Durham Greenhouse Gas Reduction Update

Background

Durham has been a longtime leader in addressing the challenge of climate change. In 2007, Durham was the first community in North Carolina to develop a Greenhouse Gas (GHG) Emissions Reduction Plan. This plan sets ambitious goals for reducing GHG emissions from government operations and the community by 2030.

Durham has maintained that early commitment to curbing climate change through operational efforts to reduce emissions as well as through public commitments. In 2017, Mayor Bell signed the national Mayor's Climate Protection Agreement, affirming Durham's commitment to upholding the Paris Climate Accords. Since taking office, Mayor Schewel has also singed on to uphold the Paris Climate Agreement goals, in addition to the goals established in the GHG Emissions Reduction Plan.

What Is the Goal?

Reduce local government GHG emissions by 50% by 2030

Reduce community GHG emissions by 30% by 2030

What Are Greenhouse Gas Emissions?

GHGs like carbon dioxide and methane trap heat in the atmosphere, warming the planet and causing cascading impacts on environmental systems. The largest source of GHG emissions from human activity in the US is from burning fossil fuels for electricity, heat, and transportation.

CO_2e, or "carbon dioxide equivalent," is a standard unit for measuring GHG emissions.

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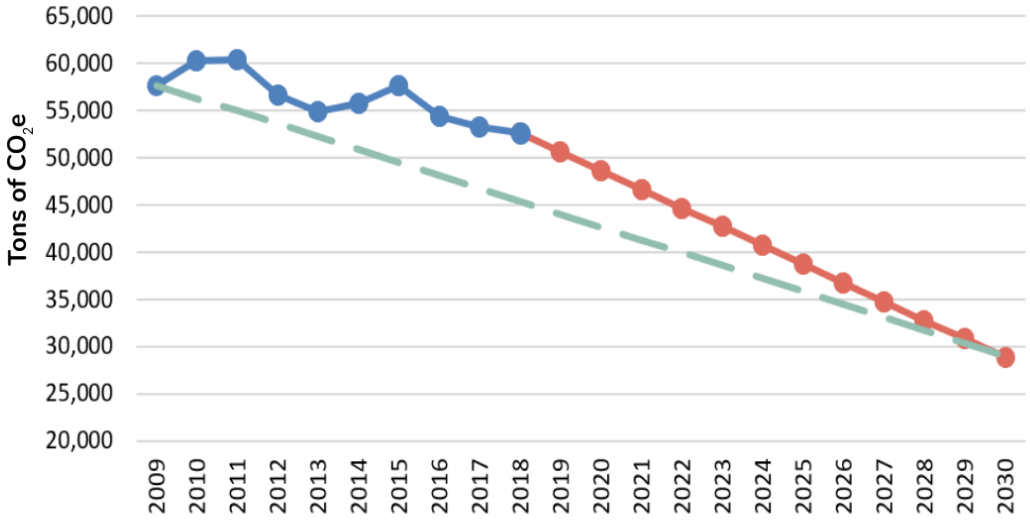
Emissions From City of Durham Operations

Emissions from the City of Durham include emissions from City buildings, fleet, water/waste water systems, street lights, and traffic lights. Emissions from City government operations account for about **74%** of total government emissions.

Total GHG Emissions From City Operations



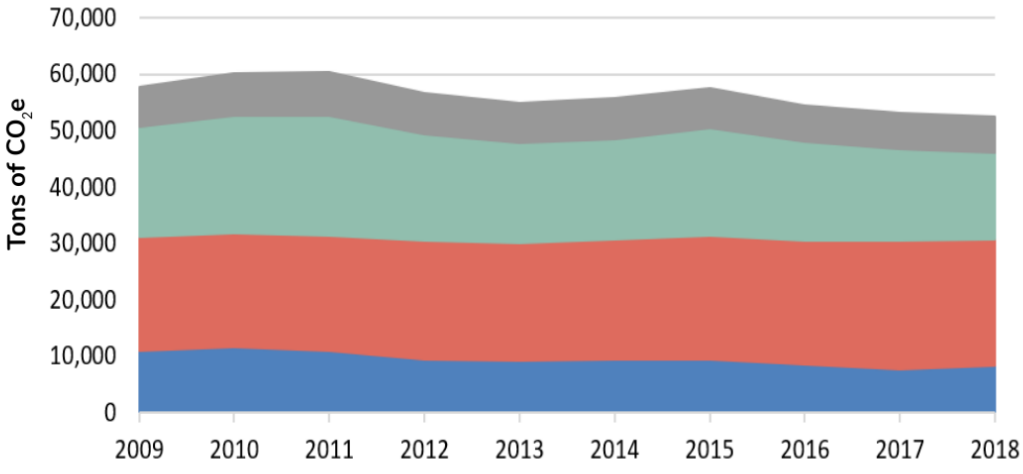
Actual emissions from City operations between Fiscal Year 2009 and 2018.

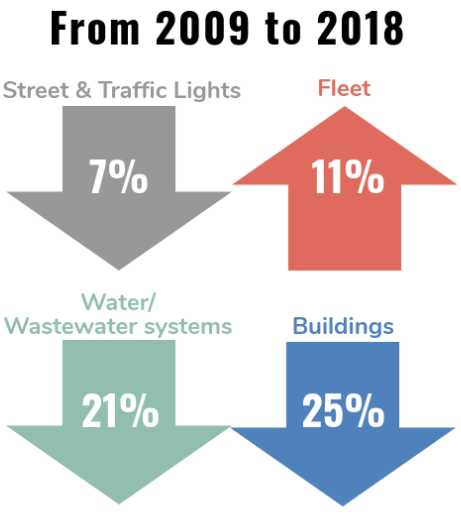
What would need to occur for the City to achieve its share of the 50% reduction goal for total government emissions.

As of 2018, total City operations emissions have decreased by about **9%** since 2009.

To meet the 2030 goal, total GHG emissions need to decrease by an average of **1,979 tons of CO_2e** per year, or about **3.7%** of 2018 levels per year.

Total City GHG Emissions by Source

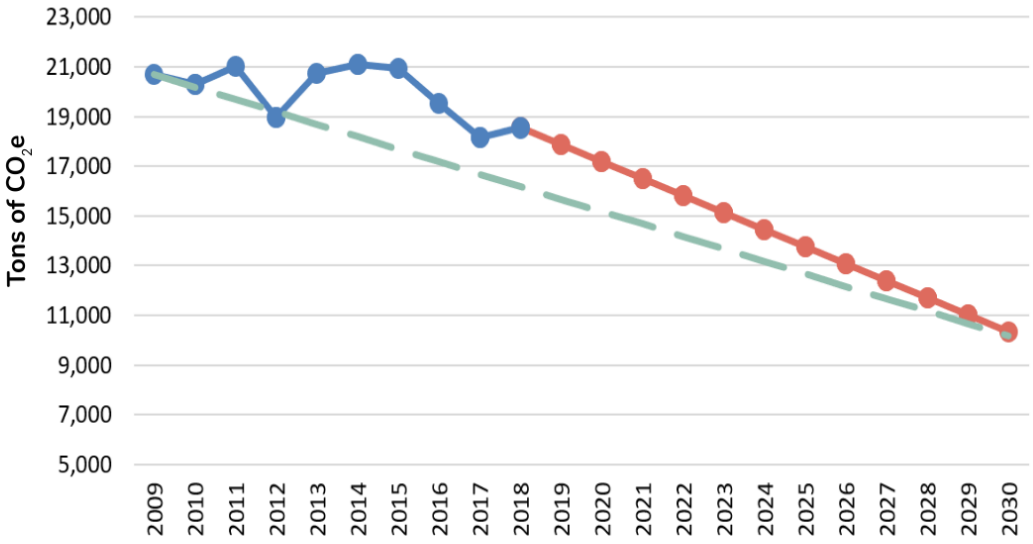




Emissions From Durham County Operations

Emissions from Durham County include emissions from County buildings, fleet, and water/wastewater systems. Emissions from County government operations account for about **26%** of total government emissions.

Total GHG Emissions From County Operations



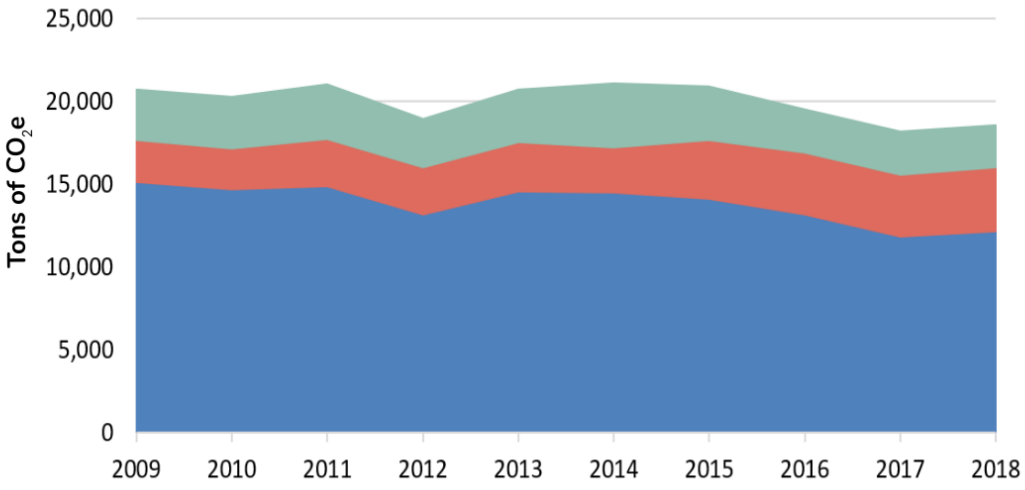
Actual emissions from County operations between Fiscal Year 2009 and 2018.

What would need to occur for the County to achieve its share of the 50% reduction goal for total government emissions.

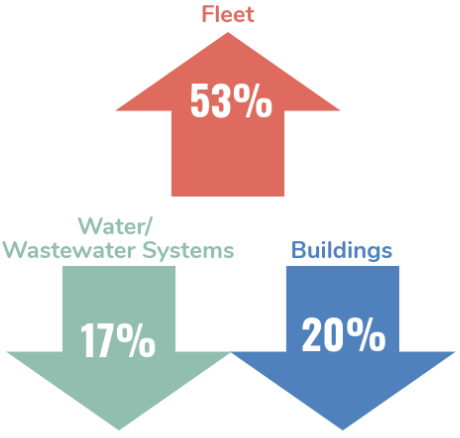
As of 2018, total County operations emissions have decreased by about **10%** since 2009.

To meet the 2030 goal, total GHG emissions need to decrease by an average of **684 tons of CO_2e** per year, or about **3.7%** of 2018 levels per year.

Total County GHG Emissions by Source



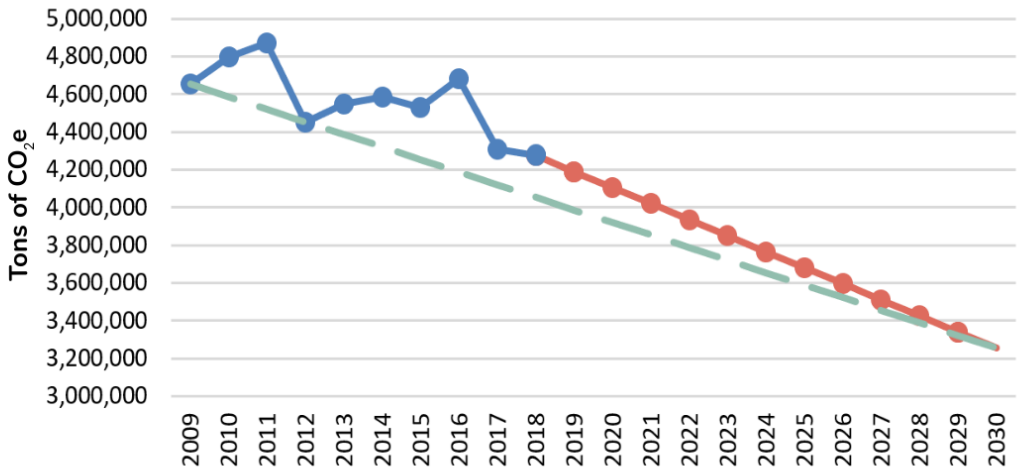
From 2009 to 2018



Emissions From The Durham Community

Community emissions include emissions from all residences, businesses, and industries in Durham County. It also includes estimates of transportation emissions from vehicles traveling on roads in Durham County.

Total GHG Emissions From The Durham Community



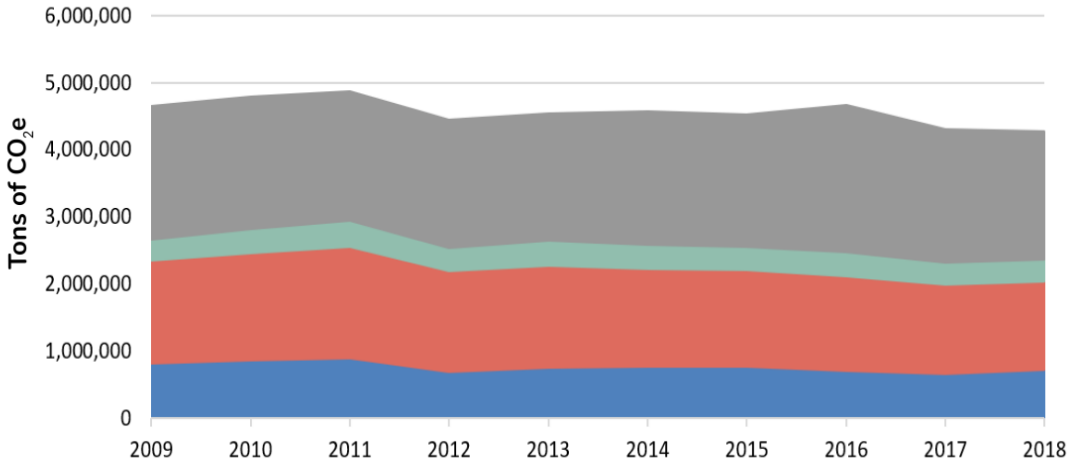
Actual community emissions between Fiscal Year 2009 and 2018.

What would need to occur for the community to achieve the 30% reduction goal.

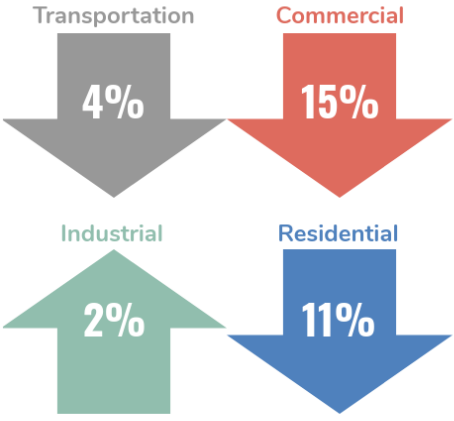
As of 2018, total community emissions have decreased by about **8%** since 2009.

To meet the 2030 goal, total GHG emissions need to decrease by an average of **66,469 tons of CO_2e** per year, or about **1.6%** of 2018 levels per year.

Total Community GHG Emissions by Source



From 2009 to 2018

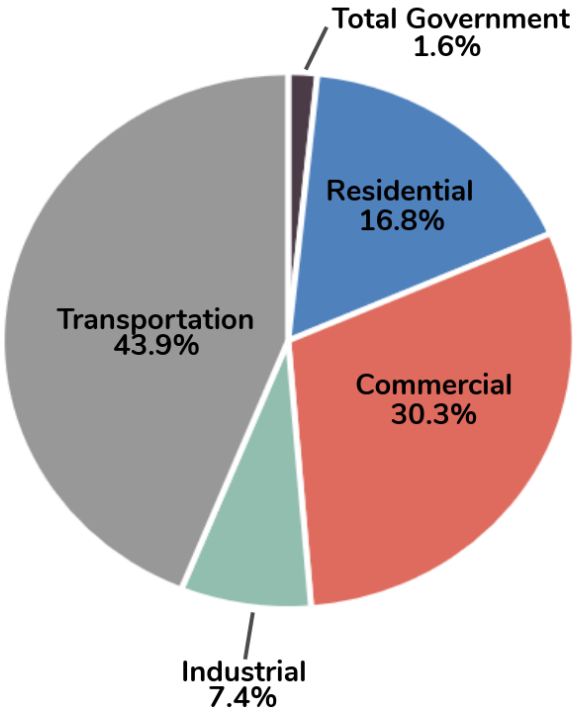


Emissions Overview

Note that the reductions shown in the graphs above are the result of both:

1. Operational efforts to improve energy efficiency and reduce energy use; and
2. The transition toward a less carbon intensive energy mix by Duke Energy.

FY18 Total Emissions Breakdown



Community emissions (residential, commercial, industrial, and transportation) account for **98.4%** of total emissions in Durham, while government emissions from City and County operations account for **1.6%**.

Therefore, Durham residents and workers have a key role to play in helping Durham meet its GHG emissions reduction goals.

What Can You Do To Help?

Save Energy at Home and at Work

- Turn off lights an appliances when not in use.
- Wash clothes in cold water.
- Change out energy-inefficient incandescent bulbs for efficient LEDs.
- Choose energy efficient appliances rated by ENERGY STAR.
- Get an energy audit and implement recommendations.
- Register your workplace for the **Bull City Workplace Challenge** for additional resources.

Drive Less

- Walk, bike, carpool, or utilize public transit whenever possible.
- Visit **GoDurhamTransit.org** for more information about buses and ride share options.

Support Clean Energy

- Enroll in **NC Green Power** through Duke Energy to support the development of green power sources throughout NC.
- Install solar panels through new Duke Energy rebates and programs.
- Vote for candidates who value clean energy innovation and environmental protection.
- Support companies who either use renewable energy or purchase credits and offsets.