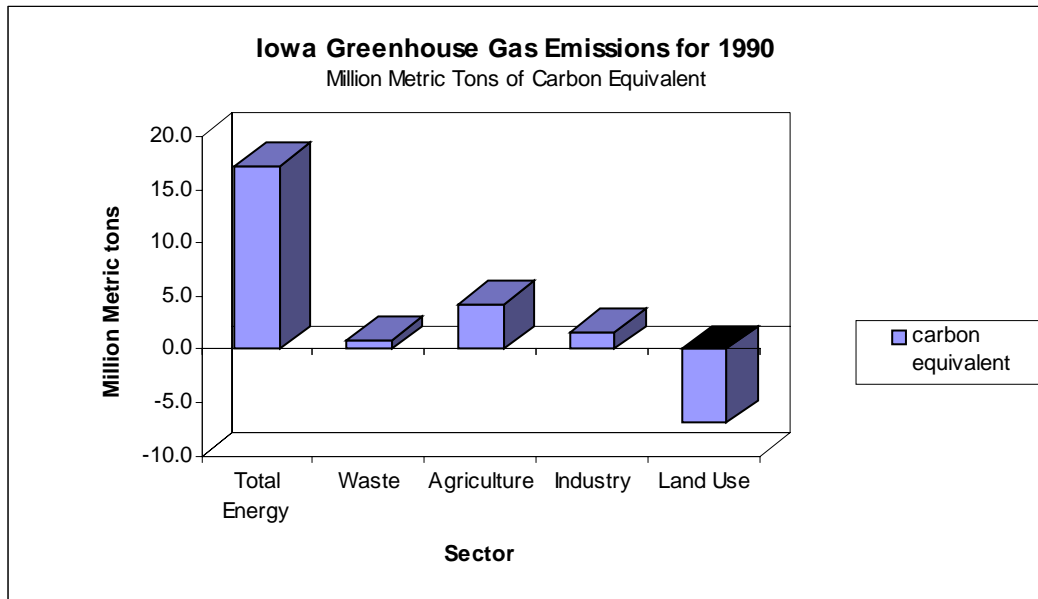


IOWA GREENHOUSE GAS EMISSIONS AND SINKS INVENTORY: SUMMARY



The report “*Iowa Greenhouse Gas Action Plan*” provides a detailed inventory of greenhouse gas emissions and sinks for Iowa in 1990. Emissions were estimated using methods from EPA’s 1992 guidance document ***State Workbook: Methodologies for Estimating Greenhouse Gas Emissions***. In 1990, Iowa emitted 17.0 million metric tons of carbon equivalent (MMTCE). Iowa estimated emissions of 0.01 MMTCE from biomass fuels and from other sources not included in the workbook. Emissions from these sources are not included in the reported total or in the table below.¹

The principal greenhouse gas was carbon dioxide, comprising 43.3 million metric tons (11.8 MMTCE). Other emissions included 0.7 million metric tons of methane (3.7 MMTCE) and 18 thousand metric tons of nitrous oxide (1.6 MMTCE).

¹ Note that the state of the art emission inventory method has advanced since Iowa completed its inventory; therefore, we have made the following adjustments to Iowa’s emission estimates. First, we excluded emission estimates for methane from biofuels, a source that is not covered by the most recent inventory guidance (<http://www.epa.gov/ttnchie1/eiip/techrep.htm#green>). Second, we used updated carbon coefficients for some fuel types. Third, we used updated values for global warming potentials.

Iowa Greenhouse Gas Emissions for 1990

BY SECTOR	CO2 (MMTCE)	Methane (MMTCE)	Nitrous Oxide (MMTCE)	HFCs, PFCs, and SF6 (MMTCE)	Total GHG Emissions (MMTCE)
Energy - Residential	1.3	*	*	*	1.3
Energy - Commercial	0.8	*	*	*	0.8
Energy - Industrial	3.6	*	*	*	3.6
Energy - Transport	4.5	*	*	*	4.5
Energy - Utility	6.9	*	*	*	6.9
Energy - Exported Electricity	0.0	*	*	*	0.0
Energy - Other	0.0	0.1	0.0	*	0.1
Total Energy	17.2	0.1	0.0	*	17.3
Waste	0.0	0.9	0.0	*	0.9
Agriculture	0.0	2.6	1.6	*	4.2
Industry	1.6	*	0.0	*	1.6
Land Use	-6.9	*	*	*	-6.9
Total	11.8	3.7	1.6	*	17.0

All emissions are reported in million metric tons of carbon equivalent (MMTCE).

An asterisk (*) indicates that emissions of the gas from this sector were zero, insignificant, or not reported.

Emissions due to coal mining and extraction of natural gas and oil are included in the energy – other figures, and emissions from biofuel combustion are excluded.

The major source of carbon dioxide emissions was fossil fuel combustion (92%), with minor emissions from limestone use, lime manufacturing, and cement. Carbon dioxide sinks (i.e., an increase in forest carbon storage) offset about 37% of the total carbon dioxide emissions. Sources of methane emissions were domesticated animals (54%), landfills (25%), manure management (17%), natural gas production (3%) and burning of agricultural waste (1%). Nitrous oxide emissions were primarily attributable to fertilizer use (97%) and burning of agricultural waste (3%).

Iowa's emissions in 1990 were 6.1 MTCE per capita, compared to 1990 U.S. emissions of 6.4 MTCE per capita.