


CLIMATE SMART CLAVERACK



Town of Claverack Climate Action Plan - Working Document 11/27/23

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INTRODUCTION

New York State is already experiencing the impacts of climate change and has made climate mitigation one of the top priorities for the state. The Town of Claverack is joining other communities to lead the way by launching Climate Action Plans (CAP) to strategically implement actions that will result in reduced energy demand and Greenhouse Gas Emissions (GHG) emissions resulting from town operations.

This is an aspirational document, prepared by the Claverack Climate Committee, which identifies priority actions that will result in meeting the reduction targets defined therein. It should be noted that the town is not beholden to the strategy laid out here; this roadmap is subject to adjustment according to local developments, available resources, and evolving technologies. A Government Operations CAP is one small part of a broader strategy to both mitigate and adapt to climate change in our local context.

Further pursuits beyond this plan could include a Climate Vulnerability Study and Adaptation Plan, Sustainability Elements for Comprehensive Planning, a Natural Resources Inventory and other pledge elements within the NYS Climate Smart Communities program.

A CAP is a strategy document that sets goals and outlines a set of initiatives that reduce Claverack GHG emissions. Using a GHG emissions inventory as the foundation, a CAP defines GHG reduction targets and provides a framework for achieving those targets. The CAP identifies priority actions and facilitates coordination across government departments and will be updated as goals are met and new priorities arise.

By choosing to act now, the Town of Claverack is taking a leadership role in mitigating the impacts of climate change and aligning its goals with New York State's Climate Leadership and Community Protection Act.



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Executive Summary

What is a CAP?

A Climate Action Plan (CAP) is a strategy document that describes town actions to reduce greenhouse emissions and energy use costs. The town chooses several areas where actions can have impacts from many that the Capital District Regional Planning Commission (CDRPC) lists. Based on current energy use or greenhouse gas impacts as detailed in the Greenhouse Gas Inventory update (GHG), the town sets goals for reduction. The town must adopt, by vote of the Town Board, a CAP to make progress toward goals of the NYS Climate Smart Communities program.

Why do we need this?

A CAP is a priority requirement for NYS Bronze Certification and will allow us to access grant opportunities to achieve the planned reductions, making our investment in reducing energy use and costs smaller and more achievable. Finally, as energy costs rise we must look at energy use reduction as a long term benefit to the town.

What areas of climate and energy use impacts are addressed in the CAP?

The Claverack Climate Smart Committee believes the town can most effectively and immediately work to reduce emissions and energy costs through plans to update its municipal buildings and vehicle fleet. For specific recommendations see Reduction Targets by Sector starting on p 15.

What are short- and long-term targets?

Starting from a baseline GHG Inventory from 2019 each year we are measuring our reduction (or increase) in use and emissions. Short-term reduction targets aim for a specific reduction by 2030

(7 years). Long-term reduction targets are planned for 2040 (17 years). See Reduction Targets p 12.

What must Claverack do?

The CAP commits Claverack to try to achieve the listed reductions in greenhouse gas emissions. Energy use - specifically gasoline/diesel/oil fuels or electricity from non-renewable sources - is the most commonly used metric for calculating GHG emission reductions. Therefore, the town is adopting a resolution to use current and future technologies wherever possible and when available to achieve these goals.

What if we exceed or fall short of our plan?

There are no listed penalties for failure to achieve the targets; for example, no efficient and workable low-fuel replacements for our snowplows presently exist. However, the plan commits the town to evaluate alternatives to fleet and building energy use as available and to use energy use as a factor in making upgrades, replacing vehicles or systems, and in planning future changes in the fleet or new municipal buildings.

Key Recommendations

1. Perform energy audits on town owned buildings.
2. New buildings should be built to high energy efficient standards and existing buildings upgraded to recommendations per energy audits.
3. Any opportunity to develop on-site renewable energy should be explored so as to reduce dependence on volatile energy markets - electric heat pumps are considerably more cost effective than heating fuel oil, especially if based on onsite solar
4. Managing the vehicle fleet needs to proceed cautiously to adopt electric or renewable energy technologies when proven and available.



Proposed Planning Process

The Town of Claverack completed a greenhouse gas (GHG) emissions inventory in 2019 to identify the largest sources of emissions. Based on the GHG baseline analysis and input from community stakeholders, focus areas were developed to streamline and cross-coordinate actions between the local government and the community to reduce emissions across these sectors. The inventory has been updated through 2022.

The Town of Claverack Climate Action Plan creates a framework for documenting and coordinating efforts to provide information about each initiative's estimated implementation timeframe, costs, and potential leaders and partners. Each focus area includes a list of actions to help achieve the goals and reduction targets established during the climate action planning process.

The focus areas addressed in this plan are Municipal Facilities and Transportation. Each focus area includes a list of actions to help achieve the goals and reduction targets established during the climate action planning process.

This Climate Action Plan takes advantage of common sense approaches to improve air quality, lower energy costs, improve transportation and accessibility, reduce the municipality's carbon footprint, and benefit the Town of Claverack's municipal operations for years to come. Many of the actions have positive long term financial impact.

Planning Process: *italic indicates steps accomplished*

1. Determine leadership and CAP framework
2. Develop a communication and engagement strategy
3. Complete and analyze baseline assessments
4. Identify goals and GHG reduction targets
5. Identify existing and potential initiatives
6. Create a plan for implementing the chosen initiatives
7. Establish metrics
8. Work with the Town Board to develop a Climate Action Plan Draft.
9. Solicit public feedback to the Climate Action Plan Draft and prepare the final Plan.
10. Present the plan to the Claverack Town Board for adoption.

Proposed Outreach Efforts

Our timeline for rest of 2023 & 1st Quarter 2024

- A draft edition (this document) is presented to the Town Supervisor (today), and Board for Review (Nov TB meeting). Board feedback by (mid Dec)
- The CAP will then be revised according to board feedback and granted approval for a (Feb) public review.
- The Climate Smart Committee will then reach out, via numerous means, to notify public that this plan would be available on the Town's website and at the Town Hall for a 1 month comment period (Feb '24) prior to its inclusion on the docket for a vote at the (April '24) Town Board meeting
- There will be the opportunity to revise the CAP as a result of public comment. (Mar 24)
- The Board will vote to approve (we hope!) the CAP at the (April '24) meeting.
- Following approval of the Claverack Climate Action Plan by the Board, the public will be kept informed of progress toward meeting the greenhouse gas emissions reduction targets. Updates will be posted on the town website, Climate Smart website, Town email and sent in the CSC newsletter.

First Steps

The Town of Claverack completed a greenhouse gas (GHG) emissions inventory to identify the largest sectors of emissions. Based on the GHG baseline analysis and input from community stakeholders, focus areas were developed to streamline and cross-coordinate actions between the local government and the community to reduce emissions across these sectors.

Claverack's Climate Action Plan (CAP) creates a framework for documenting and coordinating efforts by providing information about each initiative's estimated implementation timeframe and

associated costs. These focus areas include a list of actions that will help to achieve the goals and reduction targets established during the climate action planning process.

Background

The town of Claverack has a rich history and covers beautiful and varied landscapes, farms, forests, and includes several small rural communities within its boundaries. The Town Board of Claverack, in its stewardship of the community's important natural resources, by adopting this plan is acting with foresight by valuing sustainability and climate consciousness in its policymaking. Claverack has made progress in reducing its greenhouse gas emissions without a formal plan yet in place. In 2018, the town and library installed an EV charging station as its first Climate Smart action and impetus for further momentum. The committee and town made significant progress in its CSC actions towards Bronze by adopting a Unified Solar Permit, creating a hazard mitigation plan, spearheading a Solarize Claverack campaign, and establishing the organizational framework for Climate Smart Communities.

In the 4 year period (2019-2022) the town's GHG emissions were reduced by 10% due primarily to variability in Highway Dept vehicle use. Aside from vehicle emissions, aggregate emissions for the rest of operations are flat, but there are several areas of progress; for heating fuel oil, a positive path forward has been identified. Claverack is an historic rural town that is poised to make significant strides in energy efficiency for the future. This plan formalizes a roadmap for making further strides in preserving the natural beauty, running our town cleanly and cost effectively and ensuring future viability for the citizens of Claverack.

GHG Inventory Update

The GHG Inventory provides the basic framework for analyzing energy use and identifying opportunities for reducing use and costs.

The baseline averages, from 2019, 2021 and 2022 provide a useful picture of use and costs. Combined with understanding of changes in technologies and market trends, it is possible to propose feasible avenues for action.

The town operations consist of the three buildings (highway garage, town office, and town court) and the vehicle fleet, streetlights and water pumps.

The next steps are to conduct energy audits of several buildings and analyze the main contributors of emissions. Two technologies are evolving to aid in mitigating climate change. One is the development of electric heat pumps as the heating and cooling method of choice from a cost and emissions perspective. The other development of note is the lowering of the cost of renewable energy, especially for solar energy. Important here is that renewable energy production can be decentralized at the individual user level or with community based solar farms. The evolution of decentralized energy production helps protect energy users from some of the volatility of world markets.

The following comments are based on the charts and tables below:

The town's vehicle fleet represents the largest component of emissions (48%) and second largest cost (\$42,77.53 or 33%). Because EV technology for heavy equipment and trucks is still evolving, the primary strategies in this area are prudent use and waiting for developing technology.

The next largest source is heating fuel oil for the highway garage and court buildings, accounting for 42% of emissions and 29% of cost (\$38,319). The Highway Garage represents a triple opportunity - identify energy waste with an energy audit, convert to renewable energy with solar panels, and install electric heating to reduce reliance on oil boilers. Numerous towns in the Hudson Valley have implemented such projects.

The third largest source of emissions is electricity, with 10% of emissions and 29% of costs. Electricity is the town's cleanest energy source. The town has recently converted many of its electricity accounts to solar through the Solarize program which also provides 10% savings plus significant reduction in emissions. These benefits should be reflected in future years data. Even greater savings can be realized by installing solar panels on site.

ANALYSIS OF BASELINE GHG EMISSIONS (2019, 2021 + 2022)

The 2019, 2021 + 2022 Claverack GHG Inventory Report summarizes the greenhouse gas (GHG) emissions from the Town of Claverack’s consumption of energy, direct and indirect, from its own operations - its buildings, fleet of vehicles, and streetlights. The inventory was an important step toward tangible climate action and further development of this Climate Action Plan (CAP).

The inventory includes Scope 1 and Scope 2 GHG emissions from government operations, as defined below:

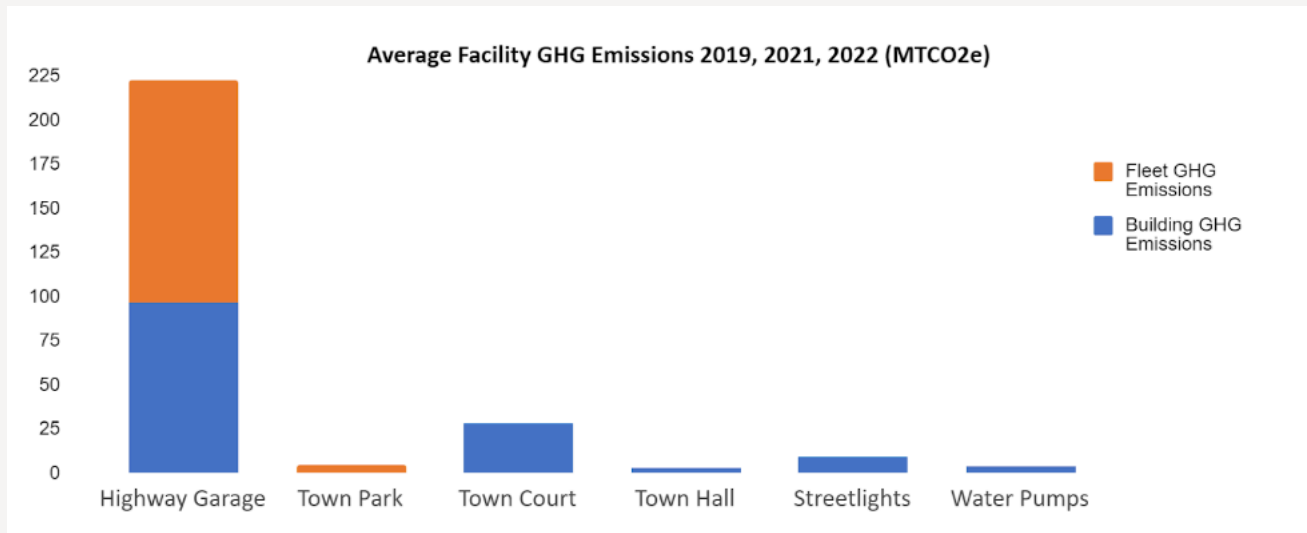
- **Scope 1:** Direct GHG emissions from government-owned vehicles and onsite fuel combustion (gasoline, diesel, propane, and fuel oil) for administration buildings, and the Highway Garage.
- **Scope 2:** Indirect GHG emissions from purchased electricity.

The data collected for this inventory uses an average of 2019, 2021+ 2022 as a baseline. The metrics used in this GHG Inventory were calculated using the GHG Inventory spreadsheet developed by Climate Action Associates, LLC, which complies with the Local Government Operations Protocol (LGOP).

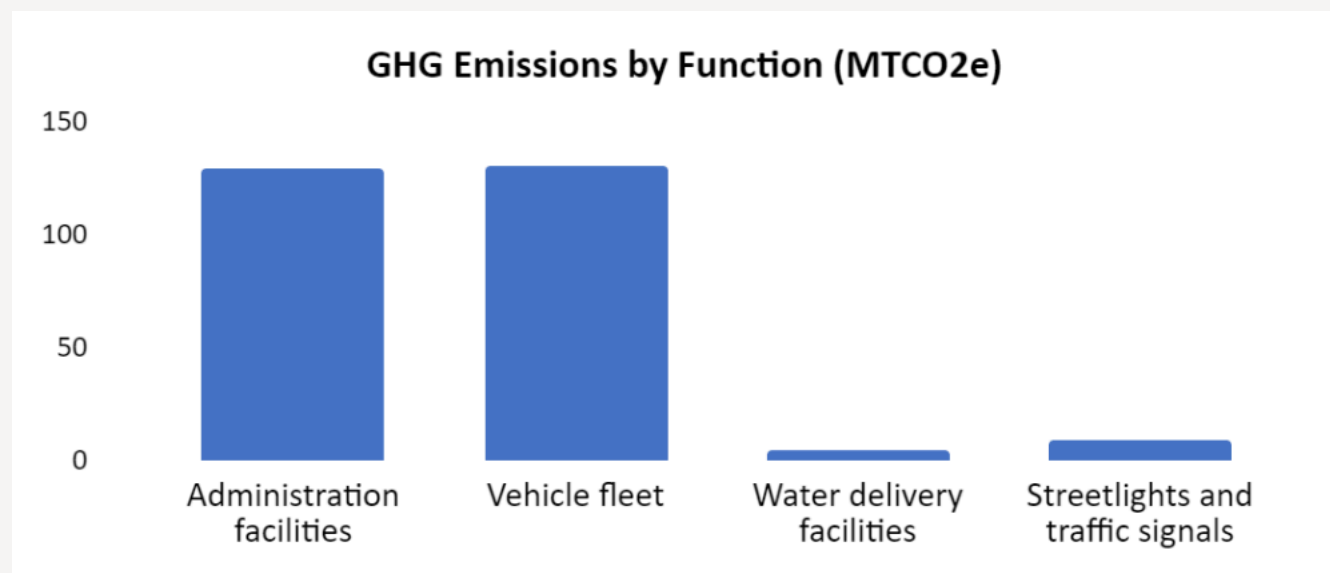
This table shows the Town buildings and energy providers included in the Claverack GHG Inventory:

Town Building/Municipal Vehicles	Energy Providers
Highway Garage	National Grid (Electric), Valley Energy
Old Town Court	NYSEG (Electric), Valley Energy
Temporary Town Court	National Grid (Electric), Valley Energy
Town Offices	NYSEG (Electric)
Streetlights	National Grid, NYSEG
Municipal Fleet	Paraco, Valley Energy, Kosco Heritage, Global Montello
Town Park	NYSEG, Valley Energy, Global Montello
Water Pumps	National Grid

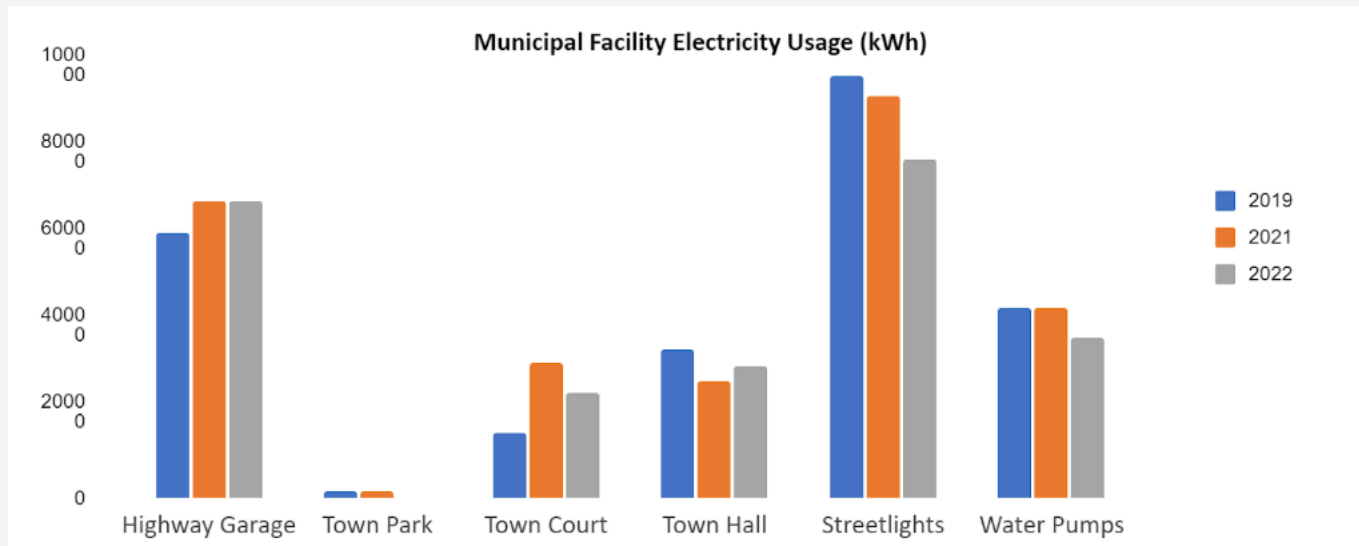
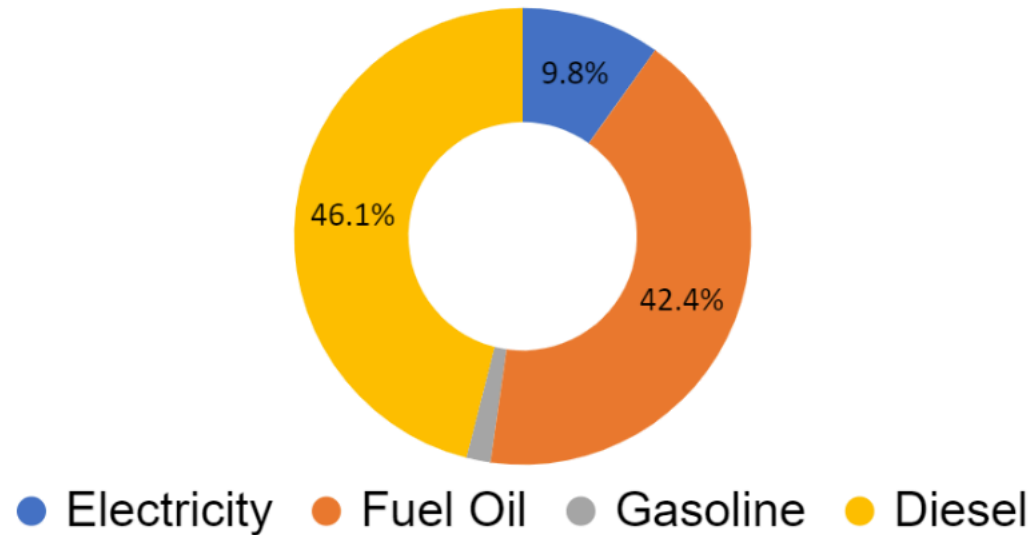
The total average GHG emissions produced by the Town of Claverack’s municipal operations in 2019, 2021 + 2022 was 273 MTCO₂e. The facility with the greatest source of GHG emissions was the Highway Garage, which produced 223 MTCO₂e of GHG emissions on average.



When viewing emissions by facility type function, the vehicle fleet slightly exceeded administrative facilities, totaling 130.5 tons of GHG emissions on average – gasoline created 5 MTCO₂e and diesel 126 MTCO₂e. Water Delivery Facilities had the smallest impact, with 4.5 MTCO₂e on average.

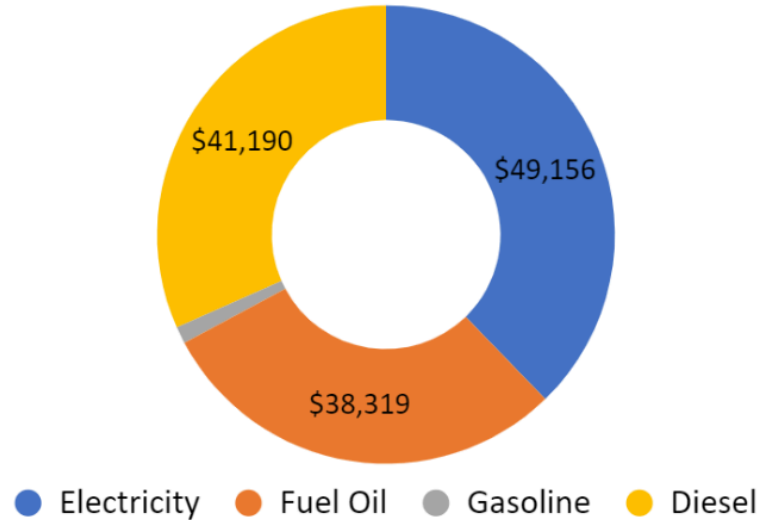


GHG Emissions by Energy Type (MTCO₂e)



When assessing cost of energy, for all energy sources, the Town spent on average \$130,228 per year. The chart below shows a breakdown of these costs by energy source. The Town spent approximately equal amounts on electricity, fuel oil, and diesel. However only two buildings, the Garage, and the New and Old Town Court, account for all of the fuel oil cost, which is equal to the cost of the Town's entire electricity usage.

Average Energy Cost by Fuel



Aggregated Energy Use, Cost and Emissions Data

*Data under review due to possible glitch in Portfolio Manager download

Electricity	Facility / Group Name	Electricity (kWh)				Electricity (\$\$\$)			
		2019	2021	2022	Baseline Average	2019	2021	2022	Baseline Average
	Highway Garage	61,307	68,573	68,573	66,151	\$ 8,844	*\$ 4,422	*\$ 4,422	*\$ 5,896
	Town Park	1,549	1,549	318	1,139	\$ 680	\$ 680	\$ 686	\$ 682
	Town Court	15,145	31,501	24,547	23,731	\$ 2,366	\$ 4,337	\$ 4,278	\$ 3,660
	Town Offices	34,506	27,166	30,427	30,700	\$ 3,622	\$ 5,121	\$ 5,836	\$ 4,859
	Streetlights	97,455	93,033	78,174	89,554	\$ 26,069	\$ 26,142	\$ 25,326	\$ 25,846
	Water Pumps	43,869	43,869	36,944	41,560	\$ 8,296	\$ 8,296	\$ 8,045	\$ 8,212
	TOTALS	253,831	265,691	238,983	252,835	\$49,878	\$48,998	\$48,592	\$49,156
Heat Oil	Facility / Group Name	Heating Oil (Gal)				Heating Oil (\$\$\$)			
		2019	2021	2022	Baseline Average	2019	2021	2022	Baseline Average
	Highway Garage	8,673	9,130	8,691	8,831	\$ 25,999	\$ 26,374	\$ 38,946	\$ 30,439
	Town Court	2,217	3,123	2,261	2,534	\$ 6,198	\$ 8,477	\$ 8,964	\$ 7,880
	TOTALS	10,890	12,253	10,951	11,365	\$34,216	\$36,872	\$49,931	\$38,319

Reduction Targets

New York State has set GHG Emissions Reductions targets which towns typically adopt as starting points in developing their emissions reduction targets.

The Town of Claverack is committed to achieving an overall GHG emissions reduction target of 40 percent below 1990 levels by 2030 and 85 percent by 2050.

This reduction target can be met if each focus area implements the list of recommended actions to achieve the reduction target set for that sector. The goals and reduction targets for each of the focus areas are summarized in the following outline.

OVERALL TARGETS

30% Reduction in GHG Emissions by 2030
70% Reduction in GHG Emissions by 2040

SHORT-TERM TARGETS

Reduce Emissions from Municipal Buildings by 50% by 2030
Reduce Transportation Emissions by 20% by 2030
Increase Onsite Renewable generation by 2030

LONG-TERM TARGETS

Reduce Emissions from Municipal Buildings by 70% by 2040
Reduce Transportation Emissions by 50% by 2040

LONG-TERM TARGET

Operate Claverack Government with Net-Zero Emissions by 2050 in alignment with NY CLCPA.

EVALUATION GOALS

Annual Update of Fleet Inventory
Update of GHG Inventory every 3-5 years
Benchmarking via portfolio manager to track climate action results.
Establish project timelines to track implementation.

PROGRESS TO DATE *

2018 Municipal Buildings' Benchmarking - - Discontinued

2022 To be restarted 2023

2018 Unified Solar Permit - 4/26/2018

2019 Inventory Baseline inc Clean Fleets Data Collected

2020 COVID zoom meetings continued

2021 Claverack designated a Clean Energy Community (CEC) for completing at least four High Impact Actions and earned a \$5,000 grant.

2021 NYSEG LED Streetlight Conversion Completed - NYSEG has a smaller portion of town's streetlights, cost reductions started in 2022.

2021 Report to Town Board on Greenhouse Gas Inventory for Town Operations Recommendations identified opportunities for long term savings with energy efficient design for new town hall and energy efficiency upgrades to town garage. When garage boilers need to be replaced, an energy audit should be undertaken and conversion to renewable energy be considered.

2021 Path to Bronze presentation to Town Board (July) The Committee outlined a range of climate actions to take to achieve the 120 points for Bronze Certification;

2021-2022 Reports on feasibility of hydropower and co-development options for a town hall complex Discussion with hydropower developer-investor confirmed feasibility; Discussion with community groups and possible partners indicated community interest in public use of town's Mellenville property; Columbia Land Conservancy (CLC) expressed interest in a pedestrian access to High Falls Conservation Area from SR217 and Philmont Village. Next steps were to provide building/site planning for further analysis of hydropower feasibility.

2022 Revised Claverack Climate Smart organization to comply with NYS regs, and gains points for certification.

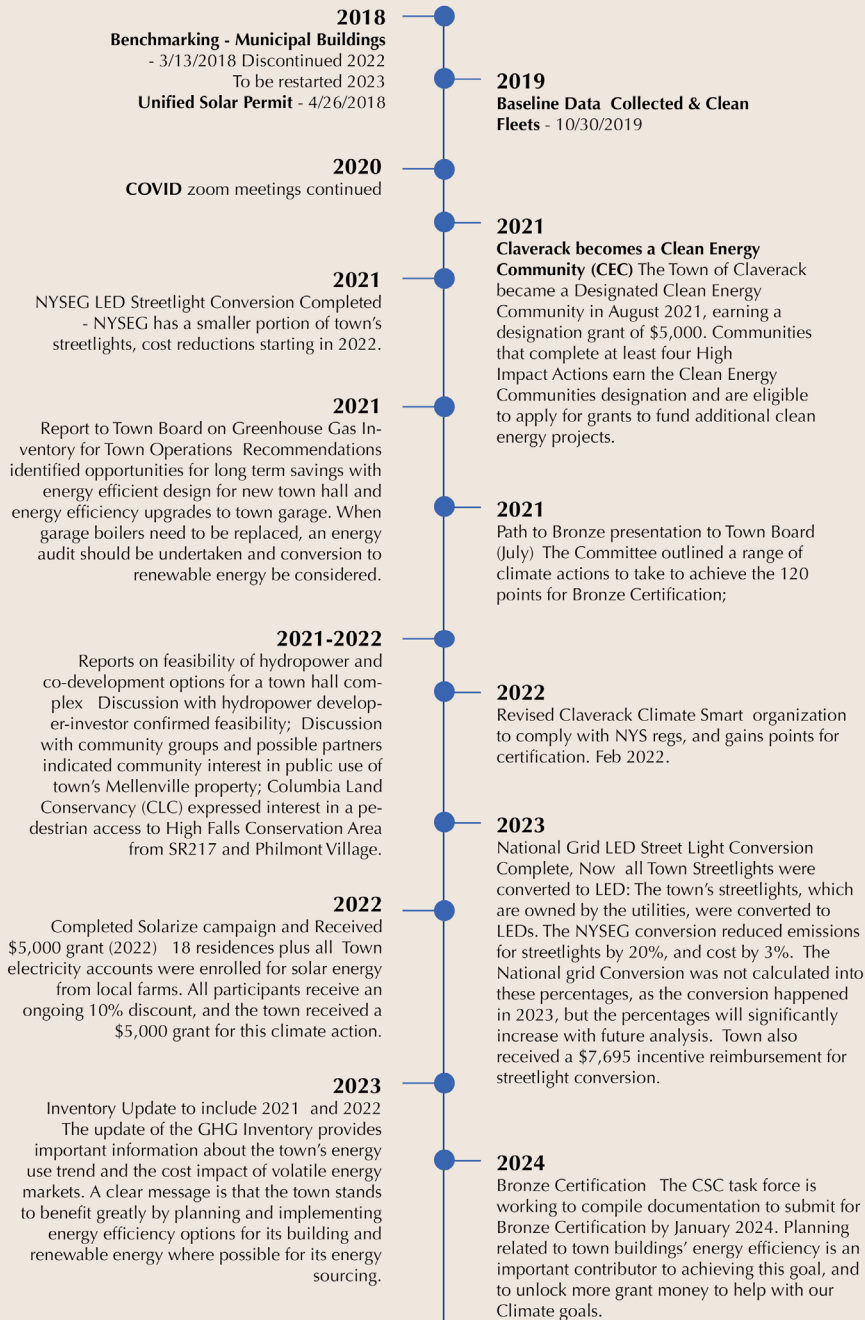
2022 Completed Solarize campaign and Received \$5,000 grant (2022) 18 residences plus all Town electricity accounts were enrolled for solar energy from local farms. All participants receive an ongoing 10% discount, and the town received a \$5,000 grant for this climate action.

2023 National Grid LED Street Light Conversion Complete Now all Town Streetlights were converted to LED: The town's streetlights, which are owned by the utilities, were converted to LEDs. The NYSEG conversion reduced emissions for streetlights by 20%, and cost by 3%. The National grid Conversion was not calculated into these percentages, as the conversion happened in 2023, but the percentages will significantly increase with future analysis. Town also received a \$7,695 incentive reimbursement for streetlight conversion.

2023 Inventory Update to include 2021 and 2022. The update of the GHG Inventory provides important information about the town's energy use trend and the cost impact of volatile energy markets. A clear message is that the town stands to benefit greatly by planning and implementing energy efficiency options for its building and renewable energy where possible for its energy sourcing.

2024 Bronze Certification The CSC task force is working to compile documentation to submit for Bronze Certification by January 2024. Planning related to town buildings' energy efficiency is an important contributor to achieving this goal, and to unlock more grant money to help with our Climate goals.

PROGRESS TO DATE



Progress is reported only on climate actions relating to energy efficiency for town operations. Other climate actions under other Program Elements will be in separate documents.

REDUCTION TARGETS BY SECTOR

The projects listed in this section include two types of actions: (1) actions that will result in direct reduction of GHG emissions; (2) policy actions that when implemented will result in energy savings and GHG emissions reduction.

1. The actions resulting in GHG emissions reduction will be quantified when the next government operations' GHG emissions inventory is completed, and results are compared with the current inventory.
2. Policy actions include:
 - Fleet Efficiency Policy that prioritizes EV purchases
 - Adopt green building and new construction standard
 - Adopt benchmarking requirement

Prioritizing Projects: The Government Operations GHG inventory reveals Transportation as the largest emitter of GHGs. When determining priorities for project implementation, two main factors need to be considered: the amount of greenhouse gas the project will reduce, and the funds available to implement the project. Prioritizing projects for implementation depends largely on emissions reductions, budgetary constraints, resources available, and grants available to the town.



REDUCTION TARGETS:

Municipal Facilities

The municipal facilities sector includes all electricity or energy used in government buildings or facilities. Municipal facilities account for 14% of Claverack's total GHG emissions. The Town's goal for a reduction of facility emissions is **50% by 2030**. The targets and implementation strategies below will help us achieve this goal:

Short Term Target: 50% GHG Reduction by 2030

Facilities Goals and Prioritization:

1. Conduct energy audits of local government buildings (Town Offices, Court; and Garage)
2. Implement Building Upgrades
 - Create HVAC replacement plan (heat pumps and renewable)
 - Upgrade interior and outdoor lighting to LEDs
 - Reduce the number of outdoor lighting fixtures
 - Upgrade building envelope
3. Pursue sustainable and energy efficient building methods, systems and materials for all new town building projects.
4. Plan on a New Town Hall being built to high energy efficiency standards.

Long Term Target: 70% GHG Reduction by 2040

Facilities Goals and Prioritization:

5. Adopt building standards to meet future NYS building energy code and standards
6. Install a Solar Array on/near Highway Garage to offset electricity purchased from the grid
7. Install a Solar Array on/near the Town Offices.
8. Install a Solar Array on/near the Town Hall.



Municipal Facilities: Prioritization and Implementation

This section addresses initiatives for the municipality to reduce its GHG emissions by 30% by 2030. The implementation of the actions listed here will position Claverack to make substantial progress toward the overall emissions reduction target.

List of Municipal Facilities with Addresses:

- Highway Garage-128 Schoolhouse Rd,
- Town Offices - Includes Hall (91 Church St., Mellenville) and Courts, Temporary (629 Rt 23B) and Old (836 Highway 217)
- Water Pumps

A preliminary step is to do an **energy audit of the buildings**. Funding for this audit is available through the [NYSERDA FlexTech Program](#), which provides 50% funding towards audits. The [NYSERDA Clean Energy Communities Program](#) small grants (under \$5,000, for community campaigns) can also fund energy audits.

HIGHWAY GARAGE

Garage energy costs, presently costing \$36,335 on average and 42% of the energy cost for the town. The fuel oil for heating is 84% of that energy cost, or \$30,439 on average.

The building should be evaluated for **upgrades to the envelope tightness**. Improvement in wall and ceiling insulation as well as sealing of all penetrations such as, windows, doors, vents, etc. The current building is leaking heat (GHG & town money) at an alarming rate.



The building should be evaluated for upgrading to heat pumps and renewable electricity via solar panels, which would electrify the heating for the building. A solar array on the roof or on the proposed new equipment shed structure, could offset energy consumed on-site and possibly offsite. Employing heat pump technology would take advantage of on-site low cost renewable electricity and eliminate high cost fuel oil heating systems.

1. Conduct energy audit of Highway Garage
 - Based on the findings of the audit possible actions include:
 - Upgrade building envelope
 - Upgrade HVAC equipment
 - Upgrade interior lighting
2. Adopt building standards to meet future NYS building energy code and standards
3. Establish green building codes to set standards for new construction or redevelopments

Funding for energy efficiency and heat pump projects is available through the [NYSERDA Clean Energy Communities Program](#), which requires no cost share. Additionally, heat pumps can and LEDs can be funded through utility rebate programs such as the [Small Business Energy Efficiency Program](#) (for lighting) and the [Utility Rebate Programs](#) for heat pumps.

Solar Arrays receive the NY-SUN credits, which are applied when working with a participating NY-Sun Contractor.

All of the above projects are available for the Federal Tax Rebate through Elective Pay, The Inflation Reduction Act allows tax-exempt and governmental entities to be able to receive a payment equal to the full value of tax credits for building qualifying clean energy projects.



TOWN HALL & COURT BUILDINGS

The opportunities to reduce emissions for the Town Hall and Court buildings are significant as Claverack must build a new town hall. Using sustainable building practices, energy efficient products and systems will save the town money for years to come. The **current town offices** can be studied to make smart upgrades to improve efficiencies. The three buildings together account for \$16,399 of the town's energy costs or 27% of energy costs (excluding streetlights). About 48% this cost is heating fuel oil for the court building.

The construction of a well insulated building envelope on a **new town hall**, as well as the transition to new hvac units and renewable energy should result in significant savings with the payback to our town continuing for many years. These savings can be estimated when preliminary designs of the new building are available.

With proper planning, a net zero building can cost the town less for years to come making it a wise investment upfront as well as make great strides toward reducing GHG goals and achieving bronze and silver certification. If Claverack were to build a new energy efficient town hall our stated goal of 30% reduction in GHG would exceed our goal for 2030.

All of the funding listed above for the Highway Garage apply to the town hall and court buildings as well, including for new builds.



The Committee encourages the Board to explore these options.

WATER PUMPS

The town's water district is serviced by a pump, which uses \$8,212 a year of electricity. Conducting an audit on the pumps for efficiency, including potential installation of VFD pumps can reduce cost and GHG emissions.

1. Conduct a Audit of the Water Pump Facility, free through the NY Rural Water Association
2. Implement energy saving measures recommended by the audit. These can be funded by the NYSERDA Clean Energy Communities Program once an audit is completed.

REDUCTION TARGETS:

Transportation

The transportation sector accounts for all fuel used for municipal vehicles. Transportation accounts for 48% of our GHG according to our baseline inventory analysis. The Town's goal to reduce emissions from the government fleet is **20% by 2030 and 70% by 2040.**

The following reduction target goals and priorities listed below will help us achieve this sector goal:

Short-Term Reduction Target: 20% GHG Reduction by 2030

Transportation Goals and Prioritization:

1. Inventory Municipal Fleet: Annual update of fleet inventory and overall transportation evaluation of operations
2. "Right-size" the vehicle fleet
3. Prioritize purchases of vehicles with reduced fuel consumption and reduced emissions (electric is considered an appropriate option for some vehicles).
4. Installation of EV charging stations as appropriate
5. Evaluate opportunities to replace traditional vehicles in the municipal fleet with advanced vehicles.

Long-Term Target: 50% GHG Reduction by 2040

Transportation Goals and Prioritization:

6. Replace 75% of traditional vehicles in the municipal fleet with advanced vehicles by 2045

Transportation: Prioritization and Implementation

This section addresses initiatives for the municipality to reduce its fossil fuel consumption by 30% by 2030 and 70% by 2040. Fleet emissions for the town are 130 MTCO₂E per year, or about 48% of the annual emissions. This includes \$42,753 per year in costs, or 33% of the cost of energy for the town. 96% of these emissions are from diesel, the rest from gasoline. The implementation of the actions listed here will position Claverack to make substantial progress toward the overall reduction target.

1. Inventory Municipal Fleet: Annual update of fleet inventory and overall transportation evaluation of operations

The Town has a municipal fleet inventory that outlines the make/model/year/fuel type/ mpg rating for all Town-owned vehicles. Keeping this updated annually will help the Highway Department and Town Officials identify which vehicles no longer serve their intended purpose and/or which can be replaced/rightsized with more efficient/electric options. Coordination between the Climate Smart Task Force and the Highway Department will help ensure the annual implementation of this goal.



2021 Claverack Fleet Inventory

Model Year	Year Purchased	Make	Model	Drivetrain Type	Type of Fuel/ Power Source	Mi. Per Gallon rating	Mileage	Class	Gross Vehicle Weight Rating (GVWR) over 8,500 pounds	Vehicle Function	VIN	
1997		INTER	2000 SMEN								1HTGEAUR7VH436032	T-33
2000		VOLVO	2001 SMEN								4V5JC2GG3YN87094	T-69
2005		INTER	7000 Series								1HTWZahr25J167344	T-89
2001		<u>FRGHT</u>	SWEEPER								1FVABTBVX1HH57961	T-24
1987		VIL	TRAILER								1C9ET2625HII93053	
2006		FORD	F350								1FTWX31P06ED47293	T-14
2007		INTER	7000 Series								<u>HTWZAH</u>	T-48
2006		H	TRAILER								1D9HH162X6G224593	
2009		INTER	7000 Series								1HTWXAHT69J	T-84
2011		INTER	7000 Series								1HTGRSJT3BJ432624	T-82
1989		GMC	SIERRA								1GTGC24K9KE518658	T-16
2003		CHEVY	S10								1GCCS14H738260480	PARK
2013		INTER	7000 Series								1HTGRSJT3DJ357474	T-86
2017		<u>CHEVR</u>	SILVERADO								IGC5KZCY8HZ283356	T-1
2017		DODGE	RAM5500								3C7WRNAL8HG598631	T-20
2018		INTER	DUMP								<u>3HAGRSNT7JL057816</u>	T-88
2018		INTER	DUMP								3HAWLSURXJL057778	T-90
2019		CAM	TRAILER								5JWCK2520KP4	E-64

2. Prioritize EV or reduced fuel purchases

A Fleet Efficiency Policy sets the intention to right-size and replace municipal vehicle purchases with more efficient options that adequately. The policy sets the minimum efficiency levels for new vehicles purchased. Minimum efficiency levels for different vehicles can include certain types of advanced vehicles, such as plug-in hybrid vehicles, battery-electric vehicles, compressed natural gas, and hydrogen fuel cell vehicles.

Exemptions for certain types of vehicles may be included in the Fleet Efficiency Policy as well, such as heavy-duty vehicles, where low-emission alternatives that are comparable in performance are difficult to procure and are not yet on the market. These types of vehicles may include emergency vehicles. Vehicles with internal energy recycling systems, such as batteries charged by vehicle motion, fit within this category.

As a short-term goal, the Town will specify a short-term (7-year) deadline by which a minimum percentage of new vehicles purchased will be efficient or a medium-term (17-year) deadline for the development of a fuel efficiency standard for the entire fleet.

We need to develop a process for determining replacement of current vehicles: The fleet data will be used to anticipate appropriate timing for upgrading to more efficient vehicles.

Vehicles that consume less fuel or are more fuel-efficient options should be considered

Funding for this action is available through the DEC Climate Smart Communities Grants: <https://www.dec.ny.gov/energy/109181.html> This program provides a 50% match towards developing a fleet efficiency policy. Additionally, at no cost, the town can review existing adopted policies throughout the

state here: <https://climatesmart.ny.gov/actions-certification/participating-communities/>, to find a template and establish a policy that makes sense for the town operations.

3. Installation of EV charging stations and infrastructure by 2030

There are several steps Claverack can take to plan for and install EV charging stations in the near future:

- Identify the best location(s) at the Highway Garage for EV charging stations and determine whether they should also be available for public use. EV infrastructure installed at the Highway Garage will help facilitate a smooth transition to an EV fleet.
- Assess procurement options, such as purchasing or leasing the equipment.
- Charging station can coordinate with the County effort.

The town can fund EV Charging infrastructure through a few different programs, which will be able to fully fund the project through combination:

- [DEC's Zero Emissions Vehicle Program](#), which requires a 10% match by the town (based on MHI data for 2023), provides funding for station purchase and install.
- The [NYSERDA Charge Ready NY Grants](#), which provide \$2,000 per port
- [NYSERDA Clean Energy Communities Program](#), which provides match free grants that can be used for EVCS
- [National Grid / NYSEG](#) make-ready grants, which can be used for the resources to prepare the site for the infrastructure
- [Federal Tax Rebate through Elective Pay](#), The Inflation Reduction Act allows tax-exempt and governmental entities to be able to receive a payment equal to the full value of tax credits for building qualifying clean energy projects.

4. Replace some traditional vehicles, purchased or leased, in fleet with advanced vehicles by 2030

The Town will identify vehicles that are ready to be replaced with advanced vehicles. There are funding sources currently available to offset the cost of purchase:

The town can fund EV Charging infrastructure through a few different programs, which will be able to fully fund the project through combination:

- [DEC's Zero Emissions Vehicle Program](#), which provide funding of up to \$7,500 per vehicle based on vehicle range.
- [NYSERDA Clean Energy Communities Program](#), which provides match free grants that can be used for EV purchases.
- [NYSERDA Drive Clean Rebate](#) of up to \$2,000 for new car purchase or lease
- [Federal Tax Rebate through Elective Pay](#), The Inflation Reduction Act allows tax-exempt and governmental entities to be able to receive a payment equal to the full value of tax credits for building qualifying clean energy projects.

5. Lawn Equipment

In the ongoing maintenance of town-owned lands, Claverack currently uses gasoline-powered chainsaws, leaf blowers, weed whackers, and lawnmowers. As a part of this plan, the climate committee would like to investigate electrification of all gas-powered tools and in consultation with the Highway Department, consider particular models and sources of funding for these.



MOVING FORWARD

This Climate Action Plan provides a roadmap to take action and make better energy choices that will make the Town of Claverack more stable and resilient in the future. Climate change mitigation may be a challenge, but it is also an opportunity to make the Claverack cleaner, more able to withstand fluctuation in fossil fuel cost, save taxpayer money and contribute toward the stabilization of world wide climate threats in the future.

This Climate Action Plan is a resource to municipal officials and all community stakeholders by offering a framework to implement actions that will help the Claverack achieve the goals established for the future of our government operations. The Claverack Climate Action Plan has outlined a collection of measures and policies that reduce GHG emissions. To maximize success in implementing this plan, detailed information about the leadership and resources needed to take action is provided and initiatives are ranked according to our local priorities and feasibility. With the Climate Action Plan as a guide, Claverack can take effective action in climate change mitigation as we implement municipal projects and policies.

This Climate Action Plan is intended to be a “living document” in which there is room for re-evaluation and adjustment of targets based on progress, emerging technologies and local circumstances.

Methods for Assessing Progress

The Town’s vehicle fleet is the main contributor to municipal GHG emissions and is therefore a priority to assess and evaluate annually. This will be done by conducting a fleet inventory and overall fleet operations assessment. This will provide an opportunity to make adjustments based on available electric vehicle capabilities, vehicle performance, and usage. In addition to updating and assessing the fleet inventory,

the Town plans to update GHG Inventory every 3-5 years to determine whether progress is being made toward achieving the goals outlined in this Climate Action Plan.

Adjusting Local Strategy if GHG Targets are Surpassed or Not Fulfilled

As the Town’s GHG Inventory is updated and re-assessed, municipal officials and stakeholder committees will be able to determine if the goals outlined in this Climate Action Plan have been met, surpassed or not fulfilled. If the targets are surpassed or not fulfilled, the targets and priorities outlined in this Climate Action Plan may need to be re-evaluated and updated. The Town plans to ensure alignment with the goals outlined by New York State’s Climate Leadership and Community Protection Act.

ONGOING WORK

Making strides in greenhouse gas reductions are one small part of Claverack’s strategy to both mitigate and adapt to climate change in our local context. This government operations Climate Action Plan outlines what is within our sphere of control to protect the viability of this place we share and call home. Further pursuits beyond this plan address other areas of effort and include a Climate Vulnerability Study and Adaptation Plan, a Community Greenhouse Gas Inventory and Community Climate Action Plan, Sustainability Elements for Comprehensive Planning, a Natural Resources Inventory and other pledge elements within the NYS Climate Smart Communities program.

LAND ACKNOWLEDGEMENT

We acknowledge the lands we are stewarding within the town of Claverack are the ancestral homelands of the Muh-he-con-ne-ok people. We hope our actions will protect and preserve these lands respectfully for all who came before us and who will come after us.