Boral Resources
America’s Largest Manager and Marketer of Coal Combustion Products
We are the pioneers of coal combustion products management.
One-third of U.S. electricity generation continues to be provided by coal, and the value of that resource does not end at the power plant. A host of materials—coal combustion products (“CCPs”)—are created when coal is consumed. Boral Resources is the nation’s largest manager and marketer of CCPs—providing services to power plant owners in handling these materials and facilitating environmentally sound higher-value uses of them wherever possible.

A RANGE OF PRODUCTS

Commonly called “coal ash,” coal combustion products actually include several materials with distinct properties and marketing opportunities. Fly ash is a powder desirable for the production of concrete. Bottom ash is a heavier, granular material that can be used as an aggregate and in other settings. Synthetic gypsum is not ash at all, but is produced by power plant emissions control equipment and managed alongside the ash products. Synthetic gypsum has important uses in agriculture and the production of wallboard.

Not only is there a range of coal combustion products, the characteristics of the individual products can vary. The type of coal that is consumed, the type of power plant that consumes it, and even how that power plant is operated can influence the physical properties and performance characteristics of coal combustion products from different sources. Matching sources to users is a logistical (and sometimes technological) enterprise.

That’s where Boral Resources comes in.

BORAL’S ROLE

What is a byproduct for power plant owners concerned with generating electricity becomes the primary product for Boral Resources. Boral’s customers are on both sides of the material:

- For power plant owners, Boral is a trusted service provider—handling coal combustion products to ensure safety, efficiency, and regulatory compliance.
- For users of CCPs, Boral delivers products where they are needed when they are needed, while providing technologies and technical support to address product variability.
7 million tons of high-quality fly ash sold annually

> 20 million total tons of CCPs managed annually

> 2 million tons of synthetic gypsum dewatered and marketed annually

> 600 pieces of heavy equipment for Plant Services operations

105 power plant locations

> 4,000 active customer locations serviced

1,750 railcars owned for fly ash distribution

> 30 free-standing fly ash terminals

40 states with Boral Resources operations

> 400 trucks owned for fly ash distribution
AN ABUNDANT RESOURCE
Consider the math: The United States produces approximately 111 million tons of CCPs annually.¹ Sixty-four percent of that material is beneficially used, with the remainder disposed. Of the total CCPs produced, 38.2 million tons is fly ash. The high-value concrete market consumes 14.3 million tons of fly ash annually, leaving large volumes of ongoing ash production available for increased use. Additionally, more than 1.5 billion tons of previously disposed ash provides a resource for continuing to utilize CCPs many decades into the future.

That’s good news for CCP users, who value the products for their performance-enhancing characteristics. For instance, concrete containing fly ash is stronger and more durable than concrete made with portland cement alone. (U.S. taxpayers save $5.2 billion per year just in highway and bridge construction costs as a result of fly ash performance benefits.²) User demand for coal combustion products is growing, and more than 50 years of industry development ensures that uses are both effective and environmentally safe.³

A FAMILY OF BUSINESS UNITS
To address a market with so many product types and use opportunities, Boral has organized a family of business units:

Boral Resources—Focuses on marketing for high-value applications, particularly fly ash in concrete. Boral Resources also develops technologies for improving ash quality and is deploying a range of strategies to harvest previously disposed CCPs for beneficial use.

Boral Plant Services—Provides services to power plant owners managing coal ash that is disposed. Boral Plant Services designs, builds, and operates landfills, as well as performs pond closure and site redevelopment activities.

SynMat—Offers more than 25 years’ experience in all phases of synthetic gypsum management and marketing.

LA Ash—Specializes in management and marketing of materials produced by circulating fluidized bed (CFB) boilers.

¹. American Coal Ash Association 2017 CCP Production and Use Survey
². American Road & Transportation Builders Association Economic Assessment, September 2011
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TECHNOLOGY LEADERSHIP

Boral Resources’ Material Testing and Research Facility is committed to the advancement of CCP utilization and enhancement of CCPs’ value by deploying beneficiation and new application technologies. Fully commercialized products and technologies include:

- **RestoreAir®**—System to improve ash quality for concrete markets
- **Carbon Burn Out™**—System to improve and utilize high-carbon fly ash
- **Ammonia Slip Mitigation**—Technology to improve ash quality at power plants using a type of emissions control
- **P2 Performance Pozzolan**—Blended fly ash to meet customer specifications and market demands
- **GypSyn**—Performance gypsum for agricultural use
- **Sintered Light Weight Aggregate**—Conversion of high-carbon ash into high-value construction aggregate
- **Micron™**—Highly reactive refined pozzolan for specialty use applications
- **Celceram®**—Specialty ash products for use as fillers in product manufacturing

UNPARALLELED PEDIGREE

Boral Resources’ predecessor companies were the pioneers of coal combustion products management and marketing beginning in the 1970s. The Boral Resources management team represents the deepest bench in the CCP marketing industry, and company personnel fill key leadership roles in an array of industry associations and standards-setting organizations for construction materials.

Boral Resources offers the widest geographic footprint and most comprehensive roster of technologies and services in the coal combustion products industry.

FOR MORE INFORMATION

To learn more about the products and services described herein, please visit Boral Resources’ website at flyash.com.
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