

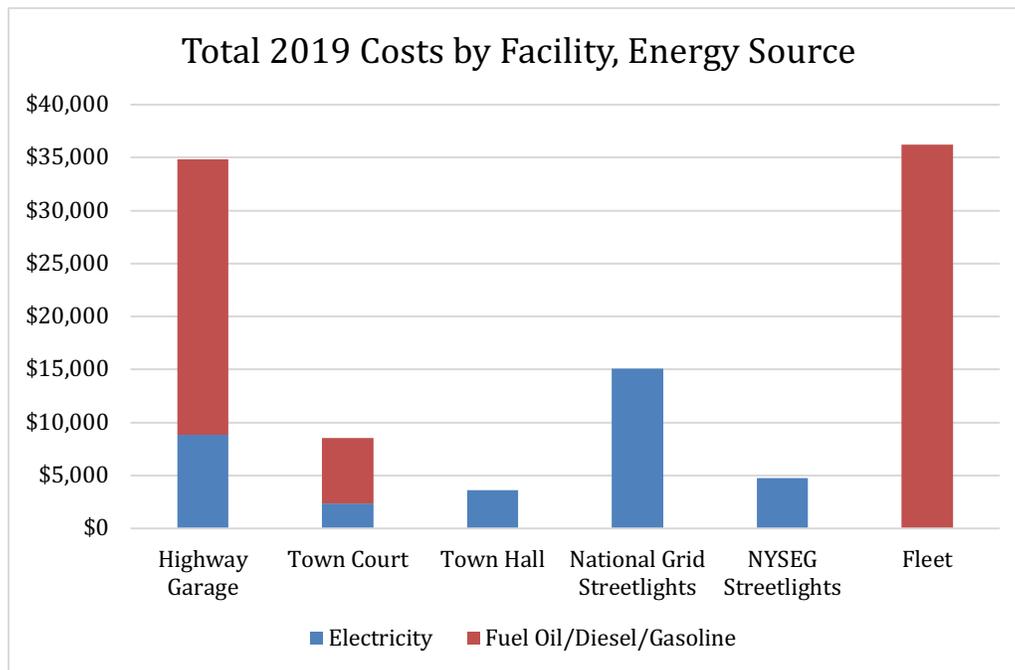
## Executive Summary of the Greenhouse Gas Inventory Report for Claverack August 12, 2021

This Executive Summary highlights several key aspects of the Greenhouse Gas Inventory Report and the Committee’s recommendations.

The Inventory is a joint effort between the Claverack Climate Smart Committee (CSC) and the Capital District Regional Planning Commission (CDRPC) technical staff. The GHG Inventory is one of the foundations for Climate Action Planning (CAP). Both are essential actions for attaining Bronze Certification, which unlocks opportunities for Climate Smart grants.

### Key Findings of the Inventory:

- Using base year 2019, Claverack’s municipal operations generated 364.21 tons of GHG emissions for a total cost of \$103,126.52. Detailed graphics are in the report and summarized in the charts below.
- The largest sources of both costs and emissions for the Town are the vehicle fleet, followed by heating fuel oil for the garage, followed by streetlights. As discussed below, garage heating with renewable energy may represent a substantial opportunity for the town to cut costs by investing in energy efficiency.



Facility	Electricity Costs	Tank/Other Fuels	Fleet Fuel	TOTAL COSTS
Town Court	\$ 2,365.94	\$ 6,198.07		\$ 8,564.01
Town Hall	\$ 3,620.67			\$ 3,620.67
Highway Garage	\$ 8,844.26	\$ 25,998.58	\$ 34,957.62	\$ 69,800.46
Park			\$ 1,260.23	\$ 1,260.23
<b>Facility Summary</b>	<b>\$ 14,830.87</b>	<b>\$ 32,196.65</b>	<b>\$ 36,217.85</b>	<b>\$ 83,245.37</b>
Streetlights - N-Grid	\$ 15,114.10			\$ 15,114.10
Streetlights - NYSEG	\$ 4,766.05			\$ 4,766.05
<b>Total Summary</b>	<b>\$ 34,711.02</b>	<b>\$ 32,196.65</b>	<b>\$ 36,217.85</b>	<b>\$ 103,125.52</b>

### **Opportunities to Reduce Greenhouse Gases**

Our preliminary recommendations in this section need to be reviewed with the Town's staff and officials and will be further explored and refined as the dialog with the Town Board evolves.

Our Climate Smart Committee (CSC) has members with various experience in business and facilities management. Working on this report were: Josh Nislick who works in the solar industry; Imre Varga, a corporate executive for facilities management for a global software corporation; and Jeff Kiplinger who has leadership experience in the chemical labs industry. Council Member Cashen was also instrumental for this report. In addition to our own analysis, we have consulted with other Climate Smart Committees and the CDRPC staff., and will continue to do so.

### **Streetlights:**

The Town's Streetlights provided by N-Grid and NYSEG cost \$19,880 annually, or 19% of energy costs. Claverack is in the process of finalizing an LED Conversion plan which is expected to reduce electricity costs by 47%, or \$9,374 per year.

### **Garage:**

The Highway Garage Building and the vehicle fleet account for \$69,800 or 84% of town annual energy costs - 80% of heating fuel and 60% of electricity costs (excluding streetlights). The CSC committee recommends that several steps be explored.

- A preliminary step is to tour the garage facility with town officials to be briefed on what initiatives have already been taken and collect background information relevant to present opportunities. We will invite Tom Paino, Architect, Coordinator of Philmont CSC, and former Director of Sustainability for the NYC Dept of Buildings and Design to join us.
- Garage energy costs, presently costing \$34,843 in 2019 should be evaluated for upgrading to heat pumps and renewable electricity via solar panels. A solar array on the roof or on the ground 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 system. This strategy may be financially complex but should be evaluated for longer term feasibility

### **Town Hall and Court buildings:**

The opportunities to reduce emissions for the Town Hall and Court buildings are significant. The consolidation of the two buildings operations, into the new town hall, the replacement of fuel oil heating with heat pumps, and sourcing electricity from renewables (solar and/or hydro) will result in a significant reduction in annual energy costs. One cannot compare two old buildings to one high code new building. An estimate of the reduction must await preliminary plans for the new building.

The new town hall is an opportunity to incorporate energy efficient technology and building practices to benefit from long-term energy savings and Climate Smart incentives (for completing a municipal building to a designated high efficiency code). These energy cost savings can be estimated once the planning process is well underway.

There is evidence that a net zero building can be less costly than current code and offers enormous long-term savings. This is an opportunity worth exploring for the town.

**Vehicle Fleet:**

A long term strategy for transition to Electric Vehicles should be considered as vehicles age and technology and the regulatory framework evolve in the coming decades.

**Conclusion:**

The GHG Inventory Report is a valuable resource for the Town to help us understand where we can practically and cost-effectively reduce emissions. It is also a tool to help save money and guide investment in critical infrastructure upgrades. The Committee recommends that these opportunities be fully explored and looks forward to working with the Town Board and staff to review these findings and identify effective climate actions.

