PORTLAND CEMENT MANUFACTURING AND USE

The Portland Cement Association (PCA) represents 92% of US cement manufacturing capacity with more than 90 plants in 32 states and distribution facilities in every state in the continental U.S.

NORTH AMERICAN CONCRETE ALLIANCE

The North American Concrete Alliance (NACA), formed in 2004, is a coalition of twelve concrete and cement-related associations dedicated to addressing industry-wide priorities in the areas of research, safety, education, economic recovery and government affairs. Cement and concrete product manufacturing directly or indirectly employs approximately 610,000 people in our country, and our collective industries contribute approximately $125 billion to our economy. Our member Associations represent businesses and talented workers in all fifty states.
Building the Foundation of South Carolina’s Economy

SC Cement Production

[Graph showing SC Cement Production from 2008 to 2018]

State Economic Data
- Theoretical clinker capacity: 3.1 million metric tons (3.4 million short tons)
- Theoretical cement production capacity: 3.4 million metric tons (3.7 million short tons)
- Actual cement production: 2.8 million metric tons (3.1 million short tons)
- Cement consumption: 1.6 million metric tons (1.8 million short tons)

U.S. Economic Data
- Theoretical clinker capacity: 97 million metric tons (106.9 million short tons)
- Theoretical cement production capacity: 106.5 million metric tons (117.4 million)
- U.S. cement companies have annual sales valued at approximately $10.3 billion

Energy and Environment
- The U.S. cement industry is committed to minimizing emissions, waste, energy consumption, and the use of virgin raw materials. For example, the cement industry began to address climate change in the mid-1990s—one of the first industries to do so. Over the past 40 years, U.S. cement manufacturers have reduced the amount of energy required to produce a ton of cement by over 40 percent. The industry also has reduced its use of traditional fossil fuels by over 15 percent. In 2018, The Environmental Protection Agency ENERGY STAR® Program recognized 100 manufacturing facilities in the U.S. as ENERGY STAR® certified facilities as operating in the top quartile of efficiency in their respective industry sectors. The cement industry represented 24 of those recognized facilities.

- Sustainability
  The industry is a leader in sustainable material and fuel use. Industrial byproducts like coal combustion residuals, steel blast furnace slag, and silica fume provide valuable sources of critical elements like aluminum, iron, and silica used in the clinker production process. Agricultural, industrial, and consumer waste streams like biomass, paper, plastic, fabrics, and fibers provide valuable sources of low-cost, low-carbon energy for cement kilns. By using these materials as valuable input and fuel commodities rather than discarded wastes, the cement industry essentially expands the circular economy and diverts materials from landfills.

- The durability, resiliency, and insulating qualities of cement-related products also lower our environmental footprint. Concrete does not rust, rot, or burn, saving energy and resources needed to replace or repair damaged buildings and infrastructure.

- Because of its rigidity, concrete pavement can enhance the fuel efficiency of vehicles that travel on roads when compared to other pavements. If concrete pavements were used by the U.S. road system, fuel consumption is estimated to decrease by 3 percent nationwide, equating to a reduction in fuel consumption of 273 million barrels of crude oil a year, and a corresponding reduction decrease of greenhouse gas emissions by 51.2 million short tons.

- Cement and concrete building materials also exhibit excellent thermal insulating qualities, improving the energy efficiency of buildings when concrete is used.

- Studies by the Massachusetts Institute of Technology have shown that homes with concrete walls can use 8 to 15 percent less energy than other homes.

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