

**Moses Lake Washington Energy Star Home**  
**Habitat for Humanity of Grant County**  
**Moses Lake, WA 2004**  
**1000 sq. ft. three bedrooms**

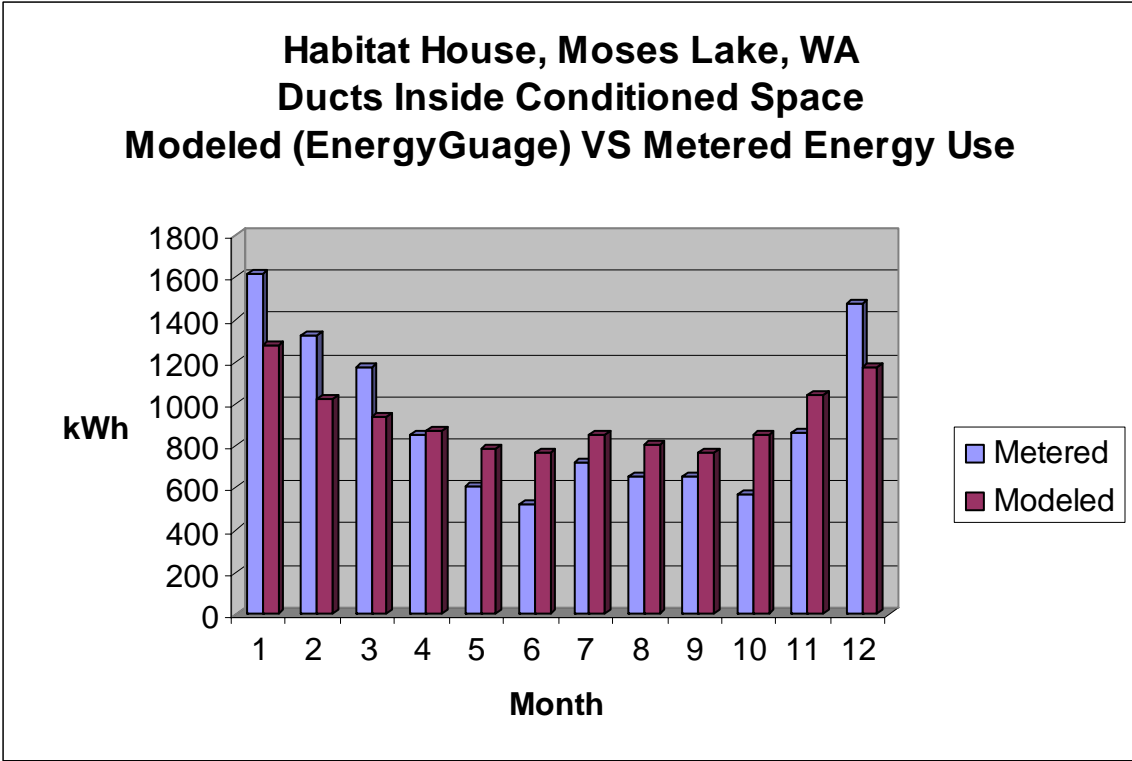
**Specifications**

- Heat Pump HSPF= 8.25 SEER= 13.6
- Air handler and all duct work in conditioned space
- 4.0 ACH50 tested envelope tightness
- 128 ft<sup>2</sup> glazing U=0.32
- Lighting – 95% Energy Star lamps
- Electric water heating EF= .93
- Ceiling R-49
- Floor over crawlspace R-30
- Walls 2x6 R=21
- Energy Star dishwasher
- Whole house ventilation meeting Washington State Ventilation and Indoor Air Quality Code

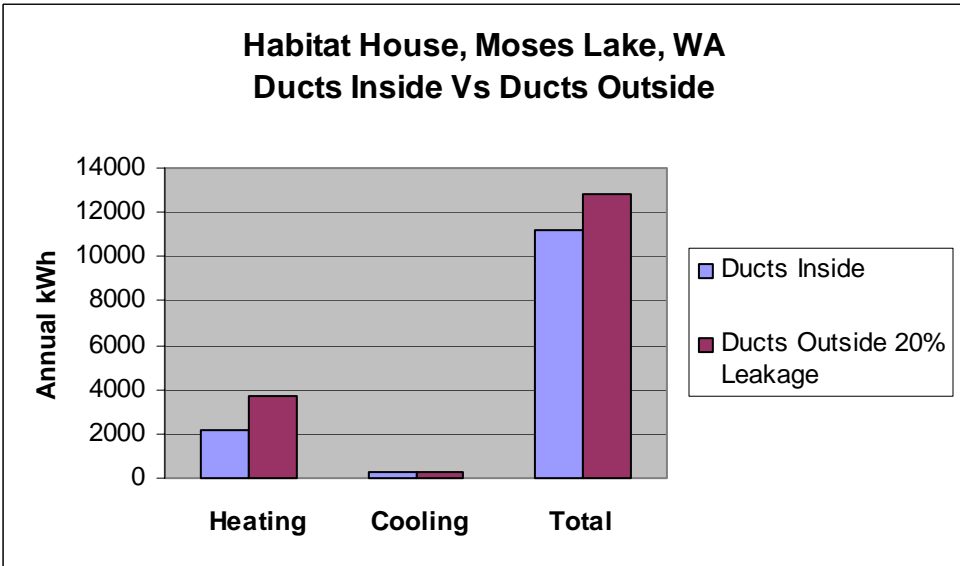
This Habitat home was among the first certified Energy Star Homes Northwest built in Washington State. With assistance from Grant County PUD, Washington State University Energy Program and the Building America Program, Habitat for Humanity exceeded Energy Star program specifications for heat pump efficiency, glazing, ceiling insulation, lighting and envelop tightness.

Built in 2004 in a 6835 heating degree day climate with four occupants, this all electric home used only 11,041 kWh of electricity (1.1 kWh/ft<sup>2</sup>-yr) in the first year of occupancy. Total metered energy use (11,041 kWh) conformed closely to the total modeled energy use (11,107 kWh) predicted by the Energy Gauge program (see Figure 1).

Significant savings were predicted from bringing all duct work and the air handler completely inside the conditioned area (see Figure 2). Modeled with ducts inside and with ducts outside (assuming 20% leakage and R-8 duct insulation with ducts outside), Energy Gauge predicted a 39% energy savings in heating and a 31 % savings in cooling.



**Figure 1: Total Metered Use (11,041 kWh) VS Total Modeled Use (11,107 kWh)**



**Figure 2: 39% Energy Saving in Heating—31% Savings in Cooling**



Dropped Ceiling in Hall with Supply Register



Completed Home