Lafarge Cement Plant

Carbon offset funds enabled the cement producer to reduce the amount of coal used in the process of creating cement. Traditionally substantial users of coal, Lafarge is able to reduce the amount they burn by replacing a portion of this fossil fuel with biomass and other materials from construction waste. This shift in fuel reduces annual greenhouse gas emissions relative to the baseline.

HOW IT WORKS

The kilns at this facility are designed to burn coal, which has specific combustion properties. Lafarge is developing a system to combine a variety of alternative fuels and to feed them into their manufacturing process. Processed engineered fuel (PEF) from construction and demolition wood waste is made up of mostly wood with very small volumes of paper and non-chlorinated film plastics. Burning PEF at this facility is beneficial because it reduces coal consumption. Hazardous emissions are avoided because the kiln burns at such a high temperature. And, the ash that would otherwise be emitted from burning wood is captured and used in solid form in the cement itself.

CARBON OFFSETS MADE IT HAPPEN

Without offset funds the financial payback for this installation would not have been viable and the cement plant would have continued to use the conventional coal-fired system at traditional levels. The installation is not common practice and yields savings in GHG emissions compared to the traditional approach. This also stands as a model for energy innovation and a switch to a lower carbon future.

OTHER BENEFITS OF THE INSTALLATION

With the installation of this alternative energy process, Lafarge also reduces the waste that goes to landfill where it not only occupies precious space, but also releases methane as the organic materials decompose. Methane is a GHG with more than 20 times the climate impact of carbon dioxide. Additionally, landfill fires can erupt spontaneously and construction waste is a fuel that can keep these fires smoldering for weeks, creating other air pollution issues.

PROJECT AT A GLANCE

Project Location:	Richmond, BC Canada
Project Type:	Energy Efficiency
Standard:	B.C. Emission Offsets Regulation
Credits generated per year:	~15,000 - 50,000 tCO_2e depending on cement production
Equivalent # of cars removed from the road annually:	~2868 - 9560 (Based on EPA GHG Equivalency Calculator)
Verifier:	Envirochem Services Inc.
Portfolio:	PCT
Project Start:	2008
Technical Longevity:	No limit