

California Methane Inventory for 2000-2015
 — by Category as Defined in the 2008 Scoping Plan

Methane

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	2015
Transportation	0.58	0.52	0.48	0.44	0.53	0.47	0.42	0.38	0.33	0.31	0.29	0.27	0.24	0.23	0.21	0.20
On Road	0.57	0.51	0.46	0.42	0.52	0.45	0.40	0.36	0.32	0.29	0.27	0.25	0.23	0.21	0.19	0.18
Passenger Vehicles	0.50	0.44	0.40	0.36	0.44	0.38	0.34	0.30	0.26	0.25	0.23	0.21	0.20	0.18	0.17	0.16
Heavy Duty Vehicles	0.07	0.07	0.06	0.06	0.08	0.07	0.06	0.06	0.05	0.05	0.04	0.04	0.04	0.03	0.03	0.02
Ships & Commercial Boats	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	0.00
Aviation (Intrastate)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Rail	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	0.00
Off Road [1]	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	0.00
Unspecified	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	0.00
Industrial	6.62	6.69	7.04	6.79	6.87	7.24	7.43	7.23	7.25	7.23	7.31	7.49	7.43	7.61	7.75	7.80
Refineries and Hydrogen Production	0.20	0.16	0.17	0.16	0.15	0.16	0.16	0.16	0.16	0.17	0.15	0.18	0.16	0.15	0.16	0.14
General Fuel Use	0.04	0.05	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Natural Gas	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Other Fuels	0.03	0.04	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Oil & Gas: Production & Processing [2]	1.39	1.43	1.46	1.49	1.52	1.54	1.58	1.62	1.65	1.67	1.72	1.79	1.85	2.03	2.15	2.26
Fuel Use	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Fugitive Emissions	1.38	1.43	1.45	1.48	1.51	1.53	1.57	1.61	1.65	1.66	1.72	1.78	1.85	2.03	2.14	2.26
Cement Plants	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.01	0.01	0.02	0.02	0.01	0.02	0.02
Fuel Use	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.01	0.01	0.02	0.02	0.01	0.02	0.02
Cogeneration Heat Output	0.03	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.03	0.02	0.02	0.02	0.02
Other Fugitive and Process Emissions	4.93	4.99	5.33	5.06	5.12	5.44	5.60	5.37	5.36	5.32	5.37	5.45	5.34	5.36	5.38	5.34
Natural Gas Transmission & Distribution [5]	3.52	3.57	3.89	3.65	3.72	3.76	3.90	3.87	3.94	3.98	3.94	3.92	3.87	3.81	3.87	3.94
Manufacturing	0.09	0.10	0.06	0.06	0.06	0.06	0.05	0.04	0.04	0.04	0.05	0.05	0.04	0.03	0.03	0.04
Wastewater Treatment	1.19	1.17	1.18	1.15	1.14	1.14	1.13	1.13	1.10	1.08	1.07	1.06	1.05	1.05	1.02	0.97
Other	0.14	0.15	0.20	0.20	0.20	0.48	0.53	0.32	0.28	0.23	0.31	0.43	0.39	0.48	0.46	0.40
Electric Power	0.11	0.12	0.12	0.12	0.11	0.11	0.11	0.11	0.11	0.12	0.11	0.19	0.11	0.25	0.24	0.24
In-State Generation	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.10	0.09	0.17	0.08	0.22	0.22	0.21
Natural Gas	0.02	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Other Fuels	0.06	0.06	0.07	0.07	0.06	0.06	0.06	0.06	0.06	0.07	0.06	0.06	0.05	0.06	0.06	0.06
Fugitive and Process Emissions	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.10	0.01	0.14	0.13	0.13
Imported Electricity	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.02	0.03
Unspecified Imports	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	0.01	0.01	0.01
Specified Imports	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.02	0.03	0.02	0.02
Commercial and Residential	0.06	0.05	0.06	0.06	0.06	0.05	0.04	0.05	0.05	0.06	0.05	0.05	0.05	0.06	0.06	0.06
Residential Fuel Use	0.04	0.04	0.04	0.04	0.05	0.04	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05
Natural Gas	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Other Fuels	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04
Commercial Fuel Use	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Natural Gas	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	0.00	0.00
Other Fuels	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Commercial Cogeneration Heat Output	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	0.00

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	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Agriculture	19.46	19.53	20.85	21.19	20.67	21.13	21.42	23.74	23.75	23.15	23.74	23.64	24.18	23.26	23.30	22.71
Livestock	18.24	18.48	19.67	20.07	19.37	19.96	20.26	22.56	22.60	21.91	22.51	22.36	22.93	22.01	22.31	21.77
Enteric Fermentation (Digestive Process)	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	11.54
Manure Management	7.88	8.23	8.76	9.06	8.60	8.89	9.13	10.25	10.56	10.26	10.38	10.38	10.84	10.23	10.46	10.23
Crop Growing & Harvesting	1.21	1.04	1.17	1.12	1.30	1.16	1.16	1.17	1.15	1.23	1.22	1.28	1.25	1.25	0.98	0.94
Soil Preparation and Disturbances	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	0.91
Crop Residue Burning	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
General Fuel Use	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	0.00
Diesel	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	0.00
Natural Gas	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	0.00
Gasoline	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	0.00
Other Fuels	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	0.00
Recycling and Waste	7.31	7.46	7.41	7.54	7.54	7.72	7.79	7.87	8.04	8.19	8.28	8.38	8.40	8.43	8.50	8.63
Landfills [3]	7.21	7.36	7.31	7.42	7.41	7.59	7.65	7.71	7.88	8.02	8.11	8.19	8.20	8.22	8.28	8.40
Composting	0.09	0.10	0.11	0.12	0.13	0.14	0.14	0.15	0.16	0.17	0.18	0.19	0.20	0.21	0.21	0.22
Included Inventory CH4 Emissions	34.13	34.37	35.95	36.14	35.79	36.70	37.21	39.36	39.53	39.04	39.79	40.03	40.41	39.83	40.06	39.63

[1] Includes equipment used in construction, mining, oil drilling, industrial and airport ground operations.

[2] Reflects emissions from combustion of natural gas, diesel, and lease fuel plus fugitive emissions.

[3] These categories are listed in the Industrial sector of ARB's GHG Emission Inventory sectors.

[4] This category is listed in the Electric Power sector of ARB's GHG Emission Inventory sectors.

[5] The exceptional Aliso Canyon natural gas leak event released 1.96 MMTCO₂e of unanticipated emissions in calendar year 2015 and an additional 0.52 MMTCO₂e in 2016. These emissions will be mitigated in the future according to legal settlement and are presented alongside but tracked separately from routine inventory emissions.