



Heidelberg Materials North America

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**The Honorable Brian Feldman
Chair, Senate Education, Energy, and the Environment Committee
2 West
Miller Senate Office Building
11 Bladen Street
Annapolis, MD 21401**

March 26, 2024

RE: HB 990 – Environment – Greenhouse Gas Emissions Reductions – Manufacturers

POSITION: FAVORABLE

Dear Chairman Feldman:

Thank you for the opportunity to testify in support of HB 990 as amended in the House on behalf of Heidelberg Materials. We appreciate that Delegate Stein made the time to meet with us and amend the bill in a manner that Heidelberg Materials can support.

Heidelberg Materials is a leading supplier of construction materials in North America. Our core activities include the production of cement and aggregates, as well as producing ready-mixed concrete, asphalt, and other downstream cement products. The Union Bridge, MD plant dates to 1909, and Heidelberg Materials has supplied the cement supporting Maryland's critical infrastructure needs for nearly 120 years. The Union Bridge plant employs approximately 165 people year-round, and the Union Bridge plant supplies roughly 65 percent of the cement used throughout Maryland.

Prior to the bill being amended, we were concerned that the bill as proposed would create significant uncertainties as it relates to the regulation of greenhouse gas emissions in cement manufacturing plants. The bill as amended addresses these concerns by requiring the Department of Environment ("Department") to take into consideration the following:

- (1) the extent to which cement manufacturing is an energy intensive and trade exposed industry;
- (2) credit for early action investments made by cement producers to reduce emissions;
- (3) the adoption of policies that encourage, facilitate, and offer financial incentives for the use of alternative fuel sources;
- (4) the availability and cost of mature greenhouse gas abatement technologies; and
- (5) advancing policies that provide financial incentives to offset the costs of installing and transitioning to greenhouse gas emissions abatement technologies.

Additionally, the Department in considering the feasibility of regulation, shall consult with impacted cement producers and other stakeholders.

We believe the bill as amended is a thoughtful and collaborative approach. We look forward to partnering with the Department to continue to reduce our carbon footprint in Maryland.

Cement is the primary active ingredient in concrete, the world's most consumed building material behind water. Concrete has a long-proven value as a durable, cost-effective, available material that is resistant to extreme temperatures and resilient against natural disasters, and remains critical to Maryland's infrastructure due to its versatility, durability, resiliency, strength, and its ability to enable construction that is more sustainable.

Heidelberg Materials is committed to supporting Maryland's carbon emissions reduction targets through the Union Bridge plant. We recognize that our facility is a major emitter of carbon dioxide ("CO₂") in Maryland due to the nature of the cement-making process, in particular the chemical conversion emissions required to produce cement. In fact, we share many of the environmental goals of the State of Maryland and have a carbon roadmap that commits to carbon neutral concrete by 2050 at latest.

From 1990 to 2021, we reduced our specific net CO₂ emissions by 25% to 565 kg CO₂ per tonne of cementitious material. In May 2022, we again substantially tightened our emission reduction target. By 2030, our goal is to reduce specific net CO₂ emissions to 400 kg/t of cementitious material. Compared to the base year 1990, this corresponds to a reduction of almost 50 percent.

Starting in January 2023, we transitioned at the Union Bridge plant to producing EcoCem PLCTM, a Portland-limestone Cement ("PLC") that directly lowers the carbon intensity of our cement product, which in turn, translates to carbon intensity reductions across the cement and concrete value chain. This is a critical first step and we are committed to making further changes to reduce carbon emissions in the State. As an innovative leader in sustainability as well as an important part of the Maryland community, we will continue to be an engaged partner with Maryland as we work together to reduce State CO₂ emissions, and welcome our legislative leaders to visit the Union Bridge plant as schedules permit. We appreciated the opportunity to testify on HB 990 in the House, and offered the following points on the bill:

The US cement industry is energy intensive, and trade exposed ("EITE")

The process of manufacturing cement is energy intensive because we require significant amounts of thermal energy to convert limestone and other raw materials into new minerals which ultimately comprise cement. Our product is trade exposed because it can (and is) shipped not only across state lines but internationally as well. We are both trying to manage the energy consumption requirements of manufacturing a necessary commodity while balancing the realities of international trade and competition. We believe it is crucial in our collaboration with policymakers that this baseline of our sector's reality to be understood.

Under a carbon regulation and pricing policy, existing manufacturers, particularly those in EITE sectors (steel/chemical/fertilizer/glass/cement) must not be put at a competitive disadvantage to firms in the same sectors operating in countries and neighboring states without similar restrictions. When not adequately addressed, “leakage” can occur, whereby imports from other states or countries that do not have the same regulatory requirements (and higher CO₂-intensity products) are at a competitive advantage. This results in adverse impacts to local producers, as well as increased overall CO₂ emissions.

This can be addressed via several policy options including:

- Fully or partially exempting vulnerable industries;
- Compensating industries for the costs of GHG regulation through allowance activities or tax rebates;
- Transition assistance to help industries adopt lower-GHG technologies; and
- Implementing border measures such as taxes on EITE imports without GHG controls.

Supplementary Cementing Materials Play A Critical Role in Reducing CO₂ Emissions

In addition to setting aside the industry with specific conditions due to its EITE standing, other policy mechanisms should be implemented. For example, the important role of supplementary cementing materials in reducing GHG emissions must be encouraged and incentivized to reduce the overall CO₂ footprint of both cement as well as concrete. The State of Maryland should work to accelerate the adoption/incorporation of PLC, as referenced above, in projects and specifications.

Performance-Based Specification Approach Should Be Utilized in Driving CO₂ Emissions Goals

The State of Maryland should also consider developing a performance-based specification approach for cement and concrete as opposed to the traditionally prescriptive standards that are largely in place today. This will maintain performance and enable innovation and advancements in other materials that can help extend traditional portland cement and clinker. We believe that the State of Maryland should incorporate full life-cycle assessment and costing principles in their procurement policies, understanding not only the CO₂ intensity of the product inputs, but the overall performance of those assets during their lifetime, including end-of-life recycling. Introduction of circularity into procurement decision-making is critical to helping support a lower carbon-built environment.

The Cement Manufacturing Industry Needs a Collaborative Approach to Driving Down CO₂ Emissions Through Incentivizing the Use of Alternative Energy Sources

Due to the thermally intensive nature of cement manufacturing, increased use of renewable, lower carbon as well as alternative energy sources from biomass, waste, and other combustible by-products must be encouraged and incentivized. While 2/3 of CO₂ emissions from cement manufacturing emanate from the chemical process of converting limestone, work can be done in short order to address the remaining 1/3 from fuel use.

To date, technologies of carbon capture at scale have not been fully vetted for application in the cement sector, and at present are extremely costly and provide their own set of challenges with transport and storage of CO₂. While this ultimately will be a longer-term solution to the process emissions of cement manufacturing, fuel switching and optimization can have an immediate beneficial impact on the process.

When considering biogenic sources such as wood, cellulose and other materials, the biogenic component of any mixed-composition fuel must accurately be considered as “carbon neutral.” Furthermore, all fully renewable energy sources (ex: forestry and agricultural fibers, municipal biosolids) should also have this same designation. Importantly, it is essential to have permitting clarity to integrate these materials into our process, and environmental approval mechanisms must provide the operational flexibility required to maximize opportunities for the use of lowcarbon alternative and renewable fuels.


Other key elements for any carbon policy affecting the cement industry include the principle of Credit for Early Action, the establishment of emission reduction targets at reasonable levels which can be achieved without output reductions, recognizing also that irreducible cement manufacturing GHG process emissions must be exempted or in the absence of such an exemption, a uniform calculation must be adopted.

Heidelberg Materials Requests a Collaborative Approach in Policy Development Regarding CO₂ Emissions Goals

Finally, any policy that is developed for the cement industry must be structured with producers participating in its development. We are focused on reducing our carbon emissions and are committed to working with the State of Maryland to accomplish this substantial task, but it is critical that we are at the table to ensure that the State makes full consideration of the many complex factors in developing such policy.

This is an extremely complicated matter and we believe HB 990 as amended addresses our concerns. We urge this committee to pass HB 990 as amended in the House. We look forward to our collaboration together with the Department of Environment. We appreciate the opportunity to offer this testimony on HB 990. Should you have any questions, please feel free to contact me at paul.rogers@heidelbergmaterials.com.

Sincerely,



Paul Rogers
Plant Manager, Union Bridge
Heidelberg Materials North America