

HB0990_Greenhouse_Gas_Reductions_Manufacturers_MLC

Uploaded by: Cecilia Plante

Position: FAV



**TESTIMONY FOR HB0990
ENVIRONMENT - GREENHOUSE GAS EMISSIONS REDUCTIONS -
MANUFACTURERS**

Bill Sponsor: Delegate Stein

Committee: Environment and Transportation

Organization Submitting: Maryland Legislative Coalition

Person Submitting: Cecilia Plante, co-chair

Position: FAVORABLE

I am submitting this testimony in favor of SB0990 on behalf of the Maryland Legislative Coalition. The Maryland Legislative Coalition is an association of activists - individuals and grassroots groups in every district in the state. We are unpaid citizen lobbyists and our Coalition supports well over 30,000 members.

When the original Greenhouse Gas Reduction Act was passed in 2009, it required Maryland to reduce state-wide greenhouse gas emissions from all sectors of the economy except for manufacturers. Maryland is the only state to exempt manufacturers from greenhouse gas reduction goals. If we are to achieve the statutory reductions that we declared we would achieve, every sector needs to participate.

This bill, if enacted, would require the Maryland Department of the Environment to consider requiring emissions reductions from manufacturers operating in Maryland in 2023. It also removes the exemption for cement manufacturers and sets a new pollution baseline for existing manufacturers to be regulated at their 2023 emission levels.

Our members believe that we all need to pull together in order to save the planet for our children. No one should get a free pass. We support this bill and recommend a **FAVORABLE** report in committee.

Stein Testimony HB 990.pdf

Uploaded by: Dana Stein

Position: FAV

DANA M. STEIN
Legislative District 11B
Baltimore County

—
SPEAKER PRO TEM
—

Environment and Transportation
Committee

Subcommittees

Chair, Environment

Natural Resources,
Agriculture and Open Space



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ANNAPOLIS, MARYLAND 21401

**Delegate Dana Stein Testimony in Support of HB 990
Environment – Greenhouse Gas Emissions Reductions - Manufacturers**

The first time we committed to reduce state-wide greenhouse gas (GHG) emissions was in the 2009 Greenhouse Gas Reduction Act. This legislation required Maryland to reduce GHG Emissions by 25 percent by 2020. The Act authorized Maryland Department of the Environment (MDE) to regulate GHG emissions from all sectors of Maryland’s economy with one exception: the manufacturing sector. When we renewed and expanded our GHG reduction goals in 2016 and 2022, we maintained the manufacturing exemption.

But, according to the National Caucus of Environmental Legislators (NCEL), Maryland is currently the only state with a climate plan that exempts manufacturers from meeting its GHG emissions goals. Additionally, the exemption conflicts with the state’s Climate Pollution Reduction Act, which calls for “an all-of-society approach” to meeting our GHG Reduction goals.

This bill would modify the exemption on manufacturing and is based on a recommendation made by the Maryland Commission on Climate Change that was approved by a vote of 18 to 1. It’s also one of six legislative actions proposed in the *Maryland Climate Pollution Reduction Plan* released by MDE in December 2023. This bill would do a few things:

1. It enables MDE to consider emissions reductions from manufacturers that come to Maryland after 2023.
2. It removes the exemption for existing cement manufacturers because of their large contribution to the state’s GHG emissions.
3. The bill allows MDE to regulate emissions from existing manufacturers provided the regulations do not require a manufacturer to reduce emissions below its 2023 level or increase its costs beyond 2023 costs.

Cement manufacturers are brought under MDE regulation because the two highest-emitting manufacturing facilities in Maryland are cement production plants. Fortunately, the cement industry has committed to net-zero emissions by 2050, and one of these

plants has already reduced emissions through fuel switching, so any MDE regulation should reflect these actions.

MDE has said that it would discuss with the cement industry any future regulations that would impact them. Discussions would start early and not just occur during the comment period on a proposed regulation.

The Maryland General Assembly has passed the most aggressive GHG reduction goals in the country, and this committee has considered legislation that would reduce GHG emissions from the transportation sector, the building industry, and even homeowners. It only makes sense that we also consider reducing emissions from the manufacturing sector.

Testimony HB990 Manufacturing and Cement.pdf

Uploaded by: Debbie Cohn

Position: FAV

Committee: Environment and Transportation
Economic Matters
Testimony on: HB990 –Environment – Greenhouse Gas Emissions Reductions - Manufacturers
Submitting: Deborah A. Cohn
Position: Favorable
Hearing Date: February 22, 2024

Dear Chair Korman and Wilson and Committee Members:

Thank you for allowing my testimony today in support of HB990.

Maryland has committed to reducing greenhouse gas emissions (GHGs) to 60% of 2006 levels by 2031 and transitioning to a net-zero economy by 2045. Doing so will require not only the building and transportation sectors, but also the manufacturing sector to reduce GHG emissions.

Problem: In 2009, the Greenhouse Gas Reduction Act (GGRA) authorized the Maryland Department of the Environment (MDE) to regulate GHG emissions from all sectors of Maryland’s economy *other than manufacturing*. In 2016, when GGRA was renewed, the manufacturing sector remained exempt. Even in 2022, when the General Assembly passed the Climate Solutions Now Act, the manufacturing sector remained exempt. According to the National Caucus of Environmental Legislators, *Maryland is the only state with GHG reduction goals that exempts manufacturing*. The reasons are clear. States cannot adequately reduce GHG emissions without significant reductions in the manufacturing sector. Maryland is no exception. In 2020, the manufacturing sector accounted for *nearly 10%* of Maryland’s GHG emissions. The two highest emitting manufacturing facilities were cement production plants but since cement is used in the production of concrete, technology advances in the manufacturing of concrete with fewer GHG emissions also holds potential.

Solution: HB990 would *authorize* (not direct) the Department of the Environment to require GHG emissions reductions from the state’s manufacturing sector. This action was recommended in the Climate Pollution Reduction Plan. HB990 would do three things:

- Direct MDE *to consider* requiring GHG emissions reductions from the manufacturers that come to Maryland after 2023.
- Remove the exemption from GHG emissions reductions for existing cement manufacturers.
- Set a new pollution baseline for existing manufacturers to be regulated at their 2023 emissions levels.

Reducing GHG from the manufacturing sector, including the cement manufacturing facilities and in the manufacture of concrete, is reasonable. Several advances in materials science and new technologies have developed in recent years to reduce the GHG emissions of cement production and reduce the amount of cement needed to product concrete. These include switching from ordinary Portland cement to cement combined with limestone or cement that incorporates CO_2 . But newer technologies may even permit [zero-carbon cement](#) that can be used in lieu of traditional cement. Several technologies, such as adding pozzolans to cement or [recycling concrete](#) can also be used to reduce GHG emissions in the manufacturing sector. New [technologies](#) that allow the production and long term storage of

extremely high heat thermal energy produced from wind and solar energy, with the ability to release that heat on demand, are also being developed.

In other words, some GHG reductions in the manufacturing sector are commercially available now, and others may prove economically feasible and commercially available in the next several years, soon enough to make a significant difference in GHG emissions from the manufacturing sector.

Accordingly, I urge a **FAVORABLE** report for HB990 in committee.

HB990 - MDLCV SUPPORT_ - Environment-Greenhouse Ga

Uploaded by: Kim Coble

Position: FAV



Kim Coble
Executive Director

2024 Board of
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March 1, 2024

**SUPPORT: HB990- Environment-Greenhouse Gas Emissions Reductions -
Manufacturers**

Chair Korman and Wilson and Members of the Committees:

Maryland LCV and the undersigned organizations support HB990 (Environment-Greenhouse Gas Emissions Reductions - Manufacturers) and thank Delegate Stein for his continued leadership in driving Maryland's leadership in advancing strong climate policy.

In 2022, the Maryland General Assembly passed the Climate Solutions Now Act (CSNA), which set ambitious goals and put Maryland at the forefront of strong climate policy nationally. In December 2023, the Maryland Department of the Environment released the Climate Pollution Reduction Plan (Climate Plan), outlining the path to reach the goals set by the CSNA - including a series of legislative actions.¹ HB990 advances one of those recommended actions: allowing the Department of the Environment to require greenhouse gas (GHG) emissions reductions from the state's manufacturing sector. This action is also recommended in the 2023 Annual Report of the Maryland Commission on Climate Change.²

The 2009 Greenhouse Gas Reduction Act (GGRA) required Maryland to reduce state-wide greenhouse gas (GHG) emissions by 25% by 2020 using 2006 as a baseline while ensuring a positive impact on Maryland's economy. The Act authorized the Maryland Department of the Environment (MDE) to regulate GHG emissions from all sectors of Maryland's economy with one exception: the manufacturing sector. In 2016, the Act was renewed with new targets of 40% reduction by 2030, but maintained the manufacturing exemption. In 2022, when the General Assembly renewed its commitment to climate emission reduction through the Climate Solutions Now Act, the exemption remained in place - however the Climate Plan is clear that removing this provision is critical reaching our state's climate goals.

According to the National Caucus of Environmental Legislators (NCEL), Maryland is currently the only state with GHG reduction goals to exempt manufacturers from meeting these goals.

HB00990 does three things:

¹<https://mde.maryland.gov/programs/air/ClimateChange/Maryland%20Climate%20Reduction%20Plan/Maryland%27s%20Climate%20Pollution%20Reduction%20Plan%20-%20Final%20-%20Dec%2028%202023.pdf>

²[https://mde.maryland.gov/programs/Air/ClimateChange/MCCC/Pages/MCCCReports.aspx#:~:text=The%202023%20Commission%20on%20Climate,Gas%20\(GHG\)%20reduction%20mitigation](https://mde.maryland.gov/programs/Air/ClimateChange/MCCC/Pages/MCCCReports.aspx#:~:text=The%202023%20Commission%20on%20Climate,Gas%20(GHG)%20reduction%20mitigation)

- 1) Directs MDE to consider requiring emissions reductions from manufacturers that come to Maryland after 2023
- 2) Removes the exemption from GHG emissions for existing cement manufacturers given their large contribution to the state's GHG emissions.
- 3) Sets a new pollution baseline for existing manufacturers to be regulated at their 2023 emissions levels.

Emissions from the Manufacturing Sector in Maryland

In 2022, there were 6,693 manufacturing facilities within the state, employing over 100,000 people. They are distributed throughout the state. Maryland's manufacturers accounted for nearly 10% of statewide emissions in 2020. Although the total emissions in the sector has decreased from 2006 levels, there has been a 21% growth in cement facility emissions.

Cement Manufacturers

In Maryland, the two highest emitting manufacturing facilities are cement production plants - Heidelberg Materials' Union Bridge facility and LafargeHolcim's Hagerstown Facility. These two plants accounted for 35% of total industrial emissions in Maryland in 2020. About 67% of the emissions are related to process and 33% are related to fuel emissions. The Union Bridge facility emits about 5x as much as the Hagerstown facility. Although Union Bridge is more efficient and produces less CO₂ per metric ton of cement manufactured.

Both the Union Bridge and Hagerstown facilities have invested in efficiency improvements to reduce CO₂ and non-CO₂ emissions. As a result, emissions from the Hagerstown facility dropped significantly between 2014 and 2017, despite an expansion in production capacity. An investment was also made to provide approximately 25% of the power consumed by the Hagerstown facility from solar.

There are further actions that can be taken to reduce emissions from the cement facilities. Hagerstown can reduce emissions by 87% and Union Bridge by 80% compared to 2006 by product switching from Ordinary Portland Cement to Portland Limestone Cement, fuel switching and carbon capture utilization and storage.³ The cement industry has committed to net-zero emissions by 2050, so state regulations could support the industry's decarbonization commitment.

It is critical to reiterate that this legislation enables the Department of the Environment to regulate the GHG emissions. It does not require them to take any additional actions. As indicated above, many manufacturers have taken steps independently to support the State's climate goals. For these "good actors," the Department may choose to continue working with them to achieve the state goals without further regulations.

Maryland LCV and the following organizations urge a favorable report on this priority bill.

³ *Impacts on Maryland's Manufacturing Sector*, 23 Aug. 2022, mde.maryland.gov/programs/Air/ClimateChange/MCCC/MWG/Manufacturing%20Study%20preliminary%20results.pdf.

Annapolis Green
Audubon Mid-Atlantic
Chesapeake Bay Foundation
Chesapeake Physicians for Social Responsibility
Climate Communications Coalition
Climate Law & Policy Project
Climate Reality Greater Maryland
EarthJustice
Elders Climate Action Maryland
Gnatt Medical Associates
HoCoClimateAction
Maryland Conservation Council
Maryland Legislative Coalition
Maryland Legislative Coalition Climate Justice Wing
Unitarian Universalist Legislative Ministry of Maryland

HB0990 - FAV.pdf

Uploaded by: Landon Fahrig

Position: FAV



Maryland Energy Administration

TO: Chair Korman, Vice Chair Boyce, and Members of the Environment and Transportation Committee
FROM: MEA
SUBJECT: HB 990 - Environment - Greenhouse Gas Emissions Reductions - Manufacturers
DATE: March 1, 2024

MEA Position: FAVORABLE

This bill would exclude cement manufacturing from the definition of “manufacturing” for the purpose of the applicable sections of the Environment Article as it relates to the state’s greenhouse gas emissions reduction goals.

Maryland has enacted one of the most ambitious standards in the country, a 60% reduction in greenhouse gas emissions required by the Climate Solutions Now Act (CSNA), and it cannot be achieved without all sectors of our state playing a role in climate mitigation solutions. Maryland's Climate Pollution Reduction Plan (the Plan) notes that cement plants account for nearly all coal use in the industrial sector, making it ripe for fuel switching to make large emission reductions.¹

Therefore, the Plan calls for the Maryland Energy Administration (MEA) to continue its current practice of providing grants for energy efficiency and decarbonization projects at industrial facilities and for the state to provide additional support for decarbonization activities across Maryland’s industrial sector. Priority investments will include cement manufacturing decarbonization under the Plan. MDE, MEA, and the Maryland Clean Energy Center (MCEC) are to increase staff capacity to partner with industry to streamline access to grants and financing for emissions reduction projects.

The bill also directly reflects a recommendation of the Maryland Commission on Climate Change (MCCC) included in its 2023 annual report.²

For these reasons, MEA urges the committee to issue a **favorable report**.

Our sincere thanks for your consideration of this testimony. For questions or additional information, please contact Landon Fahrig, Legislative Liaison, directly (landon.fahrig@maryland.gov, 410.931.1537).

¹ Maryland's Climate Pollution Reduction Plan, p43-44, mde.maryland.gov/programs/air/ClimateChange/Maryland%20Climate%20Reduction%20Plan/Maryland%27s%20Climate%20Pollution%20Reduction%20Plan%20-%20Final%20-%20Dec%2028%202023.pdf

² See Mitigation Working Group (MWG) recommendation No. 12, mde.maryland.gov/programs/air/ClimateChange/MCCC/Documents/MCCC%20Annual%20Report%202023/MCCC%20Annual%20Report%202023.pdf

HB0990_Greenhouse Gas Emissions Reductions - Manuf

Uploaded by: Laurie McGilvray

Position: FAV



Committee: Environment and Transportation
Testimony on: HB0990 - Greenhouse Gas Emissions Reductions -
Manufacturers
Organization: Maryland Legislative Coalition Climate Justice Wing
Submitting: Dave Arndt, Co-Chair
Position: Favorable
Hearing Date: March 1, 2024

Dear Mr. Chair and Committee Members:

Thank you for allowing our testimony today in support of HB0990. The Maryland Legislative Coalition Climate Justice Wing, a statewide coalition of nearly 30 grassroots and professional organizations, urges you to vote favorably on HB0990.

The 2009 Greenhouse Gas Reduction Act (GGRA) required Maryland to reduce state-wide greenhouse gas (GHG) emissions by 25% by 2020 using 2006 as a baseline while ensuring a positive impact on Maryland's economy. The Act authorized the Maryland Department of the Environment (MDE) to regulate GHG emissions from all sectors of Maryland's economy with one exception: the manufacturing sector. According to the National Caucus of Environmental Legislators (NCEL), Maryland is currently the only state to exempt manufacturers from meeting GHG emissions goals.

HB0990 corrects this omission by requiring MDE to consider requiring emissions reductions from manufacturers operating in Maryland in 2023. It removes the exemption from GHG emissions for existing cement manufacturers and sets a new pollution baseline for existing manufacturers to be regulated at their 2023 emissions levels.

This policy has been recommended by the Maryland Commission on Climate Change, and is one of six legislative actions advanced in the Maryland Climate Pollution Reduction Plan released by the Department of the Environment in December 2023.

For all of these reasons, we strongly support HB0990 and urge a **FAVORABLE** report in Committee.

350MoCo
Adat Shalom Climate Action
Cedar Lane Unitarian Universalist Church Environmental Justice Ministry
Chesapeake Earth Holders
Chesapeake Physicians for Social Responsibility

Climate Parents of Prince George's
Climate Reality Project
ClimateXChange – Rebuild Maryland Coalition
Coming Clean Network, Union of Concerned Scientists
DoTheMostGood Montgomery County
Echotopia
Elders Climate Action
Fix Maryland Rail
Glen Echo Heights Mobilization
Greenbelt Climate Action Network
HoCoClimateAction
IndivisibleHoCoMD
Maryland Legislative Coalition
Mobilize Frederick
Montgomery County Faith Alliance for Climate Solutions
Montgomery Countryside Alliance
Mountain Maryland Movement
Nuclear Information & Resource Service
Progressive Maryland
Safe & Healthy Playing Fields
Takoma Park Mobilization Environment Committee
The Climate Mobilization MoCo Chapter
Unitarian Universalist Legislative Ministry of Maryland
WISE

HB 990 MDE SUP.pdf

Uploaded by: Les Knapp

Position: FAV



The Maryland Department of the Environment
Secretary Serena McIlwain

House Bill 990
Environment - Greenhouse Gas Emissions Reductions - Manufacturers

Position: Support
Committee: Environment & Transportation
Date: March 1, 2024
From: Hadley Anthony

The Maryland Department of the Environment (MDE) **SUPPORTS** HB 990.

Bill Summary

House Bill 990 would exclude cement production from the definition of “manufacturing,” which is exempted from certain greenhouse gas (GHG) regulations required pursuant to § 2-1205(g) of the Environment Article. The change in the definition will allow regulations adopted by State agencies to limit GHG emissions from cement manufacturers.

The bill will also modify the application of § 2-1205(g) to only those persons who engaged in manufacturing in 2023, and prohibit regulations adopted pursuant to final statewide GHG reduction plans from requiring any manufacturer to reduce GHG emissions below emission levels for that manufacturer in 2023, or causing an increase in costs to a manufacturer that are “significantly beyond” the costs that were incurred by the manufacturer in 2023.

Position Rationale

The manufacturing sector GHG reduction exemptions detailed in §§ 2–1202 and 2–1205 of the Environment Article constrain the regulatory authority of the State to mandate the reduction of GHG emissions from the manufacturing sector or to issue any regulation that significantly increases the cost of operation for manufacturers. This bill would implement a recommendation from the Maryland Commission on Climate Change by allowing MDE to regulate GHG emissions from the cement industry which was responsible for approximately 1.8 million metric tons of CO₂e emissions in 2020 and allow MDE to regulate any increase in GHG emissions above 2023 levels for non-cement manufacturers that were operating in the state in 2023, within certain cost parameters.

Maryland’s Climate Pollution Reduction Plan emphasizes the importance of an “all-of-economy” approach to decarbonization. Two cement production facilities in Maryland represent the two largest point-sources of GHG emissions from manufacturing in the State. House Bill 990 would open new regulatory avenues for the state to reduce point-source GHG emissions from cement production.

Accordingly, MDE asks for a **FAVORABLE** report for HB 990.

HB 990 Environment - Greenhouse Gas Emissions Redu

Uploaded by: Michelle Dietz

Position: FAV

Friday, March 1, 2024

TO: Marc Korman, Chair of the House Environment and Transportation Committee; C. T. Wilson, Chair of the House Economic Matters Committee, and Committee Members

FROM: Mariana Rosales, The Nature Conservancy, Director of Climate; Cait Kerr, The Nature Conservancy, State Policy Manager

POSITION: Support HB 990 Environment - Greenhouse Gas Emissions Reductions – Manufacturers

The Nature Conservancy (TNC) supports HB 990, offered by Delegate Stein. This bill directs the Maryland Department of the Environment (MDE) to consider requiring emissions reductions from manufacturers that come to Maryland after 2023. It also sets a new pollution baseline for existing manufacturers to be regulated at their 2023 emissions levels.

According to the National Caucus of Environmental Legislators (NCEL), Maryland is currently the only state to exempt manufacturers from meeting GHG emissions goals. The Maryland Commission on Climate Change recommended removing this exemption, and it is one of the six legislative actions recommended in MDE's Climate Pollution Reduction Plan. HB 990 is also consistent with Maryland's commitments to address climate change established in the Climate Solutions Now Act of 2022: reducing greenhouse gas emissions by 60% from 2006 levels by 2031 and achieving net-zero statewide greenhouse gas emissions by 2045.

The Center for Climate and Energy Solutions has found that almost a quarter of U.S. greenhouse gas emissions come directly from industrial sources, such as manufacturing, food processing, mining, and construction. While in Maryland the manufacturing sector only represents 10% of emissions, the Center for Global Sustainability (CGS) of the University of Maryland identified in its report, titled "Manufacturing Sector Decarbonization Strategies and Impacts in the State of Maryland," that the manufacturing sector currently has the ability to significantly reduce emissions without compromising economic and social growth.

In 2022, there were 6,693 manufacturing facilities within the state, employing over 100,000 people. The exemption was initially granted in part due to the potential negative impact it could have on this labor-intensive industry; however, the CGS study recognizes that reducing emissions brings economic opportunities. While this legislation enables MDE to regulate the GHG emissions from manufacturing, it does not require them to take any additional actions. Many manufacturers have taken steps independently to support the State's climate goals. The Department may choose to continue working with them to achieve the state goals without further regulations. The transition to a net-zero economy in our state should be inclusive and just. HB 990 is inclusive of these goals.

TNC commends Delegate Stein for bringing forward this bill to address climate change and better align Maryland's manufacturing standards with the rest of the country.

Therefore, we urge a favorable report on HB 990.

Holcim HB 990 FWA.pdf

Uploaded by: John Favazza

Position: FWA

The Honorable Marc Korman, Chair
Maryland House Committee on Environment and Transportation
Room 251
House Office Building
Annapolis, MD 21401

March 1, 2024

Comments on House Bill 990

Mr Chairman and Members of the Committee

We appreciate the opportunity to comment on the House Bill 990 you are considering today. Holcim is the world's largest producer of building materials. We produce cement, concrete, aggregates, asphalt, roofing, and other materials that we all use to build our structures of tomorrow. We are proud of our Maryland roots, with a Hagerstown, Washington County cement production facility. The facility has operated in the exact location since its doors opened in 1903. Over 100 folks from the greater Washington County area call Holcim their employer, and over 400 Marylanders who call Holcim their work home, see their products used throughout the State.

Holcim has a rich recent history of decarbonizing our company by setting aggressive goals and ultimately working to have a net zero impact by 2050. We are recognized as leaders in our space for our aggressive goals and have shown through innovation and development of our production process in cement that we can impact the emissions from our work.

Hagerstown is an excellent example of where we are doing great things to make significant impacts. Several years ago, we were able to recycle automobile tires in our process, lowering our usage of traditional fuels such as natural gas, coal, petroleum coke, and others. This coming year, we will provide a 40% fuel substitution for recycled construction materials. We accept the material, process it, and use it as a fuel source, reducing CO2 emissions by roughly 17% over the next ten years and reducing our coal usage by more than 12,000 tons.

Fuels have been a prominent way we have reduced our emissions already, but the change in how we manufacture our product has helped us lower our overall emissions. Innovating our product from a traditional Portland limestone cement to a 1L type of limestone cement has provided reductions in our CO2 by using more crushed limestone during the finishing of our product using less clinker, which produces CO2 during its process, all while providing a product with the same or increased performance as a traditional cement product.

Delegate Stein's legislation is consistent with the goals of the Maryland Commission on Climate Change and Holcim's commitment to decarbonizing the building industry. However, the legislation's uncertainty fails to provide a solid foundation for the industry to satisfy the expectations of everyone's needs. Therefore, we ask that any potential regulation of the industry consider the following factors:

- Classification of the US cement industry as energy-intensive and trade exposed (EITE).
 - Under a carbon regulating program, 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 without similar restrictions. A regulatory scheme that provides disadvantages will lead to leakage from the industry.
 - Competitiveness costs 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
 - Implement border measures such as taxes on EITE imports without GHG controls
- The principle of Credit for Early Action must be endorsed.
 - State governments must establish a uniform cement GHG performance standard (efficiency based metric – ex: pounds of CO₂ per ton of cement or pounds of CO₂ per ton of clinker) to account for investments made in facility modernization, energy substitution, and substitute cementitious materials
 - Manufacturers who have invested in reduction technologies and efficiencies will be better positioned with an earlier cap year
- Emission reduction targets must be established at reasonable levels which can be achieved without output reductions.
- Irreducible cement manufacturing GHG process emissions must be exempted, and in the absence of, a uniform calculation must be adopted.
 - If process emissions are included in regulatory programs, they must not be subjected to a price on carbon, or an emissions reduction target
 - Adopt a uniform protocol for calculating process emissions (related to Principle #2)
- Finally, an inclusive regulatory environment where experts from the industry can be at the table with policy makers defining regulations that accomplish everyone's goals.

There is more work to be done; with these changes and others our industry is requesting, and your continued work with us, we can ensure our support in our efforts moving forward. Thank you again for the opportunity to share our thoughts with you today.

Yours sincerely,

Andrew R Schepers

Andrew R. Schepers

Testimony HB 990 Heidelberg - 01 March 2024.pdf

Uploaded by: Neal Karkhanis

Position: FWA



Heidelberg Materials North America

Heidelberg Materials US Cement LLC/North

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Phone (410) 386-1210

**The Honorable Marc Korman
Chair, House Environment and Transportation Committee
Taylor House Office Building, Room 251
6 Bladen Street
Annapolis, MD 21401**

March 1, 2024

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

POSITION: FAVORABLE WITH AMENDMENTS

Dear Chairman Korman:

Thank you for the opportunity to provide testimony on behalf of Heidelberg Materials on HB 990 – Environment – Greenhouse Gas Emissions Reductions – Manufacturers. We appreciate that Delegate Stein made time to meet with us on February 26 regarding our position on the bill. We look forward to working with the Delegate and this Committee on HB 990 to address our concerns with the legislation as currently proposed.

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 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 facility supplies roughly 65 percent of the cement used throughout Maryland.

While we appreciate the intent of the bill to help reduce greenhouse gas (“GHG”) emissions in Maryland by way of enabling the Department of Environment to regulate the GHG emissions of Maryland cement plants, we believe the bill as written creates significant uncertainties as it relates to the regulation itself. This uncertainty has tremendous implications on our proactive efforts to reduce GHG as well as our ability to continue to produce the cement that is needed by Maryland today and remain competitive in a global marketplace.

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 PLC™, 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 appreciate the opportunity to testify today on HB 990, and offer 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 low-carbon 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 do not believe that the legislation as proposed addresses or contemplates any of the issues critical issues outlined above. We are confident that the Maryland Department of Environment will work with the cement manufacturing sector on the way forward, but we are requesting that these concerns be taken into account in this proposed legislation. We appreciate the opportunity to offer this testimony on HB 990.

Sincerely,



Paul Rogers
Plant Manager, Union Bridge
Heidelberg Materials North America

Testimony HB 990 Heidelberg - 01 March 2024.pdf

Uploaded by: Paul Rogers

Position: FWA



Heidelberg Materials North America

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Union Bridge, MD 21791

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**The Honorable Marc Korman
Chair, House Environment and Transportation Committee
Taylor House Office Building, Room 251
6 Bladen Street
Annapolis, MD 21401**

March 1, 2024

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

POSITION: FAVORABLE WITH AMENDMENTS

Dear Chairman Korman:

Thank you for the opportunity to provide testimony on behalf of Heidelberg Materials on HB 990 – Environment – Greenhouse Gas Emissions Reductions – Manufacturers. We appreciate that Delegate Stein made time to meet with us on February 26 regarding our position on the bill. We look forward to working with the Delegate and this Committee on HB 990 to address our concerns with the legislation as currently proposed.

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 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 facility supplies roughly 65 percent of the cement used throughout Maryland.

While we appreciate the intent of the bill to help reduce greenhouse gas ("GHG") emissions in Maryland by way of enabling the Department of Environment to regulate the GHG emissions of Maryland cement plants, we believe the bill as written creates significant uncertainties as it relates to the regulation itself. This uncertainty has tremendous implications on our proactive efforts to reduce GHG as well as our ability to continue to produce the cement that is needed by Maryland today and remain competitive in a global marketplace.

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 PLC™, 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 appreciate the opportunity to testify today on HB 990, and offer 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 low-carbon 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 do not believe that the legislation as proposed addresses or contemplates any of the issues critical issues outlined above. We are confident that the Maryland Department of Environment will work with the cement manufacturing sector on the way forward, but we are requesting that these concerns be taken into account in this proposed legislation. We appreciate the opportunity to offer this testimony on HB 990.

Sincerely,



Paul Rogers
Plant Manager, Union Bridge
Heidelberg Materials North America

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Uploaded by: Valerie Skvirsky

Position: FWA



The Honorable Marc Korman
Chair, House Environment and Transportation Committee
House Office Building, Room 250
6 Bladen Street
Annapolis, MD 21401

March 1, 2024

HOUSE BILL 990 – ENVIRONMENT – GREENHOUSE GAS EMISSIONS REDUCTIONS –
MANUFACTURERS
TESTIMONY FAVORABLE WITH AMENDMENTS

Chair Korman and Members of the Committee:

For over 45 years Maryland Ready Mix Concrete Association, Inc. (MRMCA) has been the voice for the Maryland ready mix industry. MRMCA is a resource for local, state, and national legislative affairs. MRMCA provides concrete education, training, and certifications. MRMCA advocates for its members by working with the State on specifications, technical issues, and environmental matters.

Regarding House Bill 990, MRMCA joins its members in seeking a favorable report with amendments. In recent years, MRMCA and its members have taken substantial steps to improve their environmental footprint in Maryland, including reducing emissions in the manufacturing process and promoting the use of durable, sustainable materials to ensure that Maryland’s infrastructure is efficient and consistent with the State’s energy efficiency and usage goals.

The cement and concrete industry is committed to working with the General Assembly and the Administration to implement appropriate emission controls on the manufacturing process and are already doing so as part of the State’s Buy Green procurement process enacted in 2023. However, the bill as drafted would impose disproportionate obligations on a single sector of Maryland’s manufacturing industry and do so in a manner that creates significant uncertainty in how emission reduction requirements would be implemented and applied in the future. Additionally, HB990, as introduced, singles out one specific type of manufacturing, creating a competitive disadvantage for the targeted materials. MRMCA is committed to meeting the State’s emission goals, but suggests that broader approach to implement similar standards across the full manufacturing sector would be more appropriate.

MRMCA welcomes the opportunity to work with the bill sponsor and the Committee to include instructive language in HB990 that would specify the consideration of certain financial and technological realities facing Maryland’s cement and concrete manufacturing industry, including access to sufficient renewable energy sources, competition from other states and international manufacturers, and the availability and affordability of emission-reduction technology. Thank you for your consideration of our position and we urge the Committee’s consideration of clarifying amendments on House Bill 990.