



## CARUS “CLEANS UP” WITH ENERGY SAVINGS

Keeping our world clean keeps Carus Corporation in business. As a leading environmental treatment company, Carus provides innovative products and services to purify soil, water and air. Carus is also “cleaning up” with energy savings at its LaSalle-Peru plant, with a little help from the Ameren Illinois Energy Efficiency Program.

Carus’ core products are produced at the LaSalle plant. These products are used every day in water treatment plants, at industrial manufacturing sites, at remediation sites, and to purify the air at locations around the globe.



The plant is powered by a natural gas-fired boiler where combinations of heat and pressure help to produce the base products. The company also recycles all of the byproducts created during the manufacturing process.

All in all, “it’s an energy-intensive process, but much less so these days due to several years of plant energy conservation efforts,” says Dan Hartsough, Process Development Manager at Carus Corporation’s LaSalle facility. “These energy improvements — most recently a major boiler improvement

project — have led to a 25% reduction in energy usage,” Hartsough added.

“We have an older boiler, and it was going to cost too much to replace it, so we were looking for upgrades.”

To help the company delay the boiler replacement, Carus engineers devised an innovative solution to install a condensing economizer on the boiler to recover and re-use heat that would otherwise be wasted.

As Hartsough explains, “Before we added the condensing economizer, our process released very hot exhaust gas harmlessly into the atmosphere. The economizer recovers that wasted heat and uses it to pre-heat fresh water going into the boiler.”

The energy contained in the hot flue gas is transferred through a proprietary heat exchanger manufactured by Condex to the cold boiler feed water. The feed water temperature is raised

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— Dan Hartsough, Carus Corporation

### Benefits to Carus Corporation:

- \$150,000 in annual savings
- \$100,000 in incentives
- Nearly 263,000 therms saved every year
- Reduced project payback period
- Less environmental impact
- Every dollar saved boosts the bottom line

# Manufacture Savings with Ameren Illinois

## UNIQUE SOLUTIONS BEGIN WITH YOU

### Custom Gas & Electric Incentives Available

If you have an innovative idea for a gas or electric energy-saving project that is not eligible for standard incentives, you may benefit from our Custom Program — just like Carus Corporation did.

In 2012, the company decided to take advantage of a newer technology by installing a condensing economizer on an aging boiler at its LaSalle-Peru plant.

“Ameren Illinois’ energy efficiency program was very supportive of our energy efficiency efforts,” says Process Development Manager Dan Hartsough, who plans to pursue more custom projects. “I was impressed that Ameren Illinois was willing to get involved with a technology they were not familiar with.”

Cash incentives, based on estimated savings, are available for a variety of custom electric and gas projects, including compressed air, geothermal, grain drying, and large HVAC projects.

“Not every efficiency measure fits nicely into one of our standard programs,” says Dave Kilgore, Program Engineer. “Industrial processes are not cookie-cutter; they have very unique and diverse energy-saving opportunities. Our Custom Program provides an opportunity to receive incentives for practically anything that saves energy.”

from 60 to 180 degrees Fahrenheit, thereby increasing the efficiency of the boiler from 80 to 90% and decreasing the site carbon footprint.

Through its Custom Program, Ameren Illinois gave Carus \$100,000 in cash incentives that covered 25% of projects costs and reduced the project payback to just over two years.

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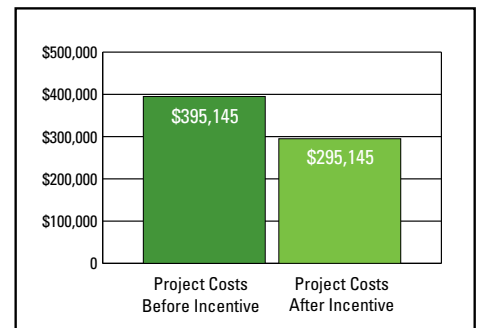
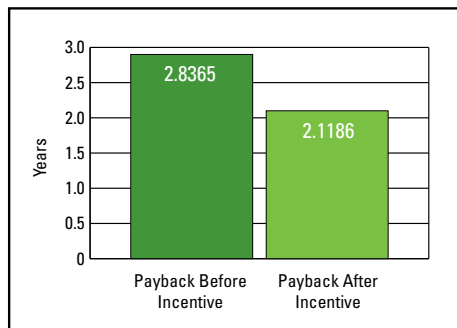
“Any large boiler system could benefit from a condensing economizer — especially those that use a lot of makeup water,” says Dave Kilgore, Program Engineer for Ameren Illinois. “Typically, about 18% of the useful heat generated in a boiler goes right up the flue stack. A good economizer can reclaim most of that.”

And when it comes to reclaiming wasted energy, Ameren Illinois is a good place to start.

“Ameren Illinois’ energy efficiency program is a great program and the process was very clear,” says Hartsough. “The energy efficiency team was very much involved, understood what we were trying to do, and had folks who could help us.”

As Carus proves, you can help the bottom line and the environment in one clean sweep.

## INCENTIVES CUT PROJECT PAYBACKS & COSTS



## READY TO BEGIN?

[AmerenIllinoisSavings.com](http://AmerenIllinoisSavings.com)

1.866.800.0747

