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In the summer of 2017 the P3 program partnered with the Nebraska Industrial Assessment Center (NIAC) to assess 8 Nebraska businesses. The NIAC is a part of an environmental sustainability initiative funded through the U.S. Department of Energy. The program performs free, one-day energy assessments for local manufacturing plants, develops energy saving recommendations for the facilities, and produces reports that detail these finds which are given to the manufacturers. Over the course of the summer, Chris Bianchini participated in four assessments including a pork packaging plant, a medical device manufacturer, a grain silo, and a plastic injection molding facility. Bianchini was also the lead analyst on one assessment for a cardboard box manufacturer.

Assessment recommendations included optimization of compressed air systems, development of compressed air leak detection program, and lighting upgrades. The sum of energy and cost savings from assessment recommendations of the four assessments described in the report can be found in the below table.

In addition to the assessment recommendations, Bianchini developed a guide for auditing a compressed air system in the duration of a one-day assessment. The guide teaches users how to evaluate the air system at first glance, estimate the operating cost of the compressor, estimate the leakage of the system, calculate potential savings from leak repair, calculate potential savings from pressure reduction, and make an assessment recommendation for implementing a leak detection program. Also included in this special project is a calculator to help expedite compressed air calculations during audits. These tools will be used by future NIAC students to improve the service provided to clients during the assessment.

Overall Summary of Authored Assessment Recommendations

Recommendation	Annual Savings		Implementation Cost (\$)	Simple Payback (years)
	Resource (Unit/year)	Dollars (\$/year)		
Pork Packaging: Implement an Air Leak Detection Program	1,930,000 kWh/year	\$49,000/year	\$12,700	0.26 years
Medical Manufacturing: Reduce Air Compressor Operating Pressure	4,300 kWh/year	\$110/year	\$0.00	0.0 years
Grain Silo: Replace fluorescent and HID bulbs with LEDs	11,000 kWh/year	\$700/year	\$3,400	4.86 years
Box Plant: Implement an Air Leak Detection Program	34,000 kWh/year	\$1,100/year	\$580	0.51 years
Total Sum*	1,979,300 kWh/year	\$50,910/year	\$16,680	0.33 years

*The overall payback was calculated based on the total sum of all capital investments divided by the total sum of dollar savings from all the recommendations