

# Protecting Black and African Americans from Disproportionate Coal Ash Exposure in Georgia

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**Executive Summary:** In 2019, an estimated 20% of the energy produced in Georgia came from coal power plants, producing a staggering 6 million tons of toxic coal ash byproducts (Nuclear Energy Institute 2020). The improper storage of this coal ash leads to chemicals leaching into the environment, poisoning the people who reside near the power plants and coal ash dump sites (Earth Justice 2018). Both in the nation and here in Georgia, Black and African American communities are disproportionately harmed by health issues caused by coal ash exposure due to living near coal power plants (Merem 2016, 1-16). To ensure equitable protection from coal ash across the community, we propose amending the Official Georgia Code to adopt HB431, which implements extensive requirements for obtaining coal ash site permits. We further propose incorporating fines for companies that violate HB431 and using fines to empower affected communities.

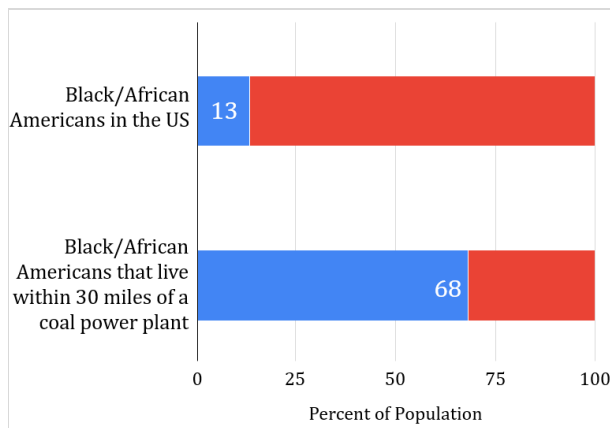
## I. Background and problem

Coal ash, also called coal combustion residuals (CCRs), describes the waste left over from burning coal (EPA 2021). Hazardous contaminants in coal ash include mercury, cadmium, and arsenic, which pose dangers to human health and the environment. The majority of coal ash is produced by coal-fired power plants and is the largest source of mercury pollution in the United States (Perkin Elmer 2009). Mercury poisoning is well-documented to impair vision, movement, development, cause seizures and even death (Rice 2014). Additionally, mercury strongly accumulates in the body over time; therefore, pollution below an acute toxic threshold can become deadly with chronic exposure (Rice 2014). It is imperative that contaminants from coal ash be appropriately stored and regulated to protect human health.

Coal ash groundwater pollution is caused by watering down coal ash waste and storing the waste in coal ash ponds that are improperly lined (SELC 2019). While capping a decommissioned ash pond is a common tactic, rain and heat can cause leaking from pressurization, and the lack of oxygen may lead to higher rates of pollutants leaching out (Schwartz 2016). Additionally, flooding of ash ponds can be extremely costly and deadly. In 2009, the dike holding coal ash from the Kingston Fossil Plant in Kingston, Tennessee failed, causing over \$100 million of estimated property damage (Satterfield 2018). Within 10 years, thirty of the Tennessee Valley Authority employees deployed to respond to the crisis died, and over 250 suffered from chronic illnesses related to coal ash exposure (Gang 2013, Satterfield 2019, Satterfield 2018). The direct cause

of this spill was due to the lack of, or poor lining of, the coal ash ponds (Environment America n.d.). The preferred lining is made from high density polyethylene (HDPE) geomembrane. HDPE geomembranes can cost up to 60¢ per pound; Watershed Geosynthetics estimated that the Kingston Fossil Plant would have spent \$9.1 million to install the linings (Zhu 2018), whereas the cost of cleaning up the Kingston Fossil Plant spill was upwards of \$1 billion (Gang 2013). Lining coal ash ponds with the most reliable material available to date is an investment that will reduce costs, damages, and health complications.

Low-income communities and people of color are disproportionately affected by coal ash (NAACP 2016). In the United States, Black and African Americans make up less than 15% of the population yet make up approximately two-thirds of the population that live within 30 miles of a coal power plant (United States Census Bureau 2019; NAACP 2016).



**Figure 1:** Unequitable Exposure to Coal Ash in the United States. Data compiled from the United States Census Bureau, 2019, and NAACP's Coal Blooded Toolkit, 2016

As of 2018 in Georgia, Black and African Americans make up 45% of the population within 1 mile of a coal power plant despite only comprising 30% of the state's population (Statistical Atlas 2018; Earth Justice 2018). Furthermore, Black and African Americans are more likely to experience mercury-related health issues (Merem 2016, 1-16). In this memo, we support the proper storage of coal ash in order to protect the communities who are most affected.

## II. Current Response

Georgia has adopted a CCR rule (GA R&R Section 391-3-4) similar to that of the EPA's federal ruling (40 CFR 257&261), allowing Georgia's Environmental Protection Division (EPD) to regulate coal ash in lieu of EPA authority (EPA 2020). Under Georgia law, the state does not require coal ash removal from unlined to lined units, despite significantly high levels of pollutants, including mercury, found in groundwater (Georgia Power 2021). Georgia Power, the dominant electric utility owning most Georgia coal plants, is decommissioning all unlined coal ash ponds, by either moving the waste to lined landfills or by the predominant strategy of dewatering and capping ponds to prevent further contamination (Georgia Power 2018). However, the dewatered and capped ponds are still contained in unlined pits where contamination from coal ash can continue to seep into the groundwater. (Georgia Power 2018; Associated Press 2020). Currently, many plants have inspection notices stating that the groundwater contains pollutants above the legal threshold (Georgia Power 2021). HB176 and SB230, recently introduced in the Georgia Assembly, required CCR containment in lined pits but have stalled so far (Georgia House of Representatives 2021).

Both federal and Georgia's coal ash rules lack protections for Black, African American, and other minority communities. Although several federal programs allocate funding for waste clean-up and safe water projects in burdened areas (see WIIN Act and Brownfield; City of Atlanta, Georgia 2017), the threat of contamination in these communities remains unabated. Nearly all of the plants near these communities currently have unsafe levels of pollutants in the sites' groundwater (Georgia Power 2021). Furthermore, there are no considerations for these communities when permits are issued for coal ash waste sites. Similar to legislation in other US states (Tigue 2021; Andersen 2021), HB 431 was introduced in the latest session of the Georgia Assembly to require environmental justice impact statements during permitting but was never brought for a vote. The mostly Black and African American populations near these sites will remain highly vulnerable to contamination and subsequent health

impacts until government action addresses these issues.

### III. Stakeholders

Coal ash pollution impacts anyone who lives in close proximity to coal-powered power plants or their waste dump sites. However, Black and African Americans are disproportionately affected by the pollution from these power plants (NAACP 2016). Furthermore, coal companies could lose profits if proper coal ash storage regulations are not implemented. For example, properly lining a coal ash dump site costs \$8 million (WaterShed Geo Unearthing Solutions 2018), but cleaning up coal ash spills can cost upwards of \$1 billion (Gang 2013).

Georgia Power would incur significant costs to clean up CCRs safely. Here in Georgia, the 2019 state legislature approved a hike in power bills for Georgia Power consumers to fund the \$525 million clean-up effort to decommission the ash ponds (Morehouse 2019). While the Sierra Club is challenging this action, Georgia Power plans on charging customers \$4 more per month to achieve the current clean-up response—though this would likely increase with advised clean-up.

### IV. Options

Georgia's coal ash waste problem necessitates a solution to protect all people equally and provide resources for communities near waste sites, especially primarily Black and African American communities which are historically under-protected (NAACP 2016). Action is needed now to prevent the ongoing effects of coal ash pollution.

*i. Option A:* Amend the Georgia code to store coal ash in lined containers.

The best way to safeguard drinking water for vulnerable communities is to mandate all coal ash ponds be moved into a lined landfill. Therefore, we propose amending Article 2 of Chapter 8 of Title 12 of the Georgia Code to require all waste from coal ash ponds—even those decommissioned—moved to a landfill with a layer of HDPE lining. In this, we support both Georgia Senate Bill 230 and House Bill 176 (Georgia General Assembly 2021), which aim to amend the code in this manner.

#### *Advantages*

There are advantages to all stakeholders in the long-term: Georgians, especially Black and African American communities, and Georgia Power alike will benefit from proper lining of CCR waste.

- Georgians' groundwater will be less likely to be contaminated with toxic pollutants.
- Georgia Power will avoid the potential of a costly clean-up effort.

#### *Disadvantages*

The disadvantages also affect all the stakeholders but relate to direct clean-up costs:

- Georgia Power will require more funding to move all waste into lined pits, which could partly be pushed onto the stakeholders, an extra \$4 monthly increase per customer (Morehouse 2019). However, these costs can be negotiated and are still a fraction of the cost of an emergency clean-up effort.

*ii. Option B:* Amend the Georgia code to store coal ash in lined containers and provide protections for overburdened communities near waste sites.

Georgia must consider Black, African American, and other affected residents when permitting new and existing facilities that pollute their communities. Collective action between government and private enterprises will help empower and protect residents from environmental contamination. To achieve this, HB431 was introduced in the 2021 Georgia Assembly and provided a framework for evaluating environmental justice during the permitting process.

We propose amending Chapter 1 of Title 12 of the Official Georgia Code by adopting HB431 (Georgia Assembly 2021). This amendment would require companies to submit environmental justice impact statements when applying for permits near communities with a high proportion of minority or low-income residents. This amendment would mandate public hearings in communities to give impacted residents a chance to voice concerns prior to permit approval. We also propose to further amend Chapter 1 of Title 12 to collect reasonable fines from companies that do not follow all requirements in the amendment. Those fines will be

allocated to clean-up and education efforts in impacted communities.

### Advantages

Implementing an environmental justice review prior to permit approval for waste facilities would benefit all stakeholders:

- This amendment will educate communities about the potential hazards of waste sites and prevent further exploitation.
- Utility stakeholders will be more aware of the disproportionate harm of Black, African American, and other minority communities, and government officials will be able to comprehensively evaluate health, racial, and socioeconomic impacts before permit approval.
- Fines for companies that do not comply would directly benefit communities by funding education and clean-up efforts.

### Disadvantages

- Companies applying for permits are responsible for the costs associated with completing an environmental justice impact statement and any fines that would arise from non-compliance.
- However, these costs are negligible compared to coal ash clean-up, \$1 billion for clean up at the Kingston Fossil Plant spill, (Gang 2013) or even proper coal ash waste storage, an estimated \$9.1 million (Zhu 2018). A caveat of this amendment is the extent of protection towards overburdened communities. Other states have adopted similar legislation within the last year (Tigue 2021; Andersen 2021), but it is too soon to

determine whether these measures effectively prevent environmental contamination near such communities.

*iii. Option C:* Continue allowing coal power plants to improperly store and maintain coal ash waste.

### Advantages

- Short-term benefits will be offered to stakeholders financially:
- Power companies that will not have the financial burden of properly handling coal ash.
- Georgia Power consumers would not experience a monthly \$4 price hike on their bill.

### Disadvantages

- Leakage or future flooding events may lead to costly clean-up efforts by Georgia Power.
- Residents are currently suffering from exposure to the toxic compounds found in coal ash, with a majority of those identifying as Black or African American. Each year, power plant pollution is responsible for 30,000 premature deaths, 7,000 asthma-related emergency room visits, and 18,000 cases of chronic bronchitis (NAACP 2016).

## V. Recommendations

Based on the profoundly disproportionate impact that coal pollution has on Black and African American residents, we recommend taking action on Option B. At the bare minimum, we implore that Option A be pursued. Option C, which is to do nothing, would have a negative impact on everyone involved and is not recommended.

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