CARBON CITY
IDENTIFYING THE SOURCES OF CARBON DIOXIDE IN THE URBAN ENVIRONMENT

For most US cities, global warming pollution comes from three primary sources: electricity use in homes, businesses and factories; the burning of fossil fuels by industry; and pollution from cars, trucks, SUVs and other transportation.

Carbon dioxide (CO₂) from burning fossil fuels makes up most of this pollution. Methane gas (CH₄) from rotting garbage at landfills and nitrous oxide (N₂O) from industry also contribute to global warming.*

80% of US electricity-related CO₂ emissions are attributed to coal-fired power plants, or 31% of all CO₂ emissions.

262 million metric tons CO₂ Annual emissions from a year's worth of all US household waste.

250 billion pounds CO₂ Estimated emissions from US residential electricity consumption.

18 thousand pounds CO₂ Typical annual household electricity consumption (12,000 kWh).

180 pounds CO₂ 60 watt incandescent bulb used at home for a year.

1.5 pounds CO₂ Average kilowatt hour of electricity.

RESIDENTIAL
1.2 billion metric tons CO₂ comprising 21% of US CO₂ emissions.

For most homes, the largest portion of global warming pollution comes from the use of electricity produced by coal- and gas-fired power plants and used for lighting, air conditioners, washers/dryers, refrigerators and other appliances. Half of all electricity in the US is generated by coal-fired power plants which produce 2 lbs of CO₂ pollution for every kilowatt hour of electricity.

Many homes burn natural gas or oil in furnaces and water heaters, producing additional pollution. Un-recycled household garbage also causes pollution -rotting garbage in landfills creates methane, an extremely potent greenhouse gas.

*For the purposes of this graphic, all pollution totals are given in carbon dioxide equivalents.

INDUSTRIAL & COMMERCIAL
2.7 billion metric tons CO₂ emissions from smokestacks, comprising 46% of US CO₂ emissions.

Carbon dioxide from the burning of coal in power plants is the largest single source of global warming pollution in the industrial/commercial sector. These power plants, which typically are located outside of city boundaries, provide electricity to businesses and factories.

Industrial pollution also comes from the burning of other fossil fuels such as oil and natural gas. Commercial pollution comes from businesses that burn fossil fuels and use electricity from coal-fired power plants to produce light and heat and to run air conditioners and machinery.

TRANSPORTATION
1.9 billion metric tons CO₂ emissions, comprising 33% of US CO₂ emissions.

Private vehicles such as cars, SUVs and pick-up trucks, are the largest source of global warming pollution in the transportation sector. Each gallon of gasoline burned in an engine emits roughly 20 pounds of CO₂. Other sources include buses, trucks, trains, container ships and other vehicles with internal combustion engines.