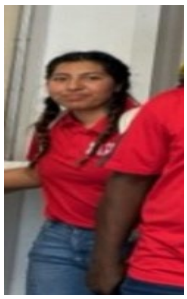
Project Overview



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Summer Activities
I visited four facilities this summer with various backgrounds ranging from industrial products to food products. Some were located in Lincoln, NE and others where in neighboring cities and also out of state. The industrial facilities specialize in the design and cut of iron, steel, and other metals with automized computer aid (CAD). The food facility specializes in exporting beef and pork products to Japan and the cheese facility makes the base product that comes in semi-trucks as milk to be sold in gallon tubes that are shipped to other states as well as selling whey products.

Recommendations Description
For all the facilities we were tasked to assist the maintenance department with our various recommendations to their systems or processes. Energy efficient methods were in mind as the walk through the facility. This was placed to looking at: chiller optimization, solar energy, heat exchangers, steam trap surveys, and to up keep maintenance. These were investigated and determined how much GHG emission were reduced.

Pollution Prevention Benefits
The resulting pollution prevention benefits mainly entail reducing the amount of electricity usage and electricity demand. In the recommendations, switching to more efficient options will result in the reduction of electricity usage and demand. The recommendations have high upfront costs, but the benefits will be seen when implemented. The facility will also reduce their greenhouse gases by implementing the recommendations.

Results
The pollution prevention benefits and results done by the intern are summarized in Table 1:

Table 1: Pollution Prevention Benefits and Results

Project	Electricity Usage Savings (kWh)	Electricity Demand Saved (kW)	Therms Saved	Cost Savings	GHG Reduced ($MTCO_2e$)
Installing Solar Panels	144,042	-	-	$17,171	138.9
Chiller Optimization	130,300	186	-	$6,418	124.2
Enhance Fine diffusers	-	-	68	-	-
Boiler Heat Exchanger	-	-	15,068	$10,688	79.7
Steam Trap Survey	-	-	7,866	$5,518	41.6
Total	**274,342**	**186**	**23,002**	**$39,795**	**384**