



MONTGOMERY COUNTY CLIMATE ACTION PLAN

Building a Healthy, Equitable, Resilient Community

JUNE 2021



MONTGOMERY COUNTY

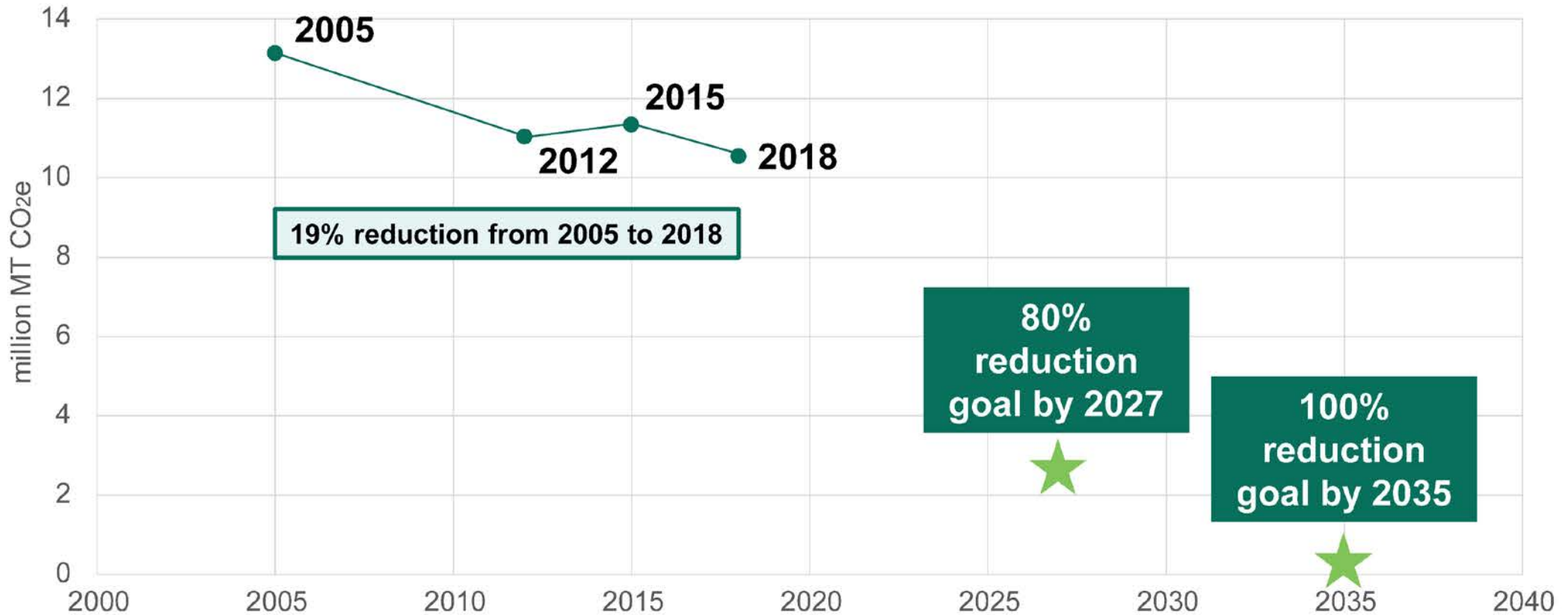
ZERO EMISSIONS BY 2035



Climate Action in Montgomery County

MARCH 2022

County GHG Emissions Progress and Goals

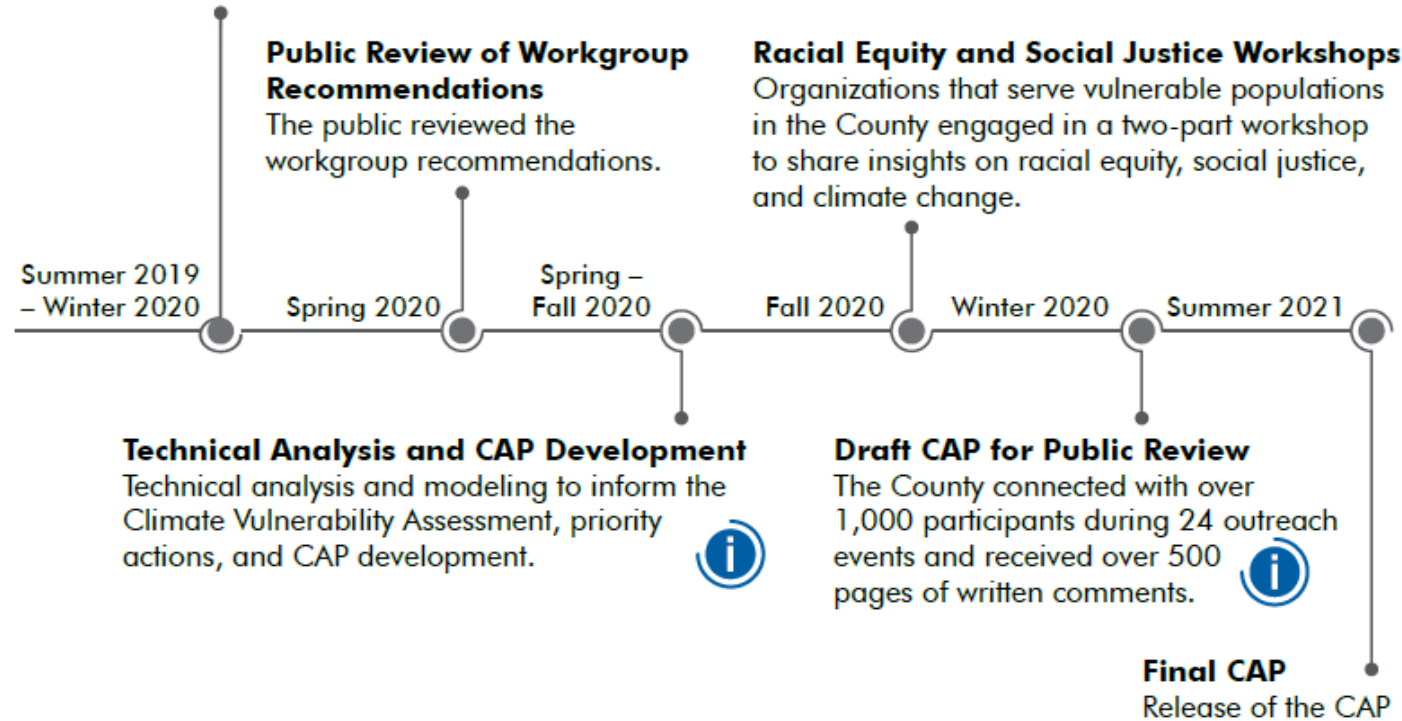


Source: Metropolitan Washington Council of Governments (MWCOC) Montgomery County GHG Inventory

Climate Planning Process

Climate Workgroup Efforts

The County formed six technical climate workgroups—made up of County volunteers with area-specific expertise—focused on buildings, clean energy, transportation, climate adaption, carbon sequestration, and public engagement and education.



- 176 Technical Climate Workgroup Members
- 30 Workgroup Meetings
- 2 Racial Equity and Social Justice Workshops
- 130 Community Conversations with Resilience Ambassadors

ORGANIZATIONS PARTICIPATING IN THE CLIMATE PLANNING PROCESS:

22 Environmental Conservation and Climate Groups	20 Business
9 Education Groups	10 Civil Rights and Religious Groups
7 Federal Agencies (Unofficial Presence) and International Organizations	8 County Advisory Groups
4 Utilities	7 Adaptation, Resilience and Energy Associations
4 Municipalities and Municipal Advisory Groups	5 Budget, Finance, and Philanthropic Groups
2 Public Health Groups	3 Chambers of Commerce
1 Buildings Group	2 Transportation Groups
	1 Environmental Justice Group

Localized Climate Hazards

- Downscaled climate projections for 2035, 2050, and 2100
- **Key Takeaways:**
 - ↑ risk of moderate, severe & extreme drought
 - ↑ number of high heat days
 - ↑ extreme precipitation & precipitation totals
 - ↑ high winds

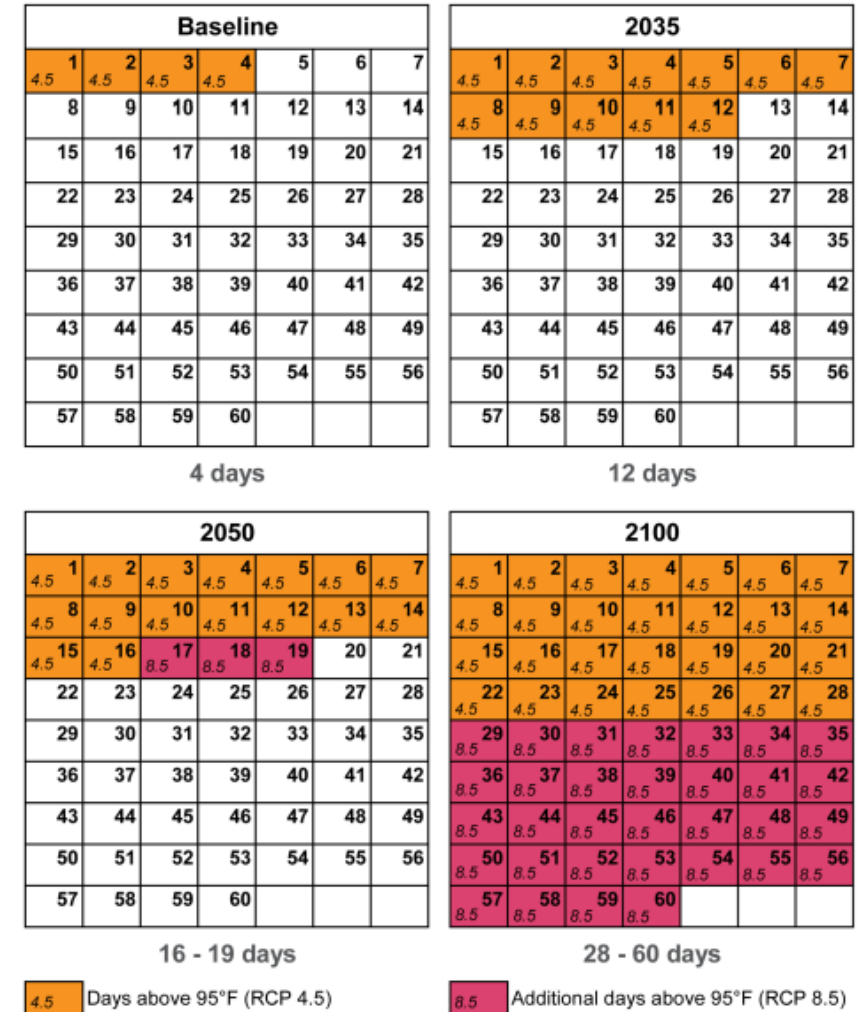


Figure 14: Projected average number of days above 95°F in Montgomery County for GHG Representative Concentration Pathway (RCP) 4.5 and 8.5

Localized Climate Hazards

Table 2: Future changes to return period storms

Current		2050		2100	
Recurrence Interval	Precipitation for 24-Hour Storm (inches)	RCP 8.5 Equivalent Recurrence Interval	RCP 8.5 24-Hour Storm (inches)	RCP 8.5 Equivalent Recurrence Interval	RCP 8.5 24-Hour Storm (inches)
1-year	2.6	1-year	2.7	1-year	2.7
2-year	3.1	2-year	3.2	3-year	3.3
10-year	4.8	13-year	5.0	15-year	5.2
100-year	8.3	115-year	8.5	151-year	9.0

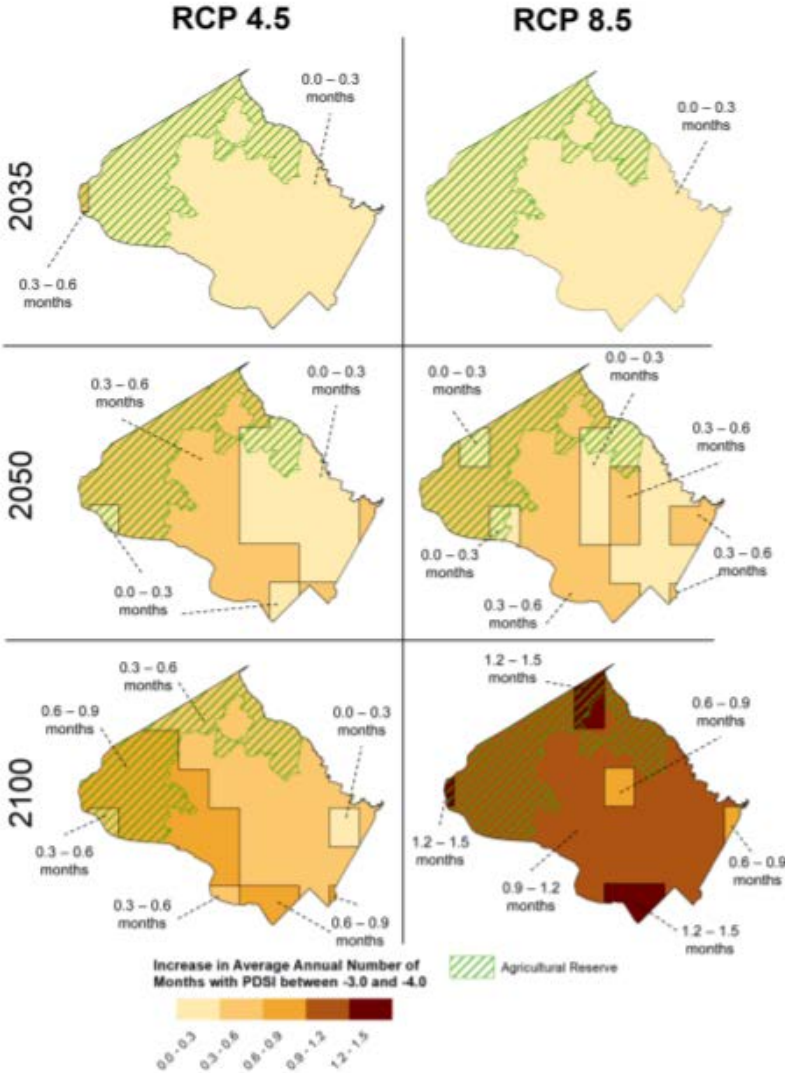


Figure 17: Projected increase in average number of months per year of severe drought (Palmer Drought Severity Index between -3.0 and -4.0) for 2035, 2050, and 2100, and climate scenarios RCP 4.5 and RCP 8.5 in Montgomery County

Climate change is already impacting Montgomery County

We are experiencing warmer temperatures and more extreme rain events.

It's getting hotter.

- Daily high and daily low temperatures have been increasing 0.2° F [0.1 degrees C] per decade
- The average temperature has already risen by 2.6° F [1.4 degrees C] since 1901.

It's getting wetter.

- Increased number of hours where more than 1" of rain has fallen in an hour since 2010
- Increased number of significant flood reports since 2010



Image: Rock Creek Woods apartment in Twinbrook, September 1, 2021



The CAP lays out a Path to Meet the County's Zero GHG Emissions Goal by 2035

1. Reduce Emissions in the Energy, Buildings, and Transportation Sectors
2. Center Racial Equity and Social Justice
3. Address Residual Emissions and Carbon Sequestration
4. Reduce Risks from Climate Hazards (Resilience & Adaptation)
5. Identify Resources to Pay for Climate Action
6. Enhance Climate Governance
7. Engage the Community as Partners in Climate Action
8. Take the Next Steps

Two companion reports

CLIMATE ACTION PLAN (CAP)

- Strategic plan to achieve County climate goals by 2035
- 86 actions across 7 sectors
- Identifies GHG reduction actions
- Identifies localized climate hazards & actions to increase resilience and adapt to a changing climate
- Identifies equity-enhancing measures to address racial equity and social justice implications of climate action

FY22 CLIMATE WORK PLAN

- Annual implementation plan
- Enables flexibility in CAP implementation
- Identifies legislative & regulatory agenda for the coming year
- Aligns staff and funding resources
- **75 of 86 CAP actions are moving forward in FY22**

montgomerycountymd.gov/climate

Centering Racial Equity & Social Justice in the CAP

- The CAP identifies communities that are likely to have less ability to adapt to the impacts of climate change

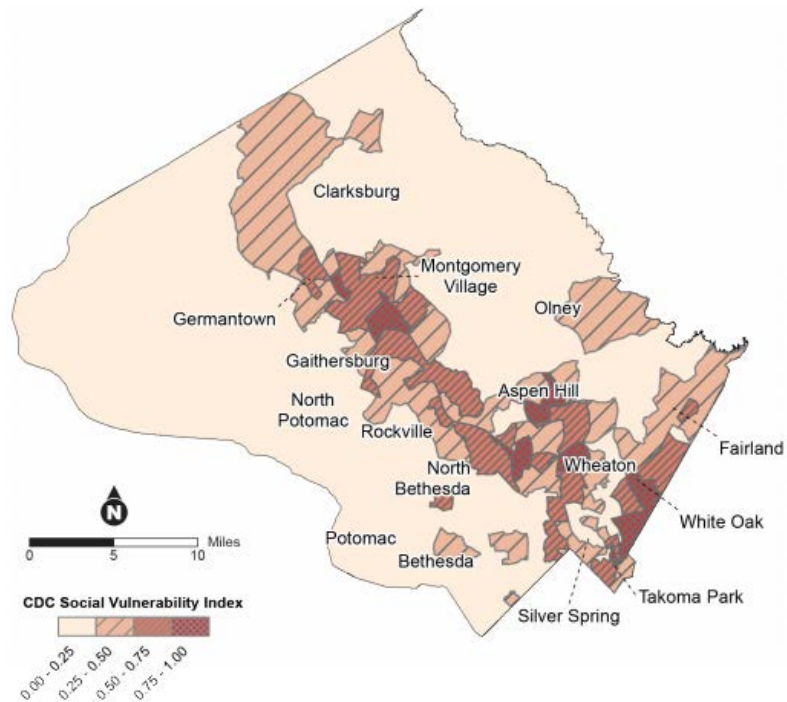


Figure 20: Social vulnerability in Montgomery County

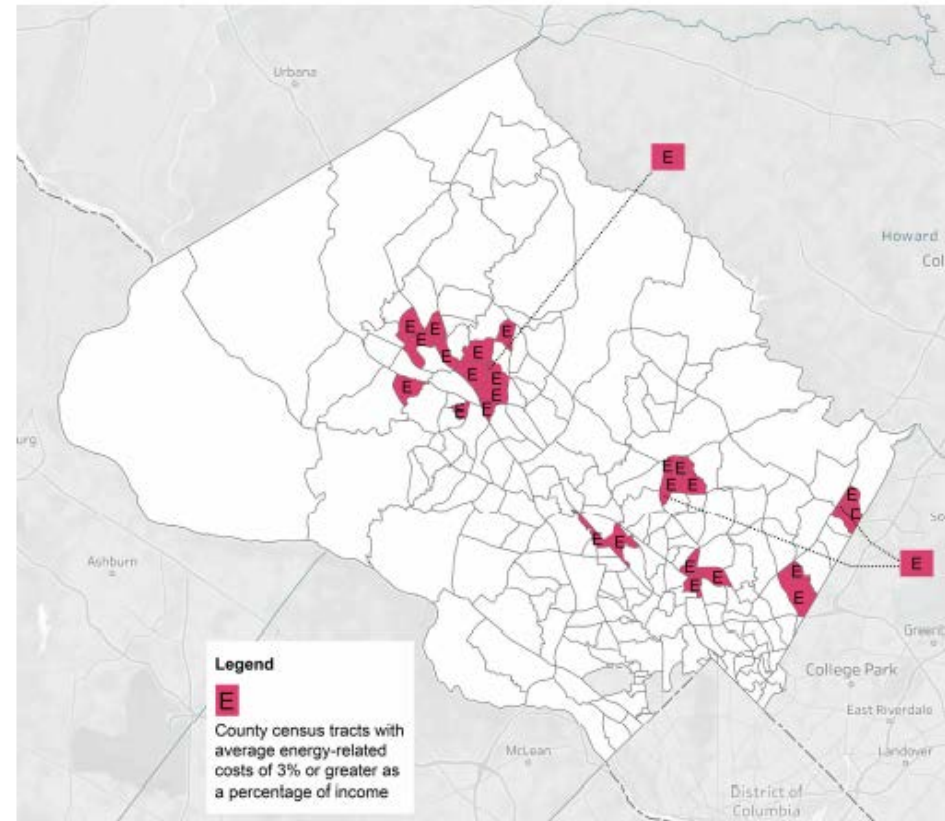


Figure 5: Montgomery County census tracts with median energy burden of 3% or greater as a percentage of income²²

Equity Enhancing Measures

- Equity-enhancing measures were identified for each action in the Climate Action Plan that were initially rated as having a less than “very positive” rating for racial equity and social justice.
- Equity-enhancing measures are intended to ensure that climate actions respond to the key issues and priorities of the County’s most climate vulnerable communities, to ensure that racial equity and social justice principles are considered when designing and finalizing actions, and to ensure that climate vulnerable groups are considered from a benefits perspective.

Example from Action E-1, Community Choice Energy:

EQUITY-ENHANCING MEASURES

- Balance the costs and percent of renewables in the electricity mix. If there is a premium associated with offering a higher level of renewable electricity, the County will need to consider ways to offset the cost premium for low-income residents.
- Develop and promote an awareness campaign on how to access the CCE program and its associated benefits. Ensure the awareness campaign is developed in multiple languages.

Equity Enhancing Actions Underway include:

- Application of a **Racial Equity and Social Justice Impact Statement** underway for all Council bills
- **High Road Economic Inclusion Framework**– integrates climate, equity, and economic development
 - Contract with the Emerald Cities Collaborative focused on:
 - Leveraging the 2,600 to 3,300 jobs per year through 2050 which are estimated to be generated by the CAP
 - Ensuring that these jobs are inclusive, accessible and lead to career pathways for underrepresented and historically marginalized people.
- Establishment of a **Community Justice Academy** underway
 - Community Ambassadors from underrepresented communities who “graduate” from the Academy would work with the County to co-conceive and co-create integrated health, equity and quality-of-life solutions directly applicable to their neighborhoods.
 - County staff are working with the Montgomery County Racial Equity Network on development; contracted with Justice Alchemy to guide efforts.

GHG Reduction Actions

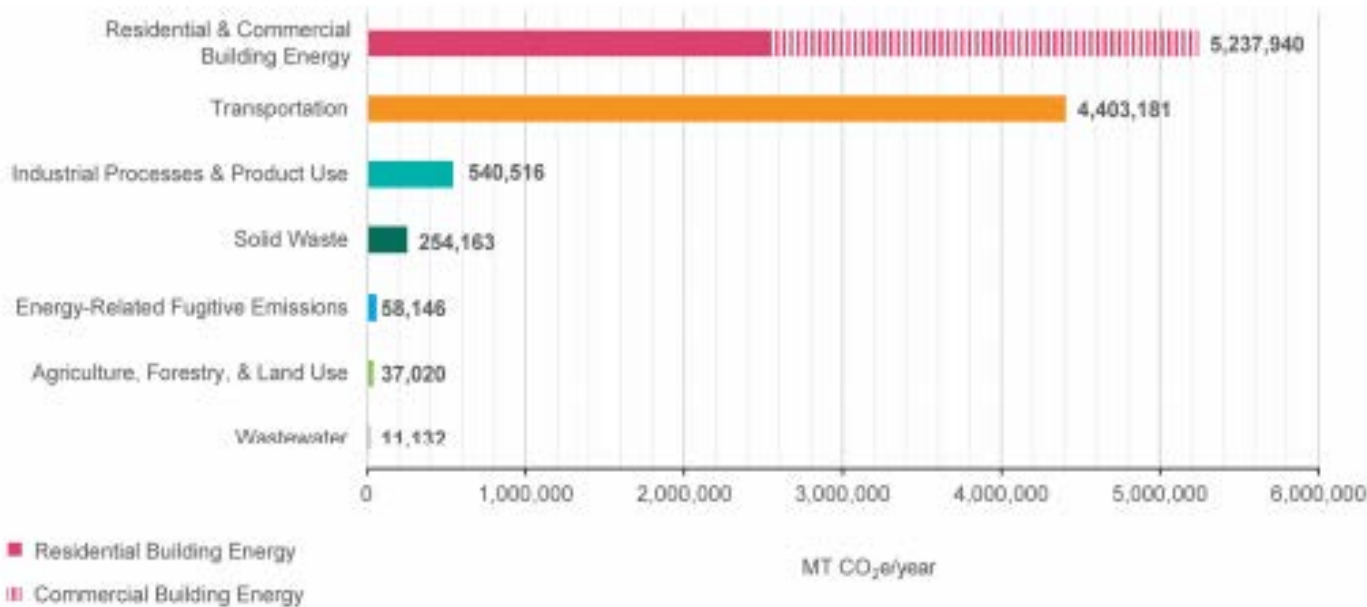


Figure 25: Montgomery County 2018 GHG inventory

- Significant shifts needed in the way we generate and use energy– how we heat and cool our homes, businesses and public buildings; how we fuel vehicles; and our consumption patterns
- 25 GHG Reduction actions centered in **Buildings, Transportation, and Clean Energy**. Examples:
 - Community Choice Energy
 - Natural Gas Disincentives/Elimination
 - Expand Solar Installations
 - Building Energy Performance Standards
 - Net Zero Building Codes
 - Private Vehicle Electrification Incentives & Disincentives
 - Expand Public Transit, Active Transportation, & Shared Micromobility Network
 - Zero Emissions Buses & Fleet

Climate Adaptation & Sequestration Actions

- The Plan identifies 6 **nature-based carbon sequestration** actions, including:
 - Retaining and increasing forests
 - Retaining and increasing tree canopy
 - Regenerative agriculture
 - Increasing carbon in soils through improved agricultural practices
- The 20 **climate adaptation** actions include:
 - Water infrastructure resilience & water supply protection
 - Resilience hubs
 - Updating green streetscape and green infrastructure standards
 - On-site water reuse
 - Update floodplain maps

Governance, Public Engagement and Personal Actions

- **16 Climate Governance Actions, incl.:**

- Climate Change Academy
- Incorporating climate competencies into MCG job descriptions
- Incorporate climate considerations into the budgeting processes
- Develop climate financing strategies
- Develop climate equity metrics
- Consolidate County climate data
- Conduct climate vulnerability detailed assessments

- **19 Public Engagement Actions, incl:**

- Forming a climate change communications coalition
- Establishing a community justice academy
- Establishing statewide climate coalition of local governments
- The CAP calls for both system-level changes and **personal actions**, including:
 - Actions to lower carbon footprint
 - Actions to reduce home electricity usage
 - Actions to lower electricity use in businesses
 - Actions to increase climate resilience

The CAP ranks actions by GHG reduction impact

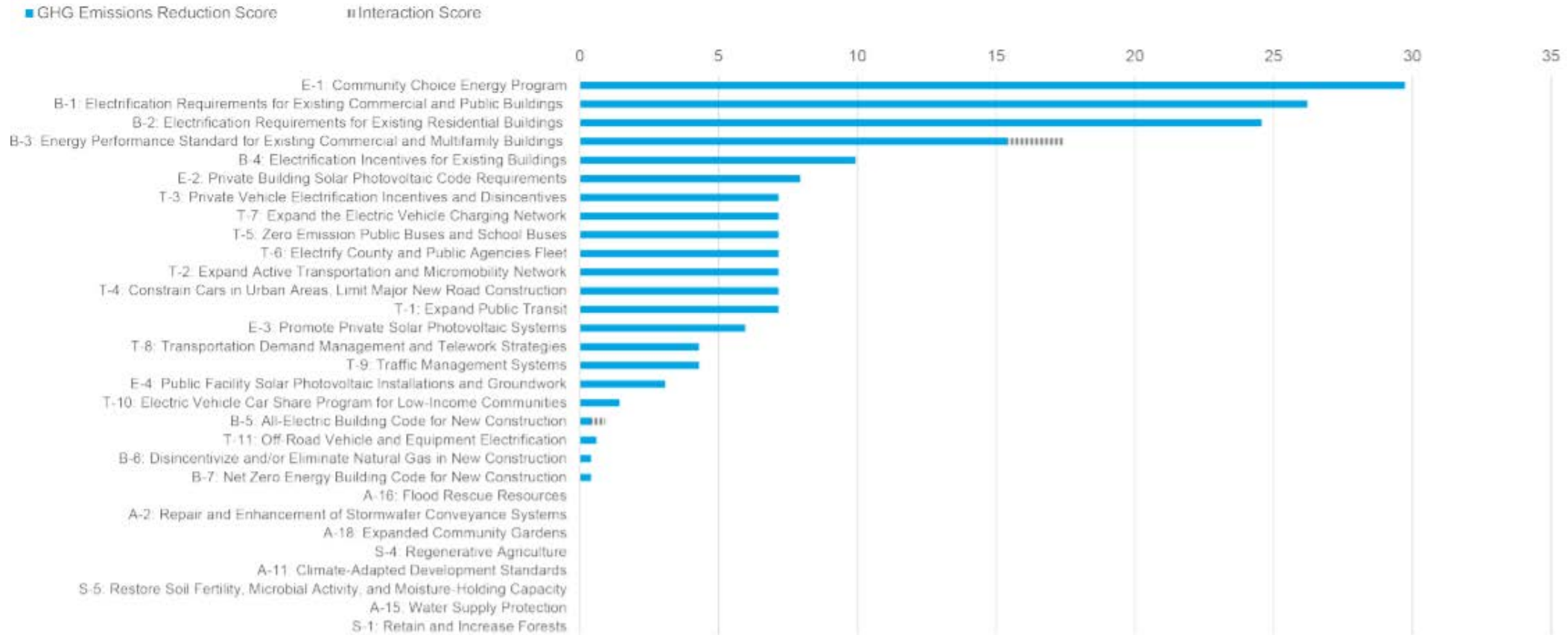


Figure 30: GHG mitigation actions with the highest emissions reduction potential

The CAP also ranks actions by co-benefits



Figure 31: CAP actions with the greatest cumulative co-benefits

Key actions are already underway

- **Building Energy Performance Standards** – bill transmitted to Council April 2021, undergoing Council review
- **Commercial Property Assessed Clean Energy expansion** – bill transmitted to Council October 2021, undergoing Council review
- **2018 International Green Construction Code** – Executive regulations transmitted to Council March 2021 – passed October 2021
- **Transportation Demand Management** – Executive regulations being finalized
- **Community Choice Energy** authorized by General Assembly; PSC regulatory workgroup kicked-off Sept. 2021
- **Additional legislation** being drafted, incl. authorizing Green Bank resilience activity, gas-powered leaf blower ban



Additional FY22 Climate Actions Include

Community Justice Academy

Climate budgeting

Sustainable Economic Development analysis

Agrivoltaic study project

Electric Vehicle Purchasing Coop

EV Wayfinding Signage

Brookville Bus Depot microgrid installation

EV police cruisers pilot

Electric bus procurements for MCPS & Ride On

Montgomery College building submetering

County fleet transition study

Project equity (worker-owned co-ops)

Climate stories project

BEPS implementation technical study

EV charging installations in public properties

Scotland resilience hub

Expand RainScapes

• See [FY22 Work Plan](#) for full list of near-term actions