

Town of New Castle

Community Greenhouse Gas Emissions

Inventory Report

February 2022

This Community Greenhouse Gas Emissions Inventory Report for the Town of New Castle is an essential component in assessing the Town of New Castle's emissions baseline. A community greenhouse gas (GHG) inventory is an accounting, analysis, and report of the GHG emissions resulting from transportation fuels, waste, energy usage in buildings, and other sources within a given geographic boundary. The inventory identifies activities that are responsible for GHG emissions, quantifies the level of each activity, and then calculates the associated emissions.

The information in this report is obtained from the baseline data for calendar year 2010, as stated in the [2012 Mid-Hudson Regional Greenhouse Gas Emissions Inventory](#)¹ (Mid-Hudson GHG Inventory). That report, prepared by ICF International for the New York State Energy Research and Development Authority (NYSERDA), lists community level emissions in various predefined sectors. The data is compiled in metric tons of carbon dioxide equivalent (MTCO₂e) and is intended to provide a baseline for measuring future progress in reducing total community GHG emissions. The report begins with a general background to the inventory, a discussion of key steps in establishing and defining a GHG inventory, and a description of how the inventory is organized. For each source that follows, the inventory presents a description of each source and a discussion of the data and methods used. New Castle's information is provided in Table 31 on page 50 of the Mid-Hudson GHG Inventory.

The categories for the inventory are:

- Residential Energy Consumption
- Commercial Energy Consumption
- Industrial Energy Consumption
- Transportation Energy Consumption
- Energy Generation and Supply
- Waste Management:
 - Solid Waste
 - Wastewater
- Industrial Processes
- Agriculture

¹https://climatesmart.ny.gov/fileadmin/csc/documents/GHG_Inventories/midhudghginventory.pdf

As detailed in the Mid-Hudson GHG Inventory, New Castle’s total community GHG emissions were approximately 173,000 MTCO₂e. The largest source of GHG emissions is the energy consumption for transportation, which is responsible for 37% of emissions, or 64,474 MTCO₂e.

The second largest contributor is from residential energy consumption (such as home heating and lighting), which is responsible for 35% of emissions, or 60,028 MTCO₂e. The next largest contributor is commercial energy consumption (18% or 31,945 MTCO₂e). The remaining significant GHG contributors are emissions related to industrial energy use, energy generation and supply, waste management, and industrial processes.

See Table 1 below and Figure 1 on page 3 for more detailed information.

Table 1: New Castle – 2010 Total Community GHG Emissions by Sector, MTCO₂e

Sector	MTCO ₂ e	Percentage
Residential Energy Consumption	60,028	34.6%
Commercial Energy Consumption	31,945	18.4%
Industrial Energy Consumption	1,481	.9%
Transportation Energy Consumption	64,474	37.2%
Energy Generation and Supply	5,535	3.2%
Waste Management:		
Solid Waste	1,019	.6%
Wastewater	1,709	1.0%
Industrial Processes	6,521	3.8%
Agriculture	500	.3%
Total	173,212	100.0%

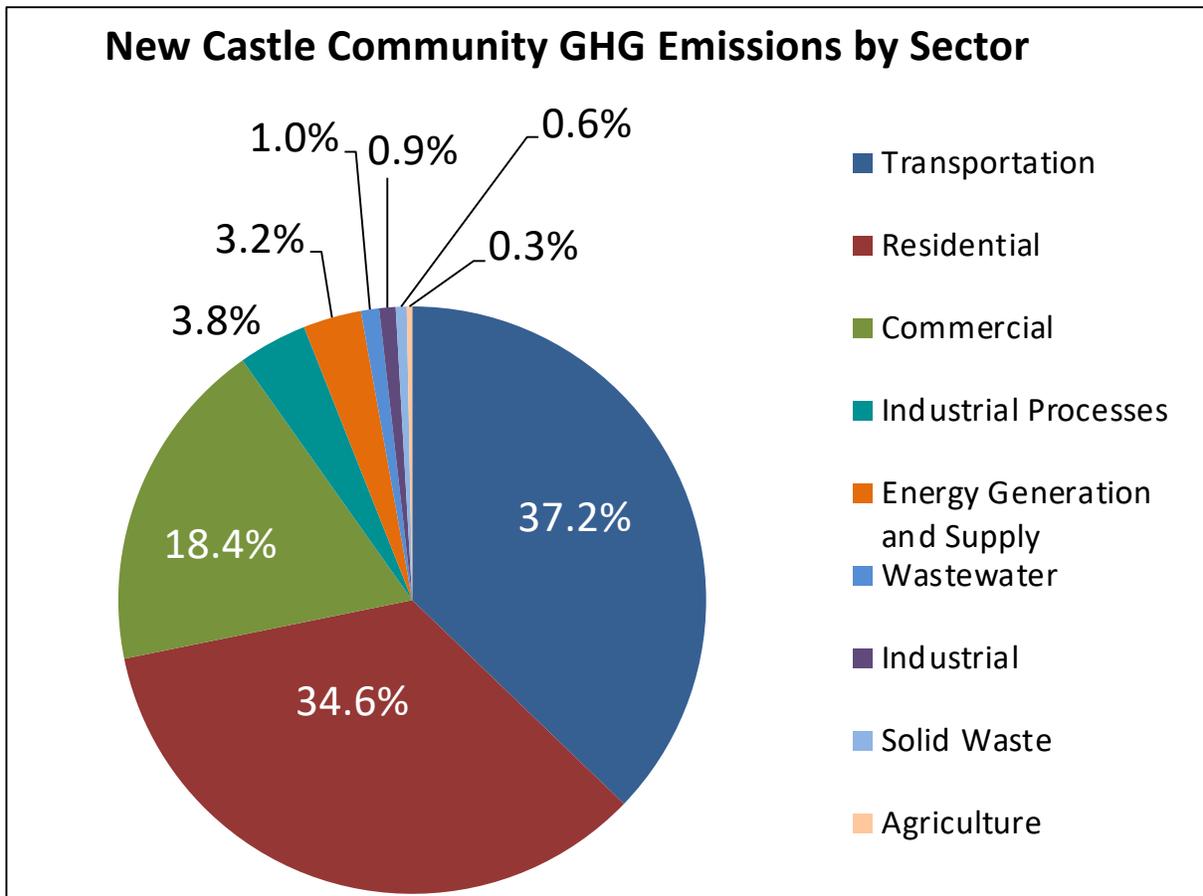


Figure 1: New Castle – 2010 Proportion of GHG emissions by sector-percentage

New Castle’s GHG Goals

One of the goals in New Castle’s Comprehensive Plan is to “provide access for non-motorized forms of transportation, make streets accessible for all users (i.e. pedestrians of all ages and abilities, cyclists, vehicles) and promote walkability.” Implementation of changes to achieve this goal could decrease the use of fossil fuel-driven automobiles which would help reduce energy consumption for transportation.

Another goal in the Comprehensive Plan is to “reduce the Town’s carbon footprint, encourage climate change adaptation measures, minimize energy demand and promote the use of alternative energy.” The Town recently adopted the NYStretch Energy Code, which promotes higher energy efficiency standards during construction of both new and renovated buildings.

The Community GHG inventory provides New Castle helpful information for its climate action initiatives.