Is Food *Warming* Burning a Hole in Your Profit?

Electric food warming equipment uses more electricity than you might think. As electricity prices rise, the cost to operate this equipment also increases and can cut into profits.

As an example, let's take the electric pizza conveyor oven. This type of oven has a duty cycle of 50%, meaning that the appliance actively draws electricity about 50% of the time it is 'on'. In this example, the conveyor oven is 'on' ten hours a day, so actively drawing electricity about five hours a day.

Below are steps you can take to manage deli and kitchen energy use and cost:

- Clean equipment regularly.
- Turn off equipment during anticipated slow times.
- Replace older model fryers, griddles, hot food holding cabinets and ovens with ENERGY STAR® qualified models that are 20% to 30% more efficient than standard models. Go to **www.energystar.gov** for more information.

What Does It Cost to Operate a 40 kW Pizza Conveyor Oven Daily?

40 kW x 10 hours per day x 50% duty cycle = 200 kWh of electricity daily

200 kWh x $0.10 per kWh charge from utility = $20 a day before taxes and surcharges.

Are you selling enough pizzas to cover this cost and still make a profit?

For more information about the duty cycles of other common deli equipment, please see the other side of this page.

MACED Energy Efficient ENTERPRISES

www.maced.org

Deli Equipment – Electricity "Cost to Operate" Calculator

Use this calculator for equipment that has variable duty cycles. To get the % duty cycle which is typical of your equipment, use the table below. **A Microsoft Excel version is also available on our website at www.maced.org/E3/convenience-store.htm.**

kW x % = kW x h/d = kWh daily x kWh rate from utility = $ cost for electricity per day

Refer to table to get duty cycle.

Enter the daily hours of operation for this piece of equipment

For a full listing of utility rates in eastern Kentucky, go to www.maced.org/E3/E3-chart.htm

x 30 days

$ cost for electricity per month

x 12 months

$ cost for electricity per year

Kilowatt Calculator

If you have equipment that doesn't list kW information on its electric plate, but does list Amps and Volts, use this calculator:

_____ Amps x _____ Volts = _____ Watts

To convert Watts to Kilowatts, divide the Watts figure by 1,000.

NOTE: Electric plates are attached to equipment as a safety UL listing requirement. To get the most accurate measure of how much electricity equipment actually uses, we recommend using a 220-V plug in Watts Up? Meter to measure electricity usage over time. One of these meters can be borrowed from MACED's Energy Audit Equipment Library for free.

ELECTRIC FOODWARMING EQUIPMENT – DUTY CYCLES

	Duty Cycle (%)
Ovens	
Standard/Convection/ Combination:	
Full-size	25
Half-size	25
Countertop	25
Deck	20
Conveyor	50
Rotisserie	65
Fryers	
Open Deep Fat	20
Pressure/Kettle	33
Flat Bottom:	
Chicken/Fish	20
Donut	14
Griddles	
Single Sided	25
Broilers	
Charbroiler	70
Overfired	70
Steamers	
Pressure	12
Pressureless:	
Boiler-based	20
Connectionless	14

GAS FOODWARMING EQUIPMENT – DUTY CYCLES

	Duty Cycle (%)
Ovens	
Standard/Convection/ Combination:	
Full-size	35
Half-size	40
Countertop	40
Deck	30
Conveyor	50
Rotisserie	60
Fryers	
Open Deep Fat	20
Pressure/Kettle	30
Chicken/Fish	20
Griddles	
Single Sided	34
Broilers	
Charbroiler	80
Overfired	70
Steamers	
Pressure	15
Pressureless	15

For more information or help with specific projects, contact MACED's Energy Efficient Enterprises team at 859-986-2373. Ask for Elizabeth Graves or Joshua Bills.