report"; Form EIA-816, "Monthly Natural Gas Liquids Report"; Form EIA-64A, "Annual Report of the Origin of Natural Gas Liquids Production"; and the U.S. Minerals Management Service.