

NET ZERO EMISSIONS

Regional Review

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Metropolitan Washington
Council of Governments

Regional Challenges

The damaging impacts of the climate crisis pose a major threat to cities. It is critical that we understand best practices and the obstacles cities face when it comes to developing climate-resilient infrastructure and economies.

Increases in population, construction, transportation, and energy demand all add to our already high dependence to unsustainable energy sources. This will pose threats to the long term health of our natural environment.

As the Metro Washington area accelerates its efforts to meet our state and local sustainability commitments, new research shows that ambitious urban climate policies can vastly reduce carbon emissions regionally as well as effectively deliver enormous economic and public health benefits for the local population.

REGIONAL REVIEW

- **DC** - 93% of GHG emissions in the district come from electric (56%), natural gas (20%), and gasoline (17%) sources. The highest emitting sectors in the district are Commercial/Industrial Buildings (32%), Residential Buildings (23%), and Passenger Vehicles (20%).
- **MD** - *For the state's gross GHG emissions in 2017, electricity consumption accounted for 30%, transportation accounted for 40%, and RCI fuel use accounted for 18%.*
- **VA** - The commonwealth determined that its greatest GHG emitters were Transportation, Electricity, and Industrial Buildings.

COG 2017-2020 Plan

- **Net Zero Measures**

- Provide education and training on new and advanced green construction standards (e.g., Living Building, Net Zero, WELL Standard, Designed to ENERGY STAR, etc.).
- Offer incentives for commercial and residential buildings certified by a high efficiency building/green rating system (e.g., LEED, ENERGY STAR, Passive House, EarthCraft, Living Building Challenge, Net Zero, Well Standard, etc.).
- Adopt a net zero energy plan, policies, or initiatives.

REGIONAL REVIEW

- **DC**
 - Legislation
 - Omnibus Act
 - Green Building Act
 - Policy
 - DC Codes
 - Program
 - DC Green Bank
 - DC-PACE
 - Solar For All



The Race to NZE: MD

- **MD**
 - Legislation
 - GHG Emissions Reduction Act - (GGRA)
 - Policy
 - Emergency Climate Mobilization
 - Sustainability and Climate Action Plan (SCAP)
 - Programs
 - Clean and Renewable Energy Standard (CARES):
 - MD-PACE
 - MD Clean Energy Center (MCEC)

The Race to NZE: VA

- VA-
 - Legislation
 - Virginia Energy Plan (SB 94)
 - Commonwealth Efficient and Resilient Buildings Board
 - Green New Deal Act(HB 77)
 - Policy
 - Energy and Climate Action Plan
 - Operational Energy Strategy
 - Uniform Statewide Building Code (USBC)
 - Programs
 - C-PACE



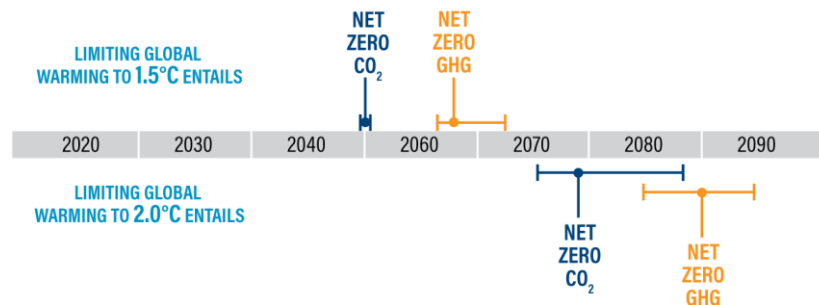
Future Initiatives

- In order to achieve NZE regionally by 2050, policy, technology and behavior need to shift across the board. Removing CO2 from the atmosphere will be necessary to compensate for emissions from sectors in which reaching zero emissions is more difficult

10 Key Solutions Needed to Reduce Greenhouse Gas Emissions

-  **PHASE OUT** coal plants
-  **INVEST** in clean energy & efficiency
-  **RETROFIT** buildings
-  **DECARBONIZE** cement, steel & plastics
-  **SHIFT** to electric vehicles
-  **INCREASE** public transport
-  **DECARBONIZE** aviation and shipping
-  **HALT** deforestation & **RESTORE** degraded lands
-  **REDUCE** food loss and waste
-  **EAT** more plants & less meat

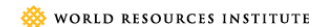
Global timeline to reach net-zero emissions



Source: IPCC Special Report on Global Warming of 1.5°C



Source: WRI



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