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Background

Innovative Exhaust Solutions Inc. (inExhaust) was founded in 2016 after IAC Acoustics ceased operations. The company designs and manufactures custom exhaust solutions for facilities where redundant power supply is critical. Examples include hospitals, laboratories, and food processing plants.

Project Description

During the summer of 2018, P3 intern Evan Beckmann worked with inExhaust in Lincoln, Nebraska to determine potential Pollution Prevention (P2) opportunities. The following assessment covers the electrical energy consumption, wood pallet usage, and insulation waste removal for the company. This assessment was completed on the premise that inExhaust would likely be relocating within a year. Under this presumption, the focus of the assessment was to decrease the waste in the production processes rather than focusing on facility improvement opportunities.

Pollution Prevention Benefits

In the following text, opportunities are provided that will allow inExhaust to reduce material and energy consumption, help the environment, and save money if implemented. Secondary benefits include increased productivity and safety. Included in this report are suggestions that would save the company \$ 27,200, 21,620 kWh of electricity, 23,150 lbs. of wood, and 750 lbs. of insulation. Below are the main pollution prevention benefits and results, which are summarized in Table 1.

Table 1. Pollution Prevention Benefits

Assessment Recommendation	Annual Cost Savings	Annual Reduction	GHG Reduction (MTCO2e/yr)
Redesign of Pallets (Materials & Shipping)	\$ 7,250 \$ 16,000	23,150 lbs. of wood	4.72
Reuse waste insulation to pack heads	\$ 1,750	750 lbs. of insulation	1.08
Install LED lights throughout facility	\$ 1,620	21,620 kWh	12.2
Install Occupancy Sensors	\$ 580	7,800 kWh	4.4
Total	\$ 27,200	23,900 lbs. of solid waste , 29,420 kWh	22.4

Secondary Benefits of Assessment:

- Reduction of waste to landfill
- Reduction of greenhouse gas emissions