

SINGLE-FAMILY HOME OPERATING COSTS: NATURAL GAS VS. RESIDENTIAL HEATING OIL, PROPANE AND ELECTRIC¹

Average costs for a three person, 2,300 square foot single-family home in the DC metropolitan region utilizing space heating, water heating, cooking and drying.

Equipment Description	Estimated Annual Operating Costs			Savings if Converted to Natural Gas		
	DC	MD	VA	DC ²	MD ³	VA ⁴
Space Heating						
Natural Gas - Average Furnace, 80% AFUE	\$701	\$685	\$581	-	-	-
Residential Heating Oil (#2) - Average Furnace, 83% AFUE	\$1,415	\$1,415	\$1,517	\$714	\$730	\$936
Propane - Average Furnace, 80% AFUE	\$1,704	\$1,704	\$1,873	\$1,003	\$1,019	\$1,292
Electric - Standard Efficiency Heat Pump, 8.7 HSPF	\$854	\$958	\$965	\$153	\$273	\$384
Natural Gas - High Efficiency Furnace, 92% AFUE						
Natural Gas - High Efficiency Furnace, 92% AFUE	\$610	\$604	\$505	-	-	-
Residential Heating Oil (#2) - High Efficiency Furnace, 85% AFUE	\$1,382	\$1,382	\$1,520	\$772	\$778	\$1,015
Propane - High Efficiency Furnace, 92% AFUE	\$1,481	\$1,481	\$1,629	\$871	\$877	\$1,124
Electric - High Efficiency Heat Pump, 10 HSPF	\$799	\$765	\$872	\$189	\$161	\$367
Water Heating						
Natural Gas - Standard Water Heater, 0.62 EF	\$190	\$189	\$143	-	-	-
Residential Heating Oil (#2) - Standard Water Heater, 0.62 EF	\$399	\$399	\$399	\$209	\$210	\$256
Propane - Standard Water Heater, 0.62 EF	\$463	\$463	\$463	\$273	\$313	\$317
Electric - Standard Water Heater, 0.9 EF	\$445	\$465	\$419	\$255	\$276	\$276
Natural Gas - Condensing Tankless Water Heater, 0.95 EF						
Natural Gas - Condensing Tankless Water Heater, 0.95 EF	\$124	\$123	\$94	-	-	-
Propane - Condensing Tankless Water Heater, 0.95 EF	\$302	\$302	\$302	\$178	\$204	\$207
Electric - High-Performing Water Heater, 0.95 EF	\$442	\$440	\$397	\$318	\$317	\$303
Cooking						
Natural Gas - Standard Cooktop, 40% Efficient	\$56	\$56	\$42	-	-	-
Electric - Standard Cooktop, 74% Efficient	\$103	\$108	\$97	\$47	\$52	\$55
Clothes Drying⁵						
Natural Gas - Standard Dryer, 2.67 EF	\$42	\$41	\$32	-	-	-
Electric - Standard Dryer, 3.01 EF	\$126	\$131	\$119	\$84	\$90	\$87

Notes:

¹ All costs are obtained from the Energy Solutions Center, Inc. (ESC) Residential Energy Calculation, as of 5/13/22 (<https://esc.energydepot.com/user-information/home>)

² Washington, DC data obtained by selecting District of Columbia/Washington in calculator

³ Maryland data obtained by selecting Maryland/Baltimore in calculator

⁴ Virginia data obtained by selecting Virginia/Sterling in the calculator

⁵ Clothes drying costs are based on usage of 8 loads per week