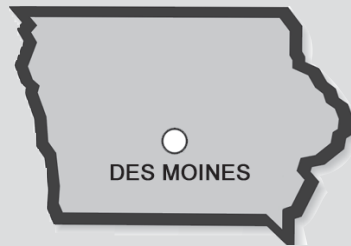


Alcan Packaging

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Alcan Packaging of Des Moines, formally known as Pechiney Plastic Packaging, is now a division of its parent company Alcan. Alcan's Packaging division is among the top ranked packaging companies in the world in providing food grade packaging. The plant, like its parent company, prides itself in environmental, health, and safety performance including reducing its environmental footprint.

Project Background

Alcan Packaging of Des Moines is ISO 9001, ISO 14001, and OHSAS 18001 certified. Alcan continuously implements programs to reduce its environmental footprint. The plant's waste streams are monitored monthly and waste reduction goals are set annually. Along with these goals, company directives also require the facility to regularly investigate energy saving opportunities.

Incentives to Change

Alcan must maintain their ISO and OHSAS certification to remain a leader in the areas of environmental, health, and safety. Reducing waste and energy demand gives Alcan an edge in the business market and proves to communities that Alcan is a company that cares about the environment and the health and safety of its employees. Some of the major opportunities include:

- Plant Lighting
- Compressor Efficiency
- Paper Recycling
- Pallet Recovery

Current waste levels are on the way to meeting this year's goal of 89 percent solid waste recycled, and energy demand reduction opportunities are regularly being investigated.

Results

Plant Lighting Alcan has a variety of light fixtures including MH-HID, HPS-HID, Fluorescent T8 and T12, and even incandescent lighting. The project survey revealed that installing updated lighting fixtures could result in reduced energy demand, cost savings and improved facility lighting. Replacing MH-HID lighting with fluorescent HO-T5

lighting could result in savings of around \$48,000 annually and an energy reduction of around 1.2 million kWh a year. The payback period of this project can be dramatically reduced by applying for MidAmerican Energy rebates as well as an EPC Act tax incentive for reducing energy demand.

Compressor Efficiency

Alcan uses over 2,000 CFM of air in daily operations. Air leaks in compressor lines around the plant were discovered and savings of 450 CFM and \$25,000 a year in air compressor energy savings will be realized by fixing these leaks. Further maintenance during shutdown times could prove to save up to 900 CFM with savings of \$50,000 a year, with little or no investment. It is recommended that Alcan fix the leaks identified and further investigate leaks during shutdown time.

Paper Recycling and Pallet Recovery

Alcan currently recycles approximately 89 percent of its solid waste which will meet its yearly goal. Additional recycling programs need to be implemented to reach a higher goal next year. Two opportunities are paper recycling and pallet recovery.

The office uses approximately five tons of paper a year, which was contributing to its solid waste. An office recycling program was set up to further reduce solid waste and help meet the yearly goal.

The opportunity for pallet recovery was discovered while observing worker behavior around the facility's compactor. Six tons of pallets a year are used to seal off the end of each truck load to the landfill. Options were discussed with the compactor operators and signs were placed to prevent this behavior. As a result of these two projects, approximately eleven tons per year of solid waste will be diverted from the landfill.

Project	Annual Cost Savings	Environmental Results	Status
PLANT LIGHTING	\$48,500	1.2 million kWh per year	Recommended
COMPRESSOR EFFICIENCY	\$25,000 - \$50,000	450 – 900 cfm	Recommended
OFFICE RECYCLING	> \$300	5 tons per year diverted	Implemented
PALLET RECOVERY	> \$400	6 tons per year diverted	Implemented



Air Pollutants Diverted in Tons

	Total for all sectors
SO2	5.79
CO	0.60
NOX	2.74
VOC	0.10
LEAD	0.00
PM	0.14

Green House Gases Diverted in Tons (CO2 Equivalent)

	Total for all sectors
CO2	1,075.86
CH4	35.60
N2O	11.79
CFCS	13.12

