



Service/Product Provider

E4E Solutions, LLC

990 Hammond Drive / Suite 1010
Atlanta, GA 30328

Business: Engineer, Design Build
Michael McMurtry
Executive Vice President
Phone: 817-301-6620
Email: mmcmurtry@e4esolutions.com

Industrial Partner

Alcoa

4879 State Street
Bettendorf, IA 52722-8001

Business: Heat Treat & Mill Products
Jeffrey Richland
Electrical Utilities Manager
Phone: 563-459-2685
Email: jeffrey.richland@alcoa.com

Alcoa & E4E Solutions Completed Lighting System Upgrades to Save 30-50% in Energy, Reduce Maintenance Costs

Project Scope

The scope of the lighting project at Alcoa Mill Works in Bettendorf, Iowa involved replacing 1000- & 400-Watt HID lighting with 500- & 250-Watt induction fixtures. In addition to the lighting fixtures, we upgraded the lighting infrastructure and installed lighting UPS systems. With the implementation of these products, the plant is now benefitting from lighting controls that incorporate motion and daylight sensors.

In addition to local utility incentives, E4E provided documentation for Federal Energy Policy Act Credits to Alcoa for this project.

Project Summary

Approximately 500 induction fixtures were installed, many of which included motion and daylight sensors. Also included was some new infrastructure, and UPS systems.

- **Energy Savings**
\$150,000 per year
- **Investment**
\$500,000
- **Financial Return**
Typical 2-year simple payback after utility incentive.
- **Other Benefits**
100,000-hour lamp life and 10-year guarantee provided from the fixture manufacturers will reduce maintenance costs. Safety (instant start fixtures), improved light levels and visibility in the plant.

Monitoring & Verifying Energy Savings

Investment grade audit was completed by E4E personnel. Pre and post inspections were performed by the utility, Alcoa and E4E to verify the installation and savings as required for utility incentives.

Distinguishing Value

This plant environment is particularly difficult due to the type and amount of production. There were no accidents or production issues with the implementation of these projects. The light levels have improved along with the quality of light.