



Field Study:

# Pellston General Store

Pellston, Michigan

## The Reihl Coil Evaporator Technology

At a mid-sized grocery/convenience store location in Emmet County, Arnold’s Refrigeration installed a CoolVap Evaporator Coil on a walk-in dairy display case. Through the use of electrical monitoring equipment, they were able to determine the upgrade brought a reduction of 53% of the kilowatt hours used between the evaporator coil and the condensing unit in late May and early June. For this particular business, changing the evaporator coil in one walk-in cooler display case equaled an *estimated* annual savings of 7,380 kilowatts or \$738.

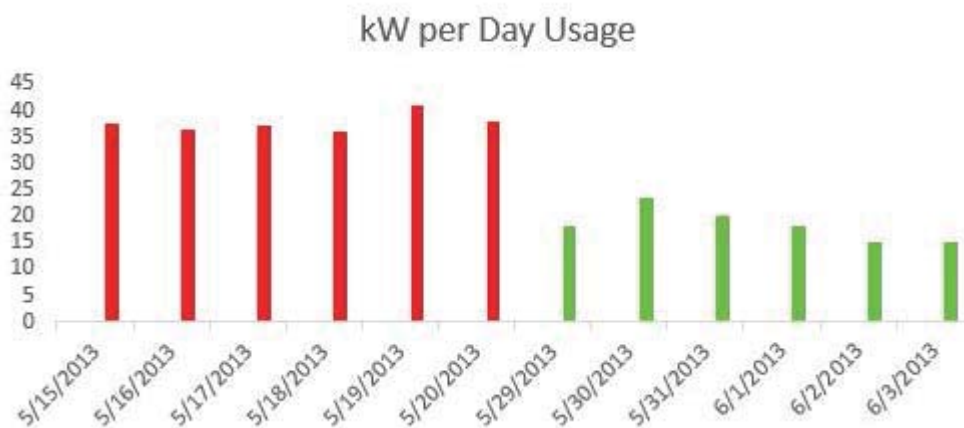
Though the evaporator and condenser showed a savings of 53% during this period, with further adjusting of the system, Arnold’s Refrigeration believes their customer will see **even more savings**

Conservatively assuming 28% of the total electric usage of the business is for refrigeration, if all of the evaporator coils are changed at this location and the savings of 53% is constant, the total annual kilowatts used would be reduced by approximately seventy three thousand and cost savings would be approximately \$8,066 annually. If the preexisting refrigeration system was less efficient and accounted for 38% of the total electric usage, total annual kilowatts used would be reduced by approximately ninety nine thousand and cost savings would be approximately \$10,947 annually.

The charts below show the 53% combined decrease in kilowatts used and cost per day for the evaporator and condensing unit on the walk-in display cooler in the time period before (pre test) and after (post test) the evaporator was upgraded to the CoolVap technology.

Red indicates Pre-Reihl Coil Installation Data

Green indicates Post-Reihl Coil Installation Data





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## What Can This Technology do for You? - Determine Your Potential Cost Savings

In order to calculate a rough estimate of potential savings for your food sales or food service business, first find the total annual kilowatt hours and costs from your recent electric utility bills. So as to not overestimate savings, assume that 28% of the total kilowatts are used for refrigeration.<sup>1</sup> Next, calculate 53% of that number; this number is a conservative estimate of your potential savings. The following table shows the potential savings in an example business that uses 500,000 KW of electricity per year.

Total Annual KW Used	Total Annual KW Cost at \$0.11/KW	Refrigeration Cost National Average %	Annual KW Used for Refrigeration	Annual KW Cost Used for Refrigeration	Estimated Annual KW Refrigeration Savings with CoolVap Coil (53%)	Estimated Annual KW Refrigeration Cost Savings with CoolVap Coil (53%)
500,000	\$55,000	28%	140,000	\$15,400	<b>74,200</b>	<b>\$8,162</b>

This study was completed by the previous owner of the product known as CoolVap.

<sup>1</sup> If the existing refrigeration system in your business is less efficient, your savings could increase beyond the numbers shown here.