

2015 TEEA Winner Pollution Prevention Category: Nucor Steel, Texas

Chad Prior, Senior Environmental Engineer

This Nucor Steel Texas, we manufacture rebar, which is reinforcing bar that goes in concrete to make structures and roads. In addition, we make angles, rounds, channels and flats for other fabrication activities.

Buddy Dorman, Electric Arc Furnace

We drop 100, anywhere from 105 to 115 tons of scrap in there at one time. All the gas and smoke goes out through the arm going down the side, down to a dropout chamber box. Which then what don't stay in the dropout chamber goes to the baghouse out there.

Thad Solomon, General Manager

The team found fan blades that are used to draw the air out of the operation, needed to be redesigned.

Chad Prior

The fan blades were having some wear on them, we knew we were either going to have to repair them or replace them. So we were able to find these new higher-efficiency fan blades to give us more efficiency in the same airflow.

Mark Drymalla, Environmental Technician, Mechanical

The fans that we had before were forward curved, and then we went to a backward incline. The backward incline were much more efficient.

Kim Pritchard, Environmental Manager

So we're saving in the range of about 3,000 kilowatt hours for every hour that we operate, which is about equivalent to power about 1,142 homes.

Adam Spece, Environmental Technician, Electric

We did a project later that same year on the melt shop, non-contact cooling tower. We installed variable frequency drives on the existing equipment.

Kim Pritchard

The variable frequency drive, what it does, is it meters just the right amount of energy to give us the cooling that we need to cool the water efficiently instead of having a big spike, you know, where you go from off to on. So it's saving energy as well as lowering the evaporation rate. And last year we were able to measure at least 1 million gallons had been saved using this new system.

Thad Solomon

Being environmentally conscious is absolutely crucial at Nucor, here in Jewett and throughout the corporation. Recognition from this reward just reinforces for us that we are accomplishing what we set out to do.