

S9 Comparing Energy Consumption:
More for Your Money

TODAY'S
DATE

E.Q.: If high-efficiency appliances cost more, are they worth the added cost?

Cost of operating an electrical appliance

$$\text{cost} = \text{energy} \cdot \text{price per unit of energy}$$

(kW·h)

heat transfer the transmission of heat energy from a warmer substance to a cooler substance

- occurs according to the second law of thermodynamics
- 3 ways of heat transfer:

- conduction the transfer of heat energy from particle to particle btwn substances through contact or within a substance

- convection → the transfer of heat energy through the movement of air or liquid currents
- radiation → the transfer of heat energy by emission of electromagnetic radiation in all directions

most high-efficiency appliances are worth the added cost - however be sure to evaluate total cost over the lifetime of the appliance vs. the amt. of savings the appliance provides.