



# Lorentz Meats

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## Company

Lorentz Meats is a full-service, USDA inspected, meat processing business, from slaughter to retail-ready packaging, serving a range of small to medium producers.

## Intern Project

Optimize the industrial refrigeration system used in the plant for its continual cold storage needs and analyze the water usage of the various meat processing and sanitation practices for potential reductions.

## Incentives to Change

Optimization has the potential to markedly decrease the overall energy usage, saving money by operating more efficiently and requiring less power at any given time.



## Solutions

### Vary Floating Head Pressure:

Allowing the refrigeration compressor head pressure to vary with temperatures permits the compressors to run at a lower pressure during colder weather

### Adjust Fan Speed With VFDs:

Since the refrigeration system condensers rarely operate at capacity, adjusting fan speed with a VFD saves energy and utilizes the whole condenser more fully

### Install Electronically Commutated Motors for Evaporator Fans:

Requires less energy, has softer start-ups, and longer life expectancy compared to the traditional motor



### Clean Condenser Coils:

Decreases fan run hours which allows greater condensing capacity and tighter head pressure control

### Optimize Carcass Cleaner Nozzles:

Installing a shutoff allows the full height of the carcass cleaning cabinet to be utilized only when necessary