

# GREENHOUSE GAS EMISSIONS INVENTORY

Columbia, Missouri

## OUR COMMITMENT



Columbia City Council reaffirmed Columbia's commitment to take action to reduce climate pollution (Resolution 83-17A) on June 19, 2017. The first step in establishing reduction targets is to complete a greenhouse gas (GHG) emissions inventory with a breakdown of emissions for buildings and transport sectors. This inventory measures and reports 2015 GHG emissions by the sector they represent in the community. The City utilized the U.S. Community Protocol for Accounting and Reporting Greenhouse Gas Emissions.

## WHY GREENHOUSE GAS EMISSIONS MATTER

Gases that trap heat in the atmosphere are called greenhouse gases (GHG). In the United States, GHG emissions caused by human activities increased by 7 percent from 1990 to 2014. Carbon dioxide accounts for most of the nation's emissions and most of the increase since 1990. Electricity generation is the largest source of ghg emissions in the United States, followed by transportation. In Columbia, emissions have increased 12% since we began measuring them in 2000.

The increase in GHGs in the atmosphere can lead to an increase in the number and the intensity of extreme weather events and the degradation of our air quality. Extreme weather events, like torrential rains, contribute to flooding and can destroy homes and infrastructure. Studies estimating economic damage from climate change in the United States show combined values of market (e.g. agriculture, energy, labor) and non-market (e.g. crime, human mortality) damage to increase as global mean temperature increases. Communities across America are learning that smart investments provide a healthier environment, attract new business, create jobs, and build stronger communities. Columbia is taking action to both understand and reduce its contribution to increasing GHG emissions into the air.



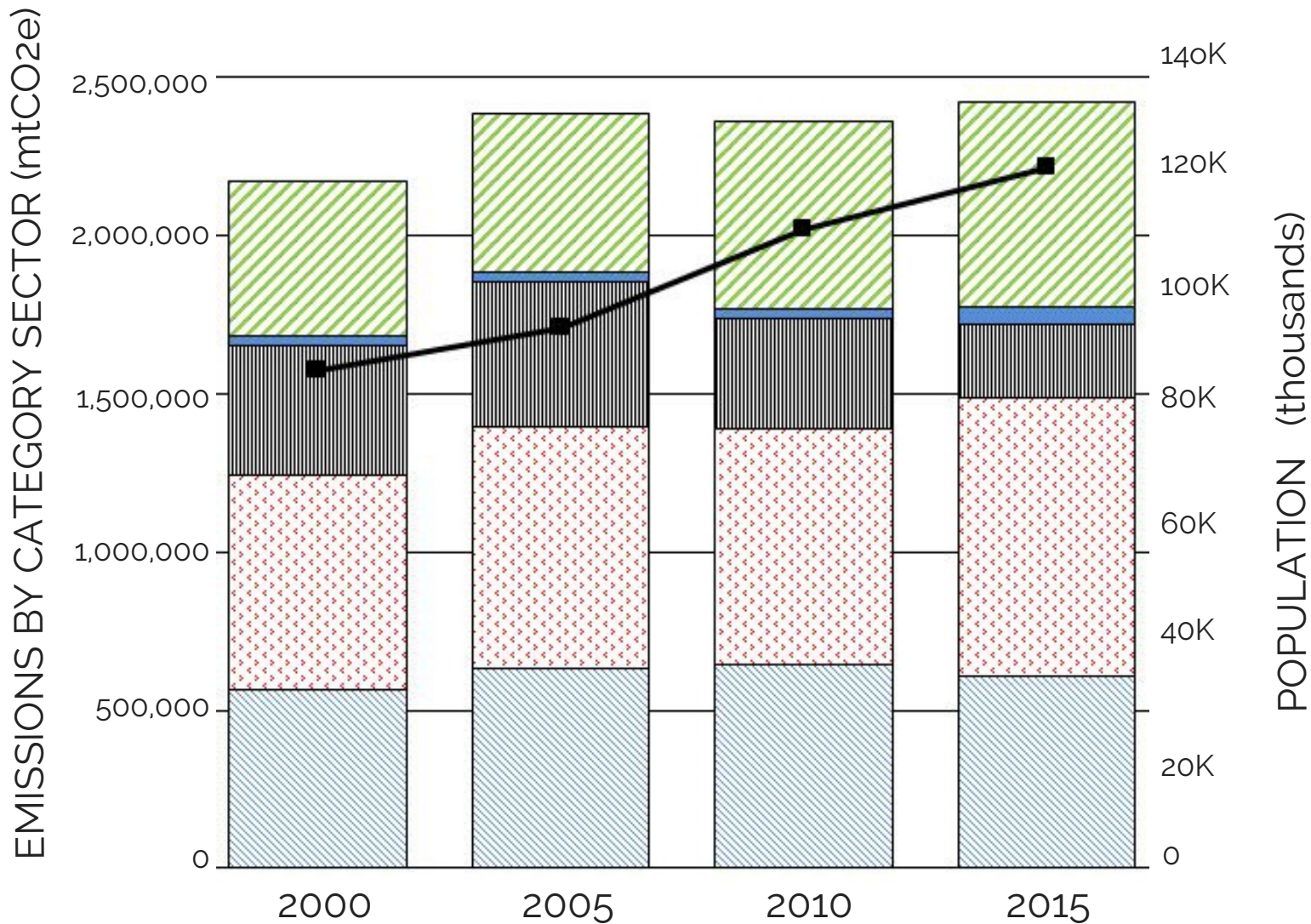
What we track  
for GHG  
emission  
inventories

- **Electricity** consumption for residential, commercial, and industrial sectors
- **Natural Gas** consumption for residential, commercial, and industrial sectors
- Vehicle miles traveled for occupant **transportation**
- Tons of **waste** sent to the landfill
- Emissions from **wastewater** treatment operations

# COMMUNITY GHG EMISSIONS

## Executive Summary

Activities by residents, visitors, and workers in Columbia resulted in the emission of **2,421,399 metric tons** of equivalent carbon dioxide (CO<sub>2</sub>e) in 2015.



- Transportation
- Waste
- Industrial Energy
- Commercial Energy
- Residential Energy
- Population

From 2000 - 2015, community emissions have increased 12%. Seventy-one percent of our community emissions are a result of energy used to cool, heat, light and power our homes, offices, and industrial facilities. Emissions from transportation account for 27%. Emissions associated with solid waste and wastewater makes up the remaining 2%.

In order to meet carbon reduction goals, Columbia will need to make smart investments in clean energy and adopt sustainable practices that save money and improve the quality of life for all residents, visitors, and workers.

Columbia's 2015 emissions would be the equivalent of **62,753,326 tree seedlings grown for 10 years.**