

## How much do various food heating methods cost?

	Temperature	Time	Energy Used	Cost
	(degrees F)			
Electric oven	350	1 hr.	2.0 kWh	\$0.20
Gas oven, electric ignition	350	1 hr.	0.112 therm +0.35 kWh	\$0.18
Gas oven, pilot	350	1 hr.	0.112 therm	\$0.15
Electric oven, convection	325	45 min.	1.39 kWh	\$0.14
Toaster oven	425	50 min.	0.95 kWh	\$0.10
Crockpot	200	7 hours	0.70 kWh	\$0.07
<b>Microwave oven</b>	High	<b>15 minutes</b>	0.36 kWh	<b>\$0.04</b>

From Citizens Campaign for the Environment, and Home Energy 1993 and 2001. As seen on <http://michaelbluejay.com/electricity/cooking.html>

Assumes \$0.10/kWh for electricity and \$1.30/therm for gas

Relative Cost of Operation for Ovens	
Cooking Method	Relative Cost
<b>Microwave</b>	<b>1</b>
Electric, standard	4.8
Electric, self-cleaning	4.1
Electric, self-cleaning, convection	3.4

*Note: Costs are in terms of how much electricity an oven would use for a task relative to a microwave oven. For instance, if it costs \$.10 to cook an item in a microwave, it would cost approximately \$.48 in a standard electric oven.\**

Efficiency of Ovens		
Cooking Method	Cooking Efficiency (%)	Energy Factor (%)
<b>Microwave</b>	<b>57.5</b>	<b>57.5</b>
Electric, standard	12.1	10.9
Electric, self-cleaning	13.9	10.2
Electric, self-cleaning, convection	17.1	13.4
Gas, pilot light	5.9	3.5
Gas, electronic ignition	6.1	5.8
Gas, electronic ignition, self-cleaning	7.1	5.8
Gas, electronic ignition, self-cleaning, convection	8.7	7.4

*Note: Cooking efficiency is the fraction of energy supplied to the unit that heats food during a typical cooking cycle. Energy factor is the ratio of energy that is effectively used to heat food to the the total energy used.\**