

# ARCELORMITTAL: SERIOUS ABOUT SAVING ENERGY



LED lighting upgrade at ArcelorMittal's Burns Harbor steelmaking facility in Northwest Indiana.



Saving energy is serious business for ArcelorMittal. It has to be. The world's largest steel producer cranks out 15-million tons of raw steel every year in the U.S. alone. Plus, it mines the materials used to create liquid iron, the building block for making steel. The company also competes in the global marketplace to sell its steel to the automotive, construction, appliance and other industries. Steel manufacturing is a highly competitive and energy-intensive business, which is why ArcelorMittal has to save energy to set it apart and protect its bottom line.



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MANAGER OF CONTINUOUS  
IMPROVEMENT**

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**you need to control your costs, and energy is one of those costs you can control,”** said Larry Fabina, Manager of Continuous Improvement for ArcelorMittal.

Since 2006, ArcelorMittal has saved more than \$257 million annually on energy costs through a wide range of efficiency measures, including installing variable speed drives, energy monitoring systems, LED lighting, and combined heat and

power systems. In 2017 alone, the company completed 36 energy-saving projects with a combined annual savings of \$17 million.

ArcelorMittal's success can be attributed to several factors: first, its public commitment to save energy; second, its strong partnerships with local utilities and federal agencies; and third, its motivated and empowered staff.

In 2006, ArcelorMittal became the first steel company to become a U.S.

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Combined heat and power system at ArcelorMittal's Indiana Harbor steelmaking facility in east Chicago.

EPA ENERGY STAR partner. And in 2013, the company joined the U.S. Dept. of Energy's Better Plants Program and made a public, voluntary commitment to reduce its energy intensity by 10% across 12 of its U.S.-based plants by 2023.

For an industry as energy intensive as steel making, setting an energy-savings goal wasn't just the right thing to do—it was the smart thing to do.

“Ours is a tough industry. To stay competitive, you have to continually improve and reduce your costs,” said Fabina.

One measure the company is taking to reduce costs is the installation of a new power system at its Burns Harbor facility in Indiana. The multi-year capital investment project is designed to use fuel from coke ovens and blast furnaces (used to create liquid iron) to generate steam. The steam is then used to power the plant's operations, and to generate supplemental electricity for the facility. Once completed, the power station is expected to provide 75% of the plant's power requirements and save the

company \$60 million annually.

Many of ArcelorMittal's energy-saving projects were funded in part through federal grants and utility programs.

“Utility programs and other incentives help make these projects possible. They reduce the upfront costs, and help us meet our payback thresholds sooner,” said Fabina. “But if you only look at upfront costs, you are not getting the complete picture. For example, when we put in a variable speed drive or LEDs, we're looking at these investments paying the company back for 10 years or more. We're still getting pay back for projects we did more than 5 years ago.”

He added, “Energy efficiency projects do a lot more than just save money. They have a ripple effect of benefits.”

For example, before the company installed variable speed drives at one of its facilities, it was replacing at least three motors and fans every year to the tune of \$200,000 annually. When equipment went down, operations were delayed,

causing further expenses. Plus, replacing equipment required employees to work in difficult and potentially dangerous situations. Replacing motors and fans is hot, hard work on high structures. Now, with variable speed drives installed, they haven't had to replace a motor or fan in years.

“At the end of the day, investing in energy efficiency reduces downtime, saves money, reduces delays, makes equipment run longer and even improves worker safety,” he said.

Employees are actually a big part of the energy-saving picture at ArcelorMittal. Every employee is encouraged to find ways to save—on the job and at home. One employee at the Riverdale facility came up with the idea of installing a magnet-controlled speed drive that is even more cost-effective than a variable speed drive. The company also hosts annual energy fairs at its facilities, and Fabina personally gives an energy boot camp class to every new employee.

“We believe in the power of one—that one person or one team can make a difference,” Fabina said.