ENVIRONMENTAL SUSTAINABILITY SERVICES

Sustainability is central to everything we do at Charah Solutions. Our core business is centered on coal ash byproduct management, the beneficial recycling of ash products, and environmental remediation and compliance. We develop innovative sustainable solutions to complex environmental issues for the betterment of the planet and the communities in which we operate.







DECREASES LANDFILL DISPOSAL

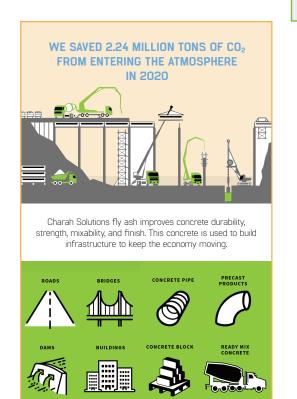


CONSERVES VIRGIN RESOURCES



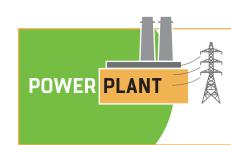
CONSERVES AND

REMEDIATES LAND FOR USE



FOR EVERY TON OF FLY ASH USED TO

REPLACE TRADITIONAL CEMENT. .87 TONS OF CO₂ IS SAVED FROM ENTERING THE ATMOSPHERE



Coal ash is generated by burning coal in the boiler furnace, which creates bottom ash. The ash then goes into the electrostatic precipitator or fabric filter, which creates fly ash, then into the flue gas desulfurization (FGD), creating gypsum - all byproducts are managed by Charah Solutions and can be beneficially used, creating a sustainable process.

BENEFICIAL USE of CCPs

Charah Solutions manages the coal combustion products (CCPs) including fly ash, bottom ash, conditioned ash, ponded ash, and gypsum, which are collected and beneficially used in products for multiple industries. By beneficially using more than 2.58 million tons of ash and supplementary cementitious materials (SCMs) each year, we dramatically reduce greenhouse gas emissions and the amount of waste sent to landfills.

via truck, barge, or rail

to ready mix concrete

producers where it is

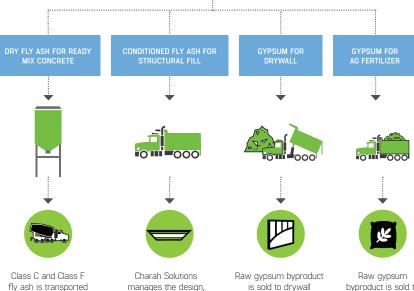
beneficially used by mixing

with other ingredients to

produce concrete.



WE BENEFICIALLY RECYCLED MORE THAN 2.58 MILLION TONS OF CCPs IN 2020



construction, and

operation of structural

fill projects in which the

land is reclaimed and

used for community or

business use.

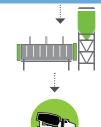
is sold to drywall manufacturing plants, where it is beneficially used in residential and commercial construction projects.

byproduct is sold to growers where it is beneficially used as agriculture fertilizer to enhance soil health and improve plant nutrition.

ASH POND MANAGEMENT



Charah Solutions manages the design, construction, operation, and remediation of on-site ash ponds to enable the safe and compliant beneficial use of these byproduct materials.



Pond ash is beneficiated using Charah Solutions proprietary EnviroSource™ fly ash beneficiation technology, which uses a thermal process to reduce the loss on ignition (LOI) of the ash, making formerly unusable fly ash stored in ponds and landfills immediately marketable to be beneficially used in the production of concrete.

CONDITIONED FLY ASH FOR STRUCTURAL FILL



Charah Solutions manages the design, construction, and operation of structural fill projects in which the land is reclaimed and used for community or business use.



Upon ash pond closure by removal of the ash pond, the land is remediated and redeveloped for community use. renewable energy, agricultural, commercial, or other industrial redevelopment opportunities.

POWER PLANT DECOMMISSIONING AND DEMOLITION



Steel from the demolished plant and other facilities is collected and recycled where it is then beneficially used

to produce products for the automotive, construction, furniture, and other industries

Through our Environmental Risk Transfer (ERT) services, we take full ownership of decommissioned power plants and land from the utility. We demolish the power plant and recycle the steel and other metals. The land is also fully remediated and redeveloped for use, which includes community use, renewable energy, agricultural, commercial, or other industrial redevelopment opportunities.

RECYCLED STEEL FOR INDUSTRIAL USE LAND REMEDIATION/ REDEVELOPMENT Upon demolition of the power plant, the land is remediated and redeveloped for community use. renewable energy, agricultural, commercial, or other

BUILD PARKS, GREEN SPACES, NATURAL HABITATS. AND COMMERCIAL SPACES.

Since 2015, Charah Solutions has reclaimed approximately 300 acres of land for community use.





IN 2020, CHARAH SOLUTIONS **DIVERTED 2.58 MILLION TONS OF** MATERIAL FROM LANDFILLS.

