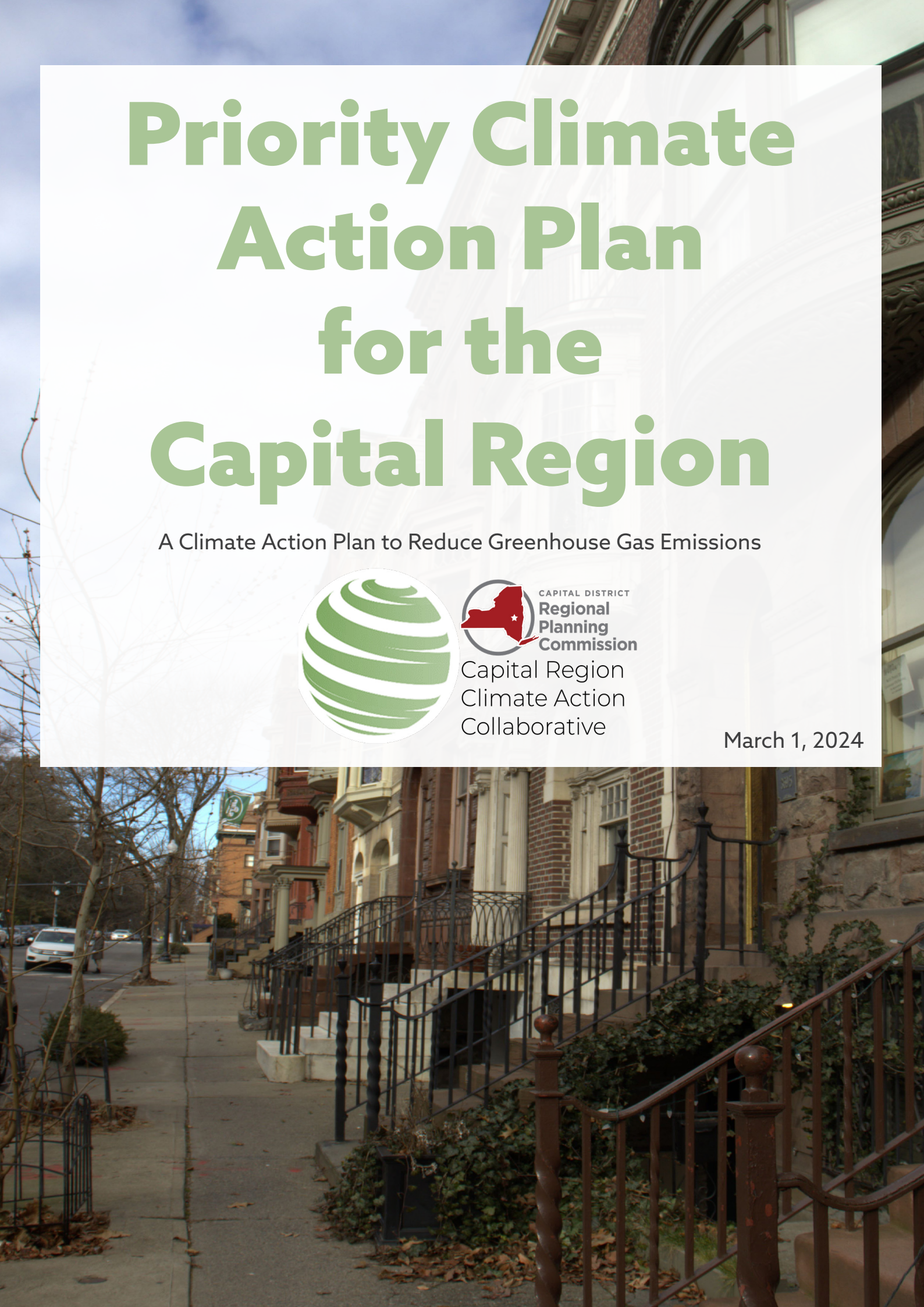
Priority Climate Action Plan for the Capital Region

A Climate Action Plan to Reduce Greenhouse Gas Emissions

CAPITAL DISTRICT Regional Planning Commission

Capital Region Climate Action Collaborative

March 1, 2024



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Cover: City of Albany, NY
Left: Building rehabilitation work

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Above: Solar field in the Town of Glenville, Schenectady County, NY

Acknowledgements

This Priority Climate Action Plan (PCAP) was developed by the Capital District Regional Planning Commission (CDRPC) in coordination with a newly assembled Climate Action Collaborative that includes a consortium of existing regional agencies, partner organizations and municipal climate action leaders covering Albany, Schenectady, Saratoga, Rensselaer, Columbia, Warren, Washington, and Greene Counties.

The Collaborative, at the time of writing this document, includes the Capital Region Transportation Council, the Capital District Transportation Authority, the Affordable Housing Partnership of Albany, Albany County, City of Albany, City of Cohoes, Columbia County, City of Glens Falls, Town/Village of Lake George, City of Saratoga Springs, Schenectady County, Troy Architectural Program, Solarize Capital Region, Capital District Community Energy, South End Community Collaborative, Zero Waste Albany, and the Albany County League of Women Voters.

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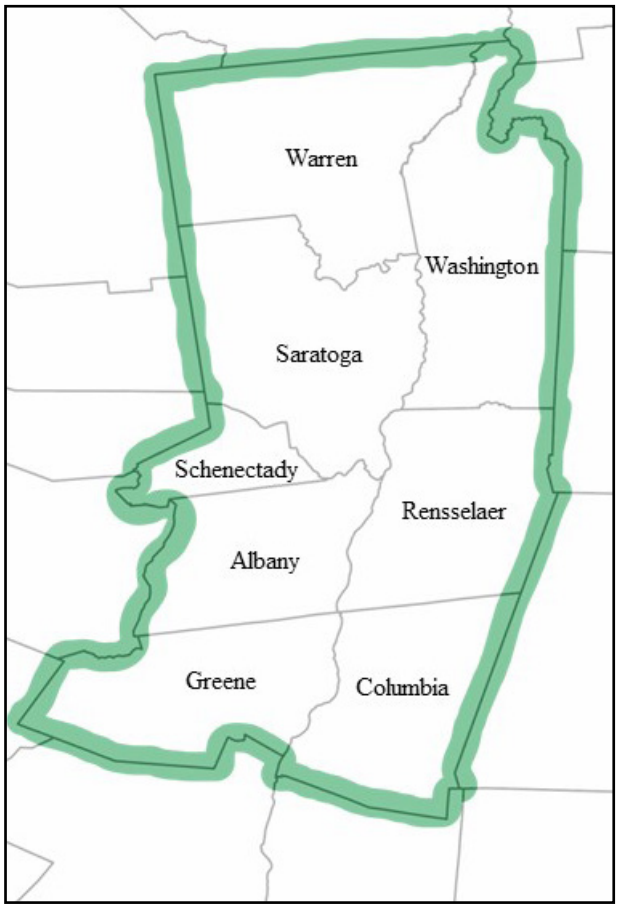
Introduction



Above: The eight county PCAP Planning Area

Plan Overview

On August 3, 2023, the Albany-Schenectady-Troy, NY Metro Area (EPA Region 2), led by the Capital District Regional Planning Commission (CDRPC), was awarded a CPRG Planning Grant. This award is one of only four awards made to New York State Metropolitan Statistical Areas (MSA - an area defined by the U.S. Census 2020 MSA population) and one of five grants awarded in the state of New York (New York State secured the 5th award). The CDRPC is responsible for leading the development of the first ever climate action plan for the Capital Region.

Funding for this Priority Climate Action Plan (PCAP) came from the Climate Pollution Reduction Grants (CPRG) program which provides $5 billion in grants to states, local governments, tribes, and territories to develop and implement ambitious plans for reducing greenhouse gas emissions and other harmful air pollution. Authorized under Section 60114 of the Inflation Reduction Act, this two-phase program provides $250 million for noncompetitive planning grants, and approximately $4.6 billion for competitive implementation grants.

The PCAP is defined by the US EPA as "...a narrative report that includes a focused list of near-term, high-priority, and implementation-ready measures to reduce GHG pollution and analysis of GHG emissions reductions." This PCAP was developed over an approximately 6-month period beginning in September 2023. The PCAP covers all sectors, with a focus on transportation, built environment, and waste.

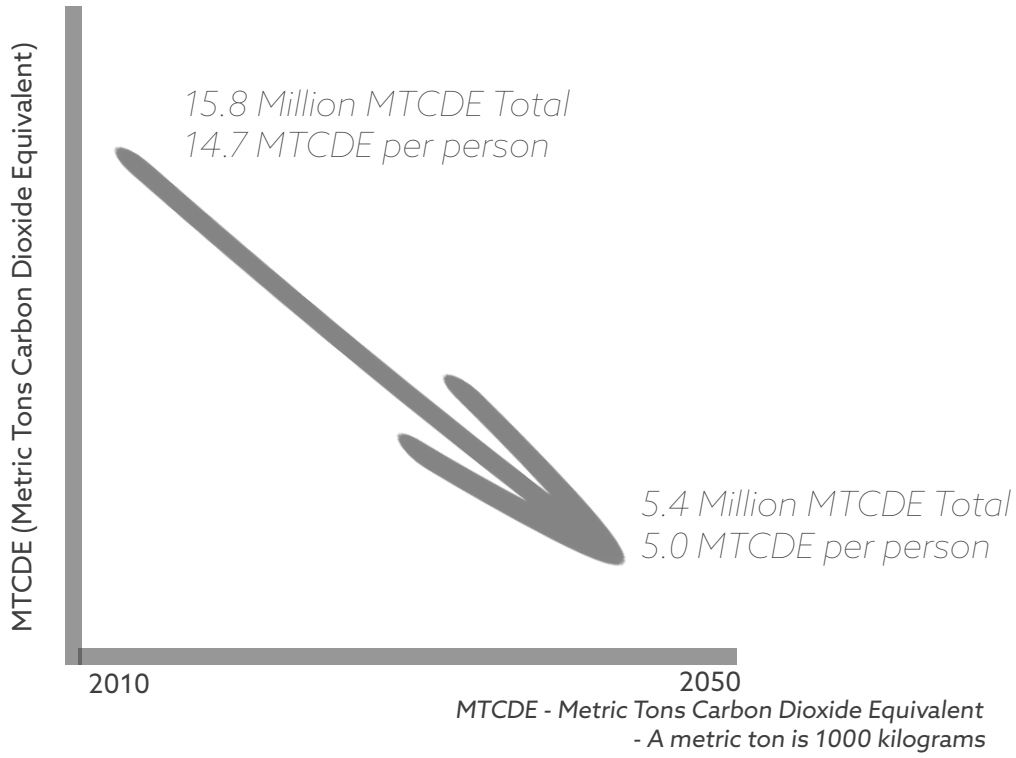
The PCAP is broadly inclusive, with each sector including regional measures that can cultivate local projects and policies from across diverse rural, suburban, and urban communities when they make local climate action plans. This plan focuses on the unique role of local governments in New York State, through home rule, to reduce Greenhouse Gas (GHG) emissions.

This PCAP was developed by engaging regional partners to gather input on their key GHG reduction strategies. The PCAP strategies will support CPRG Implementation Grant proposals, which are due to the EPA by April 1st, 2024. The PCAP is also intended to serve as a container for the priority climate action strategies embraced by the Capital Region's regional agencies and municipal climate action leaders. The strategies also support New York State's Climate Leadership Protection Act, and NY State programs such as NYSERDA's Clean Energy Communities Program, and NYSDEC's Climate Smart Communities Program.

In addition to the PCAP, the CDRPC will develop a Comprehensive Climate Action Plan (CCAP) that will be completed by mid-summer 2025. The CCAP process will include more extensive engagement with regional stakeholders and more elaborate strategies for GHG reduction in all sectors, with particular focus on disadvantaged communities, and with the overriding goal of developing a plan with local input that supports community implementation projects.

The CDRPC utilized the existing 2010 Capital Region GHG inventory (see summary findings below) for development of this PCAP. The inventory identifies GHG emissions for each regional community by sector. An updated inventory will be created during the development of the CCAP. To support the PCAP and CCAP, and to assist communities with their own local climate action planning, CDRPC developed a GHG Dashboard that portrays GHG emissions and sources in graphic form for all region's municipalities. Information on the Capital Region Climate Action Planning efforts can be found under the sustainability section of the CDRPC website.

Capital Region GHG Emissions PCAP Benefits Summary



MTCDE - Metric Tons Carbon Dioxide Equivalent
- A metric ton is 1000 kilograms

Above: View from the Helderberg Escarpment, Albany County, NY

2010 GHG Inventory

Capital District 2010 Regional GHG Inventory - Community GHG inventories for all 160 municipalities in the Capital District

In 2010, the Capital District Regional Planning Commission (CDRPC) developed a GHG Inventory that covers all major GHG sources in the eight-county Capital District Regional Economic Development Council (REDC) region.

It was developed to support communities participating in the Climate Smart Communities (CSC) program. It also serves as the baseline for the Capital District Regional Sustainability Plan developed in 2012 under the Cleaner Greener Communities (CGC) Program. The inventory was developed for the year 2010 and is based upon methods, data sources, and protocol established by the CSC and CGC programs.

Notable Findings

In 2010, Capital District greenhouse gas (GHG) emissions were 15.8 million MTCDE (Metric Tons Carbon Dioxide Equivalent), or 14.7 MTCDE/person. Fossil fuels created 84% of the emissions. Smaller sources included chemical biproducts of the region's cement industry, fugitive refrigerant leakage from buildings and vehicles, and emissions from agriculture and waste management practices. The Capital District spent $4.5 billion for energy ($4100 / person), paying 60% more than it did 10 years ago after adjusting for inflation. Much of the increase was driven by rising petroleum fuel prices.

Albany and Saratoga Counties have an even balance of residential, commercial, and industrial emissions, whereas Schenectady and Rensselaer counties have a higher proportion of emissions in the residential sector. Albany, Greene, and Warren counties have most of the region's cement and paper industry. Washington and Columbia counties, on the other hand, have the largest share of agriculture.

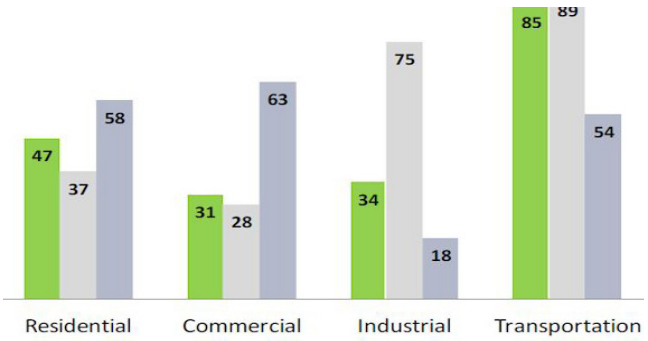
While transportation fuels dominate in all counties and account for 40% of the Capital District's GHG emissions, Upstate New York's electricity is the least-carbon intensive in the nation and offers a unique opportunity to reduce emissions and save residents money by electrifying on-road transportation.

The findings of the 2010 GHG Inventory noted that shifting 20% of on-road gasoline vehicles to electricity would reduce Capital District emissions by 4.5% and save drivers $174 million in fuel costs. Significant reductions and cost savings may be possible by introducing electric vehicles, alternative fuels, more efficient vehicles, transit, and more walkable, compact development patterns.

Development patterns in the Capital District influence emissions. Households in compact, employment-accessible areas generate 31% less greenhouse gas emissions and have 39% lower energy costs. Households in some rural towns consume three times more energy than households in some cities. Rising energy prices hit rural areas harder because they have longer commute distances (using gasoline) and rely on fuel oil and propane for heating.

The Capital District was noted as being a major electric power generating region in New York. Emissions from Athens Generating, the PSEG Bethlehem Energy Center, and Selkirk Cogeneration Partners are equivalent to the emissions from all vehicles operating on all roads, in all eight counties combined.

Finally, the findings noted that the Capital District is diverse and as such, one set of GHG strategies will not necessarily work for all communities in the region.



Energy Use by Sector per Capita
(MMBTU/person) from the GHG Inventory

PCAP Goals

The goals below provide a high-level vision of how to reduce GHG emissions and enhance the quality of life in the Capital Region.

Climate Action Goals

1 Reduce carbon emissions in the Region

2 Enhance carbon sequestration efforts in the Region

Community Benefit Goals

3 Promote climate equity

4 Foster a vibrant green energy economy

5 Enhance community resilience to climate change

6 Promote equitable, healthy, and affordable land use and transportation practices

7 Reduce harmful outdoor air pollution/benefit indoor air quality

Above: View from Rensselaer County, NY

GHG Sectors

The Capital Region produces GHG emissions throughout the economy. The Climate Action Collaborative identified Transportation, the Built Environment, and Waste Sectors as priorities for the PCAP.

Transportation - Priority Sector

GHG emissions from on- and off-road vehicles and equipment such as cars, trucks, trains, ships, airplanes, construction, and other vehicles.

Built Environment - Priority Sector

GHG emissions from energy used in homes and businesses, generally defined as the man-made structures for living, working, and recreation, including fugitive emissions related to energy consumption, such as natural gas leakage.

Waste Management - Priority Sector

GHG emissions from landfills, wastewater, treatment plants, industrial waste streams, disposal of products with refrigerants, and from consuming goods with large embodied GHG impacts.

Electricity (Power) Generation

GHG emissions associated with generating and distributing electricity by large central power stations.

Industrial Processes and Product Use

GHG emissions from manufacturing goods and raw materials such as cement and steel. This sector includes consuming human-made products like refrigerants that are GHGs themselves.

Agriculture

GHG emissions related to producing crops and raising livestock, including animal methane and as emissions from nitrogen fertilizers.

Sequestration and Land Use

Emissions or sequestration of carbon in natural or managed lands remaining in their current use, or when converted from one land use to another.

PCAP Components

Regional Goals: Crosscutting themes reserved for the highest-level aspirations of collective climate action across all sectors. They may be quantifiable or aspirational.

Sector Measures: Ideas intended to deflect GHG emissions from specific sector activity drivers while simultaneously meeting one or more PCAP Regional Goals.

Implementation Measures: Tangible policies, projects, and programs (PPPs) implemented by stakeholders.

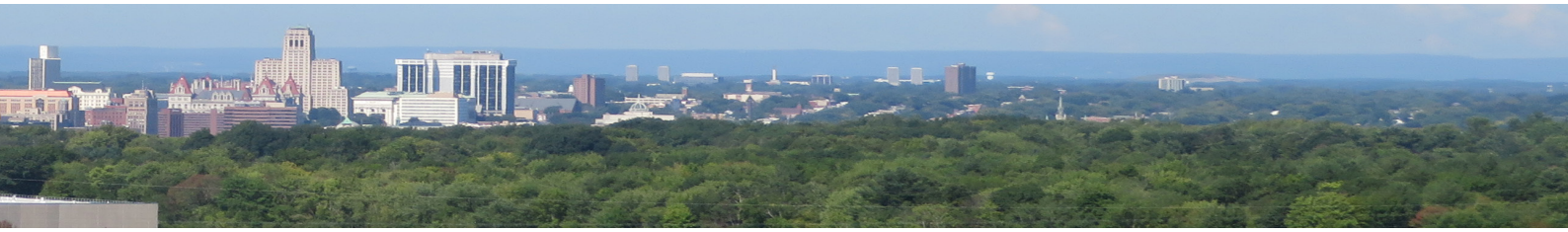
Low Income/Disadvantaged Communities (LIDACs): Communities with residents that have low incomes, limited access to resources, and disproportionate exposure to environmental or climate burdens.

Key Definitions

GHG Sources: Physical sources of GHG emission, such as burning gasoline or refrigerant leaks. Sources are linked to all sectors.

GHG Activity Drivers: Human activities that create GHG emissions from sources, typically targeted in strategies.

GHG Inventory: A list of emission sources and sinks, and the associated emissions quantified using standard methods.



Above: View of the Capital District from Rensselaer County

Transportation Measures

This sector moves people and goods by cars, trucks, trains, ships, airplanes, construction, and other vehicles.

The Transportation Sector accounted for 40% of the GHG Emissions in the Capital Region in 2010.

1 **Shift to Zero Emission Vehicles in Communities**
Encourage consumers and fleet operators to purchase or lease new light, medium- and heavy-duty zero-emissions vehicles and/or fueling infrastructure.

2 **Enhance Optimized Application of Zero Emissions Transit Services**
Invest in zero-emissions transit vehicles, energy supply, power sources and storage strategies, in-field/on-route transit vehicle charging infrastructure, and other support investments needed to eliminate emissions from transit services.

3 **Invest in Zero Emissions Municipal Fleets**
Transition light, medium, and heavy-duty fleets to appropriate zero-emission platforms and prepare to replace vehicles as options become available on the market.

4 **Support Ridesharing/Carpooling**
Reduce single occupancy vehicles on the road with financial incentives and other policies to encourage travelers to commute using rideshare, carpooling, and taxi services to reduce VMT in the region.

5 **Shift Off-Road Vehicles and Equipment to Alternative Fuels**
Create incentives or local policies to transition away from using gasoline and diesel off-road vehicles and equipment used by residents and businesses, local governments, farms, construction companies, and industrial operators.

6 **Shift Single Occupancy Vehicle Trips to CDTA Through Increased and Improved Services**
Fund projects and plans to improve, enhance, and expand CDTA services, to shift trips using individual vehicles to lower-polluting modes and reduce single occupancy vehicle dependency. Current service options include fixed route and commuter bus services, CDPHP Cycle! bikeshare, DRIVE zero-emission carshare, Flex micro-transit, and vanpool.

7 **Support Electric Micro-mobility Adoption in Communities**
Encourage implementation of e-bikes, e-scooters and support infrastructure. Introduce options for direct purchase or reimbursements to local governments and mobility operators to build and install charging infrastructure, including for mobility assistance devices, to encourage more use of these modes throughout the region.

8 **Support Mobility Hubs for People and Goods**
Invest in multi-modal transportation hubs to improve accessibility and efficiency for transit, bicycle/pedestrian, and shared mobility services. Improve freight connectivity through the development of new intermodal freight facilities throughout the region.

Above: CDTA stop in Albany, NY

9 Encourage Smart Growth

Plan for the future by providing assistance to local governments to develop plans and edit codes to encourage infill, compact development, transit-oriented and transit-supportive development, and new paved trails throughout the region. Plan for and support nonvehicular infrastructure investments in road projects that add, or enhance the safety of, pedestrian and bicycle infrastructure.

10 Implement Advanced Traffic Management Technologies

Use advanced data-driven management and monitoring technologies such as real time travel information and optimization to improve traffic flow, reduce idling, and reduce the need for drivers to search for parking spaces.

11 Shift to Zero Emission Port & Airport Operations

Support a resilient zero emissions port by providing incentives for the development and purchase of alternative fuel and advanced vehicle technologies for off-road port vehicles and marine vessels, airport operations vehicles and aircraft.

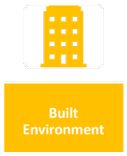
12 Invest in Training to Support Zero-Emission Technologies

Invest in workforce training, such as an educational facility for transit and public fleet maintenance and operations education, as well as battery fire and other new technology safety training needs.

13 Increase Grid Capacity and Energy Supplies

Coordinate with utilities, NYSERDA, and the Public Service Commission to invest in local transmission capacity upgrades necessary to electrify planned public sector fleet electrification initiatives and bring about broader adoption of EVs.

Built Environment Measures



This sector includes energy used by homes and commercial businesses for living, working, and recreation.

The Built Environment Sector accounted for 31% of the GHG Emissions in the Capital Region in 2010.

1 Efficient Equipment & Weatherization

Incentivize building envelope insulation and purchases of energy-efficient appliances, heating and cooling equipment, lighting, and building products. Implement insulating, cool roofing, passive design, and other measures in existing government, educational, commercial, and residential buildings.

2 Transition to Clean Heating and Cooling Systems

Install air and ground source heat pumps in residential and commercial buildings to reduce use of natural gas and fuel oil.

3 Electrification Readiness

Prepare building stock by investing in electric service and envelop upgrades needed for heat pumps, on-site renewable generation, energy storage, and battery electric vehicle (BEV) charging. Invest, additionally, in buildings in LIDAC communities to solve barrier issues such as mold abatement, asbestos removal, and remediation of other hazards.

4 Expand Local Renewable Power through Land Use & Energy Planning

Use stakeholder planning and zoning processes to identify optimal locations for small, medium, and large renewable energy generation and storage systems. Improve coordination between NYSERDA and municipalities on related policy and programs for solar, wind, energy storage, and anerobic digestion.

5 Clean & Innovative Power Generation

Eliminate fossil-fuel power generation in high density residential communities to reduce GHG emissions and exposure to harmful air pollution in urban areas.

6 Clean Energy Supply Access

Promote clean energy policies and programs like Community Choice Aggregation to, where appropriate, increase access to cost-effective clean energy supplies.

7 Energy Performance, Standards and Codes

Adopt and enforce advanced energy codes or stretch codes.

8 Expand Grid Capacity & Enhance Utility Partnerships

Perform local energy capacity studies and remove regulatory barriers through work with utilities, New York State, and the PSC to create a funding mechanism for interconnection costs, system expansion, and substation upgrades necessary to make building electrification upgrades feasible.

Above: Residential Building in Glens Falls, NY

9 Increase Local Climate Action Planning

Engage municipalities, ports, airports, and other public entities to develop community and government climate action plans.

10 Education and Training Initiatives

Increase land use, zoning, code, and building literacy through targeted education on issues such as, but not limited to, energy technologies, building science, and smart land use. Work with local institutions to expand on-the-job training programs and workforce development.

11 Microgrids and Thermal Loops

Identify and implement thermal loops to replace the natural gas grid where feasible. Leverage thermal energy sources such as ground source geothermal, heat recovery from municipal wastewater systems, water bodies, and other sources available. Work with NYSERDA to ensure local efforts support emerging operating standards and scalability statewide.

12 Rental Housing Energy Initiative

Develop a comprehensive program in partnership with housing advocates, developers, landlords, and municipalities to ensure rental housing is upgraded to provide tenants with clean, healthy, and affordable energy.

Waste Measures

Sustainable materials management is a systematic approach to using and reusing materials more productively over their entire life cycles.

The Waste Sector accounted for 2% of the GHG Emissions in the Capital Region in 2010.

1 **Increase Organic Waste Composting and Diversion**
Reduce landfills by creating community and government programs to promote residential, commercial, and industrial composting, including food scraps.

2 **Recover and Avoid Climate-Harmful Refrigerants**
Implement measures to reduce leakage and ensure recovery and recycling of hydrofluorocarbon (HFC) based refrigerants. Invest in low emissions alternatives in industries such as hospitals, grocery stores and ice rinks. Manage and track refrigerants in GHG inventories.

3 **Promote Waste-Smart Clean Energy Development**
Eliminate harmful forever-chemicals in clean energy products and projects and consider lifecycle emission impacts of products being considered as GHG measures. Avoid counter-productive strategies like using high GWP refrigerants in heat pumps and reducing carbon sequestration by cutting forests for solar development. Include decommissioning and recycling strategies in all energy projects to avoid stranded assets and environmental hazards in the future.

4 **Move Toward a Zero-Waste Economy**
Create integrated sustainable supply chains such as local farm to table food systems integrated with composting that reduces GHG emissions and improves access to healthy food. Evaluate all product consumption streams and replace disposable products with those designed to be reusable.

5 **Recover Energy from Managed Waste Streams**
For large and managed waste streams, such as those from farms, industrial food facilities, and wood products industries. Consider anerobic digestion or other clean technologies to generate power, or to create energy products like renewable natural gas, hemp, or wood pellets.

6 **Leverage Waste to Create Carbon Sequestration**
Use industrial wood waste and other suitable feedstock to produce biochar as a sustainable soil amendment to increase permanent carbon sequestration.

7 **Reduce Emissions from Open and Closed Landfills**
Increase emissions reductions through improved landfill management, gas recovery, flaring, and energy generation at the open City of Albany and Town of Colonie Landfills. Evaluate the region's numerous closed landfills and reduce passive methane emissions from vents. Repurpose closed landfills for solar development or for other public benefit.

8 **Promote Low-Emissions Wastewater Treatment Plant Operations**
Promote fully aerobic treatment processes to reduce methane emissions and consider drying biosolids for land reapplication instead of landfilling if free of contaminants. When using aerobic digestion to reduce sludge volume, recover methane as an energy source or flare it.

9 **Reduce Emissions from Septic Systems**
Inventory and evaluate methane emissions from septic systems and develop strategies to reduce them such as connecting to public sewers or introducing aeration into tanks.

PCAP GHG Benefits & Authority to Implement

Priority Sectors: Transportation, Built Environment, and Waste

PCAP sector measures are local and regional climate actions underway and planned throughout the region. They were developed through consensus discussion and through a review of existing local climate actions. Each measure is quantified f or its potential impact on GHG emissions from 2025 to 2030 with realistic assumptions of progress in the next five years, and to 2050 with more aspirational assumptions reflecting the region's commitment to New York's goal of reducing emissions by 80% by 2050. Long term PCAP GHG benefits reflect local action only and do not count expected benefits of state and federal actions that will further reduce emissions. GHG reduction benefits are summarized below and detailed by measure in the following pages. PCAP measures calculations and methodologies are available here .

2010 Baseline GHG Emissions
15.8 Million MTCDE

Reduction by 2030
12% or 1.9 Million MTCDE

Reduction by 2050
66% or 10.4 Million MTCDE

PCAP GHG Benefits Summary (MTCDE*)

Sector	Measures	By 2030	By 2050
Transportation	13	767,638	4,498,385
Built Environment	14	967,228	5,180,338
Waste Management	9	172,808	764,974
TOTALS:	36	1,907,674	10,443,697

**MTCDE (Metric Tons Carbon Dioxide Equivalent)*

Authority to Implement

Climate action is the result of collective action by many entities. While there are actions outside of the region's jurisdiction, such as those implemented by the state and federal government, or by large industries decarbonizing supply chains of products brought to the region, in general, the PCAP measures consider actions that are to be implemented locally. The following tables detail the authority to implement each measure.

Transportation Sector			GHG Reductions (MTCDE/year)	
Measure #	**Measure Name**	**Authority to Implement**	**Benefits by 2030**	**Benefits by 2050**
1	Shift to Zero Emission Vehicles in Communities	Local Governments, Community Groups, Businesses, Individuals	360,617	3,088,820.63
2	Enhance Optimized Application of Zero Emissions Transit Services	CDTA	29,045	64,239.71
3	Invest in Zero Emissions Municipal Fleets	Local Governments, CDTA	36,322	83,188.62
4	Support Ridesharing/ Carpooling	CDTA, The Transportation Council, Local Governments, Businesses	136,322	340,805.38
5	Shift Off-Road Vehicles and Equipment to Alternative Fuels	Local Governments, The Transportation Council, Community Groups, Businesses	32,058	192,780.21
6	Shift Single Occupancy Vehicle Trips to CDTA Through Increased and Improved Services	CDTA, The Transportation Council	34,081	85,201.34
7	Support Electric Micro-mobility Adoption in Communities	CDTA, The Transportation Council, Local Governments	20,448	51,120.81
8	Support Mobility Hubs for People and Goods	CDTA	Not Quantified	Not Quantified
9	Encourage Smart Growth	Local Governments, Community Groups	56,233	281,164.44
10	Implement Advanced Traffic Management Technologies	CDTA, The Transportation Council	62,013	310,064.29
11	Shift to Zero Emission Port & Airport Operations	Port of Albany, Albany County Airport Authority	500	1,000.00
12	Invest in Training to Support Zero-Emission Technologies	CDTA, The Transportation Council, Local Colleges and Universities	Not Quantified	Not Quantified
13	Increase Grid Capacity and Energy Supplies	Utilities	Not Quantified	Not Quantified

Built Environment			GHG Reductions (MTCDE/year)	
Measure #	**Measure Name**	**Authority to Implement**	**Benefits by 2030**	**Benefits by 2050**
1	Efficient Equipment & Weatherization	State, Local Governments	307,804	1,539,020.01
2	Transition to Clean Heating and Cooling Systems	State, Local Governments, Individuals	343,051	2,232,881.07
3	Electrification Readiness	State, Local Governments, Individuals	81,845	615,608.00
4	Expand Local Renewable Power through Land Use & Energy Planning	Local Governments, Developers, Commercial Sector	106,160	424,641.77
5	Clean & Innovative Power Generation	State Government	Not Quantified	Not Quantified
6	Clean Energy Supply Access	Local Governments	92,515	231,286.82
7	Energy Performance, Standards and Codes	Local Governments	12,312	24,624.32
8	Expand Grid Capacity & Enhance Utility Partnerships	State and Local Governments, Utilities, and the PSC	Not Quantified	Not Quantified
9	Increase Local Climate Action Planning	Local Governments	Not Quantified	Not Quantified
10	Education and Training Initiatives	Local Governments, Universities, businesses.	Not Quantified	Not Quantified
11	Microgrids and Thermal Loops	Local Governments	17,335	92,884.39
12	Rental Housing Energy Initiative	Local Government, NYSERDA, Housing Authorities, Housing Advocates, Developers, Landlords	6,205	19,391.46

Waste Sector			GHG Reductions (MTCDE/year)	
Measure #	**Measure Name**	**Authority to Implement**	**Benefits by 2030**	**Benefits by 2050**
1	Increase Organic Waste Composting and Diversion	Local Governments, Community Groups, Businesses, Individuals	76,440	203840.76
2	Recover and Avoid Climate-Harmful Refrigerants	Local Governments, Businesses	20,029	320463.57
3	Promote Waste-Smart Clean Energy Development	Local Governments, Community Groups, Businesses	Not Quantified	Not Quantified
4	Move Toward a Zero-Waste Economy	Local Governments, Industry, Businesses, Agriculture, Community Groups	Not Quantified	Not Quantified
5	Recover Energy from Managed Waste Streams	Industry, Agriculture, Commercial Food Businesses	41,375	165498.27
6	Leverage Waste to Create Carbon Sequestration	Wood Products Industries	Not Quantified	Not Quantified
7	Reduce Emissions from Open and Closed Landfills	Local Governments	24,480	48959.4
8	Promote Low-Emissions Wastewater Treatment Plant Operations	Local Governments	10,485	26211.74
9	Reduce Emissions from Septic Systems	Local Governments, Community Groups	Not Quantified	Not Quantified

LIDAC Analysis

The Capital District's eight county population is 1,106,088. The EPA's EJScreen: Environmental Justice Screening and Mapping Tool designates 81 census tracts containing disadvantaged communities, representing 20% of our population. In general, disadvantaged areas are clustered primarily in urban communities and in some rural towns. See the Appendix for the list of LIDAC U.S. Census tracts.

Existing Climate Risks, Impacts and Vulnerabilities

All residents within the Capital Region will experience the effects of climate change. However, residents living in areas identified as LIDAC are particularly vulnerable to these effects. LIDAC residents are concentrated in urban areas near waterways vulnerable to flooding. These urban areas have less vegetative coverage and therefore more pronounced heat island effects. Most of the region's LIDAC residents live in areas of high automobile traffic and therefore poor air quality. Moreover, these residents often lack the resources to take advantage of educational opportunities that lead to high quality jobs. Many LIDAC residents are renters and are not in the position to electrify their heating and cooling, or as owners, often lack the resources to invest in building weatherization and electrification upgrades.

LIDAC Engagement Process

The Capital Region PCAP was developed through the Capital Region Climate Action Collaborative. The intention of the Climate Action Collaborative is to be a continuous forum for regional agencies and additional partners to meet, coordinate, plan, and implement climate action initiatives coming out of the PCAP and CCAP process and additional climate action initiatives now and into the future. Through the Collaborative, CDRPC engaged with key regional organizations that actively engage with and support LIDAC populations, key municipalities with large LIDAC populations, and local not-for-profit organizations and volunteers who work to improve the lives of LIDAC populations. The Climate Action Collaborative members assisted in developing actions relevant to their appropriate sectors. Members met multiple times during the six-month PCAP development phase, worked on their own, and in coordination with other members to develop detailed priority measures for their focus area.

In addition to direct engagement with regional stakeholders, CDRPC publicized the CPRG planning grant and implementation grant programs through multiple regional eblasts to regional communities and stakeholders, a regional program webinar (with EPA participation), a regional climate action conference (also with EPA participation), and several direct presentations to the South End Community Collaborative, which is a large group of regional organizations and residents focused on supporting LIDAC populations and initiatives.

Additional Benefits of PCAP Measures to LIDACs

PCAP climate measures create additional benefits in disadvantaged communities. Reducing fossil fuels used in households and from local vehicles will reduce exposure to criteria air pollution (CAPs) and hazardous air pollution (HAPs). In addition, residents in disadvantaged communities spend relatively more of their income on energy compared to other areas, and PCAP measures will save them money. Electrification readiness in LIDAC building stock will enhance the value of properties and redirect routine investment in fossil fuel replacements to energy saving heat pumps.

LIDAC-Focused Benefits	Value
GHG Savings (MTCDE/year)	358,111
CAP Exposure Avoided (tons)	1,143
HAPs Exposure Avoided (lbs)	24,285
Energy Savings (MMBTU*)	4,491,621
Energy Cost Savings ($)	80,880,327
Jobs Created	TBD
Leveraged Investment ($)	TBD

**MMBTU - Million British Thermal Unit*

Appendix

- Measures Development Process Summary
- Transportation Measures Consolidation Flow Chart
- List of LIDAC Census Tracts
- CDRPC Climate Action Plan Webpage & GHG Dashboard Details

Measures Development Input Template

To facilitate priority measures development through engagement with Climate Action Collaborative members, an input template was developed to draft and track changes in the transportation, built environment and waste sectors. Below is a copy of the instructions and details on key PCAP component development.

Capital Region Climate Action Collaborative

Key Stakeholder Input Instructions

- Review / Comment on proposed PCAP Components and structure (Below)
- Review PCAP Regional Goals (next tab)
- Review Regional GHG Inventory to understand role of each sector (next tab)
- Recommend Sector Strategies (next tab)
- Identify Implementation Measures for CPRG Funding, and as existing measure to report

PCAP Components - Key Definitions

Regional Goals: Crosscutting themes reserved for the highest level aspirations of collective climate action across all sectors. They may be quantified (a GHG Emission Reduction goals) or aspirational like climate resilience or equity.

Sector Strategies: Strategies define intention to deflect GHG emissions from specific sector Activity Drivers while simultaneously meeting one or more PCAP Regional Goals. Strategies do not have owners and represent a holistic bucket of potential measures that any regional stakeholder could implement to support the strategy. Characteristics of good strategies- they:

- Refer to one or more plan goals, and a comprehensive set of strategies should cover all goals.
- Are Holistic and concise, with limited overlap, and targeting one or more GHG Activity Drivers. Enabling stakeholders in all sectors to develop projects that reference and roll up in the plan.
- Expressed, ideally, it in a quantitative way (such as %) so the strategy can be quantified. For example, "Reducing VMT through transit by 20%" is better than broadly stating that "Reducing VMT through Transit"

Quantifying strategies create a roadmap for how all sectors tie together to contribute to collective climate action.

Implementation Measures (IMs): These are tangible policies, projects, and programs (PPPs) implemented by stakeholders. They are the most resolved level of action, from a single community buying an electric vehicle, to a regional organization running a program to support EV infrastructure. Characteristics of good IMs - they:

- Have a specific owner or organization, are budgeted, and implemented
- Can be listed tracked as either implemented, planned, or aspirational.
- Benefits can be measured
- Acts as a "living" list of actions in the region. Whereas PCAP Goals and Strategies may be reviewed and refined, on occasion, IMs can be added and removed as needed.

Quantifying measures helps track actual progress, in each sector, to reaching PCAP goals

GHG Emissions Accounting - Key Definitions

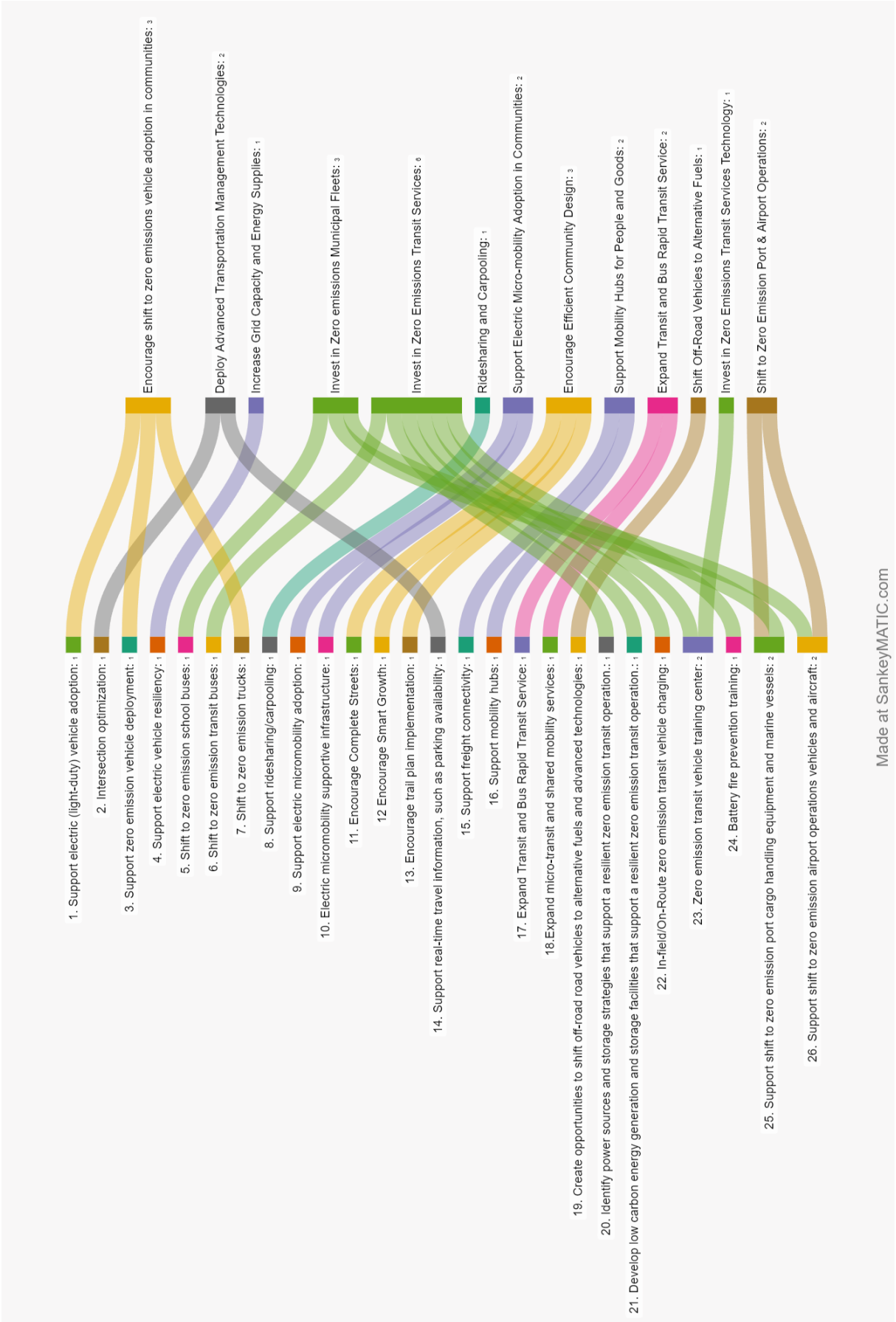
PCAP Sectors: Conventional macroeconomic groupings for planning, whether for GHG emissions, economic development and other planning. Subsectors further classify emissions.

GHG Sources: Physical sources of GHG emission, such as burning gasoline or from leaking refrigerants. Sources are linked to all sectors

GHG Activity Drivers: Human activities that create GHG emissions from sources, and these are usually targeted in strategies. For example, transportation demand (VMT) is an activity driver for GHG emissions in the transportation sector.

Transportation Measures Consolidation Flow Chart

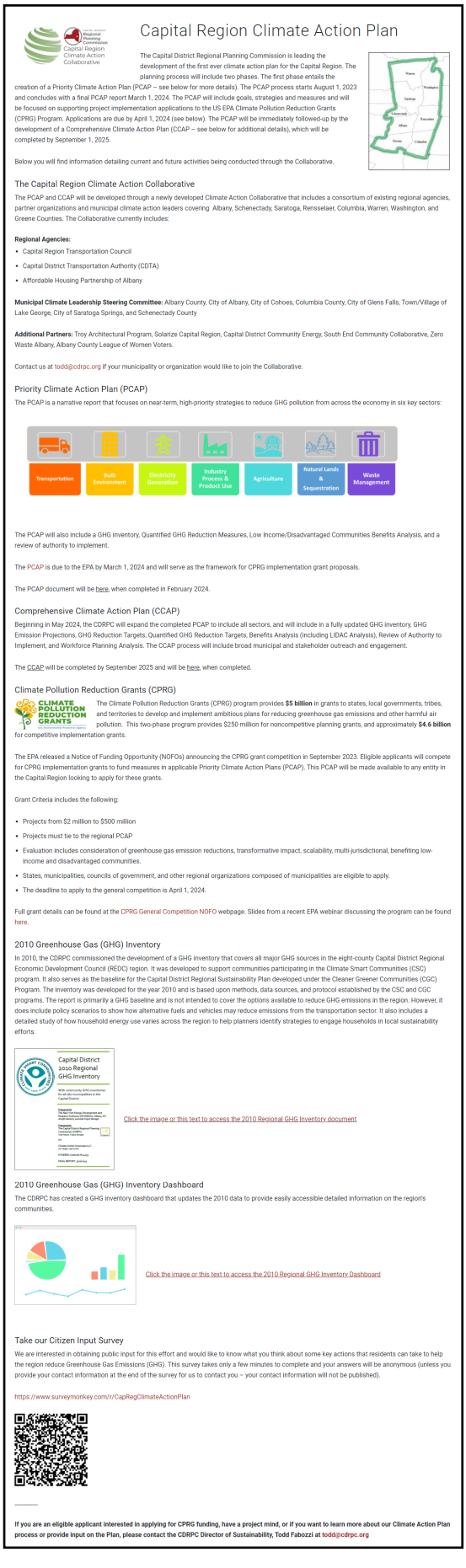
An expansive list of initially identified transportation measures has been consolidated for the PCAP.



LIDAC U.S. Census Tracts

County	Census Tract	Population	%LIDAC
Albany County	36001000100	2073	100
Albany County	36001000201	3125	100
Albany County	36001000202	2598	100
Albany County	36001000301	3190	100
Albany Count	36001000302	3496	100
Albany County	36001000403	4418	31
Albany County	36001000404	5194	100
Albany County	36001000501	3440	100
Albany County	36001000600	3500	100
Albany County	36001000700	4196	100
Albany County	36001000800	2216	100
Albany County	36001001100	1826	100
Albany County	36001001500	4528	62
Albany County	36001002000	5960	100
Albany County	36001002100	3937	32
Albany County	36001002300	2147	100
Albany County	36001002500	3208	100
Albany County	36001002600	5179	100
Albany County	36001012800	3797	100
Albany County	36001012900	3931	100
Albany County	36001013100	2934	29
Albany County	36001013200	3380	100
Albany County	36001013300	4397	33
Albany County	36001014001	4200	16
Albany County	36001014002	4376	20
Albany County	36001014401	3985	29
Columbia County	36021001200	3168	100
Columbia County	36021001300	2726	14
Greene County	36039080202	2627	100
Greene County	36039081001	1759	100
Greene County	36039081002	2518	100
Greene County	36039081101	4049	100
Greene County	36039081102	2972	100
Rensselaer County	36083040100	4017	100
Rensselaer County	36083040200	4279	100
Rensselaer County	36083040300	3350	100
Rensselaer County	36083040400	2531	100
Rensselaer County	36083040500	2055	100
Rensselaer County	36083040600	2286	100
Rensselaer County	36083040701	3786	100
Rensselaer County	36083040702	1629	100
Rensselaer County	36083040800	1731	45
Rensselaer County	36083040900	2950	100
Rensselaer County	36083041000	4536	30
Rensselaer County	36083041102	2682	38
Rensselaer County	36083041300	5283	16
Rensselaer County	36083051500	2880	100
Rensselaer County	36083051701	3495	100
Rensselaer County	36083051702	3216	100
Saratoga County	36091060200	3744	100
Saratoga County	36091060400	2562	100
Saratoga County	36091061002	1789	36
Saratoga County	36091061101	2002	18
Saratoga County	36091061303	2123	100
Saratoga County	36091062300	2046	100
Schenectady County	36093020102	2605	100
Schenectady County	36093020200	2839	100
Schenectady County	36093020300	1771	100
Schenectady County	36093020700	5618	100
Schenectady County	36093020800	3943	100
Schenectady County	36093020900	3767	100
Schenectady County	36093021001	926	100
Schenectady County	36093021002	2311	100
Schenectady County	36093021200	2892	40
Schenectady County	36093021400	3526	100
Schenectady County	36093021500	3227	100
Schenectady County	36093021600	3709	100
Schenectady County	36093021700	4167	100
Schenectady County	36093033200	3405	100
Warren County	36113070200	1862	100
Warren County	36113070400	3884	37
Warren County	36113070500	2554	100
Warren County	36113073000	3959	100
Washington County	36115080100	4820	21
Washington County	36115080200	2607	45
Washington County	36115080301	3089	36
Washington County	36115080302	2452	19
Washington County	36115082001	4880	15
Washington County	36115084001	3179	100
Washington County	36115084002	3036	100
Washington County	36115086000	1786	100

Climate Action Plan Webpage & GHG Dashboard



Capital Region Climate Action Plan

The Capital District Regional Planning Commission is leading the development of the first ever climate action plan for the Capital Region. The planning process will include two phases. The first phase entails the creation of a Priority Climate Action Plan (PCAP – see below for more details). The PCAP process starts August 1, 2023 and concludes with a final PCAP report March 1, 2024. The PCAP will include goals, strategies and measures and will be focused on supporting project implementation applications to the US EPA Climate Pollution Reduction Grants (CPRG) Program. Applications are due by April 1, 2024 (see below). The PCAP will be immediately followed-up by the development of a Comprehensive Climate Action Plan (CCAP – see below for additional details), which will be completed by September 1, 2025.

Below you will find information detailing current and future activities being conducted through the Collaborative.

The Capital Region Climate Action Collaborative

The PCAP and CCAP will be developed through a newly developed Climate Action Collaborative that includes a consortium of existing regional agencies, partner organizations and municipal climate action leaders covering Albany, Schenectady, Saratoga, Rensselaer, Columbia, Warren, Washington, and Greene Counties. The Collaborative currently includes:

Regional Agencies:

- Capital Region Transportation Council
- Capital District Transportation Authority (CDTA)
- Affordable Housing Partnership of Albany

Municipal Climate Leadership Steering Committee: Albany County, City of Albany, City of Cohoes, Columbia County, City of Glens Falls, Town/Village of Lake George, City of Saratoga Springs, and Schenectady County

Additional Partners: Troy Architectural Program, Solarize Capital Region, Capital District Community Energy, South End Community Collaborative, Zero Waste Albany, Albany County League of Women Voters.

Contact us at todd@cdrpc.org if your municipality or organization would like to join the Collaborative.

Priority Climate Action Plan (PCAP)

The PCAP is a narrative report that focuses on near-term, high-priority strategies to reduce GHG pollution from across the economy in six key sectors:

Transportation | Built Environment | Electricity Generation | Industry Process & Product Use | Agriculture | Natural Lands & Sequestration | Waste Management

The PCAP will also include a GHG inventory, Quantified GHG Reduction Measures, Low Income/Disadvantaged Communities Benefits Analysis, and a review of authority to implement.

The PCAP is due to the EPA by March 1, 2024 and will serve as the framework for CPRG implementation grant proposals.

The PCAP document will be here, when completed in February 2024.

Comprehensive Climate Action Plan (CCAP)

Beginning in May 2024, the CDRPC will expand the completed PCAP to include all sectors, and will include in a fully updated GHG inventory, GHG Emission Projections, GHG Reduction Targets, Quantified GHG Reduction Targets, Benefits Analysis (including LIDAC Analysis), Review of Authority to Implement, and Workforce Planning Analysis. The CCAP process will include broad municipal and stakeholder outreach and engagement.

The CCAP will be completed by September 2025 and will be here, when completed.

Climate Pollution Reduction Grants (CPRG)

The Climate Pollution Reduction Grants (CPRG) program provides **$5 billion** in grants to states, local governments, tribes, and territories to develop and implement ambitious plans for reducing greenhouse gas emissions and other harmful air pollution. This two-phase program provides $250 million for noncompetitive planning grants, and approximately **$4.6 billion** for competitive implementation grants.

The EPA released a Notice of Funding Opportunity (NOFOs) announcing the CPRG grant competition in September 2023. Eligible applicants will compete for CPRG implementation grants to fund measures in applicable Priority Climate Action Plans (PCAP). This PCAP will be made available to any entity in the Capital Region looking to apply for these grants.

Grant Criteria includes the following:

- Projects from $2 million to $500 million
- Projects must tie to the regional PCAP
- Evaluation includes consideration of greenhouse gas emission reductions, transformative impact, scalability, multi-jurisdictional, benefiting low-income and disadvantaged communities.
- States, municipalities, councils of government, and other regional organizations composed of municipalities are eligible to apply.
- The deadline to apply to the general competition is April 1, 2024.

Full grant details can be found at the CPRG General Competition NOFO webpage. Slides from a recent EPA webinar discussing the program can be found here.

2010 Greenhouse Gas (GHG) Inventory

In 2010, the CDRPC commissioned the development of a GHG inventory that covers all major GHG sources in the eight-county Capital District Regional Economic Development Council (REDC) region. It was developed to support communities participating in the Climate Smart Communities (CSC) program. It also serves as the baseline for the Capital District Regional Sustainability Plan developed under the Cleaner Greener Communities (CGC) Program. The inventory was developed for the year 2010 and is based upon methods, data sources, and protocol established by the CSC and CGC programs. The report is primarily a GHG baseline and is not intended to cover the options available to reduce GHG emissions in the region. However, it does include policy scenarios to show how alternative fuels and vehicles may reduce emissions from the transportation sector. It also includes a detailed study of how household energy use varies across the region to help planners identify strategies to engage households in local sustainability efforts.

Capital District 2010 Regional GHG Inventory

Click the image or this text to access the 2010 Regional GHG Inventory document

2010 Greenhouse Gas (GHG) Inventory Dashboard

The CDRPC has created a GHG inventory dashboard that updates the 2010 data to provide easily accessible detailed information on the region's communities.

Click the image or this text to access the 2010 Regional GHG Inventory Dashboard

Take our Citizen Input Survey

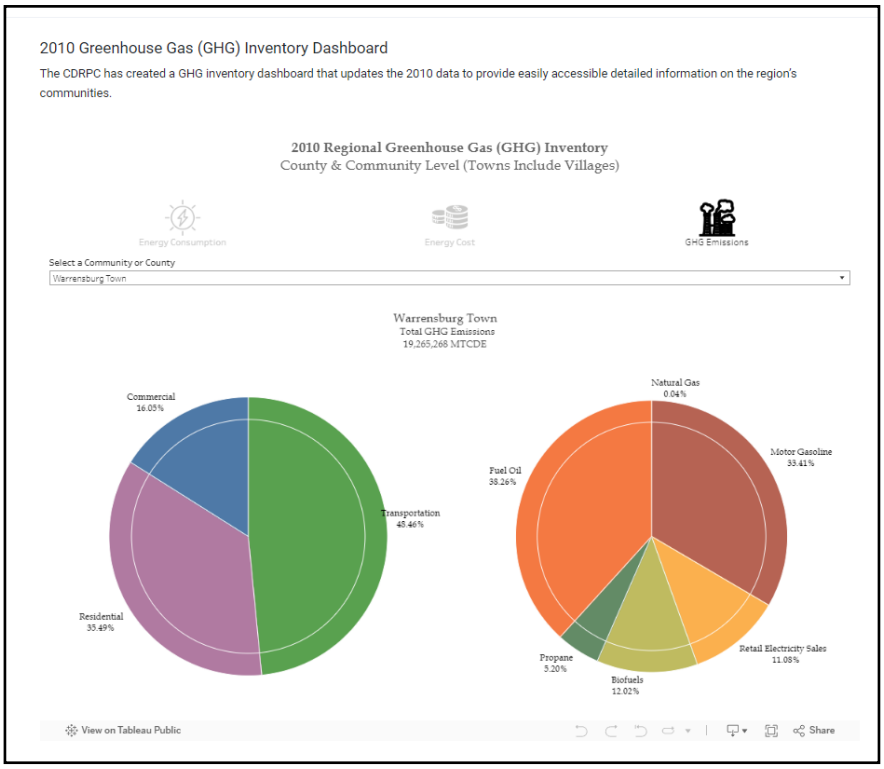
We are interested in obtaining public input for this effort and would like to know what you think about some key actions that residents can take to help the region reduce Greenhouse Gas Emissions (GHG). This survey takes only a few minutes to complete and your answers will be anonymous (unless you provide your contact information at the end of the survey for us to contact you – your contact information will not be published).

https://www.surveymonkey.com/r/CapRegClimateActionPlan

If you are an eligible applicant interested in applying for CPRG funding, have a project mind, or if you want to learn more about our Climate Action Plan process or provide input on the Plan, please contact the CDRPC Director of Sustainability, Todd Fabozzi at todd@cdrpc.org

The CDRPC developed a Climate Action Plan webpage provides a single location for the hosting of Plan documents and Planning information for the public. Information on the Capital Region Climate Action Planning efforts can be found under the Sustainability section of the CDRPC website.

Included on the webpage, the CDRPC developed a GHG Dashboard that portrays GHG emissions and sources in graphic form for all region's municipalities. This dashboard utilizes the existing 2010 Capital Region GHG inventory to identify GHG emissions for each regional community by sector. An updated inventory will be created during the development of the CCAP.



Above and left: Screen captures of the GHG Inventory Webpage & Capital Region Climate Action Webpage

This PCAP was developed by the Capital District Regional Planning Commission and members of the Climate Action Collaborative.

Professional assistance was provided by
Climate Action Associates and Planning4Places, LLC.

All images by Planning4Places, LLC unless otherwise noted.

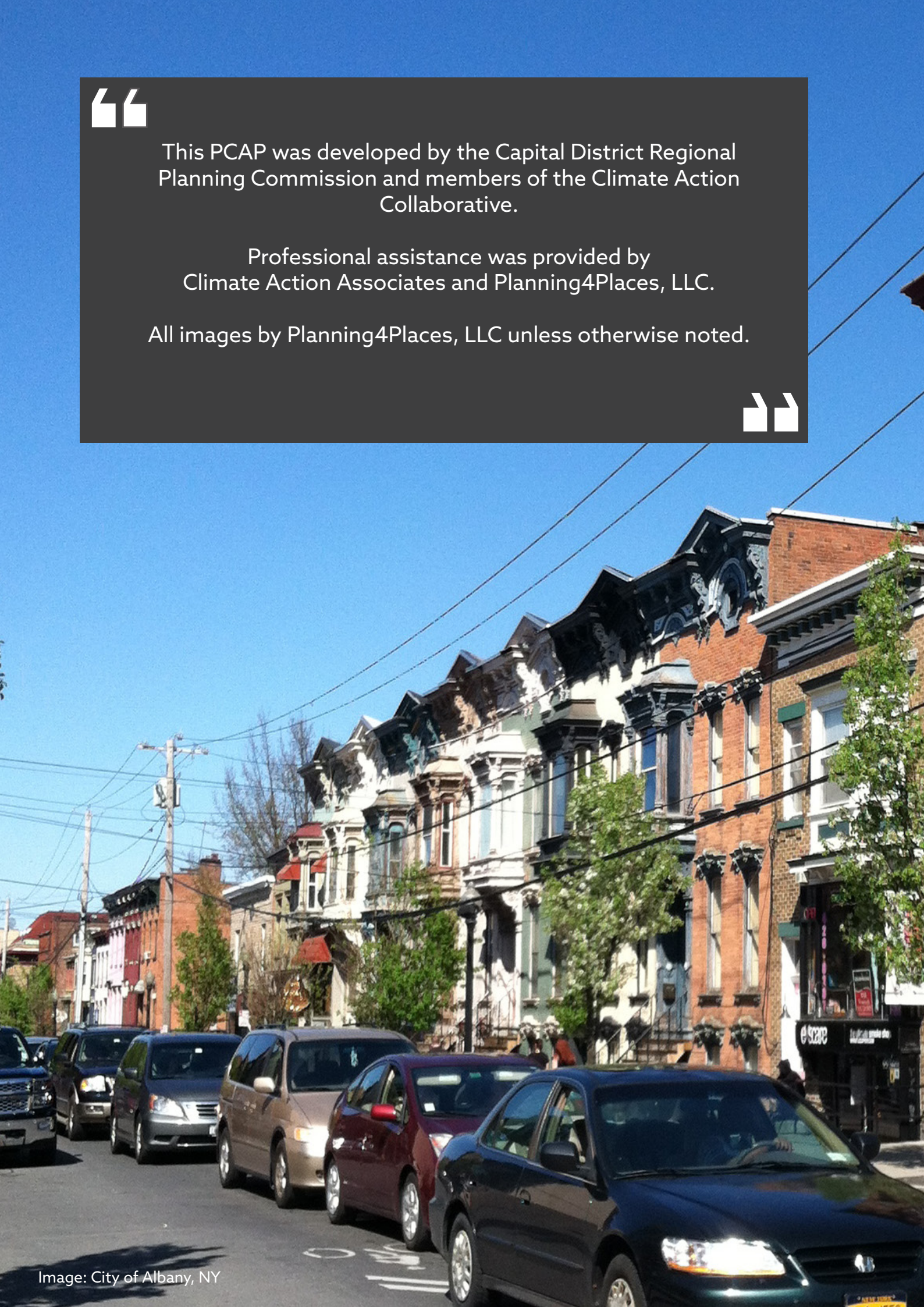


Image: City of Albany, NY