

**Table 12.7c Emissions From Energy Consumption for Electricity Generation and Useful Thermal Output: Commercial and Industrial Sectors, 1989-2007** (Subset of Table 12.7a; Thousand Metric Tons of Gas)

Year	Carbon Dioxide <sup>1</sup>					Sulfur Dioxide					Nitrogen Oxides					
	Coal <sup>2</sup>	Petroleum <sup>3</sup>	Natural Gas <sup>4</sup>	MSW <sup>5</sup>	Geo-thermal <sup>6</sup>	Total	Coal <sup>2</sup>	Petroleum <sup>3</sup>	Natural Gas <sup>4</sup>	Other <sup>7</sup>	Total	Coal <sup>2</sup>	Petroleum <sup>3</sup>	Natural Gas <sup>4</sup>	Other <sup>7</sup>	Total
<b>Commercial Sector <sup>8</sup></b>																
1989	2,292	631	1,534	796	—	5,253	R37	R5	(s)	1	R43	R9	2	R3	3	R17
1990	2,388	699	2,282	949	—	6,319	R39	R4	(s)	1	R45	R10	1	6	4	R21
1991	2,648	538	2,276	1,004	—	6,466	R32	3	(s)	1	R35	R10	1	R6	4	R21
1992	2,521	469	2,773	1,245	—	7,008	R32	3	(s)	1	R35	R10	1	R7	4	R21
1993	2,953	610	3,298	1,273	—	8,134	R40	R3	(s)	1	R44	R12	1	R7	4	R24
1994	2,897	647	3,704	1,279	—	8,527	R39	3	(s)	(s)	R42	R11	1	8	4	R24
1995	3,069	504	4,049	1,447	—	9,070	R30	R3	(s)	R3	R35	R8	R6	R20	R11	R45
1996	3,596	529	4,347	2,003	—	10,475	R40	R3	(s)	R4	R47	R9	R4	R23	R14	R50
1997	3,825	712	4,630	2,252	—	11,419	R43	R3	(s)	R6	R51	R10	R7	R34	R14	R65
1998	3,303	826	4,683	2,054	—	10,867	R37	R5	(s)	R4	R45	R10	R5	R35	R16	R66
1999	3,428	734	4,512	1,988	—	10,662	R34	R4	(s)	R4	R42	R9	R4	R28	R17	R57
2000	3,590	733	4,582	1,667	—	10,573	R33	R4	(s)	R7	R43	R8	R4	R38	R16	R65
2001	3,328	831	4,258	1,404	—	9,820	R43	4	(s)	2	R48	R13	R2	R19	R16	R50
2002	2,988	566	4,015	1,505	—	9,074	R41	R2	(s)	2	R46	R13	R2	R20	R13	R48
2003	3,855	677	3,205	1,689	—	9,426	R32	3	(s)	R1	R36	R9	R5	R16	R15	R45
2004	3,969	910	3,896	1,943	—	10,718	R30	R3	(s)	2	R35	R8	8	R18	R16	R49
2005	3,982	751	4,066	1,878	—	10,676	R33	3	(s)	1	R36	R9	R6	R24	R15	R54
2006	3,860	440	4,435	1,926	—	10,662	R33	3	(s)	1	R36	R9	3	R35	R17	R64
2007	3,944	359	3,781	1,619	—	9,704	33	3	(s)	1	37	10	2	16	16	44
<b>Industrial Sector <sup>9</sup></b>																
1989	50,433	11,104	46,952	416	—	108,905	R616	R169	(s)	R32	R817	R218	R21	R100	R63	R403
1990	55,198	16,903	54,055	727	—	126,883	R666	R304	(s)	R229	R1,199	R233	R31	R116	R80	R461
1991	54,313	15,502	54,979	223	—	125,017	R618	R232	(s)	R230	R1,080	R215	R27	R108	R66	R416
1992	57,073	16,841	57,344	316	—	131,574	R655	R143	(s)	R251	R1,049	R218	R29	R110	R67	R425
1993	57,789	17,002	58,511	531	—	133,832	R671	R113	(s)	R257	R1,041	R219	R29	R110	R70	R429
1994	59,492	17,022	61,124	558	—	138,195	R664	R126	(s)	R267	R1,057	R219	R30	R114	R71	R435
1995	59,510	15,323	65,527	488	—	140,849	R585	R243	(s)	R262	R1,090	R154	R43	R231	R128	R556
1996	59,731	17,220	67,896	738	—	145,585	R642	R256	(s)	R268	R1,166	R154	R48	R228	R128	R558
1997	59,734	17,539	67,970	697	—	145,940	R653	R309	(s)	R261	R1,223	R155	R50	R215	R121	R541
1998	58,276	17,014	72,549	529	—	148,368	R603	R247	(s)	R248	R1,099	R148	R53	R234	R121	R557
1999	58,382	17,032	75,719	459	—	151,591	R576	R260	(s)	R243	R1,080	R144	R55	R223	R120	R541
2000	58,704	15,393	75,508	464	—	150,069	R556	R184	(s)	R248	R988	R138	R34	R238	R123	R533
2001	54,091	13,379	71,406	629	—	139,506	R581	R245	(s)	R259	R1,085	R206	R39	R187	R156	R587
2002	55,986	11,603	67,123	633	—	135,344	R639	R221	(s)	R303	R1,163	R231	R36	R181	R170	R618
2003	51,767	13,042	62,285	775	—	127,869	R401	R135	(s)	R224	R761	R102	R28	R155	R119	R404
2004	55,072	14,497	65,093	961	—	135,622	R415	R136	(s)	R227	R779	R95	R25	R157	R100	R376
2005	53,028	13,672	58,920	1,114	—	126,734	R395	R124	(s)	R241	R760	R75	R27	R117	R104	R322
2006	51,783	12,066	60,730	1,683	—	126,262	R419	R161	(s)	R218	R798	R86	R26	R134	R117	R362
2007	47,685	11,751	57,180	1,583	—	118,199	353	154	1	217	726	79	26	129	113	346

<sup>1</sup> Metric tons of carbon dioxide can be converted to metric tons of carbon equivalent by multiplying by 12/44.  
<sup>2</sup> Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and synthetic coal.  
<sup>3</sup> Distillate fuel oil, residual fuel oil, petroleum coke, jet fuel, kerosene, other petroleum, and waste oil.  
<sup>4</sup> Natural gas, plus a small amount of supplemental gaseous fuels.  
<sup>5</sup> Municipal solid waste (only the estimated plastics portion of municipal solid waste is included) and tire-derived fuel.  
<sup>6</sup> Carbon dioxide in geothermal steam.  
<sup>7</sup> Blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels; wood and wood-derived fuels; municipal solid waste, landfill gas, sludge waste, tires, agricultural byproducts, and other biomass; and chemicals, hydrogen, pitch, sulfur, and tar coal.  
<sup>8</sup> Commercial combined-heat-and-power (CHP) and commercial electricity-only plants.  
<sup>9</sup> Industrial combined-heat-and-power (CHP) and industrial electricity-only plants.

R=Revised. — = No data reported. (s)=Less than 0.5 thousand metric tons.  
 Notes: • Data are for emissions from energy consumption for electricity generation and useful thermal output. • See Table 12.7b for electric power sector data. • See Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of Section 8. • See "Useful Thermal Output" in Glossary. • Totals may not equal sums of components due to independent rounding.  
 Web Page: For related information, see <http://www.eia.doe.gov/fuelelectric.html>.  
 Sources: **Carbon Dioxide:** • 1989-1997—Energy Information Administration (EIA), Form EIA-867, "Annual Nonutility Power Producer Report." • 1998-2000—EIA, Form EIA-860B, "Annual Electric Generator Report—Nonutility." • 2001-2003—EIA, Form EIA-906, "Power Plant Report." • 2004 forward—EIA, Form EIA-906, "Power Plant Report," and Form EIA-920, "Combined Heat and Power Plant Report." **Sulfur Dioxide and Nitrogen Oxides:** EIA, Form EIA-767, "Steam-Electric Plant Operation and Design Report." Data were adjusted by the Environmental Protection Agency's Continuous Emission Monitoring System.