BSR/ASHRAE/IES Addendum v
to ANSI/ASHRAE/IES Standard 90.1-2025

Public Review Draft

Proposed Addendum v to Standard 90.1-2025, Energy Standard for Sites and Buildings Except Low-Rise Residential Buildings

First Public Review (November 2026)
(Draft Shows Proposed Changes to Current Standard)

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FOREWORD

This addendum specifies the baseline building HVAC system mapping for a proposed 100% outdoor air system. It follows the rationale for mapping a proposed DOAS system to a baseline system established in an interpretation that was issued recently by the ECB subcommittee. When the proposed design has a DOAS system, it shall map to an identical DOAS system in the baseline meeting the minimum requirements of the standard.

[Note to Reviewers: This addendum makes proposed changes to the current standard. These changes are indicated in the text by underlining (for additions) and ~~strikethrough~~ (for deletions) except where the reviewer instructions specifically describe some other means of showing the changes. Only these changes to the current standard are open for review and comment at this time. Additional material is provided for context only and is not open for comment except as it relates to the proposed changes.]

Addendum v to 90.1-2025

Modify Section 12.5.2, HVAC Systems, as follows:

...

j. Determining the HVAC System: Each *HVAC system* in a *proposed design* is mapped on a one-to-one correspondence with one of eleven *HVAC systems* in the *budget building design*. To determine the *budget building system*, do the following:

1. Enter Figure 12.5.2 at "Water/Ground" if the *proposed design system* condenser is water or evaporatively cooled; enter Figure 12.5.2 at "Air/None" if the condenser is air cooled. Closed-circuit dry coolers shall be considered air cooled. *Systems* utilizing district cooling shall be treated as if the condenser water type were "Water." If no *mechanical cooling* is specified or the *mechanical cooling system* in the *proposed design* does not require heat rejection, the *system* shall be treated as if the condenser water type were "Air." For *proposed designs* with ground-source or groundwater-source heat pumps, the *budget system* shall be water-sourced heat pump (System 6).
2. Select the path that corresponds to the *proposed design* heat source: *electric resistance*, heat pump (including air source and water source), or *fuel-fired*. *Systems* utilizing district heating (steam or hot water) shall be treated as if the *heating system* type were "Fossil Fuel." *Systems* with no heating capability shall be treated as if the *heating system* type were "Fossil Fuel." For *systems* with mixed *fuel* heating sources, the *system* or *systems* that use the secondary heating source type (the one with the smallest total installed output capacity for the *spaces* served by the *system*) shall be modeled identically in the *budget building design*, and the primary heating source type shall be used in Figure 12.5.2 to determine *budget system* type.
3. Select the *budget building design system* category. The *system* under "Single-Zone Residential System" shall be selected if the *HVAC system* in the *proposed design* is a *single-zone system* and serves a *residential space*. The *system* under "Single-Zone Nonresidential System" shall be selected if the *HVAC system* in the *proposed design* is a *single-zone system* and serves other than *residential spaces*. The *system* under "All Other" shall be selected for all other cases.
4. The outdoor air *system* shall not be mapped using Figure 12.5.2 where
   a. the *proposed design* includes a 100% outdoor air *system* that provides outdoor air for ventilation to one or more *HVAC zones,* and
   b. the remaining space heating and cooling loads for those zones are served by one or more separate *HVAC systems* that do not independently provide minimum outdoor air for ventilation.

   The *budget building design* shall include an outdoor air *system* of the same type and configuration as the *proposed design*, subject to the requirements of Sections 6.4, 6.5, and 12.5.2. The separate *HVAC system* or *systems* serving the remaining space heating and cooling loads shall be mapped in accordance with items 1 through 3.