

### California Carbon Dioxide Inventory for 2000-2021 — 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	2015	2016	2017	2018	2019	2020	2021
<b>Electricity Generation (In State)</b>	<b>58.6</b>	<b>62.6</b>	<b>49.3</b>	<b>47.7</b>	<b>48.8</b>	<b>44.7</b>	<b>49.5</b>	<b>53.8</b>	<b>54.0</b>	<b>53.0</b>	<b>46.5</b>	<b>42.3</b>	<b>54.7</b>	<b>53.7</b>	<b>53.1</b>	<b>52.1</b>	<b>44.1</b>	<b>40.2</b>	<b>40.2</b>	<b>38.3</b>	<b>40.7</b>	<b>42.3</b>
<i>CHP: Commercial</i>	0.7	0.7	0.8	0.9	0.7	0.7	0.7	0.8	0.8	1.1	0.8	1.1	1.2	1.3	1.3	0.9	0.9	1.0	0.9	0.8	0.8	0.8
<i>CHP: Industrial</i>	18.0	16.5	20.1	17.6	15.1	14.6	13.7	13.6	13.5	14.6	12.5	14.2	15.1	15.9	14.5	13.9	13.0	12.2	11.8	11.0	10.0	9.7
<i>Merchant Owned</i>	32.8	38.7	23.6	23.9	27.4	23.0	26.1	29.1	28.6	27.3	21.3	16.7	24.2	22.9	23.5	23.1	17.3	15.0	16.0	15.4	18.3	19.6
<i>Utility Owned</i>	7.1	6.7	4.9	5.4	5.6	6.4	9.1	10.3	11.1	10.1	12.0	10.3	14.2	13.7	13.8	14.2	12.9	11.9	11.6	11.1	11.6	12.2
<b>Electricity Generation (Imports)</b>	<b>45.7</b>	<b>58.7</b>	<b>58.7</b>	<b>64.2</b>	<b>65.7</b>	<b>62.5</b>	<b>54.4</b>	<b>59.5</b>	<b>65.5</b>	<b>47.9</b>	<b>43.4</b>	<b>46.4</b>	<b>44.3</b>	<b>39.8</b>	<b>36.6</b>	<b>33.8</b>	<b>26.2</b>	<b>23.8</b>	<b>24.5</b>	<b>21.6</b>	<b>18.5</b>	<b>19.7</b>
<i>Specified Imports</i>	31.5	33.4	31.9	32.3	33.0	32.6	26.6	26.9	27.8	32.9	30.0	31.2	26.9	27.9	23.2	22.6	16.6	15.0	12.9	11.7	9.7	11.3
<i>Unspecified Imports</i>	14.2	25.3	26.8	31.9	32.8	29.9	27.8	32.6	37.7	15.0	13.4	15.2	17.4	11.8	13.4	11.2	9.7	8.8	11.6	9.9	8.8	8.5
<b>Transportation</b>	<b>168.2</b>	<b>168.6</b>	<b>176.0</b>	<b>173.4</b>	<b>175.1</b>	<b>177.0</b>	<b>177.2</b>	<b>177.4</b>	<b>166.9</b>	<b>161.0</b>	<b>158.4</b>	<b>155.1</b>	<b>152.8</b>	<b>152.8</b>	<b>153.7</b>	<b>157.5</b>	<b>161.3</b>	<b>162.7</b>	<b>161.8</b>	<b>158.9</b>	<b>132.7</b>	<b>142.7</b>
<i>Aviation</i>	4.2	4.0	4.1	4.2	4.4	4.5	4.5	4.9	4.5	4.0	3.8	3.7	3.7	3.9	3.9	4.1	4.3	4.6	4.6	4.3	2.9	3.5
<i>Not Specified Transportation</i>	2.0	1.9	1.9	1.8	1.9	2.0	2.0	1.8	2.1	1.6	2.0	1.6	1.6	1.5	1.8	1.9	1.6	1.4	1.5	1.5	1.2	1.2
<i>On Road</i>	157.2	158.1	164.5	161.4	162.7	163.9	163.8	164.2	154.8	150.4	146.6	143.7	141.5	141.5	142.4	146.3	150.3	151.8	150.2	148.0	123.5	132.9
<i>Rail</i>	1.9	1.9	2.5	2.9	2.9	3.3	3.5	3.1	2.4	1.9	2.3	2.6	2.4	2.1	1.9	1.7	1.5	1.3	1.9	1.4	1.3	1.3
<i>Water-borne</i>	2.9	2.7	3.0	3.1	3.1	3.3	3.3	3.3	3.2	3.0	3.7	3.6	3.6	3.8	3.9	3.5	3.5	3.6	3.6	3.7	3.8	3.8
<b>Industrial</b>	<b>85.5</b>	<b>85.0</b>	<b>85.9</b>	<b>84.4</b>	<b>87.7</b>	<b>85.0</b>	<b>84.8</b>	<b>82.3</b>	<b>80.5</b>	<b>77.9</b>	<b>80.2</b>	<b>77.8</b>	<b>72.9</b>	<b>74.7</b>	<b>77.1</b>	<b>74.8</b>	<b>73.4</b>	<b>73.4</b>	<b>73.9</b>	<b>72.8</b>	<b>65.5</b>	<b>66.1</b>
<i>CHP: Industrial</i>	11.6	10.4	10.6	10.5	12.9	12.3	12.1	11.1	10.3	12.5	12.5	9.9	7.1	6.9	7.2	6.8	6.4	6.0	6.7	6.0	6.1	6.1
<i>Manufacturing</i>	22.6	22.7	22.9	21.6	22.9	20.8	21.4	19.6	19.5	16.3	17.0	17.5	17.3	18.0	18.3	17.5	17.6	17.6	17.6	18.1	16.7	16.8
<i>Mining</i>	0.2	0.3	0.3	0.3	0.3	0.3	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1
<i>Not Specified Industrial</i>	2.0	1.9	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.7	1.9	1.7	1.7	1.9	2.0	2.1	2.0	2.0	1.9	2.0	1.9	1.9
<i>Off Road</i>	2.6	2.8	2.8	2.8	3.0	3.2	3.3	3.2	2.8	2.2	2.0	2.1	2.1	2.1	1.7	1.8	1.8	1.9	2.4	2.6	1.9	1.9
<i>Oil &amp; Gas: Production &amp; Processing</i>	17.6	17.3	17.7	17.0	17.3	16.3	16.1	16.7	17.1	16.1	15.4	15.4	13.8	15.5	16.6	16.8	14.2	14.3	13.9	14.0	11.7	11.7
<i>Petroleum Refining and Hydrogen Production</i>	27.9	28.5	28.8	29.3	28.4	29.1	29.1	28.7	27.8	28.1	30.2	30.0	29.7	29.3	29.7	28.3	29.7	30.0	30.0	28.6	25.6	26.1
<i>Solvents &amp; Chemicals</i>	0.4	0.4	0.3	0.4	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
<i>Transmission and Distribution</i>	0.6	0.7	0.6	0.6	0.8	0.7	0.5	0.6	0.5	0.4	0.6	0.6	0.7	0.6	1.2	1.0	1.2	1.0	1.0	1.2	1.0	1.1
<b>Commercial</b>	<b>13.0</b>	<b>12.4</b>	<b>12.8</b>	<b>12.6</b>	<b>13.8</b>	<b>13.3</b>	<b>13.0</b>	<b>13.3</b>	<b>13.4</b>	<b>13.8</b>	<b>14.5</b>	<b>14.2</b>	<b>12.6</b>	<b>12.2</b>	<b>11.8</b>	<b>12.9</b>	<b>12.8</b>	<b>12.8</b>	<b>12.6</b>	<b>13.2</b>	<b>12.0</b>	<b>12.5</b>
<i>CHP: Commercial</i>	1.1	1.1	1.1	0.3	0.6	0.4	0.4	0.5	0.4	0.9	0.9	0.5	0.5	0.6	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.4
<i>Communication</i>	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
<i>Domestic Utilities</i>	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2
<i>Education</i>	1.2	1.1	1.1	1.0	1.2	1.1	1.1	1.1	1.0	1.0	1.1	1.1	0.9	0.9	0.8	0.8	0.8	0.9	0.9	1.0	0.8	0.9
<i>Food Services</i>	2.0	2.0	2.2	2.3	2.4	2.4	2.4	2.5	2.3	2.2	2.2	2.2	2.0	2.0	2.1	2.2	2.2	2.2	2.1	2.2	1.8	2.0
<i>Health Care</i>	1.3	1.3	1.3	1.3	1.4	1.3	1.4	1.4	1.3	1.3	1.4	1.4	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
<i>Hotels</i>	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.7	0.7	0.7	0.7	0.6	0.6	0.7	0.7	0.7	0.7	0.6	0.7	0.5	0.5
<i>National Security</i>	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
<i>Not Specified Commercial</i>	3.2	2.8	2.8	3.4	3.5	3.6	3.2	3.2	3.8	3.8	4.3	4.3	3.7	3.5	3.2	4.2	3.9	3.9	3.7	4.0	3.8	3.7
<i>Offices</i>	1.9	1.9	2.1	2.0	2.1	2.0	2.0	1.9	1.8	1.7	1.8	1.8	1.6	1.5	1.4	1.5	1.6	1.6	1.6	1.7	1.6	1.7
<i>Retail &amp; Wholesale</i>	0.9	0.9	1.1	1.1	1.2	1.1	1.1	1.2	1.1	1.0	1.1	1.1	1.1	1.0	1.0	1.0	1.1	1.1	1.1	1.1	1.1	1.2
<i>Transportation Services</i>	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.5
<b>Residential</b>	<b>29.2</b>	<b>28.1</b>	<b>28.6</b>	<b>27.8</b>	<b>29.3</b>	<b>28.0</b>	<b>28.3</b>	<b>28.4</b>	<b>28.7</b>	<b>28.4</b>	<b>29.1</b>	<b>29.5</b>	<b>24.2</b>	<b>24.4</b>	<b>21.3</b>	<b>21.9</b>	<b>22.5</b>	<b>23.1</b>	<b>22.5</b>	<b>24.9</b>	<b>24.4</b>	<b>23.8</b>
<i>Household Use</i>	29.2	28.1	28.6	27.8	29.3	28.0	28.3	28.4	28.7	28.4	29.1	29.5	24.2	24.4	21.3	21.9	22.5	23.1	22.5	24.9	24.4	23.8

**California Carbon Dioxide Inventory for 2000-2021 — 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 2015 2016 2017 2018 2019 2020 2021**

*Transmission and Distribution*

<b>Agriculture &amp; Forestry</b>	<b>3.9</b>	<b>3.9</b>	<b>4.4</b>	<b>4.5</b>	<b>4.8</b>	<b>4.9</b>	<b>5.6</b>	<b>4.0</b>	<b>4.2</b>	<b>2.7</b>	<b>3.3</b>	<b>3.7</b>	<b>3.8</b>	<b>3.4</b>	<b>3.6</b>	<b>3.4</b>	<b>2.9</b>	<b>2.3</b>	<b>2.8</b>	<b>2.3</b>	<b>2.5</b>	<b>2.5</b>
<i>Ag Energy Use</i>	3.7	3.8	4.2	4.3	4.6	4.6	5.1	3.7	4.0	2.5	3.1	3.5	3.6	3.2	3.4	3.2	2.8	2.2	2.7	2.2	2.3	2.4
<i>Ag Soil Management</i>	0.3	0.2	0.2	0.2	0.2	0.3	0.5	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1

**Summary for Included Emissions**

**2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021**

**California CO2 Emissions 404.0 419.4 415.8 414.9 425.2 415.4 412.8 418.7 413.2 384.8 375.4 369.1 365.2 361.0 357.2 356.2 343.2 338.3 338.3 332.1 296.3 309.7**

**California Carbon Dioxide Inventory for 2000-2021 — 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	2015	2016	2017	2018	2019	2020	2021
<b>Transportation</b>	50.2	43.9	48.7	43.0	47.4	50.1	52.6	55.6	52.3	51.4	52.0	47.7	45.0	44.2	43.7	48.8	53.3	56.0	55.8	51.1	29.0	32.9
<i>Aviation</i>	34.8	32.3	34.8	33.5	35.9	35.5	36.5	38.1	34.6	33.9	33.2	34.0	32.4	34.9	37.3	40.1	42.3	43.5	42.9	37.2	19.4	23.4
<i>Water-borne</i>	15.4	11.6	13.9	9.5	11.5	14.6	16.2	17.5	17.7	17.5	18.7	13.8	12.6	9.3	6.4	8.8	11.0	12.5	13.0	13.9	9.5	9.5
<b>Military</b>	3.8	4.3	4.1	4.1	3.9	3.4	3.1	2.9	2.8	2.7	3.1	2.7	3.3	2.6	2.9	2.6	2.3	2.4	2.2	2.2	2.2	2.2
<i>Not Specified Military</i>	3.8	4.3	4.1	4.1	3.9	3.4	3.1	2.9	2.8	2.7	3.1	2.7	3.3	2.6	2.9	2.6	2.3	2.4	2.2	2.2	2.2	2.2
<b>Summary for Excluded Emissions</b>																						
Excluded CO2 Emissions	54.0	48.2	52.8	47.2	51.2	53.5	55.7	58.6	55.0	54.1	55.0	50.4	48.2	46.9	46.6	51.4	55.6	58.4	58.0	53.3	31.1	35.1

**Forested Lands & Wood Products**

**2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021**

**This section of the inventory is currently under development**