

**Table NG1. Montana Natural Gas Production and Average Wellhead Price, 1950-2002**

Year	Gross Withdrawal <sup>1</sup> (MMcf)	Marketed Production <sup>2</sup> (MMcf)	Average <sup>3</sup> Wellhead Price (\$/Mcf)	Gross Value of Montana Production (thousand \$)
1950	40,975	38,972	\$0.053	\$2,066
1951	36,897	36,225	0.055	1,992
1952	29,140	28,557	0.061	1,742
1953	28,245	27,736	0.059	1,636
1954	30,532	30,087	0.068	2,046
1955	28,841	28,100	0.067	1,883
1956	26,852	25,706	0.068	1,748
1957	30,830	28,481	0.072	2,051
1958	30,830	27,836	0.068	1,893
1959	32,819	30,575	0.075	2,293
1960	37,792	33,235	0.071	2,360
1961	36,798	33,716	0.074	2,495
1962	32,621	29,791	0.074	2,205
1963	31,228	29,862	0.075	2,240
1964	26,653	25,050	0.078	1,954
1965	29,800	28,105	0.082	2,305
1966	36,048	30,685	0.083	2,547
1967	31,610	25,866	0.084	2,173
1968	32,229	19,313	0.091	1,757
1969	68,064	41,229	0.102	4,205
1970	48,302	42,705	0.103	4,399
1971	38,136	32,720	0.121	3,959
1972	38,137	33,474	0.123	4,117
1973	60,931	56,175	0.236	13,257
1974	59,524	54,873	0.253	13,883
1975	44,547	40,734	0.433	17,638
1976	45,097	42,563	0.445	18,941
1977	48,181	46,819	0.719	33,663
1978	48,497	46,522	0.847	39,404
1979	56,094	53,888	1.211	65,258
1980	53,802	51,867	1.454	75,415
1981	58,502	56,565	1.909	107,983
1982	58,184	56,517	2.145	121,229
1983	53,516	51,967	2.410	125,240
1984	52,930	51,474	2.460	126,626
1985	54,151	52,494	2.390	125,461
1986	48,246	46,592	2.050	95,514
1987	47,845	46,456	1.800	83,621
1988	53,014	51,654	1.700	87,812
1989	52,583	51,307	1.550	79,526
1990	51,537	50,429	1.790	90,268
1991	53,003	51,999	1.660	86,318
1992	54,810	53,867	1.620	87,265
1993	55,517	54,528	1.550	84,518
1994	51,072	50,416	1.460	73,607
1995	50,763	50,264	1.360	68,359
1996	51,668	50,996	1.410	71,904
1997	53,621	52,437	1.590	83,375
1998	59,506	57,645	1.530	88,197
1999	61,545	61,163	1.680	102,754
2000	70,424	69,936	2.840	198,618
2001	81,802	81,397	3.120	253,959
2002	86,424	86,075	2.390	205,719

<sup>1</sup> Gross Withdrawal includes marketed production, plus quantities used in re-pressuring, plus quantities vented and flared from both gas and oil wells.

<sup>2</sup> Marketed Production represents gross withdrawals of natural gas from gas and oil wells minus gas used for repressuring, nonhydrocarbon gases removed, and quantities vented and flared. For 1979 and prior years, the volumes of nonhydrocarbon gases included in marketed production were not reported. For 1980 and 1981, the amount of nonhydrocarbon gases removed was not available for the Montana data, so the Department of Energy used the same figure for Montana's marketed production including nonhydrocarbon gases as was used for marketed production excluding nonhydrocarbon gases.

<sup>3</sup> Average wellhead price is computed by dividing the gross value of the gas produced by the respective volume produced.

**Sources:** U.S. Department of Interior, Bureau of Mines, *Mineral Industry, Natural Gas Production and Consumption Annual Report*, 1950-75; U.S. Department of Energy, Energy Information Administration, *Natural Gas Production and Consumption Annual Report*, 1976-79 (EIA-0131); U.S. Department of Energy, Energy Information Administration, *Natural Gas Annual*, 1980-2002 (EIA-0131).

**Table NG2. Montana Natural Gas Consumption by Customer Class, 1950-2002 (million cubic feet)**

Year	Residential	Commercial <sup>1,2</sup>	Industrial <sup>1,3</sup>	Utilities	Total Consumption <sup>4</sup>
1950	12,596	7,536	13,979	892	38,333
1951	12,287	7,379	15,047	884	37,276
1952	12,263	7,794	17,422	998	41,545
1953	12,029	7,544	16,559	1,237	40,953
1954	13,314	8,277	14,909	601	41,002
1955	15,335	9,427	18,240	630	47,861
1956	15,235	9,314	18,226	876	48,305
1957	16,725	10,116	18,429	2,954	54,868
1958	14,970	9,546	18,960	3,183	54,725
1959	17,310	11,124	16,438	1,005	51,898
1960	16,825	11,820	19,558	339	54,271
1961	17,086	12,140	21,404	354	57,465
1962	17,078	12,302	21,713	3,692	62,952
1963	17,274	12,569	24,613	3,285	66,969
1964	18,792	13,059	26,419	2,437	67,282
1965	19,908	14,110	28,310	1,992	70,895
1966	19,690	14,068	29,571	2,977	73,829
1967	19,756	15,516	22,584	502	65,782
1968	19,711	13,651	23,155	631	63,642
1969	21,463	16,593	31,917	1,520	78,988
1970	24,794	18,564	36,105	2,529	90,823
1971	25,379	18,109	36,800	1,075	89,021
1972	23,787	19,151	33,192	1,218	85,161
1973	24,923	19,143	37,898	2,322	91,148
1974	21,590	16,602	35,202	1,111	80,766
1975	24,097	18,654	31,631	1,059	80,351
1976	23,525	17,831	31,049	709	78,094
1977	21,596	16,706	27,260	953	70,956
1978	22,944	17,766	26,686	909	72,649
1979	22,579	17,396	20,411	2,320	69,805
1980	19,296	14,265	16,717	4,182	60,724
1981	17,245	13,725	15,494	2,069	52,452
1982	19,989	15,987	11,574	337	52,208
1983	16,967	13,534	11,798	335	46,249
1984	18,443	14,256	9,855	360	46,864
1985	19,371	14,820	8,220	468	47,265
1986	16,822	12,536	7,507	407	41,148
1987	15,359	10,989	7,861	478	38,786
1988	16,900	12,041	8,360	286	41,825
1989	18,195	13,141	9,903	336	45,756
1990	16,850	12,164	9,424	418	43,169
1991	18,413	12,848	9,873	268	45,402
1992	16,673	11,559	12,218	220	45,561
1993	20,360	13,884	12,690	270	53,298
1994	18,714	12,987	13,940	632	52,058
1995	19,640	13,497	18,135	388	57,827
1996	22,175	14,836	18,103	470	61,399
1997	21,002	13,927	18,766	420	59,827
1998	19,172	12,952	21,416	522	59,840
1999	19,676	12,088	23,036	291	62,129
2000	20,116	13,533	23,841	192	67,955
2001	20,147	13,245	20,923	161	65,051
2002	21,710	14,704	21,867	116	69,636

<sup>1</sup> Other consumers, including deliveries to municipalities and public authorities for institutional heating, street lighting, etc., were included in the 'Industrial' category prior to 1967. From 1967 on, other consumers were included in the 'Commercial' category.

<sup>2</sup> Beginning with 1990 data, 'Commercial' volumes include natural gas delivered for vehicular fuel use.

<sup>3</sup> Industrial use includes refinery use of gas, but excludes pipeline fuel.

<sup>4</sup> Total Consumption includes total gas delivered to consumers, plus lease and plant fuel, plus pipeline fuel.

**Sources:** U.S. Department of Interior, Bureau of Mines, *Mineral Industry Surveys, Natural Gas Production and Consumption*, annual reports for 1950-75; U.S. Department of Energy, Energy Information Administration, *Natural Gas Production and Consumption*, annual reports for 1976-79 (EIA-0131); U.S. Department of Energy, Energy Information Administration, *Natural Gas Annual*, annual reports for 1980-99, 2002 (EIA-0131);

**Table NG3. Average Natural Gas Prices by Customer Class,<sup>1</sup> 1950-2002**

Year	Price by Customer Class (dollars per thousand cubic feet)			
	Residential	Commercial	Industrial	All Customers <sup>2</sup>
1950	0.473	0.328	0.142	0.301
1951	0.510	0.351	0.160	0.320
1952	0.507	0.352	0.192	0.324
1953	0.531	0.368	0.194	0.337
1954	0.589	0.415	0.201	0.388
1955	0.583	0.411	0.202	0.380
1956	0.585	0.412	0.206	0.382
1957	0.583	0.413	0.208	0.380
1958	0.647	0.443	0.218	0.401
1959	0.647	0.457	0.267	0.456
1960	0.660	0.464	0.274	0.454
1961	0.655	0.459	0.257	0.438
1962	0.752	0.506	0.251	0.464
1963	0.746	0.507	0.268	0.462
1964	0.763	0.533	0.303	0.495
1965	0.781	0.541	0.311	0.506
1966	0.779	0.543	0.304	0.495
1967	0.796	0.571	0.341	0.546
1968	0.822	0.603	0.326	0.554
1969	0.882	0.643	0.338	0.562
1970	0.907	0.659	0.339	0.572
1971	0.934	0.685	0.357	0.603
1972	0.965	0.691	0.381	0.630
1973	1.086	0.804	0.425	0.698
1974	1.119	0.926	0.580	0.804
1975	1.296	1.101	0.949	1.089
1976	1.364	1.187	0.930	1.164
1977	1.816	1.584	1.558	1.641
1978	1.894	1.646	1.642	1.720
1979	2.213	2.002	1.749	2.004
1980	3.053	3.117	3.143	3.182
1981	3.754	4.138	4.258	4.057
1982	4.460	4.874	5.488	4.829
1983	4.627	5.065	3.990	4.561
1984	4.861	5.242	5.173	5.025
1985	4.813	5.094	4.706	4.845
1986	4.446	4.476	3.913	4.312
1987	4.410	4.340	3.420	4.160
1988	4.300	4.300	3.080	4.040
1989	4.370	4.360	2.980	4.080
1990	4.590	4.640	3.270	4.260
1991	4.520	4.350	3.220	4.160
1992	4.800	4.460	4.190	4.510
1993	4.920	4.670	2.760	4.250
1994	5.230	4.910	4.910	4.990
1995	5.150	4.920	4.870	4.980
1996	4.860	4.640	4.880	4.790
1997	5.050	4.830	4.790	4.900
1998	5.250	5.130	4.680	4.960
1999	5.160	5.130	3.440	4.420
2000	6.030	5.900	7.430	6.580
2001	7.260	7.350	5.170	6.480
2002	5.300	5.370	2.750	4.360

<sup>1</sup> Average prices were computed by dividing the annual value of natural gas consumed by a customer class by the respective annual volume of natural gas consumed.

<sup>2</sup> The All Customers category includes all the consumers in Table NG2. The All Customers category is calculated by multiplying the consumption of each customer class (residential, commercial, industrial, utilities) by its corresponding consumer class price. These products are added up and the sum is divided by the total consumption of the four customer classes.

**Sources:** U.S. Department of the Interior, Bureau of Mines, Mineral Industry Surveys, *Natural Gas Production and Consumption*, annual reports for 1950-75; U.S. Department of Energy, Energy Information Administration, *Natural Gas Production and Consumption*, annual reports for 1976-79 (EIA-0131); U.S. Department of Energy, Energy Information Administration, *Natural Gas Annual*, annual reports for 1980-1999, 2002 (EIA-0131); U.S. Department of Energy, Energy Information Administration, *Natural Gas Monthly*, Sept. 2001 (EIA-0131).

<b>Table NG4. Average Natural Gas Consumption and Annual Cost per Consumer, 1980-2002<sup>1</sup></b>						
<b>Year</b>	<b>Residential<sup>2</sup></b>		<b>Commercial</b>		<b>Industrial<sup>3</sup></b>	
	<b>Average Consumption (Mcf)</b>	<b>Average Annual Cost (dollars)</b>	<b>Average Consumption (Mcf)</b>	<b>Average Annual Cost (dollars)</b>	<b>Average Consumption (Mcf)</b>	<b>Annual Cost (dollars)</b>
1980	117	356	670	2,089	32,841	103,218
1981	104	389	610	2,523	31,364	133,551
1982	121	538	780	3,800	24,013	131,770
1983	102	470	651	3,298	25,048	99,956
1984	110	534	679	3,558	21,013	108,703
1985	115	555	706	3,595	17,908	84,267
1986	100	445	597	2,672	16,869	66,006
1987	91	404	514	2,231	18,072	61,806 E
1988	98	423	541	2,329	19,219	59,195 E
1989	106	464	591	2,579	23,138	68,951 E
1990	97	444	521	2,419	20,622	67,434 E
1991	104	468	554	2,411	21,842	70,331 E
1992	91	439	490	2,185	26,620	--
1993	108	--	569	--	27,469	--
1994	96	--	512	--	30,773	--
1995	96	--	512	--	39,168	--
1996	108	--	562	--	38,848	--
1997	100	--	507	--	40,619	--
1998	88	--	462	--	47,172	--
1999	89	--	425	--	58,025	--
2000	89	--	463	--	335,786	--
2001	89	--	450	--	286,617	--
2002	95	--	480	--	287,720	--

<sup>E</sup> Estimate

<sup>1</sup> Starting in 1993, figures were no longer given for average cost. Starting in 1999, residential average consumption was no longer given.

<sup>2</sup> From 1999-2002, average consumption for residential customers was calculated by dividing total residential consumption in Montana by the total number of residential consumers

<sup>3</sup> Beginning in 1987, industrial costs per consumer are estimated by DEQ using U.S. Department of Energy average prices of deliveries to industrial customers times industrial consumption volumes. The Department of Energy did not calculate these numbers in national statistics because values associated with gas delivered for the account of others are not always available. However, those values are not considered to be significant in Montana.

**Source:** United States Department of Energy, Energy Information Administration, *Natural Gas Annual*, annual reports for 1980-99, 2002 (EIA-0131).

**Table NG5. Regulated Sales<sup>1</sup> of Natural Gas by Gas Utilities,\* 1950-2002 (million cubic feet)**

Note: The gas sales numbers in this table are significantly lower than the total gas consumption numbers in Table NG2 for several reasons. First, these sales data are taken from annual reports filed by utilities to the Montana Public Service Commission. The way utilities report gas sales to the PSC is different from the way in which Table NG2 total consumption numbers are calculated by the U.S. Energy Information Administration. Also, much of industrial consumption since 1991 is not reported in this table due to different reporting requirements and processes used by utilities since deregulation. These include the practice of not reporting gas used for pipeline transportation. This table does not include gas sales sold to other utilities for resale in Montana, lease and plant fuel, pipeline fuel, or fuel used by utilities.

Year	MONTANA POWER /NORTHWESTERN ENERGY <sup>2</sup>					MONTANA-DAKOTA UTILITIES <sup>3</sup>				
	Residential and Commercial	Industrial	Other	Total	% of Total Montana Sales	Residential and Commercial	Industrial	Other	Total	% of Total Montana Sales
1950	7,909	8,852	NA	16,761	54.2%	4,228	240	469	4,937	16.0%
1951	8,076	12,970	NA	21,046	59.3%	5,514	1,180	499	7,193	20.3%
1952	8,435	13,760	NA	22,195	62.0%	7,340	1,845	468	9,653	26.9%
1953	8,229	13,624	NA	21,853	61.9%	7,223	1,863	480	9,566	27.1%
1954	8,737	12,225	NA	20,962	59.3%	7,912	1,649	495	10,056	28.4%
1955	11,231	15,511	NA	26,742	63.9%	7,594	1,996	533	10,123	24.2%
1956	11,100	15,584	NA	26,684	63.4%	7,708	2,212	509	10,429	24.8%
1957	12,584	15,527	NA	28,111	64.4%	7,797	2,056	492	10,345	23.7%
1958	12,391	15,173	NA	27,564	62.7%	7,429	3,233	551	11,213	25.5%
1959	14,401	12,629	NA	27,030	59.6%	8,678	2,934	507	12,119	26.7%
1960	14,533	15,462	NA	29,995	62.3%	8,516	3,148	342	12,006	25.0%
1961	14,517	16,654	NA	31,171	62.7%	8,689	3,606	177	12,472	25.1%
1962	15,133	18,080	NA	33,213	64.1%	9,148	3,051	103	12,302	23.7%
1963	14,893	19,666	NA	34,559	64.6%	8,826	3,862	79	12,767	23.9%
1964	16,853	20,958	NA	37,811	64.1%	9,620	4,687	55	14,362	24.4%
1965	17,977	22,195	NA	40,172	63.9%	10,955	4,430	61	15,446	24.6%
1966	17,731	23,058	NA	40,789	65.2%	10,414	4,256	55	14,725	23.5%
1967	18,027	20,766	NA	38,793	64.5%	10,584	3,813	67	14,464	24.0%
1968	19,063	21,650	NA	40,713	64.6%	10,847	4,523	65	15,435	24.5%
1969	19,891	25,536	NA	45,427	64.2%	11,534	6,277	55	17,866	25.3%
1970	20,398	26,006	NA	46,404	62.9%	11,499	8,582	102	20,183	27.3%
1971	18,956	25,581	1,628	46,165	62.9%	11,612	8,317	139	20,068	27.3%
1972	20,068	26,128	1,491	47,687	62.4%	12,352	8,218	600	21,170	27.7%
1973	19,771	25,915	1,578	47,264	62.3%	11,525	8,685	1,415	21,623	28.5%
1974	18,931	26,301	1,408	46,640	63.4%	11,230	8,455	588	20,273	27.6%
1975	20,762	24,130	1,523	46,415	62.5%	12,779	7,774	NA	20,553	27.7%
1976	18,795	20,663	1,405	40,863	61.0%	12,208	7,100	NA	19,307	28.8%
1977	18,413	18,101	1,451	37,965	61.4%	11,898	5,923	NA	17,821	28.8%
1978	18,696	17,280	1,498	37,475	60.5%	13,784	3,981	NA	17,765	28.7%
1979	19,142	16,118	2,737	37,997	62.0%	13,500	3,480	NA	16,981	27.7%
1980	17,091	12,655	4,986	34,733	62.9%	11,332	3,627	NA	14,959	27.1%
1981	15,216	9,758	2,754	27,727	57.8%	10,312	5,307	NA	15,618	32.6%
1982	17,032	7,064	1,317	25,413	54.6%	12,228	4,148	60	16,436	35.3%
1983	14,606	6,829	1,152	22,587	54.8%	10,181	3,774	32	13,987	34.0%
1984	16,075	5,967	1,238	23,280	56.3%	10,744	2,451	59	13,254	32.1%
1985	16,916	6,043	1,271	24,230	58.3%	11,094	1,336	19	12,449	29.9%
1986	14,461	5,208	1,099	20,768	58.6%	9,191	607	15	9,813	27.7%
1987	14,090	5,358	748	20,196	62.6%	7,712	254	15	7,981	24.7%
1988	15,027	6,652	732	22,410	63.2%	8,285	475	17	8,776	24.8%
1989	16,771	7,050	771	24,592	64.0%	9,069	161	17	9,247	24.1%
1990	15,915	6,057	744	22,715	64.5%	8,192	54	17	8,262	23.5%
1991	16,522	4,980	683	22,185	62.2%	9,074	12	11	9,096	25.5%
1992	18,641	672	221	19,534	60.4%	8,290	4	13	8,307	25.7%
1993	21,216	756	1481	23,453	60.4%	9,927	12	8	9,947	25.6%
1994	19,680	603	499	20,782	59.5%	9,258	3	10	9,271	26.5%
1995	20,900	616	517	22,033	60.8%	9,345	NA	NA	9,345	25.8%
1996	23,414	681	599	24,694	61.1%	10,891	NA	NA	10,891	26.9%
1997	22,465	619	488	23,572	60.4%	10,148	NA	NA	10,148	26.0%
1998	19,298	309	294	19,901	58.4%	8,906	NA	NA	8,906	26.1%
1999	18,277	281	244	18,802	57.8%	8,906	NA	NA	8,906	27.4%
2000	18,382	211	282	18,875	58.1%	9,301	NA	NA	9,301	28.6%
2001	18,459	236	299	18,995	60.0%	8,885	NA	NA	8,885	28.1%
2002	19,748	237	317	20,302	60.1%	9,843	NA	NA	9,843	29.1%

NA Not Available  
\* See notes on following page.

Table NG5. (continued)

Year	GREAT FALLS GAS COMPANY/ ENERGY WEST <sup>4</sup>					OTHER UTILITIES <sup>5</sup>		TOTAL SALES <sup>6</sup>			
	Residential and Commercial	Industrial	Other	Total	% of Total Montana Sales	Total for all Sectors	% of Total Montana Sales	Residential and Commercial	Industrial	Other	TOTAL
1950	2,509	208	53	2,770	9.0%	6,481	20.9%	21,127	9,300	522	30,949
1951	2,697	311	191	3,199	9.0%	4,055	11.4%	20,342	14,461	690	35,493
1952	2,566	228	333	3,127	8.7%	852	2.4%	19,193	15,833	801	35,827
1953	2,478	238	350	3,066	8.7%	814	2.3%	18,744	15,725	830	35,299
1954	2,795	255	400	3,450	9.8%	892	2.5%	20,336	14,129	895	35,360
1955	3,284	243	434	3,961	9.5%	1,049	2.5%	23,158	17,750	967	41,875
1956	3,361	204	396	3,961	9.4%	1,019	2.4%	23,188	18,000	905	42,093
1957	3,510	258	451	4,219	9.7%	955	2.2%	24,846	17,841	943	43,630
1958	3,365	268	475	4,108	9.3%	1,067	2.4%	24,252	18,674	1,026	43,952
1959	4,048	388	566	5,002	11.0%	1,175	2.6%	28,302	15,951	1,073	45,326
1960	3,928	512	516	4,956	10.3%	1,152	2.4%	28,129	19,122	858	48,109
1961	4,067	380	606	5,053	10.2%	1,045	2.1%	28,318	20,640	783	49,741
1962	4,092	371	752	5,215	10.1%	1,078	2.1%	29,451	21,502	855	51,808
1963	4,030	396	793	5,219	9.8%	945	1.8%	28,694	23,924	872	53,490
1964	4,446	480	847	5,773	9.8%	1,018	1.7%	31,937	26,125	902	58,964
1965	4,767	499	868	6,134	9.8%	1,160	1.8%	34,859	27,124	929	62,912
1966	4,593	490	846	5,929	9.5%	1,125	1.8%	33,863	27,804	901	62,568
1967	4,505	397	856	5,758	9.6%	1,160	1.9%	34,276	24,976	923	60,175
1968	4,504	424	852	5,780	9.2%	1,074	1.7%	35,488	26,597	917	63,002
1969	5,042	412	891	6,345	9.0%	1,118	1.6%	37,585	32,225	946	70,756
1970	4,926	378	902	6,206	8.4%	1,010	1.4%	37,833	34,966	1,004	73,803
1971	4,901	367	895	6,163	8.4%	1,048	1.4%	36,517	34,265	2,662	73,444
1972	5,185	353	884	6,422	8.4%	1,105	1.4%	38,710	34,699	2,975	76,384
1973	4,729	414	864	6,007	7.9%	982	1.3%	37,007	35,014	3,857	75,876
1974	4,504	412	807	5,723	7.8%	936	1.3%	35,601	35,168	2,803	73,572
1975	5,145	354	845	6,344	8.5%	1,000	1.3%	39,686	32,258	2,368	74,312
1976	4,875	237	892	6,004	9.0%	762	1.1%	36,640	28,000	2,297	66,936
1977	4,317	246	734	5,297	8.6%	715	1.2%	35,343	24,270	2,185	61,798
1978	4,818	196	826	5,840	9.4%	824	1.3%	38,122	21,457	2,324	61,904
1979	4,512	249	750	5,512	9.0%	804	1.3%	37,958	19,847	3,487	61,294
1980	3,888	266	689	4,842	8.8%	669	1.2%	32,980	16,548	5,675	55,203
1981	3,257	169	619	4,044	8.4%	573	1.2%	29,358	15,234	3,373	47,962
1982	3,289	188	627	4,104	8.8%	596	1.3%	33,145	11,460	1,944	46,549
1983	3,320	206	636	4,162	10.1%	446	1.1%	28,553	10,809	1,820	41,182
1984	3,531	256	530	4,317	10.4%	487	1.2%	30,837	8,674	1,827	41,338
1985	3,719	181	536	4,436	10.7%	474	1.1%	32,203	7,560	1,826	41,589
1986	3,538	285	592	4,415	12.5%	465	1.3%	27,655	6,100	1,706	35,461
1987	3,064	193	442	3,699	11.5%	388	1.2%	25,254	5,805	1,205	32,264
1988	3,189	170	499	3,858	10.9%	386	1.1%	26,887	7,296	1,247	35,431
1989	3,567	160	411	4,138	10.8%	427	1.1%	29,834	7,371	1,199	38,404
1990	3,381	78	401	3,860	11.0%	392	1.1%	27,879	6,189	1,162	35,230
1991	3,435	164	389	3,988	11.2%	400	1.1%	29,430	5,156	1,083	35,669
1992	4,139	0	NA	4,139	12.8%	373	1.2%	31,443	676	234	32,353
1993	4,478	0	490	4,968	12.8%	432	1.1%	36,053	768	1,979	38,800
1994	3,971	0	478	4,449	12.7%	443	1.3%	33,352	606	987	34,945
1995	3,942	0	464	4,406	12.2%	447	1.2%	34,634	616	981	36,231
1996	4,362	0	NA	4,362	10.8%	498	1.2%	39,165	681	599	40,445
1997	4,496	0	314	4,810	12.3%	504	1.3%	37,613	619	802	39,034
1998	3,535	0	1331	4,866	14.3%	418	1.2%	32,157	309	1,625	34,091
1999	3,401	0	996	4,397	13.5%	427	1.3%	31,011	281	1,240	32,532
2000	3,058	0	1009	4,067	12.5%	239	0.7%	30,980	211	1,291	32,482
2001	3,758	0	0	3,758	11.9%	258	0.8%	31,102	236	299	31,637
2002	3,651	0	0	3,651	10.8%	256	0.8%	33,242	237	317	33,796

NA Not Available

\* See notes on following page.

**Table NG5. (continued)**

<sup>1</sup> Gas sales to other utilities for resale and sales of natural gas to Canada are not included in these numbers

<sup>2</sup> From 1950 to 1970, government and municipal sales were reported in the "Residential and Commercial" sector

"Other" includes interdepartmental use, sales to government and municipal authorities for heating, and special off-line sales to firms in Montana where these figures are reported separately.

In 1991 is when MPC's Gas Utility started deregulating its customers. As a result, there have been changes in measured sales methodology from 1991 until present. This created differences after 1991 in how MPC's data is reported and is part of the reason why the numbers in the 'industrial' column decrease so sharply in 1992. It is very hard to reconcile these differences and thus the 1990's numbers are given as presented in Schedule 35.

In 1992, some customers in the 'industrial' category left MPC as a result of deregulation

In 1992 and 1993, Schedule 35 was not reported like in later years. In 1992, figures used are from Actual Billed Volumes supplied by Fran Balkovetz at MPC

<sup>3</sup> Prior to 1975 "Other" includes interdepartmental use and natural gas used in MDU's electric generating plants at Baker, Glendive, and Miles City. Company consumption and unbilled customer consumption as part of a lease agreement at Saco are not included

The 1975-81 data uses slightly different sector definitions; as a result, consumption in the "Other" sector is not shown separately for these years

Since 1982 "Other" includes interdepartmental sales.

From 1992-2000, amount sold is reported in Dekatherms rather than Mcf. From 1995 on, amounts for industrial and other usage not reported by MDU.

<sup>4</sup> "Other" includes sales to Malmstrom Air Force Base and other public authorities. In 1993, Great Falls Gas became Energy Wes

<sup>5</sup> "Other Utilities" includes the following companies (listed in approximate descending order by volume of sales)

Cut Bank Gas Company: Supplies natural gas to Cut Bank; approximately 80 percent of its gas is purchased from the Montana Power Company/NorthWestern Energy.

Shelby Gas Association: Supplies natural gas to Shelby; gas is purchased from the Montana Power Company/NorthWestern Energy.

Saco Municipal Gas Service: Supplied natural gas to Saco from the town's own wells.

Consumers Gas Company: Supplied natural gas to Sunburst and Sweetgrass; gas was purchased from the Montana Power Company and J.R. Bacon Drilling Company through the Treasure State Pipeline Company.

After 1991, Saco no longer reported any numbers and Consumers Gas was bought out by a municipal provider. Thus, those two are no longer added among "other utilities". No industrial numbers were given by any of these utilities after 1991. Thus, after 1991, 'other utilities' includes the Cut Bank Gas Company and Shelby Gas Association only.

Some of the smaller gas utilities have experienced problems measuring actual gas sales volumes. Therefore, the figures for these utilities should be considered estimates.

In the year 2000, Shelby did not report

<sup>6</sup> All gas sales from "Other" vary from utility to utility and from year to year, as indicated above

**NOTE:** Source documents from the Public Service Commission often report data at sales pressure rather than at a uniform pressure base. When necessary, the data were converted to the uniform pressure base of 14.73 psia at 60 degrees Fahrenheit using Boyle's law.

The source reports are for the companies' fiscal years ending during the year shown. Because reporting years vary from utility to utility, the data represent various twelve-month periods and are, in that sense, not strictly comparable.

The Saco Municipal Gas Service and the Cut Bank Gas Company have reporting years ending June 30. The Shelby Gas Association's reporting year ends September 30. The Consumer Gas Company, the Montana Power Company/NorthWestern Energy, and Montana-Dakota Utilities use calendar year reporting periods.

The Great Falls Gas Company/Energy West used a calendar year reporting period through 1981; they filed a six-month report for the period January 1, 1982, through June 30, 1982, and then changed to a twelve-month reporting period ending June 30.

The 1982 figures were estimated by the sector averages from the 1981 and 1983 twelve-month reports. The 1983 figures and those for all subsequent years are based on twelve-month reports ending June 30 of that year.

**SOURCE:** Annual reports filed with the Montana Public Service Commission by the natural gas utilities (1950-2002), supplemented by information obtained directly from the utilities. After 1993, schedule 35 of the annual reports of each utility was used.



<b>Table NG6. Largest Natural Gas Users in Montana</b>		
<b>Company</b>	<b>Industry</b>	<b>Location</b>
<b>Over 500 Million Cubic Feet (MMcf) Average Usage Annually</b>		
Conoco	Oil refinery	Billings
Stone Container	Pulp/paper mill	Missoula
Exxon Co. USA	Oil refinery	Billings
Cenex Harvest States	Oil refinery	Laurel
<b>200-500 MMcf Average Usage Annually</b>		
Advanced Silicon Materials Inc.	Industrial manufacturing	west of Butte
Montana State University	Heating plant	Bozeman
Barretts Minerals Inc.	Talc processing	Dillon
<b>50-200 MMcf Average Usage Annually</b>		
MDU Glendive turbines	Electrical generation	Glendive
Montana Resources Inc.	Mine	Butte
Columbia Falls Aluminum Co.	Aluminum manufacturing	Columbia Falls
Malmstrom AFB	Air Force Base	Great Falls
Luzenac America Inc.	Talc processing	Three Forks
Corette Generation Plant	Electrical generation	Billings
American Chemet Corp.	Industrial manufacturing	East Helena
MDU Miles City turbine	Electrical generation	Miles City
Plum Creek Manufacturing	Sawmills, wood products	Columbia Falls

NOTE: Due to the difficulties of reporting exact or even approximate usage numbers for large individual gas users, DEQ has attempted to identify the current largest natural gas users in Montana and determine what range of average annual usage they likely fall under. Data for estimating consumption ranges was taken mostly from the DEQ Air and Waste Management Bureau, Emissions Inventory Report. Note that these ranges represent average annual usage over the past 6 to 8 years and that actual usage can greatly vary from year to year--especially for the refineries. Estimated gas usage is based upon the annual process rate of particular industrial components that use gas within each listed company. Each facility reports their use rates of various fuels including natural gas, and those numbers are entered into the Emissions Inventory Reports. Also, the reports contained the rare error. Thus, best professional judgement was used for those Emissions Inventory Reports that were unclear or contained an error.

**Source:** DEQ Air and Waste Management Bureau, Emissions Inventory Report, Point and Segment List (1997 to 1999) taken from EPA's AIRS County Reports; DEQ Air and Waste Management Bureau,