ERRATA SHEET FOR THE USER'S MANUAL TO ANSI/ASHRAE/IESNA STANDARD 90.1-2004 ENERGY STANDARD FOR BUILDINGS EXCEPT LOW-RISE RESIDENTIAL BUILDINGS

December 17, 2008

The corrections listed in this errata sheet apply to all copies of ANSI/ASHRAE/IESNA Standard 90.1-2004, User's Manual. Shaded item has been added since the previously published errata sheet dated October 29, 2008 was distributed.

Page	Erratum

4-6 **Normative Appendices (§ 4.1.7) and Informative Appendices (§ 4.1.8).**

1. Under Normative Appendices in the second column delete the last sentence that reads "Appendix G describes the building performance method".

2. Change the section on Informative Appendices in the second column to read as follows:
(Note: Additions are shown in underline and deletions are shown in ~~strikethrough~~.)

"The Standard also contains three~~two~~ informative appendices. One appendix (Appendix E) provides references and acknowledges source documents. These~~This~~ informative appendices~~x~~ do~~es~~ not contain requirements that are a part of the standard. The second appendix (Appendix F) describes the addenda from *Standard 90.1-2001* that have been incorporated into 90.1-2004. The third appendix (Appendix G) describes the building performance rating method."

(Note: Appendix G is an informative appendix.)

5-14 **Vestibules (§ 5.4.3.2).** In the third column under Vestibules change the first sentence as follows:
(Note: Additions are shown in underline and deletions are shown in ~~strikethrough~~.)

"Vestibules or revolving doors are required for the main entrance door(s) to four-story (or taller) buildings in climate zones 3 through 8~~1 and 2~~."

5-25 **Floor Insulation.** In the second column under *Steel-Joist Floors* add the units "Btu/ft^2·°F" after 7.0 for the heat capacity of steel-joist floors.

5-31 **Example 5-H - Prescriptive Building Envelope Option, Tucson Supermarket.** In the first sentence of answer "A" change "5.5-3 (see Appendix D)" to "5.5-2 (see Appendix B, Pima County)" so it now reads as follows:

"The envelope criteria table for Tucson is 5.5-2 (see Appendix B, Pima County)."

In the fifth sentence of the second paragraph of the answer "A" change

"Exception (c) to §5.4.4.4.1" to "Exception (c) to §5.5.4.4.1".

5-57 **Above-Grade Wall Classes.** In the third column under *Mass Walls* add the units "Btu/ft^2·°F" after 7.0 for the heat capacity of a mass wall.

5-58 **Above-Grade Wall Classes.** In the first column, last paragraph, add the units "Btu/ft^2·°F" after 7.0 for the heat capacity of mass materials.

7-17 **Service Water Heating Compliance Documentation (Compliance Form).** In the Equipment Efficiency Worksheet (§7.4.1), seventh column titled "Standby Loss", change "≥" to "≤" in five places. In the Combination Space and Water Heating Worksheet (§7.5.1), second column titled "Standby Loss Method", change "≥" (greater than or equal) to "≤" (less than or equal), in five places. Also, in the Combination Space and Water Heating Worksheet (§7.5.1), third and fourth columns, change "≥" (greater than or equal) to "<" (less than) in five places in each of the two columns column.

G23 **Baseline HVAC System Type and Description.** Change the first sentence in the third paragraph of the first column on page G-23 as follows:
(Note: Additions are shown in underline and deletions are shown in ~~strikethrough~~.)

"For smaller nonresidential buildings that are less than 75,000 ft^2 ~~(any height)~~ and three stories or less~~or less than three stories (any area)~~, the baseline building HVAC system is a rooftop packaged system serving each thermal zone (or thermal block)."

G28 **Example G-J – Baseline Building Peak Fan Power.** Change the answer "**A**" fan power calculation as follows:
(Note: Additions are shown in underline and deletions are shown in ~~strikethrough~~.)

Using the equation from Table G3.1.2.9, the brake horsepower for the baseline building fan system is 136.5~~144~~ hp as calculated below:

BBH = 24 + (CFM – 20,000) x 0.001125~~0.0012~~
BBH = 24 + (120,000 – 20,000) x 0.001125~~0.0012~~
BBH = 136.5~~144~~

Using the equation above, the fan power is 107,858~~114,403~~W, as calculated below:

P_{fan} = 746 x bhp / 1 - $e^{[-0.2437839 \times \ln(bhp)] - 1.685541}$

= 746 x 136.5~~144~~ / 1 - $e^{[-0.2437839 \times \ln(136.5~~114~~)] - 1.685541}$

= 101, 829~~107,424~~ / 1 – $e^{-2.88~~2.79~~}$

= 101, 829~~107,424~~ / 1-0.0559

= 107,858~~113,698~~W

G-30 *Type and Number of Chillers (§ G3.1.3.7).* Change the last sentence as follows:
(Note: Additions are shown in underline and deletions are shown in ~~strikethrough~~.)

In this case at least two equally sized centrifugal chillers are always modeled, but additional equally sized chillers are added as necessary so that all chillers are 800 tons or~~are~~ smaller.