

California Greenhouse Gas Inventory for 2000-2014 — by Sector and Activity

million tonnes of CO₂ equivalent - (based upon IPCC Fourth Assessment Report's 100-yr Global Warming Potentials)

Included Emissions	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Electricity Generation (In State)	59.19	63.21	49.88	48.25	49.35	45.25	50.05	54.30	54.50	53.51	46.92	41.36	51.18	49.60	51.81
<i>CHP: Commercial</i>	0.73	0.67	0.76	0.86	0.69	0.73	0.72	0.78	0.77	1.05	0.79	0.86	0.62	0.84	0.88
<i>CHP: Industrial</i>	18.15	16.70	20.24	17.76	15.29	14.79	13.84	13.79	13.63	14.78	12.57	13.84	12.54	12.85	13.89
<i>Merchant Owned</i>	32.96	38.86	23.80	24.05	27.53	23.15	26.23	29.27	28.79	27.42	21.41	15.30	24.22	22.66	23.63
<i>Transmission and Distribution</i>	0.25	0.23	0.20	0.20	0.20	0.20	0.20	0.18	0.18	0.18	0.17	0.17	0.16	0.12	0.09
<i>Utility Owned</i>	7.10	6.75	4.89	5.38	5.64	6.39	9.06	10.28	11.14	10.07	11.98	11.20	13.63	13.12	13.32
Electricity Generation (Imports)	45.99	59.12	59.07	64.66	66.15	62.90	54.76	59.90	65.92	48.13	43.67	46.94	44.15	40.24	36.56
<i>Specified Imports</i>	31.64	33.59	32.04	32.51	33.13	32.79	26.73	27.08	27.90	33.05	30.14	31.34	26.59	28.35	23.07
<i>Transmission and Distribution</i>	0.09	0.10	0.11	0.10	0.11	0.10	0.09	0.09	0.10	0.09	0.08	0.08	0.08	0.06	0.05
<i>Unspecified Imports</i>	14.27	25.42	26.92	32.05	32.92	30.01	27.95	32.73	37.92	14.99	13.45	15.52	17.48	11.82	13.44
Transportation	178.50	178.77	185.81	183.35	185.11	187.07	187.04	187.14	176.17	169.51	166.20	162.90	162.94	161.46	163.02
<i>Aviation</i>	4.15	4.07	4.12	4.25	4.49	4.49	4.56	4.97	4.50	4.03	3.84	3.71	3.75	3.91	3.89
<i>Not Specified Transportation</i>	4.00	4.01	4.08	4.18	4.33	4.61	4.64	4.58	5.09	4.80	5.35	4.94	4.96	5.03	5.25
<i>Off Road</i>	2.63	2.79	2.77	2.84	3.03	3.22	3.32	3.18	2.82	2.25	2.03	2.13	2.23	2.33	2.43
<i>On Road</i>	162.35	162.70	168.72	165.43	166.56	167.36	166.91	167.00	157.39	152.85	149.03	145.92	145.67	143.86	144.75
<i>Rail</i>	1.88	1.89	2.50	2.86	2.91	3.34	3.53	3.17	2.38	1.95	2.31	2.64	2.47	2.40	2.75
<i>Water-borne</i>	3.50	3.32	3.63	3.79	3.79	4.04	4.08	4.24	3.99	3.63	3.65	3.56	3.84	3.92	3.95
Industrial	104.40	102.64	104.22	103.22	105.84	103.89	101.63	98.58	99.31	97.26	100.88	100.76	101.09	103.76	104.22
<i>CHP: Industrial</i>	11.69	10.48	10.65	10.59	12.92	12.41	12.16	11.15	10.40	12.56	12.61	11.15	10.81	10.99	9.64
<i>Landfills</i>	7.22	7.36	7.31	7.43	7.42	7.59	7.65	7.71	7.88	8.02	8.11	8.19	8.20	8.22	8.28
<i>Manufacturing</i>	28.13	27.02	28.87	25.28	25.67	24.69	24.93	23.00	23.57	20.38	22.34	23.83	24.62	25.29	25.59
<i>Mining</i>	0.86	0.31	0.31	0.34	0.36	0.34	0.11	0.16	0.19	0.14	0.15	0.15	0.17	0.16	0.16
<i>Not Specified Industrial</i>	2.31	2.28	2.42	2.42	2.56	2.67	2.82	2.89	3.05	3.15	3.44	3.52	3.60	3.99	4.22
<i>Oil & Gas Extraction</i>	19.40	19.63	18.36	20.83	20.97	19.64	17.49	17.56	18.83	17.72	16.82	16.77	16.83	19.06	19.25
<i>Petroleum Marketing</i>	0.01	0.01	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.03	0.03	0.00	0.00
<i>Petroleum Refining and Hydrogen Production</i>	28.46	29.03	29.19	29.82	29.06	29.74	29.63	29.20	28.40	28.31	30.39	30.05	29.81	29.15	29.33
<i>Pipelines</i>	4.16	4.34	4.90	4.28	4.62	4.53	4.55	4.57	4.64	4.63	4.65	4.66	4.61	4.45	5.31
<i>Solid Waste Treatment</i>	0.24	0.26	0.29	0.31	0.33	0.36	0.38	0.40	0.43	0.45	0.47	0.50	0.52	0.54	0.57
<i>Wastewater Treatment</i>	1.93	1.90	1.93	1.91	1.92	1.91	1.91	1.93	1.91	1.89	1.90	1.90	1.89	1.90	1.88
Commercial	14.07	14.01	16.05	15.27	15.83	15.85	16.57	17.12	17.74	18.74	20.20	20.85	21.11	21.64	21.63
<i>CHP: Commercial</i>	1.09	1.05	1.06	0.26	0.62	0.40	0.42	0.49	0.37	0.92	0.92	0.78	0.76	0.71	0.58
<i>Communication</i>	0.19	0.18	0.20	0.19	0.19	0.17	0.19	0.18	0.16	0.16	0.15	0.15	0.14	0.14	0.12
<i>Domestic Utilities</i>	0.25	0.18	0.17	0.37	0.33	0.23	0.29	0.30	0.28	0.28	0.27	0.26	0.26	0.25	0.25
<i>Education</i>	1.22	1.07	1.24	1.09	1.09	1.08	1.12	1.10	1.01	1.03	1.05	1.06	0.99	1.01	0.86
<i>Food Services</i>	1.90	1.97	2.48	2.31	2.28	2.30	2.47	2.43	2.31	2.23	2.23	2.25	2.28	2.32	2.33
<i>Health Care</i>	1.39	1.42	1.65	1.48	1.43	1.43	1.52	1.49	1.45	1.45	1.51	1.55	1.52	1.54	1.47
<i>Hotels</i>	0.63	0.67	0.78	0.69	0.68	0.68	0.75	0.75	0.73	0.70	0.73	0.74	0.73	0.74	0.73

California Greenhouse Gas Inventory for 2000-2014 — by Sector and Activity

million tonnes of CO2 equivalent - (based upon IPCC Fourth Assessment Report's 100-yr Global Warming Potentials)

Included Emissions	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<i>Landscape</i>	0.50	0.51	0.51	0.52	0.53	0.53	0.53	0.54	0.54	0.55	0.55	0.55	0.56	0.57	0.57
<i>National Security</i>	0.20	0.31	0.21	0.19	0.20	0.18	0.21	0.20	0.17	0.18	0.17	0.18	0.16	0.14	0.15
<i>Not Specified Commercial</i>	4.94	5.11	5.83	6.36	6.68	7.06	7.13	7.63	8.53	9.06	10.39	11.04	11.42	12.02	12.49
<i>Offices</i>	0.77	0.55	0.66	0.67	0.70	0.68	0.72	0.63	0.69	0.67	0.68	0.69	0.55	0.54	0.50
<i>Retail & Wholesale</i>	0.82	0.87	1.13	1.03	1.01	1.02	1.11	1.06	0.97	1.00	1.02	1.05	1.18	1.08	1.00
<i>Transportation Services</i>	0.18	0.13	0.13	0.11	0.10	0.09	0.12	0.34	0.51	0.51	0.53	0.56	0.57	0.58	0.58
Residential	30.76	29.84	30.01	29.58	30.66	29.51	29.93	30.11	30.55	30.33	31.43	32.25	30.30	31.47	27.40
<i>Household Use</i>	29.38	28.47	28.62	28.14	29.17	27.98	28.36	28.50	28.82	28.47	29.19	29.64	27.34	28.14	23.73
<i>Landscape</i>	0.74	0.75	0.76	0.77	0.78	0.78	0.79	0.79	0.80	0.80	0.81	0.82	0.83	0.83	0.84
<i>Not Specified Residential</i>	0.64	0.63	0.63	0.67	0.71	0.75	0.78	0.82	0.93	1.06	1.43	1.79	2.14	2.50	2.83
Agriculture & Forestry	31.80	31.72	33.96	34.20	33.82	34.45	35.61	36.20	36.37	34.06	34.92	35.85	36.78	35.36	36.11
<i>Ag Energy Use</i>	3.81	3.82	4.38	4.25	4.50	4.60	5.30	3.78	4.09	2.61	2.77	3.65	3.87	3.71	4.67
<i>Ag Residue Burning</i>	0.08	0.06	0.06	0.07	0.07	0.07	0.07	0.07	0.08	0.08	0.08	0.08	0.08	0.08	0.08
<i>Ag Soil Management</i>	6.95	6.78	7.05	7.02	7.01	7.04	7.15	6.92	6.80	6.61	6.73	6.88	6.98	6.72	6.44
<i>Enteric Fermentation</i>	10.36	10.25	10.91	11.00	10.77	11.08	11.13	12.31	12.04	11.65	12.13	11.98	12.10	11.78	11.85
<i>Histosol Cultivation</i>	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
<i>Manure Management</i>	9.26	9.64	10.25	10.60	10.04	10.39	10.68	11.82	12.09	11.75	11.86	11.86	12.38	11.71	11.96
<i>Rice Cultivation</i>	1.19	1.02	1.15	1.10	1.28	1.14	1.13	1.15	1.12	1.20	1.20	1.26	1.22	1.22	0.96
Not Specified	1.20	1.07	0.94	0.98	0.87	0.89	0.89	0.87	0.85	0.79	0.82	0.79	0.78	0.79	0.79
<i>Solvents & Chemicals</i>	1.20	1.07	0.94	0.98	0.87	0.89	0.89	0.87	0.85	0.79	0.82	0.79	0.78	0.79	0.79
Summary for Included Emissions	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
California Emissions	465.9	480.4	479.9	479.5	487.6	479.8	476.5	484.2	481.4	452.3	445.0	441.7	448.3	444.3	441.5

California Greenhouse Gas Inventory for 2000-2014 — by Sector and Activity

million tonnes of CO2 equivalent - (based upon IPCC Fourth Assessment Report's 100-yr Global Warming Potentials)

Excluded Emissions	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Transportation	50.94	44.02	48.97	43.26	47.36	50.68	53.19	56.03	52.54	52.04	51.39	47.20	44.40	47.06	49.70
<i>Aviation</i>	35.18	32.51	35.19	33.80	36.18	35.84	36.79	38.44	34.87	34.20	33.50	34.00	32.70	35.01	37.41
<i>Water-borne</i>	15.75	11.51	13.78	9.46	11.18	14.84	16.40	17.58	17.67	17.84	17.89	13.20	11.70	12.05	12.29
Industrial	0.41	0.54	0.55	0.55	0.10	0.10	0.59	0.62	0.62	0.62	0.62	0.60	0.60	0.60	0.60
<i>Oil & Gas Extraction</i>	0.41	0.54	0.55	0.55	0.10	0.10	0.59	0.62	0.62	0.62	0.62	0.60	0.60	0.60	0.60
Military	3.81	4.36	4.13	4.16	3.88	3.41	3.11	2.93	2.77	2.71	3.10	2.68	3.30	2.89	3.55
<i>Not Specified Military</i>	3.81	4.36	4.13	4.16	3.88	3.41	3.11	2.93	2.77	2.71	3.10	2.68	3.30	2.89	3.55
Summary for Excluded Emissions	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
International and Interstate Emissions	55.2	48.9	53.6	48.0	51.3	54.2	56.9	59.6	55.9	55.4	55.1	50.5	48.3	50.5	53.8

Archiving

California Greenhouse Gas Inventory for 2000-2014 — by Sector and Activity

million tonnes of CO₂ equivalent - (based upon IPCC Fourth Assessment Report's 100-yr Global Warming Potentials)

CO ₂ from biogenic materials	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Electricity Generation (In State)	7.07	7.17	7.41	7.60	6.92	6.96	7.07	6.73	6.76	7.75	7.28	7.99	7.75	8.68	9.02
<i>CHP: Commercial</i>	0.13	0.05	0.08	0.15	0.15	0.19	0.18	0.16	0.15	0.08	0.01	0.13	0.07	0.17	0.19
<i>CHP: Industrial</i>	1.69	2.33	1.64	1.80	1.36	1.24	1.22	1.23	1.09	0.93	0.94	1.16	1.31	1.36	1.19
<i>Merchant Owned</i>	5.12	4.68	5.56	5.47	5.28	5.36	5.50	5.17	5.34	6.44	5.95	6.16	5.78	6.49	7.05
<i>Utility Owned</i>	0.13	0.11	0.12	0.17	0.14	0.17	0.17	0.18	0.18	0.30	0.37	0.53	0.59	0.67	0.59
Electricity Generation (Imports)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44	0.82	0.28	1.30	2.01	1.31
<i>Specified Imports</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44	0.82	0.28	1.30	2.01	1.31
Transportation	0.34	0.46	0.57	3.14	4.79	5.11	5.24	5.18	5.41	5.38	8.23	8.89	8.33	11.02	11.62
<i>Aviation</i>	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
<i>On Road</i>	0.34	0.46	0.57	3.12	4.77	5.08	5.21	5.15	5.38	5.35	8.19	8.85	8.28	10.97	11.57
<i>Water-borne</i>	0.00	0.00	0.00	0.01	0.02	0.02	0.02	0.02	0.02	0.03	0.04	0.03	0.04	0.04	0.04
Industrial	12.15	12.79	11.09	11.11	11.81	12.66	12.73	12.96	12.79	12.53	12.67	13.22	13.37	13.42	13.44
<i>CHP: Industrial</i>	1.29	1.03	0.61	0.62	1.14	1.49	1.52	1.52	1.48	1.23	1.06	1.29	1.21	1.23	1.12
<i>Landfills</i>	6.28	6.62	6.88	6.86	6.90	7.08	7.28	7.39	7.47	7.57	7.68	7.73	7.87	7.91	7.95
<i>Manufacturing</i>	0.06	0.07	0.07	0.10	0.13	0.13	0.10	0.10	0.11	0.11	0.19	0.17	0.23	0.31	0.33
<i>Not Specified Industrial</i>	3.72	4.19	2.57	2.50	2.53	2.78	2.56	2.61	2.31	2.13	2.16	2.37	2.33	2.16	2.16
<i>Petroleum Refining and Hydrogen Production</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<i>Solid Waste Treatment</i>	0.80	0.87	0.95	1.03	1.11	1.19	1.26	1.34	1.42	1.50	1.57	1.65	1.73	1.81	1.88
Commercial	0.60	0.60	0.61	0.64	0.64	0.44	0.43	0.45	0.47	0.53	0.50	0.54	0.48	0.56	0.55
<i>CHP: Commercial</i>	0.02	0.01	0.01	0.01	0.03	0.05	0.06	0.07	0.06	0.03	0.01	0.07	0.06	0.07	0.07
<i>Not Specified Commercial</i>	0.58	0.59	0.60	0.63	0.61	0.39	0.36	0.39	0.41	0.50	0.49	0.47	0.42	0.48	0.48
Residential	3.47	3.33	3.38	3.56	3.65	2.43	2.15	2.38	2.66	3.50	3.05	3.12	2.91	4.02	4.02
<i>Household Use</i>	3.47	3.33	3.38	3.56	3.65	2.43	2.15	2.38	2.66	3.50	3.05	3.12	2.91	4.02	4.02
Agriculture & Forestry	1.39	1.16	1.17	1.21	1.23	1.22	1.24	1.29	1.39	1.41	1.45	1.53	1.55	1.55	1.51
<i>Ag Energy Use</i>	0.00	0.00	0.00	0.01	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.04	0.05	0.03	0.04
<i>Ag Residue Burning</i>	1.39	1.16	1.17	1.20	1.21	1.20	1.22	1.28	1.38	1.41	1.44	1.49	1.50	1.52	1.47
Summary for CO₂ from biogenic materials	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Carbon dioxide from Biogenic sources	25.0	25.5	24.2	27.3	29.0	28.8	28.9	29.0	29.5	31.5	34.0	35.6	35.7	41.3	41.5

California Greenhouse Gas Inventory for 2000-2014 — by Sector and Activity

million tonnes of CO2 equivalent - (based upon IPCC Fourth Assessment Report's 100-yr Global Warming Potentials)

2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014

This section of the inventory is currently under development

Archive