



# Agency Climate Implementation Plan

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Maryland State Department of Education

November 1, 2024





# Agency Climate Implementation Plan

Maryland State Department of Education (MSDE) Climate Implementation Plan (CIP) required by Executive Order, “Leadership by State Government: Implementing Maryland's Climate Pollution Reduction Plan”

Per Executive Order Md. Code, Envir. § 2-1304, MSDE shall plan to work to provide a CIP in collaboration with the Maryland Department of Environment (MDE) and other State agencies, as we strive to help reduce Maryland statewide emissions by 60% by 2031 and to net-zero by 2045.

Objective: Every Maryland State agency shall:

- 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.

The MSDE CIP includes the following:

- The steps, time, and resources needed to implement all required actions in Maryland's Climate Pollution Reduction Plan that are within the agency's purview, including their top priorities for the upcoming year;
- the current funding, including State, federal, or additional funding, that can be directed or redirected, toward accomplishing the actions in the agency's CIP, the outcomes that can be achieved with current funding, and the anticipated gap, if

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any, between the current funding and the total resources required to implement the agency's CIP;

- the potential outcomes of the investment over time, including health benefits, job creation, and energy costs; and
- how the State agency will advance environmental justice by working to address the disproportionate impacts of climate change for underserved and overburdened communities.

The following document is an outline of the responses received by the MSDE CIP Committee, which includes:

- Zachary Carey, Office of Teaching and Learning
- Joseph Hansbrough (PM), Office of Information Technology
- Payton Hesse, Office of Teaching and Learning
- Lia Mack (PM), Office of Information Technology
- Xavier Richards, Office of Facilities and Operations
- Gabriel Rose, Office of Pupil Transportation/ Emergency Management
- Jillian Storms, Office of School Facilities

## Part 1: Agency Actions Under the Climate Pollution Reduction Plan

### **Federal Funding**

Maryland's Climate Pollution Reduction Plan calls on MSDE to apply for federal funding. Under the leadership and coordination of the Governor's Federal Office, all agencies will apply for federal funding to implement actions that support the achievement of this plan. State agencies will work closely with local governments, nonprofits, and community-based organizations to ensure Maryland is competitive for federal climate action implementation funds and to build capacity for local-level implementation. State agencies will offer support to Maryland's businesses and private sector to ensure they are competitive for historic federal investments.

*Please note: Other agency actions may be derived from the Climate Pollution Reduction Plan and explained in agency Climate Implementation Plans (e.g., policies related to sustainable/smart growth planning, commitments towards carbon sequestration on the state's natural and working lands and actions that align agency mission with sector specific decarbonization strategies).*

### **Collaborating with the Department of Budget and Management (DBM)**

MSDE will work with the DBM to help maximize external funding opportunities to address climate in Maryland.

- The Internal Revenue Service (IRS) Elective Pay program allows governments (and other non-tax paying entities) to take advantage of tax incentives, including credits for electric vehicles, clean energy generation technologies, energy storage, and electric charging equipment and infrastructure. Since these credits were authorized for 10 years when passed through the Inflation Reduction Act in 2022 they will be a great tool in helping Maryland fund critical work to meet the State's 60% greenhouse gas reduction goal by 2031.
- MSDE will coordinate with DBM to make sure that all eligible projects are registered with the IRS in order to help maximize federal funding opportunities.
- MSDE will keep Elective Pay funding in mind as a way to stack and braid tax credits with existing funding, grant opportunities, other federal programs, loans, and/or other financial products to help bridge the gap between traditional items procured and the green premium of climate-smart items.

In all decisions MSDE and other Maryland agencies make, we must make use of the resources we are afforded, both financial and environmental. Therefore, it will be through collaborative efforts that Maryland will come out cleaner, greener, and better.

### **Environmental Literacy and Educational Policy**

MSDE works to ensure a rigorous and world-class educational experience for every Maryland student, in every neighborhood, that prepares each to be college and career-ready, through:

- strategic direction and leadership;
- policy making and resource allocation; and
- engagement and advocacy.

In line with this work and the goals of the Climate Pollution Reduction Plan (CPPR), MSDE recognizes the importance of education in supporting Maryland's youth to grow as environmental stewards that access, conserve, and restore our natural resources to ensure a climate-ready Maryland.

Related to MSDE's work in the areas of educational policy, facilities policy, and resource allocation, the agency will take the following actions in support of the CPPR:

- MSDE's adoption of the Next Generation Science Standards and the Environmental Literacy Standards support student understanding of climate change and advance students' knowledge, confidence, skills, and motivation to make decisions and take actions that preserve and protect the unique natural resources of Maryland and of the Chesapeake Bay and its watershed. Additionally, many of MSDE's Career and Technical Education (CTE) Pathways which prepare high school students for the 21st Century's global economy and its rapidly changing workforce needs, have connections to preparing our society for a changing climate. This could include CTE programs within the Construction and Development, Environmental, Agricultural and Natural Resources, and Manufacturing, Engineering and Technology career clusters.
- In accordance with Code of Maryland Regulations (COMAR) 13A.04.17.01, each local school system shall provide in public schools a comprehensive, multi-disciplinary environmental literacy program infused within current curricular offerings and aligned with the Maryland Environmental Literacy Standards.
  - MSDE will convene Local Education Agency (LEA) Science and Environmental Literacy staff to collaborate to problem solve, share resources, and inform MSDE initiatives around topics and issues related to instruction that will increase access to and achievement with Science and Environmental Literacy for all students.
  - MSDE will pursue National Oceanic and Atmospheric Administration (NOAA) Bay Watershed Education and Training (B-WET) grants and other

grant funding to support professional learning opportunities to build capacity of LEA to support environmental literacy programs, including climate education.

- MSDE will collaboratively develop a state Environmental Literacy plan template to support the implementation of multi-disciplinary environmental literacy programs across Maryland.
- In accordance with Executive Order 01.01.2024.15, signed by Governor Wes Moore on April 22, 2024, which established the Maryland Outdoor Learning Partnership (OLP) and tasking the Partnership with empowering all of Maryland's youth to grow as environmental stewards that access, conserve, and restore our natural resources to ensure a climate-ready Maryland.
  - MSDE will co-chair the OLP along with the Maryland Department of Natural Resources (DNR) to support the Partnership in empowering all of Maryland's youth to grow as environmental stewards that access, conserve, and restore our natural resources to ensure a climate-ready Maryland.
  - MSDE will support the establishment of working groups with focuses including:
    - Environmental and Climate Literacy;
    - College and Green Careers;
    - Access to Nature;
    - School Sustainability; and
    - Networks;
  - MSDE will conduct a review of current environmental and climate change education efforts in Maryland and meet all other responsibilities of the Partnership.
- In accordance with Maryland Code, Educ. § 7-130, which established the School Waste Reduction and Composting Grant Program.
  - MSDE will coordinate with MDE to identify and apply for federal funding that may be used to support the Program.
- In accordance with Maryland Code, Educ. § 7-117, which established the Maryland Association for Environmental and Outdoor Education Grant Program.
  - MSDE will administer the grant program, which supports the Maryland Association for Environmental and Outdoor Education (MAEOE) to

increase the number of MAEOE Green Schools, increase the number of environmental educators who will provide MAEOE Green School training, support professional development and activities that incorporate environmental best practices in Maryland schools, and support statewide MAEOE Green School events.

- MSDE will support and provide outreach to early learning centers, schools, districts, and higher education institutions, related to the United States Department of Education Green Ribbon Schools (ED-GRS), which recognizes awardees that conserve environmental resources, reduce costs, feature environmentally sustainable learning spaces, protect school and community health, foster wellness, and offer environmental and sustainability education.
- MSDE will serve on the Maryland Commission for Climate Change (MCCC) and support initiatives, including the Maryland Climate Teach-In.

## Part 2: Recommending Actions to Address Climate Change

### **New Building**

It has been over 15 years since there was an effort by DGS to reduce energy use in the Nancy S. Grasmick building, replacing light bulbs, faucets, toilets, and other utilities. After much consideration and correspondence with Department of General Services (DGS), MSDE plans to lease a new building rather than renovate, divesting from the current building in order to properly invest in the future location of MSDE. With a new building, MSDE will be environmentally conscious and intentional about how to reduce emissions that are produced by employees and the building. This includes:

- Engaging with DGS about Maryland's Building Energy Performance Standards when reviewing buildings. This can include evaluating a building for the potential to host clean energy generation technologies like solar panels, solar hot water, ground-source heat pumps, etc.
- Request bids from local businesses that are renowned for their sustainability practices and supplies

- Create a sustainable policy for the workplace that encourages recycling and reduce paper use, considering more strategic placement of recycling bins as it relates to paper, plastic, and waste.
- Identify new location options that will maintain public transportation to encourage employees to save gas and emissions. Following a agency-wide survey from the Office of Facilities and Operations, public transportation and electric car charging facilities were determined to be important factors in choosing the new location.

### **Improving Standards in MSDE Buildings**

While the plan is to depart from the Nancy S. Grasmick building by 2028, there are over 13 regional offices for the Division of Early Childhood (DEC), 21 regional offices for the Division of Rehabilitation Services (DORS), and DORS headquarters. These are leased with different entities, with DGS having oversight and involvement. MSDE will drive the pursuit of the same level of environmentally friendly maintenance practices that are in line with Maryland's Building Energy Performance Standards, engaging with the buildings' leasers and DGS, where appropriate. These may include:

- Replacement of 40 Watt light bulbs with LED bulbs in each building;
- assess the use of heating, air conditioning, and steam production to determine ways to reduce their usage or to replace systems for long term reductions and cost savings;
- contract services with sustainable suppliers;
- improving insulation where possible; and
- migrating data from on-prem data centers to a Cloud environment, which will reduce the machinery and materials, along with energy use tied to those servers. This project is currently underway.

### **Transportation**

MSDE will work with the Maryland Department of Transportation (MDOT) and DBM to do our part in transportation demand management.

- MSDE will collaborate with MDOT to receive and disseminate materials that help state employees understand the alternative transportation options available to them which align with the State's goal of reducing vehicle miles traveled and harmful air pollution.



- Analyze where charging infrastructure could be added to support the transition to electric vehicles, both now and for MSDE's future location.
- Consult with DBM regarding what electric vehicles are considerable for replacing cars within MSDE's fleet of hybrid vehicles.
- Identify State mechanics who are able to properly maintain the vehicles.
- Continue Telework as that already reduces vehicle miles traveled and the associated greenhouse gas (GHG) emissions.
- Promote green commuting: Encourage carpooling, biking, and walking to school. Offer rewards for students and staff who use eco-friendly transport options.

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

MSDE can advance environmental justice by working to address the disproportionate impacts of climate change for underserved and overburdened communities through collaboration efforts with the LEAs to better provide for and educate our future generations to reduce gas emissions and pollution in our State and world.

### **Collaboration with LEAs**

MSDE encourages LEAs to use their schools and facilities as teaching tools for environmental and sustainability topics, including providing opportunities for outdoor learning to foster students' awareness of the environment in order to become better stewards. Furthering this effort would require communications and resources that can be shared with LEAs across the State.

- Local School Agencies (LEA) are responsible for the construction and design of their school facilities. The MSDE Office of School Facilities reviews these school projects through all phases of programming and design and provides recommendations for LEAs to consider. The OSF will collaborate with the Interagency Commission on School Construction (IAC) on how best to encourage the school facilities departments of LEAs to develop plans and capital projects that meet or exceed the State's Building Energy Performance Standard to reduce direct greenhouse gas emissions in their public school buildings by 20% by 2030 and reach Net Zero direct emissions by 2040. Currently, the IAC offers additional high performance school funding and incentives for replacement or new schools

that are designed to achieve Net Zero Energy.

- MSDE will collaborate with MDE and the Maryland Energy Administration (MEA) to explore considerations and standards for School Decarbonization efforts across the State, informing LEAs of their options.
- In accordance with Education Article §5-312, new school projects and renovation/addition projects that receive State funds are subject to the requirements of the High Performance Buildings Act. New public school buildings shall achieve the equivalent of the current version of the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) Green Building Rating System Silver rating or a comparable rating system. The MSDE Office of School Facilities has trained staff in LEED certification and provides guidance in their school facility design reviews on possible means an LEA can consider to achieve the required rating.

### **Pupil Transportation**

MSDE's Office of Pupil Transportation and Emergency Management (OPTeM) works with LEAs pupil transportation offices, including providing technical assistance, understanding regulations, and school vehicle driver instructor trainings. With this responsibility, there are opportunities for MSDE to encourage LEAs to pursue funding and creating cleaner Bus programs to reduce emissions. These include:

- EPA's [Clean School Bus Program](https://www.whitehouse.gov/wp-content/uploads/2024/04/2024-04-24-Toolkit-for-Sustainable-and-Healthy-Schools.pdf) provides \$5 billion over five years (FY 2022-2026) to replace existing school buses with zero-emission and low-emission models. EPA administers both grant opportunities and rebates under this program. Local Education Agencies, Tribes, non-profit transportation associations, and certain contractors providing transportation or buses are eligible for the grants and rebates. (Source: <https://www.whitehouse.gov/wp-content/uploads/2024/04/2024-04-24-Toolkit-for-Sustainable-and-Healthy-Schools.pdf>, page 11)
- MDE's Electric School Bus Grant Program that includes \$3 million in state grants to purchase new electric school buses. Each grant will provide \$300,000 funding for the replacement of a diesel bus with an electric bus to improve indoor and outdoor emissions for students.
- Providing virtual forums for LEAs to discuss their needs, resources, funding, and reporting as it relates to pupil transportation, to account for their concerns and desired outcomes with any change of equipment and personnel.

### **Federal Funding**

MSDE and IAC are in the position to provide direction and guidance to LEAs on considerations when building and/or renovating school facilities. This can include pointing the schools to existing grants and programs that they can apply for from the Department of Energy (DOE), IRS, United States Environmental Protection Agency

(EPA), and United States Department of Agriculture (USDA). Based on the [White House Toolkit for Sustainable and Healthy Schools](#), some notable programs include:

- DOE's "[Renew America's Schools](#) grant program, funded by President Biden's Bipartisan Infrastructure Law, provides \$500 million for competitive grants to make energy efficiency, clean energy, and alternative fueled vehicle upgrades and improvements. This funding aims to help school communities make energy upgrades that will lower utilities costs, improve indoor air quality, and foster healthier learning environments." (Source: <https://www.whitehouse.gov/wp-content/uploads/2024/04/2024-04-24-Toolkit-for-Sustainable-and-Healthy-Schools.pdf>, page 8)
- USDA's "[Rural Development Electric programs](#) provide reliable, affordable electricity in rural areas, including energy efficiency relending in partnership with local utilities for school retrofits, renewable energy installations and charging stations." (Source: <https://www.whitehouse.gov/wp-content/uploads/2024/04/2024-04-24-Toolkit-for-Sustainable-and-Healthy-Schools.pdf>, page 9)
- EPA's "[Greenhouse Gas Reduction Fund](#), created by President Biden's Inflation Reduction Act, is a historic \$27 billion investment to mobilize financing and private capital to combat the climate crisis and ensure American economic competitiveness. The Greenhouse Gas Reduction Fund delivers capital to financing organizations for projects that lower energy costs and catalyze economic revitalization to communities, particularly those that have historically been left behind. There are several ways that schools and school districts could interact with Greenhouse Gas Reduction Fund grantees and access financing resources, including (but not limited to): energy efficiency in buildings, solar (energy generation and storage), and school buses. The Greenhouse Gas Reduction Fund has been implemented via three grant competitions: the National Clean Investment Fund, Clean Communities Investment Accelerator, and the Solar for All competition." (Source: <https://www.whitehouse.gov/wp-content/uploads/2024/04/2024-04-24-Toolkit-for-Sustainable-and-Healthy-Schools.pdf>, page 9)
- DOE's "[Efficient and Healthy Schools Program](#) engages schools – especially those serving low-income populations and rural areas – to reduce energy bills and improve student and teacher health. The program provides year-round technical assistance to schools and offers annual opportunities to recognize schools that seek to implement high-impact indoor air quality and efficiency improvements." (Source: <https://www.whitehouse.gov/wp-content/uploads/2024/04/2024-04-24-Toolkit-for-Sustainable-and-Healthy-Schools.pdf>, page 9)

### **Providing Guidance for Underserved Communities**

Equity is of utmost importance in all of these efforts. Through communication with LEAs and special interest groups, MSDE can encourage the following ideas to help promote stronger participation in battling climate-related issues, all in the classroom or with Boards of Education across the State.

- Supporting initiatives to build capacity for science and environmental literacy education, including utilization of localized data and phenomena, through evaluation of LEA and school need.
- Promote Justice40 Funding - The Justice40 Initiative aims to direct 40% of federal climate and environmental funding to communities that have been hit hardest by pollution and climate impacts. This funding supports clean energy, better public transit, affordable housing, and pollution control. By focusing on these areas, we can help Maryland's disadvantaged communities get the resources they need.
- Apply the Climate Vulnerability Score Tool: Maryland has a tool that helps identify which communities are most at risk from climate change. By using this tool, the state can make sure that efforts to cut emissions and address climate impacts are focused where they are needed most.
- Per the programs, educational opportunities, and charitable acts, we can make clear how the mission of MSDE is inherently tied to promoting the good for our students, families, and providers, which includes standing for environmental justice, measures for reducing waste and emissions, and leading by example.

## **Part 4: Resources for Implementation**

### **Implementing Maryland's Climate Pollution Reduction Plan**

MSDE is involved in many programs and initiatives to better educate the State's students and families about the need for greenhouse gas reduction. The primary resource for this is the team that has been created to promote environmental literacy and to be a presence throughout the State by sitting on commissions and boards to promote Maryland's CCPR.

MSDE will pursue National Oceanic and Atmospheric Administration (NOAA) Bay Watershed Education and Training (B-WET) grants and other grant funding to support professional learning opportunities to build capacity of LEA to support environmental literacy programs, including climate education.

MSDE will coordinate with the MDE to identify and apply for federal funding that may be used to support the School Waste Reduction and Composting Grant Program.

## Part 5: Outcomes from Implementation

MSDE has both an opportunity and responsibility to educate Maryland's families and educators about what is being done, and what we can do to effect change in our State and country. The steps outlined in this CIP are actionable ideas that will see greater public engagement and advocacy amongst younger generations, paving the way for the reduction of greenhouse emissions through inherent practice and resources.

- With a cleaner, eco-friendly work environment, increased awareness and encouragement of measures to "do your part" such as commuting using public transportation or having a robust recycling program, there is likely to be an improvement of health associated with the lowered emissions, as well as the collective communal health of incorporating environment justice into what is already a mission-driven approach to the work we do.
- Creating further environmentally focused positions to carry out the CIP would create jobs, while enabling current employees to get involved in a greater way can help encourage growth.
- Energy costs coming down can have a substantial impact over the course of time, as we can invest that money into our students, families, and educators.

MSDE believes very much in the mission of the Governor to reduce greenhouse gas emissions by 60% by 2031 and net-zero emissions by 2045. It will take a concerted and collective effort by each Maryland agency and the people that represent them everyday to make this change possible. Fortunately, MSDE's mission "requires us to be bold with urgency. We are seizing this once-in-generation opportunity to transform Maryland education to ensure that every Maryland student has access to excellent and equitable educational opportunities to realize their full potential." Education can be the key to forming future leaders and stewards who will be instrumental in meeting this goal, and that goes beyond any CIP. Thank you for promoting this green cause.