

# Miller Manufacturing - Waste Reduction

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**Driven to Discover<sup>SM</sup>**

# Company Background

- Frandsen Corporation owned
- Farm, ranch, and pet products



- Anoka = Plastic parts
- Glencoe = 1200+ Products under the brands of
  - Little Giant, Hot-Shot, Pet Lodge, Springer Magrath, Double-Tuf and API.

# Incentive to Change

## Incentives

- Reducing consumption
- Ongoing expenses
- Sustainability

## Action Plan

- Reduce packaging, electricity, and heating
- Increase Sustainability:
  - Climate Change
  - Geopolitics
  - Supply chain

# Packaging Reduction

## Plastic Shrink Wrap

- 50 Pallets from Glencoe to Anoka per week
- 2,000-4,000 lb./yr.
- 11–16-month payback



Figure 1: Reusable Pallet Wrap

# Packaging Recommendations

## Immediate Solution

- 50 pallet wraps for Glencoe to Anoka
- Return with reusable gaylords

## Future Use

- Pallet Wraps for boxed items
- Reusable gaylords for plastic Anoka items

# Energy Efficiency

## Backup Fuel Source

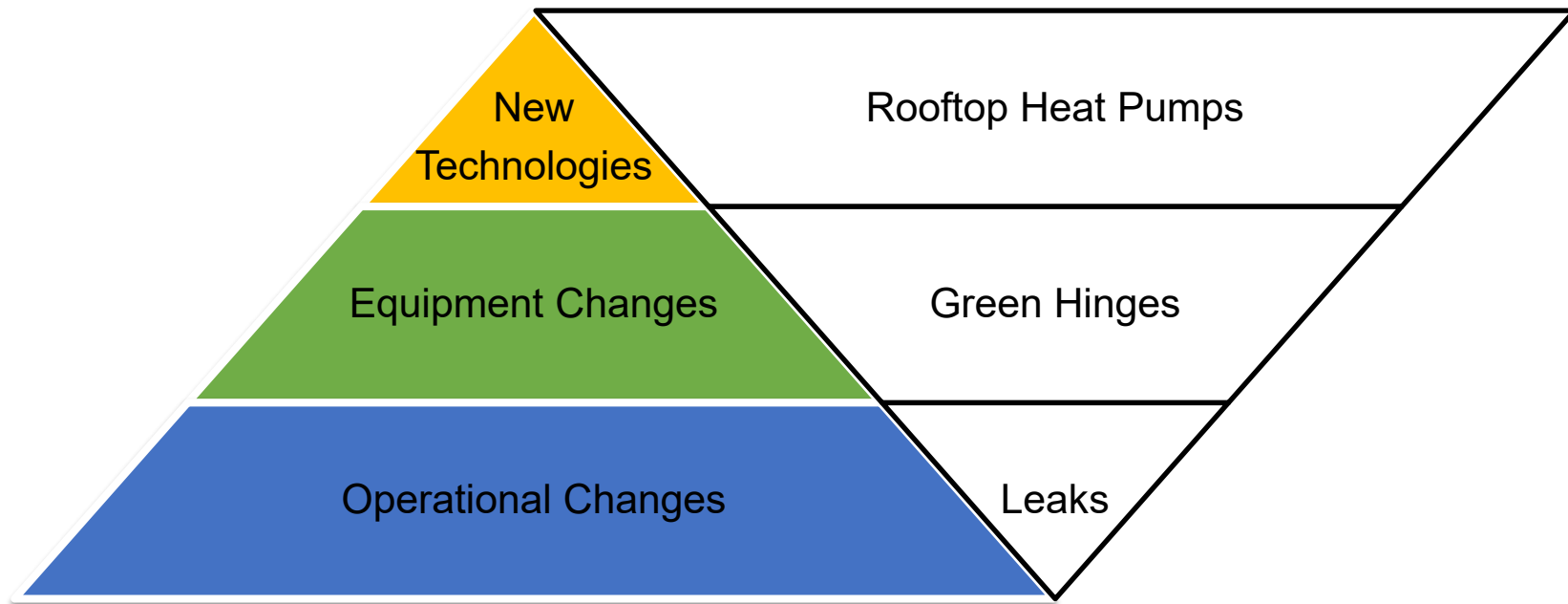
- Current: Propane Tank
- Goal: Forward Thinking Sustainability

Proposed: Heat Pumps



Figure 2: Propane Tank

- Current: Reduce Loads
- Future: Heat Pumps



**Figure 3: Potential Priority Pyramid**

# Solutions

Recommendation	Annual reduction	Total cost	Annual savings	Payback period	Status
Pallet Wraps	3,000 lb	\$7,000	\$6,000	14 months	Testing
Air Study	18,000 kWh	\$1,500	\$1,000	18 months	Implementing
Temperature Control	6,500 therms	\$0	\$5,000	1 month	Implementing
Dock Leveler Sweeps	160 therms	\$1,000	\$250	4 years	Recommended
Exhaust Fans Occupancy Sensors	300 therms	\$2,000	\$2,000	1 year	Recommended
Green Hinges	3,000 therms	\$3,900	\$2,200	22 months	Recommended

# Personal Benefits

## Learning Experience

### Workplace Acumen

- Speak up
- Reach out to vendors

### Business Logistics

- Supply Chain
- Executive Mindset

