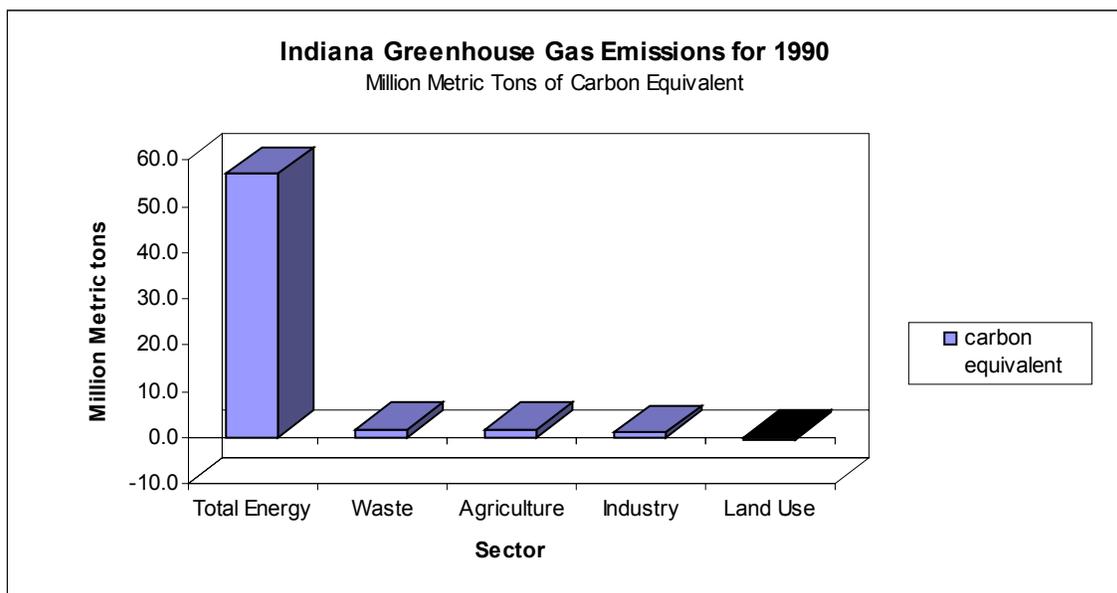


INDIANA GREENHOUSE GAS EMISSIONS AND SINKS INVENTORY: SUMMARY



The report “*Indiana Greenhouse Gas Emissions and Sinks: Estimates for 1990*” provides a detailed inventory of greenhouse gas emissions and sinks for Indiana in 1990. Emissions were estimated using methods from EPA’s 1992 guidance document ***State Workbook: Methodologies for Estimating Greenhouse Gas Emissions***. In 1990, Indiana emitted 61.3 million metric tons of carbon equivalent (MMTCE). Indiana estimated emissions of more than 0.9 MMTCE from biomass fuels and from other sources as well as 9.1 MMTCE of emissions from ozone-depleting substances (ODS) from ODC consumption (not including HFCs and PFCs). Emissions from these sources are not included in the reported total or the table below.^{1,2}

The principal greenhouse gases were carbon dioxide, comprising 205.4 million metric tons (56.0 MMTCE), and methane, with 0.6 million metric tons (3.7 MMTCE). Other emissions included over 9 thousand metric tons of nitrous oxide (0.8 MMTCE).

¹ Note that the state of the art emission inventory method has advanced since Indiana completed its inventory; therefore, we have made the following adjustments to Indiana’s emission estimates. First, we excluded emission estimates for sources not covered by the most recent inventory guidance (<http://www.epa.gov/ttnchie1/eiip/techrep.htm#green>). These emissions include carbon dioxide from landfills and methane flaring; carbon dioxide and methane from wetland drainage; and carbon dioxide, methane, and nitrous oxide from orchard burning. Second, we used updated carbon coefficients for some fuel types. Third, we used updated values for global warming potentials.

² In addition, the Indiana inventory estimated emissions of non-methane volatile organic compounds, carbon monoxide, and nitrogen oxides, which are greenhouse gases for which global warming potentials have not yet been developed.

Indiana 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	2.6	*	*	*	2.6
Energy - Commercial	1.4	*	*	*	1.4
Energy - Industrial	15.2	*	*	*	15.2
Energy - Transport	11.2	*	*	*	11.2
Energy - Utility	25.6	*	*	*	25.6
Energy - Exported Electricity	*	*	*	*	*
Energy - Other	*	0.8	0.2	*	1.0
Total Energy	56.1	0.8	0.2	*	57.0
Waste	*	1.7	*	*	1.7
Agriculture	*	1.2	0.6	*	1.8
Industry	0.3	*	*	0.7	1.0
Land Use	-0.4	*	*	*	-0.4
Total	56.0	3.7	0.8	0.7	61.3

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 (>99%) with minor emissions from cement production (<1%). Carbon dioxide sinks (i.e., an increase in forest carbon storage) offset about 1% of the total carbon dioxide emissions. Contributors to methane emissions included landfills (47%), manure management (18%), domesticated animals (15%), coal mining (10%), natural gas production (8%), and fossil fuel combustion (3%). Nitrous oxide emissions were accounted for by fertilizer use (77%) and fossil fuel combustion (23%).

Indiana emissions in 1990 were 11.0 MTCE per capita, compared to 1990 U.S. emissions of 6.4 MTCE per capita.