METROPOLITAN WASHINGTON 2030 CLIMATE AND ENERGY ACTION PLAN (CEAP)

Addressing Climate Change
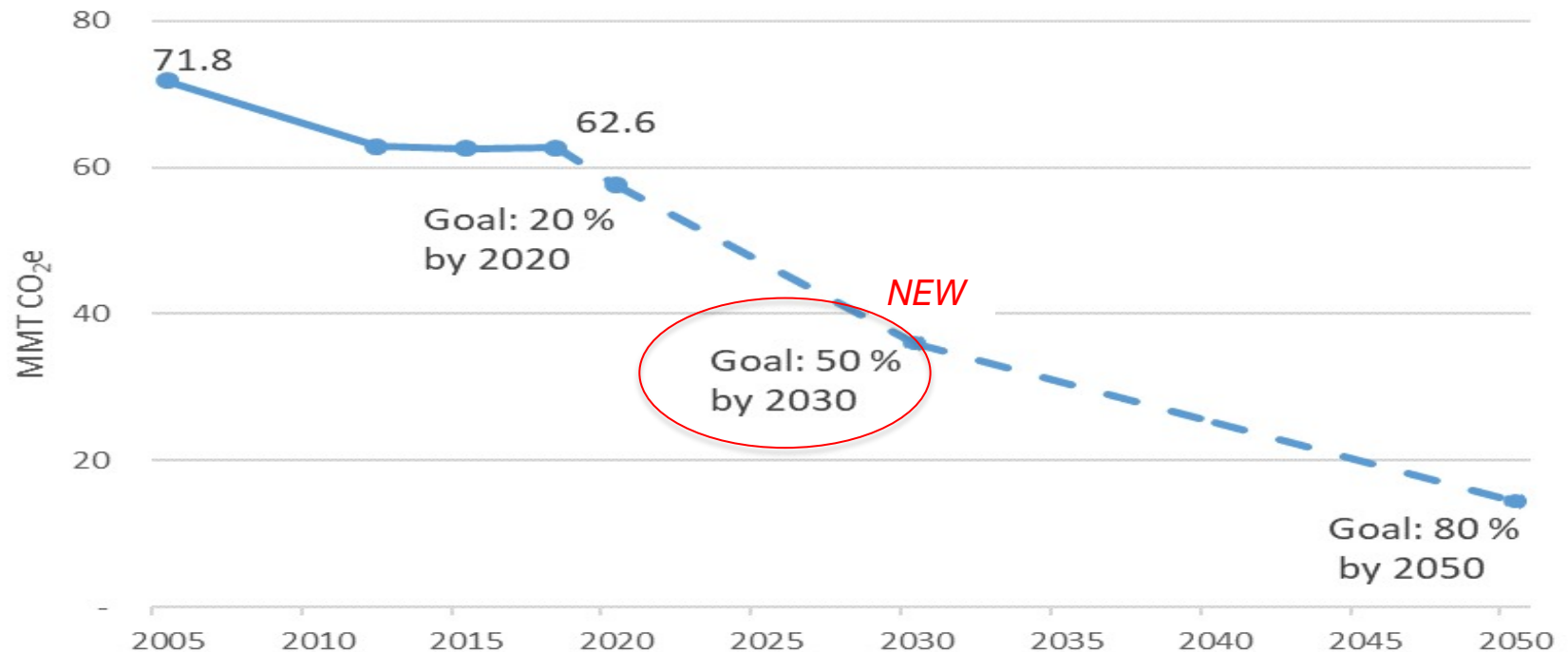
Jeffrey King
Director, Climate, Energy, Air Programs, COG

COG Board of Directors
May 12, 2021

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2030 Climate and Energy Action Plan Presentation Overview

- Establishment of Interim Climate Change Goals

  ➢ Mitigation

  ➢ Resilience

- Development of Climate and Energy Action Plan (CEAP)

- Action Plan Implementation

  ➢ Regional Support

  ➢ Local plans

Interim Emission Reduction Goal

- 2008 – Board Adopts National Capital Region Climate Report (20% by 2020 and 80% by 2050)

- 2019 – Board Advises CEEPC to develop Interim Climate Goals

- October 2020 – Board Adopts new 2030 Climate and Resilience Goals

Climate Change Aspirations

Climate Ready Region:

To be Climate Ready, all local governments must assess current and future climate risks, and be actively integrating climate planning across government plans, operations, and communications.

Climate Resilient Region:

To fully be a Climate Resilient Region, the region must have the ability to adapt and absorb against disturbances caused by current and future, acute and chronic climate impacts and successfully maintain essential functions.

2030 Climate and Energy Action Plan

- CEEPC's Local Member and Stakeholder Planning Process

- Support from International and Non-Profit Organizations

  - European Commission (EC), International Urban Cooperation (IUC), Global Covenant of Mayors (GCoM)

  - ICLEI – Local Governments for Sustainability, and the Carbon Disclosure Project (CDP).

- Collaborated with Other Metro-Scale Climate Leaders

  - Metropolitan Washington, Kansas City, Chicago, Denver, Minneapolis

- November 18, 2020 – CEEPC Recommends 2030 Climate and Energy Action Plan to COG

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Climate Collaborative Guiding Principles

Principle	Description
1. Collective Action	We will continue to work together to leverage our impact and facilitate application at scale.
2. Effective Partnerships	We will continue to share best practices, learn together, and coordinate on implementation to advance regional transformation.
3. Lead by Example	We have a continued commitment to internal implementation of long-term solutions to reduce the climate impacts of our operations.
4. Integration	We understand climate action is inherently multidisciplinary and will promote cross-department coordination, including in areas such as equity, health, and economic development.
5. Flexibility	We understand the need for flexibility in how our public agencies and stakeholders across the DC, MD, and VA work to achieve regional GHG goals.
6. Transparency	We will continue to measure and report progress in a manner easily understandable by all.
7. Innovation	We support a just transition to a clean energy economy through the application of innovative technology, policies, and processes by public and private sectors.
8. Community Leadership	We will continue to educate, motivate, and empower action from our community's institutions, businesses, non-profits, and residents.
9. Inclusive Engagement	We commit to inclusive community engagement and equitable provision of climate and energy programs and services.
10. Advocacy	We will continue to support state and federal policies and programs that protect the human and environment health of our communities.

Metropolitan Washington 2030 Climate and Energy Action Plan

Element	Description
1. Greenhouse Gases	• Summary of regional GHG inventory trends from 2005 – 2018 • Business-as-usual GHG emission projections through 2030 • Scenario analysis - what it will take to attain 2030 GHG goal.
2. Climate Mitigation Strategy	• Priority collaborative mitigation actions to achieve 2030 GHG goal • Climate action areas include - Planning, Equity, Clean Electricity, Zero Energy Buildings, Zero Emission Vehicles, Mode Shift and Travel Behavior, Zero Waste, and Sequestration.
3. Climate Risks and Vulnerabilities	• Regional Climate, Risk and Vulnerability Assessment (CRVA). • Evaluate climate hazards: Extreme heat, Drought, Lightning and Thunderstorms, Flash and Riverine flooding, Coastal flooding and Extreme winter conditions.
4. Climate Resilience Strategy	• Priority collaborative climate resilience actions to become a Climate-Ready Region and making significant progress to be a Climate Resilient Region by 2030. • Resilience action areas include - Planning, Equity, and Resilient Infrastructure.

2030 CEAP: International Recognition

GLOBAL COVENANT
of MAYORS *for*
CLIMATE & ENERGY
UNITED STATES

Found COG's 2030 CEAP fully Compliant with Global Standards Best Practices in Climate Planning:
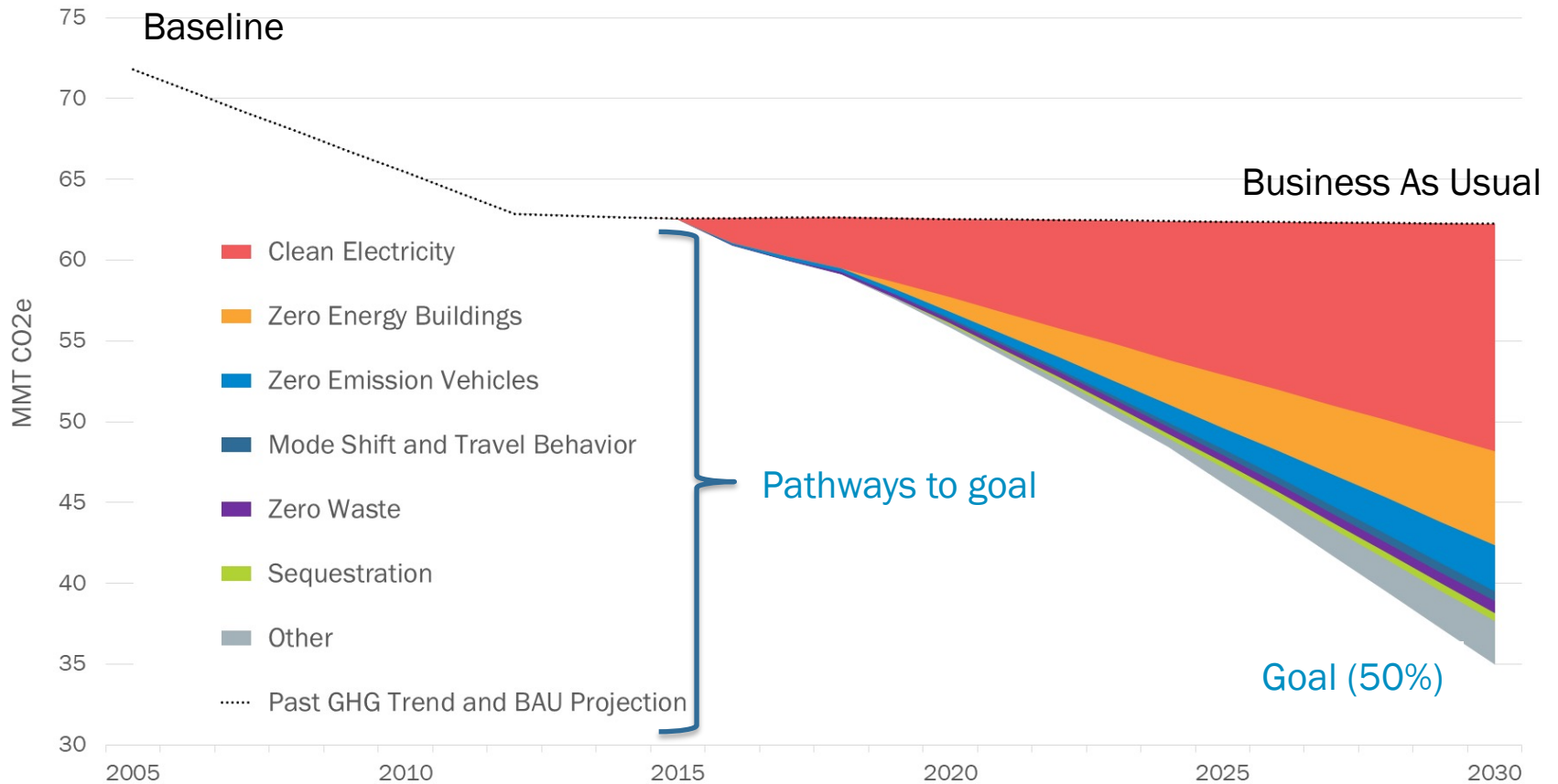
- GHG inventory
- GHG reduction target
- Climate risk and vulnerability assessment
- Adaptation goal,
- Plans for both mitigation and adaptation

Metropolitan Washington is the first region in the United States to achieve this status.

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GHG Inventory And Future Prospects

Baseline

Business As Usual

MMT CO2e

- Clean Electricity
- Zero Energy Buildings
- Zero Emission Vehicles
- Mode Shift and Travel Behavior
- Zero Waste
- Sequestration
- Other
- ······ Past GHG Trend and BAU Projection

Pathways to goal

Goal (50%)

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Mitigation Actions

Climate Action Area	Action ID	Priority Collaborative Action
Planning	PL - 1	Advance Climate Planning and Track Progress
Equity	EQ - 1	Enable Equitable Planning Practices
	EQ - 2	Prioritize Sustainable Energy Access for All
Clean Electricity	CE - 1	Advocate for Aggressive Renewable Portfolio Standards
	CE - 2	Accelerate Development of On-Site Renewables
	CE - 3	Accelerate Deployment of Battery Storage
	CE - 4	Accelerate Development of Microgrids for Critical Infrastructure
	CE - 5	Accelerate Development of Large-Scale Off-Site Renewables
	CE - 6	Advocate for and Implement Community Choice Aggregation
Zero Energy Buildings	ZEB - 1	Expand Building Benchmarking Requirements
	ZEB - 2	Accelerate Deep Building Retrofits
	ZEB - 3	Enhance Green Building Codes and Policies to Facilitate Net Zero Energy Building Development
	ZEB - 4	Expand Proper Disposal and Leak Detection of Refrigerants

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Mitigation Actions (continued)

Climate Action Area	Action ID	Priority Collaborative Action
Zero Emission Vehicles	ZEV - 1	Expand Light-Duty Electric Vehicle Deployment
	ZEV - 2	Accelerate Electrification of Medium- and Heavy-Duty Vehicles
	ZEV - 3	Build Out Regional Electric Vehicle Charging Network
Mode Shift and Travel Behavior	MSTB - 1	Invest in Infrastructure that Increases Transit, Carpooling, and Non-Motorized Travel
	MSTB - 2	Bring Jobs and Housing Closer Together
	MSTB - 3	Enhance Options for Commuters
Zero Waste	ZW - 1	Implement Curbside Organics Recycling Programs
	ZW - 2	Reduce Solid Waste Generation
	ZW - 3	Build Markets for Circularity
Sequestration	SQ - 1	Strategically Plant New Trees on Publicly Owned Land
	SQ - 2	Enhance Regulatory Capacity to Manage Tree Canopy and Forest Protection
	SQ - 3	Enhance Incentives and Financing Mechanisms for Tree Planting and Preservation on Privately Owned Lands

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Resilience Actions

Climate Action Area	Action ID	Priority Collaborative Action
Planning	PL - 2	Support Capacity Building for Climate Resilience Planning
	PL - 3	Develop Integrated Approach to Climate Resilience Planning
	PL - 4	Update Local Regional Plans to Address Climate Risks
Equity	EQ - 3	Support Engagement of the Public on Climate Risks, with a Particular Emphasis on Potentially Vulnerable Populations
	EQ - 4	Support Equitable Secure Energy Access
Resilient Infrastructure	RI - 1	Support Establishment of Resilience Hubs
	RI - 2	Improve the Resilience of Critical Infrastructure
	RI - 3	Implement Measures to Equitably Address Urban Heat Island
	RI - 4	Enhance Green Infrastructure Networks
	RI - 5	Implement Measures to Reduce Flood Risk

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2030 Plan Implementation – Integrated Multi-Sector Planning

- Local Leadership

- Regional Coordination

- Technical Support

2030 Plan Implementation – Local Leadership and Regional Support

- Local Plans – Sustainability / Energy / Climate
  - Existing – 13
  - In process (Updates OR New) – 8
  - Plans (Updates OR New) - 3
- Electric Vehicle (EV) Plans
  - EV Plan for community vehicles - 2
  - EV Plan for Public Sector Vehicles - 1
  - Developing EV Plan for Government and Community Vehicles – 3
  - Montgomery & Fairfax County school bus electrification arrangements!
- COG staff has assisted or is assisting (varying degrees)

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COG Support For Local Climate Planning

- Capacity Building and Best Practices
  - Built Environment & Energy Advisory Committee
  - Tree Canopy Subcommittee
  - TPB Mitigation and Resilience Studies
- Contracting and Technical Support
  - Local climate action plan development
  - GHG inventory calculations for local government
- Partnerships and Networking
  - Federal – DoD MIRR Program, DOE Clean Cities Coalitions, Army Corps of Engineers
  - Regional Organizations – NVRC, MCEC, ConnectedDMV, Greater Washington Partnership
  - Private Sector Advanced Energy Challenges
  - Academic and Professional Exchanges

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Additional Informational Slides

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Informational Links

Document Links

COG Board Resolution Adopting the 2030 Climate and Resilience Goals
https://www.mwcog.org/documents/2020/10/14/certified-resolution-r45-2020---endorsing-regional-climate-mitigation-and-resiliency-goals/

COG 2030 Climate and Energy Action Plan
https://www.mwcog.org/documents/2020/11/18/metropolitan-washington-2030-climate-and-energy-action-plan/

COG GCoM Recognition
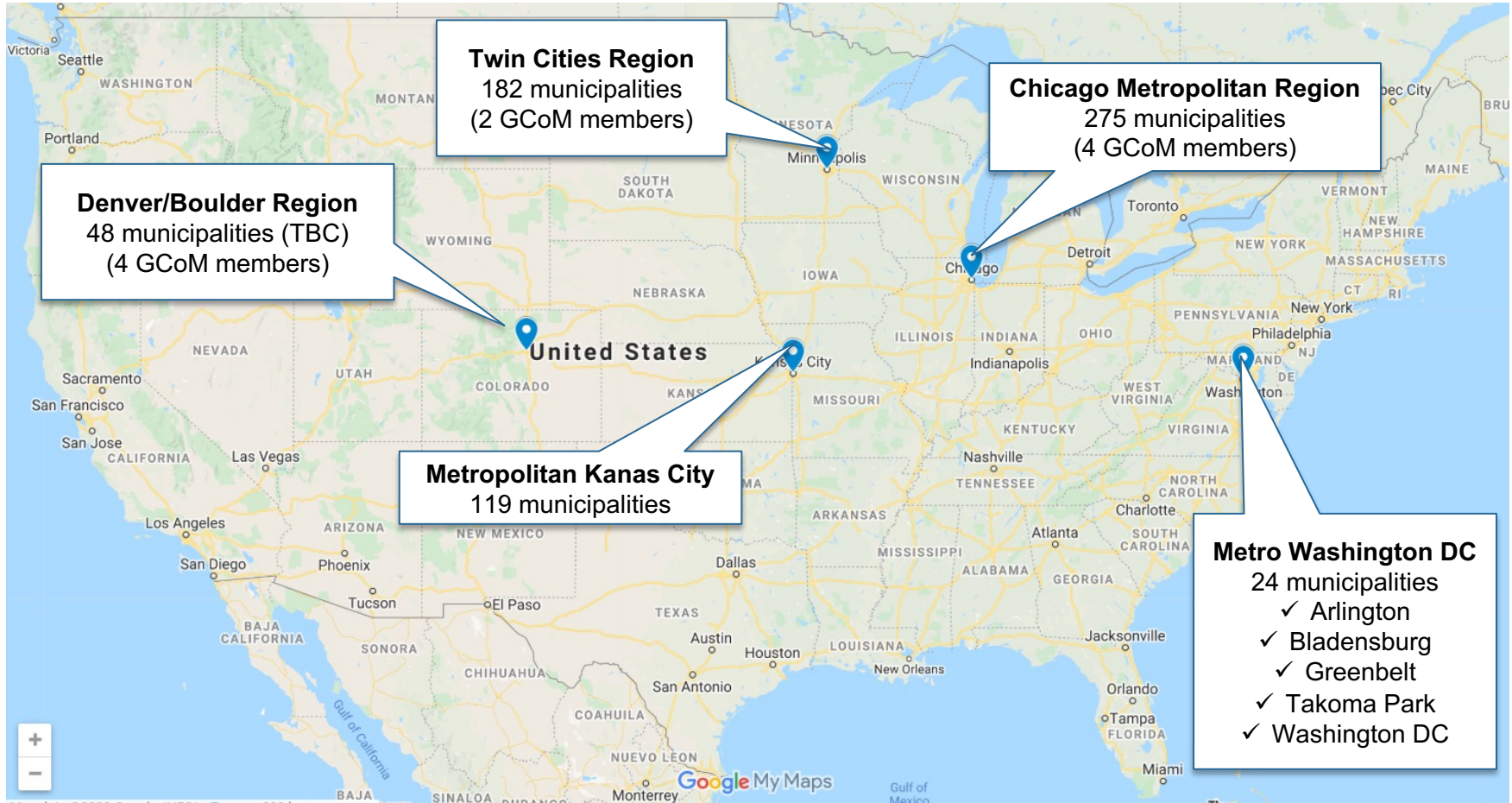https://www.mwcog.org/newsroom/2019/09/25/region-receives-global-recognition-for-leading-the-way-on-climate/

COG GCoM Certification
https://www.mwcog.org/newsroom/2021/03/24/metropolitan-washington-meets-global-standards-for-climate-planning-/
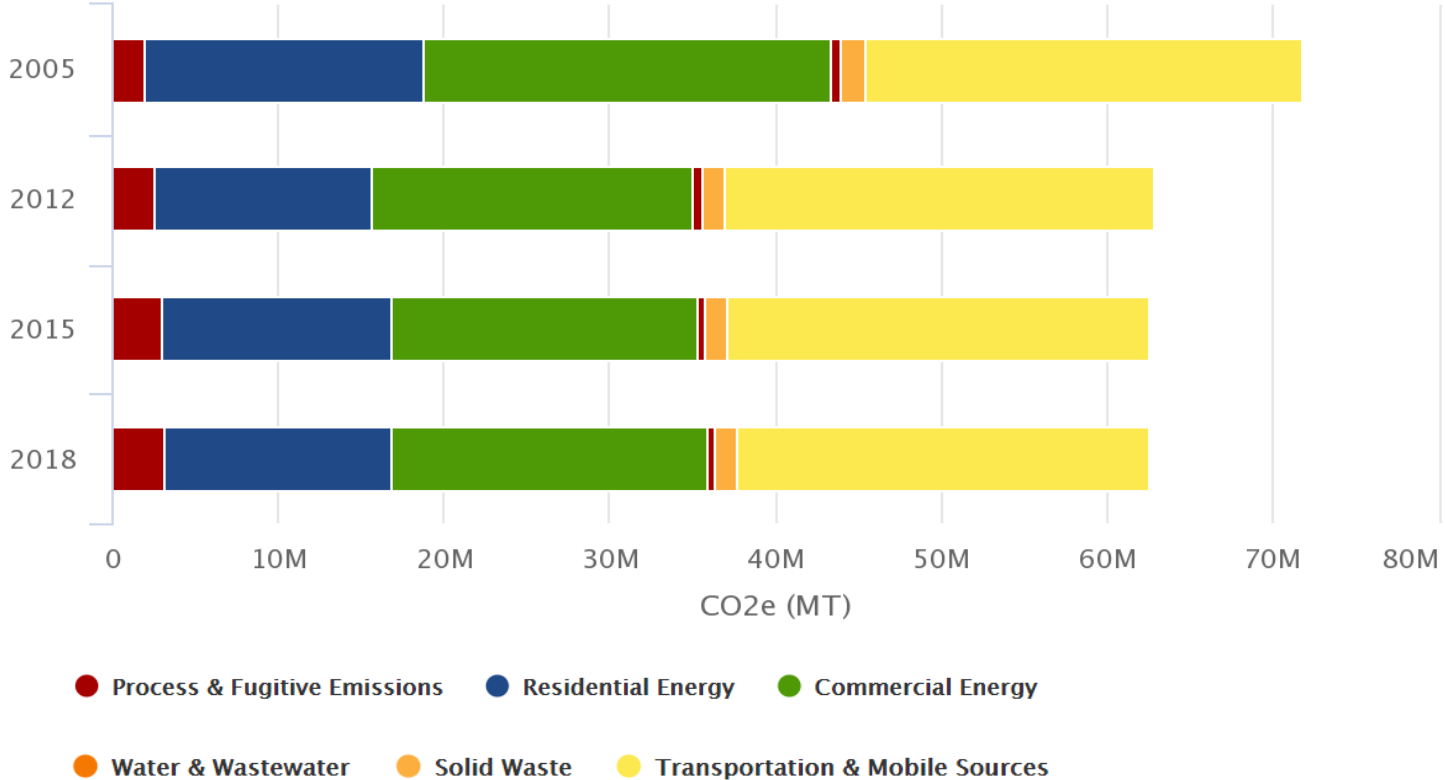
COG GCoM Page
https://www.globalcovenantofmayors.org/cities/usa/united-states/metropolitan-washington-council-of-governments/

Global Covenant of Mayors

Twin Cities Region
182 municipalities
(2 GCoM members)

Chicago Metropolitan Region
275 municipalities
(4 GCoM members)

Denver/Boulder Region
48 municipalities (TBC)
(4 GCoM members)

Metropolitan Kanas City
119 municipalities

Metro Washington DC
24 municipalities
✓ Arlington
✓ Bladensburg
✓ Greenbelt
✓ Takoma Park
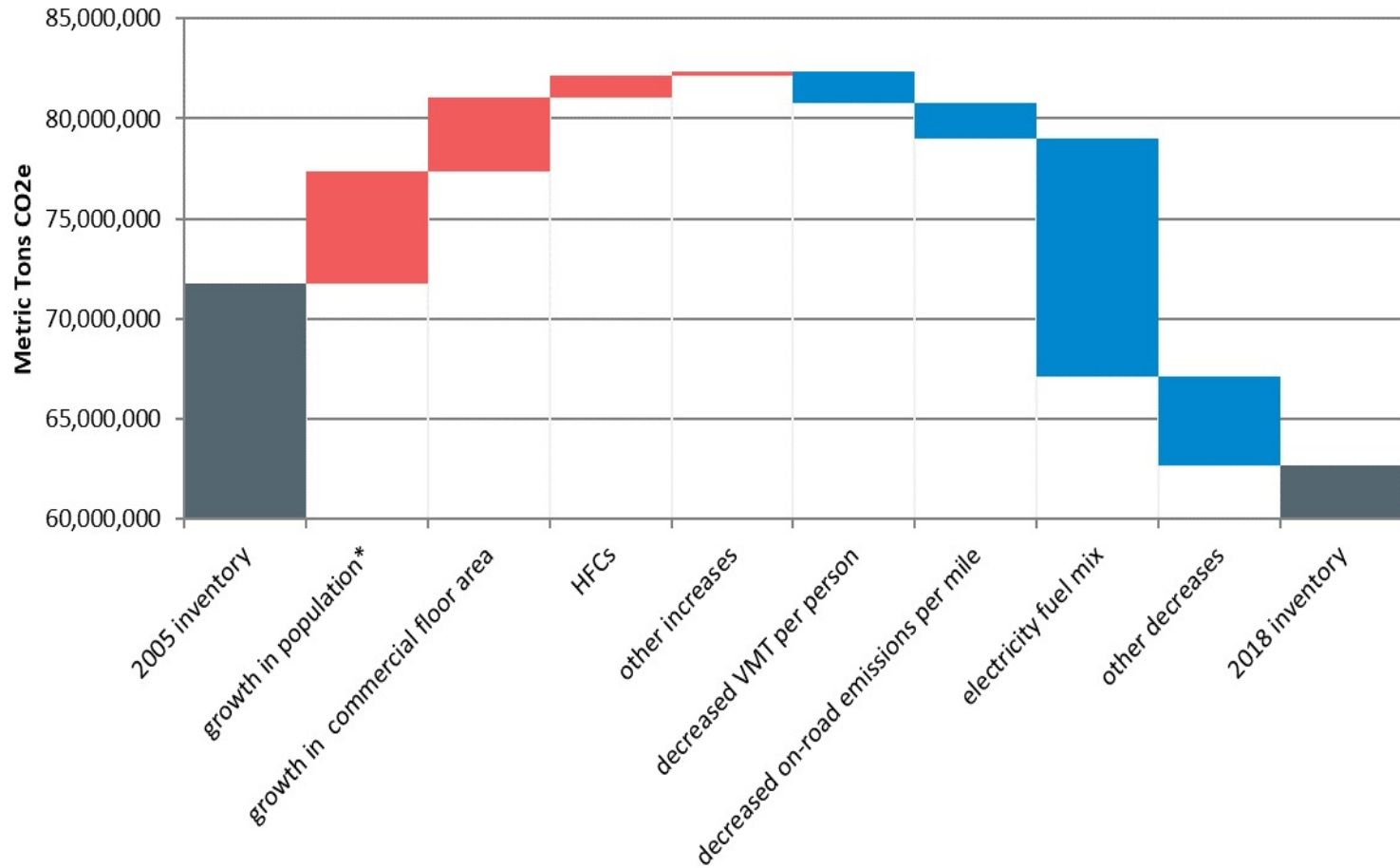✓ Washington DC

Regional GHG Mitigation Goals

- ## 13% Reduction in GHGs across region, 2005 - 2018

Source: ClearPath output
Note: ClearPath is an online greenhouse gas inventory tool. ClearPath is a product of ICLEI - Local Governments for Sustainability.

Drivers of Regional GHG Change

Details of Pathways to 2030 Goal

Climate Action Area	Assumptions
Clean Electricity	Assuming current standards (DC 87%, MD 50%, Northern VA 38% by 2030).
	Distributed generation: > 200,000 additional solar systems, equivalent to 24% of single-family homes.
	Green power purchases: continued 10 percent annual growth.
Zero Energy Buildings	Zero energy new construction: All new construction net zero energy by 2030.
	Deep retrofits of existing buildings: 2 percent of residential and commercial deep retrofits annually.
	HFCs assumptions from COG Multi-Sector Work Group (MSWG).
Zero Emission Vehicles	EV adoption rates of >30 percent light duty cars, >9 percent light duty trucks, >4 percent medium/heavy duty trucks, and >30 percent transit buses. Assumptions derived from National Renewable Energy Laboratory Electrification Futures Study high EV adoption rates.
Mode Shift and Travel Behavior	Activity centers: 75 percent new housing in Activity Centers with high-capacity transit.
	Travel demand management, transit incentives, and transit fare reduction from MSWG.
Zero Waste	The assumption is 80 percent diversion by 2030.
Sequestration	Sequestration assumptions from MSWG.
Other	Actions that are needed to reach the 2030 goal but are not addressed in this Plan, including deployment of renewable natural gas (RNG), enhanced gas repair leak initiatives, commercial aviation improvements, and non-road engine emission reduction.

Support For Local Climate Planning

- COG provides technical support for local plans
  - Contractor support for local climate action plan development (ICF, Cadmus)
  - GHG inventory calculations for local government
  - Providing expertise in best practices for mitigation and adaptation strategies
  - COG has assisted in the climate planning process for Fairfax County, City of Frederick, and Prince George's County