

CLIMATE AND ENERGY GOALS

2030 Regional Greenhouse Gas Emission Reduction Goal & Action Plan

Penny Gross

Climate, Energy and Environment Policy Committee Chair

Ryan Glancy

International Urban Cooperation Programme Technical Coordinator

Steve Walz

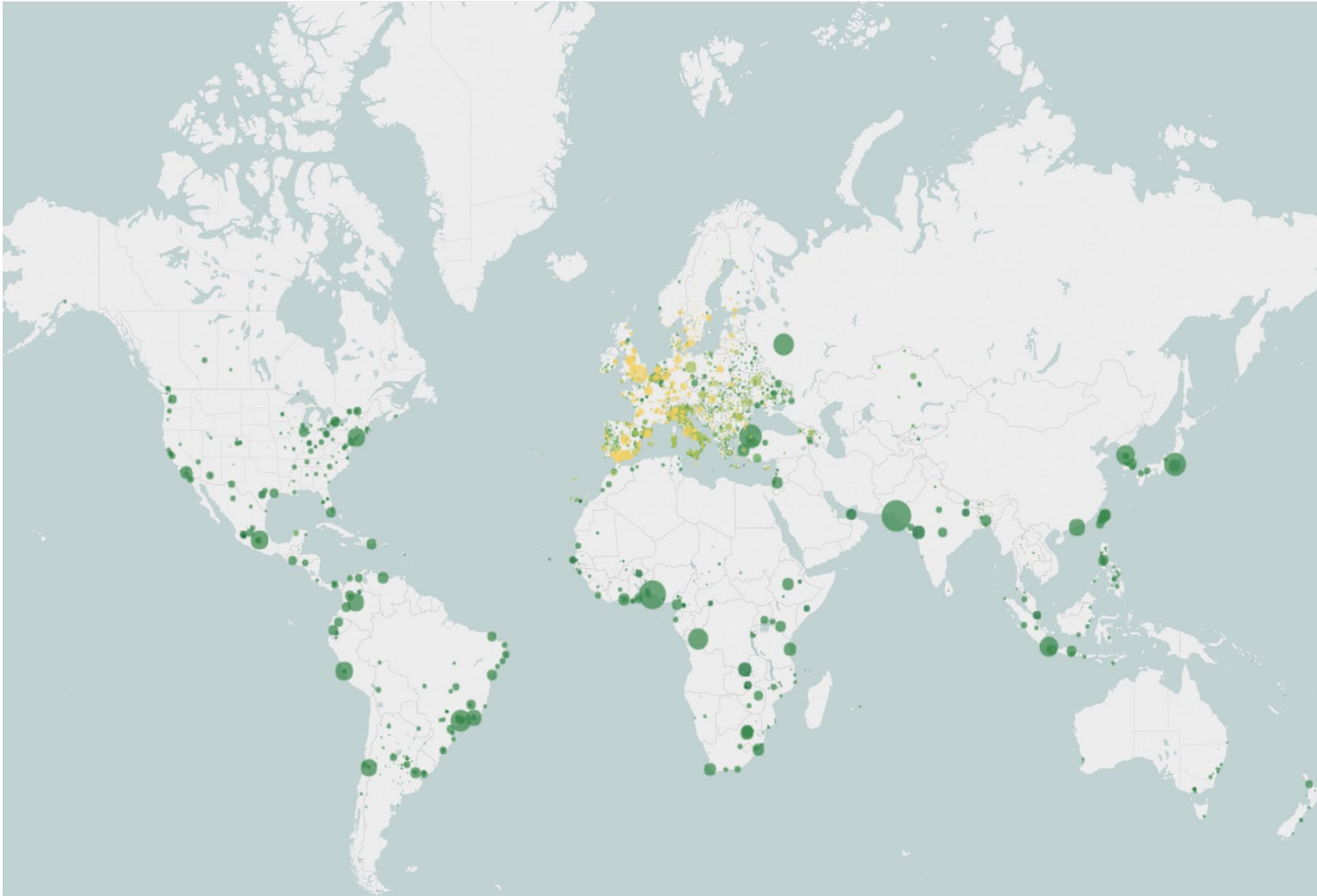
COG Department of Environmental Programs Director

COG Board of Directors

October 14, 2020

Agenda Item # 10

Global Covenant of Mayors



10,000+ CITIES

130+ COUNTRIES

800+ MILLION PEOPLE

100+ GLOBAL PARTNERS (city networks, private partners, research institutions)

10+% OF THE GLOBAL POPULATION



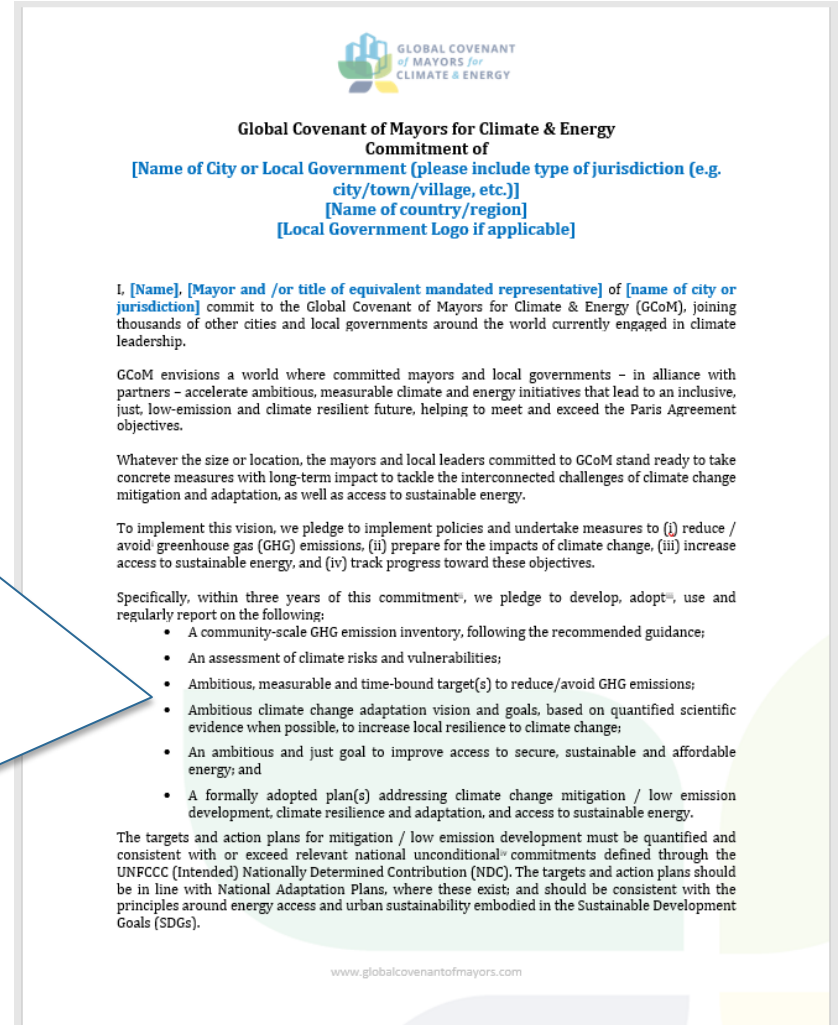
GCoM Value




- ✓ International framework for comprehensive, best-practice climate action planning (with validation)
- ✓ Networking, cooperation and knowledge exchange
- ✓ Amplifying the voice of local governments at the global level
- ✓ Collaboration across all levels of government
- ✓ Support through the Data4Cities, Innovate4Cities, and Invest4Cities initiatives

GCoM Commitments

- ✓ GHG emission inventory;
- ✓ An assessment of climate risks and vulnerabilities;
- ✓ Ambitious, measurable and time-bound target(s) to reduce GHG emissions;
- ✓ Ambitious adaptation vision and goals;
- ✓ A formally adopted plan



 GLOBAL COVENANT of MAYORS for CLIMATE & ENERGY

Global Covenant of Mayors for Climate & Energy
Commitment of
[Name of City or Local Government (please include type of jurisdiction (e.g. city/town/village, etc.))]
[Name of country/region]
[Local Government Logo if applicable]

I, [Name], [Mayor and /or title of equivalent mandated representative] of [name of city or jurisdiction] commit to the Global Covenant of Mayors for Climate & Energy (GCoM), joining thousands of other cities and local governments around the world currently engaged in climate leadership.

GCoM envisions a world where committed mayors and local governments – in alliance with partners – accelerate ambitious, measurable climate and energy initiatives that lead to an inclusive, just, low-emission and climate resilient future, helping to meet and exceed the Paris Agreement objectives.

Whatever the size or location, the mayors and local leaders committed to GCoM stand ready to take concrete measures with long-term impact to tackle the interconnected challenges of climate change mitigation and adaptation, as well as access to sustainable energy.

To implement this vision, we pledge to implement policies and undertake measures to (i) reduce / avoid greenhouse gas (GHG) emissions, (ii) prepare for the impacts of climate change, (iii) increase access to sustainable energy, and (iv) track progress toward these objectives.

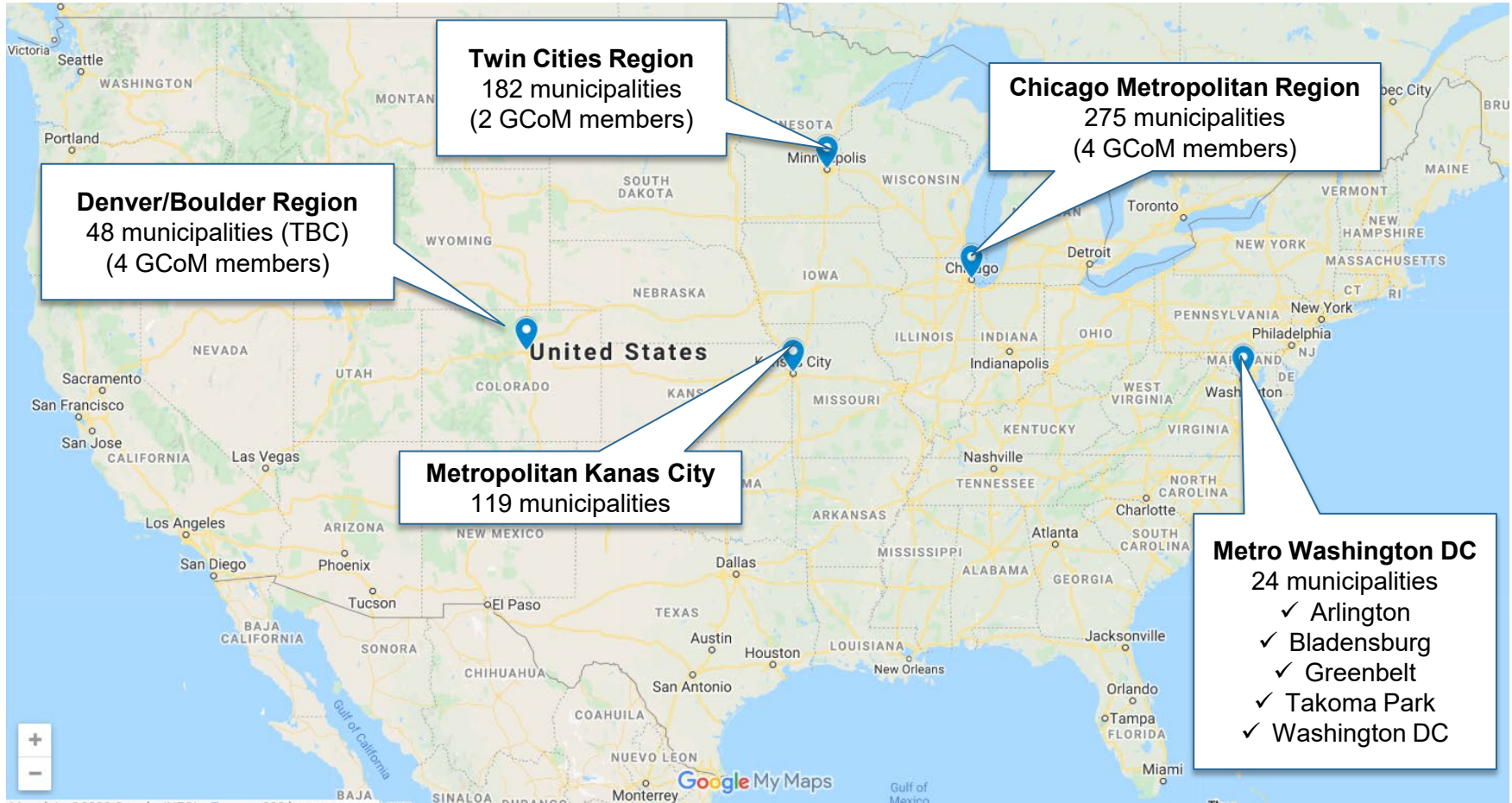
Specifically, within three years of this commitment[®], we pledge to develop, adopt[®], use and regularly report on the following:

- A community-scale GHG emission inventory, following the recommended guidance;
- An assessment of climate risks and vulnerabilities;
- Ambitious, measurable and time-bound target(s) to reduce/avoid GHG emissions;
- Ambitious climate change adaptation vision and goals, based on quantified scientific evidence when possible, to increase local resilience to climate change;
- An ambitious and just goal to improve access to secure, sustainable and affordable energy; and
- A formally adopted plan(s) addressing climate change mitigation / low emission development, climate resilience and adaptation, and access to sustainable energy.

The targets and action plans for mitigation / low emission development must be quantified and consistent with or exceed relevant national unconditional[®] commitments defined through the UNFCCC (Intended) Nationally Determined Contribution (NDC). The targets and action plans should be in line with National Adaptation Plans, where these exist; and should be consistent with the principles around energy access and urban sustainability embodied in the Sustainable Development Goals (SDGs).

www.globalcovenantofmayors.com

Global Covenant of Mayors



Ambition from other regions



Metropolitan Washington

- 50% below 2005 by 2030
- Climate Ready Region and new investments by 2030

Chicago Metropolitan Region

- 2030 goal TBC
- 80% - Carbon Neutral by 2050

Kansas City Region

- 2030 goal TBC
- 80% by 2050

Denver/Boulder Region

- TBC

Metropolitan Twin Cities (Minneapolis-Saint Paul)

- TBC

What's next?

- ✓ Promoting the work of the 5 regions nationally and internationally

- ✓ Tracking and reporting on progress
 - ✓ Bi-annual reporting to GCoM

- ✓ Supporting cities and regions to implement plans
 - ✓ Access to climate finance
 - ✓ Sharing case studies

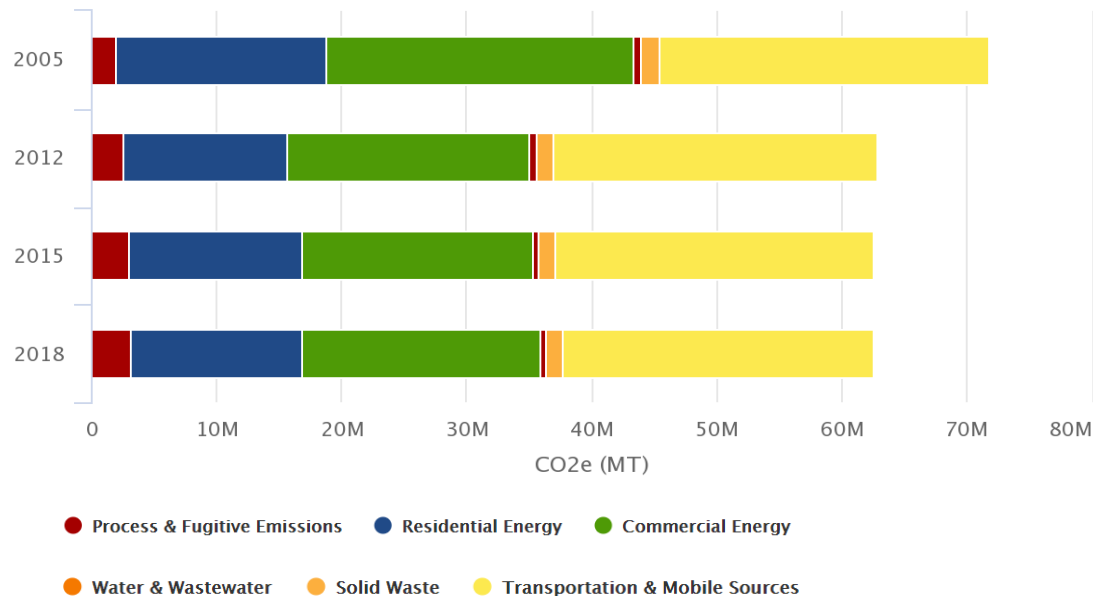
Climate Impacts – Cost of Inaction

- Increased storm intensity and frequency
 - Increased local flooding
 - Degraded MS4 performance and threaten compliance
 - Increased risk of tropical storms
 - Increased risk of winter ice storms
- Heat
 - Higher day and night temperatures – increasing health risk
 - Damage infrastructure – transit tracks, roads, energy
 - Increased drought risk
 - Wildfires & smoke
 - Worse ozone pollution
 - Utility bill increases – equity impact



Regional GHG Mitigation Goals

- Regional goals set in 2008
 - 2012 – Reduce from business as usual by 10% (roughly 2005 levels)
 - 2020 – Reduce 20% below 2005 (inventory showed 13% by 2018)
 - 2050 – Reduce 80% below 2005



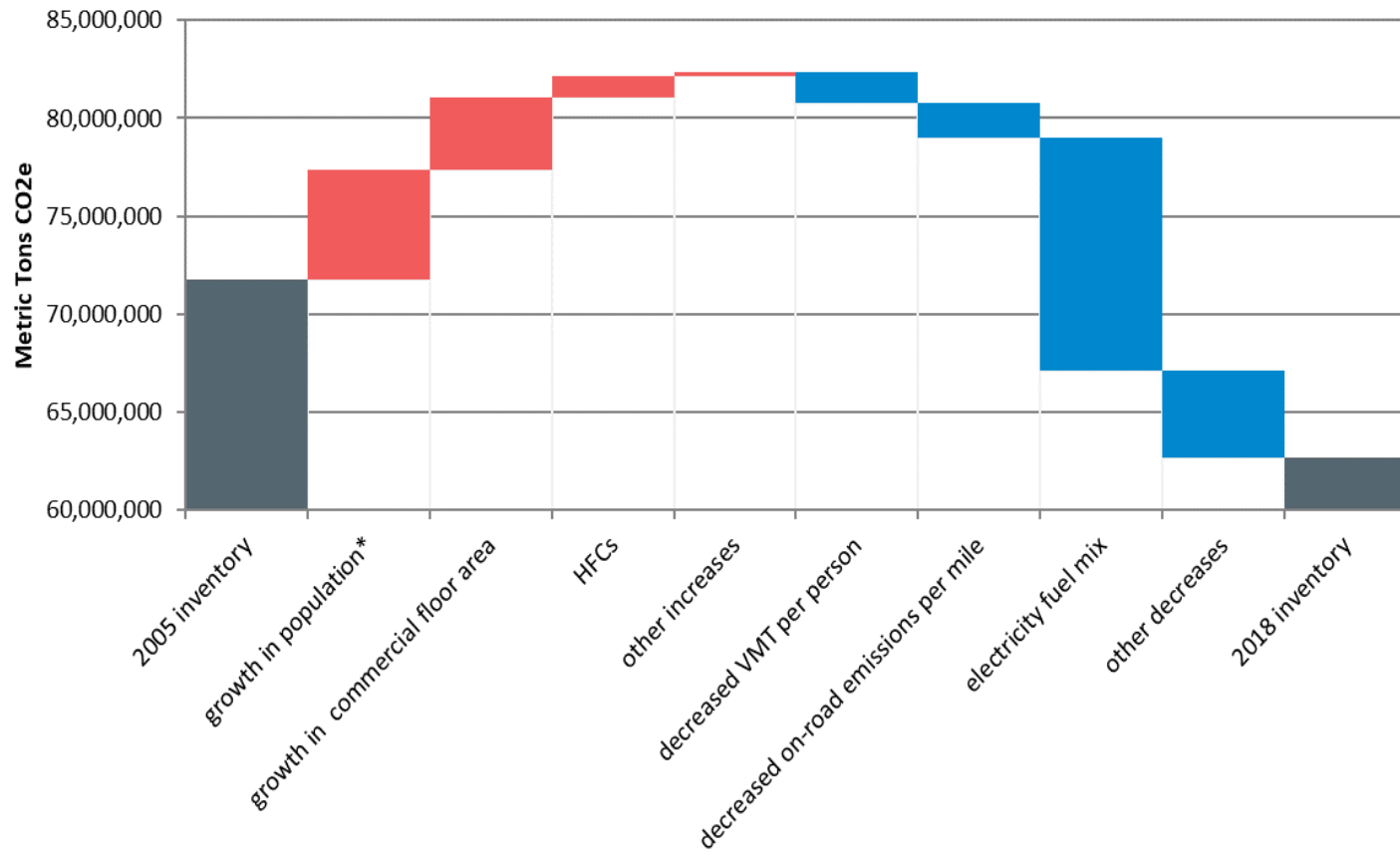
Source: ClearPath output

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



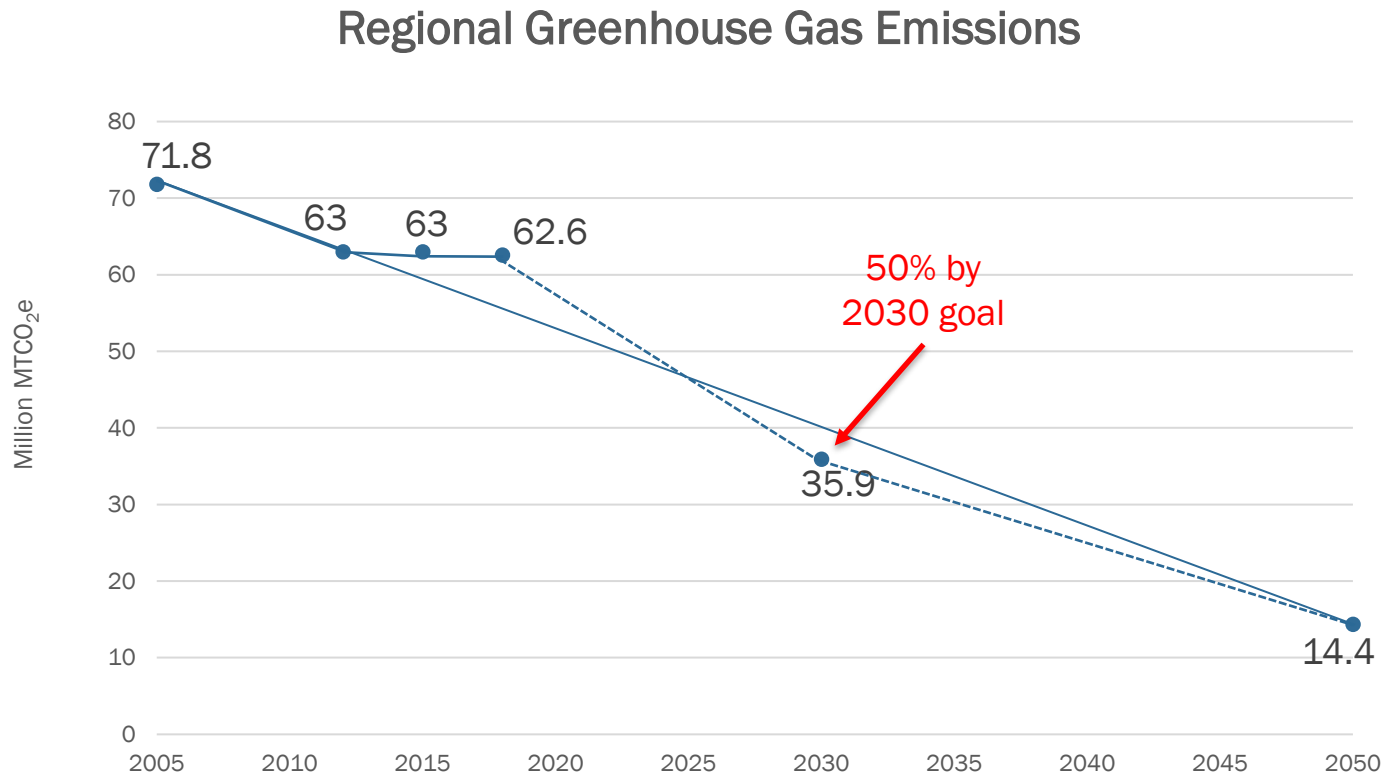
Drivers of Regional GHG Change

- What has caused regional GHG emissions to change over time?



Updated Regional GHG Mitigation Goals

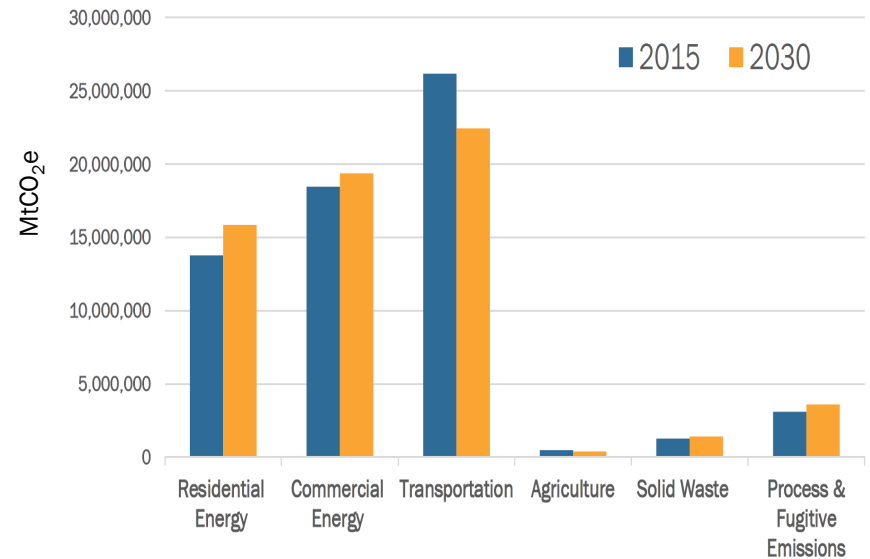
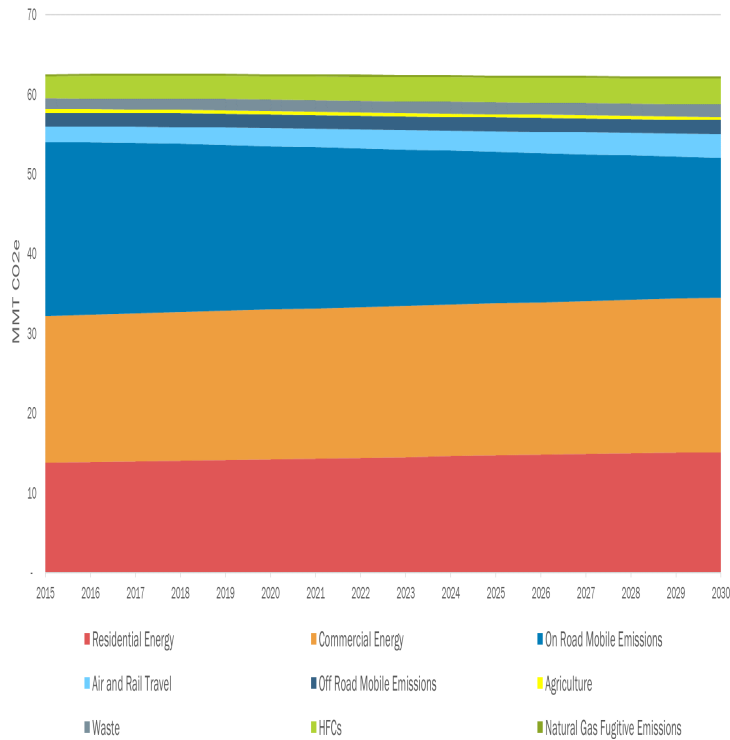
- Interim Goal - 50% below 2005 base line by 2030



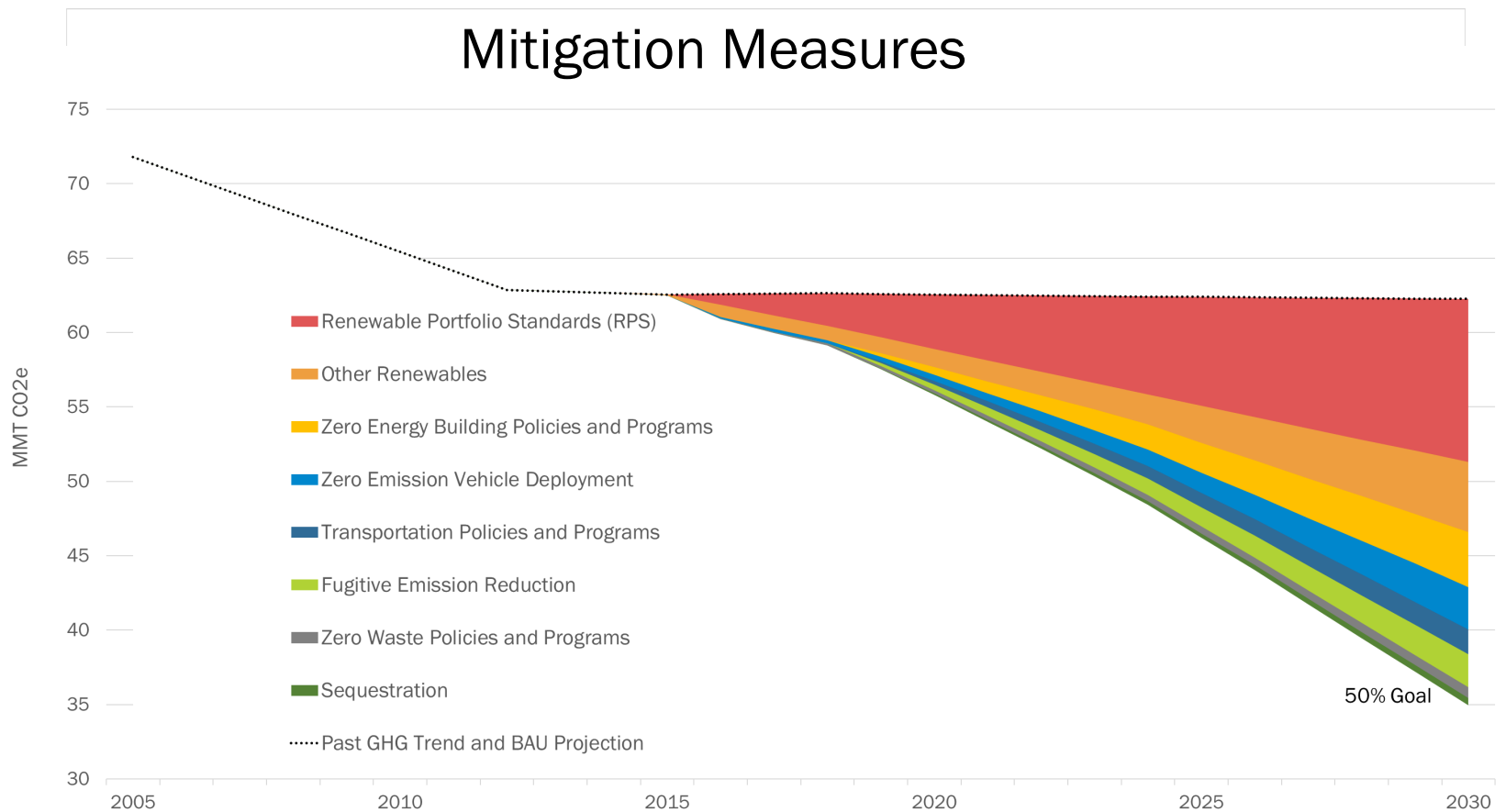
Looking Forward - Business As Usual

- Total emissions will remain flat with no new future actions

Metropolitan Washington Business as Usual Projections



50% Reduction - Technical Potential



50% Reduction - Technical Potential

Updated Scenario Assumptions	
Buildings	<ul style="list-style-type: none"> • 75% of new housing in Activity Centers with high capacity transit • All new construction new zero by 2030 • 2% residential & commercial building deep retrofits annually
Renewable Energy	<ul style="list-style-type: none"> • Renewable Portfolio Standards - Current standards (DC 87%, MD 50%, NOVA 38% by 2030) • + 200,000 additional distributed generation systems – equivalent to 24% of single-family homes with solar • 10% annual growth in corporate green power purchases
Transportation	<ul style="list-style-type: none"> • Continued fleet improvements – light, medium & heavy-duty vehicles • Electric vehicles: Add NREL Electrification Futures Study high EV adoption rates • Continued transit & micromobility – reduce VMT
Zero Waste	<ul style="list-style-type: none"> • 80% diversion by 2030



50% Reduction Mitigation - Buildings

- Buildings
 - High-performance buildings in Activity Centers
 - Net-Zero New Buildings
 - Local government and schools
 - Multi-family, commercial and institutional
 - Existing Building Deep Retrofits
 - Building benchmarking & performance standards
 - Property Assessed Clean Energy (PACE); Green Banks

50% Reduction Mitigation - Renewables

- Renewable Energy
 - Advocacy
 - Strong state renewable portfolio standards & RGGI
 - Supportive federal policies – FERC, DOE, etc
 - Local government policy
 - Incentives – property tax relief
 - Permitting – SolSmart Communities
 - Direct purchases
 - Local Power Purchase Agreements (PPAs) or system ownership
 - Private sector green power purchases or system ownership

50% Reduction Mitigation - Transportation

- Visualize 2045
 - Transit funding
 - Land use – 68% new housing in activity centers
 - VMT reduction strategies
 - Federal CAFE at 54.5 mpg
- Future
 - Multi-sector Working Group Recommendations
 - Transportation demand management
 - Transit incentives & fare reductions
 - Roadway pricing
 - Land use – 75% new housing in activity centers
 - National Renewable Energy Lab (NREL) high scenario for electric vehicles
 - Expanded transit and micromobility



50% Reduction Mitigation - Waste

- Divert 80% waste from landfill or waste-to-energy
 - Waste packaging and other sources
 - Material reuse
 - Composting
 - Recycling
 - Local programs
 - Producer responsibility



Regional Resilience Assessment

- Resilience = Lessen effects of acute or chronic events; recover more quickly after an event
- Completed Climate Risk and Vulnerability Assessment

Climate Hazards

Hazard	Probability	Consequence	Risk
Extreme Heat Days	3	3	9
Drought	2	3	6
Flooding (Flash and Riverine)	3	3	9
Lightning/Thunderstorm	3	2	6
Extreme Winter Conditions	2	3	6
Coastal Flooding	3	2	6

Adaptive Capacity

Factor	Degree of Challenge
Access to Basic Services	Moderate
Access to Healthcare	Moderate
Public Health	Moderate
Housing	Moderate
Poverty	Moderate
Economic Health	Low
Environmental Conditions	Moderate
Infrastructure Conditions / Maintenance	High
Community Engagement	Moderate

Regional Resilience Goal

- Network of people, governments, and institutions that have constructed resilient communities
- Climate risks are being communicated across governmental offices and to the public; engaging vulnerable populations
- Local climate risks have been assessed and climate planning is incorporated into all government plans & operations
- Measures have been implemented across the region
 - Critical infrastructure and functions climate resilient
 - Resilient solutions to protect public health and safety deployed
- Monitoring measures to address progress & future climate risks and vulnerabilities

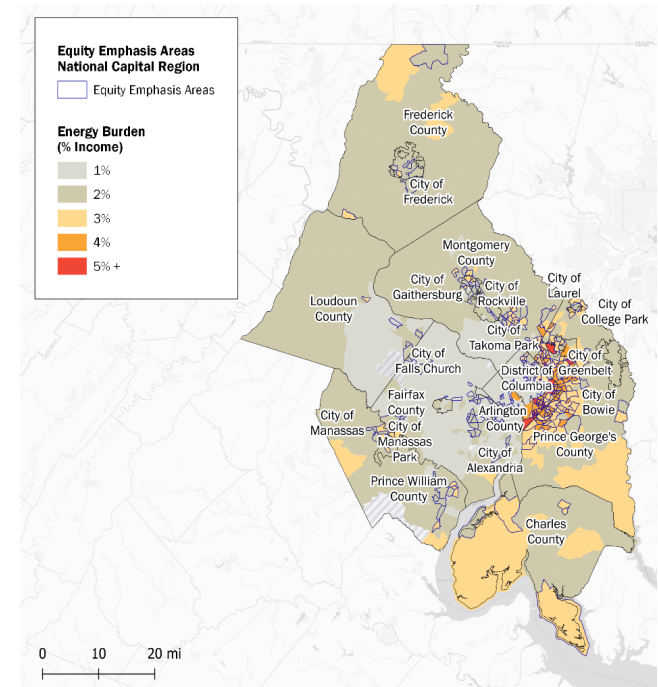
Regional Resilience Actions

- Investments being made in resilience
 - Flood control
 - Resilient hubs
 - Microgrids
 - Other services
 - Heat island cooling strategies
 - Tree canopy
 - White roof



Equity in Regional Climate Planning

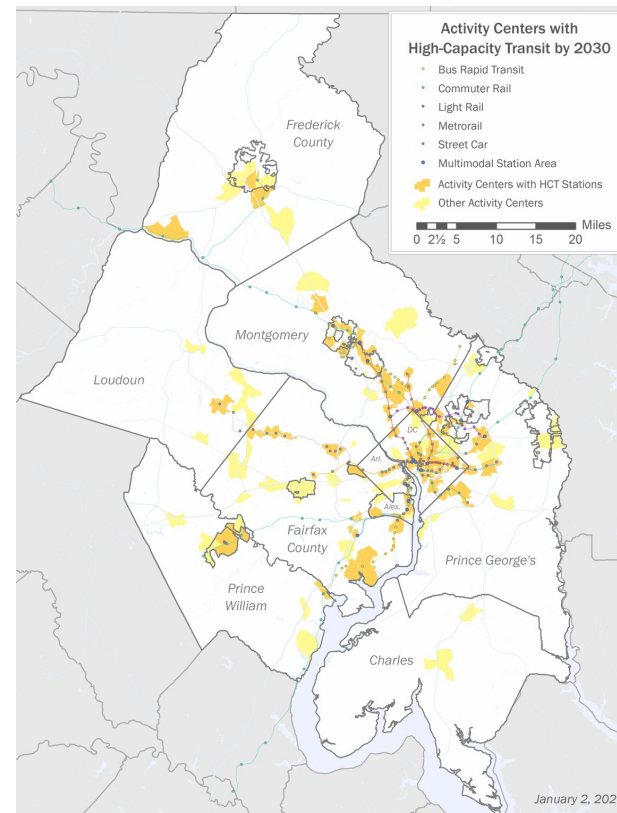
- Sustainable Energy Access
 - Addresses energy poverty & access to affordable renewable energy
- Evaluate community impact
 - Transportation Equity Emphasis Areas
 - Health Equity: How Opportunities for Health are Shaped by Race and Ethnicity



Source: US Department of Energy Low-Income Energy Affordability Data (LEAD) Tool & COG Equity Emphasis Areas

Other Benefits of Climate Planning

- Improved public health
 - Clean water & clean air
 - Reduce flooding & heat impacts
- Improved land use efficiency
- Sustainable food
- Expanded economic development
- Emergency response & recovery



Timeline

Regional Climate Plan Updated Timeline	
May 2020	<ul style="list-style-type: none"> • CEEPC consideration of updated climate goals
June 2020	<ul style="list-style-type: none"> • BEEAC and ACPAC weigh in on Plan's goals • BEEAC Review of Plan's scenarios
July 2020	<ul style="list-style-type: none"> • BEEAC deadline for comment on technical elements • CEEPC review of 2018 inventory, scenarios, and weigh in on Plan's goals
September 2020	<ul style="list-style-type: none"> • Presentation to COG Board
September 2020	<ul style="list-style-type: none"> • Preview Draft Plan framework & Climate Goals Resolution to ACPAC, BEEAC, CEEPC • CEEPC recommendation to COG Board
October 2020	<ul style="list-style-type: none"> • 2030 Climate Goal Resolution before COG Board
November 2020	<ul style="list-style-type: none"> • Draft Plan before CEEPC
December 2020	<ul style="list-style-type: none"> • Submit to GCoM; to be the 1st US Region fully meeting GCoM global standards for climate planning



Resolution

- WHEREAS
 - Recognize international factors – IPCC
 - Recognize 2008 Climate Change Report and goals
 - Global Covenant of Mayors for Climate and Energy
 - Strong actions needed to avoid most severe impacts
 - Educating the public is important
 - GOG Board – Weave equity into programs and priorities

Resolution

- NOW THEREFORE
 - Endorses 50% greenhouse gas emissions reduction from 2005 base year by 2030
 - Endorses Climate Ready Region by 2030
 - Reinforces need to incorporate equity and education in climate work
 - CEEPC to report back on progress and new actions needed

Steve Walz

Director, Department of Environmental Programs

202-962-3205

swalz@mwkog.org

mwkog.org

777 North Capitol Street NE, Suite 300

Washington, DC 20002