

Project Overview

P3 Intern: Jared Coe

Major: Mechanical Engineering

School: University of Nebraska-Lincoln



Company Background

Emerging from a six-business conglomerate, in 1999, Tenneco Automotive became a stand-alone entity. In 2005, to better represent its service in an expanding number of markets, the company rebranded its name to Tenneco. During the early part of the 21st century, Tenneco greatly expanded its global footprint. Today, Tenneco is made up of four complementary, diverse business groups: Clean Air, Performance Solutions, Motorparts, and Powertrain. Tenneco is constantly changing and expanding while thinking about environmentally friendly efficiency to help lead the automotive industry and other markets into the future.

Project Description

During the summer of 2023, Tenneco connected with Partners in Pollution Prevention (P3) to become a more environmentally friendly manufacturing facility. Specific tasks include: quantifying and reducing solid waste streams, reducing natural gas use and bulk gas shipments, and reducing hydraulic oil through source reductions and a maintenance equipment plan. Jared Coe worked to reduce waste streams throughout the facility, increase efficiencies in production lines, and improve overall safety.

Pollution Prevention Benefits

The presented recommendations will improve the environmental impact of Tenneco and create a more environmentally friendly company by conserving resources and energy. In addition, several of the suggestions will improve efficiencies in production lines and increase the safety and working environment for employees.

Results

The pollution prevention benefits and results are given in Table 1.

Table 1: Pollution Prevention Benefits and Results of the Project

Opportunity	Annual Cost Savings	Annual Reductions	Annual GHG Reductions (MTCO_{2e})
General	\$41,000	316,740 kWh	305
Solid Waste	\$45,200	540 lbs of metal 3,100 gallons of diesel	33.7
Natural Gas	\$30,000	350 gallons of diesel	3.6
Hydraulic Oil	\$40,400	2,700 gallons of hydraulic oil 12,000 lbs of oil absorbents	40.6
Total	\$156,600	-	382.9