

# SINGLE-FAMILY HOME OPERATING COSTS: NATURAL GAS VS. RESIDENTIAL HEATING OIL, PROPANE AND ELECTRIC<sup>1</sup>

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 <sup>2,6</sup>	MD <sup>3</sup>	VA <sup>4</sup>	DC <sup>2,6</sup>	MD <sup>3</sup>	VA <sup>4</sup>
<b>Space Heating</b>						
Natural Gas - Average Furnace, 80% AFUE	\$701	\$695	\$581	-	-	-
Residential Heating Oil (#2) - Average Furnace, 83% AFUE	\$1,276	\$1,276	\$1,403	\$575	\$581	\$822
Propane - Average Furnace, 80% AFUE	\$1,329	\$1,329	\$1,461	\$628	\$634	\$880
Electric - Standard Efficiency Heat Pump, 8.7 HSPF	\$854	\$958	\$965	\$153	\$263	\$384
<b>Natural Gas - High Efficiency Furnace, 92% AFUE</b>						
Natural Gas - High Efficiency Furnace, 92% AFUE	\$610	\$604	\$505	-	-	-
Residential Heating Oil (#2) - High Efficiency Furnace, 85% AFUE	\$1,246	\$1,246	\$1,370	\$636	\$642	\$865
Propane - High Efficiency Furnace, 92% AFUE	\$1,155	\$1,155	\$1,271	\$545	\$551	\$766
Electric - High Efficiency Heat Pump, 10 HSPF	\$769	\$865	\$872	\$159	\$261	\$367
<b>Water Heating</b>						
Natural Gas - Standard Water Heater, 0.62 EF	\$190	\$189	\$143	-	-	-
Residential Heating Oil (#2) - Standard Water Heater, 0.62 EF	\$359	\$359	\$359	\$169	\$170	\$216
Propane - Standard Water Heater, 0.62 EF	\$361	\$361	\$361	\$171	\$313	\$317
Electric - Standard Water Heater, 0.9 EF	\$445	\$465	\$419	\$255	\$276	\$276
<b>Natural Gas - Condensing Tankless Water Heater, 0.95 EF</b>						
Natural Gas - Condensing Tankless Water Heater, 0.95 EF	\$124	\$123	\$94	-	-	-
Propane - Condensing Tankless Water Heater, 0.95 EF	\$235	\$235	\$235	\$111	\$204	\$207
Electric - High-Performing Water Heater, 0.95 EF	\$442	\$440	\$397	\$318	\$317	\$303
<b>Cooking</b>						
Natural Gas - Standard Cooktop, 40% Efficient	\$56	\$56	\$42	-	-	-
Electric - Standard Cooktop, 74% Efficient	\$103	\$108	\$97	\$47	\$52	\$55
<b>Clothes Drying<sup>5</sup></b>						
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 1/25/23 (<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
- 6 Propane costs in DC are included for comparative purposes only