

# Fuel price break-even points

This table shows the prices fossil fuels must reach to break even with electricity.

## South Dakota

Electricity 3,413 Btu/kilowatt-hour

Propane			91,800 Btu/gallon			
			Furnace efficiency			
		Price/kwh	60%	70%	80%	90%
165/170	Dual fuel with CT metering	\$ 0.03445	\$0.56	\$0.65	\$0.74	\$0.83
168/169	Dual fuel with CT meter and ancillary load	\$ 0.03696	\$0.60	\$0.70	\$0.80	\$0.89
190	Dual fuel with self-contained metering	\$ 0.03993	\$0.64	\$0.75	\$0.86	\$0.97
191	Off-peak water heating - <b>winter</b>	\$ 0.05799	\$0.94	\$1.09	\$1.25	\$1.40
191	Off-peak water heating - <b>summer</b>	\$ 0.05938	\$0.96	\$1.12	\$1.28	\$1.44
195/197	Deferred load	\$ 0.04705	\$0.76	\$0.89	\$1.01	\$1.14
301 & 302	Fixed time of delivery 10PM - 6AM	\$ 0.03087	\$0.50	\$0.58	\$0.66	\$0.75
303	Fixed time of delivery 10PM - 6AM - Primary service	\$ 0.03074	\$0.50	\$0.58	\$0.66	\$0.74
	2008 average residential general service	\$ 0.0776	\$1.25	\$1.46	\$1.67	\$1.88

Natural gas			1,000,000 Btu/MCF			
			Furnace efficiency			
		Price/kwh	60%	70%	80%	90%
165/170	Dual fuel with CT metering	\$ 0.03445	\$ 6.06	\$ 7.07	\$ 8.08	\$ 9.08
168/169	Dual fuel with CT meter and ancillary load	\$ 0.03696	\$ 6.5	\$ 7.58	\$ 8.66	\$ 9.75
190	Dual fuel with self-contained metering	\$ 0.03993	\$ 7.02	\$ 8.19	\$ 9.36	\$10.53
191	Off-peak water heating - <b>winter</b>	\$ 0.05799	\$ 10.19	\$ 11.89	\$ 13.59	\$15.29
191	Off-peak water heating - <b>summer</b>	\$ 0.05938	\$ 10.44	\$ 12.18	\$ 13.92	\$15.66
195/197	Deferred load	\$ 0.04705	\$ 8.27	\$ 9.65	\$ 11.03	\$12.41
301 & 302	Fixed time of delivery 10PM - 6AM	\$ 0.03087	\$ 5.43	\$ 6.33	\$ 7.24	\$ 8.14
303	Fixed time of delivery 10PM - 6AM - Primary service	\$ 0.03074	\$ 5.40	\$ 6.30	\$ 7.21	\$ 8.11
	2008 average residential general service	\$ 0.0776	\$ 13.64	\$ 15.92	\$ 18.19	\$20.46

Heating oil			140,000 Btu/gallon		
			Furnace efficiency		
		Price/kwh	60%	70%	80%
165/170	Dual fuel with CT metering	\$ 0.03445	\$0.85	\$0.99	\$1.13
168/169	Dual fuel with CT meter and ancillary load	\$ 0.03696	\$0.91	\$1.06	\$1.21
190	Dual fuel with self-contained metering	\$ 0.03993	\$0.98	\$1.15	\$1.31
191	Off-peak water heating - <b>winter</b>	\$ 0.05799	\$1.43	\$1.67	\$1.90
191	Off-peak water heating - <b>summer</b>	\$ 0.05938	\$1.46	\$1.71	\$1.95
195/197	Deferred load	\$ 0.04705	\$1.16	\$1.35	\$1.54
301 & 302	Fixed time of delivery 10PM - 6AM	\$ 0.03087	\$0.76	\$0.89	\$1.01
303	Fixed time of delivery 10PM - 6AM - Primary service	\$ 0.03074	\$0.76	\$0.88	\$1.01
	2008 average residential general service	\$ 0.0776	\$1.91	\$2.23	\$2.55

**Customer charge, facilities charge, riders, and cost-of-energy and other adjustments not included.**

To find the break-even point when comparing fossil fuel with the operating cost of a **geothermal heat pump** DIVIDE the fossil fuel price by 3. A geothermal heat pump is more than 300 percent efficient and provides more than three units of heat for each unit of energy it uses.

Prices used are based on winter season rates unless otherwise noted. Calculations are rounded to the nearest penny. Winter rates are in effect October 1 through May 31. Summer rates are in effect June 1 through September 30.