

ATN Success Story **XX Quarter 2013**

Client:
E&I, Inc.

City:
Tallassee

State:
Alabama

Zip
36078

NAICS Code:
325520 – Adhesive Manufacturing

Client Size:
23

Projects/Events:
E3 Energy Assessment, Workforce Development Training, and Implementation Assistance

Success Story Title:
AU-ATN helps company control and reduce energy consumption and costs

Company Profile:

E&I Inc. – an ISO registered manufacturer -- has called Tallassee, Ala. home for more than nine years. The company employs 23 and manufactures some 50 metric tons of automotive sealant and adhesives each month for Hyundai Motor Manufacturing and other Alabama/Georgia-based automotive companies. Its product is used primarily to control noise and vibration.

Situation:

E&I, Inc. occupies a manufacturing facility comprised of 30,000 square feet of floor space. The main building was constructed in 2004. An additional smaller side building was completed in 2013. The facility houses the company's raw materials warehouse, a manufacturing area, a finished good warehouse, and associated administrative and support areas. The company consumes an average of 44,053 kWh of electricity per month. Managing energy consumption has become one of E&I's most important maintenance programs, and the company has launched an initiative to more efficiently control and manage energy consumption and use costs.

Solution:

AU-ATN’s relationship and assistance is a story involving a growth relationship over the company’s lifetime to-date. Initial work toward establishing an industry-recognized quality management system culminated when AU-ATN helped E&I attain ISO 9001-2000 registration for its Quality Management System (QMS) in 2009.

AU-ATN continues to assist E&I in the area of maintaining and improving its QMS and to train E&I personnel in the various areas and applications of continuous improvement. AU-ATN’s latest assistance has been in helping E&I evaluate its energy use and to develop a “green” program that more efficiently monitors and controls its energy consumption. AU-ATN helped E&I acquire a CAR E3 Expansion Grant. This funding enabled AU-ATN to support a thorough energy assessment of the E&I facility, to make energy use improvement recommendations, and to help E&I begin a program that already is beginning to generate cost savings and more efficient energy consumption.

Results:

AU-ATN’s energy assessment covered the key areas of:

- Examining several months of energy use data
- Evaluating the HVAC systems
- Evaluating the building interior and exterior lighting systems
- Evaluating the performance of electric motors and belts
- Evaluation of the heat loss/gain conditions of the building using infrared thermography

The result of the complete energy assessment suggested efficiency improvement modifications affecting each of the above listed areas. Among the key recommendations are:

| EFFICIENCY AREA | RECOMMENDATION | PROJECTED SAVINGS/ IMPACT |
|-------------------|--|--|
| HVAC | Improve damper and air flow; install additional insulation in specific ductwork; initiate an HVAC Total Preventive Maintenance (TPM) program | TBD (due to complexity and numerous unknown variables) |
| Lighting | Install more energy efficient lighting, including motion/photo-voltaic switching in specific areas; | More than \$1,000/year; More than 6,000 kWh |
| Motors & Belts | Initiate regular belt and motor TPM program; Replace existing motors with high-efficiency motors | More than \$3,000/year; More than 30,000 kWh (belts) More than \$10,000/year; More than 88,000 kWh (motors) |
| Building Envelope | Replace insufficient louvers; install additional location-specific insulation; modify heat room; | More than \$1,000/year |

The company has replaced insufficient louvers in the HVAC system return-air duct work; has begun an electric motor TPM program to ensure timely belt replacement and

increase motor and belt life; paint the roof of its “heat room” to ensure more efficient heat containment and use, without increasing electricity consumption; and E&I is in the process of obtaining cost quotes to make recommended modifications to its overall HVAC systems efficiency. Implementation of other energy use improvement recommendations are in the planning stage, company officials say.

Testimonials:

“The biggest thing this assessment helped us with, is it identified where we have problems,” said E&I Quality Assurance Manager Mikel Stroud. “The assessment was very helpful.” Stroud adds, “AU-ATN was great in being flexible on scheduling. We definitely would recommend this service to others.”

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