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## State Agencies Lead Effort to Reduce Greenhouse Gas Emissions in Maryland's Transportation Sector

### OVERVIEW

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The [Greenhouse Gas Emissions Reduction Act](#) (GGRA) requires all public sectors in Maryland to incorporate GHG reduction strategies into their planning and operations. Maryland's Greenhouse Gas Emissions Reduction Act Plan, a roadmap to accompany the GGRA legislation, provides a comprehensive list of strategies and activities designed to meet the State's greenhouse gas (GHG) reduction targets.

### BACKGROUND

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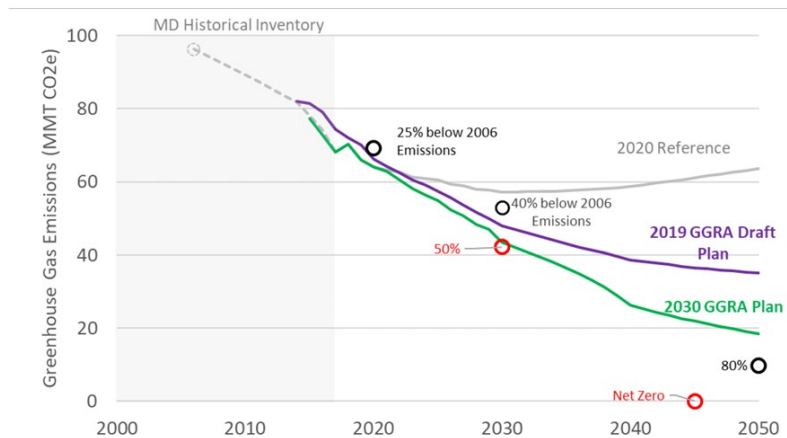
First adopted in 2009, the GGRA requires GHG reduction activities statewide. In its [2020 Annual Report](#), the [Maryland Commission on Climate Change \(MCCC\)](#) recommended another expansion of the State's GHG reduction goal: 50% reduction from 2006 levels by 2030. This is considered a statewide ambition but is not a part of the GGRA law. The MCCC, chaired by the [Maryland Department of Environment \(MDE\)](#) and made up of representatives from State agencies, plays a central role in advancing carbon reduction efforts in the State. In fall 2021, MDE released the 2030 [Greenhouse Gas Reduction Act Plan](#). It contains comprehensive programs, activities, and measures to help the State reach its GHG reduction goals while supporting economic growth.

### GOALS AND TARGETS

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The original targets outlined in the 2009 GGRA specified a 25% reduction of GHG emissions from 2006 levels by 2020. The 2016 law called for a 40% reduction in emissions by 2030 (Figure 1).

In 2020, the MDE found that Maryland exceeded the 2009 GGRA target and achieved a 30% reduction in statewide GHG emissions from 2006 levels. As a result, the MCCC recommended a statewide target of 50% emissions reductions by 2030. In 2022, Maryland lawmakers passed the [Climate Solutions Now Act](#), which reset targets to a 60% reduction by 2031 and to achieve statewide net-zero emissions by 2045.



**Figure 1: 2030 GGRA Plan Emissions Reduction Projections**

## INTEGRATION WITH TRANSPORTATION PLANNING

Data was collected from metropolitan planning organizations (MPOs) in the State of Maryland on proposed transportation projects and their GHG impacts to develop the GGRA Plan. In 2020, MDOT published its [2020 MDOT GGRA Plan](#) to outline the statewide transportation sector approach to achieving the targets set out by the GGRA. MDOT's GHG reduction planning considers two policy scenarios informed by the [Maryland Transportation Plan \(the state's long-range transportation plan\)](#), the [Consolidated Transportation Program](#), and the Baltimore MPO, and National Capital Region Transportation Planning Board plans and programs. The first scenario, referred to as "On-the-Books," evaluates the emission reductions from funded projects and programs in the metropolitan transportation plans planned for implementation by 2030. The second scenario, referred to as "Emerging and Innovative," considers unfunded strategies and technologies that will require additional investment. The Maryland Department of Planning provides population growth projections to inform MPOs' land use and travel demand forecasts. These forecasts are used to determine how proposed transportation projects will impact growth or reductions in vehicle miles traveled (VMT) in the "On-the-Books" scenario. MDOT uses EPA's [MOVES](#) model for estimating on-road GHG emissions.

## IMPLEMENTATION AT THE MPO-LEVEL

Baltimore's MPO, the [Baltimore Regional Transportation Board \(BRTB\)](#), is releasing their next LRTP, [Resilience 2050](#), in 2023. The BRTB uses the [Priority Funding Areas \(PFAs\)](#) and [Sustainable Communities](#) designations to inform transportation project selection. As part of Resilience 2050 update, BRTB released a series of whitepapers, including a [project scoring criteria whitepaper](#), which details how it quantifies the environmental conservation impact of anticipated regional transportation projects, and the potential for GHG emissions reductions, in line with the State's emissions reduction targets. The Maryland Department of Planning provides technical assistance to MPOs in their long-range planning processes to ensure projects align with local policies, planning, and context to maximize emissions reductions.



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One of the factors determining projects' scores is the degree to which it can reduce GHG emissions. Highway and transit projects could receive up to five points (out of a maximum of 55 points for Transit Projects and 50 for Highway Projects) for their potential to reduce GHG emissions based on the project scoring criteria. Including features that are anticipated to result in lower GHG emissions helps projects score higher. Examples include new sidewalks, trails, bicycle lanes, new transit lines, land preservation, tree planting, and increasing the fuel efficiency of vehicles.

#### **NEXT STEPS**

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The MDE expects to publish an updated GHG reduction plan by the end of 2023. The State's MPOs will continue to develop region-specific strategies for achieving GHG reductions in their transportation systems. MCCC's working group on Greenhouse Gas Mitigation, made up of multi-disciplinary representatives from state agencies and the legislature, local government, the private sector, non-profits, and universities, seeks to continue working across state and regional agencies to develop new strategies for achieving GHG emissions reductions statewide.