

For Immediate Release



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Coal Ash Recycling Reaches 52 Percent As Production and Use Trends Shift

October 12, 2016, Washington, D.C. – More than half of the coal ash produced in the United States in 2015 was recycled – for the first time breaking through a 50 percent utilization level that has long been a goal for beneficial use industry leaders.

“We are pleased to report that 52 percent of coal combustion products were beneficially used in 2015 – up from the previous year’s record of 48 percent,” said Thomas H. Adams, executive director of the American Coal Ash Association (“ACAA”) – an organization that advances the environmentally responsible and technically sound use of coal ash as an alternative to disposal.

“It is gratifying to know that for the first time, we are using more of these valuable resources than we are throwing away,” Adams said. “With some help from markets and regulatory certainty, we look forward to continuing to grow these practices that conserve natural resources, make products that are more durable, and dramatically reduce the need for landfills.”

According to ACAA’s just-released “Production and Use Survey,” 61.1 million tons of coal combustion products were beneficially used in 2015 out of 117.3 million tons that were produced. Although the rate of ash utilization increased from 48 percent to 52 percent, the total volume of material produced and utilized declined. Coal ash production volume declined 10 percent from 2014 levels as coal’s share of the electricity generation mix shrank in response to environmental regulations and competition from other energy sources. Coal ash utilization volume declined 2 percent overall as usage trends shifted in several key applications:

- Use of coal fly ash in concrete increased 20 percent to 15.7 million tons – up from 13.1 million tons in 2014. Fly ash improves concrete durability and significantly reduces greenhouse gas emissions associated with concrete production.
- Use of fly ash and bottom ash in structural fills declined 54 percent and 19 percent respectively. The decline of 1.9 million tons of utilization may be related to regulatory uncertainty over a provision in the U.S. Environmental Protection Agency’s Final Rule for

coal ash disposal that requires evaluation of structural fill projects greater than 12,400 tons in volume. That provision is currently under challenge in litigation.

- Utilization of a “non-ash” coal combustion product continued to increase. Synthetic gypsum is a byproduct of flue gas desulphurization units, also known as “scrubbers,” located at coal-fueled power plants. Use of synthetic gypsum in panel products (i.e. wallboard) increased to 12.3 million tons in 2015. Use in agricultural applications – in which the gypsum improves soil conditions and prevents harmful runoff of fertilizers – increased to 1.6 million tons.
- Production of boiler slag declined 17 percent to 2.2 million tons as more power plants that produce this type of material were retired. Nearly 84 percent of boiler slag is utilized, mostly as blasting grit or roofing granules.
- Cenospheres – a very valuable form of ash mainly harvested from wet disposal impoundments – saw utilization drop by 80 percent as impoundments began to close in response to EPA’s Final Rule for coal ash disposal.

“Although 2015’s results are a milestone worth celebrating, it’s important to remember that the United States is still disposing of millions of tons of coal combustion products that could be put to good use,” said Adams. “Additionally, the coal ash beneficial use industry is taking significant strides in developing strategies and technologies for reclaiming coal ash materials that were previously disposed.”

Adams referred to a 2015 ACAA-commissioned study by the American Road and Transportation Builders Association that found there will be ample supplies of coal combustion products for beneficial use in the future. The report concluded: “Coal will continue to account for a significant percentage of U.S. electric generation during the next two decades... Even under alternative scenarios of accelerated coal-fueled electric generating unit retirements, CCP production is still expected to exceed overall demand.”

About Coal Ash Recycling

Coal is the fuel source for more than one-third of electricity generation in America and produces large volumes of solid coal combustion products — primarily ash and synthetic gypsum from emissions control devices.

There are many good reasons to view coal combustion products as a resource, rather than a waste. Recycling them conserves natural resources and saves energy. In many cases, products made with CCPs perform better than products made without it. For instance, coal fly ash makes

concrete stronger and more durable. It also reduces the need to manufacture cement, resulting in significant reductions in greenhouse gas emissions – about 15 million tons in 2015 alone.

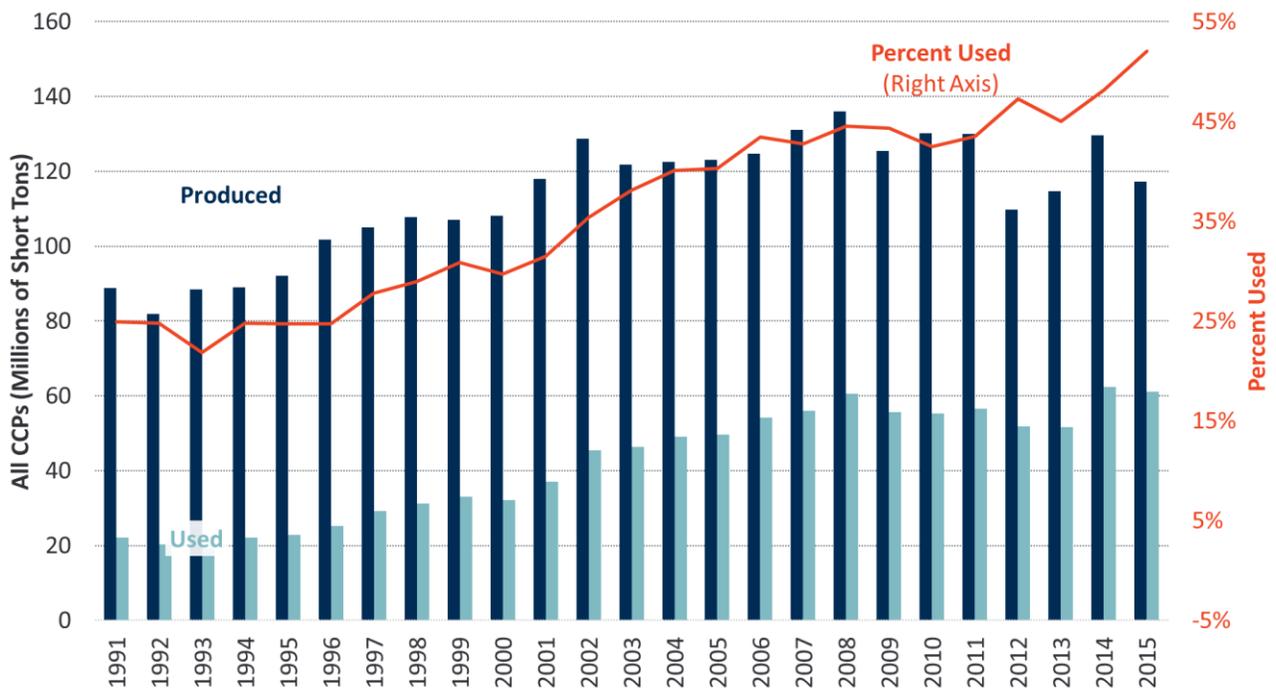
Major uses of coal combustion products include concrete, gypsum wallboard, blasting grit, roofing granules, and a variety of geotechnical and agricultural applications.

About ACAA’s Production and Use Survey

The American Coal Ash Association has conducted a survey quantifying the production and use of coal combustion products in the United States each year since 1966. Data is compiled by directly surveying electric utilities and utilizing additional data produced by the U.S. Energy Information Administration. The survey’s results have been widely utilized by federal agencies including the U.S. Environmental Protection Agency and U.S. Geological Survey.

A summary of overall production and use data since 1991 is represented by the chart below. A complete copy of the 2015 survey results is on the final page.

All CCPs Production and Use with Percent



The American Coal Ash Association was established in 1968 as a trade organization devoted to recycling the materials created when we burn coal to generate electricity. Our members comprise the world's foremost experts on coal ash (fly ash and bottom ash), and boiler slag, flue gas desulfurization gypsum or "synthetic" gypsum, and other "FGD" materials captured by emissions controls. While other organizations focus on disposal issues, ACAA's mission is to advance the management and use of coal combustion products in ways that are: environmentally responsible; technically sound; commercially competitive; and supportive of a sustainable global community.

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2015 Coal Combustion Product (CCP) Production & Use Survey Report

Beneficial Utilization versus Production Totals (Short Tons)

2015 CCP Categories	Fly Ash	Bottom Ash	Boiler Slag	FGD Gypsum	FGD Material Wet Scrubbers	FGD Material Dry Scrubbers	FGD Other	FBC Ash	CCP Production / Utilization Totals
Total CCPs Produced by Category	44,365,587	12,010,425	2,228,205	32,661,536	11,313,960	1,311,947	206,314	13,191,460	117,289,432
Total CCPs Used by Category	24,062,786	4,819,205	1,866,912	17,058,178	1,249,438	252,849	20,697	11,723,843	61,053,908
1. Concrete/Concrete Products /Grout	15,737,238	570,092	33,290	409,134	0	0	0	0	16,749,754
2. Blended Cement/ Feed for Clinker	3,629,151	1,130,802	0	1,649,934	0	0	0	0	6,409,887
3. Flowable Fill	107,263	9,106	0	0	0	0	0	0	116,369
4. Structural Fills/Embankments	1,277,356	1,561,531	305,770	1,221,865	100,940	0	0	0	4,467,462
5. Road Base/Sub-base	178,281	311,779	21	0	0	0	0	0	490,081
6. Soil Modification/Stabilization	216,483	66,253	0	8,053	0	0	0	0	290,789
7. Mineral Filler in Asphalt	52,784	0	14,176	0	0	0	11,479	0	78,440
8. Snow and Ice Control	0	527,695	77,935	0	0	0	0	0	605,630
9. Blasting Grit/Roofing Granules	0	184,712	1,400,455	173	0	0	0	0	1,585,340
10. Mining Applications	1,128,682	73,416	0	807,280	0	215,974	0	11,593,760	13,819,113
11. Gypsum Panel Products (formerly Wallboard)	0	28,378	0	11,322,016	973,785	0	0	0	12,324,178
12. Waste Stabilization/Solidification	1,138,078	242	0	0	0	0	9,218	130,083	1,277,621
13. Agriculture	2,409	1,788	0	1,392,693	174,713	0	0	0	1,571,602
14. Aggregate	0	173,472	0	0	0	0	0	0	173,472
15. Oil/Gas Field Services	181,907	0	0	0	0	36,875	0	0	218,782
16. Miscellaneous/Other	413,152	179,940	35,265	247,030	0	0	0	0	875,387

Summary Utilization to Production Rate

CCP Categories	Fly Ash	Bottom Ash	Boiler Slag	FGD Gypsum	FGD Material Wet Scrubbers	FGD Material Dry Scrubbers	FGD Other	FBC Ash	CCP Utilization Total
Totals by CCP Type/Application	24,062,786	4,819,205	1,866,912	17,058,178	1,249,438	252,849	20,697	11,723,843	61,053,908
Category Use to Production Rate (%)	54.24%	40.13%	83.79%	52.23%	11.04%	19.27%	10.03%	88.87%	52.05%
2015 Cenospheres Sold (Pounds)	948,787	Data in this survey represents 182 GWs of Name Plate rating of the total industry wide approximate 291 GW capacity based on EIA's July 2016 Electric Power Monthly.							