

OIL HEATER HEAT RECOVERY

*Energy Savings -
Payback Period:
1 year, 8 months.*



Problem: An existing facility was exhausting waste heat through two separate process oil heaters. Approximately 3,110,000 BTUH were being sent through each of two flue stacks.

Cost savings: \$300,000/year

Project Cost: \$480,000

Payback Period: 1 year 8 months.

Solution: We installed two direct contact economizers on the flue stacks of the two existing heat exchanger exhaust stacks. The waste heat was transferred to a closed loop water system. The heat was then transferred to preheated wash water for a potato feed system

through means of a plate and frame heat exchanger. This preheated the potato feed system from a temperature of 60 F to 110 F and adding heat to the potatoes. This outcome reduced the BTU's required to be input to the cooking oil, thus reducing the cost of cooking.

The project was performed with intent to minimize disruption of production. With most of the work being performed while in operation, the final installation and start-up was performed over an extended weekend outage.