Agency Climate Implementation Plan

Maryland Department of Transportation

November 1, 2024

MARYLAND DEPARTMENT OF TRANSPORTATION
Taking you places!

Agency Climate Implementation Plan

Department of Transportation Climate Plan required by Executive Order, “Leadership by State Government: Implementing Maryland's Climate Pollution Reduction Plan”

In accordance with Governor Moore’s Executive Order 01.01.2024.19, “Leadership by State Government: Implementing Maryland's Climate Pollution Reduction Plan,” the Maryland Department of Transportation (MDOT) affirms its commitment to:

- Work to address climate change and ensure a just transition to a clean economy;
- Advance environmental justice by working to address the disproportionate impacts of climate change for underserved and overburdened communities, including the application of Justice40 goals, initiatives, and funding;
- Equitably implement all existing laws, regulations, and policies related to climate change, incorporating robust community and stakeholder engagement; and
- Continue to maximize federal funding opportunities on climate.

MDOT hereby submits its agency Climate Implementation Plan (CLIP) to demonstrate its commitment to a whole-of-government approach to addressing climate change and fully implementing Maryland’s Climate Pollution Reduction Plan (CPRP).

Part 1: Agency Actions Under the Climate Pollution Reduction Plan

Maryland's Climate Pollution Reduction Plan (CPRP) calls on MDOT to implement the following:

- Implement the Zero Emissions Vehicle (ZEV) Infrastructure Plan
- Implement the Maryland Transportation Plan
- Provide new EV incentives
- Apply for Federal Funding

In addition, Executive Order 01.01.2024.19, calls on MDOT to:

- Revise the Zero-Emission Vehicle Infrastructure Plan to include the National Electric Vehicle Infrastructure (NEVI) program and a new multi-agency strategy to build out Maryland's electric vehicle charging infrastructure.
- Develop and implement a process for evaluating and reducing greenhouse gas (GHG) emissions from transportation as part of the Consolidated Transportation Program (CTP).
- Implement the CTP, including investing in new infrastructure programs, where feasible, and projects to reduce vehicle miles traveled (VMT) through enhanced transportation choices.
- Establish specific annual GHG and VMT reduction targets for the transportation sector.
- Implement the MDOT Carbon Reduction Strategy.

MDOT has a long-standing history of close partnerships with Maryland Department of Environment (MDE), Maryland Energy Administration (MEA), Maryland Department of Planning (MDP), and other state agency partners on decarbonization planning and implementation efforts. Under the Climate Solutions Now Act of 2022 (CSNA), Maryland established a target to reduce GHG emissions by 60% (compared to 2006 levels) by 2031 and to reach net zero GHG emissions by 2045. To support these goals, MDOT prepared an MDOT CPRP which provides a comprehensive approach to more fully integrate reducing emissions in the transportation sector. The plan is supported by

four pathways of emission reduction including transportation technology; VMT reduction; congestion mitigation; and sustainable design, materials, and practices as shown in Figure 1 below.

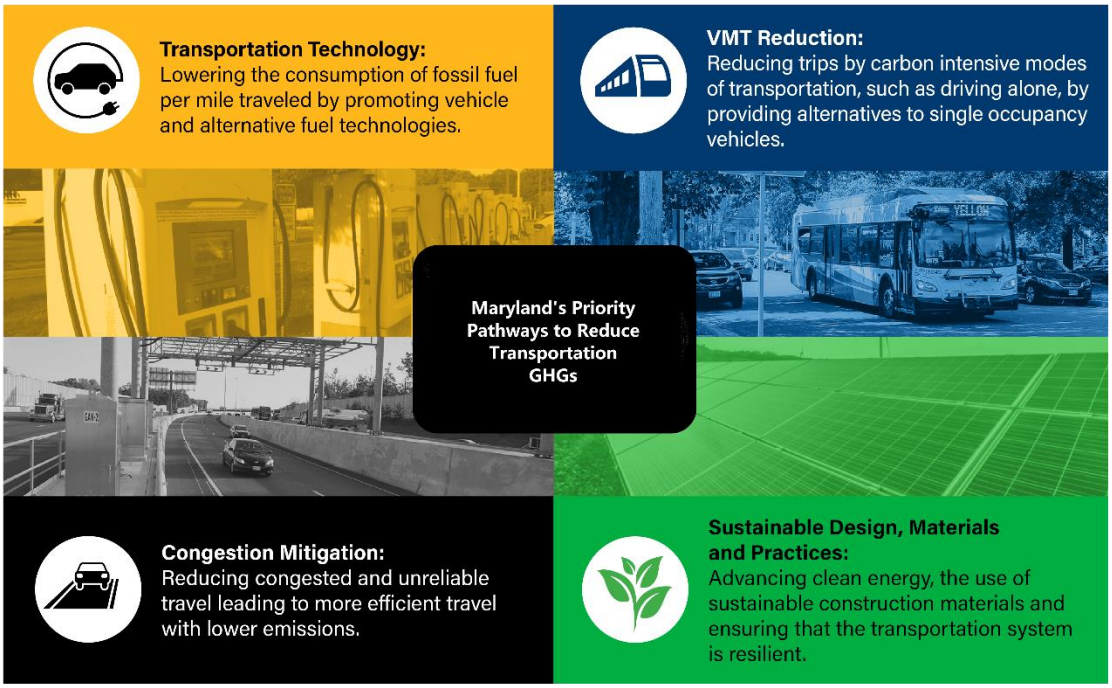


Figure 1: Four types of greenhouse gas emission reduction pathways

Part 2: Recommending Actions to Address Climate Change

In compliance with the Executive Order as well as current Maryland law (MD Code, Environment, § 2-1305), MDOT is taking or recommending the following actions to more fully integrate the consideration of Maryland's greenhouse gas reduction goal and the impacts of climate change in transportation policy, planning, and programming.

Climate Performance Measurement and Management

MDOT's annual Attainment Report (AR) on Transportation System Performance, identifies successes, challenges, and strategies for improving the transportation services delivered to Maryland residents. The report tracks the trend and future strategies for

several performance measures that support climate action, including those focused on safety and security for active transportation like walking and biking; delivering system quality through reducing the percentage of lane miles and transit miles susceptible to flooding and storm surge; providing access to reliable transit; and by minimizing and mitigating the environmental effects of transportation by tracking VMT per capita, GHG emissions from light-duty vehicles and medium-heavy-duty vehicles, MDOT fleet conversion, statewide EV registrations, and the number of electric vehicle charging ports per 1,000 residents.

Since 1996, MDOT has also participated in the State's annual Managing for Results (MFR) effort as part of the budget process. MFR is a strategic planning, performance measurement, and budgeting process that emphasizes the use of resources to achieve measurable results, accountability, efficiency, and continuous improvement in state government programs. MDOT's MFR promotes objectives to minimize and mitigate the environmental effects of transportation by reducing fossil fuel consumption, reducing GHG, adopting alternative fuels, promoting electric vehicles, and improving air quality. This year's MFR will also include the Governor's Key Performance Indicators (KPI) which will help track progress across the state.

Climate Mitigation

In addition to pursuing strategies and measures identified in our CPRP and CRS, MDOT reports annually on the status of programs that support the State's GHG emissions reduction efforts or address climate change. This will be included in MDOT's annual Climate Action Status Report. The report organizes these efforts across the four emission reduction pathways and Climate Change Resilience and Adaptation. The most recent version was released in December 2023 and the report for 2024 is currently under development.

MDOT will also continue to conduct periodic reviews of existing policies and programs to identify opportunities to incorporate decarbonization and resilience improvement strategies into existing workflows. One recent example is through the implementation of MDOT's Complete Streets Initiative, which ensures that a range of safe options for multimodal transportation, including active transportation, are prioritized throughout all phases of project development.

Climate Adaptation: Investing in Resilience

The Climate Change Resilience and Adaptation section will highlight progress made toward strategies identified in MDOT's recently approved Transportation Resilience

Improvement Plan (TRIP). The TRIP, approved by the Federal Highway Administration (FHWA), guides strategic investments in critical infrastructure and aligns adaptation and mitigation efforts with MDOT's resilience objectives. FHWA's approval allows MDOT to reduce the non-federal funding share for certain projects that qualify under the federal Promoting Resilient Operations for Transformative, Efficient, and Cost-saving Transportation (PROTECT) program.

Part 3: Considering Greenhouse Gas Emissions Reductions and Impacts on Disproportionately Affected Communities

State law (MD Code, Environment, § 2-1305) requires that each State agency, when conducting long-term planning, developing policy, and drafting regulations, shall take into consideration: (1) the likely climate impact of the agency's decisions relative to Maryland's greenhouse gas (GHG) emissions reduction goals; and (2) the likely impact of the agency's decisions on disproportionately affected communities identified according to the methodology adopted under § 1-702 of the Environment article. Furthermore, Governor Moore's Executive Order 01.01.2024.19 requires each agency to report on how the agency will advance environmental justice by working to address the disproportionate impacts of climate change for underserved and overburdened communities.

MDOT utilizes several existing tools to identify underserved and overburdened communities for climate vulnerability. This includes the Maryland EJScreen Mapper, MDE's Climate Vulnerability Score Tool 1.0, the Environmental Protection Agency's EJScreen Tool (Version 2.3), and the federal Climate and Economic Justice Screening Tool. In compliance with the law and Executive Order 01.01.2024.19, MDOT is taking the following approaches to address the outlined considerations and requirements:

- Ensuring equity and environmental justice is a key part of implementing the committed strategies identified in the MDOT CPRP. The strategies will particularly benefit communities that have historically been overburdened with the negative impacts of transportation-related pollution. For example, transit investments provide transportation access and mode choice to disadvantaged communities

who may not have access to personal vehicles, thereby expanding their access to jobs, education and health care. Other strategies that improve congestion and air quality have a positive health impact on communities and improve their quality of life.

- A guiding principle of the Maryland Transportation Plan is to integrate equity considerations in all aspects of transportation planning, programming and operational processes that improve equitable access and bolster resilience for underserved and overburdened communities as a priority. These efforts are ongoing with approximately 60% of MDOT's FY 2024 state-funded climate-related capital expenditures benefiting disadvantaged communities, as outlined in the most recent State Spending on Greenhouse Gas Reduction in Maryland report. This is a 19% increase over FY2023.
- MDOT is also actively working to meet the Biden-Harris Administration's Justice40 Initiative goals, which aim to deliver 40% of the overall benefits from certain Federal climate, clean energy, affordable and sustainable housing, and other investments to disadvantaged communities. For example, MDOT is committed to deploying an equitable and accessible charging network using the NEVI formula program to target disadvantaged and rural communities in accordance with Justice40. The 2023 NEVI Plan update identifies ensuring equitable access to charging infrastructure and developing a skilled and diverse workforce as goals.
- MDOT's Urban Tree Grant Program supports tree planting efforts in communities impacted by transportation projects. These overburdened communities benefit from the positive air quality and quality of life benefits of urban forest development.

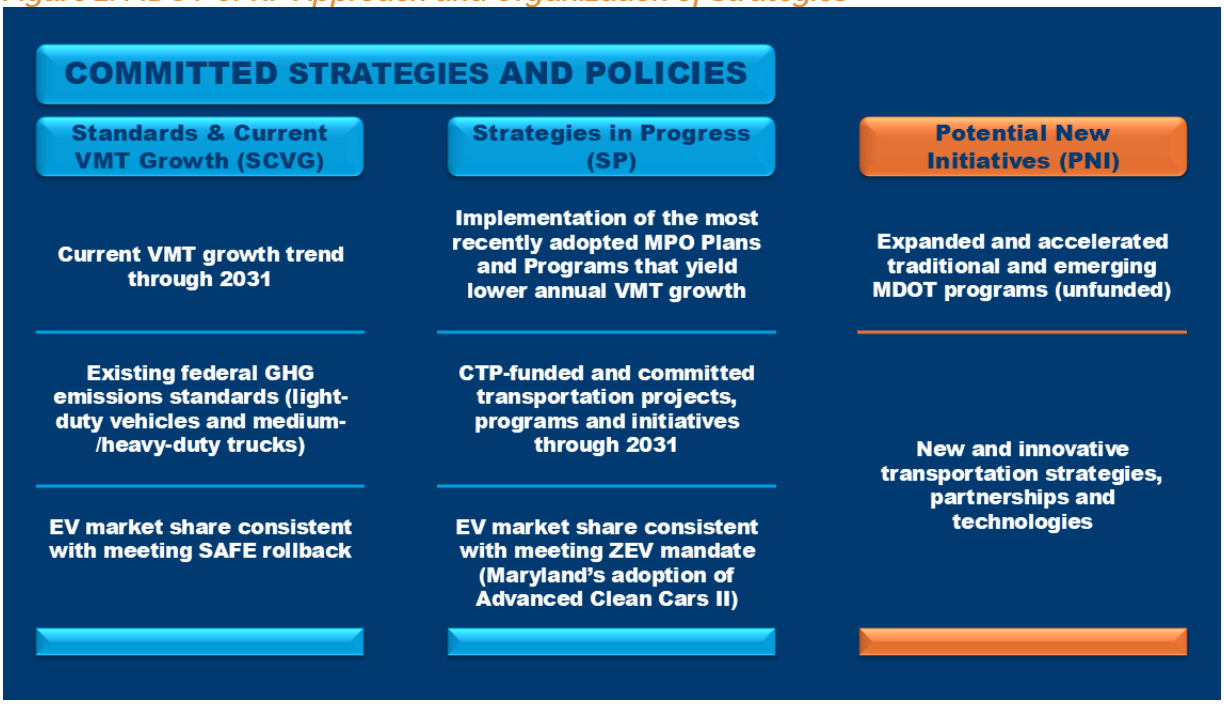
Part 4: Implementation

Implementing Maryland's Climate Pollution Reduction Plan

MDOT's 2023 Climate Pollution Reduction Plan (CPRP) includes three types of strategies and policies that reduce carbon pollution as shown in Figure 2. The Standards and Current VMT Growth (SCVG) represent emissions reductions based on federal and state fuel economy and vehicle technology standards and a projection of VMT growth out to 2031. The Strategies in Progress (SP) represent the implementation of strategies

that reduce VMT growth, improve transportation system performance, and increase sales of ZEVs in the State of Maryland. It assumes effective implementation of investments funded through the state's capital budget for transportation projects, metropolitan planning organization (MPO) plans and programs, as well as Advanced Clean Cars II (ACC II) and Advanced Clean Trucks (ACT) mandates.

Figure 2: MDOT CPRP Approach and Organization of Strategies



Potential New Initiatives (PNI) consist of currently unfunded emerging and innovative strategies, some of which include uncertainties in the timeliness of adoption, technological maturity, readiness for implementation, and variability in potential level of deployment above and beyond the SP strategies. See Figure 3 on the next page.

Figure 3: Summary of PNI Strategies in MDOT's CPRP

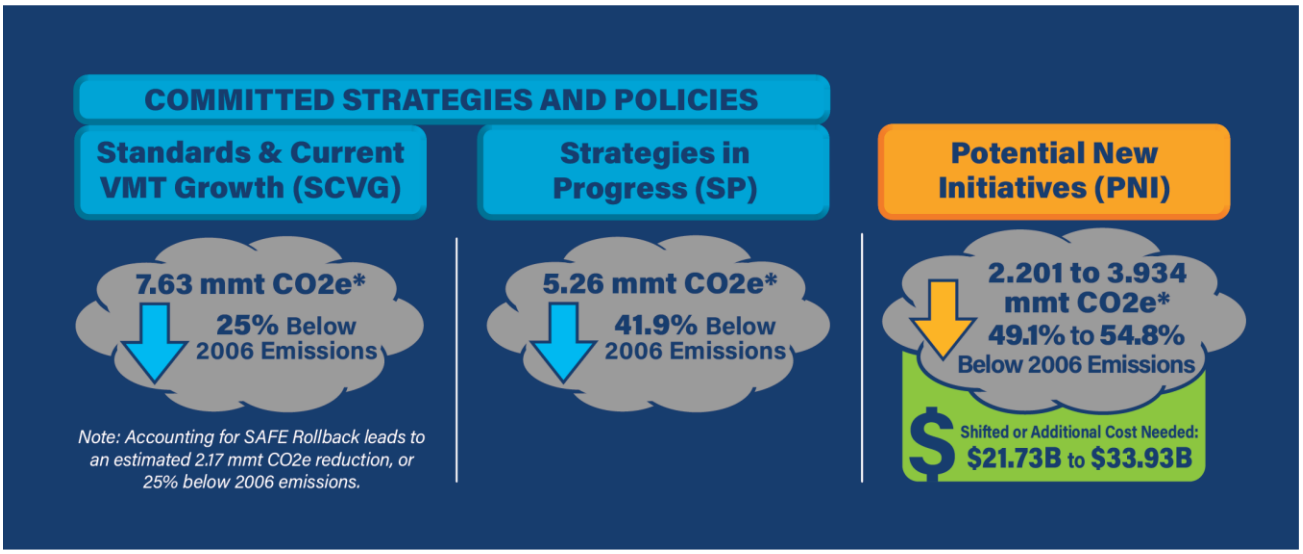
Strategies	2031 Estimate (mmt CO2e)	2031 Total Estimated Costs ($M)	2031 Total Estimated Costs per Reduction ($M per mmt CO2e)	MDOT's role in strategy administration
Bike / Ped				
Expanded Bike/Pedestrian System Development	0.02 to 0.04	1,750 to 3,500	79,077 to 79,077	Leading
Transit				
56% to 75% EV Transit Bus Fleet	0.12 to 0.18	65 to 99	539 to 539	Leading
Expanded Rail Regional Transit (e.g. MARC Growth and Investment Plan, Other Cross-regional Transit)	0.04 to 0.06	2,580 to 2,580	40,528 to 57,892	Leading
Transit Capacity/Service Expansion (Fiscally Unconstrained)	0.02 to 0.04	3,979 to 4,646	109,475 to 187,539	Leading
Red Line Transit	0.005	2,332 to 2,332	494,824 to 494,824	Leading
Intercity Bus Service Expansion	0.004 to 0.007	6 to 7	1,126 to 1,486	Leading
TDM/Pricing				
Expanded Telework	0.49 to 0.74	981 to 6,077	2,019 to 8,226	Supporting
Expanded Transportation Demand Management (TDM) Strategies (Car-Sharing)	0.25 to 0.6	18 to 35	60 to 71	Supporting
Transit-Oriented Development (TOD) Build-Out	0.05 to 0.1	2 to 2	25 to 49	Supporting
Parking Incentives, Pricing, Mins/Maxs	0.02 to 0.08	*	*	Supporting
Pay-As-You-Drive Insurance	0.06 to 0.37	**	**	Supporting
Congestion Mitigation				
TSMO/Integrated Corridor Management (Arterial System)	0.15 to 0.23	536 to 804	3,454 to 3,3661	Leading
TSMO/Integrated Corridor Management (Limited Access System)	0.08 to 0.15	128 to 180	1,234 to 1,553	Leading
Eco-Driving	0.04	4 to 6	99 to 164	Supporting
Variable Speeds/Speed Management	0.01 to 0.02	128 to 180	9,700 to 10,683	Leading
Speed Management on Freeways (Increased Enforcement)	0.04 to 0.09	8 to 17	190 to 190	Leading
Freight				
Medium- and Heavy-duty Vehicle Low-Carbon Fleet/Fueling Incentives and Programs (Non-state Fleet)	0.1 to 0.21	20 to 39	188 to 189	Leading
Hydrogen Fuel Cell Vehicles (Medium- and Heavy-duty Vehicles, Non-state Fleet)	0.08 to 0.16	45 to 89	546 to 556	Supporting
Lead by Example - Alternative Fuel Usage in State/Local Government Fleet in Medium- and Heavy-duty Vehicles	0.03 to 0.05	629 to 1,015	19,788 to 20,874	Leading
Truck Stop Electrification	0.02 to 0.03	31 to 53	1,666 to 1,666	Leading
Commercial Vehicle Technologies (Idle Reduction, Low-Carbon Fleet, Dynamic Routing)	0.01 to 0.02	2 to 4	175 to 247	Supporting
Intermodal Freight Centers Access Improvement	0.01	2,649 to 3,708	264,880 to 370,832	Supporting
Freight Villages/Urban Freight Consolidation Centers	0.02 to 0.03	5,737 to 8,405	251,298 to 257,293	Supporting
Zero-Emission Truck Corridors	0.01 to 0.02	8 to 23	980 to 1,002	Leading
Technology				
CAV Technologies	0.52 to 0.65	94 to 128	179 to 197	Supporting
Total	**2.20 to 3.93**	**21,729 to 33,928**	**8,624 to 9,874**	

Implementing the MDOT CPRP could reduce the state's emissions to between 13.91 mmt CO2e (54.8% below 2006 levels) and 15.643 million metric tons (mmt) CO2e (49.1% below 2006 levels) as shown in Figure 4. These conservative estimates depend on dedicated funding for PNI strategies, which aim to cut VMT by 3.158 billion by 2031, outperforming the electrification and system efficiency-focused Strategies in Progress (SP).

MDOT's role varies depending on action. It will lead efforts like expanding transit service and transitioning its medium and heavy-duty fleet to lower emissions. In contrast, for initiatives such as telework and car-sharing, MDOT will provide support, incentives, and technical assistance to encourage adoption.

The SP outlined in the 2023 MDOT CPRP has a total cost of $19.9 billion through 2031, excluding expanded transit operating costs. Most costs are already included in the CTP. However, PNI strategies lack current funding in the CTP, with estimated costs ranging from $21.73 billion to $33.93 billion. These strategies offer a range of options for MDOT to lead or support decarbonizing on-road transportation in the state.

Figure 4: Summary of Emission Reductions in MDOT CPRP



It's important to recognize that many PNI strategies require significant coordination with county and municipal governments, businesses, developers, and other stakeholders for successful implementation. Additionally, some strategies, like CAV initiatives or zero-emission truck corridors, may need further technological development before being widely deployed. Lastly, implementing PNI strategies is not an "all-or-nothing" approach; these strategies can be considered individually or in various combinations.

Current Funding That Can Be Leveraged

The Infrastructure Investment and Jobs Act (IIJA) (Public Law 117-58), also known as the Bipartisan Infrastructure Law, contains several new programs aimed at addressing climate change and increasing the resilience of the surface transportation system. Funding for these initiatives includes apportioned (formula) and discretionary (competitive grant) sources. Key programs include the FHWA's Carbon Reduction Program (CRP), the PROTECT Formula and Discretionary Grant Programs, the Congestion Relief Program, the Active Transportation Infrastructure Investment Program (ATIIP), the Reduction of Truck Emissions at Port Facilities (RTEPF), and the Charging and Fueling Infrastructure Discretionary Grant Program (CFI). These complement existing programs like the FHWA Transportation Alternatives Program (TAP) and

Congestion Mitigation and Air Quality (CMAQ), which support GHG reduction and climate action projects. MDOT has a strong outreach program to assist state and local agencies in applying for federal discretionary grants and will continue to seek funding to implement the CPRP.

MDOT has developed key partnerships with state agencies such as MDE, MEA, and DNR, as well as non-profit organizations and private companies. These collaborations help leverage additional funding for emission reduction programs, such as the CPRG grant with MDE, EV charging funding with MEA, and even EV infrastructure funding with other States as in a recent Charging and Fueling Infrastructure program (CFI) grant proposal. Continuing to seek out and advance strategic partnerships can help MDOT supplement currently available funding.

Development of the MDOT Project Prioritization Strategy for the six-year Consolidated Transportation Program (CTP) will help MDOT to strategically prioritize future funding, including supporting the implementation of the CPRP. The improved process will seek to align prioritization goals and measures with the MTP to more effectively achieve the State's strategic goals.

The final CTP for FY2024 to FY2029 allocates $20.2 billion for capital transportation projects over six years, with approximately 70% dedicated to initiatives that reduce greenhouse gas emissions. MDOT will update this CTP analysis annually.

To achieve CSNA goals, Maryland must explore additional funding sources, including federal grants, state-specific climate and resilience funds, public-private partnerships, and innovative financing mechanisms for implementing this Climate Implementation Plan.

Implementing this Climate Implementation Plan

Table 1: Actions Needed to Implement the CLIP

Strategies and Policies	MDOT Highlights
Implement the Zero Emissions Vehicle Infrastructure Plan (ZEVIP)	The ZEVIP is in development and is slated for release by mid-2025. This can be achieved through the identified federal formula and discretionary funding, including NEVI. In 2024, MDOT consultation with partner agencies will begin implementing NEVI Round 1 awards focused on deploying charging along Maryland's 23 Electric Vehicle (EV) Alternative Fuel Corridors (AFCs).

Strategies and Policies	MDOT Highlights
Implement the Maryland Transportation Plan	MDOT will implement the updated 2050 Maryland Transportation Plan following the guiding principles of **Equity, Preservation, Resilience, Modernization, and Experience** to help MDOT support the State's goal for the transportation system in Maryland. This includes making investments in new and existing projects and programs that will reduce vehicle miles traveled (VMT) and enhance transportation choices in the state.
Provide new EV incentives	The Maryland Excise Tax Credit, administered through the Maryland Motor Vehicle Administration (MVA), provides up to a maximum of $3,000 for qualifying zero-emission PHEVs or BEVs dependent on the availability of funds. This highly successful incentive program is often oversubscribed. MVA monitors legislative sessions in case the legislature changes and/or adds funding to the program and issues bulletins with information to EV consumers and distributors about the availability of funds.
Apply for federal funding (CPRP)	Under the leadership and coordination of the Governor's Federal Office, MDOT will continue to apply for federal funding to implement actions that support the achievement of this plan. MDOT will work closely with local governments, MPOs, nonprofits, and community-based organizations to ensure competitive applications for federal climate action implementation funds while also supporting capacity-building for local-level implementation. Since 2022, MDOT has secured $7.5 billion in federal funding from agencies like the EPA, FEMA, and USDOT, including $271 million for the MDTA and MPA, which usually rely on state funds. Key awards include $78 million for planning zero-emission infrastructure on Interstate 95, $145 million for equipment electrification and terminal decarbonization from the EPA's Clean Ports Program, $214

Strategies and Policies	MDOT Highlights
	million for light rail vehicle replacements, and $2.1 billion for new bridges over the Susquehanna River. Additionally, MDOT helped CSX secure $11.6 million to replace diesel locomotives with electric ones at the Port of Baltimore. Currently, MDOT has $293 million in pending applications for climate action projects.
Revise the Zero-Emission Vehicle Infrastructure Plan (ZEVIP) to include the National Electric Vehicle Infrastructure (NEVI) program and a new multi-agency strategy to build out Maryland's electric vehicle charging infrastructure. (Executive Order)	The ZEVIP is in development and is slated for release by mid-2025. The annually updated NEVI Plan outlines Maryland's strategy for investing apportioned NEVI formula funds to install a public network of EV chargers along 23 designated EV AFCs and within communities. While the NEVI Plan will be the cornerstone of ZEVIP's light-duty charging infrastructure strategy, the ZEVIP will expand beyond it by outlining a comprehensive MDOT-led, multi-agency strategy for charging infrastructure deployment. This strategy aims to accommodate the projected growth of light-, medium-, and heavy-duty zero-emission vehicles due to CSNA, ACC II, and ACT. The development of the ZEVIP will involve the Zero-Emissions Electric Vehicle Infrastructure Council (ZEEVIC), which includes various state agencies and may form working groups as needed for developing new strategies. The ZEVIP will examine opportunities to leverage additional state, federal, and private funds and clarify the roles of other state agencies to ensure successful infrastructure development in Maryland.
Develop and implement a process for evaluating and reducing GHG emissions from transportation as part of the Consolidated	CSNA requires MDOT to prepare an annual State Agency Climate Action Status Report to update progress toward CSNA goals. This report includes an analysis of the CTP major projects that contribute to GHG emissions reduction. In addition, several of MDOT's Modal Administrations, such as MTA, MPA and MAA, are developing decarbonization plans for their facilities or operations.

Strategies and Policies	MDOT Highlights
Transportation Program (CTP). (Executive Order)	MDOT has an established project prioritization process, known as Chapter 30, in place since 2017, to ensure investments align with State goals. MDOT is developing a new project prioritization process to evaluate surface transportation capacity projects, enhancing the Chapter 30 framework. The improved process will align prioritization goals with the MTP to better achieve the State's strategic objectives, including reducing GHG emissions.
Implement the CTP, including investing in new infrastructure programs, where feasible, and projects to reduce vehicle miles traveled (VMT) through enhanced transportation choices. (Executive Order)	Analysis of the 2024-2029 CTP indicate that approximately 70% of investments advanced projects and programs that help support a reduction in greenhouse gas emissions, including significant investments in transit projects including the Red Line and Purple Line that reduce VMT. The draft 2025-2030 CTP continues to fund emissions and VMT reduction strategies, with almost half of the capital investments going to transit.
Establish specific annual GHG and VMT reduction targets for the transportation sector. (Executive Order)	As outlined in the MTP, MDOT aims to reduce on-road transportation sector GHG emissions by 40% by 2031, based on analysis performed to support the MDOT CPRP. In 2023, the Attainment Report Advisory Committee established a goal of 20% reduction from 2019 in vehicle miles traveled (VMT) per capita by 2050, which has been documented in the MDOT Annual Attainment Report. SHA has also established a CY2026 GHG reduction target for the National Highway System, as part of an initial rulemaking under FHWA's Transportation Performance Management program, which is now voluntary. SHA developed a curve estimating year-by-year emissions reductions from planned initiatives between 2022 and 2031. Based on this curve and discussions with transportation subject matter experts, SHA and MDOT set

Strategies and Policies	MDOT Highlights
	a 4% reduction target from 2022 levels by the 2025 performance year. These goals and targets can serve as the basis for annual target-setting by MDOT, while recognizing that achieving them will require collaboration with local, regional, and other partners, as MDOT's policies, practices, and investments are only part of the equation.
Implement the MDOT Carbon Reduction Strategy. (Executive Order)	The MDOT CRS includes a range of existing strategies aimed at reducing carbon emissions in transportation. These include enhancing transit, expanding transportation demand management activities, investing in active transportation options, and promoting transit-oriented development (TOD). Many of these actions are already underway or will be further supported by the MDOT Project Prioritization Strategy. They are also supported by funding from the Bipartisan Infrastructure Law and the Inflation Reduction Act, which MDOT is actively pursuing. In addition, MDOT identified and is advancing more than 20 projects from the first round of Carbon Reduction Program (CRP) funding, totaling more than $33 million. These projects comprise a variety of carbon reduction strategies, including the deployment of electric vehicles and charging infrastructure, pedestrian and bicycle improvements, energy-efficient streetlight conversions, and innovative transportation technologies.

Top Priorities for the Upcoming Year

Near-term top priorities for MDOT and the next steps in the upcoming year to support the implementation of the CPRP are outlined below:

- Development of annual GHG and VMT reduction targets for transportation.
- Development of a subset of CPRP PNI strategies for further development and advancement.
- Identification and advancement of federal and other funding to support implementation of the CPRP strategies, including grant opportunities and partnerships.
- Development and publication of ZEVIP.
- Implementation of the NEVI Plan and Round 1 funding.
- Refinement of overall CTP greenhouse gas performance measurement and project prioritization based in part of greenhouse gas performance.
- Implementation of the Carbon Reduction Program.
- Continued coordination with Metropolitan Planning Organizations and county and municipal agencies to advance sustainable transportation programs and policies.

Gaps and Resources Needed to Implement the CLIP

While this is a decade of unprecedented federal largesse, with IIJA providing additional federal funding through formula and competitive programs, these opportunities often require non-federal matching funds of 20% or more which must be provided through a combination of state, local, or other funds. This can be a challenge given multiple competing infrastructure investment needs and a limited state budget.

Maryland is facing fiscal headwinds for transportation thanks to a continuation of trends that came to the fore last year (e.g., a slowly growing state economy, the loss of federal COVID support, and a backlog of unfunded system needs). Resources also remain tightly constrained due to the reduced effectiveness of the gas tax, reduced operating revenues, and the increased costs of goods and labor. Additional funds allocated by the Governor and the actions taken by the Maryland General Assembly in the 2024 legislative session to increase certain transportation revenues were appreciated by MDOT and were immensely important. For instance, they enabled MDOT to fully fund locally operated transit systems (LOTS) and highway user revenue (HUR) funding for our local partners. However, the structural fiscal challenges facing the program remain and similar issues test this the FY2025 – YF2030 CTP.

MDOT's Advancement of Environmental Justice

MDOT is committed to advancing environmental justice by working to address the disproportionate impacts` of climate change for underserved and overburdened communities. As noted above, approximately 60% of MDOT's FY2024 state-funded climate-related capital expenditures benefited disadvantaged communities. MDOT ensures the equitable delivery of public transportation products, services, and solutions to all its users and stakeholders. MDOT accomplishes this by engaging with communities in a transparent and fair way with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies in transportation decision-making. As an example, MDOT coordinated with MPOs and local communities through regional meetings to make them aware of climate-focused funding available to them through federal formula and grant programs administered by MDOT. In doing so, MDOT employs three fundamental principles:

Table 2: Principles employed to ensure investments benefit disadvantaged communities

Principle	Description
Promote shovel-worthy, outcome-based, community-uplifting projects.	Avoid disproportionately high and adverse impacts on human health and the environment, while ensuring equitable benefit distribution.
Intentionally engage diverse communities and stakeholders	Develop and implement innovative methods of meaningful community participation that go beyond providing an opportunity, particularly in marginalized communities.
Focus on and assess the total cost to the citizens of Maryland	Consider impacts when planning projects. With increased positive social and environmental impacts and emphasis on good stewardship of resources that affect positive change for people and our environment, with a focus on the intended outcome, not just a specific project.

Part 5: Outcomes from Implementation

As referenced in Part 3, the 2031 emissions projections from all committed strategies and policies are projected at 41.9% below 2006 emissions at 17.85 mmt CO2e. And with additional funding for PNI strategies and alignment of a range of favorable outcomes, the on-road transportation sector in Maryland could achieve up to a 54.8% reduction in CO2e emissions by 2031.

The MDOT CPRP outlines a comprehensive strategy to reduce greenhouse gas emissions from the transportation sector. In addition to these climate pollution reductions, the plan would also deliver a suite of co-benefits. For example, the plan's implementation of various strategies including the adoption of zero-emission vehicles, enhancements to public transit, and infrastructure for biking and walking, would reduce auto traffic and improve air quality. This will help Maryland with our Vision Zero goal – achieving zero deaths and injuries on our roads by 2030 – and increase public health, especially people vulnerable to air pollution's effects including kids, seniors, and asthmatics.

These measures deliver other co-benefits as well, for example they are projected to lower respiratory and cardiovascular diseases, particularly in communities historically burdened by pollution. And the integration of equity considerations ensures that all Marylanders have access to the benefits of a cleaner transportation system, thereby enhancing overall quality of life and contributing to a more just and sustainable future. Furthermore, investments in sustainable transportation options can increase accessibility to jobs, education, and healthcare, thereby promoting social equity by ensuring that disadvantaged communities benefit from cleaner, more efficient transportation systems.

Other co-benefits of reducing transportation emissions can include fostering economic opportunities, through increased workforce development opportunities and expanded green industries in Maryland.

By pursuing innovative strategies and new initiatives, MDOT also aims to create resilient and sustainable infrastructure that can withstand climate-related disruptions. This approach not only addresses environmental concerns, but it also supports economic growth through job creation in green technologies and infrastructure projects.

In sum, this holistic approach will lead to job creation and broader health and community benefits, particularly for underserved and overburdened communities, and support MDOTs mission to deliver safe, sustainable, intelligent, exceptional, and inclusive transportation solutions that connect customers to life's opportunities.