2023
Government Operations Greenhouse Gas Inventory Report

April 2024

ULSTER COUNTY
NEW YORK

Contents

1. Introduction

[Executive Order No. 1 of 2023](#) commits the Ulster County government to reducing its greenhouse gas emissions by forty percent (40%) by 2030 and eighty-five percent (85%) by 2050, with an interim target of twenty-five percent (25%) by 2025.

The following report, prepared by the Ulster County Department of the Environment, is submitted to detail the status of each of these goals, and to inform whether these goals remain attainable and whether they should be modified or amended.

The County currently uses 2012 as the baseline year for its greenhouse gas (GHG) inventory for government operations, as it provides the best available dataset that is consistent with existing protocols. Ulster County currently purchases 100% of its electricity from renewable sources through a combination of on-site solar, remote net-metering, community distributed generation, and national Green-e certified renewable energy credits (RECs); Scope 2 is associated with zero GHG emissions in the annual GHG Inventories for the years where offsets were purchased.

2. Greenhouse Gas Emissions (GHG) Inventory

In 2023, the Ulster County government produced 7,578 metric tons of CO_2-equivalent (MT CO_2e) GHG emissions. The following table details the County's emissions by sector and scope respectively, as compared to the 2012 baseline year.

Table 1: Government Operations GHG Emission by Scope & Sector (MT CO2e)

GHG Emissions Scope & Sector	2012 (baseline year)	2023 (*actual)	2023 (reported)
Scope 1	**7,668**	*7,578*	**7,578**
Buildings & Facilities	2,428	*2,308*	2,308
Transit Fleet	1,995	*1,548*	1,548
Vehicle Fleet	3,242	*3,716*	3,716
Water & Wastewater Treatment Facilities	3	*6*	6
Scope 2	**2,289**	**1,203*	**0**
Buildings & Facilities	2,279	*1,183*	0
Street Lights & Traffic Signals	4	*0*	0
Transit Fleet	0	*4*	0
Vehicle Fleet	0	*12*	0
Water & Wastewater Treatment Facilities	6	*4*	0
Grand Total	**9,957**	*8,781*	**7,578**

* Scope 2 was associated with zero GHG emissions in 2023; this offset of Scope 2 emissions was implemented after the 2012 GHG baseline inventory was completed and contributes to a portion of the GHG emission reductions over time compared to the baseline year of 2012; this is reflected in the Table 1 "calculated" and "reported" GHG emissions scope and sector columns.

3. Progress Toward GHG Emissions Reduction Goals

Between the baseline year of 2012 and the most recent GHG inventory for 2023, Ulster County's emissions from government operations decreased by 23.9%.

F*igure 1: Progress Towards GHG Emissions Reduction Goals* compares Ulster County's 2012 baseline year and current reporting year (2023) GHG emissions to the levels required to meet the County's 2025, 2030 and 2050 reduction goals.

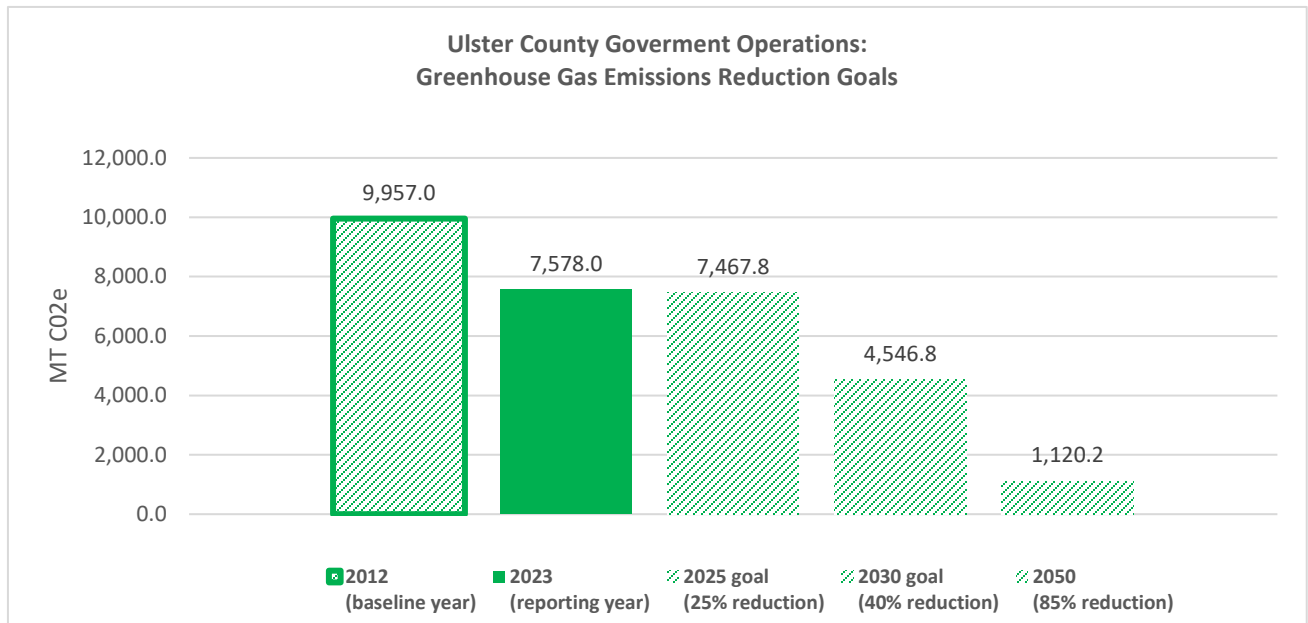*Figure 1: Progress Towards GHG Emissions Reduction Goals*

Figure 2: ClearPath Reports compares the 2012 Baseline Year & 2023 Reporting Year GHG Inventories by Scope & Sector.

Figure 2: ClearPath Reports: 2012 Baseline Year & 2023 Reporting Year GHG Inventories by Scope & Sector

4. Local Renewable Electricity Usage

Per Executive Order 1-2023, Ulster County's goal is to purchase 100% of its electricity for government operations from renewable sources through a combination of on-site generation, distributed generation, renewable energy certificates (RECs) and utility green power products.

Since June of 2014, Ulster County has purchased RECs to ensure 100% of the electricity used for government operations is renewable. The renewable claim is made through the purchase and retirement of a mixture of New York Generation Attribute Tracking System (NYGATs) certificates and RECs certified by Green-e®, a third-party verification firm.

Local Renewable Generation

In 2023, approximately **29.2**% of Ulster County's electricity came from local renewable sources (that is, exclusive of the offsets purchased via Green-e national RECs). This electricity was generated at the following locations:

Table 2: Sources of Local Generation

Site	System capacity	Type	Installation year	Ownership
New Paltz Substation Salt Shed	30.6 KW DC	Behind the meter	2011	Ulster County
Town of Ulster Landfill[1]	1.7 MW DC	Remote net metering	2018	Third Party
Natural Power Group Hydroelectric Facility Wallkill	0.5 MW	CDG subscription agreement	1988	Third Party
Natural Power Group Hydroelectric Facility Wappingers Falls	2.0 MW	CDG subscription agreement	UNK	Third Party

5. Climate Smart Communities Program - Participation Status

Ulster County is currently certified at the silver-level under the New York State Climate Smart Communities[2] (CSC) Program, with the County's first five-year recertification was announced in June 2021. More information on the County as well as local CSC participation is available on the County's CSC Program webpage at https://ulstercountyny.gov/environment/climate-smart and in County's full CSC certification report.

The County has a goal of achieving gold-level CSC certification by 2025. To date, the requirements to earn Gold-level certification in the Climate Smart Communities program have not been defined by NYSDEC. When available, the Gold-level requirements will be published by the DEC at the Climate Smart Communities program Certification Levels page.

6. Recommendations – Changes to Annual Reporting Deadlines

Annual Reports: UC DOE coordinates across relevant departments including DPW, UCAT, and others to submit several annual reports related to County government operations fleet and facilities. Table 3 provides an overview of these reports and their accompanying deadlines.

The annual reports and associated deadlines should be aligned to the greatest extent possible in future reporting years, in order to avoid duplication, avoid the use of estimated rather than actual energy data (due to the lack of data availability and/or other factors), and other inaccuracies and inefficiencies that result from the current annual reporting deadlines.

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[1] Generation data available here: http://s44709.mini.alsoenergy.com/Dashboard/2a566973496547374143454b772b71413d
[2] The NYSDEC's CSC Program website is available here: https://climatesmart.ny.gov/

The Green Fleet Report deadline of March 1st is feasible to achieve. **However, the annual reporting deadlines for the Greenhouse Gas Inventory Report and the Building Energy Benchmarking Report of March 1st and September 1st, respectively, do not align with one another and are not feasible to achieve. These two report deadlines should be aligned with one another - and potentially be combined into a single report, if possible - and, together, should not be due before June 1st annually.**

Table 3: Required Annual Reports for Ulster County Government Operations

Report	Data Description	Webpage	Deadline (for previous calendar year)
GREEN FLEET REPORT: Required per Ulster County Sustainable Green Fleet Policy - Local Law No. 9 of 2015 with subsequent amendments	County fleet inventory and fleet fuel data is obtained from DPW & UCAT fleet managers, Wex, Samsara, EV charging station online dashboards, New World Financial Systems (for fleet fuel purchases), and other sources. County staff compiles and analyzes the data to track fleet composition, energy use, and progress towards green fleet goals.	https://ulstercountyny.gov/environment/sustainability-energy/green-fleet-initiative	March 1st
BUILDING ENERGY BENCHMARKING REPORT: Required per Resolution No. 447 of 2016 Establishing A Policy To Require Annual Public Reporting Of Building Energy Consumption And Benchmarking Information For County Owned Buildings	County buildings and facilities energy data is compiled from various sources including via individual Central Hudson accounts (for electricity and natural gas), New World Financial Systems (for tank fuel deliveries), and other sources, and is entered into EPA's Portfolio Manager software which tracks aggregate energy consumption as well as facility-specific energy data over time (calculations include energy use intensity per square foot at each facility, among others).	https://ulstercountyny.gov/environment/sustainability-energy/building-energy-benchmarking	September 1st
GREENHOUSE GAS (GHG) INVENTORY REPORT: Required per Resolution No. 315 of 2019 Establishing A Policy Regarding Ulster County's Use Of Renewable Energy	County government operations aggregate energy data is obtained from the Green Fleet Report & the Building Energy Benchmarking Report* and is entered into ICLEI's ClearPath software; calculations include GHG emissions by scope and sector as well as measuring progress towards GHG reduction goals. *The data collection for the Building Energy Benchmarking Report is not complete for the previous calendar year by March 1;st annually, therefore some energy data estimates from the previous year are used in the GHGI Report – for example, for the 2023 GHGI Report, 2022 grid-supplied electricity and natural gas data were used.*	https://ulstercountyny.gov/environment/climate-mitigation	March 1st

Appendices

Appendix A: GHG Inventory Methodology and Assumptions

To track progress toward the County's GHG emissions goals, all energy usage is monitored and tracked by the Ulster County Department of the Environment (UC DOE). In previous years, the annual GHG emissions inventory calculated by aggregating this data by sector, scope, source and type and converting to metric tons of CO2-equivalent (MT CO2e) using EPA conversion factors.

In 2024, however, the Department of the Environment began using ICLEI [ClearPath](#) software to track and calculate the annual GHG emissions for the annual Government Operation GHG Emissions Inventory Report. To date, the 2012 baseline year and 2023 year are the only years that have been entered into ClearPath, and are therefore the only years included in the 2023 report. This represents a major shift in the methodology used for the GHG emission calculations, and although the ClearPath outputs are very similar to what was previously generated and reported by UC DOE, multi-year tracking was excluded in this year's reporting (but can be included in future reports at the point when the multi-year data is entered into ClearPath).

Methodology

The County references the Local Government Operations Protocol, Version 1.1 (LGOP) as a standard for accounting and reporting GHG emissions from government operations. This protocol was developed by Local Governments for Sustainability (ICLEI) and aligns with the ClearPath software.

To the extent possible, Ulster County sets organizational boundaries for emissions accounting using the operational control approach. Per the ICLEI definition, Ulster County has operational control over a building or facility if either of these two conditions exist:

- Ulster County owns the building or facility, OR
- Ulster County has full authority to introduce and implement operational and health, safety and environmental policies.

The County accounts for leased facilities where it is possible to obtain the necessary data. Currently, the County does not estimate emissions for spaces where only part of the building is leased and the space is not sub-metered.

The County currently reports the following sectors and scopes:

- Buildings and Other Facilities: Scope 1 & 2
- Streetlights and Traffic Signals: Scope 2
- Transit Fleet: Scope 1
- Vehicle Fleet: Scope 1 & 2
- Water Delivery Facilities Scope 1 & 2

Ulster County does not own or operate facilities in the following sectors:

- Wastewater Facilities
- Port Facilities
- Airport Facilities
- Power Generation Facilities
- Solid Waste Facilities

Other Process and Fugitive Emissions

Ulster County currently does not collect data or estimate values for process and fugitive emissions.

Biogenic source emissions

CO_2 Emissions from biofuel usage are not included as Scope 1 emissions in this inventory in accordance with ICLEI protocol, as the carbon concerned is of biogenic origin and would have been emitted to the atmosphere through the natural process of decay. Ulster County assumes all gasoline purchased for fleet, transit and non-road purposes is an E10 ethanol blend (10% ethanol).

Ulster County completed its first GHG inventory for government operations in 2012, which was subsequently set as the baseline year. The 2012 report included emissions from purchased electricity, stationary fuel combustion, mobile combustion from government vehicle fleets, as well as emissions from County employee commutes.

Baseline adjustments

The scope of Ulster County government operations has undergone structural changes since the 2012 baseline inventory. To accurately compare current operating conditions to the baseline year and quantify GHG increases or decreases over time, Ulster County normalizes its baseline to account for long term operational changes that are due to shifts in the services provided by the government.

For example, in 2013, the Golden Hill Health Care center was sold to a private service provider and the County no longer needed to provide this service to its constituents. This change reduced the County's purchase of utilities and fleet fuel significantly, saving approximately 3.5 MWh of electricity use, 53,000 gallons of fuel oil, and 1,500 gallons of fleet fuels per year. Because this was a divestiture of services, the 2012 baseline GHG inventory was updated to remove the emissions from this property and government function.

For its GHG inventory, the County uses the following set of rules to determine whether a baseline adjustment is warranted:

Table 4: Baseline Adjustment Methodology

Structural change	Baseline Adjustment?
New areas of government jurisdiction (or insourcing)	Yes
Acquisitions of property due to growth	No
Divestitures of property due to change in jurisdiction (or outsourcing)	Yes
Divestitures of property due to consolidation or efficiency of services	No
Access to energy use data that was not previously available	Yes
Temporary changes in government jurisdiction or acquisitions.	No

Table 11 shows the baseline adjustments that have been made to date.

Table 5: Adjustments to Normalize 2012 GHG Baseline

Baseline change	Effective Year	Reporting Sector	Scope	Change to Baseline Quantity (MT cO2e)
Golden Hill Health Care Center	2012	Buildings and Other Facilities / Vehicle Fleet	1 & 2	−1,216.4
Patriot's Project— Veteran's Housing	2014	Buildings and Other Facilities	1 & 2	+19.3
Sheriff's Substation— Wawarsing	2015	Buildings and Other Facilities	1 & 2	+6.5
Family and Child Advocacy Center	2016	Buildings and Other Facilities	1 & 2	+10.2
UCAT Kingston Expansion of Service	2019	Transit Fleet	1	+358.4
Previously unreported natural gas and fuel oil usage incorporated in baseline year	2020	Buildings and Other Facilities	1	+53.7

Appendix C: Activity Data

The following table shows the quantities of energy purchased by Ulster County in 2023. These quantities form the basis for the greenhouse gas inventory.

Table 6: 2023 Activity Data

Energy Type	2023 Usage	Actual or Estimated
Biodiesel (gal)	2,738	Actual – from 2023 Green Fleet Report
Diesel (gal)	264,810	Actual – from 2023 Green Fleet Report
Electricity (kWh)	9,598,454	Estimated – Central Hudson data not available/compiled at time of report
Ethanol (gal)	30,028.56	Actual – from 2023 Green Fleet Report
Gasoline (gal)	270,257	Actual – from 2023 Green Fleet Report
Heating Oil (gal)	37,626	Actual – from New World Financial Systems
Natural Gas (CCF)	369,844	Estimated – Central Hudson data not available/compiled at time of report
Propane (gal)	15,896.90	Actual – from New World Financial Systems

Appendix D: Climate Action Plan Implementation

The following table lists action items from the 2019 Ulster County Government Operations Climate Action Plan[6] that are either completed, in-progress or ongoing.

Table 7: Climate Action Plan Implementation Status

Focus Area	Action Number	Action	2023 Status	2023 Description
Buildings & Other Facilities	BF-14	**Conduct a rooftop solar assessment**	in progress	Solar assessments for rooftop, ground-mount, and/or carport systems at County facilities continue. 2023 assessments were completed for: the future Government Operations Center, 368 Broadway, the County fairgrounds pool pump house, and the 911 call center/Emergency Management offices at Golden Hill.
Buildings & Other Facilities	BF-19	**Offset Scope 1 and 2 emissions from buildings and facilities**	in progress	The County continues to source renewable electricity for County government operations, including locally-generated and by the purchase of renewable energy credits (RECs) via electricity supply contracts.
Buildings & Other Facilities	BF-2	**Implement lighting controls in County owned buildings**	in progress	DSS/Development Court: The LED lighting conversion project is underway (>1200 fixtures).
Buildings & Other Facilities	BF-4	**Update building automation systems & HVAC scheduling procedures**	in progress	The 75% NYSERDA-funded Onsite Energy Manager initiative is underway through 2024. The contracted engineering firm is completing energy trending analyses and providing detailed reports with recommended energy conservation measures (ECMs) for all large County facilities and is coordinating with DPW B&G staff and contracted BMS vendors to implement at priority facilities.
Buildings & Other Facilities	BF-7	**Green the lifecycle of office equipment**	in progress	2023 Climate Corp Intern Project in coordination with Information Services.
Community	NA	**Solarize, Clean Heating and Cooling, or Solar for All Campaigns**	complete	The Ulster County Community Solarize campaign subscribed over 600 residents in 2022 and aligned with the NYSERDA Clean Energy Communities Program high impact action
Community	NA	**Community GHG Inventory**	in progress	DOE began initial work on the community climate action plan project (funded in part via a 2022 NYSDEC CSC grant), including coordinating with ICLEI on an update to the County's community GHG Inventory using Clear Path software.
Policy & Procedure	PP-1	**Develop materials management annual plan and report**	in progress	DOE continues to coordinate with DPW, Purchasing, and other relevant departments on County government operations materials management initiatives including planning for hauling contracts and recycling and composting at County facilities.

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[6] Available here:
https://ulstercountyny.gov/sites/default/files/documents/environment/Ulster%20County%20Government%20Operations%20Climate%20Action%20Plan%202019_web.pdf

Policy & Procedure	PP-10	**Develop an organic waste program for government buildings**	in progress	DOE continues to coordinate with DPW on piloting a composting program at large County facilities.
Policy & Procedure	PP-16	**Right-size the local government fleet**	in progress	DOE continues to coordinate with the DPW fleet manager, UCAT, and relevant departments on implementing relevant recommendations included in the Annual Green Fleet Report.
Policy & Procedure	PP-17	**Update the County's environmentally preferable purchasing policy**	in progress	DOE coordinated closely with the Purchasing Dept. in 2023 to launch the County's Sustainable Purchasing Policy, including updating the County's Procurement Manual to include SECTION XIV SUSTAINABLE PURCHASING, implementing internal green purchasing policies and staff training, and by participating in the NYS Green Purchasing Communities program.
Policy & Procedure	PP-4	**Improve vehicle inventory**	in progress	DOE continues to coordinate with the DPW fleet manager, UCAT, and relevant departments on implementing relevant recommendations included in the Annual Green Fleet Report.
Policy & Procedure	PP-5	**Seek grant funding for climate change mitigation projects**	in progress	DOE continues to coordinate with DPW and relevant departments on relevant climate change mitigation projects. Funding awarded in 2022-23 include the NYSDEC CSC grant for the community climate action plan and NYSERDA funding for the Onsite Energy Manager project and CEC Program grants to complete a weatherization project at 17 Pearl St; relevant federal IRA direct pay incentives (including for EV charging infrastructure, fleet EVs, and solar installations) will be researched and applied for, as applicable.
Transit Fleet	TF-7	**Purchase full size electric bus(es)**	in progress	UCAT has deployed three electric buses with delivery for several more anticipated in 2025.
Transit Fleet	TF-8	**Purchase green vehicle(s) for UCAT support/administrative fleet**	in progress	UCAT has deployed three electric Ford e-transits in its vehicle fleet.
Vehicle Fleet	VF-3	**Implement a vehicle location tracking system**	2023	The DPW and UCAT fleet managers continue to coordinate the deployment of Samsara telematics software in fleet vehicles to track not only location but annual mileage and fuel consumption (including diesel, gas, and/or electricity).
Vehicle Fleet	VF-6	**Install additional EV charging stations to support fleet operations**	in progress	DOE continues to coordinate with DPW and relevant departments to installs Level 2 EV charging stations at County facilities to support fleet charging as well as public charging at priority locations. In 2023 new public chargers were installed at UCAT (front), DSS/Development Court (back), with installations planned or underway at additional County facilities.
Vehicle Fleet	VF-9	**Train UC fleet mechanics to maintain and repair electric vehicles**	in progress	Staff trainings were planned for 2024. DOE, in coordination with the Hudson Valley Regional Council, planned a two-day EV training for mechanics at SUNY Extension in April of 2024, with plans for UCAT and DPW mechanics to attend.