

## A Holistic Approach to Energy Use



**Situation** Fossil fuels have powered our society for generations. But we now must come to grips with the reality that the fuels we use are becoming scarcer and much more expensive. In addition, the burning of fossil fuels is a source of greenhouse gases and is the main catalyst driving global climate change.<sup>1</sup> Both businesses and individuals must strive to use energy more responsibly than ever before – for their own economic benefit and to leave our planet in better condition for generations to come.

The cement industry in general is a significant consumer of fossil fuels, like coal, to power their kilns. As a leader in the industry<sup>2</sup>, we at Holcim (US) are committed to managing the total effect of our energy consumption throughout the entire organization by minimizing our use of non-renewable natural resources, maximizing the fuel efficiency of our equipment, sourcing alternative fuels, using the most efficient transportation methods available, and more.

<sup>1</sup> "Human Related Sources and Sink of Carbon Dioxide," United States Environmental Protection Agency, [http://www.epa.gov/climatechange/emissions/co2\\_human.html](http://www.epa.gov/climatechange/emissions/co2_human.html), February 25, 2008.

<sup>2</sup> Holcim (US) has been designated as the industry leader by the Dow Jones Sustainability Index for four consecutive years.

We are committed to preserving the needs of future generations by maximizing our energy efficiency and conserving non-renewable resources.

**Solution** As a long-time leader in sustainable development, it is our belief that using an overall holistic approach to energy consumption is the responsible way to minimize our impact on the environment and the communities in which we do business. At the same time, we have proven that these actions can also contribute to the financial success of our company.

## Our people.

Our employees are one of the biggest drivers of our company-wide energy conservation program and we ask them to actively practice wise energy management at work and at home. As an example, we have teams of employees who conduct internal energy assessments. So far, they have reviewed eight plants and identified an average of 7% potential reduction in electrical consumption at these facilities. In addition, we conduct our own Conservation Days at our facilities. These events are designed to highlight our commitment to sustainability and promote awareness of how employees can personally contribute to reducing their personal and our collective environmental footprint.



**More efficient equipment.** By optimizing the efficiency of our existing equipment, we have significantly reduced our energy consumption. In instances where machinery or facilities are outdated, we have been making substantial upgrades, investing extensively in our plants over the last seven years, resulting in a significant reduction in energy consumption.

In fact, three of our plants have been awarded the ENERGY STAR® from the Environmental Protection Agency (EPA), which requires the facilities to be among the top 25% for energy efficiency within the industry. It also puts them among only 14 cement plants in the entire country to receive this recognition.

**Transportation choices.** Transporting goods by truck is a popular choice in the US, but it inevitably results in crowded roads and more emissions. In addition, due to their small payload capacity, they are the least efficient method of shipping. By using more energy-efficient methods whenever possible, such as ship and rail, we are decreasing our energy consumption daily. Holcim's commitment to better transportation methods includes being the first cement company to partner with the EPA's SmartWay<sup>SM</sup> program — a collaboration with the freight industry to offer environmentally cleaner, more fuel-efficient transportation options.

**Summary** We believe that to have a significant impact on our energy consumption, we must continually monitor our overall energy usage at all levels of the company. No area of our business is exempt from this effort, and we will continue to push for innovative, creative solutions so that we can do our part to mitigate global climate change.

**Alternative fuels.** Due to the unique characteristics of processes involved in cement manufacturing, we have the flexibility to safely use alternative fuels and raw materials, such as scrap tires. That means we help keep those materials out of landfills, consume fewer natural raw materials, and reduce our dependency on fossil fuels.

**Facility locations.** As we open new facilities, we are mindful of placing them on existing waterways or rail lines to minimize our transportation energy consumption. In March of 2006, Holcim (US) broke ground for a new facility in Ste. Genevieve County, MO along the Mississippi River. This state-of-the-art cement plant will ship the majority of its goods via barge on the Mississippi.

**Creative market transactions.** We are always on the lookout for innovative ways to reduce energy use and mitigate the impact of the energy we do use. One way we've done that is through a pilot project to procure Renewable Energy Certificates, which ensure we are purchasing energy created in a sustainable manner. In addition, some of our facilities are investigating the use of renewable energy sources to meet their electrical needs.