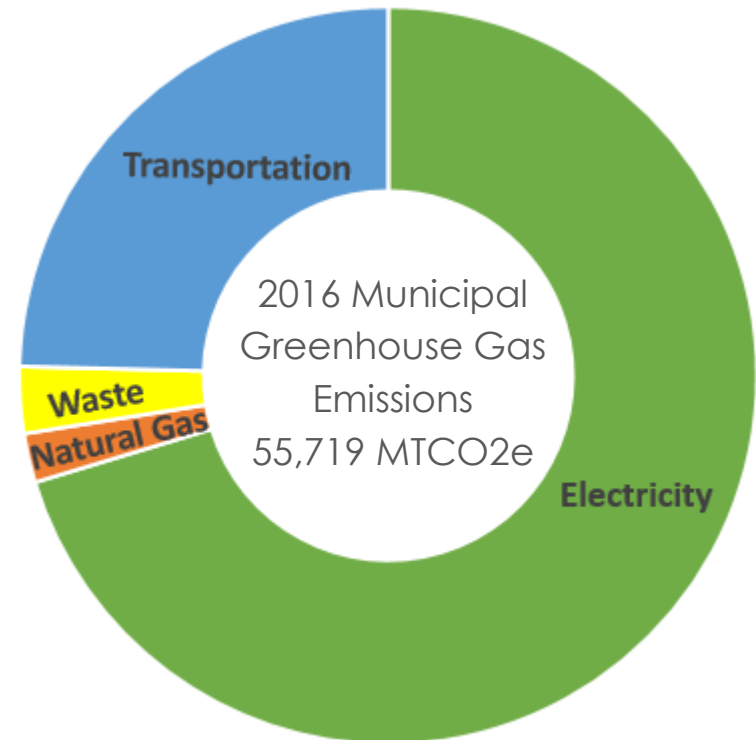
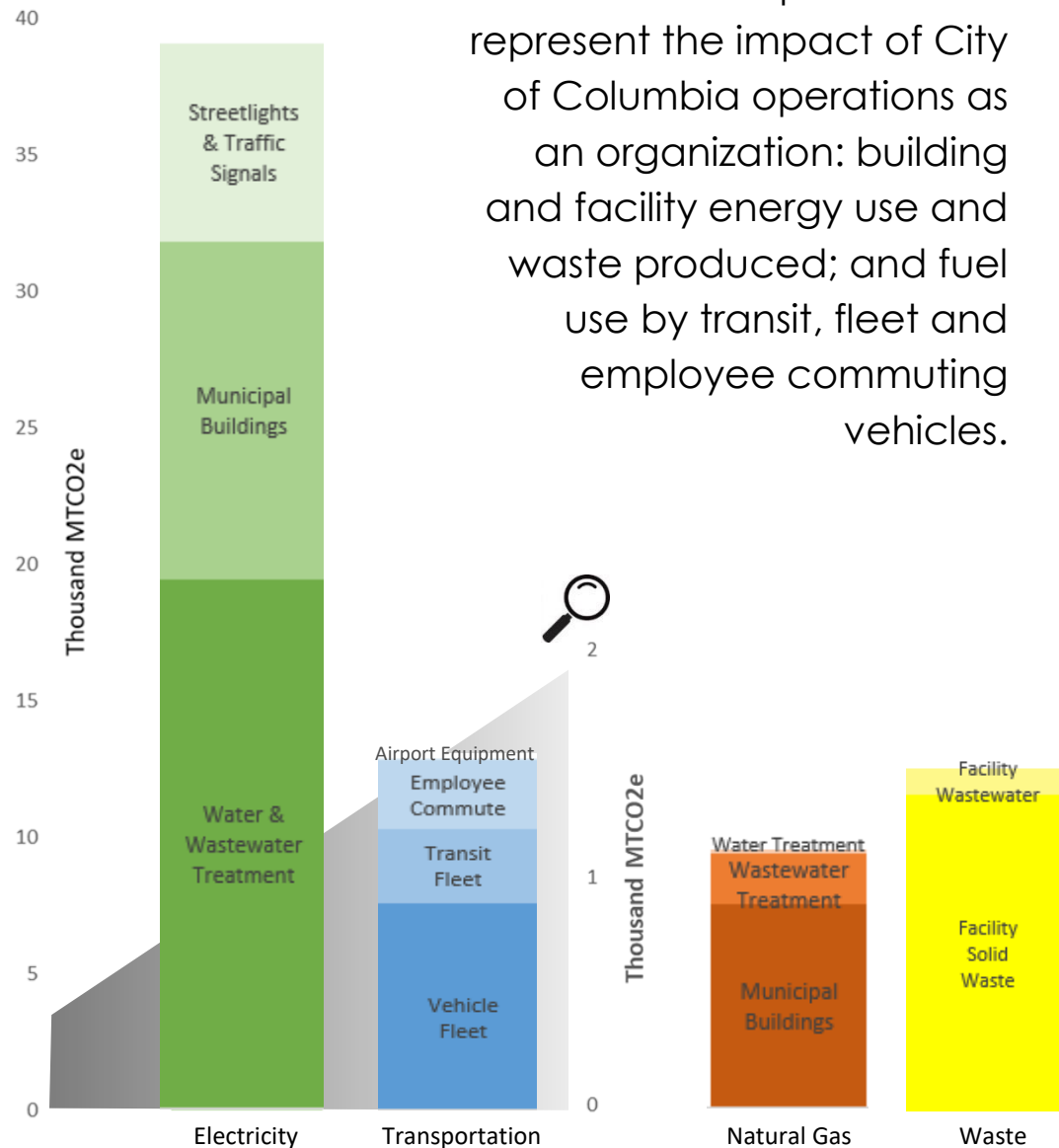


City of Columbia 2016 Municipal Emissions Report

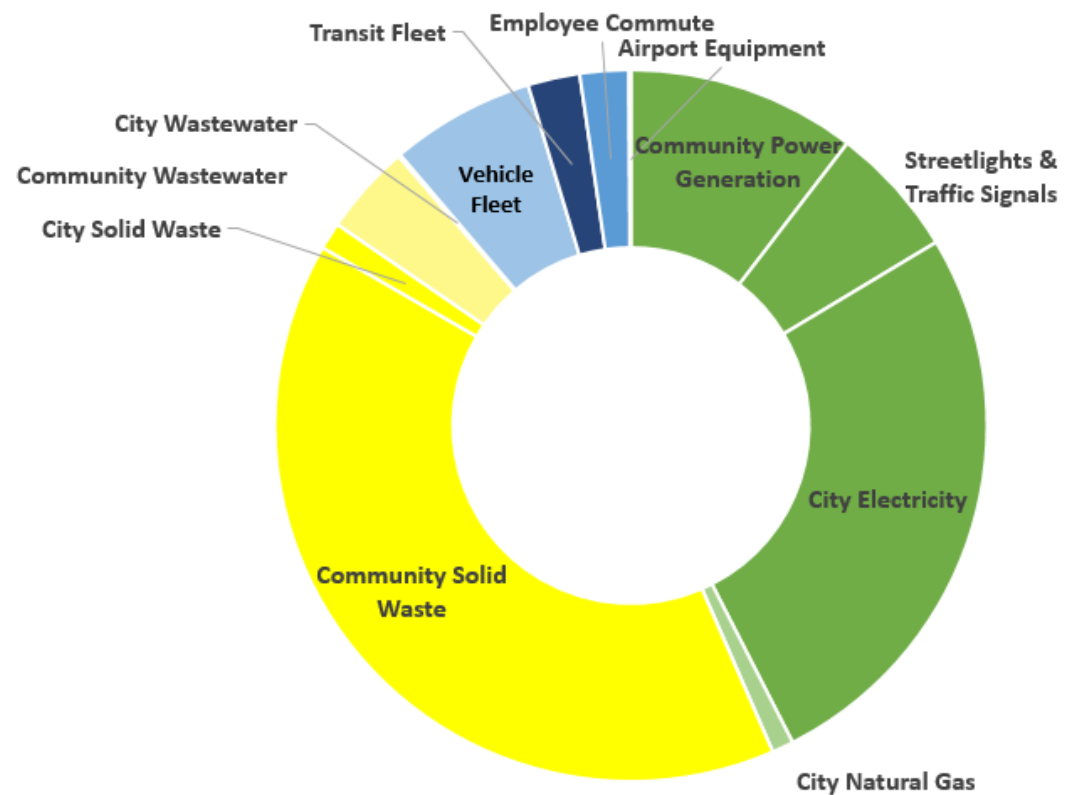
The emissions reported here represent the impact of City of Columbia operations as an organization: building and facility energy use and waste produced; and fuel use by transit, fleet and employee commuting vehicles.



This report includes emissions associated with energy use and waste produced by municipal operations only. Community energy production and waste treatment process emissions account for an additional 66,392 MTCO2e.

2016 Municipal Emissions Including Community Power Generation & Community Waste Processing Emissions

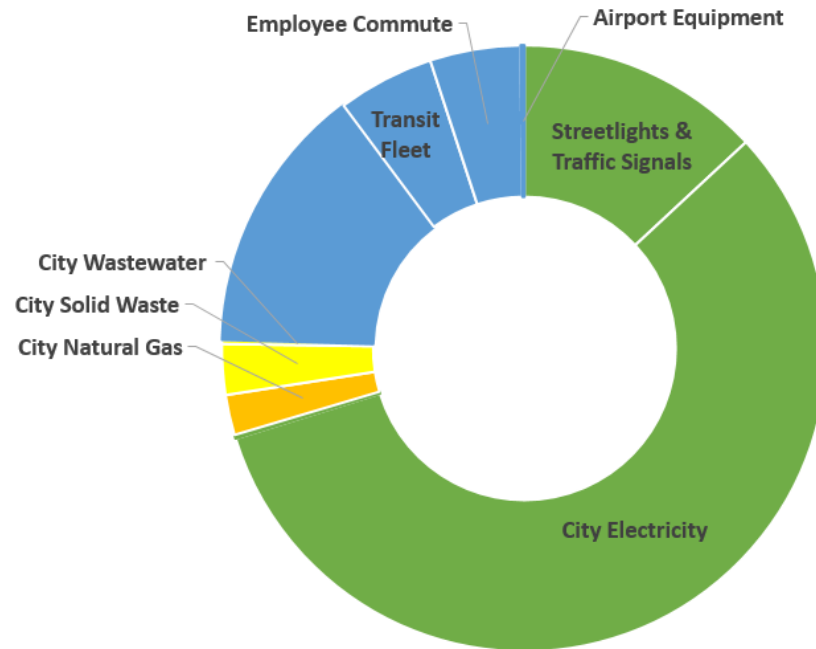
Total GHG Emissions by Sector & Source		MTCO ₂ e
Energy		53,090
	Community Power Generation	12,702
	Streetlights and Traffic Signals	7,306
	Facility Electricity	31,883
	Facility Natural Gas	1,199
	Airport Fuel Oil	
Waste		55,317
	Community Solid Waste (Landfill)	48,678
	Facility Solid Waste	1,505
	Community Wastewater	5,012
	City Wastewater	122
Transportation		13,704
	Vehicle Fleet	8,007
	Transit Fleet	2,883
	Employee Commute	2,701
	Airport Equipment	113
TOTAL		122,111



Columbia, MO provides a full range of services to the community, including electricity, solid waste and wastewater treatment. These services contribute to the greenhouse gas emissions for Columbia as a community and a municipal organization. The above calculations include emissions from both municipal operations and community services provided. Emissions from the electricity generating assets controlled by the City of Columbia represent 12,702 MTCO₂e (11%) of the 2016 municipal inventory. Community solid waste and wastewater emissions total 53,690 MTCO₂e (44%) of the 2016 municipal inventory. Reporting total emissions from these municipally controlled waste and energy sources is important and will continue to inform broader process changes and our progress toward meeting reduction goals. In order to more directly report the impact of our daily operations on the municipal inventory, the analysis below removes emissions of non-municipal activities from the energy and waste sectors.

2016 Emissions from Municipal Operations

Total GHG Emissions by Sector & Source		MTCO2e
Energy		40,388
	Streetlights & Traffic Signals	7,306
	Facility Electricity	31,883
	Airport Fuel Oil	
	Facility Natural Gas	1,199
Waste		1,627
	Facility Solid Waste	1,505
	Facility Wastewater	122
Transportation		13,704
	Vehicle Fleet	8,007
	Transit Fleet	2,883
	Employee Commute	2,701
	Airport Equipment	113
TOTAL (excluding non-municipal energy, waste and wastewater process emissions)		55,719



The distribution of City of Columbia's operational emissions across sectors resembles that of the Community's sector emissions. 73% of emissions come from facility energy, 25% from transportation, and 3% from waste process emissions. Electricity usage by City facilities and buildings accounts for 79% of energy emissions and 57% of all operations emissions. Streetlights and traffic signals account for 18% of energy emissions and 13% of all operations emissions. Facility use of natural gas and fuel oil (airport use only) make up the remaining 3% of energy emissions and represent 2% of total operational emissions.

Municipal waste emissions are made up of wastewater at 7% and solid waste at 93%. They are the fraction of total process emissions from the municipal landfill and wastewater treatment plant estimated to be from municipal wastewater and solid waste.

Transportation emissions are comprised of Columbia Regional Airport equipment, City of Columbia's fleet and transit vehicles, and employee commuting activity. Fleet vehicle activities make up 58% of municipal transportation emissions and 14% of total operational emissions. Transit activities contribute 21% to transportation and 5% to total municipal operation emissions, and employee commute contributes 20% and 5%, respectively.