Maryland Energy Administration

2025 Annual State Agency Report: Efforts to Reduce Greenhouse Gas Emissions or Address Climate Change

Pursuant to Environment Article §2–1305(c),
Annotated Code of Maryland

Maryland Energy Administration

December 5, 2025

The Honorable Wes Moore
State House
100 State Circle
Annapolis, MD 21401

Maryland Commission on Climate Change
Maryland Department of the Environment
1800 Washington Blvd
Baltimore, MD 21230

Re: Environment Article § 2-1305(c) (MSAR # 10684)

Governor Moore,

Pursuant to Environment Article § 2-1305(c) the Maryland Energy Administration ("MEA") submits this 2025 Annual State Agency Report: Efforts to Reduce Greenhouse Gas Emissions or Address Climate Change. This report fulfills the requirement of MEA to report annually on the status of programs that support the State's greenhouse gas reduction efforts or address climate change.

As required, five color hard copies will be sent to the Department of Legislative Services Library.

Sincerely,
/s/
Landon R. Fahrig, Esq.
Assistant Division Director of Energy Policy

cc: Sarah Albert, Department of Legislative Services (5 copies)

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Introduction

Environment Article § 2-1305, Annotated Code of Maryland requires that each State agency review its planning, regulatory, and fiscal programs to identify and recommend actions to more fully integrate the consideration of Maryland's greenhouse gas reduction goal and the impacts of climate change. Additionally, certain State Agencies, including the Maryland Energy Administration ("MEA"), must report annually on the status of programs that support the State's greenhouse gas reduction efforts or address climate change, in accordance with § 2–1257 of the State Government Article, to the Commission and the Governor. This report serves that purpose.

MEA serves a pivotal role in advancing a clean energy economy and reducing Maryland's carbon footprint, and shares the Moore Administration's goals of carbon pollution cuts of 60% by 2031 and a net zero greenhouse gas economy by 2045. The mission of the Maryland Energy Administration is to promote clean, affordable, reliable energy and energy-related greenhouse gas emission reductions to benefit Marylanders in a just and equitable manner. To that end, MEA has developed a bevy of programs funded through the Strategic Energy Investment Fund ("SEIF") that aid the state in accomplishing these lofty goals. A number of these programs directly reduce greenhouse gas emissions. For fiscal year 2025 ("FY25"), MEA programs provided an estimated total of 70,196 metric tons of avoided CO_2/year over the life of the projects that they supported.

FY25 Programs Resulting in Avoided Carbon Emissions

Energy Efficiency Equity (EEE) Grant Program

The EEE Program is designed to support energy efficiency projects and related activities that benefit Maryland residents experiencing low and moderate income. Grants are awarded for energy efficiency projects that generate significant reductions in energy usage and pass on the benefits to income qualifying residents. Eligible applicants include non-profit organizations and small governments that serve low-and-moderate income residents. The FY25 EEE Program awarded $11,238,448 in grants resulting in a reduction of greenhouse gas emissions estimated at 735 tons of CO2e annually.

Maryland Smart Energy Communities (MSEC)

MSEC provides grants to support the installation of sustainable, long-term, clean energy policies and projects at the local level that reduce energy usage and greenhouse gas emissions. Eligible activities may include planning and capacity building, energy efficiency and solar projects on existing and new public facilities, and clean transportation projects. Eligible applicants include county and municipal governments, public universities and community colleges, and other community-development organizations. The mission of the MSEC program is to support local

governments as they engage in sustainable, long-term clean energy and energy efficiency projects that lead to reduced energy usage and greenhouse gas emissions, increased cost savings, and robust clean energy and economic development. By empowering local governments to lead by example, the program aims to inspire community-wide engagement and drive broader adoption of clean energy solutions among residents, businesses, and institutions. The FY25 MSEC Program awarded $1,496,169 in grants resulting in a reduction of greenhouse gas emissions estimated at 865.86 tons of CO2e annually.

Commercial, Industrial & Agricultural (CI&A) Grant Program

The CI&A Program supports energy efficiency investments in commercial, industrial, multi-family, data center, non-profit, or agricultural buildings to achieve energy performance that exceeds minimum codes and standards. CI&A eligible grant recipients include owners of Maryland-based commercial, industrial, data centers, and nonprofits. Both new construction and existing facilities may be considered for grants to defray the cost of improvements resulting in energy performance that exceeds current codes or standards. The FY25 CI&A Program provided $1,784,333 in grants resulting in a reduction of greenhouse gas emissions estimated at 3,520 tons of CO2e annually.

Decarbonizing Public Schools Program

The intent of the Decarbonizing Public Schools Program is to prepare Maryland's 24 Local Education Agencies ("LEAs", also known as local school districts) and the Maryland School for the Blind, to expand their capacity to manage energy data and to reduce energy use and greenhouse gas emissions while designing for future high-performance schools. The program provides funding from the SEIF to help LEAs develop and expand their capacity to address ongoing challenges and opportunities for controlling costs through energy data management, net zero energy design considerations for public school portfolio planning, solar installations and energy efficiency upgrades. The program also supports the construction of new Net-Zero Energy schools. The FY25 program provided $17,377,150 in grants resulting in a reduction of greenhouse gas emissions estimated at 2,461 tons of CO2e annually.

Resilient Maryland

The Resilient Maryland Program is MEA's award-winning comprehensive distributed energy resource ("DER") system development and installation incentive program that provides funds to Maryland communities and organizations to offset the costs of planning, designing, and constructing microgrids, resilient facility power systems, and resiliency hubs. The FY25 program provided incentives to assist projects from conception through installation and operation. The program targets critical infrastructure (e.g., hospitals, wastewater treatment plants, food supply chains, etc.), communities, local governments, higher learning institutions, agriculture, manufacturing, municipal utilities, and others on a case-by-case basis. The FY25 program awarded $6,124,840 in grants resulting in a reduction of greenhouse gas emissions estimated at

4,350 tons of CO2e annually.

Clean Energy Rebates

The purpose of the Clean Energy Rebate Program is to provide rebates to Maryland homeowners for the installation of clean energy technologies at their residences, including solar and geothermal heating and cooling. The program provided up to $1,000 for eligible solar installations and $3,000 for geothermal installations. Eligible applicants included all Maryland homeowners. The FY25 program awarded $1,818,000 in rebates which added an estimated 13,179 KW of solar capacity resulting in a reduction of greenhouse gas emissions estimated at 11,333 tons of CO2e annually.

Solar Canopy Program

The Solar Canopy and Dual Use Technology Grant Program provides grants to support the installation of solar photovoltaic systems on parking lots and parking garages when paired with EV chargers. The agency also will consider applications for projects demonstrating other dual uses, such as installing solar to power microgrids that bolster critical infrastructure. For example, solar canopy microgrids that support more than one critical community businesses, like a grocery store, hardware store, pharmacy or gas station, can receive an added incentive. Businesses, public universities, nonprofit educational institutions, local governments and Maryland state agencies are eligible for the competitive, statewide program. Grants of up to $400,000 are offered for projects that install new solar canopies, and up to $550,000 grants are available for solar canopies that provide power to microgrids that support critical infrastructure. The FY25 program awarded $4,722,448.00 in grants resulting in a reduction of greenhouse gas emissions estimated at 4,205 tons of CO2e annually and adding 10,276 KW of solar capacity.

Community Solar Program

This program provides funding to Community Solar Subscriber Organizations to offset costs associated with Power Purchase Agreements (“PPAs”) enabling clean energy to be offered to low-income households at rates typically 20 to 25% below standard rates. This program helps provide the benefits of solar to Maryland's low-to moderate-income communities that cannot adopt solar on their own rooftops. The program now offers enhanced incentives that encourage the siting of community solar systems on landfills and other brownfield sites. The FY25 program awarded $32,628,423 in grants which added 57,369 KW of capacity to the grid resulting in a reduction of greenhouse gas emissions estimated at 25,171 of CO2e annually.

Solar Energy Equity Program

Funds under the Solar Energy Equity Program are provided for the design and installation of solar photovoltaic energy-generating systems on the homes of Marylanders that experience low-to-moderate income, or are in overburdened or underserved communities, as defined by

§1-701 of the Environmental Article, Annotated Code of Maryland. Each home must have had energy efficiency and weatherization-type upgrades completed through MEA's EEE Grant Program or through one or both of the Maryland Department of Housing and Community Development's Weatherization Assistance Program or EmPOWER Maryland Limited Income Energy Efficiency Program. MEA issues awards to current or prior EEE Program grantees to enable solar on the rooftops of households that experience low-to-moderate income, or are in overburdened or underserved communities, living in single-family homes. The Program will fund up to 100% of the solar photovoltaic system design and installation cost, up to $25,000 per home. The FY25 program awarded $10,000,000 in grants resulting in a reduction of greenhouse gas emissions estimated at 5,983 tons of CO2e annually.

OPEN Grant Program

MEA offers the OPEN Energy Innovation Program in order to receive grant proposals that fall outside the range of its other energy programs. The program provides grants to support innovative projects focused on advancing Maryland's goals to reduce greenhouse gas emissions, improve equitable access to clean energy, and reduce costs. The OPEN Energy Innovation Program provides an avenue for the agency to consider unique proposals for funding without the need to stand up individual programs tailored to each specific application. The FY25 program provided $1,309,210 in grants resulting in a reduction of greenhouse gas emissions estimated at 13,218 tons of CO2e annually.

Medium & Heavy Duty ZEV Grant Program

MEA offers grants to purchase qualifying zero-emission vehicles (ZEVs) and heavy equipment for commercial or industrial use. This program provides grants to Maryland fleet companies, organizations, and communities to help defray the costs of purchasing qualified, newly manufactured zero emission medium-duty or heavy-duty zero-emission fleet vehicles and qualified heavy equipment. The target audience for the program includes commercial and industrial entities, fleet operators, and manufacturers of medium-duty and heavy-duty vehicles and equipment. The FY25 program provided $8,981,514 in grants resulting in a reduction of greenhouse gas emissions estimated at 111,479 tons of CO2e annually.

Commercial Solar Grant Program

The Commercial Solar Grant Program provides grants for solar PV systems installed at Maryland businesses, nonprofits, and other organizations, that will be owned by or directly benefit either low-to-moderate income communities located in a census tract with an average median income at or below 80% of the average median income for the State, or overburdened or underserved communities, as defined by §1-701 of the Environment Article, Annotated Code of Maryland. These solar generating systems can help reduce organizational operational costs and improve their sustainability, which can help them better serve the communities that surround them. Solar systems are excellent solutions for organizations that seek to free up capital for other

expenses and projects, expand operations and offerings sustainably, and help Maryland meet its clean energy and greenhouse gas reduction goals. This is especially important for Maryland businesses and other organizations that have historically been disadvantaged, overburdened, and underserved. The FY25 program provided $10,000,000 in grants which added an estimated 13,903 KW of capacity to the grid resulting in a reduction of greenhouse gas emissions estimated at 11,855 tons annually.

Geothermal Rebates Program

The Geothermal Rebate Program is provided to help eligible Maryland residents, businesses, nonprofits, and government agencies with the cost of geothermal heating and cooling systems that they have installed at their properties. Geothermal systems provide energy-efficient heating and cooling using the ground temperature, and help reduce greenhouse gas emissions from more traditional heating and cooling systems that rely on fossil fuels. The FY25 program provided $597,000 in rebates that are expected to generate 130,697 kWh of electricity per year and result in a reduction of greenhouse gas emissions estimated at 131 metric tons of CO2e annually.

Maryland Solar Access Program (MSAP)

MSAP is provided to help eligible Maryland residents install solar photovoltaic systems to power their homes with clean, affordable, and sustainable energy. This program was established by the Maryland General Assembly's passage of the Brighter Tomorrow Act of 2024 (Chapter 595, 2024 Acts of Maryland), and is codified in §9-2016 of the State Government Article, Annotated Code of Maryland. The Maryland Solar Access Program is offered to Maryland residents who meet the program's income requirements on a first-come, first-served basis. As required by statute, the application process occurs in two steps whereby applicants can secure funding before the installation of their solar generating system, adding certainty to the economics of each individual project. The FY25 program provided $7,514,753 in grants resulting in a reduction of greenhouse gas emissions estimated at 15,661 metric tons CO2 annually.

Electrifying Community Buildings

The Electrifying Community Buildings Grant Program was developed as a result of Governor Wes Moore's commitment to invest $50 million through a suite of grant programs to electrify hospitals, schools, multi-family housing and other community buildings. The program's funding helps defray some of the costs of building electrification and facilitates the electrification of community-serving facilities whose primary purpose is to serve the public, such as medical facilities, private K-12 schools, places of worship and similar buildings. This is a competitive program that provides Maryland community-serving buildings with the opportunity to request funding for projects that facilitate the efficient electrification of existing building systems, which may result in lifecycle cost reductions as well as zero onsite emissions. Funding helps applicants cover a portion of upfront costs related to building electrification and helps facilities whose primary function is to serve the public shift from wasteful fossil fuel-powered equipment to

greener electric alternatives. The FY25 program awarded $6,775,7312 in grants resulting in a reduction of greenhouse gas emissions estimated at 1,273.33 tons of CO2e annually.

Higher Education Clean Energy

The Higher Education Clean Energy Grant Program is aimed at Maryland's Institutions of Higher Education (i.e., accredited two and four year colleges and universities). This competitive statewide program is designed to foster a holistic approach to sustainability by supporting the adoption of on-site renewable energy technologies, the integration of strategic energy planning into operations and academic curricula, and the advancement of workforce development in the renewable energy sector. The program supports the installation of solar system(s) on higher education institutions that complement strategic energy planning, sustainable curricula, and workforce development. The program seeks to create sustainable, energy-efficient campuses that serve as practical learning environments and hubs for renewable energy education and job creation. Activities awarded under this program not only contribute to the institution's sustainability goals but also ensure that students are equipped with the skills and knowledge necessary to thrive in the sustainability and renewable energy sectors. The FY25 program awarded $1,798,622 in grants resulting in a reduction of greenhouse gas emissions estimated at 2,718.98 tons of CO2e annually.

Mechanical Insulation Grant Program

The Mechanical Insulation Grant Program targets nonprofit organizations and business owners of facilities large enough to require distribution of thermal resources over some distance from points of production to points of use, typically across multiple floor levels, and provides grants to help incentivize the installation of mechanical insulation. The FY25 program provided $40,000 in grants resulting in a reduction of greenhouse gas emissions estimated at 40 metric tons of CO2e annually.

Electric School Bus Grant Program

The Maryland Electric School Bus Grant Program is an outgrowth of the Moore-Miller administration’s announcement to direct $4.9 million for grants to purchase and lease electric school buses to serve Maryland public school students. The Program offers a statewide competitive application process for eligible vehicles utilized in student transportation services, with a focus on expanding access to funding for overburdened and low to moderate income communities facing economic challenges. The program provides grants to incentivize zero emission electric school buses and associated charging infrastructure to benefit Maryland school and privately operated school bus fleets. The program’s target audience is schools, including those operated by local school districts or tribal governments, charter schools, and non-profit organizations acting on behalf of a school district or charter school. In FY25 the program awarded $12,056,042 in grants resulting in a reduction of greenhouse gas emissions estimated at 9,309 tons of CO2e annually.

Implementation Milestones

In FY25, MEA programs achieved the following program milestones:

- Issued more than 5,000 awards
- Provided $121 million in awards
- Annual savings of 144,001,940 kWh
- Annual savings of 55,280 MMBTU
- Installation of over 80MW of new solar renewable generation
- Installation of approximately 1,047 kWh battery storage capacity
- Annual savings of 2,601,186 gallons of gasoline equivalent

Enhancement Opportunities

As an agency, MEA has undertaken an effort to move grant and rebate applications to an online platform that integrates with MEA's grant tracking software. These new processes are expected to reduce processing times while providing MEA with more accurate data. In early FY26, five of MEA's programs launched in "My MEA", a new online portal for applicants. Maryland Solar Access Program, Residential and Commercial Energy Storage Grant Program, Electric Vehicle Supply Equipment (EVSE) Rebate Program, Medium and Heavy Duty Zero Emission Vehicles Program, and Higher Education Clean Energy Grant Program. MEA is continuing to build out functionality within the grants management platform, as well as the My MEA portal, to ensure better customer service, faster processing times, and better outcomes for partnership outreach. MEA is exploring opportunities to better capture outcomes and impacts of its various grants and rebates programs to communicate them with stakeholders and the public.

Funding

MEA does not receive general funds. MEA programs are funded through a combination of Regional Greenhouse Gas Initiative (RGGI) auction proceeds, Alternative Compliance Payments (ACP), and U.S. Department of Energy funding and any Special Funds deposited into the SEIF. The great majority of SEIF revenue comes from RGGI and ACP. All SEIF funding sources are variable in nature and subject to fluctuations.

RGGI is a multi-state collaborative cap-and-invest program aimed at reducing CO_2 emissions from power plants in the region. RGGI includes 11 states in the northeast that all agree to participate in reducing CO_2 emissions through the initiative. The states set a cap on CO_2 emissions, which declines over time, leading to lower emissions. The RGGI states sell allowances at quarterly auctions and invest the revenue from these sales into energy efficiency, clean energy, utility bill assistance, and other energy-related programs. Maryland deposits the proceeds from these quarterly auctions into the SEIF where it is administered by MEA. At least

50% of RGGI revenue goes to utility bill assistance through the Department of Human Services, 20% is dedicated to energy efficiency, 20% is earmarked for clean energy and greenhouse gas reduction initiatives, and up to 10% (but not more than $7.5 million per year) is allocated to administrative expenses.

Maryland's renewable portfolio standard ("RPS") allows two pathways for compliance. Energy suppliers must purchase a statutorily required amount of renewable energy credits ("RECs") up to a percentage of the volumetric amount of electricity they sell. However, if an energy supplier cannot purchase and retire the requisite amount of RECs required under the RPS, they can pay ACP as an alternative method of compliance. ACP is deposited in the SEIF and utilized to support the proliferation of new Tier 1 clean energy in the state.[1]

Challenges

Program challenges include, but are not necessarily limited to: 1) marketing and communication; 2) developing new program strategies; 3) fluctuations in or diversion of funding; and 4) the changing federal landscape.

Marketing & Communication

MEA is continuing to explore ways to improve its outreach to new grantees, market segments, and underserved communities. To do this, MEA has launched several public information campaigns to broaden consumer awareness of the many incentives that are funded by the state and federal governments. These campaigns involve a diverse range of media types and platforms, and seek to identify opportunities for in-person, community engagement.

The agency's campaigns have highlighted new and returning programs that cater to residents and the counties they live in. As such, the agency has been focusing on the Maryland Solar Access and Local Government Energy Modernization Programs. MEA is using a blend of geofenced digital marketing; statewide radio advertising on stations that broadcast news, sports, gospel, country and Spanish language programming; and providing MEA information booths at community events, from concerts to cookouts. MEA couples these efforts with the use of several other tools, including press releases and statements, its website and social media channels.

Development of New Program Strategies

MEA refines its program offerings annually to meet Maryland's energy needs and the goals of the Climate Solutions Now Act. Specific efforts include:

[1] Tier 1 renewable sources are defined under Md. Public Utility Companies Code Ann. § 7-701(s).

- Tailoring programs to meet specific audiences such as expanding clean energy adoption by local governments and public schools to reduce costs, improve facility condition and reduce greenhouse gas emissions.
- Continuing to offer programs to engage non-profits, community groups and others in promoting energy efficiency for low to moderate income Marylanders.
- Identifying opportunities for streamlining and consolidating programs, with an emphasis on packaging programs to meet the needs of sectors such as buildings and transportation.
- Expanding program promotion, technical assistance and streamlining applications to improve the applicant experience and help interested parties propose the most impactful clean energy projects.
- Partnering with agencies such as the Department of Labor, the Department of Housing and Community Development, the Department of Human Services, and the Department of Transportation to leverage each agency's core competencies.
- Evaluating efforts to consolidate and focus programs where they can make the most progress towards the state's goals, including ensuring that low to moderate income and overburdened communities benefit.

Funding

MEA is solely reliant on variable, market-based revenue sources that are subject to fluctuations. MEA is heavily reliant on ACP funding for the administration of its solar programming, and specifically carefully tailored solar programming that benefits low- to moderate-income, overburdened, or underserved communities.

MEA continues to pursue opportunities, as they exist, for federal funds. MEA has applied for several federal funding opportunities offered by the U.S. Department of Energy ("DOE"), including over $165 million via the two federal Home Energy Rebate Programs for energy efficiency and electrification, the State Energy Program, the Energy Efficiency and Conservation Block Grant Program, the Energy Efficiency Revolving Loan Fund, the State-Based Residential Energy Efficiency Conservation Contractor Training, and the Grid Resilience Formula Grant. While some awards have been fully approved by DOE, other federal awards (e.g., both Home Energy Rebates and the Energy Efficiency Revolving Loan Fund) are in conditional status and require further DOE approvals. MEA continues to pursue full awards for these programs and approvals to proceed, where required, from DOE.

Federal Landscape

The One Big Beautiful Bill Act, Public Law No: 119-21, ("OBBBA") has thrown the financial landscape for clean energy investment and development into upheaval. OBBBA significantly accelerated the phase-out of federal clean energy tax credits, particularly for solar and wind projects, making them unavailable for projects that either do not begin construction within one year of enactment (July 4, 2026), qualifying for a "safe harbor," or are placed in service after

December 31, 2027. This includes both the Investment Tax Credit (ITC) and the Production Tax Credit (PTC). The loss of these incentives likely means that fewer renewable energy projects will be economically viable, hindering the state's efforts to achieve its clean energy goals.

The ITC is a dollar-for-dollar credit for expenses invested in renewable energy properties, most often solar developments. The Inflation Reduction Act extended the clean electricity ITC from 2022 through 2032 as a 30% credit for qualified expenditures, with the potential for bonus incentives for elements such as domestically manufactured content or projects benefiting low- to moderate-income Marylanders. The credit dropped to 26% for systems installed in 2033 and 22% for those installed in 2034 before it was to be eliminated in 2035. OBBBA accelerates the termination of technology-neutral ITCs for new commercial solar and wind projects, phasing them out after 2027 with an exception for projects that begin construction before July 4, 2026. It also includes new and expanded Foreign Entity of Concern (FEOC) restrictions on various clean energy tax credits, including the ITC, which could limit eligibility for projects with foreign supply chain or ownership involvement. As for residential projects, the residential solar tax credit is going away for owner-purchased solar generating systems and energy storage systems after 2025, creating one of the most urgent deadlines solar homeowners and contractors have faced in years. Under OBBBA, the 30% solar tax credit (Section 25D) expires on December 31, 2025, with no phase-down or extension. Projects that are financed via a power purchase agreement, however, are currently being treated as commercial systems, providing greater flexibility in retaining the tax credit under OBBBA.

The federal production tax credit program–used mostly for wind developments–was first applied to facilities placed in service beginning in 1994. It was extended several times, most recently in the Inflation Reduction Act as a new technology-neutral credit for zero-carbon electricity (Section 45Y). The year in which a project begins construction determines the credit rate. It is a dollar-for-dollar credit against the taxpayer's federal income tax liability. OBBBA modifies existing production tax credits by phasing down solar and wind eligibility and changing the advanced manufacturing credit (Section 45X) to favor domestic manufacturing and exclude wind components after 2027.

In addition, OBBBA terminated other household-level energy credits, including the Section 25D Residential Clean Energy Credit and Section 25C Energy Efficiency Home Improvement Credit. Both credits will not be allowed for any expenditures made after December 31, 2025.

MEA is implementing measures, despite this highly disruptive federal action, to help as many grantees benefit from the ITC. This includes allowing grantees to leverage their grants to meet safe harbor provisions, approving as many applications as possible given the very limited timeframe, and adjusting incentive levels where possible for projects that will not make the ITC deadline.