Climate Action and Maryland

Chris Hoagland
Program Manager, Climate Change
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Requirement: Publish a plan to reduce GHGs by 25% by 2020, and 40% by 2030.

NOTE: 2020 goal achieved in 2017, but with help from mild weather, so continued action and progress is necessary.
Maryland Commission on Climate Change (MCCC)

- Governor Hogan signed the Commission on Climate Change Act of 2015 to codify the Commission (MCCC)

Maryland is Serious About Addressing Climate Change
How the Maryland Commission on Climate Change is preparing our state

With 3,100 miles of shoreline, Maryland is one of the most vulnerable states in the nation to climate change, and we’re already seeing its impacts. The good news: Maryland is also a climate change leader, thanks in large part to the Maryland Commission on Climate Change (MCCC).

MARYLAND IS ALREADY EXPERIENCING THE IMPACTS OF CLIMATE CHANGE, INCLUDING:

SEA-LEVEL RISE
Sea-level rise of more than one foot by 2030

MCCC TIMELINE

2007
MCCC established by Executive Order

2008
MCCC completes the Maryland Climate Action Plan, recommending a 25% reduction in greenhouse gas emissions by 2020 and a 90% reduction by 2050

2009
The Climate Action Plan is a catalyst for the 2009 Greenhouse Gas Reduction Act, which adopts a 2020 reduction goal of 25%

2014
Executive Order expands the scope of the MCCC and its membership

2015
The General Assembly codifies the MCCC into law

2016
Greenhouse Gas Emissions Reduction Act of 2016 renews the 2009 Maryland law and adopts a 2030 greenhouse gas emissions reduction goal of 40%

2018
MDE to draft “40 by 30 Plan”

2019
Final “40 by 30” Plan, incorporating public comment, to Governor and General Assembly
MCCC – Four Working Groups

• The MCCC has four Working Groups:
  – Adaptation and Resiliency (ARWG)
  – Education, Communication, and Outreach (ECO)
  – Mitigation (MWG)
  – Scientific and Technical (STWG).

• Working groups are required to develop work plans that are updated annually.

• Each working group meets throughout the year to address the MCCC's responsibilities through a series of presentations and discussions to develop the recommendations made in the annual report.
The 2019 GGRA Draft Plan

- MDE has proposed the **2019 GGRA Draft Plan**
  - in coordination with other state agencies and stakeholders
  - must achieve Maryland’s goal of reducing greenhouse gas (GHG) emissions by **40 percent** by 2030 from a 2006 baseline
    - More ambitious than the Paris Climate Accord goal of 26% to 28% reduction by 2025
  - must also benefit the State’s economy and creates jobs

- Sets Maryland on a path to achieve the States ambitious GHG emissions reduction goal for 2030 and to achieve much deeper reductions in the 2040 to 2050 time frame

- Serves as an example for the nation showing how state action can reduce the threat of climate change while growing the economy and creating jobs
Major Programs in the GGRA Plan

**Electricity Supply**
- Clean and Renewable Energy Standard
- Continued RGGI Geographic Expansion

**Transportation**
- Numerous MDOT Investments (e.g., transit)
- Clean Cars / ZEV Mandate
- 50% ZEV Transit Buses
- Compact Development
- Transportation and Climate Initiative (TCI) could fund & enable other measures.

**Building Energy Use**
- Extended EmPOWER
- Heat Pump Incentives
- Compact Development
- State Building Efficiency EO

**Carbon Sequestration**
- Enhanced Forest Management
- Enhanced Healthy Soils Incentives
GHG Emissions under the Draft GGRA Plan

The 2019 GGRA Draft Plan reduces emissions by 44% by 2030 (extra 4.5MMTCO2e)
GGRA Draft Plan Employment Impact

- The Draft Plan drives substantial job gains.
- Almost all of MD’s fossil fuel comes from out of state.
- Investments that reduce fossil fuel consumption drive positive impacts for MD’s economy.

Large transportation projects drive substantial job gains in the near-term; investments in in-state clean energy and fuel-saving measures provide more modest underlying gains. (Transportation gains dependent on Federal funding)
Air Quality co-benefits of the GGRA Plan

• Programs designed to lower GHG emissions can also reduce:
  – Nitrogen oxide
  – Sulfur dioxide
  – Mercury
  – Other toxic metals
  – Diesel exhaust
  – Black carbon
Chesapeake Bay Restoration Benefits

• 1/3 of nitrogen pollution in the Chesapeake Bay comes from air pollution (nitrogen oxide)

• The Plan’s strategies to reduce GHG emissions also reduce Nitrogen deposition to the Bay

• Slowing the rate of sea level rise can have a positive impact on the Bay’s flora and fauna by reducing sediment loads and improving habitat quality
Recent findings from the IPCC, the National Climate Assessment, and UMD point to increasing urgency to reduce emissions, even beyond GGRA Goals.
Climate Action: Federal and State

• How does Maryland reduce in-state GHGs?
  – Greenhouse Gas Emissions Reduction Act
  – SLCPs (e.g., HFCs)

• Partnerships
  – United States Climate Alliance (USCA)
  – Regional Collaboration (RGGI, TCI)

• Federal Programs
  – Legal Challenges
Maryland joined the Alliance in 2018 (now 25 states)

- Mission: meet US commitment in Paris Climate Agreement (reduce GHG emissions 26-28 percent below 2005 levels by 2025)
- Maryland is working with other states on short-lived climate pollutant reductions, including HFCs and methane
Background on SLCPs

• SLCPs are powerful climate forcers that remain in the atmosphere for a much shorter period of time than carbon dioxide (CO2)

• Methane (CH4) and hydrofluorocarbons (HFC) are short-lived climate pollutants (SLCPs)

• Their relative potency, when measured in terms of how they heat the atmosphere, can be tens, hundreds, or even thousands of times greater than that of CO2

• SLCPs may be responsible for about 40% or more of global warming experienced to date

• Reducing emissions of SLCPs is the most effective way to immediately slow global warming and reduce the impacts of climate change, and it can be accomplished quickly and cost-effectively

1 http://igsd.org/documents/PrimeronShort-LivedClimatePollutantsFeb192013.pdf
Maryland is on Track

• Progress made through implementation of the *2019 GGRA Draft Plan* will position the State to achieve longer term goals like reducing GHG emissions between **80 percent** and **95 percent** from 1990 levels by 2050.

• Maryland is on a path that reduces risk from climate impacts and positively impacts the economy.

• Maryland aims to incorporate additional strategies to meet aggressive GHG reduction goals:
  – A Clean and Renewable Energy Standard (CARES)
  – Regional partnerships like RGGI (and potentially TCI)
  – Enhanced sequestration programs
  – HFC and methane regulations
Today’s Proposed Regulations

• The two regulations that will be discussed next are Maryland initiatives to begin to address SLCPs and to push for even deeper reductions than the approximate 44% reduction in the draft GGRA Plan
  – Hydrofluorocarbons (HFCs) and Methane

• Both part of our partnership with other USCA states

• Future Maryland SLCP initiatives include
  • Methane from other source sectors
  • Black Carbon