

CASE STUDY: CURTIDOS TOLUCA

Curtidos Toluca is a large leather tannery and factory in Lerma, Mexico. Curtidos Toluca manufactures high-quality work and safety shoes.

UMA Solar manufactures and distributes the industry's highest-performing solar products for commercial and residential applications. Founded in 1977, UMA Solar promotes sustainability in energy and business.

Industry: Manufacturing

Project Type: Solar Water Preheating

Challenge:

UMA Solar was asked to reduce Curtidos Toluca's significant industrial water heating costs. The factory daily processed 53,000 gallons of water, relying upon diesel fuel to produce an average requirement of 11.9 million Btu each day. The factory's average monthly fuel costs totaled more than \$110,000.

Solution:

UMA Solar designed a customized solar solution to dramatically reduce water heating costs and to decrease the Curtidos Toluca's dependence on diesel fuel. In 2001, UMA Solar installed 16,800 square feet of Heliocol solar panels on the rooftop of the factory. The panel installation was designed to preheat the water before piping it to the existing boilers, dramatically limiting the amount of fuel required to heat the water to desired temperatures.



QUICK VIEW

Average Daily Energy Requirements	11.9 Million Btu
Average Daily Water Volume	53,000 Gallons
Installed System Size	16,800 Sq Ft of Heliocol Solar Panels

Average Monthly Diesel Fuel Consumption Costs

Before Heliocol Panel Installation	\$110,926
After Heliocol Panel Installation	\$64,218
	Savings = +42%

Average Monthly Diesel Fuel Consumption

Before Heliocol Panel Installation	13,954 Gal.
After Heliocol Panel Installation	7,420 Gal.
	Savings = 6,534 Gal.

Return of Investment	Less than 2 Years
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Results:

The installation of a Heliocol preheating system resulted in an average monthly savings for Curtidos Toluca of \$46,708 (42 percent) and reduced the factory's average monthly diesel fuel use by 6,534 gallons. The return of investment took less than two years.