



January 28, 2021

The Honorable Paul G. Pinsky, Chair
Education, Health, and Environmental Affairs Committee
Miller Senate Office Building, Suite 2W
Annapolis, Maryland 21401

Re: Senate Bill 414- Climate Solutions Now Act of 2021

Dear Chairman Pinsky and Members of the Committee:

The Maryland Department of the Environment (MDE or the Department) has reviewed Senate Bill 414 - *Climate Solutions Now Act of 2021* and would like to offer additional information about the legislation.

The Department strongly supports the bill's overall objective to reduce greenhouse gas (GHG) emissions. Climate change is an urgent threat, and all levels of government and nongovernment organizations must take increasingly aggressive and balanced actions to reduce GHG emissions and increase community resiliency. Maryland is a national leader in this area, realizing substantial reductions in emissions since the first Greenhouse Gas Reduction Act (GGRA) was passed in 2009, with the Hogan Administration taking bold new actions to achieve significant progress. The World Resources Institute recently recognized Maryland's leadership with their finding that Maryland was the number one state for reducing GHG emissions while growing our economy.¹ While the Department welcomes efforts to accelerate action to combat climate change, we would like to provide information and express some concerns with the bill as currently drafted.

Overall

The Department has some concerns with the language changes to existing law. The language in the 2009 GGRA and 2016 GGRA was the result of a very comprehensive process that resulted in strong environmental protection and economic growth. Those bills were agreed upon by a wide array of interested parties, including environmental advocacy groups, labor and industry representatives, state agencies and public citizens. Some of the language changes to the existing GGRA that are proposed by this bill threaten to unravel the consensus underlying current law. Other language changes to the current law are vague and ambiguous or seem to provide for what is already implemented under current law, such as the requirement to "ensure that the greenhouse gas emissions reduction measures implemented in accordance with the plans: 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 bill declares new goals to achieve a 60% reduction in statewide GHG emissions by 2030 and net zero GHG emissions by 2045. While the Department generally finds more ambitious goals to be laudable, the Committee should be aware that developing a plan for Maryland to achieve those goals through state programs while still meeting the law's requirements for economic impacts will be difficult and may even be impossible. Such rapid reductions will require improvements in federal programs to advance new technologies and make major infrastructure investments, and those improvements may be beyond what the incoming federal administration will put forward. The Department believes that such federal action is necessary and long overdue, but when developing a state plan, the Department cannot assume that federal action at that scale will occur.

¹ <https://www.wri.org/blog/2020/07/decoupling-emissions-gdp-us>

Recently, the bipartisan, independent Maryland Commission on Climate Change (MCCC), which includes the Senate and House sponsors of this legislation in its membership, unanimously approved a recommendation for Maryland to adopt similar ambitious GHG reduction goals. The Commission, informed by the latest scientific findings on necessary action by developed nations to limit global temperature increases and by the research and analysis of reduction opportunities by the Commission's Greenhouse Gas Mitigation Working Group, recommended a different reduction goal for 2030 – a 50% reduction rather than a 60% reduction – and the same net-zero goal for 2045.² These paths are not mutually exclusive, as the goal in the GGRA sets a floor on reductions, not a ceiling. The Department has always aimed to develop plans to exceed the required reductions by as much as possible, given available technology, constraints on state authority, and the requirements in the law relating to economic benefit and other impacts.

On January 19, 2021 the Department provided a preview of the forthcoming *2030 GGRA Plan* wherein the Department and the other Maryland state agencies advanced a portfolio of measures that will reduce Maryland's 2030 GHG emissions to 48.7% below 2006 levels, very nearly achieving the Commission's recommended 2030 goal.³ The Department intends to supplement that plan shortly with updated estimates incorporating additional federal policies that will almost certainly bring Maryland's emissions below the 50% goal, once the incoming federal administration provides more detail on its immediate climate policy actions.

Timeline and Methodology

The bill would require the Department to issue a proposed plan to achieve the new 2030 GHG reduction goals by June 30th of next year, followed by a final plan by December 31st of next year. The Department would like to provide feedback on that timeline. The bill's requirement for a final plan following a draft by only six months does not allow for public comment and review of the numerous new mitigation programs that such a plan would need to propose, followed by material changes to program design and analysis. The Department and other state agencies would struggle to meet that deadline, as development of new mitigation programs requires significant time for research, careful analysis, and consultation among agencies and with outside experts, including other states and the MCCC. Also, the bill's requirement that MDE perform measure-by-measure emissions impact analysis would add significant time and expense to the analysis process.

The bill also places some narrower methodological requirements on the GHG plan that give MDE some concern.

First, the bill prohibits the plan from including “the use of carbon capture and storage technology” as a GHG reduction measure. The Department's practice is to exclude that technology from its analysis of 2030 emissions to avoid producing a plan that depends upon that new technology to achieve the 2030 GGRA goal.⁴ However, the Department notes that achieving deeper long-term goals like net zero by 2045 may require such technology to mitigate the GHG emissions from essential industrial processes that either have process heat demands that can only be met through combustion, or entail processes that emit CO₂ as a by-product.

Second, the bill requires the plan to use the 20-year global warming potential for methane to estimate GHG emissions. While the Department recognizes the need to focus on short-lived climate pollutants like methane, and uses the 20-year value in methane-specific policy analysis, it notes that using the 20-year value in the economywide plan would violate established standards for GHG accounting. Both national standards, including the Greenhouse Gas Protocol,⁵

² <https://mde.maryland.gov/programs/Air/ClimateChange/MCCC/Documents/MCCCAnnualReport2020.pdf>

³ <https://mde.maryland.gov/programs/Air/ClimateChange/MCCC/MWG/GGRA%20Planning%20Update.pdf>

⁴ See, for example, the 2019 Draft GGRA Plan: [https://mde.maryland.gov/programs/Air/ClimateChange/Pages/Greenhouse-Gas-Emissions-Reduction-Act-\(GGRA\)--Draft-Plan.aspx](https://mde.maryland.gov/programs/Air/ClimateChange/Pages/Greenhouse-Gas-Emissions-Reduction-Act-(GGRA)--Draft-Plan.aspx)

⁵ “...users are required to estimate GHG effects using 100-year GWP values in Chapters 8, 9, and 11. ['Estimating Baseline Emissions', 'Estimating GHG Effects Ex Ante', and 'Monitoring Performance Over Time', respectively]” <https://ghgprotocol.org/sites/default/files/standards/Policy%20and%20Action%20Standard.pdf>

and international standards, including the rules for implementing the Paris Climate Agreement,⁶ require the use of 100-year global warming potentials in GHG reduction plans.

Third, the bill requires the plan to include “specific estimates of the reductions expected from each greenhouse gas reduction measure included in the plan.” Older versions of the GGRA plan did include such “measure-by-measure” analysis, but methodologies and models have advanced since then, and best practice is now to analyze the effects of multiple measures simultaneously within an economy-wide modeling framework. That is because many programs interact with one another in fundamental ways, so they do not have independently attributable impacts (for example, the future reductions achieved by the EmPOWER program’s efficiency investments depend profoundly on how the electricity generation system changes due to the Renewable Portfolio Standard’s renewable energy deployments and the Regional Greenhouse Gas Initiative’s declining pollution cap). By analyzing such measures together, analysts can capture those interactive effects and correctly estimate what all measures achieve together, which is the most important question for economywide planning. After this request in the 2020 version of this bill, MDE increased its analysis budget for 2021 in order to roughly estimate measure-by-measure reductions by adding subsequent analyses wherein programs are removed from the modeling process one-by-one to see how the overall results change. That supplemental analysis of a subset of the most significant programs will be available in the Spring, but the Department notes that, while that analysis is of interest, such measure-by-measure analysis is conceptually flawed because of the interactions among measures, and a full analysis of every one of the dozens of measures in the GGRA Plan would be a substantial and expensive undertaking.

Fourth, the bill requires the Department to incorporate aircraft-borne estimates of methane emissions from landfills into the GGRA Plan and to require landfill operators to take various actions in response to those estimates. The Department recognizes the value of aircraft-borne estimates and continues to fund the University of Maryland’s work to gather those estimates. The Department and the University’s researchers continue to collaborate on how those estimates can improve Maryland’s GHG management. However, those estimates cannot replace the facility-level estimates the Department currently uses for regulatory purposes and for the GGRA Plan. The Department requires estimates that are (1) specific to a facility and (2) annual for those purposes. Aircraft-borne measurements do not provide estimates specific to a particular landfill or other source, since they measure methane emitted from numerous upwind sources and areas, and do not provide annual estimates since they only provide snapshots in time that are heavily dependent upon immediate conditions including weather. Therefore, these provisions in the bill cannot be implemented.

Fiscal and Operational Impact

In addition to the Department’s concerns noted above, SB 414 would have a fiscal and operational impact on the Department in several ways. The first impact is tied to the increase in the GHG emissions reductions to 60% from 2006 levels by 2030. Under the bill MDE would be required to adopt the first of two new plans by December 31, 2022, adopt regulations, and implement programs that reduce statewide GHG emissions to meet these more stringent emission reduction levels. The revised 2030 GHG reduction goal would require that MDE repeat the comprehensive emissions and economic impact analysis included in the current GGRA plan process using extended contracts with emissions and economic impact modelers. For the 2019 GGRA Plan and forthcoming, 2030 GGRA Plan, emissions modeling was done on an economy-wide scale, consistent with best methodological practices and best available models. SB 414 requires that emissions reductions be calculated for each individual measure included in the plan, despite the fact that relevant measures profoundly interact with one another, so do not have independently attributable impacts. MDE can, however, estimate theoretical independent impacts by supplementing its economy-wide analysis

⁶ "Pursuant the modalities, procedures and guidelines (MPGs) for the transparency framework for action and support adopted by decision 18/CMP.1, Parties agreed to use the 100-year time-horizon GWP values from the Fifth Assessment Report of the IPCC (see [table 8.A.1](#)), or 100-year time-horizon GWP values from a subsequent IPCC assessment report as agreed upon by the CMA, to report aggregate emissions and removals of GHGs, expressed in CO₂ eq ([decision 18/CMA.1, annex, paragraph 37](#))."
<https://unfccc.int/process-and-meetings/transparency-and-reporting/methods-for-climate-change-transparency/common-metrics>

approach with additional modeling scenarios that each evaluate the presence or absence of individual measures. MDE is performing supplemental analysis to explore that for a limited number of the most significant programs. Satisfying the requirements in this bill would have substantial additional impact because of the dozens of emissions reduction measures that Maryland has implemented and that the Department includes in the GGRA Plan.

SB 414 would establish a new Just Transition Employment and Retraining Working Group under the MCCC to perform a study and provide recommendations and a report to the Commission and General Assembly. The working group would be staffed by MDE. The bill also requires the Commission on Environmental Justice and Sustainable Communities (CEJSC) to perform numerous tasks including establishing a methodology to identify disproportionately affected communities, developing recommendations relating to state spending, holding public hearings and providing additional reports to the General Assembly. The Department appreciates the efforts of the legislature to promote justice, equity, diversity and inclusion. However, both commissions are volunteer bodies with other responsibilities, so the majority of the work required under this bill would be performed by MDE staff. MDE would need to hire additional positions to staff the new working group of the MCCC and perform the additional tasks required of the CEJSC.

The bill would also require MDE to perform an annual analysis of spending by all state agencies on GHG reduction programs, including an evaluation of the portion of spending that benefits disadvantaged communities, according to criteria established by the CEJSC. Implementing agencies could also face additional recordkeeping and reporting costs to provide the necessary information to MDE.

The bill also has a goal of “planting and helping to maintain in the State 5 million sustainable trees of species native to the State by the end of calendar year 2030.” The Department would be the lead agency required to help the State reach this goal. To this end, the bill would require the creation of a 5 million tree program coordinator within the Department who would be primarily responsible for leading DNR, MDA, and the Chesapeake Bay Trust to promote, facilitate, and align the State’s efforts to achieve the goals established under the amendments in this bill. In each fiscal year from 2022 through 2030, inclusive, \$1.25 million the Chesapeake and Atlantic Coastal Bays 2010 Trust Fund shall be used to fund: the 5 million tree program coordinator position at MDE and 13 contractor positions in the forest service of the DNR to provide technical assistance, planning, and coordination related to tree plantings on public, private, and agricultural lands and in “underserved areas”.

This legislation transfers \$15 million per year in fiscal years 2022 through 2030 from the Bay Restoration Fund to other entities for tree planting activities. Specifically \$10 million will be transferred to the Chesapeake Bay Trust for a new Urban Trees Program established in this bill; \$2.5 million of the \$15 million annually will be transferred to the Chesapeake and Atlantic Coastal Bays 2010 Trust Fund in DNR to be used for tree planting on public and private land; lastly, \$2.5 million of the \$15 million annually will be transferred to MDA to fund tree plantings under the Conservation Reserve Enhancement Program (CREP) and other tree-planting programs on agricultural land. Funds transferred from the Bay Restoration Fund under the bill would be after making payments on existing Bay Restoration Fund bonds, operation & maintenance funding for Enhanced Nutrient Removal wastewater treatment plants (WWTP), and major and minor WWTP upgrades. These funds are being diverted from the Bay Restoration Fund Wastewater account which would affect projects needed for bay clean up including stormwater control measures, sewer overflow abatement, and septic connections to BNR or ENR WWTPs. Bay Restoration Funding is allocated on a competitive basis and projects are ranked based on water quality, climate resiliency, flood control and public health benefits. The Department recently updated its project scoring system to incorporate nutrient reductions from riparian forest buffers that are planted with native species. The highest ranked funding applications are awarded BRF grant funding annually. Additionally, there are a large number of eligible applications that do not receive grant funding annually. If this legislation is enacted, there will be less funding available in the Bay Restoration Fund to go to local governments for stormwater control measures, septic connections, and sewer overflow abatement. This will likely make it more difficult for local governments to meet their MS4 permits and consent decrees for sewer overflows, as well as making it more difficult for the State to meet its obligations under the Chesapeake Bay TMDL, which has a court ordered 2025 deadline.

Capital projects have been included in the FY22 capital budget to utilize all FY22 BRF revenues, including \$15 million in revenues that would be transferred out of the BRF. These projects will have to be cancelled or possibly delayed for two years, when the local government would have to apply again. Since the solicitation for FY 2023 is open now until January 31, 2021, these cancelled projects will not be able to request funding until FY 2024. These projects, that were already selected for funding in FY 2022, will have to compete with new applications received and may not rank as high. The projects affected by the transfer in FY 2022 would be Fruitland Tuxents Branch Drainage in Wicomico County, Sanitary Sewer Reconstruction in Prince George's County, and a combined sewer overflow project in Allegany County.

Lastly, this bill would create a new commission entitled the Commission for the Innovation and Advancement of Carbon Markets and Sustainable Tree Plantings. This Commission would be in effect from June 1, 2021 to June 30, 2023. The Secretary of the Environment, or his designee would chair the Commission and the Department would provide staff for the Commission. Among other items, the Commission would be responsible for developing: a plan to achieve the tree planting goals mentioned above; a plan to ensure that trees planted are properly maintained; recommendations regarding the establishment of a Maryland-based carbon offset market to support the State's tree-planting goals; and recommendations on reviewing State policies to mitigate the clearing of trees during the construction of State transportation projects. The Department would require additional staff and contractual assistance to perform these tasks.

All of these provisions would create many new responsibilities for MDE and have a very large fiscal and operational impact. MDE would need to hire additional staff and procure contractor(s) to meet the requirements in this bill. Given the short timeline provided in this bill, MDE anticipates that hiring staff, even on a contractual basis, and procuring contracts would be difficult.

Furthermore, the bill would change how funding from the Regional Greenhouse Gas Initiative (RGGI) is allocated from the Strategic Energy Investment Fund (SEIF) by, among other items, identifying the Department's climate planning work as an eligible spending category for annual revenues in excess of \$50 million per year. The Department's Climate Change Program is currently funded by RGGI SEIF funds, under the 20% credited to the renewable and clean energy programs account. Funds taken from this account to support the newly created climate solutions account, where any additional support for MDE's climate change planning efforts is a low priority, could cause significant financial issues for MDE.

Thank you for your consideration. We will monitor SB 414 during the Committee's deliberations, and I am available to answer any questions you may have. Please feel free to contact me by e-mail at tyler.abbott@maryland.gov.

Sincerely,



Tyler Abbott