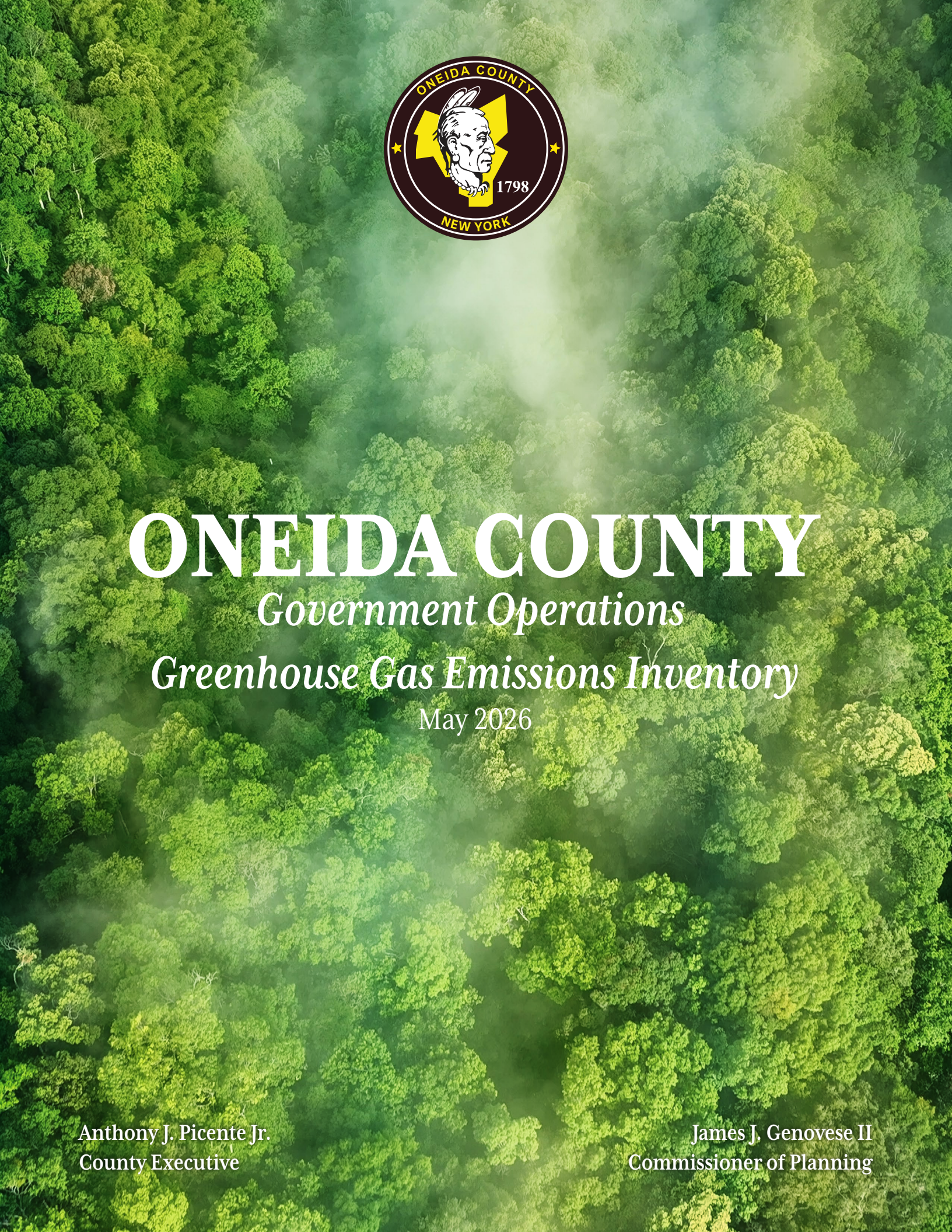

ONEIDA COUNTY

Government Operations

Greenhouse Gas Emissions Inventory

May 2026

Anthony J. Picente Jr.
County Executive

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Commissioner of Planning

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ACKNOWLEDGMENTS

Many individuals, departments, and organizations contributed to this project by providing data, subject matter expertise, or other pertinent information necessary for the completion of this report. These Oneida County departments include Public Works, Sheriff's, Aviation, Water Quality & Water Pollution Control, and Oneida Herkimer Solid Waste Authority.

Additionally, the Mohawk Valley Economic Development District provided invaluable expertise and institutional knowledge about the process of conducting the inventory.

ACRONYMS

CH4 - *Methane*

CO2 - *Carbon Dioxide*

COB - *County Office Building*

GHG - *Greenhouse Gas*

e-GRID - *Emissions & Generation Resource Integrated Database*

EIA - *Energy Information Administration*

EPA - *Environmental Protection Agency*

GHGRP - *Greenhouse Gas Reporting Program*

ICLEI - *International Council for Local Environmental Initiatives, also known as Local Governments for Sustainability*

kWh - *Kilowatt Hours*

LGOP - *Local Government Operations Protocol*

MTCO2e or MTCDE - *Metric Tons of Carbon Dioxide equivalents*

N2O - *Nitrous Oxide*

NYSDEC - *New York State Department of Environmental Conservation*

OC - *Oneida County*

OC DPW - *Oneida County Department of Public Works*

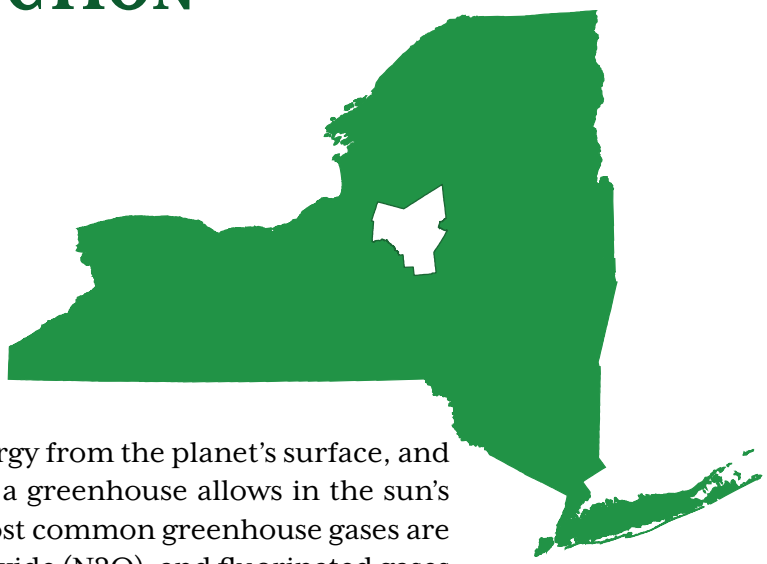
OC WQ & WPC - *Oneida County Water Quality and Water Pollution Control*

OHSWA - *Oneida-Herkimer Solid Waste Authority*

WTE - *Waste to Energy*

WWTP - *Wastewater Treatment Plant*

INTRODUCTION



Oneida County is situated between Syracuse (approximately 50 mi. to the west) and Albany (approximately 80 mi. to the east). Oneida County has a population of 229,645 and is 1,258 square miles. The County government maintains an extensive municipal infrastructure system, including maintaining numerous facilities and vehicles across many departments and employs around 1,700 people.

Greenhouse gases are gases that absorb heat energy from the planet's surface, and they trap heat in a manner somewhat like how a greenhouse allows in the sun's rays and then holds in the resulting heat. The most common greenhouse gases are carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), and fluorinated gases often used in refrigerants (NOAA, 2023). This change in gas concentrations causes warming and is affecting various aspects of climate. This includes causing more severe heat waves, floods, and droughts. These extreme events harm people, damage property, strain infrastructure, reduce crop yields, and more.

Greenhouse gas (GHG) emissions inventory is a very important step in the local climate process. A local government operations GHG inventory is an accounting, analysis, and report of the GHG emissions resulting from the day-to-day operations of a village, town, city, or county. It summarizes the GHG emissions from the consumption of energy and materials in governmental buildings, wastewater and water treatment facilities, municipal vehicle fleets, government-owned outdoor lighting, and other sources. The inventory provides the data needed to set realistic goals and track progress toward reducing operating costs, energy use and emissions. The inventory is only part of a wider community's greenhouse gas emissions, and is the part a local government is directly responsible for.

Using the Greenhouse Gas Protocol, Greenhouse Gas Emissions can be divided into three "scopes", which define where the specific emissions came from.

Scope One

All direct greenhouse gas (GHG) emissions that are owned or controlled by the entity Oneida County Scope 1 emissions are from the combustion of natural gas, gasoline, and diesel fuel in a county building, the wastewater treatment plant (WWTP) sludge incinerator, the use of refrigerants, the government-owned vehicle fleet, and equipment.

Scope Two

Includes GHG emissions an entity causes indirectly that come from where the purchased energy it uses is produced Indirect emissions are caused by the organization's activities but are not from sources they own or control Oneida County Scope 2 emissions are from the purchase of natural gas and electricity to operate government facilities.

Scope Three

Covers all other indirect emissions that result from policies of a specific governing body. One example is employee commute emissions- policies of an employer or government that require employees to commute contribute indirectly to those commute emissions.

GHG inventories help local governments select actions that offer a good return on investments and can be highlighted in subsequent infrastructure or facility planning. Over time, as a local government builds its capacity to conduct GHG inventories on a regular basis, the process helps to increase the ability of the local government to operate efficiently and use taxpayer resources effectively. The inventory is also the first step in developing a Government Operations Climate Action Plan, which is a document that sets goals and outlines initiatives that reduce GHG emissions. A reduction in GHG emissions can have environmental, public health, and economic benefits.

ENVIRONMENTAL

Reducing GHG emissions can help address the growing challenges associated with climate change. These emissions contribute to more intense and frequent extreme weather events, including severe storms, heavier flooding, prolonged droughts, and more destructive wildfires. It can also increase the potential for enhanced spread of some waterborne and pest-related diseases.

PUBLIC HEALTH

A reduction in GHG emissions can improve public health. Many air pollutants associated with GHG are known to cause cancer, cardiovascular disease, respiratory diseases, diabetes mellitus, obesity, and reproductive, neurological, and immune system disorders.

ECONOMIC

The continued rise in greenhouse gas (GHG) emissions has intensified the frequency and severity of natural disasters, leading to increased fatalities, injuries, and billions of dollars in damage to property and critical infrastructure. Investing in green technologies not only helps reduce GHG emissions but also stimulates economic growth by creating jobs, expanding the workforce, and boosting overall economic resilience. Furthermore, a diversified energy portfolio can make the supply less vulnerable to global market volatility.

REPORT METHODOLOGY

This inventory was conducted following the New York State Department of Environmental Conservation (DEC)'s Climate Smart Communities guidelines as well as ICLEI guidelines. The ICLEI, or International Council for Local Environmental Initiatives, produced the Local Government Operations Protocol (LGOP) Version 1.1, which was utilized a baseline for how to conduct the inventory. This protocol serves as the national standard for emissions reporting in local government operations.

Quantification Methodology

A GHG Inventory Calculation tool was used to calculate the County's emissions, created by Climate Action Associates, LLC. Their tool uses emissions factors produced by the Energy Information Administration to calculate emissions based off inputs. These 'emission factors' calculate the average greenhouse gas emissions produced from the units of different energy sources' usage. For example, the number gallons of gas burned is converted to metric tons of carbon dioxide. The tool uses the latest e-GRID subregion for Upstate New York. This is to account for the average greenhouse gas emissions produced by the various types of power stations that produce energy for this region. Units for electricity within the report are measured in kilowatt hours (kWh), those for natural gas are measured in Therms, and units of gasoline, diesel, and fuel oil are measured in Gallons. This report measures all emissions converted to Metric Tons of Carbon-Dioxide Equivalents (MTCDE).

Facilities Master List

To complete an inventory, a list of facilities to include was assembled first. The "Operational Control" model within the LGOP was used to determine what facilities or vehicles to include in Oneida County's government emissions inventory. Under this model, all facilities Oneida County has control to alter operational policy within fall under this model and are reported here. All facilities and vehicles that the County owns and operates were included. Oneida County owns and operates an airport, which was accounted for, except for fuel usage of tenant vehicles within the airport. Additionally, the County operates a sewer district, serving capacity needs of 15 municipalities and the Oneida County Business Park, of which emissions both from the facility and from the process of wastewater treatment were included. The County also appoints a supermajority of the Board of Directors for the Oneida-Herkimer Solid Waste Authority (OHSWA), and so fugitive emissions from landfill methane were also included.

Both the Wastewater treatment plant and the Oneida County Landfill operate WTE (waste to energy) plants, converting some methane from waste processes into electricity. The emissions produced by these plants were not counted for in the inventory, to avoid double-counting emissions for electricity usage.

The master list of facilities was assembled includes: the Oneida County Department of Public Works, Oneida County Sheriff's Department, Oneida County Department of Aviation, Oneida-Herkimer Solid Waste Authority (OHSWA), and Oneida County Department of Water Quality and Water Pollution Control (WQWPC).

The facilities were grouped into several categories to aggregate the facilities and vehicles by uses within the County. The following categories were used to organize the facilities:

Office Facilities:

These included buildings with County offices, which mainly housed administrative offices open to the public on a more limited basis. This included buildings such as Courthouses and the Oneida County Office Building.

County Services:

These included buildings which housed offices with regular office hours open to the public, including the Oneida County DMV, and Cornell Cooperative Extension (Farm & Home Center).

Police & Corrections:

These represented all buildings used by the Sheriff's department, including the Oneida County Correctional Facility, 911 Center, and Oneida County Jail.

Airport Facilities:

These included all the facilities which make up the Oneida County airport complex, including control towers, hangar buildings, and other miscellaneous facilities.

Parking & Lights:

These included all parking lots, parking garages, and traffic lights maintained by Oneida County.

Utility Towers:

These included emergency 911 radio towers, fire training facility tower structures, and other miscellaneous towers maintained by Oneida County.

Wastewater Facilities:

All facilities maintained by the OC WQWPC, including pumps and the water treatment plant.

Solid Waste Facilities:

Facilities maintained by the OHSWA, including the Ava landfill.

Data Collection:

Once the master facility list was assembled, utility bills and statements were collected for each location. These included utility bills from the regional energy provider and supplier, National Grid, as well as other contracted utility suppliers and fuel oil suppliers for select locations. Fuel usage data was collected for each County department's vehicle fleet. Data regarding the wastewater treatment nitrogen process emissions was obtained from the Oneida County WQ & WQPC, and data regarding the fugitive emissions from landfill gas was obtained from the EPA's Greenhouse Gas Reporting Program (GHGRP), since the landfill is a facility that is required to report to the program. The County conducted a commuter survey in January 2026 which elicited over 200 responses and was used to calculate emissions data from commuting as a Scope 3 metric. The County also collected lists of equipment which used refrigerants from all relevant departments and used the GHG Inventory tool to estimate emissions based on the equipment's listed refrigerant gas, charge, and leakage rate.

Base Year:

The year 2024 was decided upon as the base year for collecting information for the inventory, as it was the year that it could be realistically expected that enough data would be present to collect, and was far enough from the effects of the Covid-19 pandemic as to not have impacted data. Data was also collected for the years 2022 and 2023 for the purposes of comparison against the base year. Additionally, since the Inventory required collection of refrigerant data, 2024 as a base year allowed for the most accurate inclusion of refrigerant data.

The employee commuter survey was conducted in early 2026 and is assumed to have remained constant for the target years of the inventory, because no annual commuter survey has been previously collected.

List of all County Facilities examined as part of this Greenhouse Gas Inventory Report:

Airport Facilities

Airport Building Group -
00 Bell Road, Gate 31, Rome, NY 13440
Oneida County -
660 Hangar Road, Rome, NY 13441
Oneida County Airport -
00 Penny Street Road, Rome, NY 13440
394 Hangar Road, Building 101, Rome, NY 13441
592 Hangar Road, Building 100, Rome, NY 13441
605 Bomber Drive, Rome, NY 13441
615 Bomber Drive, Rome, NY 13441
625 Bomber Drive, Rome, NY 13441
635 Bomber Drive, Rome, NY 13441
645 Bomber Drive, Rome, NY 13441
706 Hangar Road, Rome, NY 13441
794 Ellsworth Road, Corp Hangar, Rome, NY 13441
Oneida County Airport Control Tower -
504 Hangar Road, Control Tower, Rome, NY 13441

County Services

Farm & Home Center -
121 Second Street, Oriskany, NY 13424
Health Clinic -
406 Elizabeth Street, Utica, NY 13501
Oneida County DMV -
301 W Dominick Street, Rome NY 13440
Oneida County Office for the Aging -
120 Airline Street, Oriskany, NY 13424
Social Service Department -
300 W Dominick Street, Rome, NY 13440

Department of Public Works (DPW)

Oneida County DPW Building & Grounds -
120 Airline Street, Oriskany, NY 13424
Oneida County Department of Public Works -
4608 State Route 233, Westmoreland, NY 13490
Oneida County Highway Department -
4260 Lee Center Taberg Road, Taberg, NY 13471
Oneida County Highway Department Garage -
8515 State Route 28, Barneveld, NY 13304
Oriskany DPW George E. Carle Complex -
5999 Judd Road, Oriskany, NY 13424
Oriskany Salt Barn -
5999 Judd Road, Oriskany, NY 13424
Taberg Equipment Shelter -
4261 Lee Center Taberg Road, Taberg, NY 13471
Taberg Salt Barn -
4261 Lee Center Taberg Road, Taberg, NY 13471

Office Facilities

Law Library -
235 Elizabeth Street, Utica, NY 13501
Oneida County 911 Department -
10505 N Steuben Road, Remsen, NY 13438
Oneida County Office Building -
800 Park Avenue Utica, NY 13501
Region Records Center -
4608 NYS Route 233, Westmoreland, NY 13490
Rome Court House -
302 North James Street, Rome, NY 13440
Union Station -
321 Main Street, Utica, NY 13501
Utica Court House -
200 Elizabeth Street, Utica, NY 13501

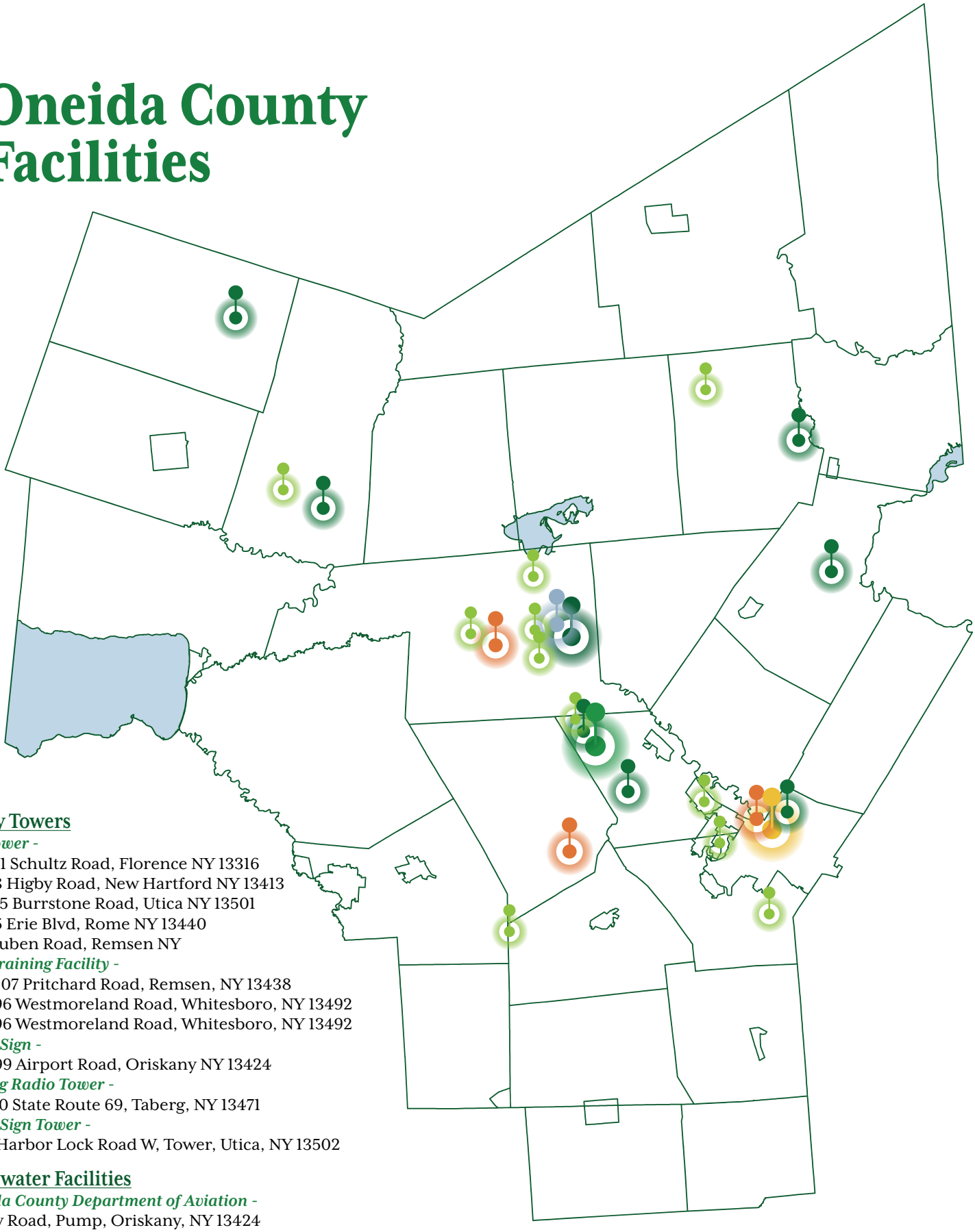
Parking & Lights

County Office Building Parking Lot -
220 Blandina Street, Utica, NY 13501
County Office Building Parking Lot & Shed -
201 Blandina Street, Other Shed, Utica, NY 13501
Parking Structure -
407 State Street, Parking Structure, Utica, NY 13502
Wynn Parking Garage -
514 Lafayette Street, Utica, NY 13502
Union Station Parking Lot -
321 Main Street, Utica NY 13501

Police & Corrections

Emergency Services Facility -
120 Base Road, Oriskany, NY 13424
Oneida County 911 Department -
3131 Shultz Road, Camden, NY 13316
3615 Skyline Drive, Clinton, NY 13323
Oneida County Correctional Facility -
6075 Judd Road, Oriskany, NY 13424
Oneida County Law Enforcement -
120 Airline Street, Oriskany, NY 13424
Oneida County Sheriff Department -
4681 State Route 233, Clinton, NY 13323
Oneida County Sheriff's Office -
6065 Judd Road, Oriskany, NY 13424

Oneida County Facilities



Utility Towers

911 Tower -
3131 Schultz Road, Florence NY 13316
623 Higby Road, New Hartford NY 13413
1555 Burrstone Road, Utica NY 13501
925 Erie Blvd, Rome NY 13440
Steuben Road, Remsen NY

Fire Training Facility -
10307 Pritchard Road, Remsen, NY 13438
5696 Westmoreland Road, Whitesboro, NY 13492
5696 Westmoreland Road, Whitesboro, NY 13492

Road Sign -
5999 Airport Road, Oriskany NY 13424

Taberg Radio Tower -
3710 State Route 69, Taberg, NY 13471

Utica Sign Tower -
10 Harbor Lock Road W, Tower, Utica, NY 13502

Wastewater Facilities

Oneida County Department of Aviation -
Dry Road, Pump, Oriskany, NY 13424

Oneida County Sewer District -
3 Barnes Avenue, Utica, NY 13502

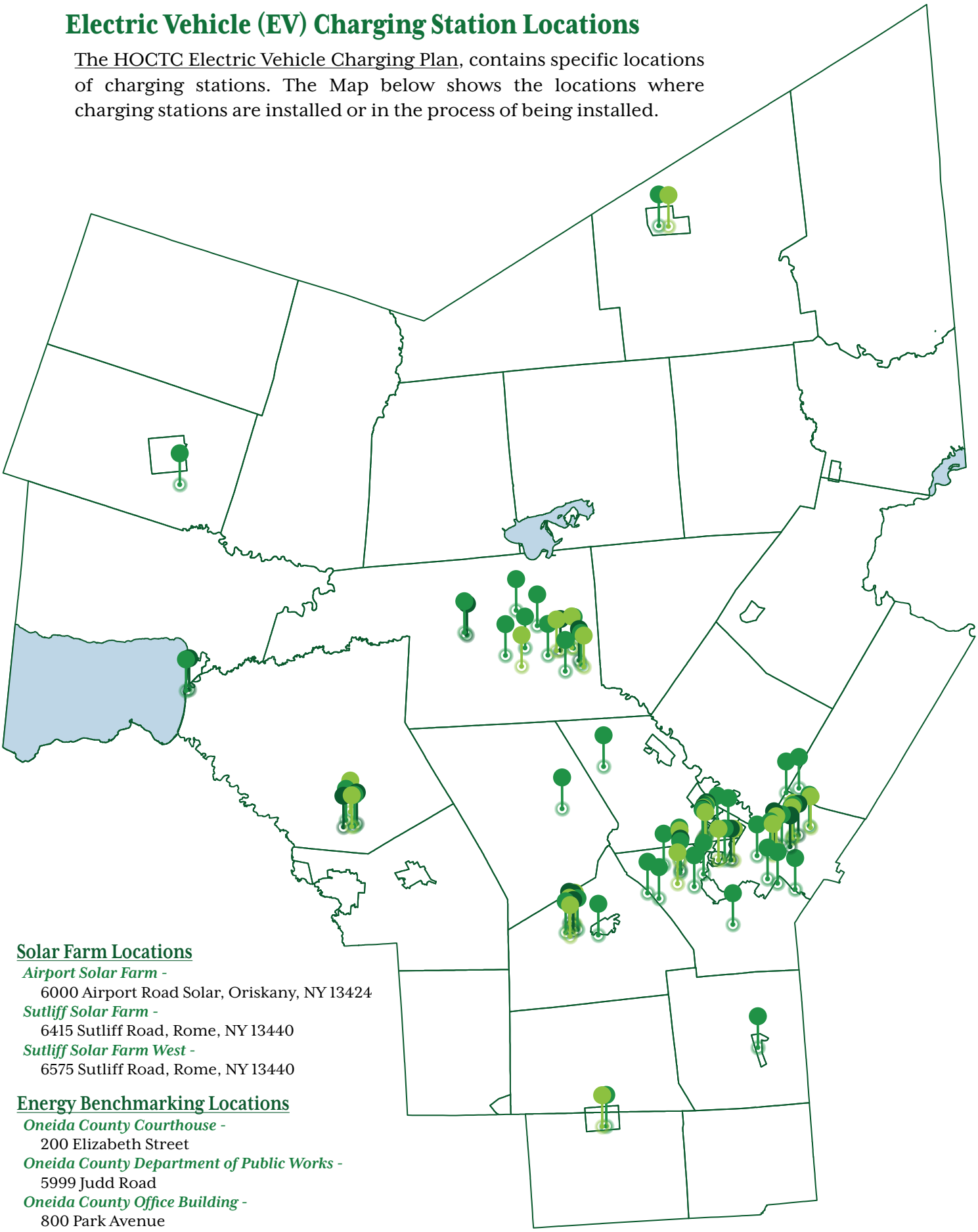
Oneida County Sewer Pump Station -
198 Whitesboro Street, Yorkville, NY 13495

Oneida County Sewer Treatment Plant -
51 Leland Avenue, Utica, NY 13502

Oneida County Water Pollution -
51 Leland Avenue, Utica, NY 13502

Electric Vehicle (EV) Charging Station Locations

The HOCTC Electric Vehicle Charging Plan, contains specific locations of charging stations. The Map below shows the locations where charging stations are installed or in the process of being installed.



Solar Farm Locations

Airport Solar Farm -
6000 Airport Road Solar, Oriskany, NY 13424
Sutliff Solar Farm -
6415 Sutliff Road, Rome, NY 13440
Sutliff Solar Farm West -
6575 Sutliff Road, Rome, NY 13440

Energy Benchmarking Locations

Oneida County Courthouse -
200 Elizabeth Street
Oneida County Department of Public Works -
5999 Judd Road
Oneida County Office Building -
800 Park Avenue
Oneida County Public Safety Complex -
6075 Judd Road

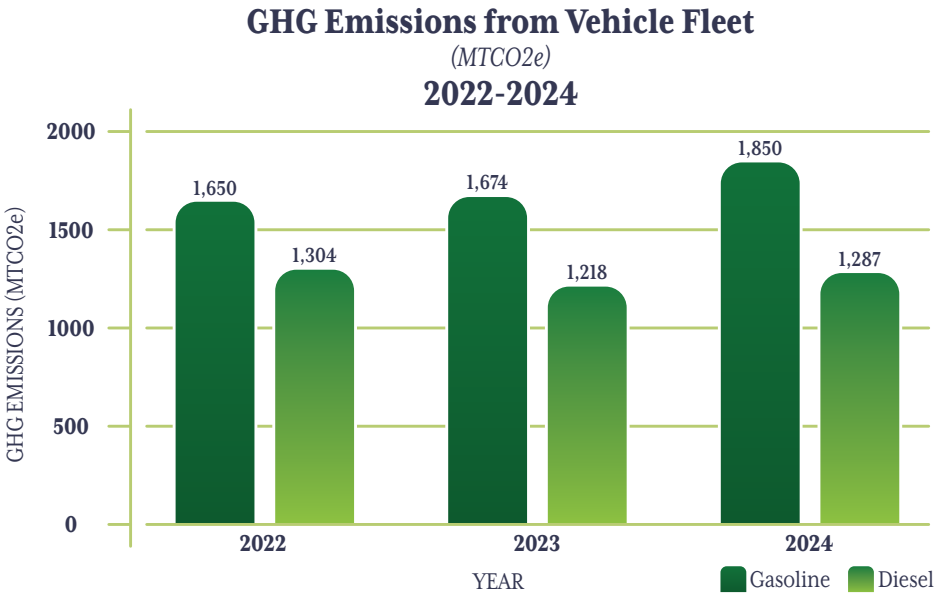
RESULTS

Employee Commute

As part of the inventory, information was gathered about emissions from government employee commutes. This data was collected through an anonymous digital survey that asked employment status (full- or part-time), mileage of round-trip to work, type of transportation, type of motor vehicle (if applicable), and the vehicle's average miles per gallon. 222 responses were gathered and based on the information given, estimating for 1,700 employees, the emissions are approximately 3,522 metric tons of carbon dioxide equivalent through from their work commutes.

Vehicle Fleet

Oneida County maintains and utilizes a vehicle fleet across office facilities, the OC DPW, OC Sheriff, and county services. In 2024, more gasoline (195,531 gallons) was used compared to diesel (126,268 gallons). In that same year, 1,850 metric tons of CO2 equivalents were from gasoline, and 1,287 metric tons of CO2 equivalents were from diesel. The graph below displays the greenhouse gas emissions from 2022 to 2024.



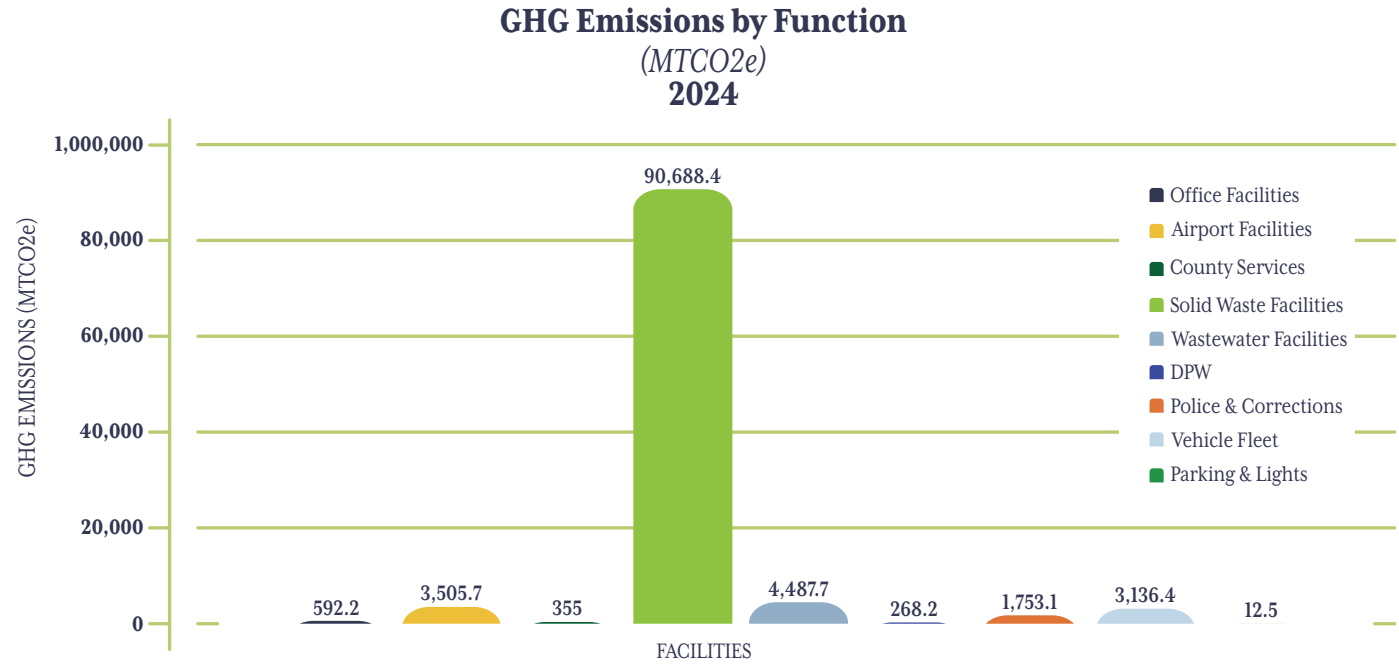
Throughout the recorded years, police vehicles have consumed the most amount of gasoline (125,795 gallons in 2024) and the Department of Public Works has consumed the most amount of diesel (123,912 gallons in 2024). The table below compares the consumption of gasoline and diesel throughout all fleet departments in 2024. Office facilities include departments such as Planning, Board of Elections, Weights & Measures, and the County Executive. On the other hand, county services are comprised of Emergency Services, Health Services, and Purchasing.

Consumption of Gasoline & Diesel in Gallons - 2024

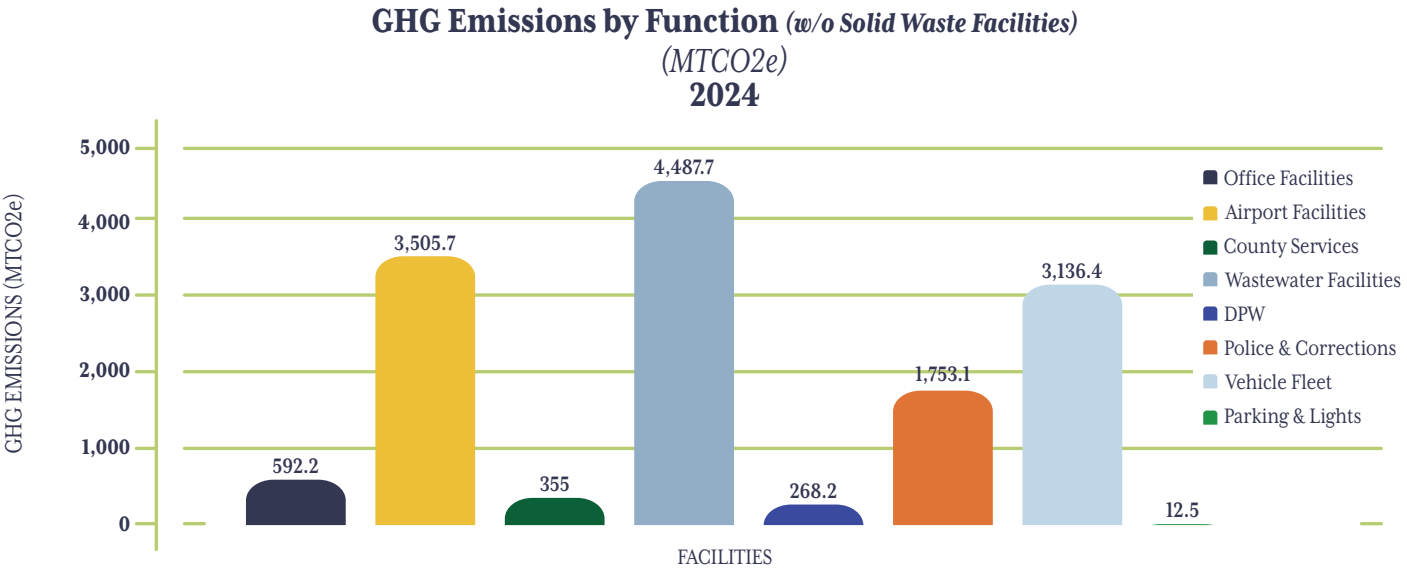
	Gasoline	*Diesel*
Office Facilities	7,037	750
DPW	44,962	123,912
Police & Corrections	125,795	457
Wastewater Facilities	5,314	1,148
County Services	12,422	0
TOTAL	**195,531**	**126,268**

Emissions by Administrative Function

When analyzing emissions by function, solid waste facilities produce the most, at 90,688.4 metric tons of CO2 equivalents in 2024. This function accounts for 83% of emissions from municipal operations. The second highest is wastewater facilities, at 4,487.7 metric tons in the same year, which is 4% of all emissions. The graph below depicts the emissions by administrative function in 2024, including energy, waste process, and refrigerants.



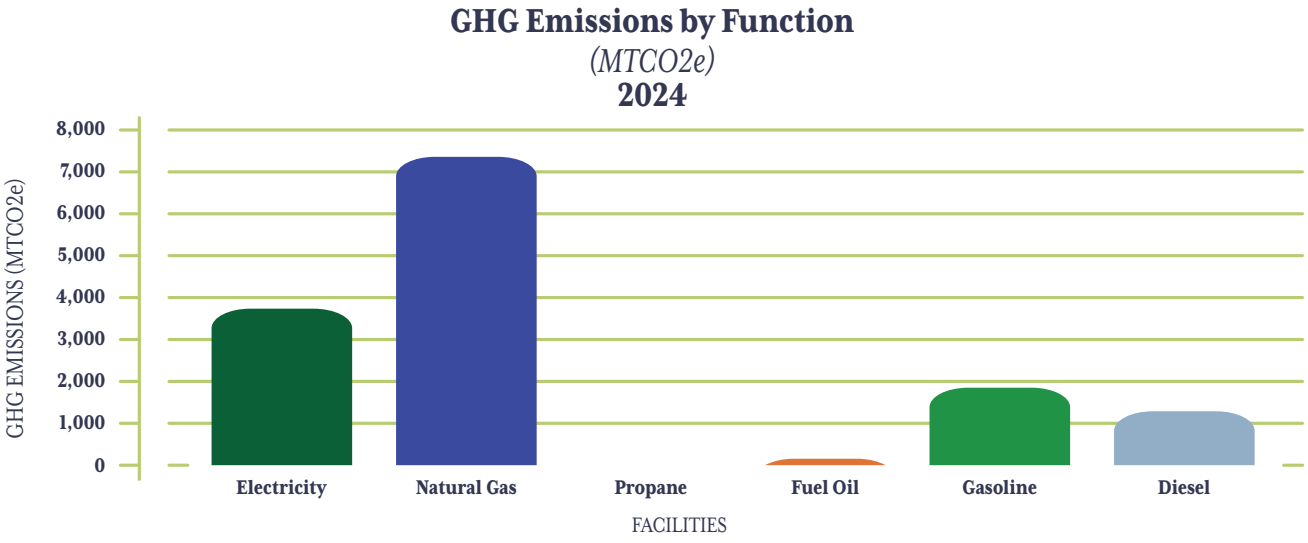
Since solid waste facilities account for a large portion of the municipal operations' emissions, below is a graph that compares the greenhouse gas emissions without the solid waste facilities. As previously mentioned, wastewater facilities emit the second highest number of metric tons, followed by airport facilities at 3,505.7 metric tons.



Emissions by Energy Type

The highest source of CO2 equivalents from an energy source is natural gas, with 7,359.4 metric tons in 2024. Although it is the highest source of emissions in Oneida County, the emissions from 2022 to 2024 have been trending downward. In 2022, the greenhouse gas emissions were 11,024.9 metric tons and in 2023, it significantly decreased to 8,045.1 metric tons.

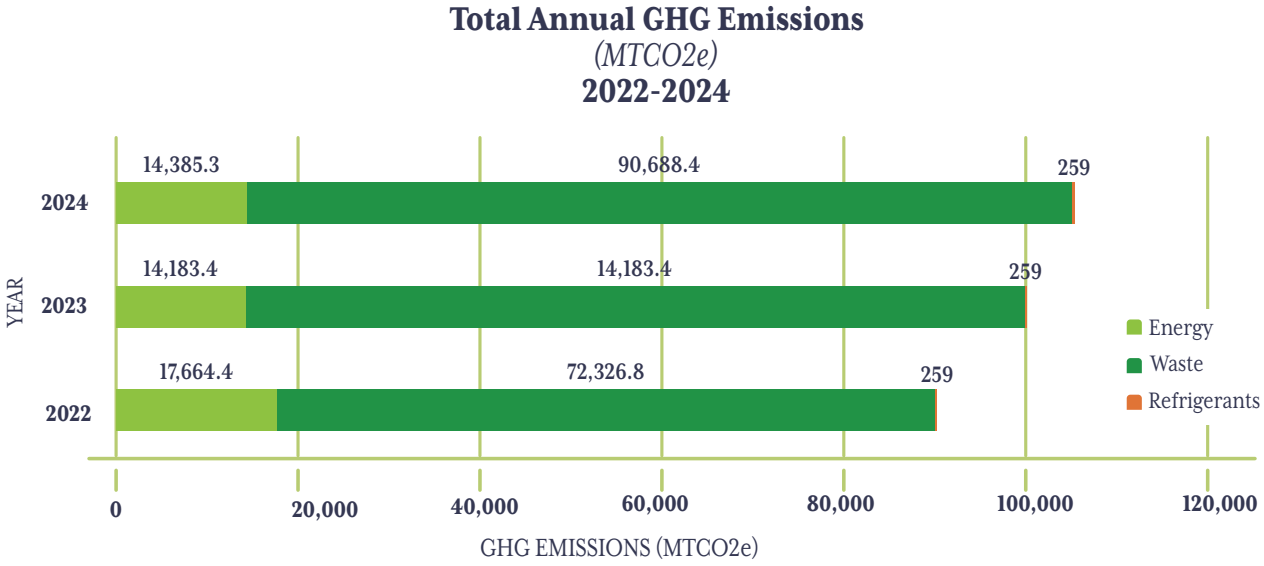
The graph below displays greenhouse gas emissions by energy type in 2024. The second highest source in 2024 is electricity at 3,735.5 metric tons. Throughout the three recorded years, it has decreased from 3,508.7 metric tons in 2022 to 3,105.1 metric tons in 2023, and then has increased, surpassing 2022 levels, in 2024.



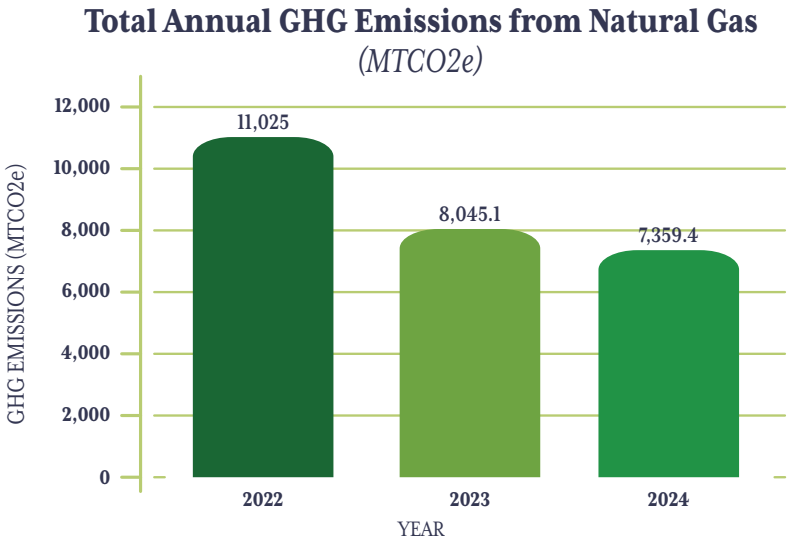
Annual Emission Trends

In 2024, Oneida County emitted 14,385.3 metric tons of CO2 equivalents from all energy sources. Although this is lower than the total emissions from 2022 (17,664.4 metric tons), it was a slight increase from 2023, with the total being 14,183.4 metric tons.

Methane and nitrous oxide emissions from waste was significantly larger than annual CO2 equivalents in 2024, at 90,688.4 metric tons. This is a considerable increase from the base year of 2022, which emitted 72,326.8 metric tons from waste. Total emissions continually increased each year from 91,433.9 metric tons in 2022 to 106,737.9 metric tons in 2024. The graph below depicts emissions from energy, waste, and refrigerants in 2022-2024. However, if the largest source of emissions, those from the Landfill facility are discounted, Oneida County has made progress in other areas in reducing the amount of greenhouse gases produced, down from 17,664.4 metric tons in 2022 to 14,385.3 metric tons in 2024. Due to the fact that refrigerant data could only be compiled for 2024, the information for 2022 and 2023 had to be an estimate, with the assumption that the number remained unchanged or similar for each year. Going forward, there will be consistent contact with departments to make sure any refrigerants changes are recorded for the greenhouse gas inventory update.

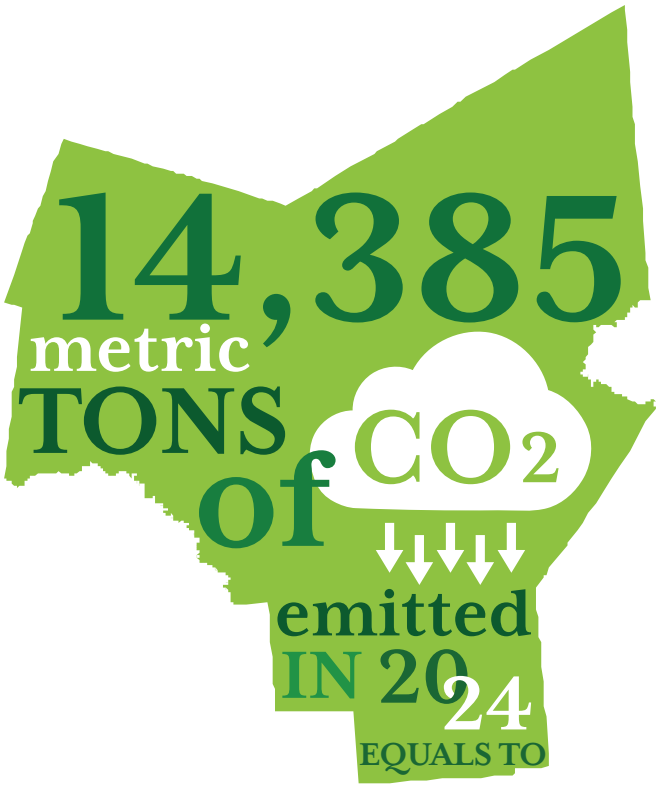


Notably, Oneida County also had consistently lower emissions in the Natural Gas category from 2022 to 2024, as shown in the graph below. This is noteworthy because it was the most-used energy type in the County for 2024.



GREENHOUSE GAS EQUIVALENCY

To put into perspective the data that was captured in 2024, the U.S. EPA Greenhouse Gas Equivalencies Calculator was used to better understand the quantity of emissions. The calculator converts abstract measurements, like metric tons of carbon dioxide equivalents, into tangible amounts.



CONCLUSION

Oneida County continues to make upgrades to facilities that both reduce energy demand and emissions and save money. Several departments have made impactful changes over the past decade.

OC WQ & WPC has made strides in the past 10 years to achieve improved operational efficiency and significant reductions in emissions within their facilities. They have installed anaerobic digesters to process leftover solid waste from their waste process, in addition to taking in additional eligible food waste through the Food2Energy program from locations across the county, which reduces landfill waste and methane emissions by proxy. They have also installed gas-powered turbines to capture and use waste gas from the digesters. This system allowed the decommissioning of their old incinerators which greatly reduced GHG emissions. These large-scale projects have resulted in a significant reduction in energy usage, from approximately 16,000,000 kWh in the 2010s to less than 10,000,000 kWh on average in the 2020s.

OC WQ & WPC is not the only department to have made efforts in reducing emissions within their facilities. Oneida County's Landfill has reduced their need for methane flaring by installing gas to energy generators that produce energy from some of the landfill gas produced by the landfill, reducing methane emissions.

Additionally, Oneida County has conducted energy benchmarking of four buildings, completed a full lighting inventory at Union Station to estimate energy savings, and has installed EV chargers, totaling 41 charging stations and 82 charging ports. The County hosts solar farms on 3 county-owned parcels, and electricity produced there is sold back to the grid. Solar offsets have totaled 7,005,568 kWh in 2022; 6,513,540 kWh in 2023; and 7,249,010 kWh in 2024.

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