THE CENTER FOR
CLIMATE STRATEGIES

WORKING TOGETHER TO CREATE A BETTER SAFER AND MORE JUST WORLD

Memo

To: Maryland Transportation Interests

From: The Center for Climate Strategies

Re: **Federal Funding Opportunities for Maryland Transportation Policies**

Date: June 9, 2022

This memo provides an **overview and mapping of funding opportunities from the Federal Infrastructure Investment and Jobs Act (IIJA) for specified Maryland climate change policies and programs** in the transportation sector[1] focused on **electric vehicles (EVs) and public transportation** and specific strategies and programs within each.

Funding from IIJA includes formula-based programs and competitive (discretionary) grant programs that are open to governmental and nongovernmental organizations. The federal guidance for awards in these areas is in varying stages of release. Programs are authorized over the next 4-5 years. Actual amounts depend upon appropriations. The requirements of each award are unique, but IIJA includes cross cutting requirements for compliance with Justice 40 Initiative[2] (Justice 40) (targeting disadvantaged populations) and Buy America provisions.

Transportation climate policy actions for Maryland addressed in this memo include:

- **EV market share ramp-up**
  - Fleet replacement, such as for EV bus purchases to replace diesel buses
  - Charging infrastructure buildout
- **Public Transit Capacity/Service Expansion and Improvement** (primarily in rural and underserved communities)
  - Construction of Baltimore's Red Line
  - Rural Transit
  - New bus purchases to expand service
  - Bus Depot Electrification
  - Accessibility

[1] Transportation is the largest emitter of greenhouse gasses (GHGs) in Maryland, accounting for about 40 percent of state emissions, with the most attributable to the operation of Light Duty Vehicles (LDV) followed by Heavy Duty Vehicles (HDV). Transportation spending has a major impact on statewide employment, health, environment, and the equitable distribution of benefits. The Maryland Greenhouse Gas Reduction Act (GGRA) includes a series of low carbon transportation actions designed to meet state climate mitigation goals.

[2] 40 percent of the overall benefits of relevant federal investments must be directed to disadvantaged communities in geographically concentrated areas as well as dispersed populations with common conditions.

The table below provides summary details on current federal funding programs under IIJA relevant to the actions listed above with indication of key dates for application. More information about each program is provided in the text following the table.

FEDERAL FUNDING PROGRAM	MARYLAND ACTIONS	KEY DATES
Low or No Emissions Grant (Competitive)	EV bus purchase/lease; Bus depot electrification; Address Justice 40 communities	Closed for 2022, watch for the next round Q1 2023.
National Electric Vehicle Infrastructure (NEVI) Formula Program	Charging infrastructure buildout; Address Justice 40 Communities	The Maryland Dept. of Transportation (MDOT) draft app. available for public review late June; next ZEEVIC meeting July 20
Charging and Fueling Infrastructure Grants (Community Charging)	Charging infrastructure buildout	A Notice of Funding Opportunity (NOFO) is expected in late 2022 (by Nov 15).
Charging and Fueling Infrastructure Grants (Corridor Charging)	Charging infrastructure buildout	A NOFO expected in late 2022 (by Nov 15).
Clean School Bus Rebate Program	School bus replacement with EVs; Address Justice 40 communities	Applications due August 19
Capital Investment Grant (CIG) Program	Construction of Red Line; Other rail; Bus rapid transit	Applications are accepted on a rolling basis until exhausted.
Carbon Reduction Program (CRP), Formula	Construction of Red Line; Other transit projects; EV buses; Charging infrastructure; Address Justice 40 communities	Transportation Strategy Plan to be submitted by November 15, 2023
Local and Regional Project Assistance Grants (RAISE), (Competitive)	Red Line; Other transit projects; Address Justice 40 Communities	Closed for 2022, watch for next round Q1 2023.
Congestion Mitigation & Air Quality Improvement Program (CMAQ)	Bus Replacement (EVs); Public transit expansion (NAAQS nonattainment and maintenance areas); Red Line	A NOFO for FY2023 is expected for October 2022.
Pilot Program for Transit-Oriented Development Planning	Land use planning in Transit corridors; Address Justice 40 Communities	FY2022 applications are due July 25.
Formula Grants for Rural Areas	Rural Transit; Address Justice 40 Communities	Next round TBD

FEDERAL FUNDING PROGRAM	MARYLAND ACTIONS	KEY DATES
Urbanized Area Formula Grants	Urban Transit	Next NOFO is expected in summer 2022.
Bus and Bus Facilities Formula and Competitive Grants	Bus service expansion (Rural or Urban); Bus depot electrification	Closed for 2022, watch for the next round in Q1 2023.
All Stations Accessibility Program	Accessibility improvements for disabled and elderly residents	A NOFO is coming in July.
Surface Transportation Block Grants (STBG), Formula	Bus Rapid Transit; Charging infrastructure; State may transfer 50% of STBG funds to other programs (such as Carbon Reduction or Congestion Mitigation)	Next round TBD
National Highway Performance Program (NHPP), Formula	State may transfer 50% of NHPP funds to other programs (such as Carbon Reduction or Congestion Mitigation)	Next round TBD
Multimodal Project Discretionary Grant	Rural/regionally significant public transit to generate economic growth (Address Justice 40 Communities)	Closed for 2022. Watch for the next round Q1 2023.
State of Good Repair	Improvements to existing transit	The last deadline was March 7, 2022 (now closed), no new date has been announced.
Promoting Resilient Operations for Transformative, Efficient and Cost-saving Transportation (PROTECT)	Resilience improvements	TBD

Please note that:

- For several funding programs demonstrated approaches and tie-ins to **workforce development** will be required. This could include expansion of government program capacity as well as non-governmental and private sector capacity for installation and operation of charging stations.
- **Maryland state leadership** on transportation
    - Predominantly through Earl Lewis, Deputy Secretary of Maryland Department of Transportation (MDOT). MDOT leads the Zero Emissions Electric Vehicle Infrastructure Council (ZEEVIC) which has been active since 2019. He also leads interdepartmental work with the Maryland Transit Administration (MTA). Through Mr. Lewis MDOT is actively engaged in planning for IIJA funds and a wide range of stakeholder engagements.

  - The Public Service Commission (PSC) is active on transportation for EVs and charging station powering. The PSC wholesale markets division is part of the ZEEVIC council and the PSC also is implementing a Zero Emissions Vehicle Pilot Program.
  - Maryland Energy Administration (MEA) administers the Electric Vehicle Implementation Program (EVIP) to help promote clean, efficient transportation by allocating funds to Electric Re-Charging Infrastructure (ECI) as well as renewable energy programs that can enable shift of power supplies for EVs to renewable and low carbon sources.
- **Maryland county leadership** on transportation is through local departments of transportation with varying levels of coordination with sustainability programs.
- **Technical assistance resources** available to applicants
  - Upcoming Notice of Funding Opportunity Announcements in 2022: https://www.transportation.gov/bipartisan-infrastructure-law/upcoming-notice-funding-opportunity-announcements-2022
  - Grants.gov, How to Apply for Grants: https://www.grants.gov/web/grants/applicants/apply-for-grants.html
  - Federal Highway Administration, Federal-aid Essentials for Local Public Agencies: https://www.fhwa.dot.gov/federal-aidessentials/catmod.cfm?id=3
  - Applicant Toolkit for Rural Competitive Funding Programs at USDOT: https://www.transportation.gov/rural/grants/toolkit
  - Rural EV Toolkit - to identify key partners, to plan, and identify available funding or financing : https://www.transportation.gov/rural/ev/toolkit
  - National Rural Transit Assistance Program - training, technical assistance, tools and peer networking: https://www.nationalrtap.org/
  - Rural Opportunity Tour Fact Sheet: https://www.energy.gov/articles/rural-opportunity-tour-fact-sheet
  - Joint Office of Energy and Transportation - technical assistance for EV funding: https://driveelectric.gov/technical-assistance/
  - Congestion Mitigation and Air Quality (CMAQ) Emissions Calculator Toolkit: https://www.fhwa.dot.gov/environment/air_quality/cmaq/toolkit/index.cfm
  - Justice 40 Accelerator - to track funding opportunities: https://www.justice40accelerator.org/accelerator-announcements-1
  - Transportation Disadvantaged Census Tracts (Historically Disadvantaged Communities) - USDOT list of U.S. Census tracts that meet the Disadvantaged Communities (DAC) definition and corresponding mapping tool: https://usdot.maps.arcgis.com/apps/dashboards/d6f90dfcc8b44525b04c7ce748a3674a
  - Climate and Economic Justice Screening Tool - map to see communities that are identified as disadvantaged for the purposes of the Justice40 Initiative: https://screeningtool.geoplatform.gov/en/about

1. Low or No Emissions Grants

Scope and Level of Funds

- Purchase/lease of low- or no-emission buses and related equipment, construction/lease/ rehabilitation of facilities
- Need to identify how the projects benefit **disadvantaged communities (DACs)**
    - USDOT's Interim definition of DACs and mapping tool apply[3]
- FY 2021 grants were $0.6-$7.4 million in size
- Federal share of costs cannot exceed 85-90% (depending on use of funds)
- 0.5% of a request may be for workforce development training, additional 0.5% for training at the National Transit Institute (NTI). Applicants for zero-emission vehicles must also spend 5% of their award on workforce development and training.

Eligible Parties

- Designated recipients of Federal Transit Administration (FTA) grants (states and local governmental authorities)

Important Dates and Next Steps

- Closed for FY 2022
- Understand requirements and prepare for next round expected in **early 2023**

Resources

- Program page: https://www.transit.dot.gov/lowno

2. National Electric Vehicle Infrastructure (NEVI) Formula Program Scope

Scope and Level of Funds

- Deployment of EV charging infrastructure, establishment of an interconnected network to facilitate data collection, access, and reliability, operation and maintenance of electric vehicle charging infrastructure
- Need to identify how the projects benefit **disadvantaged communities (DACs)**
    - USDOT's Interim definition of DACs and mapping tool apply
- Plans should be developed through engagement with **rural, underserved, and disadvantaged communities**
- Federal cost share is 80%.
- 10% of funding for discretionary grants to State and local governments that require additional assistance to strategically deploy EV charging infrastructure
- **Maryland apportionment is $62 million for 2022-2026**

[3] As part of USDOT's work in implementing the Justice40 Initiative, the Department developed an interim definition for disadvantaged communities ("DACs") that may be used under Justice40-covered grant programs. In order to help grant applicants determine whether the locations of their proposed projects were in a DAC, the Department created the following mapping tool, which went live on January 28, 2022: Transportation Disadvantaged Census Tracts (Historically Disadvantaged Communities) - : https://usdot.maps.arcgis.com/apps/dashboards/d6f90dfcc8b44525b04c7ce748a3674a

Eligible Parties

- Designated recipients of FTA grants (states and local governmental authorities)

Important Dates and Next Steps

- In response to the first NOFO, MDOT is expected to release a draft application plan for NEVI funding for public comment in **late June 2022** - an important window of opportunity for local agency and stakeholder input and agency conferral on a number of points, including the scale and end use of funds
- MDOT conferring with counties and the private sector regarding the NEVI application
- Next NOFO expected to be published **late 2022** - critical next step in MDOT stakeholder engagement, expected to include EJ40 considerations.
- Next MDOT meeting **July 20, 2022**
- Additional actions and standards from US DOT by **Nov. 15**: EV Working Group formation, EV data requirements, DOT electrification measures, NEVI EV transportation corridors, NEVI 10% EV strategy, DOT charging station standards.
- **States must submit plans describing how they intend to use funds by August 1.**

Resources

- Program fact sheet: https://www.fhwa.dot.gov/bipartisan-infrastructure-law/nevi_formula_program.cfm
- MD Zero Emission Vehicle Infrastructure Plan (ZEVIP): https://evplan.mdot.maryland.gov/
- Zero Emission Electric Vehicle Infrastructure Council (ZEEVIC): https://www.mdot.maryland.gov/tso/pages/Index.aspx?PageId=81

3. Charging and Fueling Infrastructure Competitive Grants for Corridor Charging

Scope and Level of Funds

- Deployment of EV charging and hydrogen/propane/natural gas fueling infrastructure **along designated alternative fuel corridors and in communities**; acquisition and installation of publicly accessible EV charging or alternative fueling infrastructure, operating assistance (for the first 5 years after installation), acquisition and installation of traffic control devices.
- $1.25 billion nationally for four years. It appears that for transportation, the ratio of discretionary to formula funds is 33 percent.

Eligible Parties

- State or political subdivision of a state, MPOs, local government, special purpose district or public authority with a transportation function, Indian Tribe, territory

Important Dates and Next Steps

- An early 2022 NOFO has already passed but an additional NOFO is expected in **late 2022**.
- Competitive award mechanism that does not formally require state agency partnership (applications are wide open), but it is likely that intergovernmental coordination,

community partnerships, policy commitments, and significant documentation of expected benefits and costs should be demonstrated.

Resources:

- Zero Emission Electric Vehicle Infrastructure Council (ZEEVIC): https://www.mdot.maryland.gov/tso/pages/Index.aspx?PageId=81
- MD Alternative Fuel Corridors: https://www.mdot.maryland.gov/tso/pages/Index.aspx?PageId=167

4. Charging and Fueling Infrastructure Competitive Grants for Community Charging

Scope and Level of Funds

- Provides discretionary funds for installation of EV charging and alternative fuel in locations on **public roads, schools, parks, and in publicly accessible parking facilities**, acquisition and installation of publicly accessible EV charging or alternative fueling infrastructure, operating assistance (for the first 5 years after installation), acquisition and installation of traffic control devices.
- $2.5 billion over 5 years. Grants up to $15 million.
- Federal cost share is 80%
- Priority to rural areas, low- and moderate-income neighborhoods, and communities with low rates of private parking.

Eligible Parties

- State or political subdivision of a state, MPOs, local government, special purpose district or public authority with a transportation function, Indian Tribe, territory

Important Dates and Next Steps

- An early 2022 NOFO has already passed but an additional NOFO is expected in **late 2022**.
- Competitive award mechanism that does not formally require state agency partnership (applications are wide open), but it is likely that intergovernmental coordination, community partnerships, policy commitments, and significant documentation of expected benefits and costs should be demonstrated.

Resources

- Zero Emission Electric Vehicle Infrastructure Council (ZEEVIC): https://www.mdot.maryland.gov/tso/pages/Index.aspx?PageId=81

5. Clean School Bus Rebate Program

Scope and Level of Funds

- The Environmental protection Agency (EPA) is offering $500 million ($250 million for clean school buses and $250 million for zero-emission school buses) for school bus rebates

- Applications can request funds for replacing up to 25 buses.
- EPA may award more funding depending on demand and other considerations.
- Priority goes to:
    - High-need school districts and **low-income areas** limited (School districts listed in the Small Area Income and Poverty Estimates (SAIPE) School District Estimates for 2020 as having 20% or more students living in poverty);
    - School districts not listed in the SAIPE data, including most charter schools, that self-certify as having 20% or more students living in poverty pursuant to the federal poverty threshold.
    - School districts located in the U.S. Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands.
    - **Rural** – School districts identified with locale codes "43-Rural: Remote" and "42-Rural: Distant" by the National Center for Education Statistics (NCES).
    - Tribal – Bureau of Indian Affairs funded school districts and school districts that receive basic support payments

Eligible Parties

- State and local governmental entities that provide bus service
    - Public school districts, including charter schools, with an NCES District ID are eligible to apply directly for funding.
    - Most State governmental entities would not be eligible to apply, but some, like South Carolina, own bus fleets and would be eligible.
- Eligible contractors - Eligible contractors are for-profit, not-for-profit, or nonprofit entities that have the capacity to (1) sell clean or ZE school buses or related charging or fueling infrastructure to school bus owners or (2) arrange financing for such a sale.
    - School bus dealers and original equipment manufacturers (OEMs) that meet these criteria are eligible contractors.
- Nonprofit school transportation associations
- Indian tribes, tribal organizations, or tribally controlled schools responsible for the purchase of school buses or providing school bus service for a Bureau of Indian Affairs (BIA) funded school

Important Dates and Next Steps

- Applications due August 19, 2022.

Resources

- Program page: https://www.epa.gov/cleanschoolbus/school-bus-rebates-clean-school-bus-program

6. Capital Investment Grants (CIG) Program

Scope and Level of Funds

- Fixed guideway investments including new and expanded rapid rail, commuter rail, light rail, streetcars, bus rapid transit, and ferries, as well as corridor-based bus rapid transit investments that emulate the features of rail.
- Multi step, multi-year process for eligibility
- $3 billion total available annually through 2026.

Eligible Parties

- State and local governments, including transit agencies

Important Dates and Next Steps

- Applications accepted on rolling basis

Resources

- Program page: https://www.transit.dot.gov/CIG

7. Carbon Reduction Program (CRP)

Scope and Level of Funds

- Formula funding for projects that reduce transportation emissions
- Projects must be included in a **state transportation carbon reduction strategy** to be submitted not later than two years after enactment and update strategies every four years (see deadline below).
- Projects for safe, reliable and cost-effective options to
    - Reduce congestion through encouraging alternatives to single car use.
    - Facilitate use of vehicles or modes of travel that result in lower transportation emissions per person-mile traveled as compared to existing vehicles and modes; and
    - Facilitate construction of assets that result in lower emissions as compared to existing approaches
- For projects in an urbanized area that is not a transportation management area, must consider needs of traditionally **underserved communities** by existing transportation systems and/or **low income or minority households** access to employment/other services
- State shall consult with any regional transportation planning organization or MPO that represents the **rural area**
- **Maryland's apportionment was $18 million for FY 2022**

Eligible Parties

- States

Important Dates and Next Steps

- Transportation Strategy Plan to be submitted by November 15, 2023
- Secretary must certify or deny with feedback within 90 days following submission.

Resources

- Fact sheet: https://www.fhwa.dot.gov/bipartisan-infrastructure-law/crp_fact_sheet.cfm

8. Local and Regional Project Assistance Grants (RAISE), Competitive

Scope and Level of Funds

- Portion of funding reserved for **Areas of Persistent Poverty or Historically Disadvantaged Communities**
    - "Areas of Persistent Poverty" is defined as
        - "The County in which the project is located consistently had greater than or equal to 20 percent of the population living in poverty in all three of the following datasets: (a) the 1990 decennial census; (b) the 2000 decennial census; and (c) the 2020 Small Area Income Poverty Estimate, or
        - The Census Tract in which the project is located has a poverty rate of at least 20 percent as measured by the 2014-2018 5-year data series available from the American Community Survey of the Bureau of the Census; or
        - The project is located in any territory or possession of the United States."
    - "Historically Disadvantaged Communities" is defined consistent with OMB's Interim Guidance for the Justice40 Initiative based on which "A project is located in a Historically Disadvantaged Communities if:
        - The project is located in certain qualifying census tracts[4] ; or
        - The project is located on Tribal land; or
        - The project is located in any territory or possession of the United States
    - USDOT's Interim definition of DACs and mapping tool apply
- At least $15 million guaranteed.
- Federal cost share is 80%, but this may be increased for the communities described above.

Eligible Parties

- Any public entity, including municipalities, counties, port authorities, tribal governments, MPOs

Important Dates and Next Steps

- Closed for 2022, watch for next round **Q1 2023**

Resources

- Program page: https://www.transportation.gov/RAISEgrants

[4] Please refer to the map developed by the US Department of Transportation at https://usdot.maps.arcgis.com/apps/dashboards/d6f90dfcc8b44525b04c7ce748a3674a

9. Congestion Mitigation & Air Quality Improvement Program

Scope and Level of Funds

- Funding to reduce congestion and improve air quality to areas in nonattainment or maintenance for ozone, carbon monoxide, and/or particulate matter
- Funds may be used for any transit capital expenditures otherwise eligible for FTA funding as long as they have an air quality benefit.
- Federal cost share is 80%.
- **Maryland's apportionment was $58 million for FY 2022**

Eligible Parties

- States and local governments

Important Dates and Next Steps

- Round 1 was December 2021. FY 2023 expected October 2022.

Resources

- Fact sheet: https://www.fhwa.dot.gov/bipartisan-infrastructure-law/cmaq.cfm

10. Pilot Program for Transit-Oriented Development Planning

Scope and Level of Funds

- Funding to local communities to integrate land use and transportation planning with a new fixed guideway or core capacity transit capital investment.
- Comprehensive planning funded through the program must examine ways to **improve economic development and ridership**, foster multimodal connectivity and accessibility, improve transit access for pedestrian and bicycle traffic, engage the private sector, identify infrastructure needs, and enable mixed-use development near transit station
- Plan for community engagement and to address needs of traditionally **underserved communities** by existing transportation systems, such as low- income and minority households, who may face challenges accessing employment and other services.
- Need to identify how the projects benefit **disadvantaged communities (DACs)**
    - USDOT's Interim definition of DACs and mapping tool apply
- $13 million available for FY22; $13 million available for FY23; $14 million available for FY24-26

Eligible Parties

- State or local governmental authorities

Important Dates and Next Steps

- Competitive grant for FY 2022 closes **July 25, 2022**

Resources

- Fact sheet: https://www.transit.dot.gov/funding/grants/fact-sheet-pilot-program-transit-oriented-development-planning

11. Formula Grants for Rural Areas

Scope and Level of Funds

- Formula funds for capital, planning, and operating assistance to states to support public transportation in **rural areas with populations less than 50,000.**
- The federal share is 80 percent for capital projects, 50 percent for operating assistance, and 80 percent for Americans with Disabilities Act (ADA) non-fixed route paratransit service.
- **Maryland's apportionment was $8 million for FY 2022.**

Eligible Parties

- Fixed route operators, State or local governments

Important Dates and Next Steps

- Next round of funding TBD

Resources

- Fact sheet: https://www.transit.dot.gov/funding/grants/fact-sheet-formula-grants-rural-areas

12. Urbanized Area Formula Grants

Scope and Level of Funds

- Planning, engineering, design and evaluation of transit projects and other technical transportation-related studies; capital investments in bus and bus-related activities such as replacement, overhaul and rebuilding of buses, crime prevention and security equipment and construction of maintenance and passenger facilities; and capital investments in new and existing fixed guideway systems including rolling stock, overhaul and rebuilding of vehicles, track, signals, communications, and computer hardware and software
- Urbanized areas with populations more than 50,000.
- The federal share is not to exceed 80 percent of the net project cost for capital expenditures. The federal share may be 90 percent for the cost of vehicle-related equipment attributable to compliance with the Americans with Disabilities Act and the Clean Air Act. The federal share may not exceed 50 percent of the net project cost of operating assistance.
- **Maryland's apportionment was $14 million for FY 2021.**

Eligible Parties

- Fixed route operators, State or local governments

Important Dates and Next Steps

- N**ext NOFO is expected in summer 2022**

Resources

- Fact sheet: https://www.transit.dot.gov/funding/grants/urbanized-area-formula-grants-5307

13. Bus and Bus Facilities Formula and Competitive Grants

Scope and Level of Funds

- Funds to replace, rehabilitate, and purchase buses and equipment/facilities
- Direct grants under the Urbanized Area Formula (Section 5307) and Rural Formula (Section 5311) programs
- Includes innovations for low or no emissions vehicles and facilities.
- Requires that 5% of all Grants for Buses and Bus Facilities or Low or No Emissions competitive grants related to zero emission vehicles or related infrastructure be used for workforce development activities.
- Federal cost share is 80%.
- $372 million

Eligible Parties

- Fixed route operators, State or local governments

Important Dates and Next Steps

- Closed for 2022, watch for next round **Q1 2023**

Resources

- Fact sheet: https://www.transit.dot.gov/funding/grants/fact-sheet-buses-and-bus-facilities-program

14. All Stations Accessibility Program

Scope and Level of Funds

- Projects to repair, improve, modify, retrofit, or relocate infrastructure of legacy stations or facilities for **people with disabilities**, including those who use wheelchairs.
- Only applies to legacy stations and inaccessible facilities and for planned modifications. An eligible entity may not use a grant awarded under this program to upgrade a station or facility for passenger use that is already accessible to and usable by people with disabilities, including individuals who use wheelchairs,
- $350 million

Eligible Parties

- State or local governmental authorities

Important Dates and Next Steps

- Next NOFO coming **July 2022**

Resources

- Fact sheet: https://www.transit.dot.gov/funding/grants/fact-sheet-all-stations-accessibility-program

15. Surface Transportation Block Grants (STBG), Formula

Scope and Level of Funds

- Projects to preserve and improve the conditions and performance on any Federal-aid highway, bridge and tunnel projects on any public road, pedestrian and bicycle infrastructure, and transit capital projects, including intercity bus terminals.
- Also includes installation of EV charging infrastructure and vehicle-to-grid infrastructure.
- State may transfer 50% of STBG funds to other programs (such as Carbon Reduction or Congestion Mitigation)
- 55% of a State's apportionment is to be obligated in the following areas: Urbanized areas with population greater than 200,000; Urbanized areas with population of at least 50,000 but no more than 200,000; Urbanized areas with population of at least 5,000 but no more than 49,999; Areas with population of less than 5,000. The remaining 45% of the State's STBG apportionment may be obligated in any area of the State.
- **Maryland's apportionment was $203 million for FY 2022**

Eligible Parties

- States and localities

Important Dates and Next Steps

- Next round of funding TBD

Resources

- Fact sheet: https://www.fhwa.dot.gov/bipartisan-infrastructure-law/stbg.cfm
- Guidance document: https://www.fhwa.dot.gov/specialfunding/stp/bil_stbg_implementation_guidance-05_25_22.pdf

16. National Highway Performance Program (NHPP), Formula

Scope and Level of Funds

- State may transfer 50% of NHPP funds to other programs (such as Carbon Reduction or Congestion Mitigation)
- **Maryland's apportionment was $418 million for FY 2022**

Eligible Parties

- States

Important Dates and Next Steps

- Next round of funding TBD

Resources

- Fact sheet: https://www.fhwa.dot.gov/bipartisan-infrastructure-law/nhpp.cfm

17. Multimodal Project Discretionary Grant

Scope and Level of Funds

- Combination of 3 programs with a total of $2.9 billion in funding:
  - National Infrastructure Project Assistance (MEGA) - competitive grants for multijurisdictional or regional projects of significance that may also cut across multiple modes of transportation, including highway, bridge, freight, port, passenger rail, and public transportation.
  - Nationally Significant Multimodal Freight and Highways Projects (INFRA) - competitive grants for highway, multimodal freight and rail projects.
  - Rural Surface Transportation Grant Program
- Need to identify how the projects benefit **disadvantaged communities (DACs)**
  - USDOT's Interim definition of DACs and mapping tool apply
- $300 million is **set aside for rural communities** to improve access to increase access to critical economic support facilities for agricultural, energy, and transportation.

Eligible Parties

- State or local governmental authorities

Important Dates and Next Steps

- Closed for 2022, watch for next round **Q1 2023**

Resources

- Program page: https://www.transportation.gov/grants/mpdg-announcement

18. State of Good Repair

Scope and Level of Funds

- Capital projects that maintain a fixed guideway or a high intensity motorbus system in a state of good repair
- The federal share of eligible capital costs is 80 percent of the net capital project cost, unless the grant recipient requests a lower percentage.
- **$45 million apportioned to Baltimore in 2022**

Eligible Parties

- Eligible recipients are state and local government authorities in UZAs with fixed guideway and high intensity motorbus systems in revenue service for at least seven years.

Important Dates and Next Steps

- The last deadline was March 7, 2022 (now closed), no new date has been announced.

Resources

- Program page: https://www.transit.dot.gov/funding/grants/state-good-repair-grants-5337

19. Promote Resilient Operations for Transformative, Efficient, and Cost-saving Transportation (PROTECT)

Scope and Level of Funds

- Formula and discretionary funds
- Planning, resilience improvements, community resilience and evacuation routes, and at-risk coastal infrastructure
- Federal share is 80%. Higher Federal share if the eligible entity develops a resilience improvement plan (or is in a State or area served by MPO that does) and the State or MPO incorporates it into its long-range transportation plan.
- Of the amounts apportioned to a State for a fiscal year, the State may use: not more than 40% for construction of new capacity, and not more than 10% for development phase activities.
- **$20 million apportioned to Maryland in 2022**

Eligible Parties

- State or local governmental authorities

Important Dates and Next Steps

- No deadlines identified

Annex A. - Maryland Context Overview

1. Expected GHG Emissions Trajectories - Statewide

This section provides an overview of the Maryland economy-wide GHG emission baseline Background information provided in this section are retrieved from the assessment conducted for the GGRA.

Figures 1 and 2 below show the **share of emissions by each sector in the 2017 state inventory and forecasts through 2050**. While all sectors play a critical role in emissions, t**ransportation plays a dominant role, accounting for about 40 percent of Maryland emissions** – consistent with its national and global sector ranking as the number one source of emissions. Note that the share of emissions attributable to operation of Light Duty Vehicles (LDV) is dominant. The next highest contributor to Transportation emissions is Heavy Duty Vehicle (HDV).

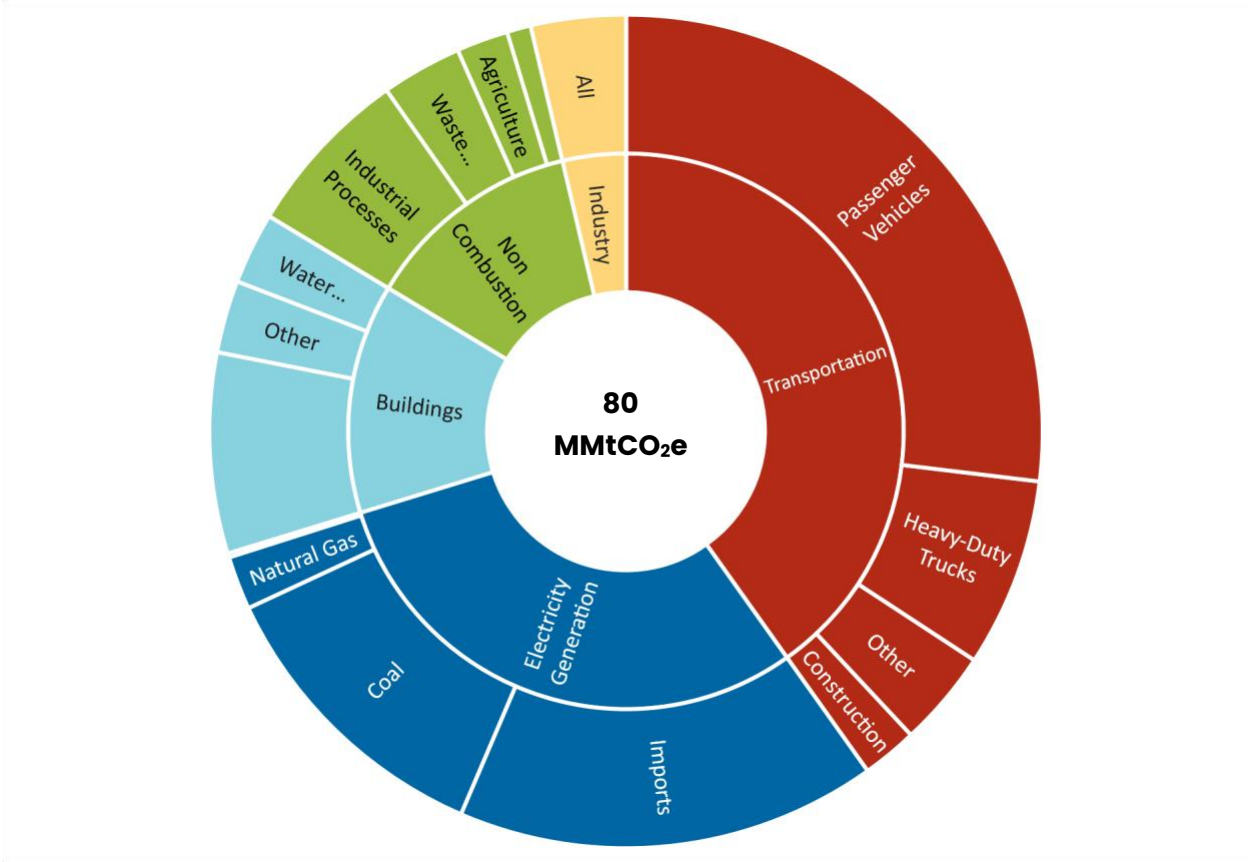

Figure 1. Maryland GHG Emissions Inventory (Gross Emissions), 2017

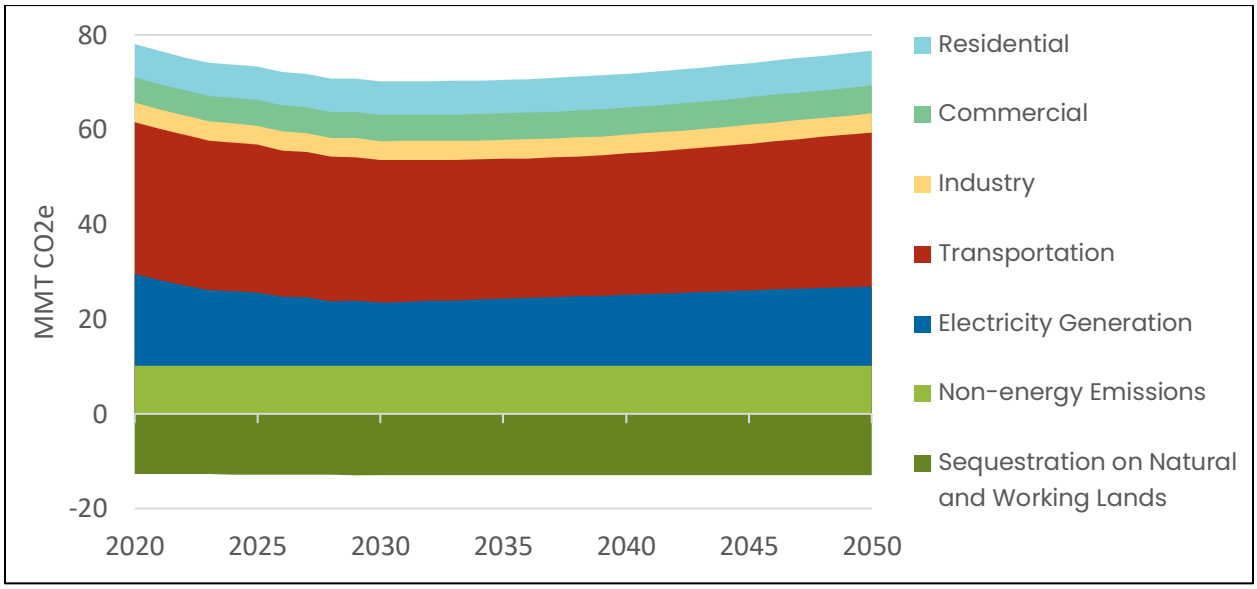

Figure 2. Maryland GHG Emissions Reference Case Scenario, 2020-2050

Prior to the passage of CSN in April 2022 Maryland had comprehensive state legislation through GGRA that set ambitious GHG reduction targets for 2030 and 2045 and specified a series of sector-level policies and measures for their potential attainment. Many of these were official or "on the books" governmental commitments and others included recommendations by the MWG not yet formally adopted by the state. With the passage of CSN, **GHG emissions reduction targets were expanded to 60 percent reduction from 2006 levels by 2031 and net zero emissions by 2045**. Figure 3 below compares the expected GHG emission reduction trajectories under the Reference Case, the GGRA scenario and the CSN scenario.

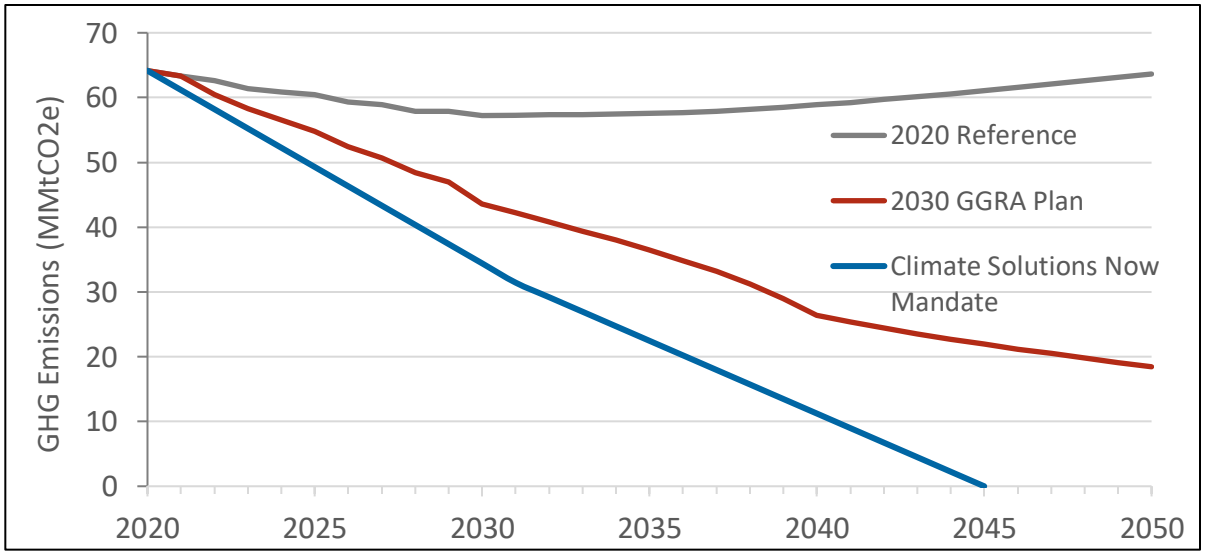

Figure 3. Maryland GHG Reductions Pathways 2020-50: All Sectors

Attainment of these new goals requires implementation of existing and planned actions as well as the formulation of new actions specified in CSN and others to be developed.

2. Expected GHG Emissions Trajectories – Transportation Sector

Figures 4 and 5 show the energy demand for each Transportation sub-sector for the Reference Case and the 2030 GGRA Scenario. The Reference Case Scenario includes the impacts of:

- Federal CAFE standards for LDVs by 2026
- Continued growth in ZEV LDVs driven by the ZEV Mandate

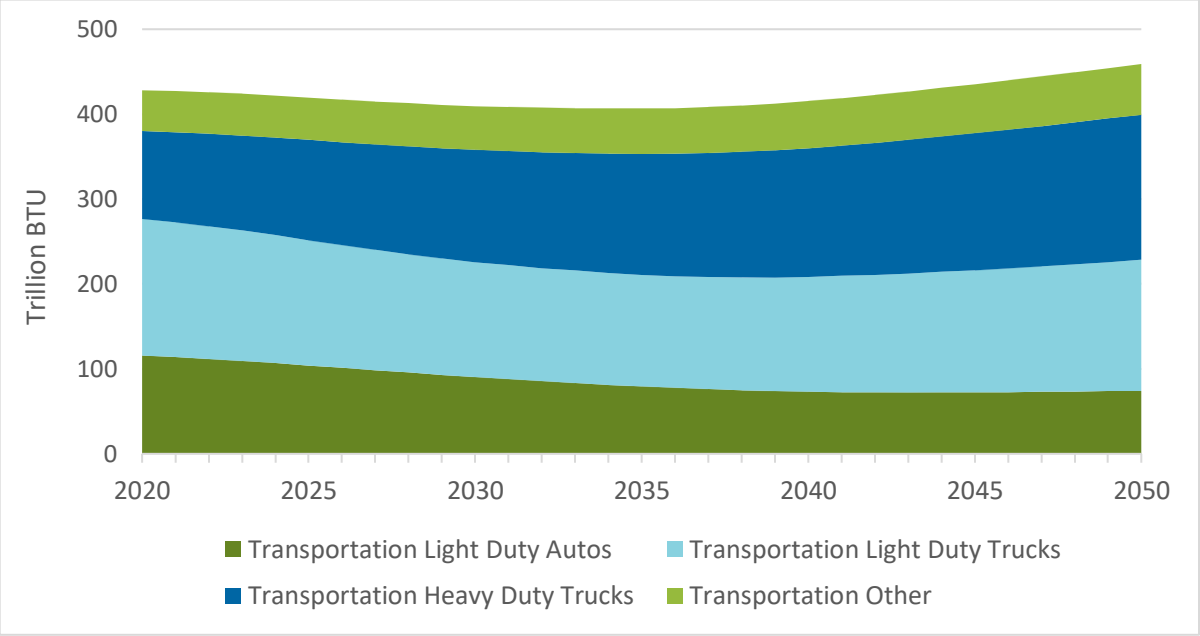

Figure 4. Maryland Transportation Energy Demand Reference Case 2020-2050

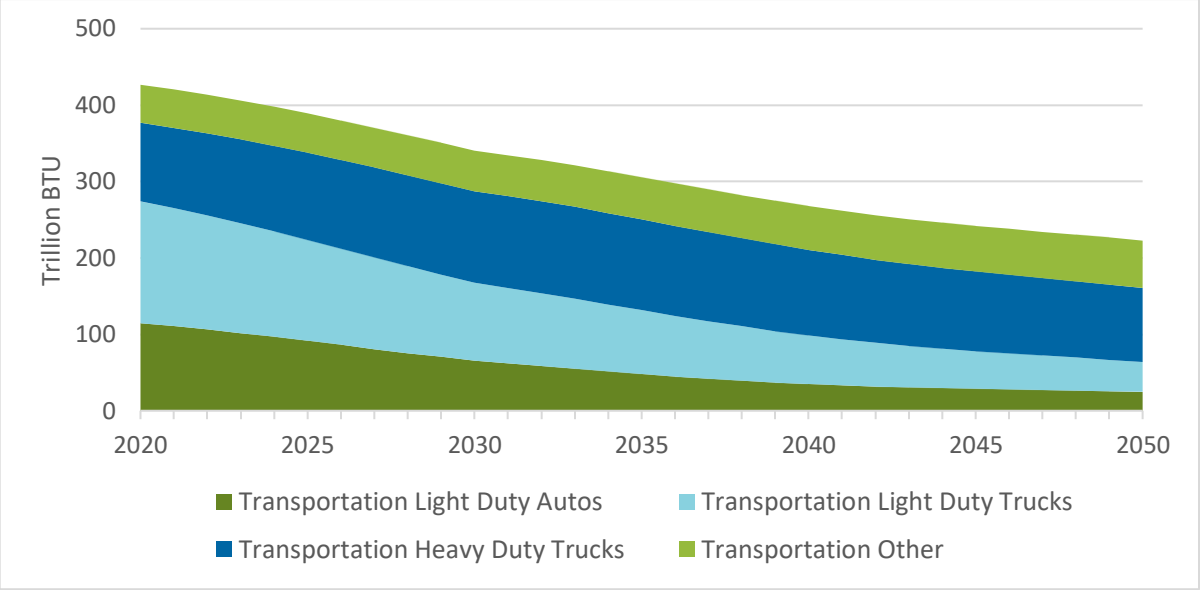

Figure 5. Maryland Transportation Energy Demand GGRA Scenario 2020-2050

Figure 6 below compares the expected GHG emission reduction trajectories for the transportation sector under the Reference Case, the GGRA scenario and the CSN scenario.

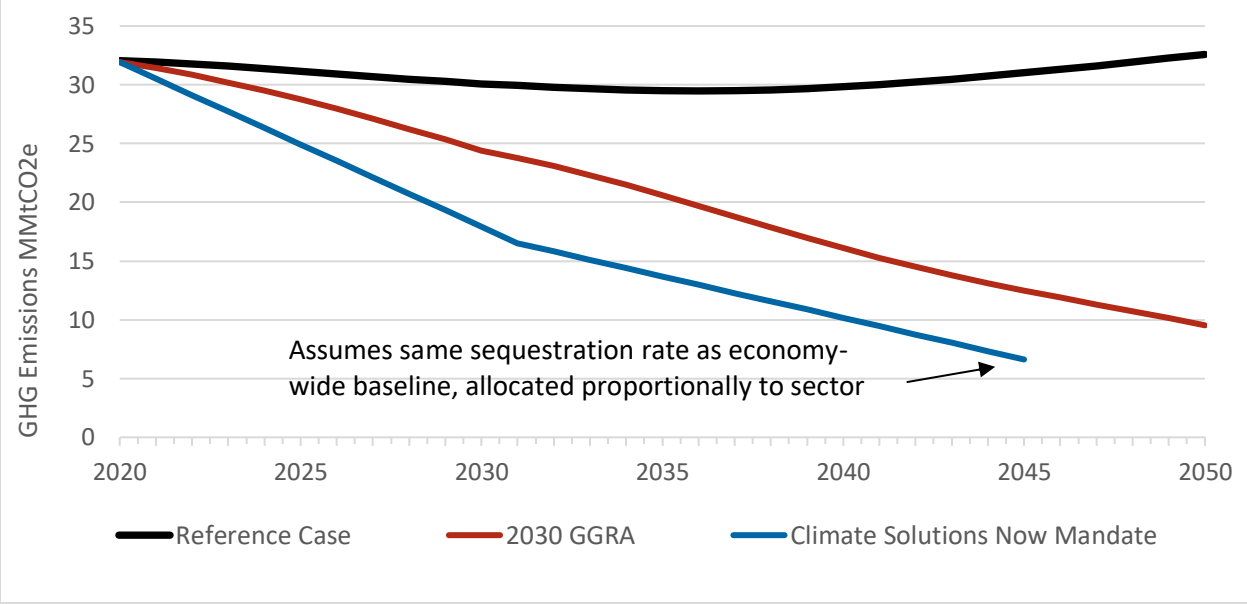

Figure 6. Maryland GHG Reductions Pathways, Transportation Sector: GGRA + CSN

3. Transportation Sector Climate Strategies

The Maryland Transportation climate strategies under consideration can be divided into two groups:

1. **On-the-books**: best-case outcome for implementation of all currently funded programs through 2030. (See Annex B for the full list)
2. **Emerging and Innovative** (See Annex C for the full list)
   - Full implementation of a strategy where current fiscally constrained plans have not identified the complete funding approach.
   - Expanded application of the strategy by enhancing its geographic scope, accelerated implementation of a strategy that would otherwise not be implemented before 2030, and implementation ramp-up of a strategy involving its intensity of application.
   - Strategies that have been implemented in peer states that could work in Maryland.
   - Expanded policy impetus and partnerships for a regional scale strategy application.
   - Those that are "disruptive" or undergoing breakthroughs in innovation, having impact on a significant user base and broad market reach, and having the potential to alter status quo in the way people make and execute their travel choices

Figure 7 below compares the expected GHG emission reduction impact of "On-the Books" strategies against the GGRA and the CSN targets. Note that 2030 Reductions come from GGRA documentation, 2050 values are estimated based on available data.

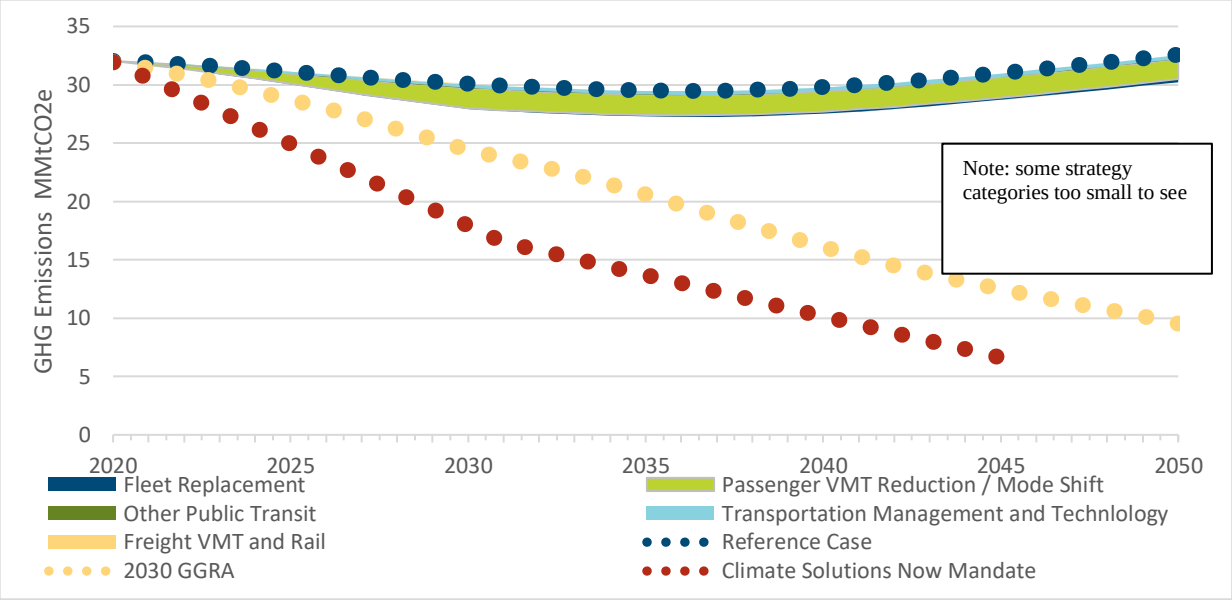

Figure 7. Emission Reductions for On-the-Books Strategies Compared to GGRA and CSN Targets

Figure 8 below compares the expected GHG emission reduction impact of "On-the Books" and "Emerging and Innovative" strategies against the GGRA and the CSN targets. Note that 2030 Reductions come from GGRA documentation, 2050 values are estimated based on available data.

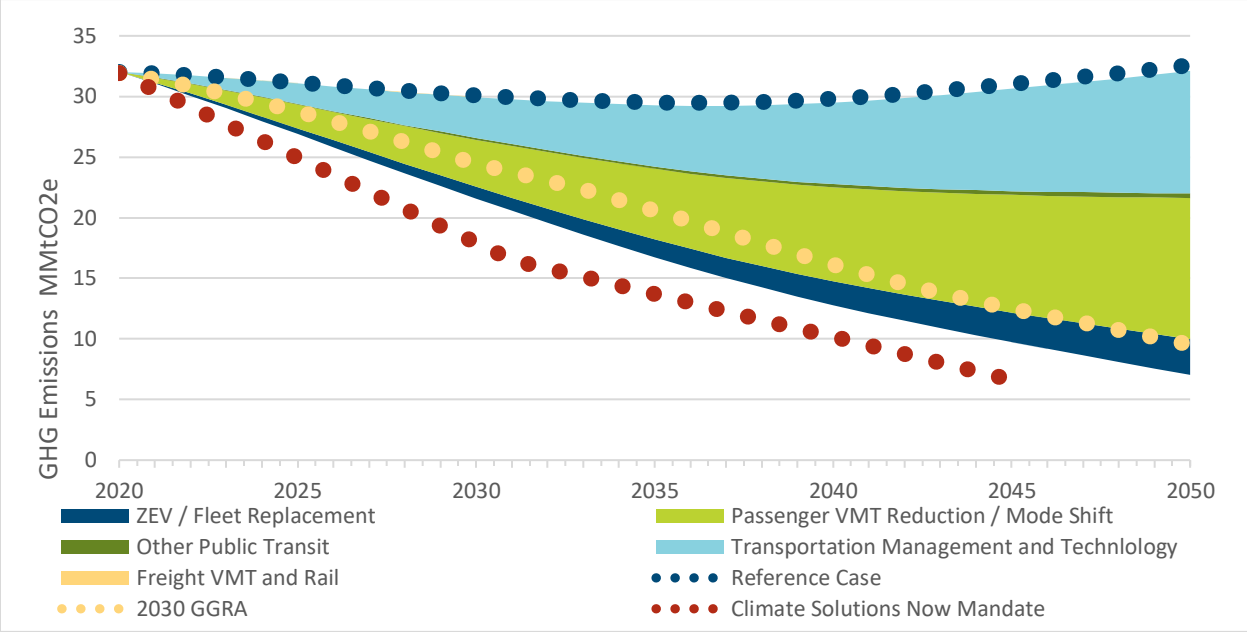

Figure 7. Emission Reductions for On-the-books + Emerging and Innovative Strategies Compared to GGRA and CSN Targets

Annex B- "On-the-Books" Strategies

Fleet Replacement

- 50% EV transit bus fleet
- Port of Baltimore Drayage Track Replacements
- BWI Airport parking shuttle bus replacements
- MDOT Vehicle Fleet (Fleet Innovation Plan)

Passenger VMT Reduction / Mode Shift

- MPO Plans & Programs yield lower annual VMT growth:
  - Land Use Planning
  - Bicycle and Pedestrian Strategies
  - Transit Improvements and Expansion
  - Roadway Planning
  - Travel Demand Management
- Bicycle and Pedestrian Strategies (current program continuation and expansion through 2030)

Other Public Transit

- Public Transportation (New rail or bus capacity or frequency, improved operations)
- Intercity Transportation Initiatives (Amtrak NE Corridor, Intercity bus)

Transportation Management and Technology

- Transportation Demand Management (Guaranteed Ride Home, Integrated Rideshare, Telework Assistance, MTA College Pass, etc.)
- On-Road Technology (CHART, Traveler Information)
- Pricing Initiatives (Electronic Tolling)

Freight VMT and Rail

- Freight and Freight Rail Programs (National Gateway, Howard Street Tunnel, MTA rail projects)

Annex C – Emerging/Innovative Strategies

Zero Emission Vehicles

- ○EV Market Share Ramp-up of an additional 255,000 vehicles

Other Fleet Replacement

- ○50% to 75% EV Transit Bus Fleet
- ○Zero-Emission Truck Corridors

Public Transit

- ○Transit capacity/service expansion (fiscally unconstrained)
- ○MARC Growth and Investment Plan / Cornerstone Plan
- ○High-Speed Rail/SCMAGLEV

Passenger VMT Reduction / Mode Shift

- ○Expanded Telework
- ○Pay-As-You-Drive Insurance
- ○Expanded bike/pedestrian system development
- ○Transit-Oriented Development (TOD) Build-Out (20 zones)
- ○Expanded TDM strategies (dynamic)

Transportation Management and Technology

- ○TSMO/Integrated Corridor Management (Limited Access System)
- ○TSMO//Integrated Corridor Management (Arterial System)
- ○Variable Speeds/Speed Management
- ○Commercial Vehicle Technologies (Idle Reduction, Low-Carbon Fleet, etc.)
- ○Extended CAFE Standards (Model Years 2026-2030)
- ○Regional Clean Fuel Standard
- ○Innovative Strategies Autonomous/Connected Vehicle Technologies
- ○Speed Management on Freeways (increased enforcement)
- ○Eco-Driving (informal implementation underway)

Freight VMT and Rail

- ○Intermodal Freight Centers Access Improvement
- ○Freight Villages/Urban Freight Consolidation Centers

Annex D – Supplementary Tables

Table 1. "On-the-Books" Strategies: GHG Reduction Potential and Estimated Costs

Strategies (Funded)	GHG Red. (MMTCO2e)	Est. Costs ($M)
Fleet Replacement		
ZEV mandate (535,000 EVs by 2030)	1.66	$12 (MD tax credit) + Federal tax credit
Public Transportation (50% EV transit bus fleet)	0.074	$625.10
Port of Baltimore Drayage Track Replacements	0.005	$18.00
BWI Airport parking shuttle bus replacements	0.001	$26.10
MDOT Vehicle Fleet (Fleet Innovation Plan)	0.006	N/A
Passenger VMT Reduction / Mode Shift		
MPO Plans & Programs yield lower annual VMT growth	1.712	$10,146.50
Bicycle and Pedestrian Strategies (current program continuation and expansion through 2030)	0.024	$263.80
Other Public Transit		
Public Transportation (New rail or bus capacity or frequency, improved operations)	0.011	$2,009.80
Intercity Transportation Initiatives (Amtrak NE Corridor, Intercity bus)	0.006	$0.00
Transportation Management and Technology		
Transportation Demand Management	0.146	$63.90
On-Road Technology (CHART, Traveler Information)	0.142	$247.00
Pricing Initiatives (Electronic Tolling)	0.022	$188.50
Freight VMT and Rail		
Freight and Freight Rail Programs (National Gateway, Howard Street Tunnel, MTA rail projects)	0.037	$503.20

Source: GGRA Plan, Appendix J

Table 2. Emerging and Innovative Strategies: GHG Reduction Potential and Estimated Costs

Strategies (Unfunded)	GHG Red. (MMTCO2e)	Est. Costs ($M)
Fleet Replacement		
50% to 75% EV Transit Bus Fleet	0.092	$93
EV Market Share Ramp-up of an additional 255,000 vehicles	0.88	$140
Zero-Emission Truck Corridors	0.045	$34 to $128
Passenger VMT Reduction / Mode Shift		
Expanded Telework	0.5465	$100 to $200
Pay-As-You-Drive Insurance	0.2075	N/A
Expanded bike/pedestrian system development	0.0455	$103
Transit-Oriented Development (TOD) Build-Out (20 zones)	0.033	$4 to $8
Expanded TDM strategies (dynamic)	0.623	$15 to $30
Public Transit		
Transit capacity/service expansion (fiscally unconstrained)	0.029	$2,307 to $2,659
MARC Growth and Investment Plan / Cornerstone Plan	0.046	$1,078
High-Speed Rail/SCMAGLEV	0.016	$45,300 to $47,300
Transportation Management and Technology		
TSMO/Integrated Corridor Management (Limited Access System)	0.11	$108 to $152
TSMO//Integrated Corridor Management (Arterial System)	0.14	$453 to $680
Variable Speeds/Speed Management	0.015	$108 to $152
Commercial Vehicle Technologies (Idle Reduction, Low-Carbon Fleet, Dynamic Routing)	0.04	Uncertain
Extended CAFE Standards (Model Years 2026-2030)	0.8	$0
Regional Clean Fuel Standard	0.895	$148
Innovative Strategies Autonomous/Connected Vehicle Technologies	0.705	$43 to $63
Speed Management on Freeways (increased enforcement)	0.12	$7 to $14
Eco-Driving (informal implementation underway)	0.042	$3 to $5
Freight VMT and Rail		
Intermodal Freight Centers Access Improvement	0.02	$2,240 to $3,136

Strategies (Unfunded)	GHG Red. (MMTCO2e)	Est. Costs ($M)
Freight Villages/Urban Freight Consolidation Centers	0.035	$4,705 to 6,893
Total Policy Scenario #2 "Emerging and Innovative"	5.478	$56,893 to $62,886

Source: GGRA Plan, Appendix J