

**Interpretation on Hot Water System Gains**

**No. 301-2014-03**

**Submitted: January 5, 2015**

**Approved:**

**Proponent: Calculations Subcommittee of SDC 300**

**Applies to:**

ANSI/RESNET 301-2014, Section 4.2, HERS Reference Home and Rated Home Configuration

**Interpretation:**

Section 4.2 specifies the configuration of the Reference and Rated Homes that are to be used in the HERS simulations. Table 4.2.2(1) does not specify the location of the Service Hot Water Systems to be simulated. Thus, Section 4.2.1 prevails. Section 4.2.1 states that where the configuration is not specified, “the HERS Reference Home and the Rated home shall be configured and analyzed using identical methods and techniques.” Further, the definition of Unconditioned Space contains an informative note that states that heat sources and sinks within such spaces are to be considered in the energy balance. This implies that these same heat sources and sinks should also be considered for Conditioned Spaces.

Taken together, these factors indicate the following:

- The location of Service Hot Water systems shall be the same in the HERS Reference Home and the Rated Home
- The heat sources and sinks associated with the Service Hot Water System may be included in the energy balance for the space in which the Service Hot Water System is located.

Is the interpretation of the above that RESNET-approved HERS software tools may include the heat sources and sinks of Service Hot Water Systems in the Conditioned Space energy balances of both the HERS Reference Home and the Rated Home when Service Hot Water Systems are located in the Conditioned Space?

Yes  Approved by the Standards Management Board on (approval date)

No

**Justification:**

Heat pump water heaters interact meaningfully with the space in which they are located. The current standard does not explicitly address this interaction. Without this interpretation it is ambiguous whether the heat sources and sinks associated with Service Hot Water Heating Systems may be considered. This is especially significant for heat pump water heaters located in the conditioned space. Potential future actions might include working on technical aspects of these interactions as well as development of associated software testing procedures for the next release of standard 301.