

Resolving the Coal Ash Issue Caused by Coal Burning Power Plants

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Key Points

- In the past year, 27.6% of electricity production was done through the burning of coal (U.S. Energy Info.)
- Coal ash can pollute the environment both through the creation of coal ash and acid rain
- As this issue goes on longer, the coal impoundments will degrade and continue to break

The Problem

Coal has been a staple in the production of energy for centuries, first used in steam engines and now being used to create electricity. This past year coal made up 27.4% of the sources used in the creation of electricity in the United States (U.S. Energy Information). The United States being so dependent on coal is an issue because a by-product of the creation of electricity are the burned remnants, called either fly ash or coal ash. In the production of electricity coal ash, sometimes referred to as particulate matter, is released through the smokestacks of the power plants, which can lead to acid rain being created. Acid rain can be responsible for several environmental issues, a specific example being the acid deposition in water systems that can lead to health failures for organisms living in those waters (Schnabel). Coal ash spills are no better, often dumping thousands of tons of ash into local waterways due to poor storage or lack of maintenance. In North Carolina there was a major coal ash spill caused by a water pipeline bursting under an ash impoundment. The containing area broke, and coal ash flooded into the Dan River. This occurs all over the United States and there is little done through policy as prevention.

Cost of the Dan River Coal

Esthetic



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\$75,000,000

Recreational



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\$35,507,500

Ecological



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\$113,412,000

Human Health



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\$75,565,425

The Grand Total Cost of the Coal Ash Spill=

\$295,485,000

(Lemly)

Opposition to Expansion of the Coal

Industry



Oppose Expansion

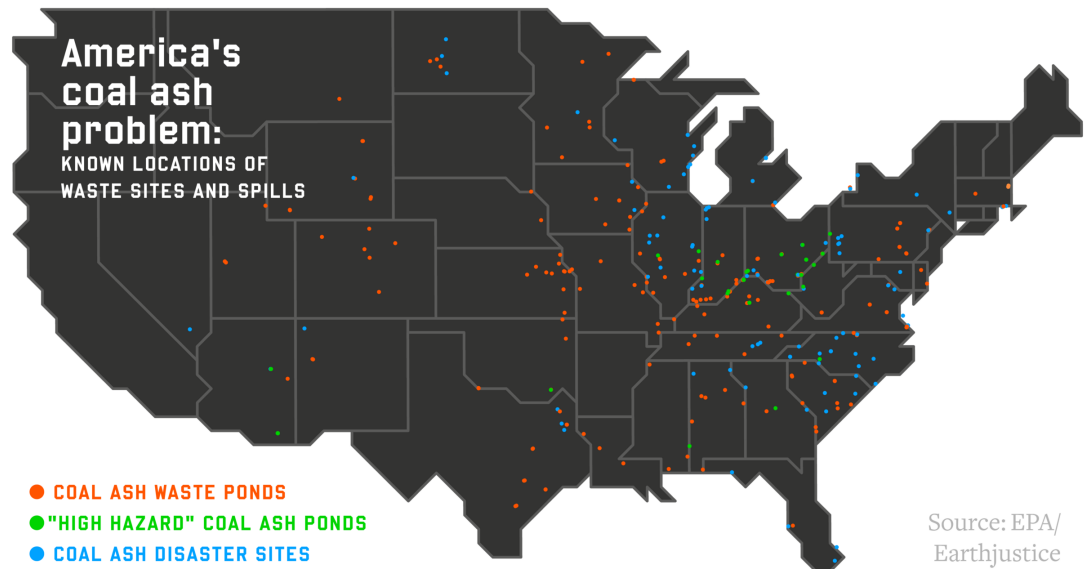
For Expansion

What Can You Do to Help?

A poll was taken in the United States about opinions on opposing the expansion of the coal industry 57% people were recorded as for opposing, while 41% were for the expansion (Americans Opinion). This poll evidenced that people are either unaware of the negative impacts of the creation of electricity using coal, or have pre-existing beliefs. A way to help stop the expansion and the creation of coal ash would be to educate fellow members of society and spread the word about the negative impact coal ash can have on the environment.

Environmental Hazards of Coal Ash

In the occurrence of a coal ash spill, thousands of pounds of harsh chemicals are released into an aquatic environment. Coal ash being introduced into an aquatic environment can greatly harm the benthic organisms through coating the bottom of the river in ash, making it inhospitable to



them (Shin). Often when water is spilled into rivers, the information is misrepresented to the public, leaving them with access to unhealthy water (Jordan-Bloch).

PUBLIC POLICY ON COAL ASH

Current

- Current policy issued by the Environmental Protection Agency (EPA) states that the power plants that generate this coal ash are now responsible for monitoring the waters around the coal ash impoundments, and releasing the results to the public (Jordan-Bloch).
- The EPA has also established a tradeable permit system that allows the power plants an allowance of how much that can pollute. Yet this is not a static system; instead, these permits can be bought and sold between different power plants allowing these plants to have flexible pollution standards (Lange). This means plants can practically pollute as much as they are willing to pay for.
- The large corporations that run these power plants provide a barrier to the changing the policy as well. For example, Duke Energy, a major provider of energy on the eastern coast of the United States, paid 5,345,592 dollars in lobbying expenses in just 2018 (Lobbying Spending Database).

Proposed Solution

- The government should subsidize research into the development of better filtration systems, electrostatic precipitators, for the tops of smokestacks. This field of research has stagnated due to lack of economic incentive for researchers (Bellas). This research could help to reduce the amount of coal ash released into the sky, which contributes to acid rain.
- The impoundments in which the coal ash is left now are very structurally faulty and provide a danger to the communities they are near. In recent legislation there was no mention of redesigning these holding areas.
- Designing new impoundment areas and employing reliant officials to test the waters and soundness of the holding areas would be another smart move. This should be much more cost effective than constantly waiting for each impoundment to break and then having to spend millions of dollars to repair the areas surrounding the spill.

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