

Draft Results of MWCOG 2023 Greenhouse Gas (GHG) Inventory for Fairfax County

Update

John Morrill, Neely Law, & Matt Meyers
Office of Environmental and Energy Coordination

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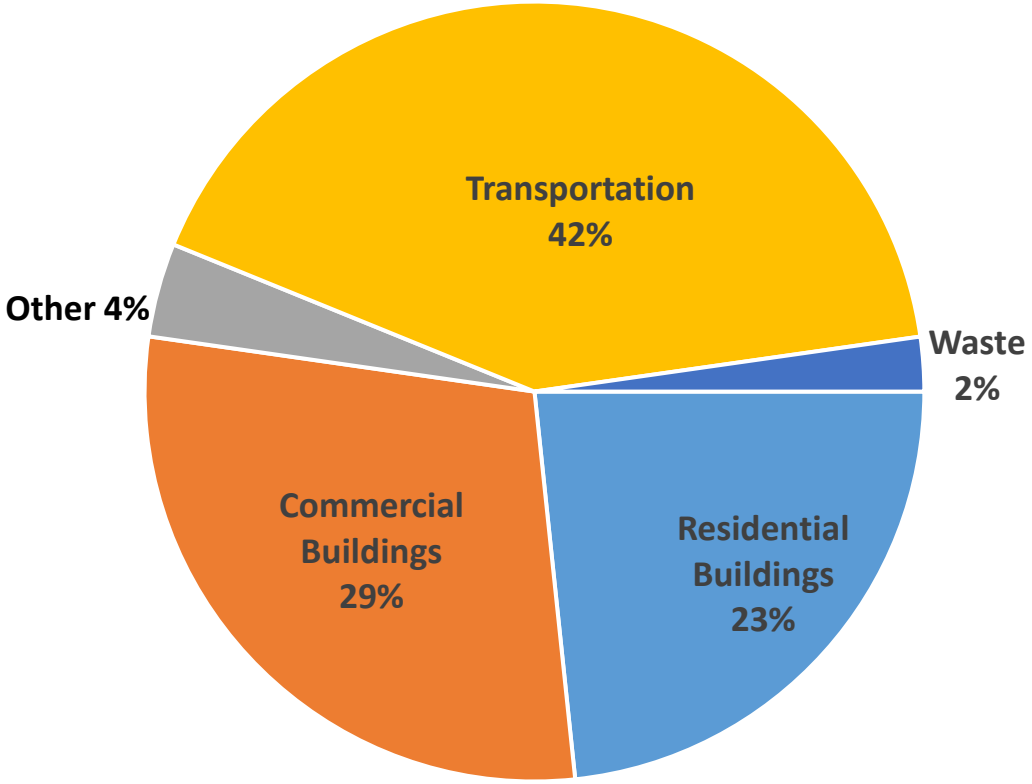
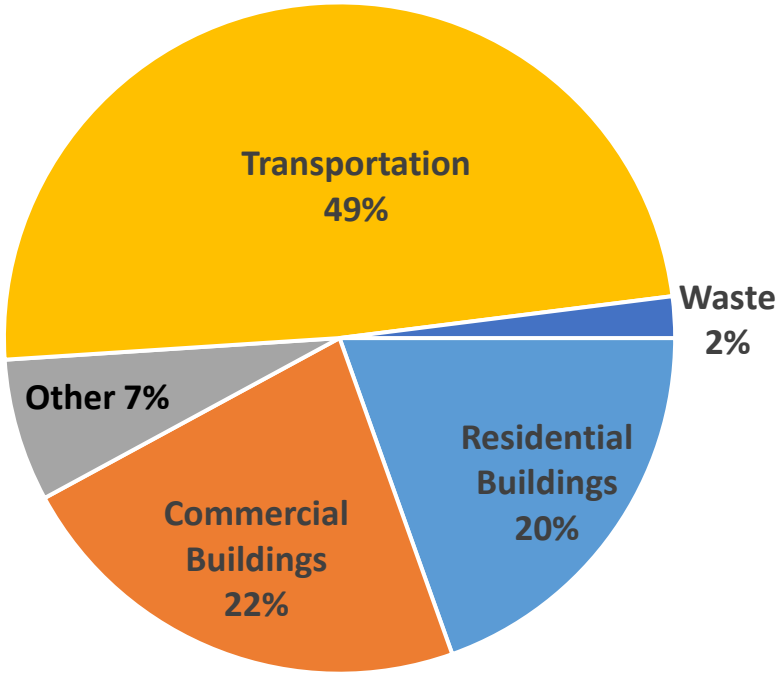
Draft MWCOG 2023 GHG Emissions Inventory for Fairfax County

2005: 14.78 million mt CO_2 equivalent.
This is the baseline for CECAP.



2023: 10.59 million mt CO_2 equivalent
28% lower than 2005



CECAP: Community-wide Energy and Climate Action Plan

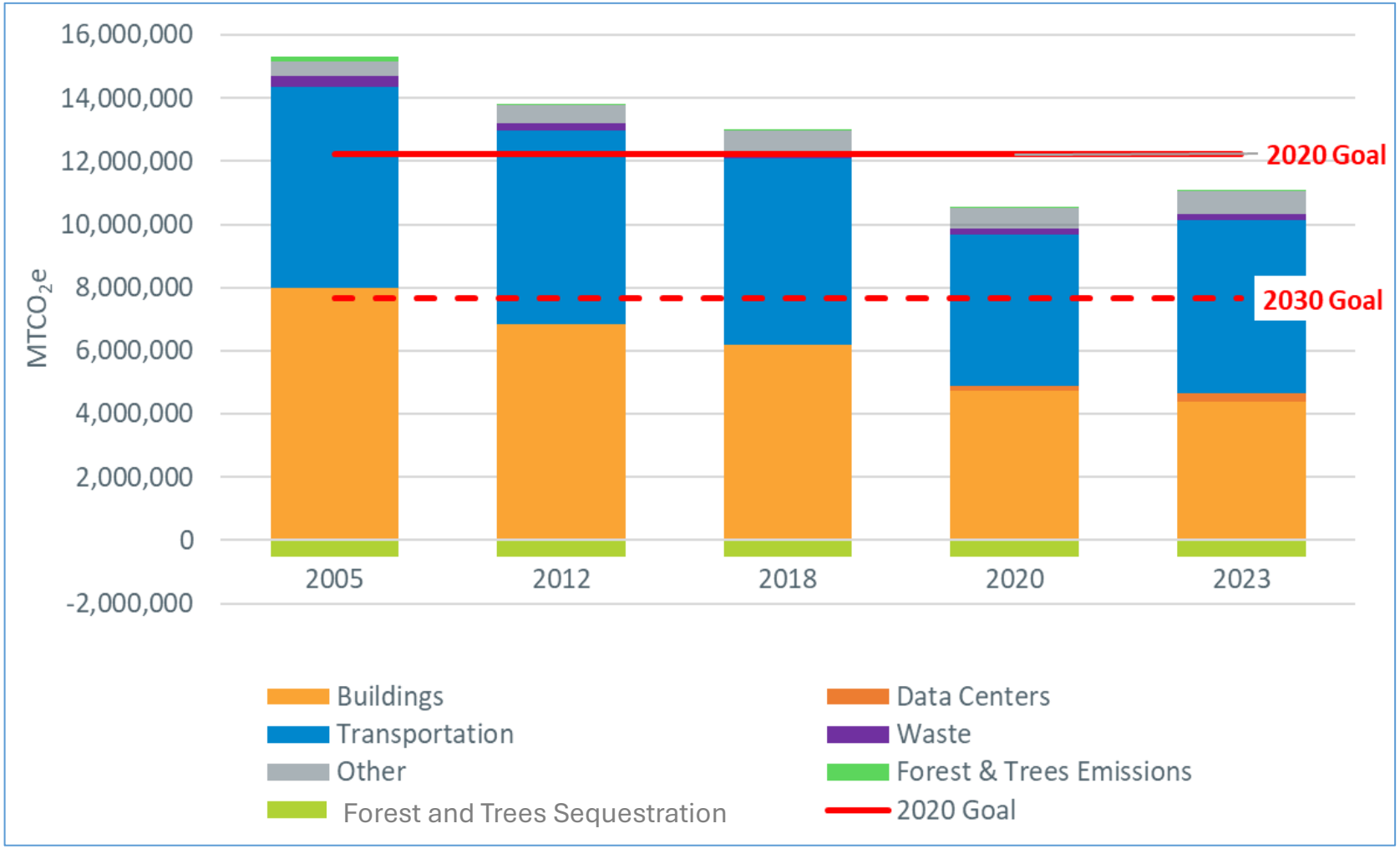
Encouraging Signs Despite Small Increase in GHG Emissions Since 2023

Greenhouse Gas Emissions *rose* between 2020 and 2023 in Fairfax County but are 28% below the 2005 level.

This increase from 2020 to 2023 is wholly due to increased travel, which rebounded from pandemic (2020) lows.

Transportation emissions are now 49% of total emissions in Fairfax County.

Community GHG Emissions Decreased 28% from 2005 to 2023

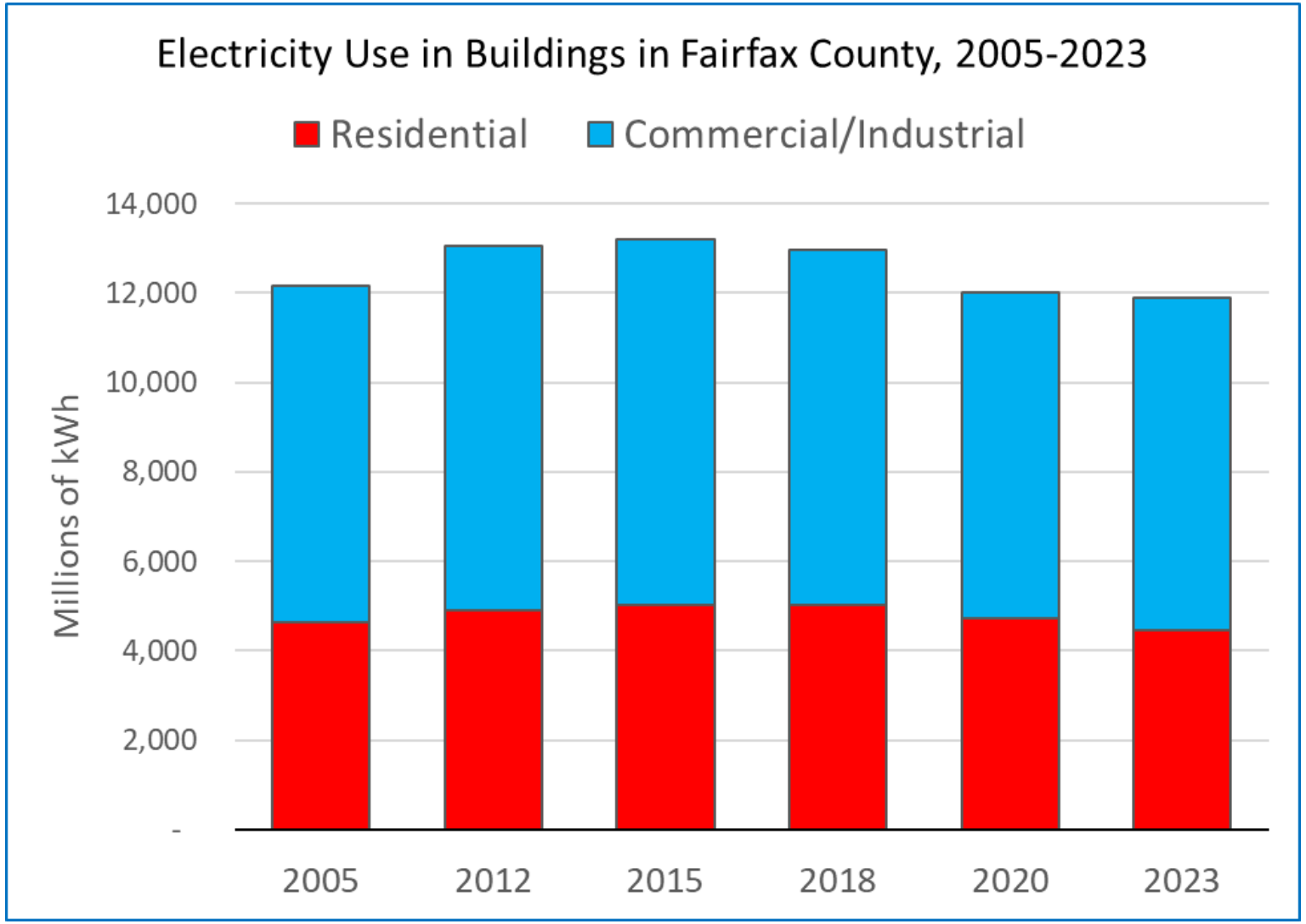


Buildings Energy Use

Total Electricity Use in Fairfax County **has fallen 10% since 2015**.

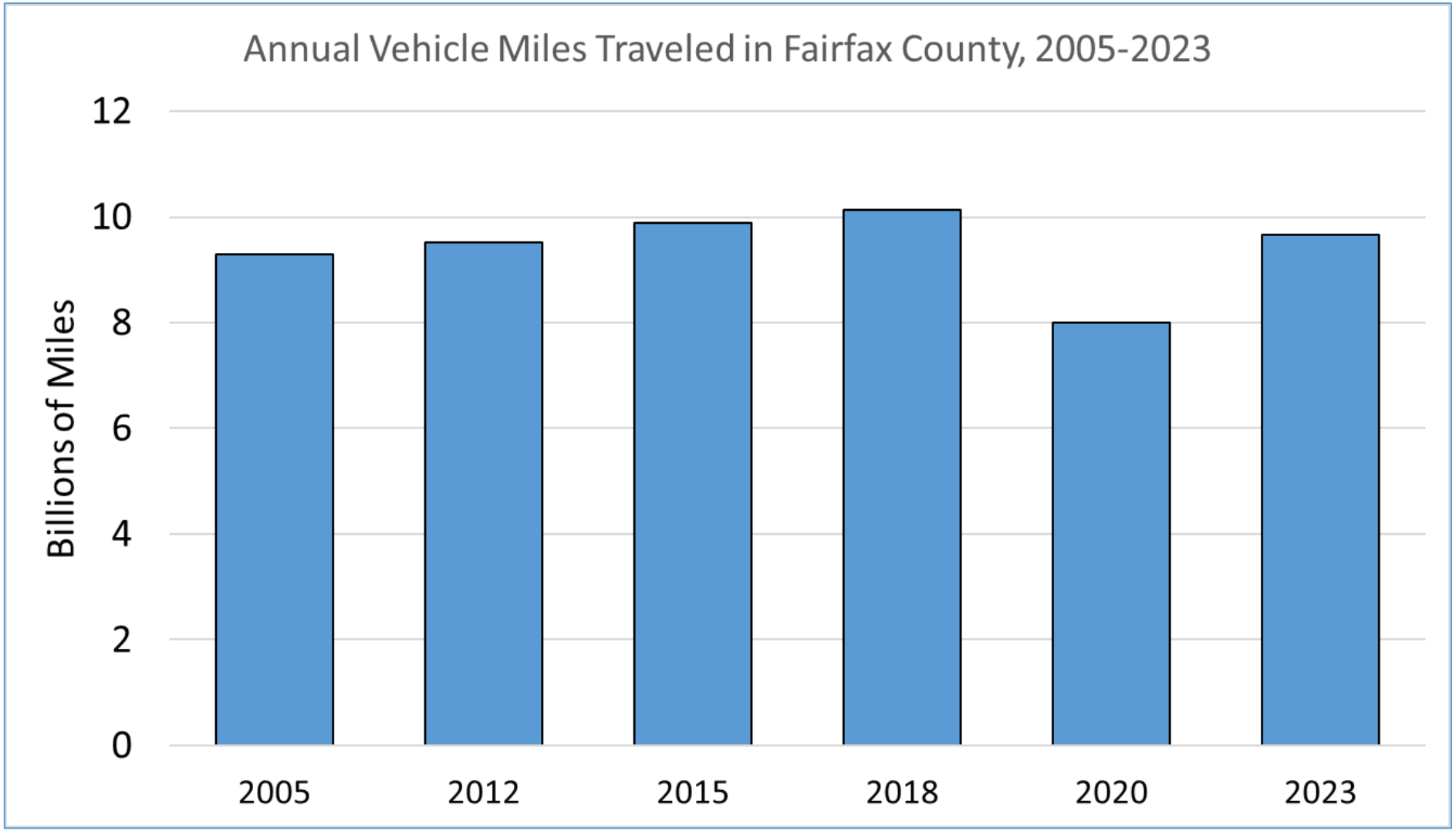
This includes an **11% decline** in Residential electricity use, and a **9% decrease** in Commercial and Industrial electricity use.

These gains in efficiency have outpaced population, economic growth, and the growing use of electric vehicle charging at buildings.



Transportation Emissions Are Driven by Vehicle Miles Traveled (VMT)

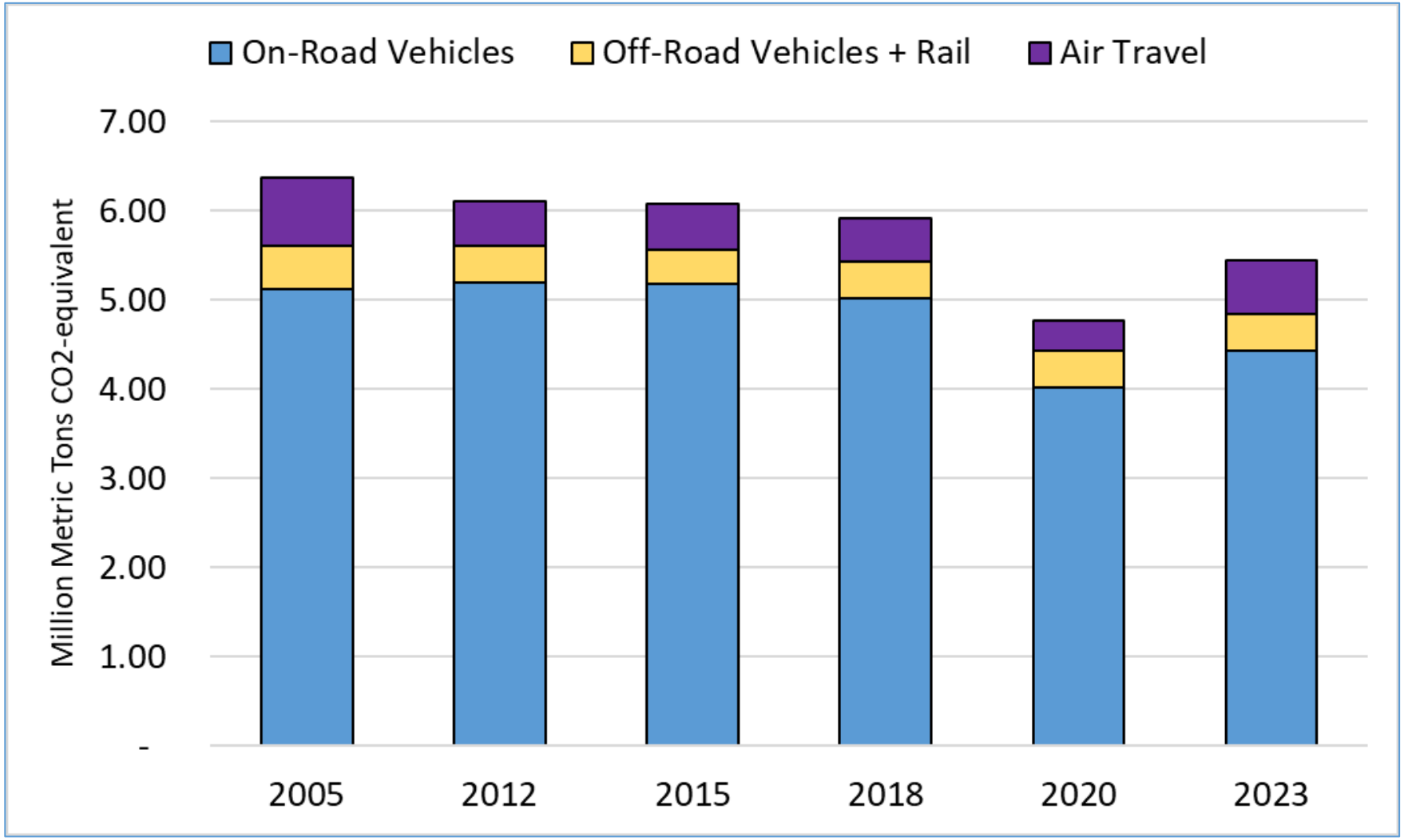
VMT rebounded from the 2020 pandemic low, but total VMT are still below 2015 and 2018 levels.



GHG Emissions from All Transportation in Fairfax County, 2005-2023

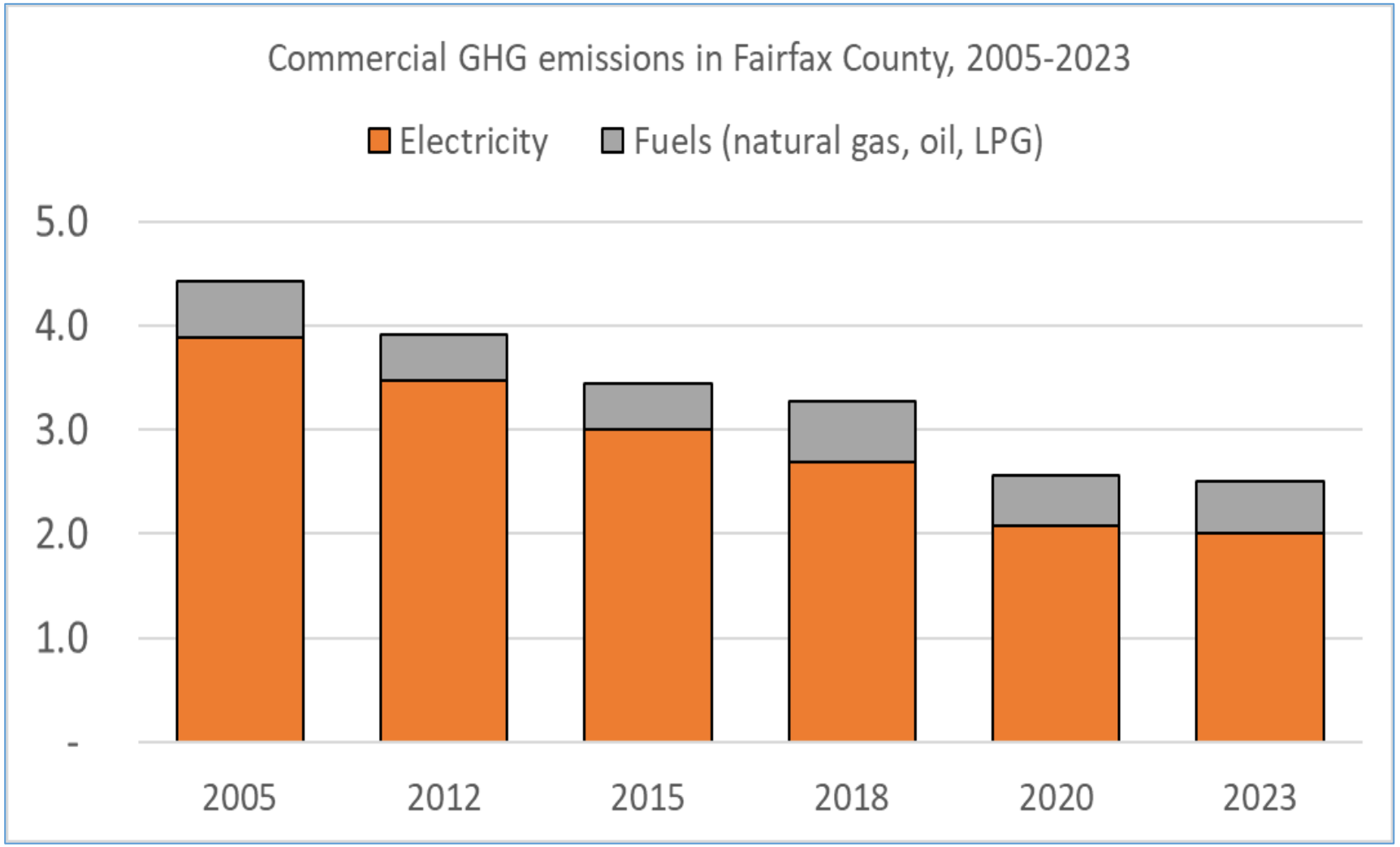
Overall transportation emissions are down 8% from 2018 and down 14% from 2005.

Improved vehicle efficiency helps lower emissions – VMT went down 5% between 2018 and 2023, but emissions from vehicles fell 10% due to greater efficiency and electrification.



Emissions from Commercial Buildings are down 43% since 2005

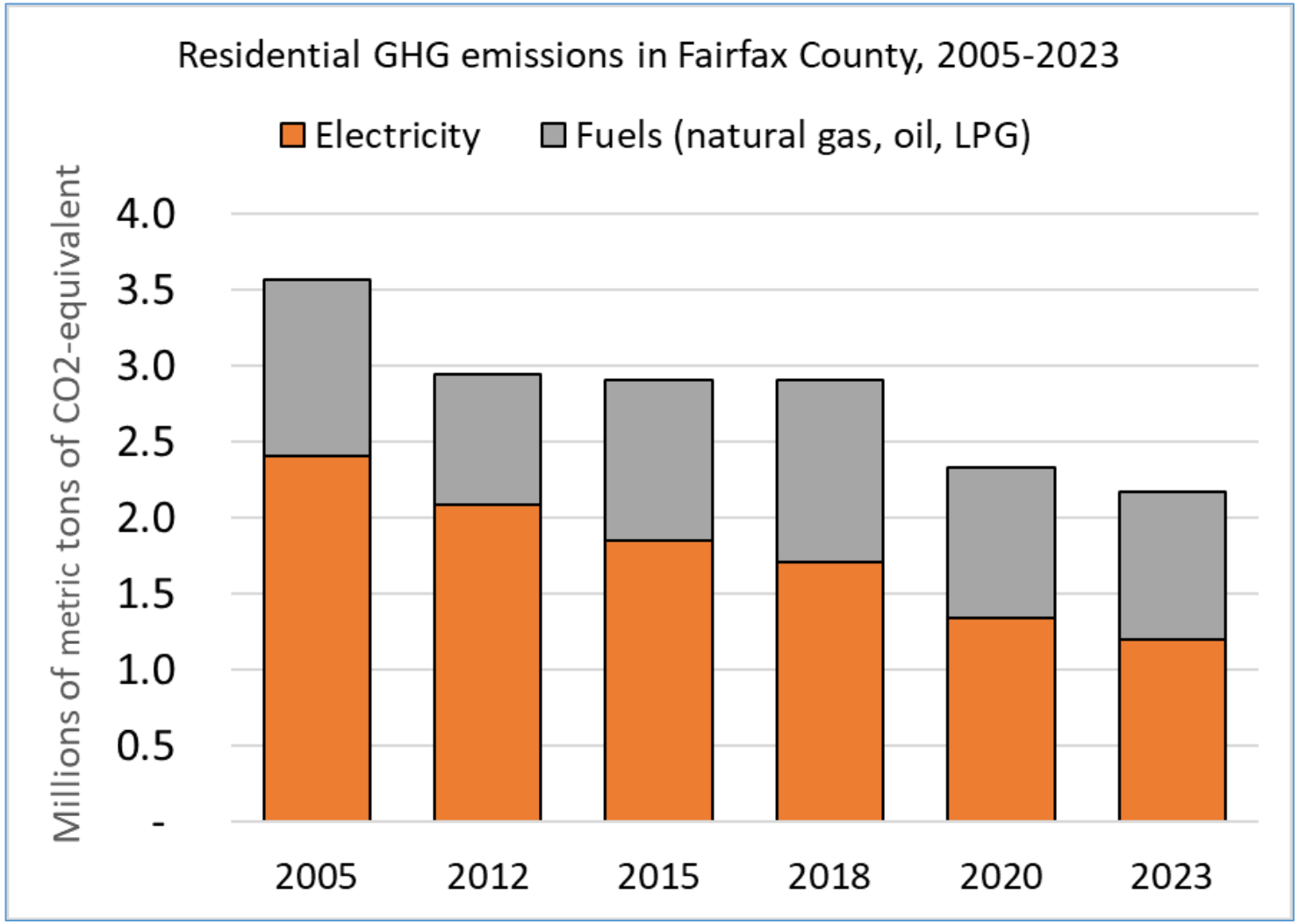
Improved energy efficiency outpaced growth in building area, and electricity got much cleaner, leading to a 43% reduction in emissions in commercial buildings.



Emissions from Residential Buildings are down 39% since 2005

Improved energy efficiency outpaced growth in number of homes and building area, and electricity got much cleaner, leading to a 39% decrease in emissions.

Even emissions from direct use of fuels (e.g., natural gas and fuel oil) in homes fell 17% from 2005 to 2023, thanks to improved efficiency and fuel switching (such as from oil to gas or to electricity).



County Programming to Continue Momentum

Continued energy programming, outreach to businesses and residents, and continued electrification of transportation hold strong promise for progress toward 2030, 2040, and 2050 goals.

Vehicle electrification is key, while continued improvements to buildings saves money and boosts comfort.

Community GHG Emissions Decreased 28% from 2005 to 2023

