
NORTHWEST



Northwest Energy Star Homes - Montana Update August 2008
For questions contact Dale Horton (406/721-9908, daleh@ncat.org)

The following information addresses NWESH verification issues of interest:

Heat Pump Commissioning

The NWESH program requires that all air-source and ground-source heat pumps be commissioned by a PTCS-certified heat pump performance tester. The next heat pump commissioning class will be held in Pablo at Mission Valley Power on Monday, August 25. Contact me for more information. A NWESH heat pump commissioning label must be attached to each house tested. More information about heat pump commissioning and a copy of the label can be found at <http://www.northwestenergystar.com/index.php?cID=333#PT%20label>

Air Duct Testing Label

Duct-leakage tests shall be documented and the PTCS-certified tester shall complete an ENERGY STAR Homes Northwest Residential Air Duct System Label and attach it to the air handler cabinet or furnace can. Duct tightness testing is not required when all ducts are located within conditioned space (NWESH Specifications and technical reference, Section 5.2). A copy of the label can be found at <http://www.northwestenergystar.com/index.php?cID=333#PT%20label>

Combustion Appliance Zone Test

Whenever an (atmospherically vented) combustion appliance used for primary space or water heating is present within a building, a Combustion Appliance Zone (CAZ) pressure test is required as outlined in Appendix A. The result of the CAZ test is to be included on the Air Duct System label. (NWESH Specifications and technical reference, Section 2.5).

Duct Board

The use of duct board is not explicitly forbidden by NWESH specifications. If used, duct board ductwork must meet the program's duct tightness requirements and be sealed with mastic. The Montana SCO for NWESH strongly discourages the use of duct board for several reasons. Experience has shown that duct board ducts will not perform over time as well as metal ducts. In addition, there are concerns about the potential for mold and fibers entering the air stream.

Performance Testing Equipment Calibration

Blower door pressure gauges, blower door fans, and duct blaster fans must be calibrated annually. The NWESH program operates under the protocols of RESNET, which requires annual calibration. The digital pressure gauges must be sent to the manufacturer for calibration. The Energy Conservatory charges \$50 for this procedure. The website below includes information about the calibration of digital monometers and fans. Each verifier must notify NCAT by email with the date of calibration for each piece of equipment.

<http://www.energyconservatory.com/support/support7.htm>

Zonal Pressure Relief

Return pathways shall be provided between axial zones (e.g., bedrooms) and the main body of the dwelling. Return pathways may include pass-through grilles, pressure-relief ducts, return ducts, door undercuts, or similar devices. Return pathways should be sufficiently sized to limit pressurization of axial zones to 3 Pa or less when the system is operating at maximum system airflow. (*NWESH Specifications and technical reference, Section 5.1*)

Sizing Heat Pump and Central AC Equipment

The recommended method and form for heating and cooling load calculations is available in the Air Conditioning Contractors of America (ACCA) *Manual J*. This or an equivalent method shall be performed using Component U-values and F-values in the heat-loss and heat-gain coefficients that reflect the actual construction of the building (*NWESH Specifications and technical reference, Section 3.1*). Sizing documentation should be made available to the Verifier on request.

Input Lighting Information

Each NWESH verification must include the total number of interior and exterior lamps in the house. A light fixture may include more than one lamp. NWESH requires that at least 50% of these lamps be ENERGY STAR. The Montana NWESH requires that, in addition to the total number of indoor and outdoor lamps, the quantity and wattage of ENERGY STAR lamps be reported in the regional web-based database lighting comments box. For example, the lighting entry of a house could be:

36 total lamps; 12 CFLs @ 13w; 9 CFLs @ 27w