Annual Operating Costs for Gas Appliances

April 2010

Natural Gas Appliance	Annual Gas Use (Therms/year)	Appliance Operating Costs* Monthly	Yearly
Furnace			
Average M.U.D. Residential Gas Customer			
Over the past 3 heating seasons, a typical home in the Omaha metropolitan area has needed to replace approximately 46 decatherms of lost space heating load. Based on this number, operating expenses for various furnaces would be as follows:			
80% Efficient Gas Furnace	581		$ 350
92% Efficient Gas Furnace	505		$ 304
95% Efficient Gas Furnace ***(Energy Star Rated)***	489		$ 294
Water Heater (Based on the DOE average of 64 gallons per day of hot water use)			
40 Gallon Models			
40,000 Btu/hr, 0.59 EF (Minimum Efficiency)	276	$ 14	$ 166
40,000 Btu/hr, 0.63 EF	258	$ 13	$ 156
Tankless Gas, 0.85 EF ***(Energy Star Rated)***	192	$ 10	$ 115
Clothes Dryer (275 hours of annual operation or one 45 minute load daily)			
5.8 cu. ft., 20,000 Btu/hr	55	$ 2.76	$ 33
7.3 cu. ft., 25,000 Btu/hr	69	$ 3.45	$ 41
Free Standing Range (Operating 2 burners for 10 minutes daily and operating the oven 3 hours weekly)			
4 Burners (each @ 9,500 BTU/hr) and a single oven burner at 18,000 btuh Btu/hr	40	$ 1.99	$ 24
Gas Fireplace & Gas Logs (120 Hours of Operation Yearly)			
30,000 Btu/hr	36		$ 22
40,000 Btu/hr	48		$ 29
60,000 Btu/hr	72		$ 43
72,000 Btu/hr	86		$ 52
90,000 Btu/hr	108		$ 65
Outdoor Yard Light (Operates 24 Hours/day, 365 days/year)			
Dual Mantle - 2,427 Btu/hr	210	$ 11	$ 126
Triple Mantle - 3,451 Btu/hr	302	$ 15	$ 182
Quad Mantle - 4,399 Btu/hr	385	$ 19	$ 232
Outdoor Grille (60 Hours of Operation Yearly)			
2-Burners: 25,000 Btu/hr	15	$ 0.75	$ 9
2-Burners: 32,000 Btu/hr	19	$ 0.96	$ 12
Pool Heaters (120 Hours of Operation Yearly)			
200,000 Btu/hr (0.88 EF)	240	$ 12	$ 144
300,000 Btu/hr (0.88 EF)	360	$ 18	$ 217
400,000 Btu/hr (0.88 EF)	480	$ 24	$ 289

Hours of Operation are based on an average home in Omaha

* Costs are based on the Average MUD Schedule A Residential Gas Rate over the past 18 Months = $0.602 per therm

Appliance Operating Cost Comparisons

April 2010

Space Heating Cost Comparison for Average M.U.D. Residential Customer

Heating System	Annual Operating Cost[1]	Annual Savings (Using 92% Efficient Furnace as a baseline)
Gas Furnace (80% Efficiency)	$ 350	$ 46 more expensive
Gas Furnace (92% Efficiency)	$ 304	
Gas Furnace (95% Efficiency)	$ 294	$ 10 less expensive
Electric Furnace	$ 1,089	$ 785 more expensive
Heat Pump (8.00 HSPF) w/ Electric Furnace Backup	$ 676	$ 372 more expensive
Heat Pump (8.00 HSPF) w/ 95% Eff. Backup Furnace	$ 356	$ 52 more expensive

[1]Annual Operating Cost assumes an electric rate of 8 cents per kWh, a gas rate of $0.602 per therm and an annual space heating load of 46 decatherms. Heat Pump systems assume a switchover temperature of 22°F.

Water Heating Cost Comparison

Water Heater	Annual Operating Cost[2]	Annual Savings (Using a 0.59 EF Water Heater as a baseline)
Gas Water Heater (40,000 Btu/hr, 0.59 EF)	$ 166	
Gas Water Heater (40,000 Btu/hr, 0.63 EF)	$ 156	$ 11 less expensive
Gas Water Heater (Tankless, 0.85 EF)	$ 115	$ 51 less expensive
Electric Water Heater (5000 Watts, 0.90 EF)	$ 410	$ 244 more expensive

[2]Annual Operating Cost assumes an electric rate of 8 cents per kWh and a gas rate of $0.602 per therm. Daily hot water use is based on the Department of Energy 64 gallons per day National Average.

Dryer Cost Comparison

Dryer	Annual Operating Cost[3]	Annual Savings Using a Gas Dryer
Gas Dryer (5.8 cu. ft., 20,000 Btu/hr)	$ 33	$ 64
Electric Dryer (5.8 cu. ft, 5600 Watts)	$ 97	

[3]Annual Operating Cost assumes an electric rate of 8 cents per kWh and a gas rate of $0.602 per therm. Annual use is based on the DOE 2001 End-Use Consumption of Electricity report.

Free Standing Range (Includes 4 cooktop burners with single oven)

Range, Oven, or Cooktop	Annual Operating Cost[4]	Annual Savings Using a Gas Range
Gas Range (9,500 Btu/hr burner, 18,000 Btu/hr oven burner)	$ 24	$ 64
Electric Range (2 kW/burner, 3 kW oven burner)	$ 88	

[4]Annual Operating Cost assumes an electric rate of 8 cents per kWh and a gas rate of $0.602 per therm. Annual use is based on the DOE 2001 End-Use Consumption of Electricity report.

How Much Can You Save??

By simply lowering the thermostat in your home you can save on your monthly heating bills.

Lowering your Thermostat by...	*Will Save You...*
1°	**3.6%**
2°	**7.1%**
3°	**10.7%**
5°	**17.6%**
7°	**24.2%**

You can also reduce your energy bills from 5 to 15 percent by setting back your thermostat 5 to 15 degrees for 8 hours nightly.