Project Overview

P3 Intern: Aiden Girthoffer
Major: Chemical Engineering
School: University of Nebraska-Lincoln

Company/Facility Background
Smithfield Foods is a pork processing company that was founded in Smithfield, Virginia in 1936. As of today, Smithfield is the largest pork producer in the world with worldwide sales figures measuring to roughly $16 billion in sales as of 2019, over 55,000 employees worldwide, and growth in production every year. The Omaha Smithfield Facility has operated under several company names since the facility was built in 1919, the most recent of which have been John Morell Food Group, Armour-Eckrich Meats, and now Smithfield. The Omaha facility produces dry-aged meats, with primary production focus in pepperoni and salami.

Project Description
In the summer of 2022, Partners in Pollution Prevention intern Aiden Girthoffer was assigned to the Omaha Smithfield facility to help to reduce utility usage in their operations. The primary projects through which this was achieved are the replacement of a steam stick washer to a recirculating unit and reduction of water usage in the stuffing department. Additionally, the intern worked with the facility's environmental lead to increase recycling efforts to reduce solid waste output.

Pollution Prevention Benefits

Recommendation	Tangible/Material Benefits (Annual)	Annual Cost Savings	Payback Period
Reducing CO_2 Usage Per Blend	337,409 lbs. CO2/year (153 Metric Tons CO2)	$168,705	.008 years (3 days)
Increased Recycling Efforts	7 Tons Plastic recycled, 231 Tons Paper/Casings sent to Compost	$41,992	0.083 years (1 month)
Stuffing Flow Limiter Valves	1.83 Million Gallons Water, 505,621,000 BTU Natural Gas	$12,281	0.03-0.08 years (less than 1 month)
Oven Exhaust Cycling	991,000 Gallons of Water	$5,708	.24 years (3 months)
Decommission of Stick Wash Rinse	4.99 Million Gallons of Water, 1,302,913,125 BTU Natural Gas	$42,058	0.12 years (1.4 months)
	Total Monetary Impacts:	$270,744	
	Total GHG Emission Reduction:	248.69 $MTCO_2$	