

Great Lakes Adventist Academy

Cedar Lake, Michigan

The Reihl Coil Evaporator Technology

At an institutionally sized cafeteria location in Iosco County, Eco Refrigeration from Rockford, MI installed The Reihl Coil in two high-activity coolers. Through the use of electrical monitoring equipment, they were able to determine the upgrade brought a reduction of almost 69% of the kilowatt hours used between the evaporator coil and the condensing unit in late November and early December. For this particular business, changing the evaporator coil in a single refrigeration unit equates to an estimated annual savings of 10,500 kilowatts or \$1,259.

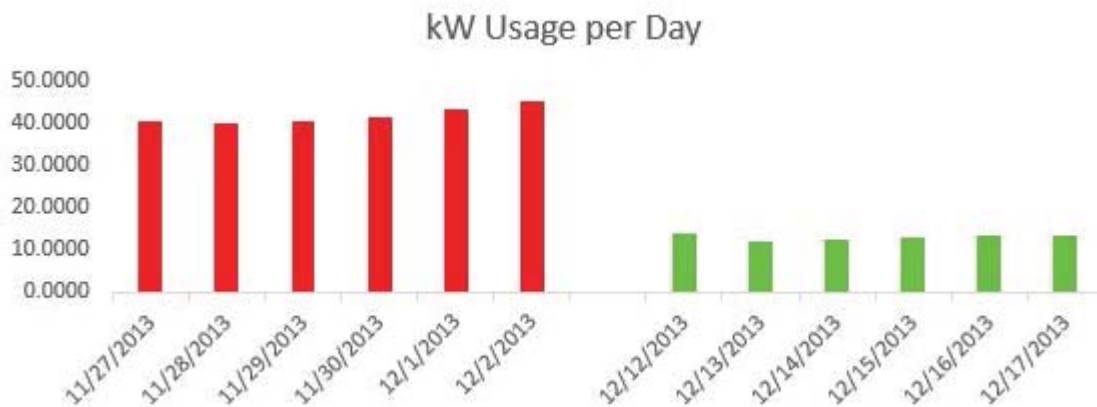
Though the evaporator and condenser showed a savings of 69% during the period, with further adjusting of the system Eco Refrigeration believes their customer will see even more savings.

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 69% is constant, the total annual kilowatts used would be reduced by approximately 21,000 and cost savings would be approximately \$2,500. This takes into consideration that GLAA (Great Lakes Adventist Academy) has two of these refrigeration units currently in service.

The charts below show the 69% combined decrease in kilowatts used and cost per day for the evaporator and condensing unit on the refrigeration unit in the time period before (pre test) and after (post test) the evaporator was upgraded to The Reihl Coil technology.

Red indicates Pre-Reihl Coil Installation Data

Green indicates Post-Reihl Coil Installation Data





Real Energy
REFRIGERATION INNOVATION

Field Study:

Great Lakes Adventist Academy

Cedar Lake, Michigan



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.¹ Next, calculate 69% of that number; this number is a conservative estimate of your potential savings.

Monthly	Preinstall	Post-install	Savings	Efficiency Improvement
Condenser:	489.08	327.66	161.42	33%
Fans:	769.74	68.23	701.51	91%
Composite:	1258.82	395.89	862.93	69%
Cost (0.12¢/kWh):	\$ 151.06	\$ 47.51	\$ 103.55	

Yearly	Preinstall	Post-install	Savings	Efficiency Improvement
Condenser:	5950.51	3986.56	1963.95	33%
Fans:	9365.17	830.15	8535.02	91%
Composite:	15315.68	4816.71	10498.97	69%
Cost (0.12¢/kWh):	\$ 1,837.88	\$ 578.00	\$ 1,259.88	

System Efficiency Improvement = 69%

Calculation Equations
System Composite Energy = Condenser Energy + Fans Energy
Efficiency Improvement = ((Pre Install Energy - Post Install Energy)/Pre Install Energy) X 100%

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

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