

## Project Overview



**Intern:** Geena Brown

**Major:** Mechanical Engineering

**School:** University of Nebraska – Lincoln

### Company Background

IC Energy Solutions was founded in 2013 by Robb Lierman and Jeff Zvolanek. They are industry experts focused on efficiency; cutting energy consumption and saving money while reducing the carbon footprint of their clients. They carry only the highest quality, most efficient products for lighting, air handling, and controls systems on the market. If it uses energy, IC Energy Solutions will work to find an efficient solution.



### Project Description

Geena Brown, a 2014 P3 intern, worked with IC Energy Solutions to find and audit industrial companies in Nebraska. Management reports were written for each company visited, outlining pollution prevention opportunities. Each opportunity strived to reduce energy consumption, as well as utility cost.

A fluorescent and HID bulb recycling program was researched and implemented, leading to the reduction of universal solid waste and hazardous mercury waste.

### Pollution Prevention Benefits

The following table highlights the potential yearly cost and energy savings from some of the companies visited.

Company	Energy Savings (kWh)	Cost Savings	GHG Reductions (MT CO <sub>2</sub> e)
Teledyne ISCO	13,700	\$1,000	13
Sysco	215,000	\$14,000	206
Midlands Packaging	307,000	\$21,500	294
Danko	77,400	\$8,500	73
Overland Products	37,000	\$3,500	35
Baldwin Filters	455,000	\$26,000	225
Claas	362,500	\$32,400	430
Others	1,600,000	\$125,000	1,500
<b>TOTAL:</b>	<b>30,670,000 kWh</b>	<b>\$231,000</b>	<b>2,780 MT</b>

Additionally, at least 43 mg of hazardous mercury will be recovered through the recycling of more than 2,200 fluorescent and HID bulbs each year. This will reduce both employee mercury exposure and landfill and groundwater mercury pollution.