

For Immediate Release



Contact: American Coal Ash Association
Thomas H. Adams, Executive Director
Office: 720-870-7897 Mobile: 720-375-2998
thadams@aca-usa.org
www.acaa-usa.org

Coal Ash Recycling Rate Increases in 2020, Reversing Declines in Previous Two Years

December 1, 2021 – Fifty-nine percent of the coal ash produced during 2020 was recycled – increasing from 52 percent in 2019 and marking the sixth consecutive year that more than half of the coal ash produced in the United States was beneficially used rather than disposed. The overall recycling rate had declined over the previous two years from its high of 64 percent in 2017.

American Coal Ash Association (“ACAA”) today released its annual “Production and Use Survey” which also showed that harvested ash is beginning to play a meaningful role in beneficial use activities. Nearly 4 million tons of previously disposed ash was utilized in a variety of beneficial uses in 2020, including coal ash pond closure activities, for cement kiln raw feed, and for gypsum panel manufacturing.

“The reversal of a downward trend in recycling rates and the utilization of a significant volume of harvested coal combustion products (“CCP”) shows that beneficial use markets are adapting to the decline in coal-fueled electricity generation in the United States,” said Thomas H. Adams, ACAA Executive Director. “New logistics and technology strategies are being deployed to ensure these valuable resources remain available for safe and productive use. We must continue to support these practices that safely conserve natural resources while dramatically reducing the need for landfills.”

According to ACAA’s 2020 survey, 40.8 million tons of coal combustion products were beneficially used in 2020, a volume approximately level with the previous year. But production of new CCP declined from 78.6 million tons in 2019 to 69.2 million tons in 2020 as utilities consumed less coal for generating electricity.

“Coal ash” is a generic term that encompasses several coal combustion products that can be beneficially used in a wide variety of applications. Highlights of CCP production and use in 2020 include:

- Use of coal fly ash in **concrete** decreased 12 percent to 11.1 million tons. Concrete producers and consumers indicated a desire to use more fly ash, but several regional markets were affected by shifting supply dynamics associated with closures of coal-fueled power plants. Fly ash improves concrete durability and significantly reduces greenhouse gas emissions associated with concrete production.
- Use of all coal combustion products in **cement production** declined 4 percent to 4.8 million tons.
- Utilization of a key “non-ash” coal combustion product posted a modest 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 3 percent to just under 10 million tons.
- Synthetic gypsum use in **agricultural applications** – in which the gypsum improves soil conditions and prevents harmful runoff of fertilizers – increased 34 percent to 847,704 tons.
- Use of CCP in **pond closure activities** increased 44 percent to 3.4 million tons. This activity is driven by utility compliance with coal ash regulations enacted in 2015 that effectively require an end to the practice of wet disposal. Fly ash, bottom ash, and synthetic gypsum were all used in construction of new permanent disposal facilities.
- Use of CCP in **structural fills** continued a multi-year decline in 2020, dropping 52 percent to 816,543 tons.
- Production of boiler slag declined 14 percent, but utilization in the production of **blasting grit and roofing granules** increased 11 percent to 273,548 tons.
- For the first year in survey history, no **cenospheres** were reported sold in 2020. The downturn was likely linked to increased closure of disposal ponds from which cenospheres are harvested.

“As America’s electricity grid changes, the coal ash beneficial use industry is evolving as well,” said Adams. “As we work diligently to utilize the nearly half of coal combustion products that

are still disposed annually, our industry is also taking significant strides in developing strategies for improving the quality and availability of these materials.”

Adams explained that increasing beneficial use requires ash marketers to ensure that products are consistent and available when customers need them – requiring large investments in technology and logistics. Additionally, the coal ash beneficial use industry is actively deploying technologies and strategies for harvesting coal ash materials that were previously disposed.

About Coal Ash Recycling

Coal is the fuel source for approximately one-quarter 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 CCP 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 11 million tons in 2020 alone.

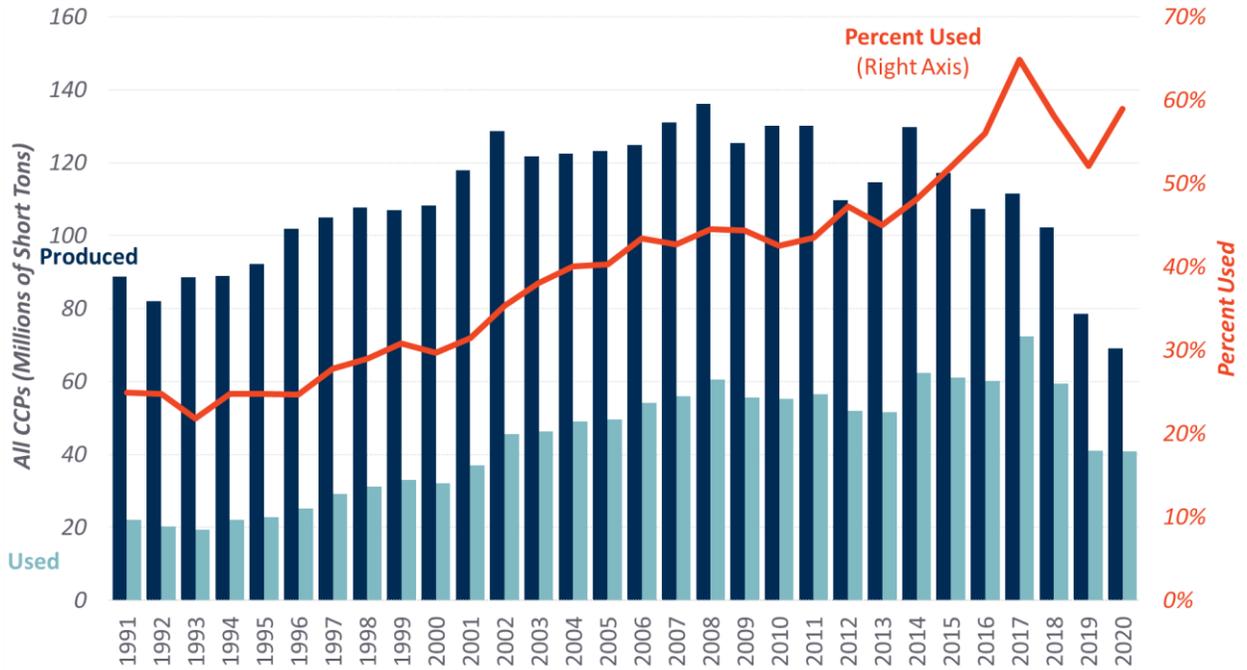
Major uses of coal combustion products include concrete, gypsum wallboard, blasting grit, roofing granules, and a variety of geotechnical and agricultural applications.

About ACAA’s Production and Use Survey

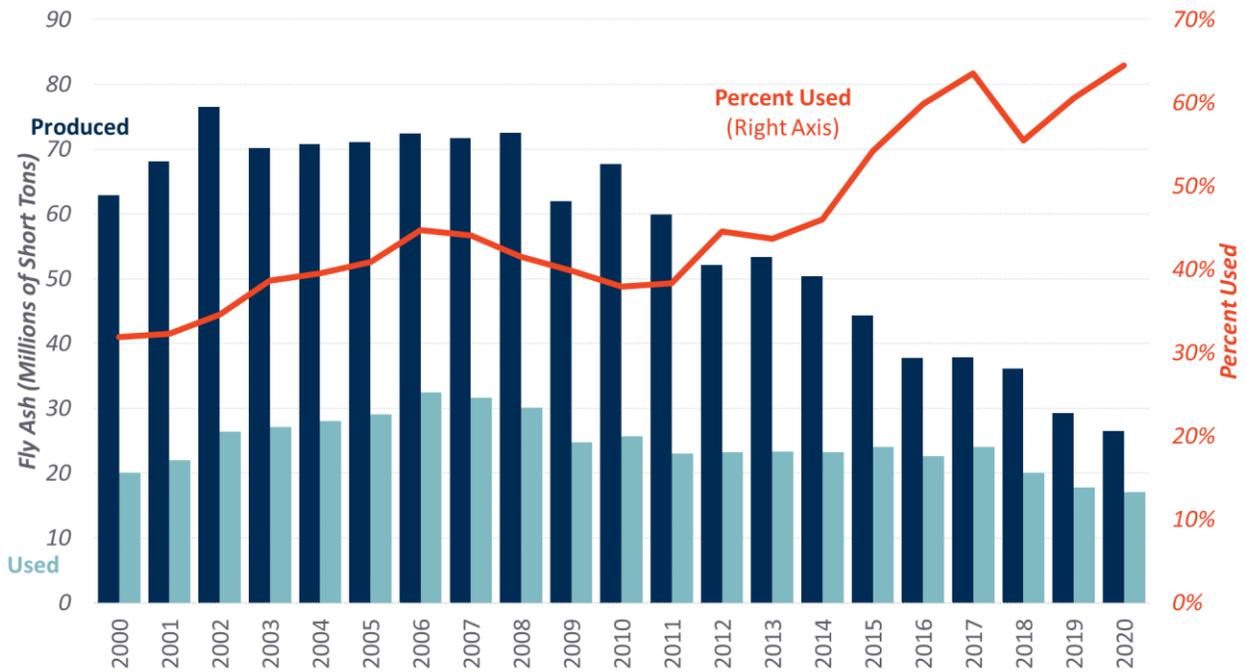
American Coal Ash Association – an organization that advances the environmentally responsible and technically sound use of coal ash as an alternative to disposal – has conducted a survey quantifying the production and use of coal combustion products in the United States each year since 1966. Data is 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.

Charts summarizing overall production and use data since 1991 and fly ash production and use since 2000 are included below. A complete copy of the 2020 survey results is on the final page.

All CCPs Production and Use with Percent Used



Fly Ash – Production and Use



American Coal Ash Association Phone: 720-870-7897
 1616 17th Street Suite #266 Fax: 720-870-7889
 Denver, CO 80202 Internet: www.ACAA-USA.org
 Email: info@aca-usa.org

2020 Coal Combustion Product (CCP) Production & Use Survey Report

Beneficial Utilization versus Production Totals (Short Tons)

2020 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	26,512,322	7,973,554	834,131	17,677,439	6,065,567	2,833,942	41,364	7,217,772	69,156,091
Total CCPs Used by Category	17,104,493	2,955,653	369,729	13,147,742	292,553	106,256	2,193	6,809,788	40,788,407
1. Concrete/Concrete Products /Grout	11,057,713	305,349	0	124,305	0	0	0	0	11,487,367
2. Blended Cement/ Feed for Clinker	2,321,062	862,160	73,727	1,546,731	0	0	0	6,512	4,810,192
3. Flowable Fill	95,272	0	0	0	0	0	0	0	95,272
4. Structural Fills/Embankments	306,379	510,165	0	0	0	0	0	0	816,543
5. Road Base/Sub-base	128,967	83,782	0	0	0	0	0	0	212,749
6. Soil Modification/Stabilization	57,558	80	0	0	0	0	0	0	57,638
7. Mineral Filler in Asphalt	16,195	0	0	0	0	33	2,193	0	18,421
8. Snow and Ice Control	0	35,210	22,454	0	0	0	0	0	57,664
9. Blasting Grit/Roofing Granules	0	9,773	273,548	0	0	0	0	0	283,320
10. Mining Applications	53,930	0	0	0	0	0	0	6,730,060	6,783,990
11. Gypsum Panel Products (formerly Wallboard)	18,308	0	0	9,963,467	0	0	0	0	9,981,776
12. Waste Stabilization/Solidification	1,117,551	43,634	0	118,854	0	13,415	0	73,216	1,366,670
13. Agriculture	0	3,901	0	764,996	0	78,806	0	0	847,704
14. Aggregate	1,550	0	0	0	0	0	0	0	1,550
15. Oil/Gas Field Services	64,163	0	0	0	0	6,816	0	0	70,979
16. CCR Pond Closure Activities	1,558,156	1,026,079	0	537,176	292,553	0	0	0	3,413,964
17. Miscellaneous/Other	307,689	75,520	0	92,212	0	7,186	0	0	482,608

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	17,104,493	2,955,653	369,729	13,147,742	292,553	106,256	2,193	6,809,788	40,788,407
Category Use to Production Rate (%)	64.52%	37.07%	44.33%	74.38%	4.82%	3.75%	5.30%	94.35%	58.98%

2020 Cenospheres Sold (Pounds)

0 Data in this survey represents 121.74122 GWs of Name Plate rating of the total industry wide approximate 222.6244 GW capacity based on EIA's July 2020 Electric Power Monthly.