

# Coal Combustion Products: Environmentally & Socially Beneficial



**Coal ash use is supported by the Federal government and many states as a way to reduce the impact of our industrial practices on the environment.**

- Using CCPs in an environmentally safe manner saves virgin resources, and reduces energy consumption and greenhouse gas emissions (GHG). In addition, it helps reduce the need for landfill space and new landfills. Using CCPs also makes good economic sense; they are often less costly than the materials they replace.

(U.S. EPA: <http://www.epa.gov/epawaste/partnerships/c2p2/use/benefits.htm>)

- Coal utilization byproducts (CUB) use improves the economies of power generation, conserves natural resources, avoids the consumption of increasingly scarce landfill space, and reduces emissions of carbon dioxide (CO<sub>2</sub>). (U.S. Department of Energy August 2006).

**Fly ash is more than a high performance material, it meets policy goals for sustainability**

- Fly ash has been used in roadways and interstate highways since the early 1950s. In 1974, the Federal Highway Administration encouraged the use of fly ash in concrete pavement with Notice N 5080.4, which urged states to allow partial substitution of fly ash for cement whenever feasible. (U.S. Department of Transportation, June 2003).
- Federal concrete projects used an estimated 5.3 million metric tons of coal fly ash in 2004 and 2005 combined. This substitution yields a number of environmental benefits, including avoided energy use of approximately 25 billion megajoules; avoided water consumption of two billion liters; and avoided carbon dioxide equivalent emissions of 3.8 million metric tons. Energy and water savings represent two significant impacts that can be monetized using market prices. Results indicate that the beneficial use of coal fly ash in 2004 and 2005 resulted in energy savings valued at approximately \$700 million, and water savings valued at approximately \$1.2 million. (The U.S. EPA Report to Congress, June 3, 2008).

...more on reverse.

**For more information, please visit [www.coalashfacts.org](http://www.coalashfacts.org)**

## **Current green building practices encourage using recycled materials such as coal ash and other industrial byproducts.**

- Green building rating systems encourage the use of materials locally available, with recycled content that contribute to innovation and reduction of the consumption of other resources such as water. (US Green Building Council, Leadership in Energy & Environmental Design (LEED) and Green Building Initiative Green Building Assessment Protocol for Commercial Buildings.)
- Coal combustion products used in construction practices and concrete products are required to adhere to consensus standards such as the American Society for Testing and Materials, the American Concrete Institute, the American Association of State Highway and Transportation Officials, state departments of transportation and others.
- The cost of a ton of ASTM C618 compliant fly ash is often half the price of portland cement. Using fly ash instead of portland cement can reduce the cost of a concrete in a project while improving its overall performance and durability. (American Coal Ash Association, 2009).

**Public policy should encourage greater beneficial use of coal combustion products.**

