

**Table 11.6c Emissions From Energy Consumption for Electricity Generation and Useful Thermal Output:
Commercial and Industrial Sectors, 1989-2009** (Subset of Table 11.6a; Thousand Metric Tons of Gas)

Year	Carbon Dioxide ¹					Total	Sulfur Dioxide					Total	Nitrogen Oxides					Total
	Coal ²	Natural Gas ³	Petroleum ⁴	Geo-thermal ⁵	Non-Biomass Waste ⁶		Coal ²	Natural Gas ³	Petroleum ⁴	Other ⁷	Total		Coal ²	Natural Gas ³	Petroleum ⁴	Other ⁷	Total	
Commercial Sector ⁸																		
1989	R2,320	1,542	637	—	804	R5,303	37	(s)	5	1	43	9	3	2	3	17		
1990	R2,418	2,294	706	—	959	R6,377	39	(s)	4	1	45	10	6	1	4	21		
1991	R2,680	2,287	544	—	1,014	R6,526	32	(s)	3	1	35	10	6	1	4	21		
1992	R2,552	2,787	474	—	1,258	R7,070	32	(s)	3	1	35	10	7	1	4	21		
1993	R2,988	3,315	616	—	1,285	R8,205	40	(s)	3	1	44	12	7	1	4	24		
1994	R2,932	3,722	654	—	1,292	R8,601	39	(s)	3	(s)	42	11	8	1	4	24		
1995	R3,106	4,070	509	—	1,462	R9,147	30	(s)	3	3	35	8	20	6	11	45		
1996	R3,639	4,369	534	—	2,023	R10,565	40	(s)	3	4	47	9	23	4	14	50		
1997	R3,871	4,654	R716	—	R2,277	R11,518	43	(s)	3	6	51	10	34	7	14	65		
1998	R3,341	4,707	R829	—	R2,081	R10,958	37	(s)	5	4	45	10	35	5	16	66		
1999	R3,468	4,535	742	—	2,008	R10,752	34	(s)	4	4	42	9	28	4	17	57		
2000	R3,635	4,605	740	—	1,684	R10,665	33	(s)	4	7	43	8	38	4	16	65		
2001	R3,366	4,280	839	—	1,418	R9,903	43	(s)	4	2	48	13	19	2	16	50		
2002	R3,025	4,035	571	—	1,520	R9,151	41	(s)	2	2	46	13	20	2	13	48		
2003	R3,904	3,222	683	—	1,706	R9,515	32	(s)	3	1	36	9	16	5	15	45		
2004	R4,018	3,916	920	—	1,962	R10,817	30	(s)	3	2	35	8	18	8	16	49		
2005	R4,031	3,701	759	—	1,897	R10,387	33	(s)	3	1	36	9	24	6	15	54		
2006	R3,908	3,686	445	—	1,946	R9,984	33	(s)	3	1	36	9	35	3	17	64		
2007	R3,994	3,800	363	—	1,635	R9,792	33	(s)	3	1	37	10	16	2	16	44		
2008	R4,155	R3,589	310	—	1,953	R10,006	32	(s)	1	(s)	33	9	14	1	16	40		
2009	3,727	4,093	245	—	2,084	10,149	26	(s)	1	(s)	27	8	13	1	16	39		
Industrial Sector ⁹																		
1989	R51,017	R47,188	R11,216	—	420	R109,842	616	(s)	169	32	817	218	100	21	63	403		
1990	R55,837	R54,326	R17,074	—	734	R127,971	666	(s)	304	229	1,199	233	116	31	80	461		
1991	R54,947	R55,255	R15,659	—	225	R126,086	618	(s)	232	230	1,080	215	108	27	66	416		
1992	R57,742	R57,632	R17,010	—	319	R132,704	655	(s)	143	251	1,049	218	110	29	67	425		
1993	R58,474	R58,805	R17,148	—	R562	R134,988	671	(s)	113	257	1,041	219	110	29	70	429		
1994	R60,202	R61,431	R17,186	—	R571	R139,390	664	(s)	126	267	1,057	219	114	30	71	435		
1995	R60,212	65,856	R15,466	—	R505	R142,040	585	(s)	243	262	1,090	154	231	43	128	556		
1996	R60,438	68,237	R17,377	—	R763	R146,815	642	(s)	256	268	1,166	154	228	48	128	558		
1997	R60,444	68,311	R17,701	—	R719	R147,175	653	(s)	309	261	1,223	155	215	50	121	541		
1998	R58,967	72,914	R17,174	—	R546	R149,601	603	(s)	247	248	1,099	148	234	53	121	557		
1999	R59,073	76,100	R17,043	—	R624	R152,840	576	(s)	260	243	1,080	144	223	55	120	541		
2000	R59,410	75,887	R15,440	—	R577	R151,315	556	(s)	184	248	988	138	238	34	123	533		
2001	R54,735	71,765	R13,457	—	R693	R140,650	581	(s)	245	259	1,085	206	187	39	156	587		
2002	R56,665	67,460	R11,719	—	R640	R136,484	639	(s)	221	303	1,163	231	181	36	170	618		
2003	R52,390	62,598	R13,173	—	783	R128,944	401	(s)	135	224	761	102	155	28	119	404		
2004	R55,744	65,413	R14,570	—	R1,044	R136,771	415	(s)	136	227	779	95	157	25	100	376		
2005	R53,675	59,216	R13,791	—	R1,145	R127,826	395	(s)	124	241	760	75	117	27	104	322		
2006	R52,418	61,035	R12,185	—	R1,703	R127,341	419	(s)	161	218	798	86	134	26	117	362		
2007	R48,282	57,467	R11,860	—	R1,609	R119,218	353	1	154	217	726	79	129	26	113	346		
2008	R46,514	52,261	R7,103	—	R798	R106,675	411	1	103	217	731	93	107	16	84	300		
2009	41,268	54,031	7,529	—	824	103,651	256	(s)	98	214	569	73	108	15	81	277		

¹ Metric tons of carbon dioxide can be converted to metric tons of carbon equivalent by multiplying by 12/44.

² Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and synthetic coal.

³ Natural gas, plus a small amount of supplemental gaseous fuels.

⁴ Distillate fuel oil, residual fuel oil, petroleum coke, jet fuel, kerosene, other petroleum, and waste oil.

⁵ Carbon dioxide in geothermal steam.

⁶ Municipal solid waste from non-biogenic sources, and tire-derived fuel.

⁷ 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.

⁸ Commercial combined-heat-and-power (CHP) and commercial electricity-only plants.

⁹ 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 11.6b 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.gov/electricity/>.

Sources: **Carbon Dioxide:** U.S. Energy Information Administration (EIA) estimates based on Form EIA-923, "Power Plant Operations Report" (and predecessor forms). **Sulfur Dioxide and Nitrogen Oxides:** EIA estimates based on Form EIA-923, "Power Plant Operations Report" (and predecessor forms). Data were adjusted by the U.S. Environmental Protection Agency's Continuous Emissions Monitoring System.