

# **Autoclaved Cellular Concrete, the Future of Fly Ash**

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## **ABSTRACT**

Autoclaved Cellular Concrete (ACC, also known as Autoclaved Aerated Concrete) is a lightweight building product with high insulating value which can be manufactured using 60-75% fly ash by weight. Fly ash with carbon content up to 12% may be used in the mix, thereby allowing high volume use of ash from sources that do not meet ready-mix concrete specifications. For over seven years, TVA has evaluated Autoclaved Cellular Concrete as part of a strategy to locate a high volume user of coal combustion by-products on a TVA Fossil Plant site. TVA's participation in the EPRI Tailored Collaboration Project in which a portable pilot plant was used to manufacture block from various utilities and TVA's subsequent market research demonstrated that a moderately-sized production facility could be profitable if located at any one of several TVA Fossil Plants. TVA's Fuel By-Products Department used the results of these studies to attract an investor to build such a plant in Clinton, Tennessee. The plant will utilize up to 100,000 dry tons of fly ash per year from TVA's Bull Run Fossil Plant. This paper will discuss the process by which TVA evaluated the potential market and awarded a contract for the first ACC plant in North America to be located at a fossil plant site and the first to use fly ash as the siliceous component.