Table 12. U.S. Carbon Dioxide Emissions from Industrial Processes, 1990-2002

(Million Metric Tons Carbon Dioxide)

Source	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	P2002
Cement Manufacture													
Clinker Production	32.6	31.8	32.1	33.9	36.0	36.1	36.3	37.6	38.4	39.2	40.4	40.5	42.3
Masonry Cement	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
Cement Kiln Dust	0.7	0.6	0.6	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8
Cement Subtotal	**33.3**	**32.5**	**32.8**	**34.7**	**36.8**	**36.9**	**37.2**	**38.4**	**39.3**	**40.1**	**41.3**	**41.4**	**43.3**
Other Industrial													
Limestone Consumption													
Lime Manufacture	12.4	12.3	12.7	13.1	13.7	14.5	15.1	15.5	15.8	15.5	15.4	14.8	14.4
Iron Smelting	1.7	1.6	1.4	1.1	1.1	1.2	1.1	1.1	1.1	1.0	1.1	1.0	0.9
Steelmaking	0.3	0.3	0.3	0.5	0.5	0.5	0.4	0.3	0.4	0.3	0.5	0.6	0.6
Copper Refining	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1
Glass Manufacture	0.1	0.1	0.2	0.2	0.3	0.3	0.2	0.1	0.2	0.2	0.2	0.1	0.1
Flue Gas Desulfurization	0.7	0.7	0.7	0.7	0.7	0.9	0.9	1.0	1.0	1.1	1.2	1.4	1.4
Dolomite Manufacture	0.5	0.4	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.1	0.3	0.3	0.3
Limestone Subtotal	***15.9***	***15.5***	***15.7***	***16.0***	***16.7***	***17.8***	***18.3***	***18.5***	***18.9***	***18.3***	***18.7***	***18.4***	***17.9***
Soda Ash Manufacture	3.4	3.4	3.4	3.3	3.4	3.8	3.8	3.9	3.8	3.7	3.6	3.6	3.5
Soda Ash Consumption													
Glass Manufacture	0.1	0.1	0.1	0.2	0.3	0.3	0.2	0.1	0.2	0.2	0.2	0.1	0.1
Flue Gas Desulfurization	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2
Sodium Silicate	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.2	0.2	0.3	0.3
Sodium Tripolyphosphate	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
Soda Ash Subtotal	***0.5***	***0.5***	***0.5***	***0.6***	***0.7***	***0.8***	***0.6***	***0.6***	***0.6***	***0.6***	***0.6***	***0.6***	***0.6***
Carbon Dioxide Manufacture	0.9	0.9	1.0	1.0	1.0	1.0	1.1	1.1	1.2	1.2	1.3	1.3	1.4
Aluminum Manufacture	5.9	6.0	5.9	5.4	4.8	4.9	5.2	5.3	5.4	5.5	5.4	3.9	4.0
Shale Oil Production	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Industrial Subtotal	**26.8**	**26.4**	**26.5**	**26.3**	**26.7**	**28.4**	**29.0**	**29.5**	**30.0**	**29.3**	**29.6**	**27.7**	**27.4**
Total	**60.1**	**58.8**	**59.3**	**61.0**	**63.5**	**65.3**	**66.1**	**67.9**	**69.3**	**69.4**	**70.9**	**69.2**	**70.6**

*Less than 50,000 metric tons carbon equivalent.

P = preliminary data.

Notes: Data in this table are revised from the data contained in the previous EIA report, *Emissions of Greenhouse Gases in the United States 2001*, DOE/EIA-0573(2001) (Washington, DC, December 2002). Totals may not equal sum of components due to independent rounding.

Sources: EIA estimates presented in this chapter.