

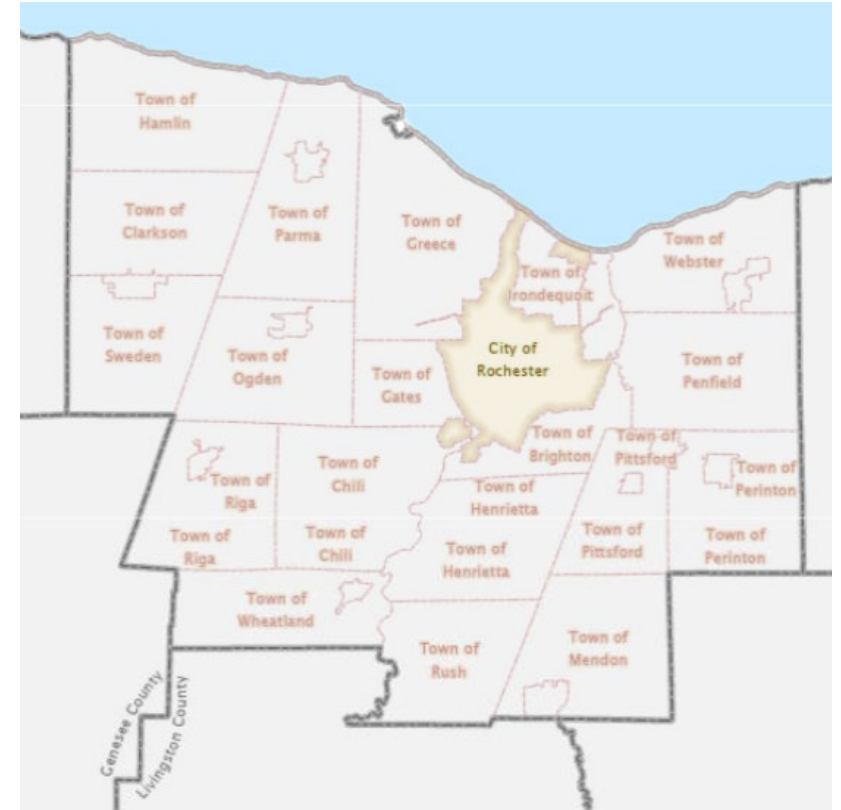


Monroe County Climate Action Plan, A tool for compliance with the CLCPA

Federation of NY Solid Waste Associations Conference
May 2022

Monroe County Facts

- 1,367 square miles
- 657 sq mi land
- 710 sq mi water
- 24 major watersheds
- 19 towns, 10 villages, and the City of Rochester
- Population 755,160
- 305,210 households
- Demographics vary widely between City and suburbs

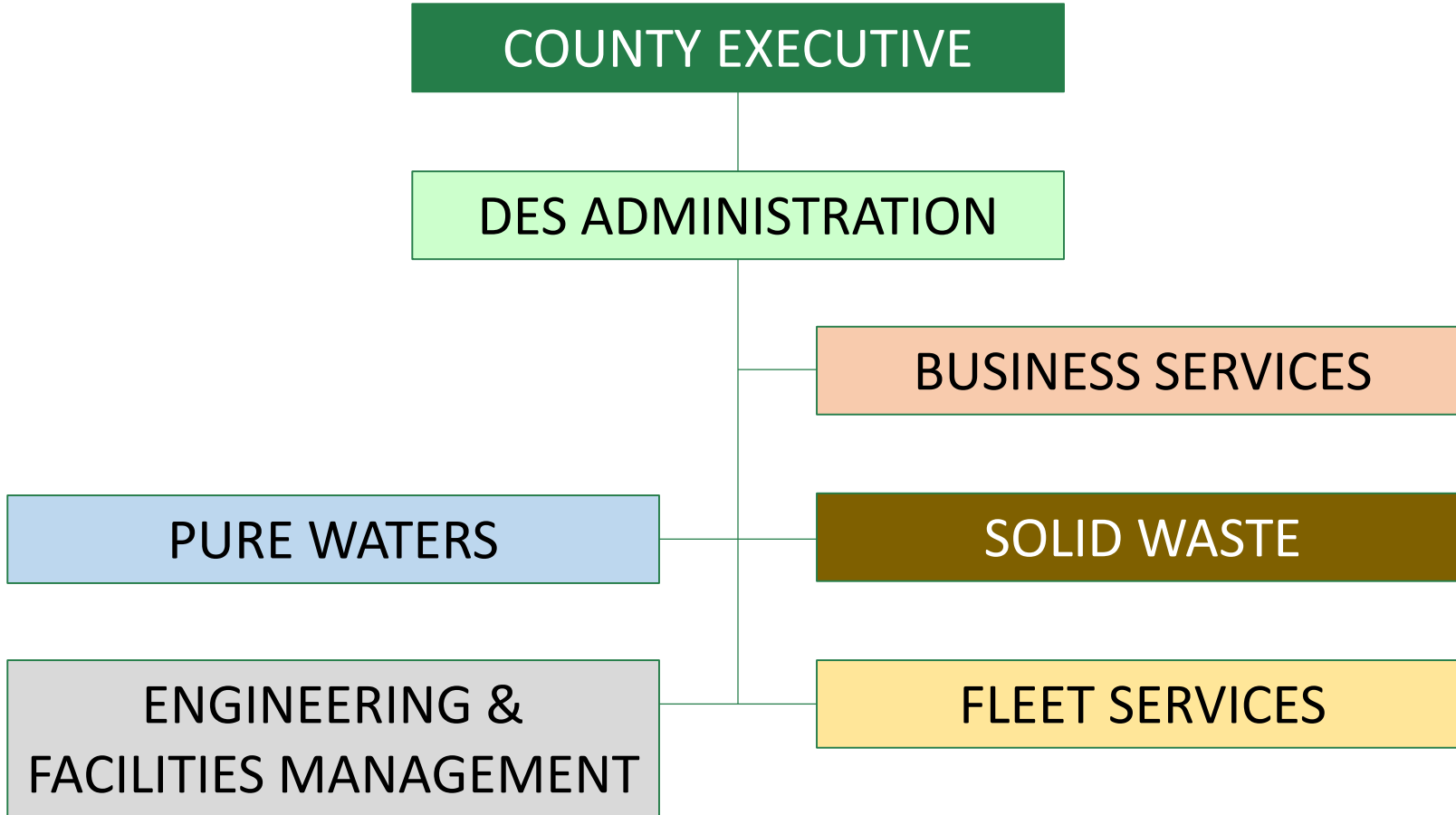




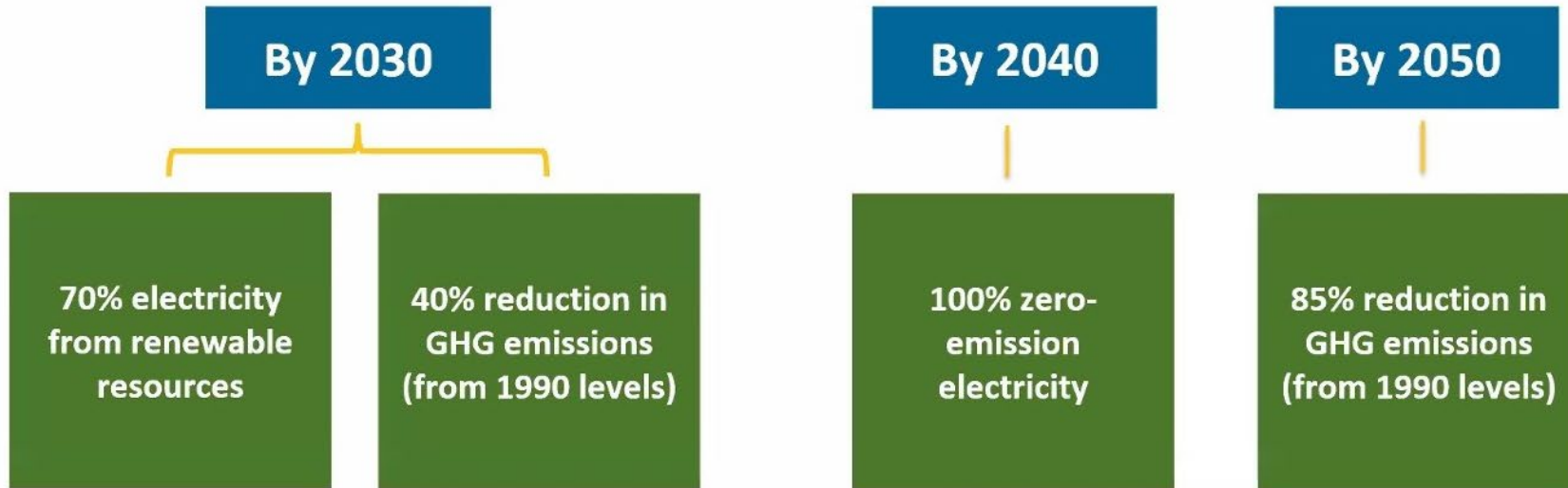
- Green Building policy
- NWQ & Gloria Drive solar facilities
- Mill Seat landfill gas-to-energy plant
- Green Fleet
- LED lighting conversion projects
- ecopark
- Public education – H2O Hero, Recycling



Monroe County Sustainability Efforts

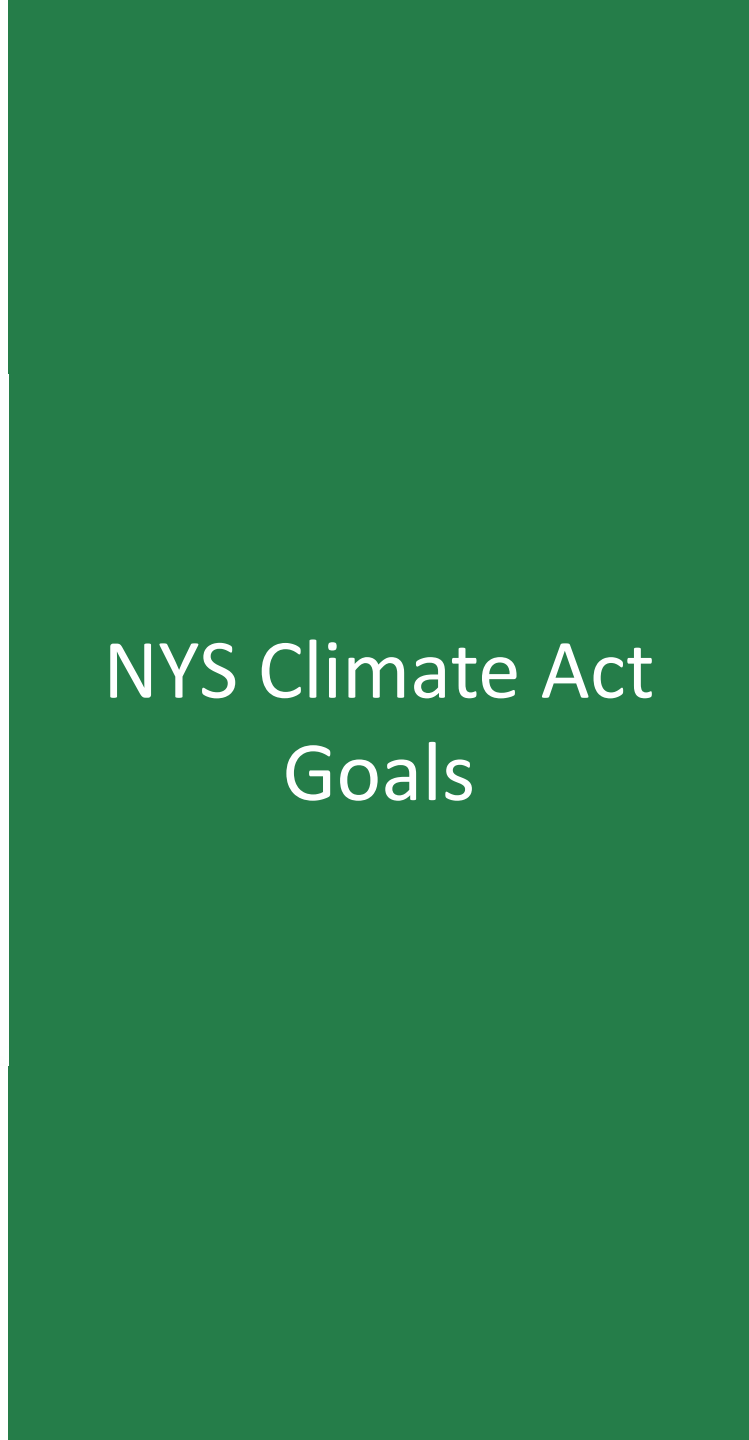


Monroe County Environmental Services



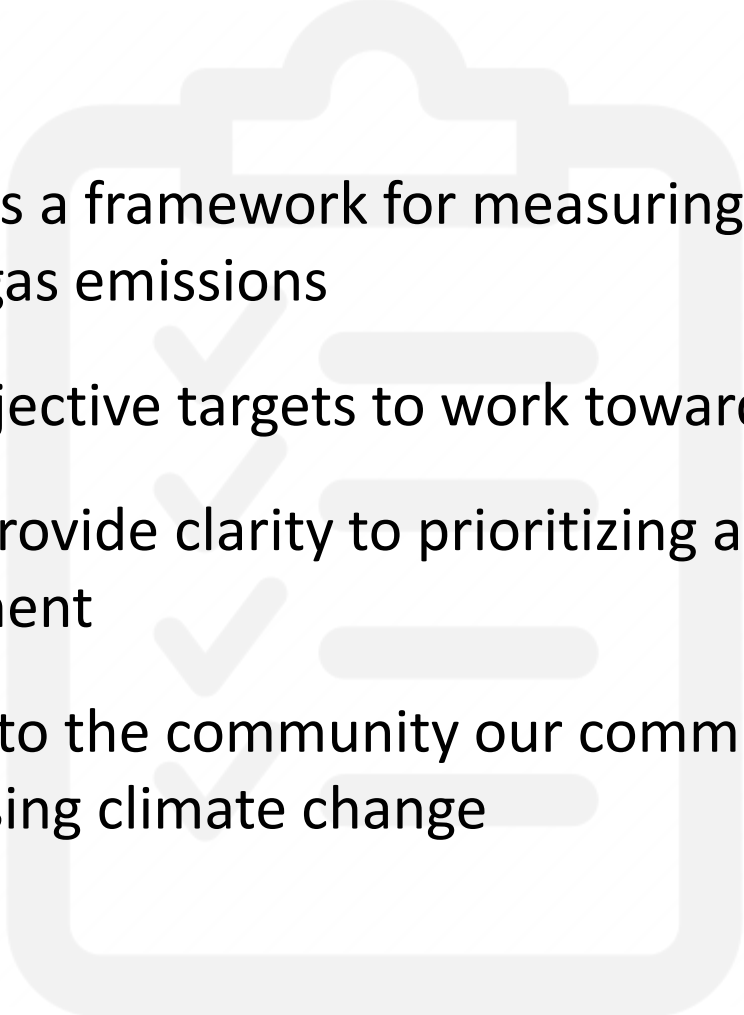
Local governments are needed to reach these goals!

*****DEC starting to add GHG inventories within conditions of landfill permit renewals *****



NYS Climate Act Goals

What does a CAP do?

- Provides a framework for measuring green house gas emissions
 - Sets objective targets to work towards
 - Helps provide clarity to prioritizing activity and investment
 - Signals to the community our commitment to addressing climate change
- 

Basic CAP Framework



What model and approach suits Monroe County best?



Local Governments
for Sustainability

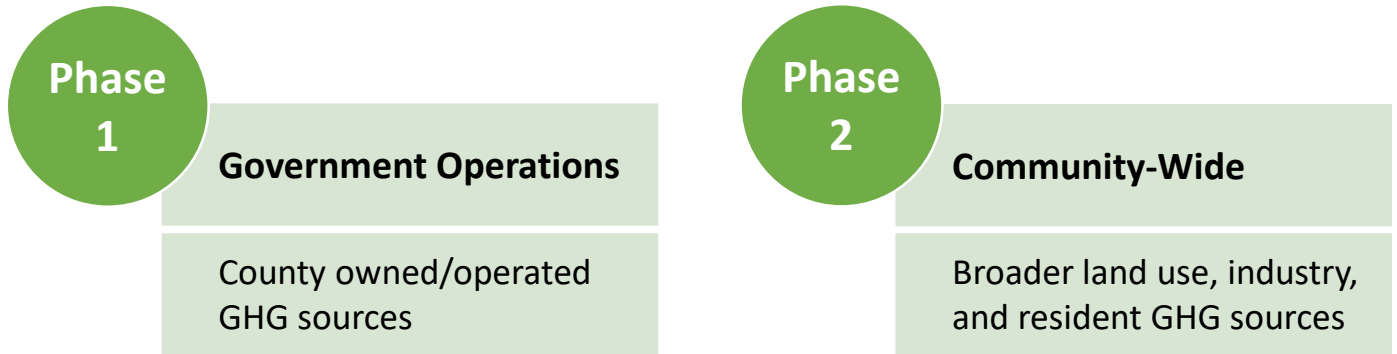
USA

- Founded in 1990 by local government representatives at the UN
- 2,250 municipalities around the world
- Developed first Local Government Operations and Community GHG Inventory protocols in 2012
- Provided ClearPath tool to make it easier to calculate GHG emissions

ICLEI – Local
Governments
for Sustainability



Two Phase Approach



- Approach used by many communities, including City of Rochester
- Model also promoted in NYSDEC Climate Smart Communities Certification Program (Pledge Element 2)
- Government operations emissions expected to be small compared with community, but presents opportunity for leadership

PHASE 1
GOVERNMENT
OPERATIONS

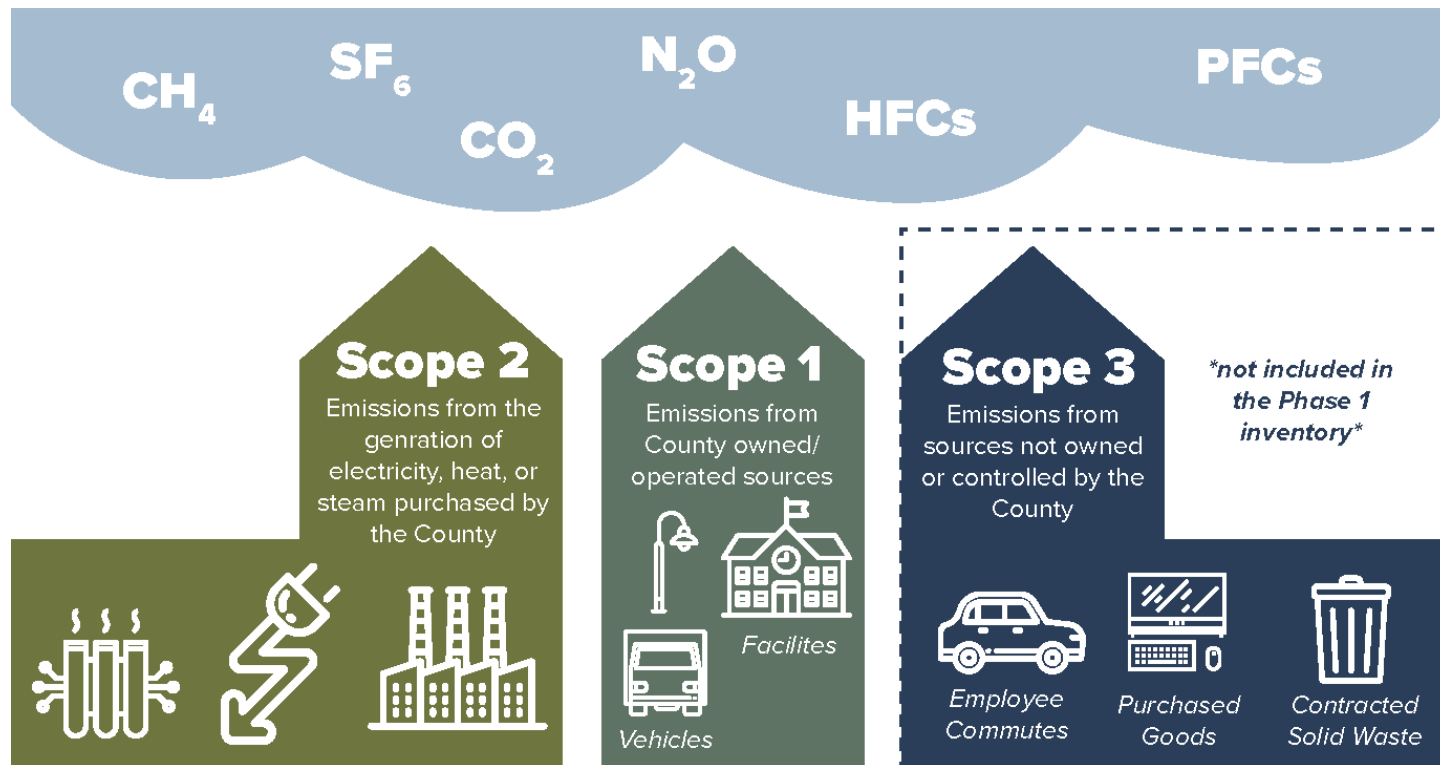


GOVERNMENT OPERATIONS

Project Scope

1. Conduct Baseline Analysis
 - a. Engage stakeholders (operational knowledge)
 - b. Build GHG inventory
 - c. Identify case studies (best practices & benchmarking)
2. Develop Goals, Actions, Strategies, and Policies
 - a. Scenario planning
 - b. Set targets for emission reduction goals
3. Prepare CAP Report

- Establish baseline year for inventory – 2019 selected
- Review County assets and activities contributing to direct/indirect emissions



Building a GHG Emissions Inventory

Sector Classification

- Determine sectors for classification
- Identify key stakeholders – Internal Working Group
- Process opened up questions about ownership of and accountability for GHG emissions
- Refined definition of Phase 1 as what was within the County's control (i.e. Scope 1 and 2 emissions)





- County responsible for one active landfill (Mill Seat), one inactive landfill (Gloria Drive/NEQL)
- When deciding if Phase 1 or Phase 2, look at where FUTURE emissions would come from
 - Gloria Drive – COUNTY CONTROL
 - Mill Seat – COMMUNITY CONTROL

Case Study: Landfill Emissions

Case Study: Airport Emissions

Which sector: Buildings & Facilities, or Transportation?

- Building emissions – COUNTY CONTROL
- Ground fleet emissions – COUNTY CONTROL
- Aviation emissions – COMMUNITY CONTROL





GHG EMISSIONS BY SECTOR (CO2 EQUIVALENTS)



57%
BUILDINGS &
FACILITIES



20%
PURE WATERS
INFRASTRUCTURE



13%
SOLID WASTE &
MATERIALS
MANAGEMENT



7%
COUNTY
FLEET



2%
EXPRESSWAY
LIGHTS & SIGNALS

Sector	Monroe Co (2019)	Orange Co, NC (2005)	Rochester (2018)	NYS Total (2020) (a)	Monroe Co % of NYS
Buildings & Facilities	26,073 MT 57%	11,658 MT 27%	13,161 MT 40%	150M MT (b)	0.02%
Wastewater Infrastructure	9,225 MT 20%	18,034 MT 42%	5,808 MT 6%	10M MT (c)	0.1%
Solid Waste & Materials Management	6,035 MT 13%	2,112 MT 5%	-	38M MT (d)	0.02%
Vehicle Fleet	3,295 MT 7%	7,530 MT 18%	11,819 MT 36%	104M MT	<0.01%
Streetlights & Signals	1,004 MT 2%	3,046 MT 7%	1,944 MT 17%	- (e)	-
Other	-	416 MT 1%	307 MT 1%	80M MT	-
Total	45,632 MT	42,840 MT	33,039 MT	382M MT	0.01%

(a) Source: NYS Scoping Plan Integrated Analysis Technical Supplement Annex 2.

(b) Includes emissions associated with electricity production. US EIA estimates residential and commercial consumes 87% total electricity production.

(c) Wastewater is categorized within Waste: Other.

(d) Compared with Waste: Landfill category.

(e) No comparable category.

Stationary Fuel Combustion: 46%

Steam & District Heating Purchases: 3%

Iola Combined Heat & Power (Electricity): 2%

Emissions from Grid Electricity: 49%

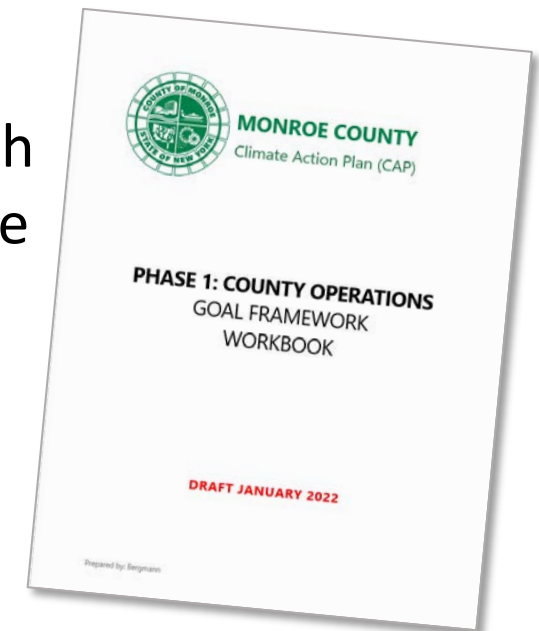


- Emissions associated with sector split evenly between electricity and stationary fuel (mainly natural gas)
- Detailed assessment reveals emissions reduction potential
- Decarbonization of electric energy determined by grid supplier
- Decarbonization of heat energy controlled by County (convert from gas to heat pumps)

Using GHG
Inventory Data
to Identify
Actions

Identifying Feasible Solutions

- GHG emissions goals depend on what reduction activities are applicable and feasible
- Many different pathways, depending on combination of activities
- Workbook of best practices, tailored to Monroe County
- Internal Working Group reviewed which were already implemented, which were feasible, and scale of difficulty



- Scenarios developed based on combinations of actions with similar cost/complexity
- Scenarios labeled based on effort required:
 - Conservative
 - Moderate
 - Aggressive

This has been thought the result of political decisions – signals priorities of the community and how seriously it considers the threat from climate change...things can change as result of the CLCPA

Building Investment Scenarios



MONROE COUNTY PHASE 1 REPORT PROGRESS

We are here



Executive Summary

Overview of Key Plan Elements

Part 1: **Intro to Climate Action Planning** ✓

- Plan Focus
- Phase 1 vs Phase 2 Scoping
- What is a Government Operations Climate Action Plan?
- Plan Framework
- Planning Process
- What is a Government Operations GHG Inventory?
- Climate Mitigation vs. Adaptation

Part 2: **Existing Climate Conditions & Projections** ✓

- The Science of Climate Change
- ClimAID Projections
- Climate Projections for Monroe County

Part 3: **Current Climate Initiatives** ✓

- Climate Smart & Clean Energy Communities
- County Climate Initiatives
- Case Studies

Part 4: **Greenhouse Gas (GHG) Inventory** ✓

- Purpose
- Methodology
- Baseline Input Data Context
- Results
- GHG Emissions by Sector
- Business as Usual (BAU) Forecast

Part 5: **Climate Action Goals & Targets**

- Draft Purpose Statement
- GHG Emissions Operational Goals and Target
- Focus Area or Sector
- Implementation Plan

Part 6: **Next Steps**

- Introduction to County Level Mitigation, Adaptation and Resilience
- Community GHG Inventory/Climate Action Plan (Phase 2)
- Building on other Plans and Initiatives

Thanks