



**BSR/ASHRAE Addendum a to
ANSI/ASHRAE Standard 209-2024**

First Public Review Draft

**Proposed Addendum a to Standard
209-2024, Energy Simulation Aided
Design for Buildings except Low-
Rise Residential Buildings**

**First Public Review Draft (August 2025)
(Draft shows Proposed Changes to Current Standard)**

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(This foreword is not part of this standard. It is merely informative and does not contain requirements necessary for conformance to the standard. It has not been processed according to the ANSI requirements for a standard and may contain material that has not been subject to public review or a consensus process. Unresolved objectors on informative material are not offered the right to appeal at ASHRAE or ANSI.)

Foreword

The existing language committee proposes the following changes to cycle 4: HVAC System Selection Modeling. The main reasons for the changes are to (1) align the level of detail with the level of detail in other modeling cycles, (2) incorporate comments on the original language, and (3) add informative notes/clarify the language.

Existing Language

5.5.3 A designated participant shall be charged with creating and bringing a preliminary list of potential energy efficiency measures (EEMs) to the charrette.

6.4 Modeling Cycle #4—HVAC System Selection Modeling

6.4.1 Purpose. Estimate the annual energy and demand impacts of *HVAC system* options.

6.4.2 Applicability. This *modeling cycle* shall be applicable prior to *HVAC system* selection. When this *modeling cycle* is used to show compliance with the standard, it shall be started after Modeling Cycle #3 is complete.

6.4.3 Analysis. Use *energy modeling* to evaluate a minimum of two alternate *HVAC systems*.

[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.]

Proposed Changes

3.2 Definitions

design development: the phase of the project that builds on the schematic design phase. This phase lays out mechanical, electrical, plumbing, structural, and architectural details.

5.5.3 Designated participant shall be charged with creating and bringing a preliminary list of potential energy efficiency measures (EEMs) and a list of potential HVAC system types to the charrette.

6.4 Modeling Cycle #4—HVAC System Selection Modeling

6.4.1 Purpose. Estimate the annual energy use and demand impacts of *HVAC system* options to inform system type selection and configuration.

6.4.2 Applicability. This *modeling cycle* shall be applicable prior to *HVAC system* selection. When this *modeling cycle* is used to show compliance with this standard, it shall be ~~started after~~ completed before the end of the *design development* phase. It shall be completed after, or concurrently with, Modeling Cycle #3 ~~is complete~~.

6.4.3 Analysis. Use *energy modeling* to evaluate a baseline and a minimum of two alternate *HVAC systems*. Evaluation of options using equipment with different levels of efficiency shall not qualify as HVAC system alternates.

Informative Note: Review the ASHRAE Advanced Energy Design Guides (AEDG) for systems to consider. Alternates should be determined in collaboration with the design team and owner and be based upon site master planning and project goals, available utilities, operation and maintenance requirements, space and structural requirements for equipment, equipment availability in local markets, ability of staff to maintain the equipment and controls, site conditions, building type and size, and climate. Some specific considerations include, but are not limited to the following:

- a. Distribution type (e.g., radiant versus convective systems)
- b. Fuel type
- c. Heating and cooling type (e.g., electric resistance coil versus direct expansion coil)
- d. Heat rejection type (e.g., air or water)
- e. Ventilation strategy
- f. Fixed versus variable speed equipment
- g. Multiple-zone versus single zone systems
- h. System water use, consumption and cost