West Liberty Foods, LLC

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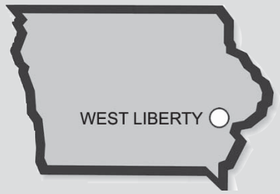


West Liberty Foods was formed by 47 Iowa-based turkey growers and is a leading co-packer, private label manufacturer and food service supplier of sliced processed meat and poultry products. West Liberty Foods has the ability to manufacture all types of sliced processed meat or poultry (ham, turkey breast, salami, etc.) or can slice and package supplied logs.

Project Background

The main focus for the internship was a reduction in energy use with respect to the HVAC system in the facility. The goal of the company is to reduce the electric bill by approximately 10 percent over the next three years. Because of the large number of cooling and production systems located throughout the facility, the utilization of electric motors for compressors, evaporator fans, condenser fans, pumps and conveyor belts is needed. In addition to studying the HVAC systems, a power factor correction and biofuel project were undertaken in order to help reduce energy costs as well as environmental impact. Research on West Liberty Foods joining the Chicago Climate Exchange was also considered.

Incentives to Change

West Liberty Foods is committed to preserving natural resources, protection of our shared waters, and to community involvement. The company's environmental operations are conducted in compliance with applicable environmental laws and regulations. West Liberty Foods strives to continuously improve environmental procedures and policies, while communicating its commitment to employees, vendors, customers and the public.

Results

Electric Motor Evaluation

West Liberty Foods has approximately six hundred electric motors in use plantwide. Very few of these motors have a premium efficiency rating for their application. By implementing a purchasing program as well as motor inventory software (Motor Master 4.0) more energy efficient motors can be purchased for plant applications. This will lower operational energy costs in the future, thereby saving money, energy and natural resources.

Biodiesel Fuel in Exchange of Diesel Fuel

West Liberty Foods sells nearly two million pounds of waste soybean oil from process cooking each year. This oil could be refined and reused as a fuel to power all of the diesel engine vehicles. With rising energy prices and the current push towards alternative fuels and energy independence, West Liberty Foods has a unique opportunity to use one of its current waste products as a fuel source and therefore become more self sufficient.

Biodiesel Fuel in Exchange of Natural Gas

By retrofitting the burner of a boiler, the vegetable oil once used for cooking can again be used as a fuel for the boilers. By making the change to a bio fuel instead of natural gas in the boilers, 20 percent or 33,500 MMBtu of natural gas use can be diverted.

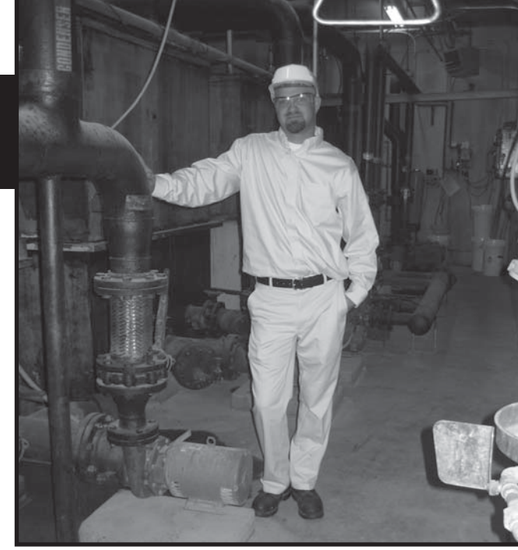
Power Factor Correction

A plant's power factor is a measure of how efficiently purchased electrical power is being used. A high power factor (near 1) indicates efficient utilization, while a lower power factor indicates a poor utilization of the electrical power. By correcting the power factor, electric utility bills can be reduced, electric system capacity will increase, and losses in the system will be reduced. A detailed analysis on a system by system basis must be done in order to more accurately determine savings plantwide.

Chicago Climate Exchange

The Chicago Climate Exchange or CCX is a voluntary emissions trading market. The market allows companies to buy and sell carbon credits based on a cap that is placed on the company. The cap is determined from prior emissions records. If the goals of emission diversion are reached, the extra carbon credits can be sold on the market at the current market price.

Project	Annual Cost Savings	Environmental Results	Status
ELECTRIC MOTOR EVALUATION	$90,500	1.8 million kWh	Implemented
BIODIESEL VS. DIESEL	$492,000	176,000 gallons of diesel 33,500MMBtu	Identified
BIODIESEL VS. NATURAL GAS	$135,000	1,608,000 Hundred ft^3 33,500 MMBtu	Identified
POWER FACTOR CORRECTION	Up to $358,000	Up to 5.5 million kWh	Recommended
CHICAGO CLIMATE EXCHANGE	$13,225	Up to 7,540 MTCO2	Recommended



Air Pollutants Diverted in Tons

	Total for all sectors
SO2	26.7
CO	2.7
NOX	12.7
VOC	0.44
LEAD	0.0
PM	0.64

Green House Gases Diverted in Tons (CO2 Equivalent)

	Total for all sectors
CO2	4,988
CH4	164.0
N2O	54.3
CFCS	60.3