



Dear Secretary McIlwain:

Thank you for considering our feedback on policies that could be implemented by the State of Maryland to reduce Greenhouse Gases by 60% by 2031 and to net zero by 2045.

Climate Parents is a campaign to reduce climate change-causing pollution in our schools, and our group is active in Prince George's County. In particular, we recently worked directly with Prince George's County Public Schools (PGCPS) technical staff and other advocates to develop a first in the national School Climate Change Action Plan.

School Climate Change Action Plans

To our knowledge, only one county school system in Maryland has a Climate Change Action Plan, that being Prince George's County¹ (note we use Climate Change Action Plan because in school systems Climate Action Plans are often a term used to describe plans to reduce bullying). While many Counties have developed holistic climate action plans, school systems are often governed by a separate set of elected officials (i.e., Boards of Education) and have a separate executive system managed by a Superintendent or CEO rather than the County Executive. They also have to manage many climate-impacting assets (e.g., school buses, school buildings, food systems) that differ greatly from those managed by County governments (e.g., waste disposal, roads, land use). Lastly, school systems provide the opportunity to teach future generations the tools they will need to solve the problems facing their generation concerning climate change. It is necessary that climate planning also happens for each LEA in parallel to County governments so that they can reduce the climate-impacting emissions under their purview while using the knowledge of their systems to tackle the problems appropriately.

Net-Zero School Life Cycle Cost Analysis

When it comes to new buildings and major renovations being undertaken at this point the HVAC systems being installed will certainly still be within their useful 2045. That means that to meet Maryland's net-zero goals in 2045 either new HVAC systems need to be zero-emitting now (e.g., ground source heat pumps) or will have to be replaced in 20 years or less. While there may be some instances where it makes more economic sense to install a fossil-fuel system now and replace it in 20 years, those are already few and far between, and Maryland needs to make sure that when new projects are being designed this is evaluated.

We can say this with some certainty because of the unique way Prince George's County is constructing new schools. Under the Alternative Construction Financing (ACF) model, the building must be returned by the private company that builds and maintains it at a point in the future and update the building to meet the building codes at the time of the return of ownership. This point will be near to 2045. Because of this the buildings being constructed are nearly all opting for ground-source heat pumps over fossil-fuel heating systems because

the private companies can see the writing on the wall and are future-proofing against the need to replace natural gas HVAC systems before the end of their useful life.

Furthermore, there are numerous government incentives that have opened up. The most important ones are the installation and efficient construction tax credits, which, due to the passage of the Inflation Reduction Act, are now open to governments and other organizations without tax liability. There are also school-specific



incentives opened up in the Climate Solutions Now Act for schools to receive an additional 5% if they are built net zero, which is essentially impossible to achieve without solar installation. There are also numerous grant programs from DOE, EPA, MEA, and others. Finally, there are innovative financial mechanisms, such as the sale of Solar Renewable Energy Credits (SRECS), Power Purchase Agreements (PPAs), demand response programs, and community solar, which have become more common and can further offset the costs of new solar systems. Even if a new project would pencil out with a replacement of a natural gas heating system before 2045 without any subsidies, the sheer number of subsidies for net-zero construction is certainly going to push projects towards net-zero.

Soon the Interagency Commission on School Construction (IAC) will be required to work with the Department of General Services (DGS) to update life cycle cost analysis under HB 458 as passed in the 2023 General Assembly session.² It is important for this to be gotten right. Life-cycle cost analysis needs to consider the cost of replacing fossil-fuel-fired equipment prior to 2045 as well as all of the subsidies that would be forgone by not building net zero.

While we are focused on school construction, this logic should apply to other projects, such as other buildings being built under the purview of DGS, highway projects, and other long-lived projects. Of course, a proper life-cycle cost analysis that includes all of these various available subsidies comes at little additional cost to the LEA or other governmental agencies and has the potential to substantially reduce emissions.

Funding the HB1255 Zero–Emission Vehicle School Bus Transition Fund

In 2019 the General Assembly passed HB1255, which established a Zero–Emission Vehicle School Bus Transition Fund that would be set up by the Maryland Department of Environment to provide funds for the purchase of zero-emission school buses.³ However, the funding does not appear to ever have been provided for to step up this program.

While some might feel this isn't necessary because of federal funds from EPA's Clean School Bus program or alternative approaches toward financing electric school buses (e.g., the Climate Solutions Now Act's vehicle to grid pilot program, Highland Electric's school bus electric leasing model) those are not sufficient. Concerning the EPA program, the funds are simply not sufficient. During the first round of funding, only Baltimore City received funds, leaving several counties that EPA found to be disadvantaged wanting, let alone the counties that EPA did not find to be disadvantaged. While alternative financing can work for some LEAs, it is not sufficient for others for any of a whole host of reasons.

Funding Zero–Emission Vehicle School Bus Transition Fund could provide additional assistance to all counties including opening up school bus grants to historically overburdened communities within a county that may get averaged out by other wealthier parts of the count. It is possible that additional funds could even be an option under IRA Section 60101 for this program.

While the total emissions from school buses is certainly dwarfed by other onroad sectors (according to the 2020 NEI school buses in Maryland emit about 8,000 tons of CO₂ annually), there are also important health co-benefits from eliminating exposure of students to fine particulate matter. Electric school buses that are equipped with vehicle-to-grid technology can also be used in demand response programs, which can reduce the need for high-emitting peaker power plants, especially during the summertime when schools are not in session, allowing them to offset other sources of carbon pollution.



Vocational Education

To ensure Prince George's County can meet the county's and the state of Maryland's ambitious goals to reduce greenhouse gas emissions, it will require a skilled green workforce to implement green policies, programs, and actions. This means not only investing in the county's green career and technical education programs but also developing programs that expose children and youth from a very early age to the range of green jobs that will fuel the county's green transition. Early exposure to jobs in energy-efficient industries like solar panel installation, home insulation, heat pump installation, etc. will be vital to ensuring the county can meet the demand for these services over the next decade. Exposure to methods that can green any and every job will also help ensure the broader workforce is doing its part to reduce emissions and demand on natural resources.

Safe Routes to School/State Highway Reform

LEAs around the state have differently sized areas around schools for which students are not eligible for bus service (in Prince George's County it is 1 ½ miles for elementary schools and 2 miles for middle and high schools). One crucial factor as to how students get to school in those zones is safety. Nationally approximately 10% of students walk or bike to school.⁴ We heard during the development of the CCAP that safety was a prime factor in preventing Prince Georgian students from walking or biking to school.

Often schools are constructed adjacent or near to roads that are managed by the State Highway Administration. One can not realistically say that the roads that SHA has built such as MD 193, MD 450, MD 202, MD 218, and MD 2010 are developed with students' safe access to their schools in mind. There is no expectation that an elementary student could safely walk to schools such as Seat Pleasant Elementary or Seabrook Elementary since crossing a SHA-managed road is a necessity for nearly everyone.

SHA must institute a policy to examine completing road diets on all roads within school walk boundaries and prioritize implementation of road diets in the 10% worst zones every year.

For every family that can feel safer allowing their kids to walk to school, using average emission rates per mile from EPA⁵, and a mile round trip for each dropoff and pickup, 0.15 tons of CO₂ could be reduced per vehicle. This isn't even considering all of the idling that occurs at dropoff, which produces greenhouse gas emissions and also health-harming air pollution at school entrances.

Composting Facilities

One thing we have learned through our advocacy is that for students, composting is the new recycling. Numerous student groups have spun up composting programs with the help of leadership in Prince George's County. Additionally, HB 264⁶ as passed in the 2021 requires any individual (including an individual school) that produces 1 ton of food waste per week to divert said food waste. Prince George's of course is at an

⁴ <https://www.saferoutespartnership.org/resources/research/factors-associated-students-walking>

⁵ <https://www.epa.gov/greenvehicles/greenhouse-gas-emissions-typical-passenger-vehicle>

⁶ <https://mgaleg.maryland.gov/2021RS/bills/hb/hb0264E.pdf>



advantage here since we are also the home of the largest organic composting facility in Maryland. Other LEAs are not so lucky. This type of organic waste composting facility that was constructed in Prince George's needs to be expanded throughout the state.

Schools in particular need access to such facilities. In a recent waste characterization study completed by Prince George's County Department of Environment, it was found that nearly 60% of the waste produced by the schools was organic waste.⁷ Of course, this organic waste is being sent to Brown Landfill, which has been found to be a high emitter of both carbon dioxide and methane.⁸ We can only imagine other LEAs are facing the same high rates of organic waste being sent to the landfill. To tackle this composting needs to be spun up at more schools and LEAs need to have easier access to organic composting facilities.

According to the waste characterization study discussed in the previous paragraph, the school system produced about 2,300 tons of organic waste. Using EPA emission factors⁹ this is the equivalent of approximately 1,300 tons of CO₂e in Prince George's County alone, though recent studies have also shown that EPA's emissions factors for methane produced in landfills are greatly underestimated.¹⁰ Assuming that other schools produce the same level of waste as Prince George's does, that would be about 25,000 tons of CO₂e state-wide. This may seem like a small number, but it for one doesn't consider the underestimation of methane emissions from organics in landfills and also doesn't consider the amplification effects of students bringing home the concept of composting to their families and neighbors.

Other Policies

There are other policies we have discussed but have not fleshed out yet, but wanted to bring to the discussion.

Local Climate-Friendly Food Purchasing: We also understand the importance of students having access to healthy food options, especially options that have lower carbon impact (e.g., plant-based meals). Lowering the carbon impact of school meals by introducing more vegetarian options will both provide healthier food for students, create a longer-term prediction towards lower-carbon foods, and possibly introduce these food options to parents, neighbors, and friends through the students.

Green Schools++: The Maryland Association for Environmental and Outdoor Education (MAEOE)'s Green School program is an excellent program, and Prince George's continues to lead in Green School applications.¹¹ That being said, it could use improvements to specifically address efforts individual schools can make towards combating climate change and also could be tiered so that more ambitious schools can achieve additional recognition for taking climate action to the next level.

Thank you for considering our feedback on school specific policies that reduce greenhouse gasses in Maryland. We believe these policies towards tackling climate change in Maryland's schools will be beneficial to the holistic approach that MDE is taking towards combating climate change.

Sincerely,

Climate Parents of Prince George's

⁷ https://princegeorgescountymd.gov/DocumentCenter/View/44076/PGCo-BSRSL-2021-2022-Waste-Sort_-Final-Report

⁸ <https://www.marylandmatters.org/2021/06/11/report-finds-md-greatly-underestimated-landfill-methane-emissions-for-over-a-decade/>

⁹ https://www.epa.gov/sites/default/files/2021-04/documents/emission-factors_apr2021.pdf

¹⁰ <https://insideclimatenews.org/news/13072021/epa-struggles-to-track-methane-emissions-from-landfills-heres-why-it-matters/>

¹¹ <https://www.pgsuite.com/green/2023/5/4/green-schools>