

6.4.2 Average Carbon Emissions from a Generic Quad in the Buildings Sector with Stock Fuel Mix and Projected Fuel Mix of New Marginal Utility Capacity and Site Energy Consumption (million metric tons) (1)

	Stock			Projected Fuel Mix of New Marginal Utility Capacity and Site Consumption								
	2002			2010			2020			2025		
	Resid.	Comm.	Bldgs.	Resid.	Comm.	Bldgs.	Resid.	Comm.	Bldgs.	Resid.	Comm.	Bldgs.
Electricity (2)	10.67	12.20	11.36	11.89	13.84	13.06	13.20	14.61	14.12	14.99	15.74	15.55
Petroleum	1.34	0.81	1.10	1.02	1.19	1.12	0.36	0.75	0.60	0.17	0.65	0.47
Natural Gas	3.49	2.66	3.11	4.08	1.60	2.60	3.44	1.57	2.31	3.22	1.60	2.24
Renew. En. (3)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coal	0.01	0.14	0.07	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Total	15.51	15.81	15.64	16.99	16.65	16.78	17.01	16.94	17.03	18.39	17.99	18.26

Note(s): 1) This table provides estimates of the carbon emissions resulting from consumption of a generic quad in the buildings sector, at current and projected fuel shares. Projected increases in *site* energy will be met primarily met by electricity, natural gas, and petroleum. Projected new marginal emissions will result from natural gas- and coal-fired power plants. Electricity imports from utility consumption were ignored since this energy was produced outside of the U.S. "Average" means the weighted average of different fuels (e.g., petroleum is the average of residual and distillate fuel oils, LPG, kerosene, and motor gasoline). The combustion of fossil fuels produces carbon in the form of carbon dioxide and carbon monoxide; however, carbon monoxide emissions oxidize in a relatively short time to form carbon dioxide. 2) Includes renewables. 3) Emissions exclude wood since it is assumed that the carbon released from combustion is reabsorbed in a future carbon cycle.

Source(s): EIA, Annual Energy Outlook 2004, Jan. 2004, Table A2, p. 134-136 and Table A18, p. 157 for energy consumption and Table A19, p. 158 for carbon emissions; and EIA, Assumptions to the AEO 2004, Jan. 2004, Table 2, p. 8.