



## What Happens to Alternative Fuels Materials and Air Emissions

Cement kilns reach temperatures above 2,500 Fahrenheit during the manufacturing process. When introduced into this high-heat environment, alternative fuels such as plastics, wood from construction and demolition waste, used tires, misprinted labels and other feedstocks are consumed, with virtually no residual material remaining.

In all cases, cement plants that use alternative fuels must meet the same air emissions guidelines established before using these materials. In some instances, air emissions like CO<sub>2</sub>, sulfur and nitrogen oxide are lower due to alternative fuel use.



If all U.S. cement plants replaced **just 33%** of traditional fuels with alternative options, it would save enough energy to **meet the needs of nearly 1.5 million American homes.** <sup>1,2</sup>



More than **100 million** scrap tires are beneficially **used as tire-derived fuel** annually. That's **more than 40%** of the total scrap tires created each year.

## Addressing a Serious Challenge

To fully understand the benefits of alternative fuels, it helps to understand the scale of the challenge. Consider the problem of scrap tires in America. Historically, America's scrap tire piles have been a significant nuisance for landfills. Tires can be a fire risk and often become breeding grounds for pests like mosquitoes. According to the U.S. Tire Manufacturing Association, the U.S. produces around 250 million scrap tires annually. LafargeHolcim is a leader in the TDF movement.

## Benefits of Alternative Fuels & Raw Materials



Provides a **sustainable waste disposal** solution



Completely destroys materials with **virtually no leftover residue**



**Conserves** conventional fuels



**Can reduce emissions** from CO<sub>2</sub>, sulfur, and nitrogen

**Find out more about LafargeHolcim's sustainability efforts:**

<https://www.lafargeholcim.us/corporate-responsibility-sustainability> or <http://tirederivedfuels.com/>

1. 77.1 million BTU average U.S. household use: <https://www.eia.gov/consumption/residential/data/2015/c&e/pdf/ce1.1.pdf>

2. 349 trillion BTU used by Cement and Lime industry in 2019:

<https://www.statista.com/statistics/1055199/cement-lime-industry-energy-consumption-us/#:~:text=U.S.%20cement%20and%20lime%20industry%20energy%20consumption%202019%2D2050&text=The%20cement%20and%20lime%20industry,360.1%20trillion%20British%20thermal%20units.>



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