

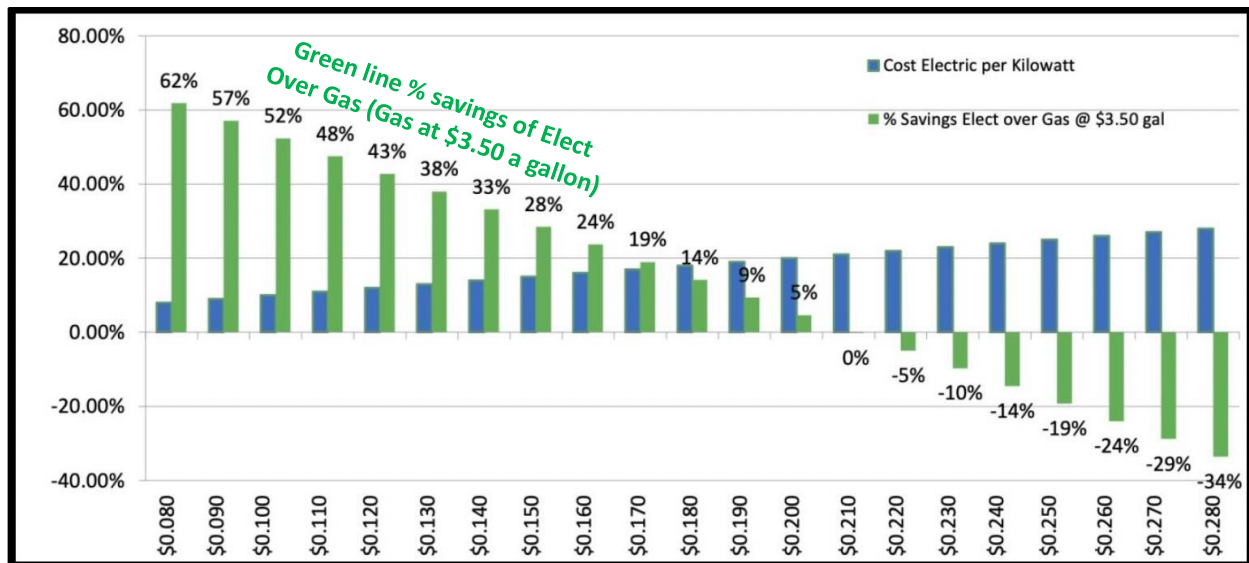


Cost of Operation Gas vs Electric

To get a true comparison of gas versus electric heating costs, we must first understand the real-world efficiency of RV gas furnaces. In our measurements, the average fuel efficiency of RV gas furnaces is 58.7%. This is the average efficiency we observed after checking several models from Dometic (Atwood) and Suburban operating in actual RV's. These tests were done using a Bacharach Combustion Flue Gas Analyzer which is an instrument used to determine true fuel heat transfer from a gas furnace's firebox to its flue discharge air. This practice for measuring fossil fuel furnace efficiency has remained unchanged in the HVAC industry for over 40 years. It isn't uncommon however for furnace manufacturers to overrate the "bonnet" (actual useable) capacity of their appliances much like gas mileage rating in the auto industry before stricter regulation by the EPA.

While some may claim that RV gas furnaces are as high as 85% efficient, the facts don't add up. Among other things, this would mean that flue temps would be under 250° F. However, at this low temperature condensation would occur in the form of nitric acid which would eat holes in the metals used in the furnace's firebox and flue system. Additionally, metal turns purple at 550° F and turns blue at 575° F. You can often observe a small amount of bluing in and around any RV gas furnace's exhaust which indicates that efficiency must be well below 75%.

So, when determining gas vs electric cost of operation, we need to take into consideration the relatively low efficiency of the gas furnace (60%), meaning 40% of every dollar goes out the exhaust. With electric resistive heat, there is no exhaust, so 100% of the heat generated is used – \$1.00-in results in \$1.00-out. If we do the math, every \$1.00 is equivalent to \$0.06 per kW. If you pay \$3.00 per gallon for propane that's \$0.18 per kW, meaning that at \$3.00 per gallon propane, electric is always cheaper to heat with when rates are under \$0.18 per kW.



Cost of Electric per Kilowatt

For more information about the RV Comfort Systems Hybrid Gas/Electric Furnace systems
www.rvcomfortsystems.com