

**Table 12.7 Emissions From Energy Consumption for Electricity Generation, 1989-2001**

Year	Carbon Dioxide					Sulfur Dioxide					Nitrogen Oxides				
	Coal <sup>1</sup>	Petroleum <sup>2</sup>	Natural Gas <sup>3</sup> and Other Gases <sup>4</sup>	MSW <sup>5</sup>	Total	Coal <sup>1</sup>	Petroleum <sup>2</sup>	Natural Gas <sup>3</sup> and Other Gases <sup>4</sup>	Other <sup>6</sup>	Total	Coal <sup>1</sup>	Petroleum <sup>2</sup>	Natural Gas <sup>3</sup> and Other Gases <sup>4</sup>	Other <sup>6</sup>	Total
	Million Metric Tons of Carbon Dioxide <sup>7</sup>					Thousand Short Tons of Sulfur Dioxide					Thousand Short Tons of Nitrogen Oxides				
Electric Power Sector <sup>8</sup>															
1989	1,505.6	129.6	164.5	1.1	1,800.8	15,211	846	2	7	16,066	6,788	217	407	27	7,439
1990	1,517.0	98.4	171.1	1.5	1,788.0	15,080	678	1	10	15,769	6,640	167	397	39	7,243
1991	1,516.6	92.1	174.4	1.9	1,785.0	14,935	680	2	12	15,629	6,609	157	390	44	7,200
1992	1,535.6	76.5	180.6	2.2	1,794.9	14,695	615	1	9	15,320	6,526	123	371	48	7,068
1993	1,603.1	87.3	181.6	2.2	1,874.2	14,426	809	1	10	15,246	6,724	139	376	51	7,290
1994	1,609.6	81.9	204.1	2.4	1,898.0	13,925	735	1	9	14,670	6,512	124	406	50	7,092
1995	1,629.2	58.1	221.8	2.5	1,911.6	11,598	560	7	8	12,173	5,525	131	504	51	6,211
1996	1,718.5	63.2	197.9	2.4	1,982.0	12,238	597	2	8	12,845	5,763	130	439	53	6,385
1997	1,763.8	72.0	211.1	2.6	2,049.5	12,630	649	1	9	13,289	5,775	140	417	55	6,387
1998	1,792.6	102.2	240.1	2.5	2,137.4	12,452	922	1	10	13,385	5,541	219	492	56	6,308
1999	1,799.8	94.9	251.2	2.5	2,148.4	11,805	826	16	8	12,655	5,048	198	484	56	5,786
2000	1,891.4	89.1	271.5	2.4	2,254.4	10,736	689	2	6	11,433	4,707	169	480	57	5,413
2001 <sup>P</sup>	1,833.4	99.6	279.1	2.7	2,214.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Industrial Sector <sup>9</sup>															
1989	21.2	4.1	29.4	(s)	54.7	271	64	(s)	12	347	96	8	167	24	295
1990	21.6	6.7	34.7	0.1	63.1	285	145	(s)	73	503	96	13	199	30	338
1991	21.2	6.2	35.9	(s)	63.3	274	105	(s)	75	454	89	11	178	24	302
1992	22.9	7.1	37.7	(s)	67.7	296	90	(s)	84	470	94	12	197	24	327
1993	23.8	6.3	37.6	(s)	67.7	309	45	(s)	86	440	96	11	202	25	334
1994	24.2	6.1	38.7	(s)	69.0	299	52	(s)	86	437	96	12	185	24	317
1995	24.1	5.6	39.9	(s)	69.6	297	65	(s)	85	447	95	11	155	26	287
1996	24.3	6.1	42.2	(s)	72.6	301	105	(s)	92	498	95	11	230	27	363
1997	24.2	5.2	40.3	(s)	69.7	274	89	(s)	85	448	94	10	177	24	305
1998	22.8	5.5	40.5	(s)	68.8	252	90	(s)	72	414	87	11	170	23	291
1999	22.5	5.7	42.0	(s)	70.2	185	71	(s)	68	324	89	13	190	23	315
2000	22.8	5.1	41.7	(s)	69.6	198	54	(s)	66	318	88	9	178	22	297
2001 <sup>P</sup>	21.3	5.2	40.7	(s)	67.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total (All Sectors) <sup>10</sup>															
1989	1,527.7	134.3	194.9	1.3	1,858.1	15,499	914	2	20	16,434	6,888	226	576	51	7,741
1990	1,539.4	105.5	207.3	1.7	1,854.0	15,381	825	2	83	16,291	6,740	180	601	71	7,591
1991	1,538.6	98.6	211.9	2.0	1,851.1	15,223	786	2	87	16,098	6,702	168	572	71	7,513
1992	1,559.3	83.8	220.2	2.4	1,865.7	15,004	705	1	94	15,804	6,623	136	571	74	7,405
1993	1,627.7	93.9	221.3	2.4	1,945.3	14,751	855	2	96	15,703	6,824	150	583	78	7,636
1994	1,634.6	88.3	245.1	2.6	1,970.6	14,240	788	2	95	15,124	6,612	136	596	76	7,421
1995	1,654.4	64.0	264.0	2.7	1,985.2	11,915	627	7	93	12,642	5,625	142	665	81	6,513
1996	1,744.1	69.6	242.4	2.8	2,059.0	12,559	703	2	101	13,366	5,864	142	675	84	6,765
1997	1,789.2	77.5	253.6	2.9	2,123.3	12,925	740	2	95	13,761	5,875	151	599	84	6,708
1998	1,816.3	108.1	282.8	2.8	2,210.0	12,719	1,014	2	82	13,817	5,632	231	667	84	6,613
1999	1,823.4	101.0	295.4	2.8	2,222.5	12,006	898	16	76	12,997	5,142	212	678	84	6,116
2000	1,915.4	94.6	315.2	2.6	2,327.9	10,952	744	3	72	11,770	4,799	178	661	83	5,722
2001 <sup>P</sup>	1,855.9	105.2	321.8	2.9	2,285.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

<sup>1</sup> Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and synthetic coal.

<sup>2</sup> Distillate fuel oil, residual fuel oil, petroleum coke, jet fuel, kerosene, other petroleum, and waste oil.

<sup>3</sup> Natural gas, plus a small amount of supplemental gaseous fuels that cannot be identified separately.

<sup>4</sup> Blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels.

Carbon dioxide data for "Other Gases" are not included in the data in Tables 12.1-12.3.

<sup>5</sup> Municipal solid waste (only the estimated plastics component of municipal solid waste is included).

<sup>6</sup> Wood, black liquor, and other wood waste; municipal solid waste, sludge waste, tire-derived fuels, agricultural byproducts, other solids, other liquids, other gases, and all other.

<sup>7</sup> Metric tons of carbon dioxide can be converted to metric tons of carbon equivalent by multiplying by 12/44.

<sup>8</sup> Electricity-only and combined-heat-and-power (CHP) plants within the NAICS (North American Industry Classification System) 22 category whose primary business is to sell electricity, or electricity and heat, to the public.

<sup>9</sup> Industrial combined-heat-and-power (CHP) and industrial electricity-only plants.

<sup>10</sup> Includes commercial combined-heat-and-power (CHP) and commercial electricity-only plants.

P=Preliminary. NA=Not available. (s)=Less than 0.05 million metric tons or less than 500 short tons.

Notes: • Data are for emissions from energy consumption for electricity generation; they exclude emissions from energy consumption for useful thermal output. • Data in this table are the same as in *Annual Energy Review 2002*, Table 12.7, "Emissions From Energy Consumption for Electricity and Useful Thermal Output at Electricity-Only and Combined-Heat-and-Power Plants, 1989-2001," which mistakenly excluded the emissions from energy consumption for useful thermal output. • See Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of Section 8.

Web Page: For related information, see <http://www.eia.doe.gov/fuelelectric.html>.

Sources: **Carbon Dioxide:** Data as of July 2, 2003, from Energy Information Administration (EIA), Form EIA-906, "Power Plant Report" and predecessor forms. **Sulfur Dioxide and Nitrogen Oxides:** Data as of July 2, 2003, from EIA, Form EIA-767, "Steam-Electric Plant Operation and Design Report." Data were adjusted by the Environmental Protection Agency's Continuous Emission Monitoring System.