

**2019 Government Operations
Climate Action Plan
Revised June 17, 2020**

**Prepared by Croton's
Sustainability Committee**

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Documents referenced herein and submitted for certification (but not attached) include:

- 2012 NWEAC Climate Action Plan performed by Ecology & Environment, Inc.
- 2007 Municipal GHG Inventory performed by the Village of Croton-on-Hudson
- June 15, 2020 Village Board of Trustees revised resolution on climate commitments

All of the above may be found at the Sustainability Committee's web page at <https://www.crotononhudson-ny.gov/sustainability-committee>

2019 Government Operations Climate Action Plan (CAP)

Introduction

In 2012, a Climate Action Plan (CAP) was produced by Ecology & Environment, Inc. for six Westchester County towns or villages that covered both community and municipal climate actions. It was submitted to DEC with this document. The CAP developed GHG and energy reduction data for each town or village. This updated CAP focuses only on aspects of that plan that relate to municipal activities of Croton-on-Hudson. This document updates E&E's findings and recommendations related to Croton. It shows how most of them were subsequently achieved, and supplements them with additional actions and opportunities.

Government Operations Measures Recommended and Completed

The following measures were identified for only government operations. Standard text is from the 2012 CAP, which is followed (in italics) by measures that were subsequently taken. Following them (in bold) are those that Croton plans to take.

From section 3.2.2 of E&E's CAP, page 18, these municipal measures were recommended.

1. "Implement energy efficiency measures at municipal buildings and provide the community with information on results."

- *programmable thermostats were installed in each zone between 2014 and 2016.*

- *the burner in the Municipal Building's oil-fired boiler was replaced in 2016 with a new dual-fuel unit that now primarily burns natural gas.*

- *all lighting in the Municipal Building, the three firehouses, and the new Department of Public Works (DPW) facility was converted to LED in 2018-19.*

- *bi-level LED fixtures were installed in the Municipal Building's stairwells, and occupancy sensors added to its bathrooms, pantry and community room in 2018; between 2013 and 2015, others were added in rooms at the firehouses.*

- *all street, parking lot, and park lights were replaced with LED units between 2016 and 2019.*

- *construction of a 250 kWac rooftop PV system is underway on the rooftop of the DPW facility.*

- *all the above have been detailed at public Board of Trustees (and other community) meetings, and via postings at the web page of Croton's Sustainability Committee (sustain-croton.org).*



Going forward, we plan to:

- review (and where feasible) add Community Solar systems via PV carports over parking areas at our municipally-owned train station lot and those of two riverside parks. Other municipal rooftops will also be reviewed for solar installations.
- specific HVAC and envelope options at the new DPW facility have been evaluated and (pending available funding) will be pursued (e.g., lobby window film, HVAC heat recovery).

2. “Contact Con Edison and conduct further investigation of the Grand Street Firehouse electricity use and billing to correct unaccountable electricity usage and cost identified in the energy audit.”

- by 2014, the problem was investigated and corrected through repairs and better controls on that firehouse’s AC system.

No further action is needed. The rooftop PV system at that firehouse was checked in 2018 and its successful ongoing operation verified by a solar system specialist.

3. “Continue the municipal green fleet program and demonstrate progress to the community.”

- in late 2018, a new plug-in hybrid vehicle replaced a gasoline-powered car used for traffic enforcement. It was delivered in May 2019. In December 2019, a fully electric vehicle (Nissan Leaf) was purchased to replace the Fire Inspector’s gasoline-powered car.

- earlier in 2019, a dual port electric vehicle charger was installed at the Municipal Building to charge municipal EVs. Another dual port charger was installed at the same site for public use, and/or additional municipal electric vehicles as they are purchased.

In 2020, two hybrid Police Interceptor vehicles will replace gasoline-powered police cars.

Based on a recently completed fleet inventory, other vehicles are being considered for replacement by EVs, based on age and condition.

We will continue to review, monitor, and (where practical) pursue grant opportunities (e.g., under the VW Diesel Settlement) that help cover the first cost of EV trucks to replace diesel units.

4. “Offer preferred parking to carpool and hybrid vehicles at train station parking lots.”

- In Croton, the single train station lot is municipal property. In 2019, a dual port EV charger was added for public use at the train station at spaces now labeled as dedicated to EVs. A parking ordinance was created to ensure use only by EVs at all municipal chargers.

As solar carports are added at the train station and other Village parking lots, we plan to sequester several more spots for EVs by installing chargers with the carports.



5. “Encourage use of mass transit, and plan new or expanded walking and cycling routes that connect residential areas with business districts, downtown, and commercial areas.”

- between 2015 and 2019, bike routes and racks were set up around the Village, with sharrow markings and dividing lines to define them. Large racks were set up at the train station under a covered section of the station for security and to ensure they remained dry during rain.

Croton’s Bike/Pedestrian Committee is developing its new Master Plan that will include expanded options for access to the Croton-Harmon train station and commercial sites throughout the Village.

6. “Work with other NWEAC communities to strengthen their composting efforts.”

- in 2019, a DEC grant was received for a pilot drop-off food scrap recycling project.

It will gather scraps and transport them to a new commercial composting facility being built in nearby Cortlandt. It is scheduled to be open in spring 2021. Forty to fifty families will be involved in the 6-month pilot. Data from it will be used to evaluate a Village-wide program.

7. “Expand the water savings educational program for residential and commercial users, and work with large users to reduce summer water use.”

- starting in 2018, the Village’s water billing was changed from semi-annual to quarterly. Its tariff was modified to encourage water efficiency by the largest users (e.g., Metro-North train service facility), resulting in a 20% drop in both Village water consumption and a comparable drop in kWh for water pumping.

As detailed below, other technical efforts are being pursued to further reduce water use and energy used to pump it.



8. “Continue to investigate and implement water and energy efficiency opportunities in the water distribution facilities, including review of energy demand, usage, and cost metrics identified in the energy assessment.”

- a water system audit was completed in 2012, and several of its recommendations subsequently pursued. By 2018, motors for all four water pumps had variable speed drives (VSD) that helped reduce pump power consumption per CCF.

- in 2019, the Sustainability Committee installed a water system pressure logger that produced 15-minute interval data in PSI. It helped us understand the drivers (e.g., sudden surges in usage) that create peak electric demand and kWh consumption by the system. That data will help us dispatch the pumps with greater energy efficiency.

In late 2019, we were able to expedite installation of ‘smart’ utility electric meters on all water pumping stations. As we are able to secure 15-minute interval data from them, we will evaluate ways to better dispatch the pumps to further reduce kWh/CCF.

Fulfillment of Action Table Items

The 2012 E&E CAP also included the following Action Table for municipal activities, found on its page 64. Bolded text indicates the actions that were subsequently taken.

- “Assign Climate Action / Sustainability Team”: **Croton’s Sustainability Committee was established in 2009. In 2019, it was designated as the Village’s Climate Smart Community (CSC) Task Force, and its chair designated at the Village’s CSC Coordinator.**

- “Leadership and Direction”: **The chair of the Sustainability Committee was replaced in 2015 with a Certified Energy Manager (CEM) holding LEED AP accreditation. Other engineers were added in 2016, allowing us to expand and expedite the actions detailed above.**



- “Coordination and Oversight”: **Closer liaisons and memoranda of understanding with other Village committees were established, and the Mayor and another Village Trustee became members of the Sustainability Committee. It now gives annual reports on its activities to the Village Board.**

- “Awareness and Outreach”: **The Committee’s web page was expanded with additions of reports and data on municipal energy usage, GHG emissions, projects, etc. Since 2016, both the Conservation Advisory Council (CAC) and the Sustainability Committee have sponsored and/or developed events featuring ways for community members to cut their carbon footprints, evaluate and secure electric vehicles, use Village EV chargers, etc.**

- “Project Implementation”: **As detailed above, many energy projects (some supported by grants) have been implemented. In 2016, conversion of all street lighting and park lighting to LED was completed. In 2017, Croton became a Clean Energy Community (CEC) based on its implementation of tasks required by that designation. In 2018, Croton won a \$50,000 CEC grant that funded an LED upgrade of all lighting in its 5 municipal buildings. A \$24,000 DEC grant was received in mid- 2019 for completion of the installation of 3 dual port EV chargers. A \$14,000 DEC grant was won in late 2019 to fund the pilot food scrap recycling project. A process is now in place for evaluating and developing new projects.**

- “Rank and prioritize climate action measures”: **Within a limit of 10-year simple payback (net of grants, discounts, and rebates), projects with the greatest GHG tonnage reduction per invested dollar are given precedence.**

-“Establish timelines and tracking mechanisms”: **Tracking is done through annual Portfolio Manager reporting which commenced in 2018, and is posted at our web page (<https://www.crotononhudson-ny.gov/village-manager/pages/energy-benchmarking>). Timelines are impacted by available funding.**

- “Secure sources of funding for priority projects”: **Grant options are continually reviewed for opportunities, and vigorously pursued. For internal funding, a significant portion of revenue from leasing of Village roof and land space for community solar projects may be allocated to projects that cut GHG emissions and energy use.**

- “Implement priority projects”: **PV carports at parking lots (to include EV chargers) and replacements of Village cars and light trucks with EVs are presently our highest priorities.**

- “Perform annual reevaluation of energy use and costs”: **Portfolio Manager reporting has been a required Village function since 2018 and will continue to provide such annual evaluations.**

Municipal GHG Target

As per the June 8, 2020 revised resolution (submitted to DEC with this document) of Croton’s Village Board of Trustees, “the Village will seek to reduce its municipal GHG emissions by 20% between 2007 and the end of 2025...”

The 2007 baseline of 1,774 MT CO₂e is detailed in Croton’s 2009 “Greenhouse Gas Emissions Inventory” published in December 2009, which is posted at <https://www.crotononhudson-ny.gov/sustainability-committee/pages/greenhouse-gas-emissions-inventory-december-2009>.