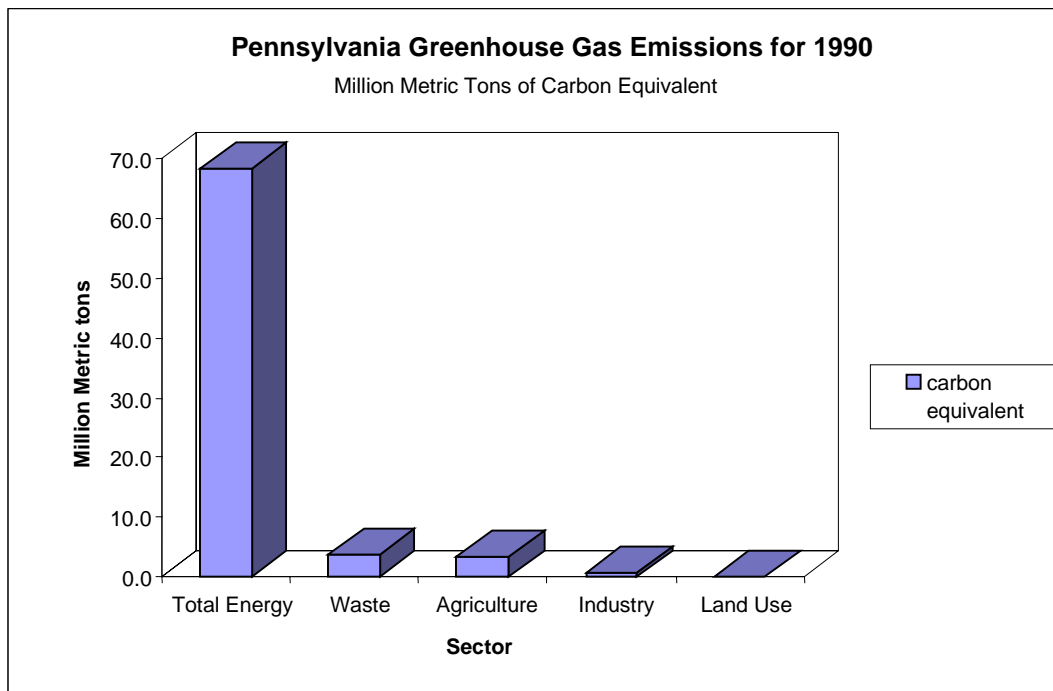


PENNSYLVANIA GREENHOUSE GAS EMISSIONS AND SINKS INVENTORY: SUMMARY



The report “*Greenhouse Gas Emissions in Pennsylvania: An Inventory*” provides a detailed inventory of greenhouse gas emissions and sinks for Pennsylvania in 1990. Emissions were estimated using methods from EPA’s 1992 guidance document ***State Workbook: Methodologies for Estimating Greenhouse Gas Emissions***. In 1990, Pennsylvania emitted 76 million metric tons of carbon equivalent (MMTCE). Pennsylvania estimated emissions of 3.5 MMTCE from sources not covered in the workbook. Emissions from these sources are not included in the reported total or the table below.¹

The principal greenhouse gas was carbon dioxide, comprising 243 million metric tons (66.3 MMTCE). Other emissions included 1.3 million metric tons of methane (7.2 MMTCE) and 0.03 million metric tons of nitrous oxide (2.5 MMTCE).

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

Pennsylvania Greenhouse Gas Emissions for 1990

SECTOR	CO ₂ (MMTCE)	Methane (MMTCE)	Nitrous Oxide (MMTCE)	HFCs, PFCs, and SF6 (MMTCE)	Total GHG Emissions (MMTCE)
Energy - Residential	6.2	*	*	*	24.9
Energy - Commercial	3.0	*	*	*	12.2
Energy - Industrial	16.8	*	*	*	67.8
Energy - Transport	15.4	*	*	*	62.2
Energy - Utility	24.2	*	*	*	97.7
Energy - Exported Electricity	*	*	*	*	*
Energy - Other	*	*	*	*	*
Total Energy	65.5	2.8	*	*	68.3
Waste	*	3.6	*	*	3.6
Agriculture	*	0.8	2.5	*	3.3
Industry	0.7	*	*	*	0.7
Land Use	0.1	*	*	*	0.1
TOTAL	66.3	7.2	2.5	*	76.0

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 (99%), the majority of which is utility coal. Pennsylvania estimated emissions associated with land use, but did not estimate land use-related sinks (i.e., an increase in forest carbon storage), which in most states (and nationally) exceed land use emissions. Contributors to methane emissions were landfills (51%), coal mining and natural gas production (38%), domesticated animals (10%) and manure management (1%). Nitrous oxide emissions were attributable to fertilizer use.

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