

Project Overview

Intern: Hee-Chan Han

Major: Mechanical Engineering

School: University of Nebraska – Lincoln



Summer Duties

The Nebraska Industrial Assessment Center (NIAC) conducts facility assessments for manufacturers, production facilities, and other companies. These companies are in or close to Nebraska. During these assessments, members of the NIAC use equipment to collect data for further research, feasibility, and final recommendations. The NIAC analyzes simple systems like LED lighting as well as complex subjects like HVAC units. After the visit, members work with each other, vendors, and faculty advisors to create a polished report. A formal report is submitted 60 days after the initial on-site assessment with the recommendations.

Summer Recommendations

Over the course of the summer, I performed 4 assessments. These companies included Trenton Agri Products, Nebraska Plastics, ASC Capacitors, and Yankton Wastewater Treatment Plant. A summary of the savings for the entire summer is included below in Table 1-1.

Table 1-1: Summer Assessment Recommendation Summary

AR	Cost Savings	Electricity Savings	Demand Savings	Natural Gas Savings
Upgrade Lighting	\$4,700	54,235 kWh	76 kW-month/year	-
Occupancy Sensor	\$1,169	19,479 kWh	-	-
Reflective Coating on Exterior Piping	\$1,176	-	-	196 MMBtu
Air Compressor – Cold Air Intake	\$171	3,232 kWh	-	-
Air Compressor – Leaks	\$3,211	120,509 kWh	-	-
Air Compressor Cold Air Intake	\$1,170	31,368 kWh	-	-
Air Compressor – Reduce Setpoint Pressure	\$513	13,852 kWh	-	-
Anaerobic Digester Gas Reuse	\$17,520	-	-	6,000 MMBtu
Total	\$29,630	242,678 kWh	76 kW-month/year	6,196 MMBtu