

**INTERPRETATION IC 90.1-1999-3 OF
ASHRAE/IESNA STANDARD 90.1-1999
Energy Standard for Buildings Except Low-Rise Residential Buildings**

February 6, 2000

Request from: Mark Hydeman, Taylor Engineering, 1305 Marina Village Parkway, Alameda, CA 94501

Reference: This request for interpretation relates to the water heater requirements in Section 7.2.2 and Table 7.2.2 in ASHRAE/IESNA Standard 90.1-1999.

Background: In Table 7.2.2, the variable V used in determining standby loss (SL) limitations is defined to be equal to the “measured” volume prior to 10/29/2001 and equal to the “rated” volume thereafter. This distinction is not clear in two other instances where water heater storage volume is referenced:

- The exception to 7.2.2 states in part: “All water heaters, hot water storage tanks, and hot water supply boilers having more than 140 gal (530L) of storage capacity are not required...”
- Product categories in Table 7.2.2 are determined in part by the input-to-volume ratio, equal to the input energy to the water heater divided by its volume.

In these two cases, it is not clear whether the volume or capacity referred to is the measured or the rated volume of the storage tank.

Interpretation: Mr. Hydeman offers the following interpretations:

1. The “storage volume” in the Exception to 7.2.2 is the measured volume.
2. The volume used to determine the input-to-volume ratio in Table 7.2.2 is the measured volume prior to 10/29/2001 and the rated volume thereafter.

Question: Are these interpretations correct?

Answer: Yes.

Comment: After 10/29/2001, standby losses will no longer vary by input-to-volume ratio so item 2, above, becomes moot.