Durham Greenhouse Gas Reduction Update 2021

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 2018, the Board of County Commissioners reaffirmed the County's commitment to addressing climate change and planning for a just and equitable transition to 100% renewable energy. In 2022, the Board adopted the Durham County Renewable Energy Plan to implement this goal.

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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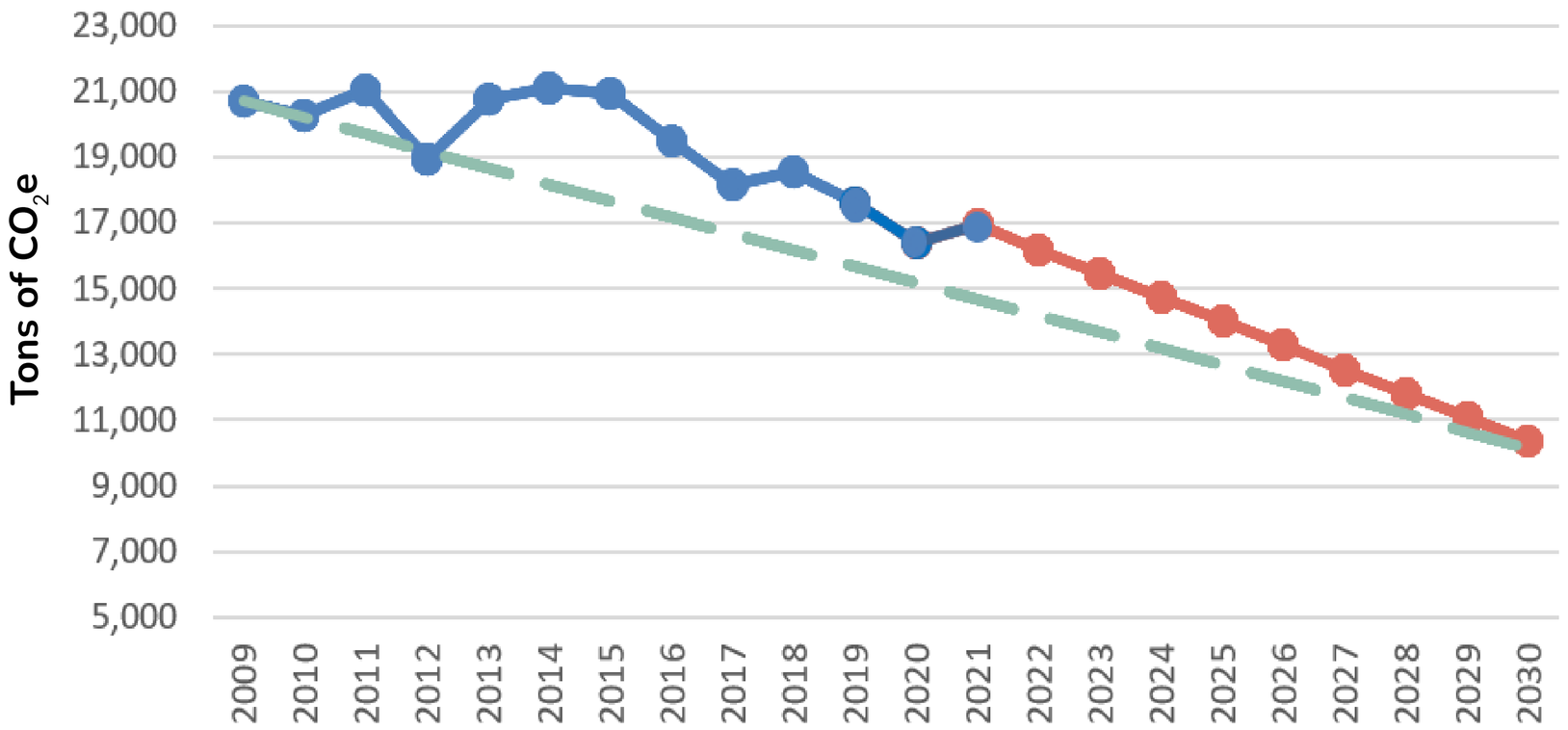
Emissions From Durham County Operations 2021

Emissions from Durham County include emissions from County buildings, fleet, and wastewater systems.

Total GHG Emissions From County Operations



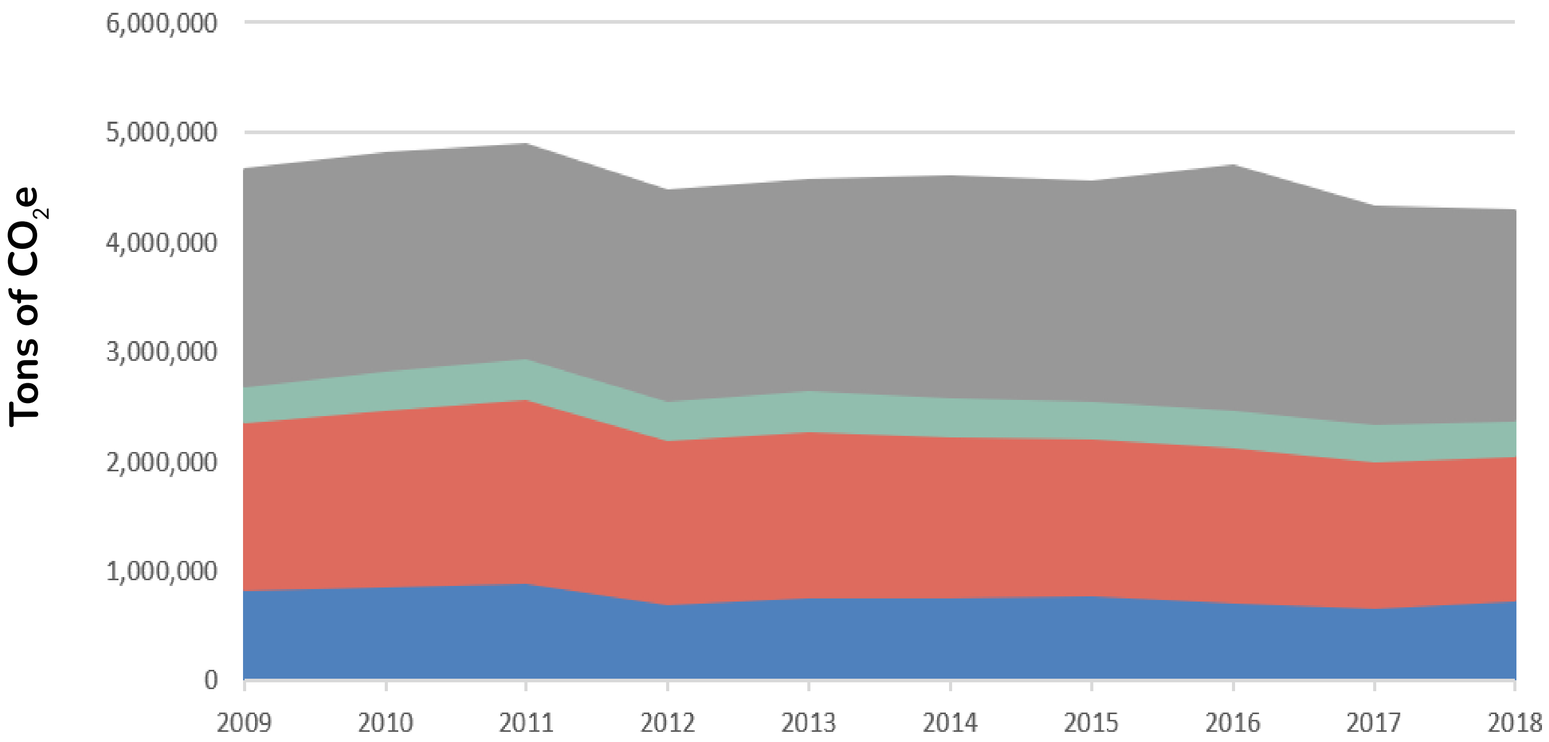
Actual emissions from County operations between Fiscal Year 2009 and 2021.

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

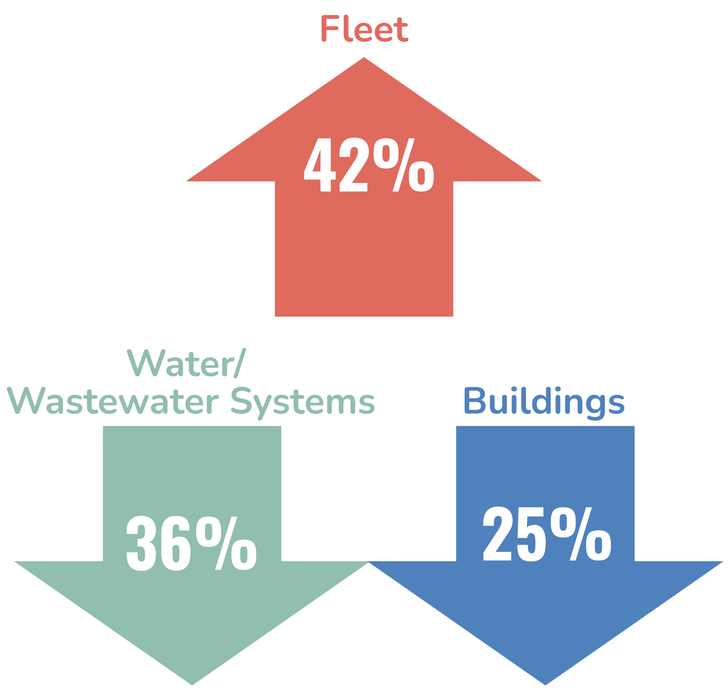
As of 2021, total County operations emissions have decreased by about **18%** since 2009.

To meet the 2030 goal, total GHG emissions need to decrease by an average of **732 tons of CO_2e** per year, or about **4.3%** of 2021 levels per year.

Total County GHG Emissions by Source



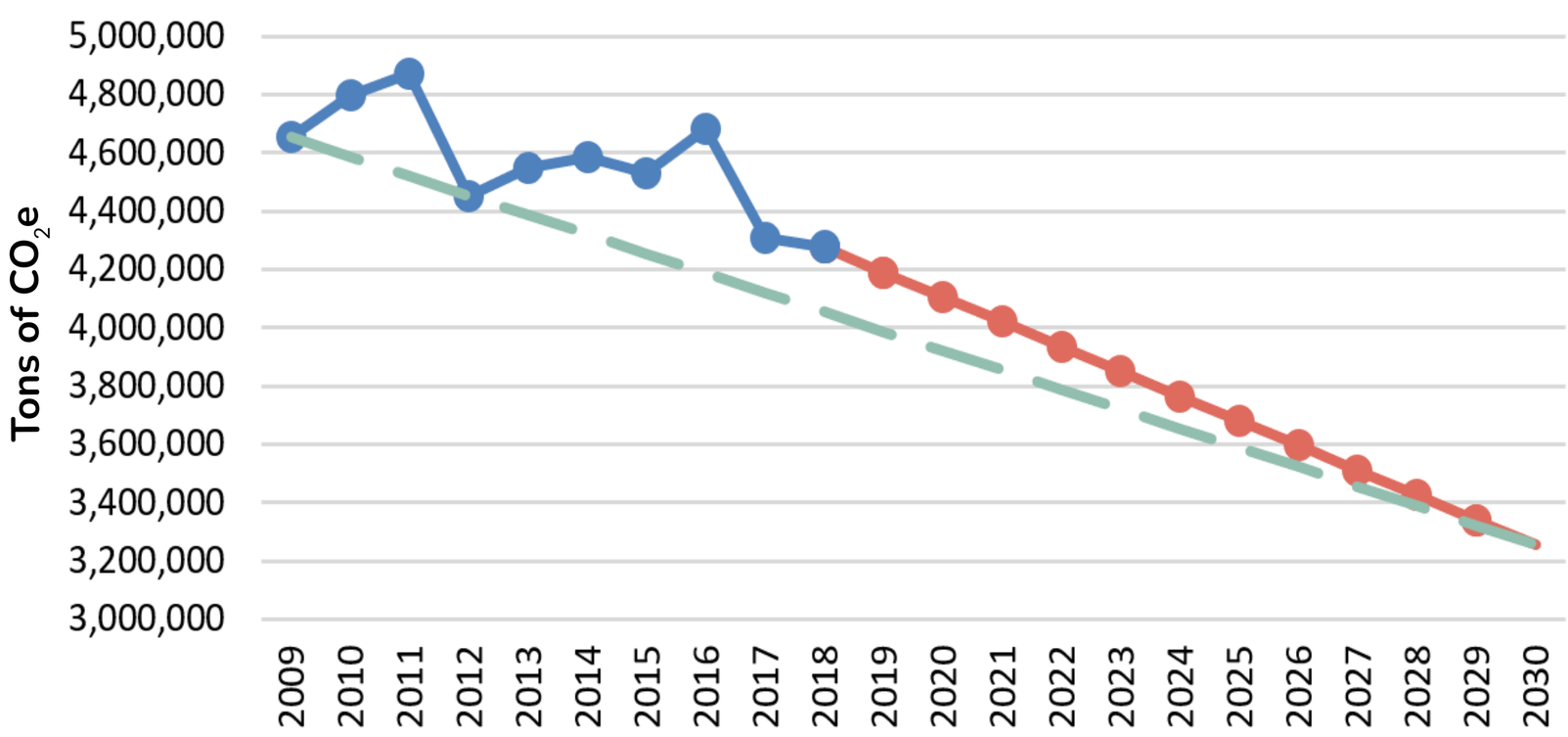
From 2009 to 2021



Emissions From The Durham Community 2018

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. Data are not yet available beyond 2018.

Total GHG Emissions From The Durham Community



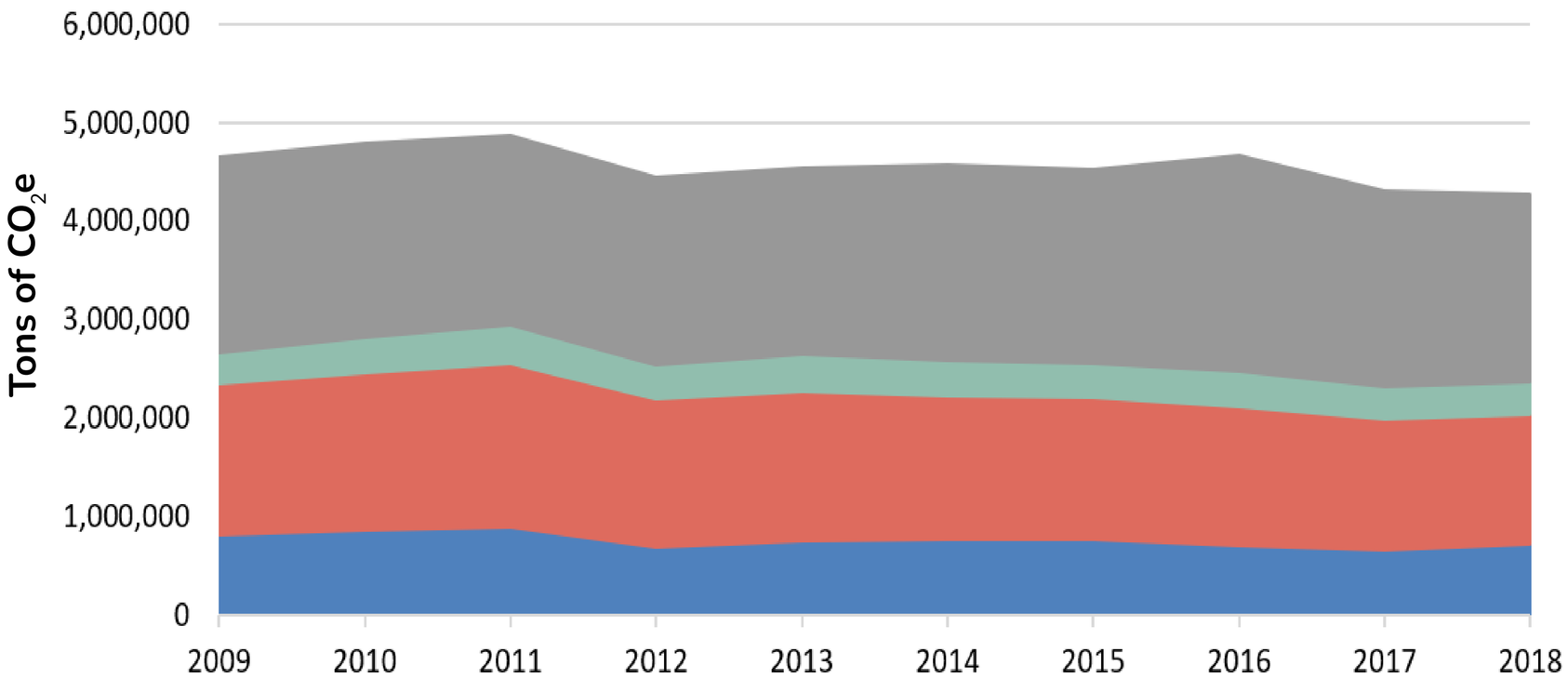
Actual community emissions between Fiscal Year 2009 and 2018.

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

Transportation 4%

Commercial 15%

Industrial 2%

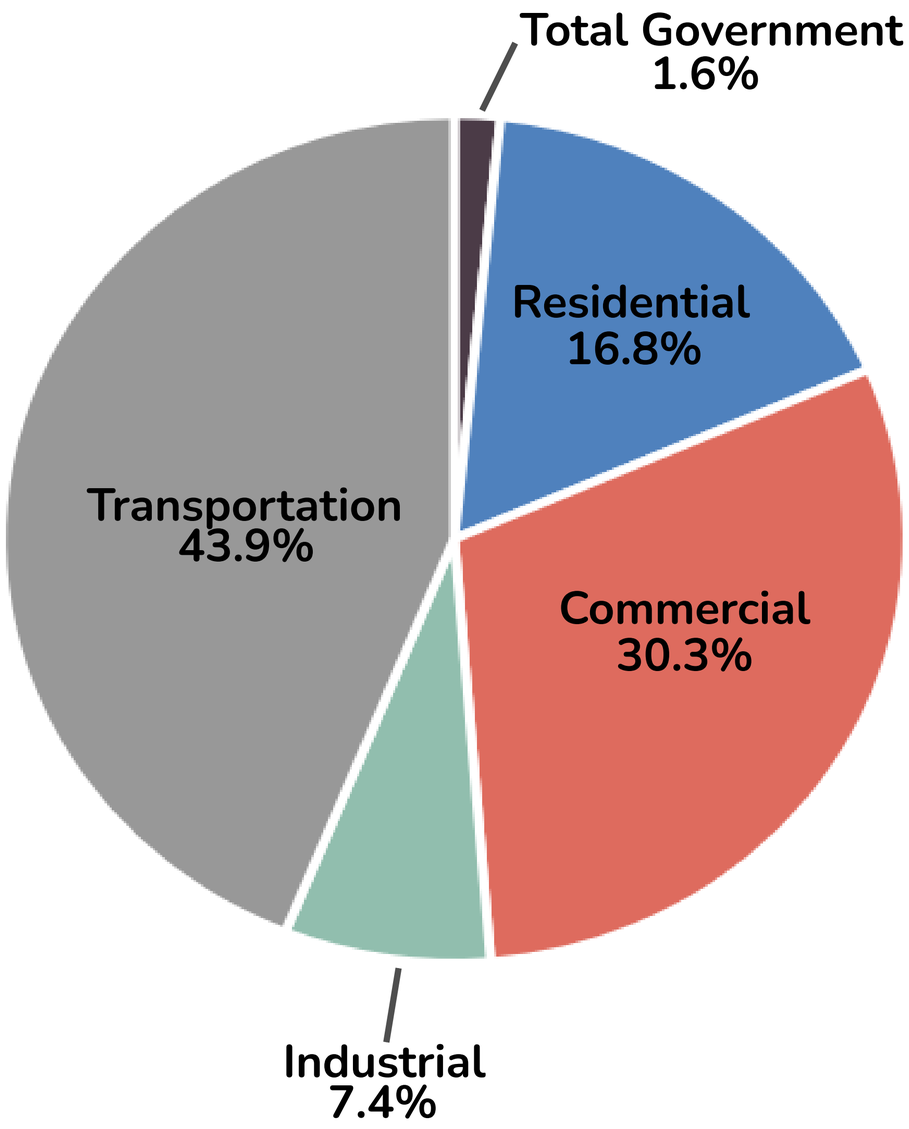
Residential 11%

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.

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 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.