

Department of Legislative Services
Maryland General Assembly
2022 Session

FISCAL AND POLICY NOTE
First Reader

House Bill 1331 (Delegate McKay)

Environment and Transportation and
Health and Government Operations

Coal Ash - Use, Recycling, and Management (Coal Ash Recycling Act of 2022)

This bill requires the Department of General Services (DGS), in coordination with the Maryland Department of the Environment (MDE), to oversee the construction, operation, and maintenance of a coal ash disposal and recycling facility in the State. Additionally, the bill requires coal ash to be used as a component of the following materials used in the State: (1) materials used to protect and stabilize shorelines; (2) precast concrete; and (3) concrete used in forms, castings, and wind turbine foundations. Further, the bill establishes that coal ash is a priority material component to be used by contractors, as specified. This includes, beginning June 1, 2022, for cement used in any offshore wind project, as specified. MDE must develop a system for tracking information about the use and management of coal ash in the State, as specified. The bill also establishes a related reporting requirement for MDE and the University System of Maryland (USM). **The bill takes effect June 1, 2022.**

Fiscal Summary

State Effect: Bond and general/special fund expenditures increase significantly, likely by millions of dollars on an annual basis, beginning as early as FY 2022, to construct, operate, and maintain the disposal and recycling facility and implement the bill's coal ash requirements. Nonbudgeted expenditures are also likely affected. State revenues may be affected, as discussed below.

Local Effect: Local expenditures likely increase to purchase materials that comply with the bill's requirements. Local revenues are not directly affected.

Small Business Effect: Potential meaningful.

Analysis

Bill Summary: “Coal ash” is residual coal ash from the burning of coal in the State.

Priority Given to Materials That Use Coal Ash

Beginning June 1, 2022, any offshore wind project that has been submitted for approval under § 7-704.1 of the Public Utilities Article, as specified, must give preference to cement materials that (1) use coal ash and (2) meet the ASTM International standards for cement use in marine environments. Additionally, all contractors licensed in the State must, to the extent feasible, use and give preference to materials that include coal ash as a component of the material. Further, any person using materials in the State that include coal ash as a component of the material must (1) give preference to materials that use coal ash from any State reserves; (2) to the extent feasible, hire local employees for the work involving coal ash; and (3) submit any information required by MDE twice a year, as specified.

Tracking System and Required Report

MDE must develop a system for tracking (1) the amount of coal ash used for the protection and stabilization of shorelines in the State and (2) the use and management of coal ash in the State. Additionally, MDE and USM must jointly identify and make recommendations on (1) opportunities for the use of coal ash in the State and (2) funding sources to promote and increase the use of coal ash in the State. By December 1, 2022, MDE and USM must jointly report their findings and recommendations to the Governor and the General Assembly.

Current Law: Coal ash, also referred to as a coal combustion residual or coal combustion byproduct (CCB), is regulated by State and federal laws. CCBs are generated from burning coal, and the type of CCB generated can vary based on each type of combustion device; however, they are produced primarily from the burning of coal in coal-fired power plants. There is no preference in State law based on the specifications of concrete purchased by State agencies. The Department of Legislative Services (DLS) is unaware of any specific preference for using CCBs as a component material in concrete, but according to MDE, beneficial uses of CCB include as a substitute for cement in the production of concrete.

Coal Combustion By-Products Management Fund

Chapter 480 of 2009 established a Coal Combustion By-Products Management Fund comprising fees collected by MDE on each ton of CCBs generated. The fee is adjusted annually to ensure that fee revenues approximate the cost of regulatory activities. However, the fee may not be imposed on CCBs that are (1) beneficially used, as determined by MDE

or (2) used for mine reclamation in accordance with MDE regulations or regulations of the receiving state. The money generated from the fee must be used to administer and implement programs to control the disposal, use, beneficial use, recycling, processing, handling, storage, transport, or other requirements related to CCB management. According to its fiscal 2021 annual [report](#), MDE collected approximately \$1.7 million in fee revenues from calendar 2019 generation.

State Regulations Governing Coal Combustion Residual Byproducts

The Code of Maryland Regulations (COMAR 26.04.10) governs the management of CCBs broadly. There are also regulations that specifically address the utilization of CCBs in surface coal mining and reclamation operations in abandoned coal mines (COMAR 26.20.24) and noncoal surface mine reclamation (COMAR 26.21.04).

CCBs are defined in State regulations as the residual generated by or resulting from the burning of coal and includes fly ash, bottom ash, boiler slag, pozzolan, and other solid residuals removed by air pollution control devices from the flue gas and combustion chambers of coal burning furnaces and boilers, including flue gas desulfurization sludge and other solid residuals recovered from flue gas by wet or dry methods. “Beneficial use” means the use of CCBs in a manufacturing process to make a product or as a substitute for a raw material or commercial product, which in either case, does not create an unreasonable risk to public health or the environment, as determined by MDE. Beneficial reuse does not include the use of CCB in a mining operation or in mine reclamation activities.

There are restrictions on the generation, storing, handling, processing, disposal, recycling, and beneficially reusing of CCBs. Facilities where CCBs are disposed must be approved by MDE, and any new CCB disposal facilities must be permitted as an industrial waste landfill. Disposing of CCBs in an open dump is specifically prohibited. Storage for CCBs must meet a number of requirements, including that CCB is stored in a manner that prevents contact with waters of the State, and any storage system must be designed to contain CCB and CCB contaminants to prevent release into the environment.

State Expenditures: State expenditures increase significantly beginning as early as fiscal 2022 to construct the required coal ash disposal and recycling facility and generally implement the bill’s requirements related to the use of coal ash in specified construction materials. Although a reliable overall estimate of the increase in expenditures cannot be made, below is a broad discussion about potential costs to construct the disposal and recycling facility, a description of DGS administrative costs, an estimate of MDE administrative costs, and some additional potential impacts on State agencies as consumers of affected products.

Costs to Construct and Operate a Coal Ash Disposal and Recycling Facility in the State

DGS does not have any expertise or past experience with this type of project or facility and is unable to develop a specific estimate of costs to construct and operate a coal ash disposal and recycling facility in the State. MDE provided information on the broad range of potential costs to construct such a facility and notes that there are several different types of facilities. MDE estimates that costs could range from a few million dollars to hundreds of millions of dollars, depending on the size and type of facility that is constructed. MDE also notes that a coal ash recycling and disposal facility will have significant ongoing maintenance costs because coal ash is an abrasive material that results in rapid wear on materials-handling equipment. Any costs to construct the plant are assumed to be from bond revenues and included in the capital budget. Total bond capacity is limited by budgetary and financial factors and is established annually through the capital budget process. Thus, any funds used to construct the facility are not available for other capital construction priorities in the State. It is assumed that procurement, design, and construction of the facility is spread over three fiscal years, from fiscal 2023 through 2025.

MDE notes that most of the generators in the State already recycle much of their coal ash as a supplement to cement production, and some of the historic ash landfills in the State are being excavated to provide material for the cement industry. According to the 2021 report on the Status of the State Coal Combustion By-Products Management Fund, of the 549,077 tons of coal ash generated in Maryland in fiscal 2021, only 16,349 tons were disposed of in-state, and an additional 11,670 tons were disposed of out-of-state. The rest was beneficially reused, either as a cement additive, in gypsum board, or as an additive to strip mine backfill to reduce the formation of acid mine drainage.

Department of General Services Administrative Costs

General fund expenditures for DGS increase significantly beginning in fiscal 2023 to hire staff to oversee the construction, operation, and maintenance of a coal ash disposal and recycling facility in the State. DGS estimates that it needs to hire a mix of regular and contractual employees (five regular employees who conduct procurement management and plant operations oversight and six contractual employees who are engineers, architects, and construction inspectors) (1) to oversee the procurement and enforcement for a statewide program; (2) to provide design and construction oversight of the facility; and (3) for operations and maintenance of the facility. Staff are phased in as the project moves through the design, construction, and operation stages, but there is overlap. DGS estimates that costs increase by \$129,020 in fiscal 2022 and range from \$586,352 in fiscal 2023 to \$1.2 million in fiscal 2026 as new staff are phased in. DLS concurs that DGS incurs significant costs beginning in fiscal 2023 and must hire a number of new staff to oversee the construction, operation, and maintenance of a coal ash disposal and recycling facility in the State. However, due to the broad variation in size and types of such facilities, and

absent actual experience under the bill, a specific estimate of DGS’s costs cannot be made at this time.

Maryland Department of the Environment Administrative Costs

The bill takes effect June 1, 2022, with requirements for contractors to use, and report their use of, coal ash beginning immediately. It also requires MDE and USM to report by December 1. Therefore, this analysis assumes that staffing begins immediately on June 1, 2022, to enable MDE to develop a tracking system and have sufficient time to work with USM on the report. To the extent that MDE is unable to fill new staffing positions without a start-up delay, expenditures may be deferred until fiscal 2023.

Chapter 480 requires MDE to set the fee for the Coal Combustion By-Products Management Fund to approximate the cost of regulatory activities. Because the number of generators who pay the fee has been decreasing over time (and is anticipated to decrease further as a result of the bill), it is unclear if MDE is able to adjust the fee to cover its administrative costs associated with implementing the bill. However, the fund ended fiscal 2021 with a balance in excess of \$900,000. Accordingly, it is possible that, at least initially, MDE may be able to cover at least a portion of its administrative costs with special funds (either by using the fund balance, to the extent there is one, or by possibly increasing fees). At some point in the near future, however, it is likely that MDE will need general funds to cover its costs associated with implementing the bill. For purposes of this analysis, it is assumed that some combination of general funds and special funds is used.

Therefore, general/special fund expenditures increase by \$37,553 in fiscal 2022, which accounts for the bill’s June 1, 2022 effective date, and by \$216,347 in fiscal 2023. This estimate reflects the cost of hiring three natural resources planners to (1) conduct outreach and research into how materials with coal ash components are used in the State; (2) identify consumers of materials containing coal ash; (3) oversee the use of these materials for construction purposes; (4) develop the required tracking system; (5) coordinate with DGS to oversee the construction, operation, and maintenance of a coal ash disposal and recycling facility in the State; (6) work with USM to identify opportunities for the use of coal ash in the State and funding sources to promote and increase the use of coal ash in the State, develop recommendations, and submit the required report; and (7) update any affected regulations as necessary. It includes salaries, fringe benefits, one-time start-up costs, and ongoing operating expenses.

	<u>FY 2022</u>	<u>FY 2023</u>
Positions (New)	3.0	
Salaries and Fringe Benefits (Total)	\$17,082	\$208,468
Operating Expenses	<u>20,471</u>	<u>7,879</u>
Total MDE Administrative Costs	\$37,553	\$216,347

Future year expenditures reflect annual increases and employee turnover as well as annual increases in ongoing operating expenses.

MDE also notes that its workload also increases to evaluate the use of coal ash concrete in shoreline protection and stabilization projects, since any material used for these purposes is subjected to the marine environment and breaks down over time. MDE needs to ensure that metals and other inorganic chemicals do not negatively affect aquatic life in surface waters. However, MDE anticipates that existing staff within its Tidal Wetlands Program can handle this increased workload. MDE notes that rip-rap is a common shoreline stabilization method and rip-rap is often composed of stones or recycled concrete that may have been poured decades ago and then removed and recycled as broken concrete rather than new concrete. Finding historic concrete with coal ash and documenting this material may be a challenge.

University System of Maryland

USM can work with MDE to (1) identify opportunities for the use of coal ash in the State and funding sources to promote and increase the use of coal ash in the State and (2) report to the Governor and the General Assembly with existing staff and resources.

Impacts on State Agencies as Consumers of Affected Products

The bill establishes broad requirements related to the use of coal ash in a number of materials and requires that contractors give preference to using materials that include coal ash, as specified. This likely affects State expenditures (all/multiple fund types), and overall is expected to increase construction costs. However, a reliable estimate of the magnitude of any such impact cannot be made at this time. The overall impacts depend on a number of unknown factors, including the availability of qualifying products.

Another factor that adds uncertainty is that different types of coal ash exist and cannot necessarily be used interchangeably. For example, the State Highway Administration (SHA) notes that fly ash (a type of coal ash) is currently used in concreted mixes that SHA already uses. However, bottom ash (a different type of coal ash) has a higher moisture content, which means bottom ash must go through a secondary burn state in order to be used in concrete for SHA's purposes. Additional processing stages will increase costs to use that material.

The Maryland Port Administration (MPA) advises that coal ash is not currently used as a component in MPA construction contracts and that MPA expects costs to increase to incorporate coal ash as specified by the bill

The Maryland Transportation Authority, a nonbudgeted State agency, also expects that costs increase to ensure proper management of materials that contain coal ash since coal ash is an environmental contaminant if not properly managed. Further, adding new contract requirements increases costs to ensure contracts incorporate coal ash as required by the bill.

State Revenues: Overall, the bill's impacts on State revenues are speculative and cannot be reliably estimated. In the short run, if MDE is able to increase fees for the Coal Combustion By-Products Management Fund to cover some or all of its costs associated with implementing the bill, special fund revenues increase. However, DLS notes that to the extent that the bill results in an increase in the amount of State-generated coal ash that is beneficially reused, and more generators become exempt from generator fees, special fund revenues for the fund likely decrease.

According to the Department of Budget Management, recycled coal ash is a valuable resource as a concrete additive, so State revenues may increase once the coal ash disposal and recycling facility is operational from the sale of recycled coal ash.

Local Expenditures: Similar to the impact on State agencies as consumers of affected products, local expenditures may increase to incorporate coal ash into materials used for construction. However, the magnitude of any such impact cannot be reliably estimated at this time. There may also be impacts to local governments to comply with the bill's reporting requirements.

Small Business Effect: Any small business that sells or manufactures concrete with coal ash or sells component parts likely sees a meaningful increase in the demand for their products under the bill. On the other hand, any small business that sells/manufactures more traditional concrete that does not contain coal ash may see a decrease in the demand for their products. Additionally, similar to the State and local impacts described above, small businesses that use and/or purchase affected products may incur increases in costs to incorporate coal ash into materials used for construction. There may also be impacts to small construction businesses to comply with the bill's reporting requirements.

Additional Information

Prior Introductions: None.

Designated Cross File: None.

Information Source(s): Prince George's County; Maryland Association of Counties; Maryland Municipal League; University System of Maryland; Department of Budget and Management; Maryland Department of the Environment; Department of General Services; Department of Natural Resources; Maryland Department of Transportation; Public Service Commission; Department of Legislative Services

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