Department of Legislative Services

Maryland General Assembly
2021 Session

FISCAL AND POLICY NOTE
Third Reader - Revised

Senate Bill 414 (Senator Pinsky, *et al.*)

Education, Health, and Environmental Affairs and Budget and Taxation

Environment and Transportation and Economic Matters

Climate Solutions Now Act of 2021

This bill makes broad changes to the State's approach to reducing statewide greenhouse gas (GHG) emissions and addressing climate change. Among other things, the bill (1) increases the statewide GHG emissions reduction requirement (from 40% from 2006 levels by 2030 to 60% from 2006 levels by 2030) and requires the State to achieve net-zero statewide GHG emissions by 2045; (2) establishes new commissions and working groups; (3) requires the Maryland Department of Labor (MDL) to adopt new energy conservation requirements for buildings and expands and alters the applicability of "high-performance building" standards; (4) establishes State tree-planting goals; (5) increases and extends energy efficiency and conservation program requirements administered by the Public Service Commission (PSC); and (6) establishes requirements for the purchase of zero-emission vehicles in the State fleet. The bill establishes related funding provisions. **The bill takes effect June 1, 2021, and specified provisions terminate at the end of fiscal 2023, 2025, and 2031.**

Fiscal Summary

State Effect: Although a reliable estimate of the bill's impact on State finances cannot be made at this time, State expenditures (multiple fund types) increase significantly beginning in FY 2022. The bill redirects funding from several existing special funds to offset some of these costs; however, some of the funding is not redirected until FY 2023.

Local Effect: Although a reliable estimate of the bill's impact on local finances cannot be made at this time, the bill likely results in a significant increase in local expenditures. Local personal property tax revenues decrease, potentially significantly. **This bill imposes a mandate on a unit of local government.**

Small Business Effect: Meaningful.

Analysis

Bill Summary:

Tree Plantings

The bill's provisions relating to tree planting terminate June 30, 2031, except as otherwise specified.

Tree Planting Goals and Requirements

The bill establishes that it is the policy of the State to support and encourage public and private tree-planting efforts, with the goal of planting and helping to maintain 5 million sustainable native trees in the State by the end of calendar 2030, as specified. It is the intent of the General Assembly that at least 500,000 of those trees be planted in an "underserved area," as defined. The Maryland Department of the Environment (MDE) is responsible for tracking the State's progress toward meeting these goals. MDE serves as the lead agency to receive tree data from the Maryland Department of Agriculture (MDA), the Department of Natural Resources (DNR), and the Chesapeake Bay Trust (CBT), as specified. The bill establishes a 5 Million Tree Program Coordinator position within MDE. The tree program coordinator must, by December 1 annually, consolidate the tree planting data and report the State's progress toward meeting the tree planting goals to specified legislative committees.

The Governor must formally pledge the State's commitment to achieving the bill's tree planting goals through the U.S. Chapter of the World Economic Forum's One Trillion Tree's Initiative.

In each fiscal year from fiscal 2022 through 2030, specified funding from the Chesapeake and Atlantic Coastal Bays 2010 Trust Fund (2010 Trust Fund) (discussed below) must be used to fund the tree program coordinator and 13 contractor positions within DNR's Forest Service to provide technical assistance, planning, and coordination related to tree plantings, tree buffer management, and forest management, including invasive vine removal, on public, private, and agricultural lands and in underserved areas. DNR must make reasonable efforts to ensure that the contractors hired pursuant to this provision reflect the geographic and demographic diversity of the State.

Tree Planting Programs and Initiatives

Urban Trees Program: The bill establishes an Urban Trees Program administered by CBT. The purpose of the program is to plant native tree species in underserved areas by making grants to qualified organizations for tree-planting projects in those areas beginning in

fiscal 2023. The bill specifies (1) eligible program expenses, which include personnel costs, among other things, and (2) required prioritization for awarding program grants. The program is funded by the Bay Restoration Fund's (BRF) Wastewater Account, as discussed in more detail below, and with any additional funds that may be allocated to CBT through its annual budget process. In addition, CBT must seek federal funds, federal grants, and private donations to support the program. By October 1 annually, CBT must report to DNR and MDE regarding the grants awarded by the program during the immediately preceding fiscal year, as specified.

Conservation Reserve Enhancement Program: In fiscal 2023 through 2031, inclusive, a landowner who enrolls land planted with a forested streamside buffer receives a one-time singing bonus of up to $1,000 per acre of land enrolled in the Conservation Reserve Enhancement Program (CREP). The signing bonuses must be funded through BRF's Wastewater Account, as specified by the bill (discussed in further detail below).

The Commission for the Innovation and Advancement of Carbon Markets and Sustainable Tree Plantings: The bill establishes a Commission for the Innovation and Advancement of Carbon Markets and Sustainable Tree Plantings. MDE and, as necessary, DNR, must provide staff for the commission. Commission members may not receive compensation, but are entitled to reimbursement for expenses, as specified. The commission must develop (1) a plan to achieve the State's carbon mitigation goal of planting 5 million native trees by 2030; (2) a plan to ensure that the planted trees are properly maintained; (3) recommendations regarding the establishment of a Maryland-based carbon offset market to support the State's tree-planting goals; and (4) recommendations on reviewing State policies to reduce and fully mitigate the clearing of trees during the construction of State highways and other transportation projects. The bill establishes requirements governing what must be included in the plans and recommendations. By October 31, 2022, the commission must report its plan and recommendations to the Governor and the General Assembly. The commission terminates June 30, 2023.

Greenhouse Gas Emissions Reduction Goals, Planning, and Monitoring

Greenhouse Gas Emissions Reduction Targets

The bill modifies a stated finding of the General Assembly relating to reducing GHG emissions. Under the bill, the General Assembly finds that the State has the ingenuity to reduce the threat of global warming and make GHG emissions reductions a part of the State's future by, among other things, achieving net-zero statewide GHG emissions by 2045. The bill explicitly requires the State to reduce statewide GHG emissions by 60% from 2006 levels by 2030 (increased from 40% under current law). The bill also explicitly requires the State to achieve net-zero statewide GHG emissions by 2045. These requirements terminate June 30, 2025.

By June 30, 2022, MDE must submit a proposed plan that reduces statewide GHG emissions by 60% from 2006 levels by 2030. By December 31, 2022, MDE must adopt a final plan to meet the 2030 goal and that sets the State on a path to achieve net-zero statewide GHG emissions by 2045. By December 31, 2030, MDE must adopt a final plan that achieves net-zero GHG emissions by 2045. By December 31, 2035, MDE must review and revise that plan.

The bill establishes several new requirements and restrictions for the final plan. A final plan may not include highway widening or additional road construction as GHG emissions reduction measures. Among other things, the final plan must (1) use specified data; (2) include specific estimates of GHG emissions reductions that could be achieved through the expansion of mass transit options; and (3) include specific estimates of expected GHG emissions reductions for each reduction measure in the plan. A final plan may include the use of carbon capture and storage technology as a GHG reduction measure only if the technology has been scientifically proven to achieve verifiable carbon reductions. In addition to existing requirements relating to plan development, in developing its plans under the bill, MDE must use the best available scientific information, as specified, and include specified emissions data. The plans must also produce a net economic benefit to the State's economy and a net increase in jobs in the State as compared with a no-action scenario. The economic benefit analysis must include the social cost of carbon, which must (1) be determined by MDE; (2) reflect the health, economic, and environmental cost of carbon; and (3) be at least $50 per ton of carbon dioxide (CO_2) equivalent.

Environmental Justice Considerations

The existing Commission on Environmental Justice and Sustainable Communities (CEJSC) must (1) in consultation with MDE, the Maryland Department of Health, MDL, and the Maryland Department of Planning, recommend a methodology for identifying communities disproportionately affected by climate changes, as specified; (2) develop specific recommendations to address environmental justice concerns, reduce emissions of GHG and co-pollutants, and build climate equity and resilience within disproportionately affected communities; and (3) set appropriate goals for the percentage of State funding for GHG emissions reduction measures that should be used for the benefit of disproportionately affected communities. The bill establishes various requirements the commission must follow when evaluating the methodologies and when developing its recommendations and goals. By December 31, 2022, the commission must report the criteria and recommendations developed pursuant to the bill to the Maryland Commission on Climate Change (MCCC).

The bill also requires MCCC to establish a Just Transition Employment and Retraining Working Group. MDE must provide staff for the working group. Members may not receive compensation but are entitled to reimbursement for expenses, as specified. The working

group must identify, study, and advise MCCC on various issues and opportunities related to job loss and creation as the State implements energy efficiency and GHG emissions reduction measures. In particular, the working group must conduct a study of (1) the number of jobs created to counter climate change, as specified; (2) the projected inventory of jobs needed and skills and training required to meet the future demand for jobs to counter climate change; (3) workforce disruption due to community changes caused by the transition to a low-carbon economy; and (4) strategies to target workforce development and job creation in fenceline communities that historically borne the brunt of hosting carbon polluters. By December 31, 2022, the working group must report to MCCC and the General Assembly on the study findings.

The bill also expands the requirements of MCCC's existing annual report to the Governor and the General Assembly.

Monitoring Methane Emissions from Landfills

For a municipal solid waste landfill that is required to monitor and report methane emissions to MDE, MDE must require the landfill operator to (1) evaluate the difference between methane emissions data acquired from aircraft observations and ground-level emissions data reported by a municipal solid waste landfill and (2) reassess the methodology and equipment used to obtain the ground-level data, as specified. MDE must publicly disclose on its website all methane emissions data obtained through airplane observations and any discrepancies between that data and the ground-level methane emissions data reported by landfills.

Public Service Commission – Energy Efficiency and Conservation Programs/Services

The bill also extends the EmPOWER Maryland Energy Efficiency Act annual energy savings goals beyond their current 2021-2023 program cycles and increases the annual energy savings requirement beyond 2.0% beginning in 2024. Specifically, PSC must, by regulation or order, require each electric company to procure or provide cost-effective energy efficiency and conservation programs and services to its customers, as specified, that are designed on a trajectory to achieve a targeted annual incremental gross energy savings of at least the following annual percentages (1) 2.25% annually in 2024 and 2025; (2) 2.5% in 2026; and (3) 2.75% per year in 2027 and thereafter.

Energy Efficiency and Clean Energy for Buildings

Energy Conservation Requirements for New Construction and Existing Buildings

"Covered building" means a commercial or residential building with a gross floor area of 25,000 square feet (ft^2) or more, excluding the garage area. "Solar-ready" means designed,

engineered, and constructed so that at least 40% of the roof area is (1) free from obstructions and (2) capable of accepting the installation of solar panels. "Commercial building" means a building that (1) is used primarily to carry on a for-profit or nonprofit business; (2) is not residential; and (3) is not used primarily to manufacture or produce raw materials, products, or agricultural commodities.

New Construction: These provisions apply only to new construction, and they do not apply to a public purpose project, as defined. By July 1, 2022, MDL must adopt regulations establishing energy conservation requirements for covered buildings. The regulations must require new covered buildings to achieve energy use reductions that exceed the 2018 International Energy Conservation Code (IECC) by specified increasing percentages, starting at 30% for building permit applications received from January 1, 2024, through December 31, 2026, and increasing to 60% for building permit applications received from January 1, 2030, through December 31, 2032. Any building permit applications received on or after January 1, 2033, must achieve a net-zero energy balance. However, if the energy conservation requirements in the Maryland Building Performance Standards (MBPS) or the energy conservation requirements of a local government in effect at the time a building permit is received are more stringent than the above requirements, the more stringent requirements apply.

MDL must also adopt regulations, by July 1, 2022, that require a new covered building for which a building permit application is received on or after January 1, 2023, to be solar-ready if the building will have 20,000 ft^2 or more of continuous roof space (excluding the parking area) and will be 20 stories or less in height (above grade plane). The regulations may authorize a local jurisdiction to waive the solar-ready requirement for a building in certain circumstances. Local jurisdictions are also authorized to adopt more stringent energy conservation and solar energy requirements for buildings.

Existing Buildings: "Major renovation" means a renovation project (1) for which the total projected cost exceeds 50% of the assessed value of the existing building or (2) involving a change of use, if the change involves the application of different requirements of MBPS.

These provisions do not apply to a (1) public purpose project or (2) a building designated as a historic property under federal, State, or local law. A covered building that is undergoing a major renovation must be renovated to achieve (1) a 40% reduction in the building's average annual energy use or (2) a level of energy efficiency that is at least 20% higher than what would be required for a new building under the bill. A local jurisdiction may waive these requirements under certain circumstances. By July 1, 2022, MDL must adopt implementing regulations.

Energy Modeling Requirement

By July 1, 2022, MDL must also adopt regulations that direct local governments to require energy life cycle cost estimates for new buildings (unless the building is designed to be all-electric). The bill establishes requirements for the regulations and the life cycle cost estimates produced in accordance with the regulations.

Special Provisions for School Construction

The net-zero energy requirements for a building to meet the definition of "high performance building" generally do not apply to public school buildings. However, subject to the availability of funding from the Net-Zero School Loan Fund (discussed below), at least one of the schools constructed in each local school system from July 1, 2022, through June 30, 2030, must be constructed to meet net-zero energy requirements. Additionally, any school constructed on or after July 1, 2022, that is not constructed to meet net-zero energy requirements must be solar-ready. Subject to the availability of funding from the Net-Zero School Loan Fund, the State must make no-interest loans to cover the local share of new costs incurred in constructing a new school to meet net-zero energy requirements.

Maryland Green Building Council – High-performance Buildings

The bill makes several changes related to existing provisions governing "high-performance buildings" by modifying the types of buildings that meet the definition of a "high-performance building" and adding several new options and/or requirements for qualification. Among other things, there is a new option for schools and public safety buildings in rural areas, as specified.

The bill expands the applicability of requirements relating to high-performance buildings to capital projects that are *at least 25% funded with State funds*. Under current law, the requirements only apply to projects that are *solely funded with State funds*.

The bill repeals a requirement for the Maryland Green Building Council (MGBC) to develop specified guidelines for new public school buildings; instead, the bill requires the council to ensure that State buildings, public schools, and community colleges that are required to meet high performance building requirements do so. MGBC must also develop guidelines for evaluating the energy balance and achieving a net-zero energy balance in buildings subject to specified high performance building standards.

Community Solar Energy Generating Systems – Personal Property Tax Exemption

The bill establishes that personal property is exempt from county or municipal corporation property tax if the property is machinery or equipment that (1) is installed on rooftops,

parking lots, roadways, or brownfields sites and (2) is part of a community solar energy generating system that serves more than 51% of kilowatt-hour output to low- or moderate-income customers, as specified.

Zero-emission Vehicles

Zero-emission Buses

These provisions apply to the Maryland Transit Administration's (MTA) State transit bus fleet; they do not apply to a bus that is part of a locally operated transit system. Beginning in fiscal 2023, MTA is prohibited from entering into a contract to purchase buses for its transit bus fleet that are not zero-emission buses, as defined by the bill. However, if MTA determines that no zero-emission buses meet the performance requirements for a particular use, MTA may purchase an alternative-fuel bus, as defined by the bill. The full cost of zero-emission and alternative-fuel buses purchased pursuant to the bill must be paid for from the Transportation Trust Fund (TTF). MTA must ensure the development of charging infrastructure to support the operation of zero-emission buses in the State transit bus fleet.

By January 1, 2022, and annually thereafter, MTA must submit a report to specified legislative committees that provides specified information regarding the conversion of its bus fleet to zero-emission buses. Among other things, the annual report must include (1) a schedule for converting MTA's State transit bus fleet to zero-emission buses; (2) an evaluation of the charging infrastructure needed for MTA to create and maintain a State transit bus fleet of zero-emission buses; (3) a plan for transitioning any State employees adversely affected by the conversion to a zero-emission State transit bus fleet, as specified; (4) in coordination with other appropriate State agencies, an estimate of the reduction in the amount of CO_2 emissions resulting from the fleet conversion, as specified; and (5) a financial analysis comparing the projected cost of continuing to operate a diesel-powered transit State bus fleet to the projected cost of purchasing, maintaining, and providing charging infrastructure for the zero-emission State bus transit fleet, as specified.

Zero-emission Passenger Cars

The bill establishes the intent of the General Assembly that 100% of passenger cars in the State vehicle fleet be zero-emission vehicles by 2030 and that the State make reasonable efforts to transition the rest of the light-duty vehicles in the State vehicle fleet to zero-emission vehicles as soon as practicable. The State must ensure that, subject to the availability of funding, (1) in fiscal 2022 through 2024, inclusive, at least 25% of the passenger cars purchased for the State vehicle fleet are zero-emission vehicles; (2) in fiscal 2025 and 2026, inclusive, at least 50% of the passenger cars purchased for the State vehicle fleet are zero-emission vehicles; and (3) beginning in fiscal 2027, 100% of passenger cars purchased for the State vehicle fleet are zero-emission vehicles. These

requirements do not apply to the purchase of vehicles that have special performance requirements, as specified, or to the purchase of vehicles by the Maryland Department of Transportation or MTA that will be used to provide paratransit service.

The Department of General Services (DGS) must ensure the development of charging infrastructure to support the operation of zero-emission vehicles in the State vehicle fleet.

By December 1 annually, the Chief Procurement Officer of DGS must submit a report to the General Assembly that includes data for the preceding fiscal year on the number of passenger cars and zero-emission passenger cars purchased by each unit, the current percentage of passenger cars in the State vehicle fleet that are zero-emission vehicles, any operational savings associated with the purchase and operation of zero-emission vehicles, and an evaluation of the charging infrastructure that exists to support the operation of zero-emission vehicles in the State vehicle fleet. Each unit must cooperate with the Chief Procurement Officer in the collection and reporting of the information needed to develop the required report.

Funding Provisions

Strategic Energy Investment Fund

The bill adds specificity to the current law requirement that 20% of the proceeds from the sale of allowances from the State's participation in the Regional Greenhouse Gas Initiative (RGGI) be allocated to a renewable and clean energy programs account within the Strategic Energy Investment Fund (SEIF) for, among other uses, climate change and resiliency programs. Under the bill, those climate change and resiliency programs include the Maryland Healthy Soils Program (an existing program administered by MDA). In fiscal 2022 through 2027, inclusive, of the 20% credited to the renewable and clean energy programs account, the greater of 5% or $500,000 must be allocated to the Maryland Healthy Soils Program.

The bill also establishes a new climate solutions account within SEIF. In any fiscal year that the proceeds to SEIF from RGGI exceed $50.0 million, the Maryland Energy Administration (MEA) must credit proceeds in excess of the first $50.0 million to the new account to be used for (1) covering the cost difference between zero-emission passenger cars and standard light-duty vehicles purchased pursuant to the bill; (2) allocations to the Net-Zero School Loan Fund; (3) MDE administrative costs relating to GHG emissions reduction planning; (4) administrative costs for MDL related to the development and implementation of the required energy conservation and energy modeling; and (5) costs incurred by DGS to install electric charging equipment on State property. Not more than $20.0 million may be deposited to the new account in a fiscal year. The bill also establishes requirements for MEA to prioritize the allocation of funding in the new account in any

years where there are insufficient funds to fully fund the above-stated programs and purposes.

Net-Zero School Loan Fund

The bill establishes a Net-Zero School Loan Fund, a special fund administered by MEA, to assist local school systems in covering the cost difference between meeting the basic high performance building requirements and the net-zero energy requirements under the bill. The fund consists of (1) money allocated from SEIF (as discussed above); (2) money provided by a school system, as specified; (3) interest earnings; and (4) any other money from any other source accepted for the benefit of the fund. The fund may only be used for providing local school systems with no-interest loans, as specified. MEA must develop guidelines and reporting requirements for local school systems to receive no-interest loans from the fund. Expenditures from the fund may only be made in accordance with the State budget. Money expended from the fund is supplemental to and is not intended to take the place of funding that otherwise would be appropriated to assist local school systems with school construction costs.

Subject to the availability of funding in the climate solutions account of SEIF, in fiscal 2022 through 2030, inclusive, the Governor must appropriate $6.0 million per fiscal year from the account to the Net-Zero School Loan Fund.

Bay Restoration Fund

After paying for eligible costs associated with upgrading wastewater treatment plants, as specified, from BRF's Wastewater Account, MDE must transfer the following amounts in each year from fiscal 2023 through 2031 (1) $10.0 million to CBT for the Urban Trees Program established by the bill; (2) $2.5 million to the 2010 Trust Fund to be used for tree planting on public and private land; and (3) $2.5 million to MDA to fund tree planting under CREP and other tree-planting programs on agricultural land, as specified.

The bill establishes restrictions on how the funds transferred to the 2010 Trust Fund can be used. Funds transferred from BRF pursuant to these provisions are supplemental to, and may not take the place of, funding that would otherwise be appropriated for the affected programs and initiatives.

Chesapeake Bay and Atlantic Coastal Bays 2010 Trust Fund

In each fiscal year from fiscal 2022 through 2030, inclusive, $1.25 million from the 2010 Trust Fund must be used to fund MDE's 5 Million Tree Program Coordinator Position and 13 contractor positions within DNR's Forest Service. This provision terminates June 30, 2031.

The bill also adds DNR's Green Shores Program to the list of programs to which the BayStat Subcabinet must direct funding from the 2010 Trust Fund.

Current Law:

Tree Planting

Although current law does not establish specific goals related to tree planting in the State, several State laws and programs address forest conservation and tree planting. Examples include:

- The Forest Service within DNR administers Maryland's Forest Conservation Act (FCA), but it is primarily implemented on the local level. FCA establishes minimum forest conservation requirements for land development, and local governments with planning and zoning authority are required to develop local forest conservation programs that meet or are more stringent than the requirements of FCA. FCA applies to any public or private subdivision plan or application for a grading or sediment control permit by any person, including a unit of State or local government, on areas 40,000 ft^2 (0.9 acres) or greater, subject to certain exceptions.
- Maryland's Roadside Tree Law protects trees along public road rights-of-way; before a roadside tree is trimmed or cared for in any way, a tree care permit must be obtained. Planting a tree within the public road right-of-way also requires a permit. Any work performed on a roadside tree must be done by a roadside tree care expert or a Maryland licensed tree expert.
- DNR launched a Marylanders Plant Trees program in 2009 to encourage citizens and organizations to partner with the State to plant new trees. Citizens can receive a $25 coupon off the purchase of a native tree at participating nurseries.
- DNR also administers the Tree-Mendous Maryland program, which is aimed at helping restore tree cover on public land and community open space.

Conservation Reserve Enhancement Program

The U.S. Department of Agriculture and the State have partnered in implementing CREP, a voluntary program, to enroll up to 100,000 acres of agricultural land in the State. Participants remove cropland and marginal pastureland from agricultural production and convert the land to native grasses, trees, and other vegetation or restore wetlands. Eligible participants receive payments in return.

Chesapeake Bay Trust

CBT is a nonprofit grant-making organization dedicated to improving the watersheds of the Chesapeake Bay, the Maryland Coastal Bays, and the Youghiogheny River. Created in 1985 by the Maryland General Assembly, CBT's goal is to increase stewardship through grant programs, special initiatives, and partnerships that support K-12 environmental education, on-the-ground watershed restoration, community engagement, and the underlying science of these three realms. Grantees include schools, local governments, community groups, faith-based groups, watershed organizations, and other not-for-profit entities.

Maryland Healthy Soils Program

Chapter 373 of 2017 established the Maryland Healthy Soils Program to (1) improve the health, yield, and profitability of the soils of the State; (2) increase biological activity and carbon sequestration in the soils of the State by promoting practices based on emerging soil science, including planting mixed cover crops, adopting no-till or low-till farming practices, and rotation grazing; and (3) promote widespread use of healthy soils practices among farmers in the State. To carry out the purposes of the program, Chapter 373 requires MDA to (1) provide incentives, including research, education, technical assistance, and, subject to available funding, financial assistance, to farmers to implement farm management practices that contribute to healthy soils and (2) determine whether the program may be implemented in a manner to enhance other State and federal programs that provide financial assistance to farmers.

Chesapeake Bay and Atlantic Coastal Bays 2010 Trust Fund

The 2010 Trust Fund was established in 2008 and is funded with a portion of revenues from the motor fuel tax and the sales and use tax on short-term vehicle rentals (which, collectively, generate approximately $50.0 million each year for the fund). The trust fund is used for nonpoint source pollution control projects to help meet Chesapeake Bay restoration goals and to improve the health of the Atlantic Coastal Bays and their tributaries. Examples of nonpoint source projects that can be funded with the trust fund include cover crops, natural filters, and local watershed restoration projects, including stormwater management projects.

Bay Restoration Fund

Chapter 428 of 2004 established BRF, which is administered by the Water Quality Financing Administration within MDE. The primary purpose of the fund is to support upgrades to Maryland's 67 major publicly owned wastewater treatment plants with

enhanced nutrient removal technology; funds are also used for septic system upgrade grants, among other things, and MDA's Cover Crop Program.

As a revenue source for the fund, Chapter 428 established a bay restoration fee on users of wastewater facilities, septic systems, and sewage holding tanks and Chapter 150 of 2012 doubled the fee for most users (until July 1, 2030). Of the fee revenue collected from users of septic systems and sewage holding tanks, 60% must be deposited into a separate account, commonly referred to as the Septics Account. The remaining funds collected from users of septic systems and sewage holding tanks (40%) must be transferred to the Maryland Agricultural Water Quality Cost Share Program within MDA to provide financial assistance to farmers for planting cover crops.

The Maryland Green Building Council

MGBC, which is staffed by DGS, is charged with:

- evaluating current high-performance building technologies;
- recommending the most cost-effective green building technologies that the State might consider requiring in the construction of State facilities;
- providing recommendations concerning how to expand green building in the State; developing a list of building types for which green building technologies should not be applied; and
- establishing a process for receiving public input.

Energy Efficiency and Conservation – High-performance Buildings

Chapter 124 of 2008 requires most new or renovated State buildings to be constructed as high-performance buildings, subject to waiver processes established by the Department of Budget and Management (DBM) and DGS. Chapter 124 defines a "high-performance building" as one that (1) meets or exceeds the Leadership in Energy and Environmental Design criteria for a silver rating or (2) achieves a comparable numeric rating according to a nationally recognized, accepted, and appropriate standard approved by DBM and DGS. Based on action approved by MBGC, DGS, and DBM, a "high performance building" also includes one that (1) earns a two Green Globes rating or better under the Green Building Initiative's Green Globes rating system or (2) complies with MGBC's supplement to the International Green Construction Code enacted in November 2014.

Only new or renovated State buildings that are at least 7,500 ft^2 and are built or renovated entirely with State funds are subject to the high-performance requirement. Additionally, building renovations must include the replacement of heating, ventilation, air conditioning, electrical, and plumbing systems and must retain the building shell. Unoccupied buildings

are exempt from the high-performance mandate, including warehouses, garages, maintenance facilities, transmitter buildings, and pumping stations.

Maryland Building Performance Standards

MDL is required to adopt, as MBPS, the most recent version of the International Building Code (IBC), including the IECC, along with applicable modifications authorized in Title 12 of the Public Safety Article. Within 18 months of the release of each new version of IBC, MDL is required to review the new version, consider modifications, and adopt specified modifications related to energy conservation and efficiency. MDL is prohibited from adopting any modification that is more stringent than IBC, except that an energy conservation requirement may be more stringent than IECC. MDL and local governments may also adopt by regulation the International Green Construction Code.

Energy Efficiency and Conservation – State Building Energy Efficiency Executive Order

In June 2019, Governor Lawrence J. Hogan, Jr., issued an executive order establishing a new energy savings goal for State government. Specifically, DGS, in cooperation with MEA, must manage a "Maryland Leads by Example" energy savings initiative that will oversee reducing, by 2029, the energy use of State-owned buildings by 10% compared to a 2018 baseline. Chapter 289 of 2020 codified the Governor's executive order, including the goal for reducing energy use in State-owned buildings by 10%.

EmPOWER Maryland

In 2008, the General Assembly passed the EmPOWER Maryland Energy Efficiency Act, which set target reductions of 15% in per capita electricity consumption and peak demand, respectively, by 2015 from a 2007 baseline. Legislation in 2017 extended the program through its 2018 to 2020 and 2021 to 2023 program cycles and established a new annual energy savings goal of 2.0% per year, based on each electric company's 2016 sales. Approved program costs are recovered by electric companies on customer bills.

Zero-emission Vehicles

Several State programs aim to encourage the purchase of electric vehicles in the State. For example, subject to available funding, a person who purchased a qualified plug-in electric vehicle or a qualified fuel cell electric vehicle prior to July 1, 2020, may claim a credit against the vehicle excise tax. In addition, MEA administers the Electric Vehicle Recharging Equipment Rebate Program, which provides rebates to individuals, businesses, and to State and local governments. The rebate is equal to 40% of the cost of property that is located in the State and used for recharging vehicles propelled by electricity, subject to

specified maximum values. MEA may also reimburse a person for the reasonable costs of installing the qualifying equipment.

State Vehicle Fleet

DGS purchases vehicles for the State based on standards developed by DBM and approved by the Board of Public Works. DBM administers the State vehicle fleet. The standards developed by DBM must, as far as practicable and feasible, be based on the lowest possible life-cycle cost of the vehicle.

Greenhouse Gas Emissions Reduction Act

The Greenhouse Gas Emissions Reduction Act, originally enacted in 2009 and made permanent and expanded in 2016, was enacted in light of Maryland's particular vulnerability to the impacts of climate change. Under the Act, the State was required to develop plans, adopt regulations, and implement programs to GHG emissions by 25% from 2006 levels by 2020 and must further reduce GHG emissions by 40% from 2006 levels by 2030; the 2030 reduction requirement terminates December 31, 2023. In October 2019, MDE released a draft plan to reach the 2030 reduction requirement.

Regional Greenhouse Gas Initiative and the Strategic Energy Investment Fund

Maryland participates in the multi-state RGGI in order to reduce CO_2 emissions from the power sector. Each participating state limits CO_2 emissions from electric power plants, issues CO_2 allowances, and establishes participation in CO_2 allowance auctions. A single CO_2 allowance represents a limited authorization to emit one ton of CO_2.

Chapters 127 and 128 of 2008 established SEIF primarily to contain revenue generated from the sale of CO_2 emission allowances under RGGI. The allocation of revenue has been altered several times in budget reconciliation legislation. The current allocation requires (1) at least 50% for energy assistance; (2) at least 20% for energy efficiency and conservation (at least one-half for low- and moderate-income programs); (3) at least 20% for renewable and clean energy, energy-related education and outreach, resiliency, and climate change programs; and (4) up to 10%, but no more than $5.0 million for administrative expenses.

Commission on Environmental Justice and Sustainable Communities

CEJSC within MDE was established by executive order in 2001 and codified in 2003. CEJSC is tasked with examining issues of "environmental justice" and sustainable communities for all Marylanders. To this end, CEJSC reviews and analyzes the environmental justice implications of current State policy, laws, and regulations; assesses

the adequacy of State and local laws to address the issue of environmental justice and sustainable communities; coordinates with the Children's Environmental Health and Protection Advisory Council on recommendations to further environmental justice and sustainable communities; develops criteria to assess whether communities may be experiencing environmental justice issues; and recommends options to the Governor for addressing issues, concerns, or problems related to environmental justice. "Environmental justice" means equal protection from environmental and public health hazards for all people regardless of race, income, culture, and social status.

Maryland Commission on Climate Change

MCCC, originally created by executive order, was codified in statute pursuant to Chapter 429 of 2015 to advise the Governor and General Assembly on ways to mitigate the causes of, prepare for, and adapt to the consequences of climate change. MCCC is required to submit annual updates to the Governor and the General Assembly on the State's efforts to mitigate the causes of, prepare for, and adapt to the consequences of climate change, including any future plans and recommendations for legislation.

Local Personal Property Taxes

Local governments have the authority to impose personal property taxes on solar photovoltaic property. The State Department of Assessments and Taxation indicates that local governments collected approximately $3.1 million in personal property tax revenues from solar energy property in fiscal 2018.

Personal property is divided into the following subclasses (1) stock in business; (2) distilled spirits; (3) operating personal property of a railroad; (4) operating personal property of a public utility that is machinery or equipment used to generate electricity or steam for sale; (5) all other operating personal property of a public utility; (6) machinery and equipment, other than operating personal property of a public utility, that is used to generate electricity or steam for sale or hot or chilled water for sale that is used to heat or cool a building; and (7) all other personal property that is to be assessed.

The county tax rate applicable to personal property and the operating real property of a public utility may not exceed 2.5 times the rate for real property.

State Fiscal Effect: The bill has far-reaching impacts on multiple State agencies. Although a reliable estimate of the bill's impact on State finances cannot be made at this time, State expenditures (multiple fund types) increase significantly beginning in fiscal 2022. The bill redirects funding from several existing special funds to cover some of the costs incurred as a result of the bill (although some of these funds are not redirected until fiscal 2023). Some of the potential effects of these and other provisions are described

below. Despite the bill's June 1, 2021 effective date, it is assumed that State finances are not materially affected until fiscal 2022.

Effects of Redirection of RGGI Auction Proceeds

The bill redirects RGGI auction proceeds that are in excess of $50.0 million in a given fiscal year to the new climate solutions account within SEIF; this funding is to be used for covering the difference between zero-emission passenger cars and standard light-duty vehicles, administrative costs of MDE relating to GHG emissions reduction planning, administrative costs of MDL related to the development and implementation of energy conservation and energy modeling requirements, costs incurred by DGS to install electric charging equipment on State property, and allocations to the Net-Zero School Loan Fund. Specifically, subject to available funding, the Governor must appropriate $6.0 million per fiscal year, from fiscal 2022 through 2030, inclusive, from the new account to the Net-Zero School Loan Fund to provide no-interest loans to local school systems to cover the cost difference between meeting the basic high performance building requirements and the net-zero energy requirements established by the bill.

The bill also specifies that, in fiscal 2022 through 2027, inclusive, of the 20% credited to SEIF's renewable and clean energy programs account, the greater of 5% or $500,000 must be allocated to the Maryland Healthy Soils Program, an existing program within MDA.

Exhibit 1 provides an illustrative example of the redirection of SEIF funds based on an estimated $65.0 million in annual RGGI auction proceeds, subject to certain assumptions regarding potential agency administrative costs that cannot be readily quantified at this time.

Exhibit 1
Example of Estimated Annual SEIF Account Funding Transfers

Account	Current Law	Bill	Difference
Energy Assistance	$33,250,000	$25,000,000	($8,250,000)
Energy Efficiency and Conservation	13,300,000	10,000,000	(3,300,000)
Renewable and Clean Energy (Total)	13,300,000	10,000,000	(3,300,000)
MDA's MD Healthy Soils Program	0	500,000	500,000
New Climate Solutions Account (Total)	0	15,000,000	15,000,000
Zero-emission Vehicles Costs*	0	8,200,000	8,200,000
MEA Net-Zero School Loan Fund	0	6,000,000	6,000,000
MDE Administrative Costs	0	500,000	500,000
MDL Administrative Costs	0	300,000	300,000
MEA Administration Costs	5,000,000	5,000,000	0

DGS: Department of General Services
MDA: Maryland Department of Agriculture
MDL: Maryland Department of Labor
MEA: Maryland Energy Administration
SEIF: Strategic Energy Investment Fund

* Zero-emission Vehicles Costs includes DGS Costs to install electric charging equipment on State property.

Note: Note, this illustrative example assumes an estimated $65.0 million in annual Regional Greenhouse Gas Initiative auction proceeds. It also makes various assumptions about agency administrative costs, which are unknown. The amounts distributed to the required programs under the climate solutions account is shown for illustrative purposes only.

Source: Department of Legislative Services

Under this illustrative example, an estimated $15.0 million annually is redirected from currently funded programs for energy assistance, energy efficiency and conservation, and renewable and clean energy, beginning in fiscal 2022. Pursuant to current law, (1) the Department of Human Services is the primary recipient of funds from SEIF's energy assistance account and (2) MEA and MDE are allocated the largest amounts of funding from SEIF's energy efficiency and renewable and clean energy accounts. Redirecting funding from those agencies limits funding available (1) for energy assistance; (2) for energy efficiency programs funded by MEA; (3) to assist in the deployment of clean energy technologies under MEA programs; and (4) to conduct climate change related programmatic activities of MDE.

Effect of Redirecting Funding from BRF's Wastewater Account and the 2010 Trust Fund

Under the bill, after paying for eligible costs associated with upgrading wastewater treatment plants, as specified, MDE must transfer, in each year from fiscal 2023 through 2031, the following amounts from BRF's Wastewater Account (1) $10.0 million to CBT for the Urban Trees Program established by the bill; (2) $2.5 million to the 2010 Trust Fund to be used for tree planting on public and private land; and (3) $2.5 million to MDA to fund tree plantings under CREP and other tree-planting programs on agricultural land. **Exhibit 2** shows the estimated effects of the redirection of funding, based on fiscal 2020 revenues to BRF's Wastewater Account.

Exhibit 2
Estimated Annual BRF Wastewater Account Funding Redirected under the Bill

Account	Current Law	Bill	Difference
MDE's BRF Wastewater Account	$121,185,707	$106,185,707	($15,000,000)
Chesapeake Bay Trust	0	10,000,000	10,000,000
DNR's 2010 Trust Fund	0	2,500,000	2,500,000
MDA's CREP/Tree Planting	0	2,500,000	2,500,000

BRF: Bay Restoration Fund
CREP: Conservation Reserve Enhancement Program
DNR: Department of Natural Resources
MDA: Maryland Department of Agriculture
MDE: Maryland Department of the Environment

Note: This estimate is based on fiscal 2020 revenues distributed to BRF's Wastewater Account, the last full fiscal year for which data is available.

Source: Comptroller's Office; Department of Legislative Services

Under the bill, there is $15.0 million less in annual funding available for currently authorized uses of BRF's Wastewater Account beginning in fiscal 2023. Instead, this funding is redirected as described above to cover specified costs related to the bill's tree-planting provisions.

The bill also requires, beginning in fiscal 2022, that $1.25 million annually from the 2010 Trust Fund be used to fund (1) MDE's 5 Million Tree Program Coordinator Position and (2) 13 contractor positions within DNR's Forest Service beginning in fiscal 2022. For

contextual purposes, the 2010 Trust Fund generally receives approximately $50.0 million in funding annually.

Other Effects on State Agencies

State expenditures (multiple funds) increase significantly for various State agencies. Among other effects, agencies incur potentially significant costs to incorporate GHG emissions reduction goals into their long-term planning and policy development activities, administer the programs and initiatives established by the bill (likely requiring additional staffing in several agencies), and purchase zero-emission passenger cars, light-duty vehicles, and buses (and potentially alternative-fuel buses). Some of these expenditures may be offset by the redirection of funding under the bill, but others are not. For example, MTA incurs significant increases in TTF expenditures to purchase zero-emission buses and related charging equipment (or alternative-fuel buses).

State expenditures (multiple fund types) may also increase in the short term due to an increase in electricity costs resulting from the bill. The State uses about 1.5 million megawatt-hours of electricity per year, out of a statewide total of about 60 million megawatt-hours. While it is unknown how much the bill will raise electricity prices, for every $60 million increase in total electric costs in the State ($1 per megawatt-hour), State expenditures for electricity increase by about $1.5 million.

Capital Expenditures for State Buildings

Although the bill has no effect on total capital spending, which is established annually by the Governor and the General Assembly through the capital budget process, funding for other capital projects is reduced due to the capital expenditures incurred as a result of the bill. DGS advises that the bill's energy efficiency and solar energy system requirements increase design and construction costs.

Local Fiscal Effect: A reliable estimate of the bill's impact on local government finances cannot be made at this time. However, some of the potential fiscal effects on local governments are discussed below.

Local personal property tax revenues decrease by a potentially significant amount beginning in fiscal 2022 due to the tax exemption for property that is machinery or equipment that (1) is installed on rooftops, parking lots, roadways, or brownfields sites and (2) is part of a community solar energy generating system that serves more than 51% of kilowatt-hour output to low- or moderate-income customers, as specified. The actual revenue decrease depends on the number of systems located in each jurisdiction that meet the requirements of the bill, the value of personal property, and local personal property tax rates.

Various provisions may result in an increase in costs for local governments. For example, local governments may incur additional costs to implement the energy conservation and solar energy regulations adopted by MDL for buildings, review building permit applications, review life cycle cost estimates for new buildings, and approve waivers, among other things. In addition, costs may increase for local governments that own and/or operate municipal solid waste landfills to comply with the bill's expanded monitoring and reporting requirements related to methane emissions.

Additionally, similar to the effect described above for State agencies, local governments may incur an increase in electricity costs in the short term. In addition, local capital projects may be significantly affected due to the bill's energy efficiency and solar energy system requirements. Local school systems that construct schools to meet net-zero energy requirements benefit from having access to no-interest loans from the Net-Zero School Loan Fund, depending on the availability of funding.

In addition, because the bill redirects funding from SEIF, BRF, and the 2010 Trust Fund for other purposes, some local governments may benefit from increased funding, while others are negatively affected.

Local governments may benefit from the funding made available under the bill for tree planting.

Small Business Effect: Although a reliable estimate of the bill's impact on small businesses cannot be made at this time, the impact on small businesses is meaningful, and some of the potential effects are discussed below.

Small businesses that provide energy modeling, energy conservation consulting, or energy usage evaluations benefit from an increase in the demand for their services. Solar installation, manufacturing, and maintenance companies benefit from the bill's solar energy system requirements. Small businesses that provide design and construction services could also be positively affected. Small businesses that sell zero-emission vehicles benefit from increased sales opportunities. Nurseries, farmers, and other small businesses may benefit from the bill's tree planting provisions.

Other small businesses, such as those constructing new buildings or renovating existing buildings, incur additional costs to comply with the bill's energy efficiency and solar energy provisions. Small businesses may also incur an increase in electricity costs in the short term.

In addition, because the bill redirects funding from SEIF, BRF, and the 2010 Trust Fund for other purposes, some small businesses may benefit from increased funding, while others are negatively affected.

Additional Information

Prior Introductions: None.

Designated Cross File: HB 583 (Delegate Stein) - Environment and Transportation and Economic Matters.

Information Source(s): Howard and Prince George's counties; Baltimore City; Northeast Maryland Waste Disposal Authority; cities of Annapolis and Bowie; Maryland State Department of Education; University System of Maryland; Public School Construction Program; Maryland Department of Agriculture; Maryland Department of the Environment; Department of General Services; Department of Natural Resources; Maryland Department of Health; Maryland Department of Labor; Maryland Department of Planning; Maryland Department of Transportation; Public Service Commission; Office of People's Counsel; Montgomery County Public Schools; Chesapeake Bay Trust; Department of Legislative Services

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