

Table 18. Carbon Dioxide Emissions by Sector and Source  
(million metric tons carbon dioxide equivalent, unless otherwise noted)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<b>Residential</b>													
Petroleum	106	105	106	106	105	105	105	106	107	107	107	107	107
Natural Gas	265	262	243	265	270	271	274	276	279	280	281	282	284
Coal	1	1	1	1	1	1	1	1	1	1	1	1	1
Electricity 1/	842	886	884	890	903	919	940	953	965	976	992	1002	1016
Total	1214	1254	1235	1262	1279	1297	1320	1336	1352	1364	1381	1392	1407
<b>Commercial</b>													
Petroleum	54	55	54	53	53	54	54	55	56	57	57	57	57
Natural Gas	170	166	159	164	169	172	175	179	183	186	189	192	195
Coal	10	8	8	9	9	9	9	9	9	9	9	9	9
Electricity 1/	800	822	817	828	847	866	886	904	919	938	960	975	991
Total	1034	1051	1038	1054	1078	1101	1124	1147	1167	1191	1215	1233	1252
<b>Industrial 2/</b>													
Petroleum	437	431	435	416	417	415	406	415	414	418	412	419	421
Natural Gas 3/	435	400	420	440	444	451	466	460	465	465	473	468	471
Coal	201	189	194	186	187	187	186	192	192	192	194	194	193
Electricity 1/	663	663	651	662	662	666	674	677	681	685	692	694	698
Total	1736	1682	1701	1703	1710	1719	1732	1744	1752	1759	1772	1775	1783
<b>Transportation</b>													
Petroleum 4/	1902	1922	1930	1940	1951	1965	1994	2025	2053	2083	2113	2142	2172
Natural Gas 5/	32	32	32	36	37	38	38	39	39	40	40	41	41
Electricity 1/	5	5	5	5	5	5	5	5	5	6	6	6	6
Total	1939	1958	1967	1980	1993	2008	2037	2069	2098	2128	2159	2189	2220
<b>Electric Power 6/</b>													
Petroleum	98	100	59	65	66	67	69	70	73	77	78	75	75
Natural Gas	296	319	319	320	346	353	346	353	363	370	372	385	390
Coal	1904	1944	1967	1987	1992	2024	2078	2103	2123	2145	2185	2203	2232
Other 7/	11	12	12	12	12	12	12	12	12	13	14	14	14
Total	2309	2375	2357	2385	2416	2456	2505	2539	2571	2605	2649	2677	2710
<b>Total by Fuel</b>													
Petroleum 3/	2598	2614	2584	2579	2593	2606	2629	2670	2703	2741	2767	2799	2833
Natural Gas	1198	1178	1174	1225	1265	1285	1298	1307	1329	1341	1357	1369	1380
Coal	2115	2142	2171	2183	2189	2221	2275	2306	2326	2347	2390	2407	2435
Other 6/	11	12	12	12	12	12	12	12	12	13	14	14	14
Total	5923	5945	5940	5999	6059	6124	6214	6296	6369	6442	6527	6589	6662
<b>Carbon Dioxide Emissions (tons per person)</b>	20.1	20.0	19.8	19.8	19.9	19.9	20.0	20.1	20.2	20.2	20.3	20.4	20.4

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	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2005-2030
<b>Residential</b>															
Petroleum	106	106	105	105	104	103	103	103	102	102	101	101	100	100	-0.2%
Natural Gas	283	284	285	287	287	287	287	288	288	288	289	289	289	289	0.4%
Coal	1	1	1	1	1	1	1	1	1	1	1	1	1	1	-0.2%
Electricity 1/	1023	1033	1045	1064	1078	1095	1113	1131	1143	1159	1175	1193	1207	1225	1.3%
Total	1413	1423	1436	1456	1469	1486	1504	1523	1534	1550	1566	1584	1596	1614	1.0%
<b>Commercial</b>															
Petroleum	57	57	57	57	57	57	58	58	58	58	58	58	59	59	0.2%
Natural Gas	196	199	201	204	207	209	211	214	216	219	222	225	228	230	1.3%
Coal	9	9	9	9	9	9	9	9	9	9	9	9	9	9	0.6%
Electricity 1/	1006	1021	1037	1059	1084	1109	1136	1161	1185	1212	1240	1268	1299	1332	1.9%
Total	1269	1286	1305	1330	1357	1385	1415	1441	1469	1499	1530	1561	1594	1630	1.8%
<b>Industrial 2/</b>															
Petroleum	416	421	425	423	429	435	435	437	433	443	447	443	445	457	0.2%
Natural Gas 3/	478	478	482	493	493	494	498	501	513	508	512	524	529	524	1.1%
Coal	194	196	197	199	201	211	213	225	243	257	257	264	266	269	1.4%
Electricity 1/	697	695	698	702	709	716	722	727	734	742	750	757	765	774	0.6%
Total	1784	1789	1803	1817	1833	1856	1868	1891	1924	1950	1967	1988	2005	2024	0.7%
<b>Transportation</b>															
Petroleum 4/	2201	2229	2258	2288	2318	2347	2378	2410	2443	2480	2516	2552	2589	2626	1.3%
Natural Gas 5/	42	44	46	47	47	48	48	48	48	48	48	48	48	48	1.7%
Electricity 1/	6	6	6	6	6	6	7	7	7	7	7	7	7	7	1.8%
Total	2249	2279	2310	2341	2371	2401	2433	2465	2498	2535	2571	2608	2645	2682	1.3%
<b>Electric Power 6/</b>															
Petroleum	75	74	74	74	74	74	75	76	76	76	76	78	77	77	-1.1%
Natural Gas	385	387	388	390	385	379	371	364	357	350	344	335	325	321	0.0%
Coal	2259	2279	2311	2354	2404	2459	2518	2572	2623	2680	2739	2800	2861	2927	1.6%
Other 7/	14	14	14	14	14	14	14	14	14	14	14	14	14	14	0.8%
Total	2732	2754	2786	2832	2877	2926	2978	3026	3070	3120	3173	3226	3277	3338	1.4%
<b>Total by Fuel</b>															
Petroleum 3/	2855	2887	2920	2947	2982	3017	3050	3084	3112	3158	3199	3232	3270	3318	1.0%
Natural Gas	1384	1391	1403	1420	1419	1417	1415	1415	1422	1414	1415	1421	1418	1412	0.7%
Coal	2463	2485	2518	2563	2616	2680	2742	2808	2877	2947	3007	3074	3137	3206	1.6%
Other 6/	14	14	14	14	14	14	14	14	14	14	14	14	14	14	0.8%
Total	6716	6777	6854	6944	7030	7128	7220	7320	7425	7533	7634	7741	7840	7950	1.2%
<b>Carbon Dioxide Emissions (tons per person)</b>	20.4	20.4	20.5	20.6	20.7	20.8	20.9	21.0	21.2	21.3	21.4	21.5	21.7	21.8	0.3%

Table 18. Carbon Dioxide Emissions by Sector and Source  
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1/ Emissions from the electric power sector are distributed to the end-use sectors.

2/ Fuel consumption includes energy for combined heat and power plants, except those plants whose primary business is to sell electricity, or electricity and heat, to the public.

3/ Includes lease and plant fuel.

4/ This includes carbon dioxide from international bunker fuels, both civilian and military, which are excluded from the accounting of carbon dioxide emissions under the United Nations convention. From 1990 through 2004, international bunker fuels accounted for 83 to 115 million metric tons annually.

5/ Includes pipeline fuel natural gas and compressed natural gas used as vehicle fuel.

6/ Includes electricity-only and combined heat and power plants whose primary business is to sell electricity, or electricity and heat, to the public.

7/ Includes emissions from geothermal power and nonbiogenic emissions from municipal solid waste.

N/A = Not applicable.

Note: Totals may not equal sum of components due to independent rounding. Data for 2004 and 2005 are model results and may differ slightly from official EIA data reports.

Sources: 2004 and 2005 emissions and emission factors: Energy Information Administration (EIA), Emissions of Greenhouse Gases in the United States 2005, DOE/EIA-0573(2005) (Washington, DC, November 2006). Projections: EIA, AEO2007 National Energy Modeling System run aeo2007.d112106a.