

Table CO2.T1. Total CO2 emissions estimates from energy consumption by source, 1960-2023, California
(million metric tons of carbon dioxide (CO2))

Year	Coal	Natural gas ^a	Petroleum ^b	Total
1960	3.3	68.2	126.0	197.5
1965	5.8	95.2	142.7	243.7
1970	5.6	117.6	171.4	294.6
1975	5.2	101.5	204.8	311.5
1980	6.1	99.4	239.4	344.9
1985	4.3	101.3	215.1	320.7
1990	8.0	110.5	242.2	360.6
1995	8.0	110.6	230.2	348.8
1996	7.6	105.7	236.5	349.8
1997	7.8	114.4	230.5	352.7
1998	6.3	126.5	230.0	362.8
1999	6.6	124.7	234.9	366.2
2000	6.6	128.9	247.0	382.5
2001	6.4	132.0	247.5	385.8
2002	6.6	121.6	256.0	384.2
2003	6.5	121.9	246.5	374.9
2004	6.5	129.6	256.6	392.7
2005	6.4	121.2	261.9	389.5
2006	6.4	125.0	266.6	398.0
2007	6.3	129.6	266.7	402.6
2008	6.0	129.9	248.2	384.2
2009	5.0	125.7	239.9	370.6
2010	5.2	122.3	229.4	356.9
2011	5.3	115.6	222.1	342.9
2012	4.2	129.2	215.7	349.1
2013	3.6	130.4	213.4	347.4
2014	3.8	126.5	212.9	343.2
2015	3.0	124.3	220.0	347.3
2016	3.1	117.2	228.6	348.9
2017	3.2	114.1	234.9	352.3
2018	3.2	115.1	236.6	355.0
2019	3.0	115.6	236.0	354.6
2020	2.7	112.3	184.7	299.6
2021	2.7	113.4	205.9	321.9
2022	2.9	111.3	210.0	324.1
2023	2.8	112.5	209.1	324.3

^a Excludes supplemental gaseous fuels.

^b Excludes biofuels.

— = No consumption. Where shown, R = Revised data and (s) = Value less than 0.05.

Notes: • Data are carbon dioxide (CO2) emissions estimates from fossil fuels primary energy consumption for all sectors, excluding renewable energy. The state data do not account for interstate flow of electricity and represent CO2 emissions in the state where fossil fuels are burned to generate electricity, although the electricity might be sold to ultimate customers in other states and sectors.

• Totals may not equal sum of components due to independent rounding. • The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the technical notes for each type of energy.

Web page: All data are available at <https://www.eia.gov/state/seds/seds-data-complete.php>.

Data source: Table by the U.S. Energy Information Administration, State Energy Data System. See technical notes. <http://www.eia.gov/state/seds/>

Table CO2.T2. Residential sector CO2 emissions estimates from energy consumption, 1960-2023, California
(million metric tons of carbon dioxide (CO2))

Year	Coal ^a	Natural gas ^b	Petroleum ^c	Total
1960	(s)	20.0	1.0	21.0
1965	(s)	27.8	1.3	29.1
1970	0.1	30.9	1.4	32.4
1975	—	35.3	0.9	36.2
1980	(s)	29.3	1.1	30.4
1985	(s)	29.0	1.2	30.3
1990	(s)	28.2	1.3	29.5
1995	(s)	25.6	1.1	26.8
1996	(s)	26.0	1.0	27.0
1997	(s)	25.8	0.9	26.8
1998	(s)	30.8	1.5	32.3
1999	(s)	30.6	1.4	31.9
2000	(s)	26.2	1.3	27.6
2001	(s)	27.6	1.0	28.6
2002	(s)	27.6	1.1	28.7
2003	(s)	26.9	1.4	28.3
2004	(s)	27.7	1.7	29.5
2005	(s)	26.2	2.0	28.2
2006	(s)	26.7	1.7	28.4
2007	—	26.9	1.8	28.6
2008	—	26.7	2.1	28.8
2009	—	26.2	2.1	28.3
2010	—	26.8	2.1	29.0
2011	—	27.7	2.0	29.7
2012	—	25.9	1.5	27.3
2013	—	26.2	1.5	27.7
2014	—	21.7	1.2	22.9
2015	—	22.0	1.4	23.4
2016	—	22.6	1.5	24.1
2017	—	23.6	1.4	25.1
2018	—	23.2	1.6	24.8
2019	—	25.4	1.7	27.1
2020	—	25.1	1.6	26.6
2021	—	24.6	1.6	26.2
2022	—	23.7	1.4	25.1
2023	—	25.3	1.6	26.9

^a Beginning in 2008, consumption data not collected and assumed to be zero.

^b Excludes supplemental gaseous fuels.

^c Excludes biofuels.

— = No consumption. Where shown, R = Revised data and (s) = Value less than 0.05.

Notes: • Data are carbon dioxide (CO2) emissions estimates from fossil fuels primary energy consumption, excluding renewable energy. The state data do not account for interstate flow of electricity and represent CO2 emissions in the state where fossil fuels are burned to generate

electricity, although the electricity might be sold to ultimate customers in other states and sectors.

• Totals may not equal sum of components due to independent rounding. • The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the technical notes for each type of energy.

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Data source: Table by the U.S. Energy Information Administration, State Energy Data System. See technical notes. <https://www.eia.gov/state/seds/>

Table CO2.T3. Commercial sector CO2 emissions estimates from energy consumption, 1960-2023, California
(million metric tons of carbon dioxide (CO2))

Year	Coal	Natural gas ^a	Petroleum ^b	Total
1960	(s)	6.0	4.5	10.5
1965	(s)	9.3	4.1	13.4
1970	0.1	11.7	5.5	17.3
1975	—	13.5	3.4	16.9
1980	(s)	14.3	5.7	20.0
1985	0.1	11.3	2.7	14.1
1990	(s)	15.6	3.3	19.0
1995	0.3	15.0	1.8	17.0
1996	0.3	12.9	1.5	14.8
1997	0.2	13.7	1.4	15.4
1998	0.2	15.8	1.7	17.8
1999	0.1	13.2	1.7	14.9
2000	(s)	12.5	1.8	14.4
2001	(s)	13.2	1.6	14.9
2002	(s)	12.9	1.4	14.3
2003	(s)	12.6	1.4	14.0
2004	(s)	12.5	1.6	14.1
2005	(s)	12.6	1.6	14.2
2006	(s)	13.3	1.2	14.5
2007	—	13.7	1.4	15.1
2008	—	13.7	2.0	15.6
2009	—	13.5	2.1	15.6
2010	—	13.5	2.7	16.1
2011	—	13.3	2.4	15.7
2012	—	13.7	2.2	15.9
2013	—	13.9	2.1	16.0
2014	—	12.9	2.1	15.1
2015	—	12.9	5.4	18.3
2016	—	13.0	5.6	18.6
2017	—	13.0	5.7	18.7
2018	—	13.6	5.8	19.3
2019	—	14.0	5.8	19.8
2020	—	12.7	5.4	18.1
2021	—	13.1	6.0	19.2
2022	—	13.5	6.0	19.5
2023	—	14.1	6.5	20.5

^a Excludes supplemental gaseous fuels.

^b Excludes biofuels.

— = No consumption. Where shown, R = Revised data and (s) = Value less than 0.05.

Notes: • Data are carbon dioxide (CO2) emissions estimates from fossil fuels primary energy consumption, excluding renewable energy. The state data do not account for interstate flow of electricity and represent CO2 emissions in the state where fossil fuels are burned to generate electricity, although the electricity might be sold to ultimate customers in other states and sectors.

• Totals may not equal sum of components due to independent rounding. • The commercial sector includes commercial combined-heat-and-power (CHP) and commercial electricity-only plants. • The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the technical notes for each type of energy.

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Table CO2.T4. Industrial sector CO2 emissions estimates from energy consumption, 1960-2023, California
(million metric tons of carbon dioxide (CO2))

Year	Coal	Natural gas ^a	Petroleum ^b	Total
1960	3.2	23.9	22.1	49.3
1965	5.8	29.1	24.0	58.9
1970	5.4	38.4	24.5	68.3
1975	5.2	36.1	25.5	66.8
1980	6.1	26.0	33.2	65.3
1985	4.2	23.1	40.7	67.9
1990	6.1	31.2	32.2	69.5
1995	5.5	36.1	26.1	67.7
1996	5.3	37.2	28.4	70.9
1997	5.9	41.3	28.4	75.6
1998	4.1	44.2	25.1	73.4
1999	4.4	41.2	26.2	71.8
2000	4.5	41.2	25.5	71.2
2001	4.4	37.4	31.2	73.0
2002	4.4	41.0	28.6	74.0
2003	4.5	43.4	26.4	74.2
2004	4.3	46.3	28.2	78.9
2005	4.4	43.6	28.2	76.2
2006	4.3	42.0	28.9	75.1
2007	4.1	42.4	26.8	73.2
2008	3.7	41.7	24.5	69.9
2009	3.0	40.9	21.2	65.1
2010	3.1	40.7	23.6	67.4
2011	3.4	39.7	24.7	67.8
2012	2.9	41.6	23.9	68.4
2013	3.0	43.9	25.0	71.9
2014	3.1	44.3	24.5	71.8
2015	3.0	43.3	24.2	70.5
2016	3.1	42.9	25.6	71.6
2017	3.2	42.2	26.1	71.6
2018	3.2	42.4	25.9	71.4
2019	3.0	42.4	25.5	70.9
2020	2.7	38.6	23.2	64.5
2021	2.7	37.8	23.2	63.6
2022	2.9	36.0	23.5	62.4
2023	2.8	35.5	22.7	60.9

^a Excludes supplemental gaseous fuels.

^b Excludes biofuels.

— = No consumption. Where shown, R = Revised data and (s) = Value less than 0.05.

Notes: • Data are carbon dioxide (CO2) emissions estimates from fossil fuels primary energy consumption, excluding renewable energy. The state data do not account for interstate flow of electricity and represent CO2 emissions in the state where fossil fuels are burned to generate electricity, although the electricity might be sold to ultimate customers in other states and sectors.

• Totals may not equal sum of components due to independent rounding. • The industrial sector includes industrial combined-heat-and-power (CHP) and industrial electricity-only plants. • The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the technical notes for each type of energy.

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Table CO2.T5. Transportation sector CO2 emissions estimates from energy consumption, 1960-2023, California
(million metric tons of carbon dioxide (CO2))

Year	Coal ^a	Natural gas ^b	Petroleum ^c	Total
1960	0.1	0.6	86.9	87.6
1965	(s)	0.9	105.5	106.4
1970	(s)	0.9	129.8	130.7
1975	(s)	1.1	138.0	139.1
1980	—	0.8	168.7	169.5
1985	—	0.8	168.2	169.0
1990	—	1.1	201.4	202.5
1995	—	1.1	199.1	200.2
1996	—	1.1	203.3	204.4
1997	—	1.3	197.9	199.2
1998	—	0.6	199.4	200.0
1999	—	0.6	203.6	204.3
2000	—	0.6	215.8	216.4
2001	—	0.7	210.8	211.5
2002	—	0.7	222.8	223.4
2003	—	0.7	214.9	215.5
2004	—	0.9	222.9	223.8
2005	—	1.1	227.7	228.8
2006	—	0.9	232.6	233.5
2007	—	1.1	234.6	235.7
2008	—	1.1	217.9	218.9
2009	—	1.0	212.7	213.7
2010	—	1.3	199.7	201.0
2011	—	1.3	191.9	193.3
2012	—	1.5	187.9	189.4
2013	—	1.3	184.8	186.1
2014	—	2.1	185.0	187.1
2015	—	1.9	189.0	191.0
2016	—	2.3	195.9	198.1
2017	—	2.4	201.6	204.1
2018	—	2.4	203.4	205.8
2019	—	2.7	203.0	205.6
2020	—	2.3	154.4	156.7
2021	—	2.6	175.0	177.6
2022	—	2.7	179.0	181.7
2023	—	3.0	178.3	181.3

^a Beginning in 1978, consumption data not collected and assumed to be zero.

^b Transportation use of natural gas to operate pipelines and as vehicle fuel. Excludes supplemental gaseous fuels.

^c Excludes biofuels.

— = No consumption. Where shown, R = Revised data and (s) = Value less than 0.05.

Notes: • Data are carbon dioxide (CO2) emissions estimates from fossil fuels primary energy consumption, excluding renewable energy. The state data do not account for interstate flow of electricity and represent CO2 emissions in the state where fossil fuels are burned to generate

electricity, although the electricity might be sold to ultimate customers in other states and sectors. • Totals may not equal sum of components due to independent rounding. • The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the technical notes for each type of energy.

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Table CO2.T6. Electric power sector CO2 emissions estimates from energy consumption, 1960-2023, California
(million metric tons of carbon dioxide (CO2))

Year	Coal	Natural gas ^a	Petroleum ^b	Total
1960	—	17.7	11.3	29.1
1965	—	28.0	7.9	35.9
1970	—	35.6	10.2	45.8
1975	—	15.5	37.1	52.6
1980	—	28.9	30.7	59.6
1985	—	37.1	2.3	39.4
1990	1.8	34.4	4.0	40.2
1995	2.2	32.9	2.0	37.1
1996	1.9	28.6	2.3	32.8
1997	1.7	32.3	1.8	35.8
1998	1.9	35.2	2.2	39.3
1999	2.1	39.2	2.0	43.3
2000	2.1	48.3	2.5	52.9
2001	2.0	53.0	2.8	57.8
2002	2.2	39.4	2.2	43.7
2003	2.1	38.3	2.3	42.7
2004	2.2	42.1	2.1	46.4
2005	2.0	37.6	2.4	41.9
2006	2.1	42.2	2.2	46.5
2007	2.2	45.6	2.2	50.0
2008	2.3	46.8	1.9	50.9
2009	2.0	44.1	1.8	47.9
2010	2.1	40.1	1.3	43.5
2011	1.9	33.5	1.1	36.4
2012	1.3	46.5	0.2	48.0
2013	0.6	45.0	0.1	45.7
2014	0.7	45.5	0.1	46.2
2015	—	44.1	(s)	44.1
2016	—	36.4	(s)	36.5
2017	—	32.9	(s)	32.9
2018	—	33.6	(s)	33.6
2019	—	31.1	(s)	31.1
2020	—	33.6	(s)	33.6
2021	—	35.3	(s)	35.3
2022	—	35.3	(s)	35.4
2023	—	34.6	(s)	34.7

^a Excludes supplemental gaseous fuels.

^b Excludes biofuels.

— = No consumption. Where shown, R = Revised data and (s) = Value less than 0.05.

Notes: • Data are carbon dioxide (CO2) emissions estimates from fossil fuels primary energy consumption, excluding renewable energy. The state data do not account for interstate flow of electricity and represent CO2 emissions in the state where fossil fuels are burned to generate electricity, although the electricity might be sold to ultimate customers in other states and sectors.

• Totals may not equal sum of components due to independent rounding. • The electric power sector

consists of electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public. • The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the technical notes for each type of energy.

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