



**BSR/ASHRAE/IES Addendum ah
to ANSI/ASHRAE/IES Standard 90.1-2022**

Public Review Draft

Proposed Addendum ah to Standard 90.1-2022, Energy Standard for Sites and Buildings Except Low- Rise Residential Buildings

**First Public Review (September 2024)
(Draft Shows Proposed Changes to Current Standard)**

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FOREWORD

A recent proposal suggested the removal of the names of specific simulation programs from the standard. These names are no longer useful since the modeling industry has expanded and matured and understands the available software. In addition, inconsistencies between these parallel sections were identified, and changes were made to make them more consistent. The sentences concerning how components are modeled were updated to read better and be self-consistent.

This addendum impacts an optional performance path in the standard designed to provide increased flexibility, which was not subjected to a cost-effectiveness analysis.

[Note to Reviewers: This addendum makes proposed changes to the current standard. These changes are indicated in the text by underlining (for additions) and ~~striketrough~~ (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 ah to 90.1-2022

12.4.1 Simulation Program. The *simulation program* shall be a computer-based program for the analysis of *energy* consumption in *buildings*. ~~For components that cannot be modeled by the *simulation program*, the~~ The exceptional calculation methods requirements in Section 12.4.5 shall be used for components that cannot be modeled by the *simulation program*. The *simulation program* shall include calculation methodologies for all other *building* components being modeled.

Exception to 12.4.1: When approved by the ~~adopting authority~~ AHJ, a separate computer-based program shall be permitted to be used to calculate *on-site renewable energy*.

Informative Note: ASHRAE Standing Standard Project Committee 90.1 recommends that the *simulation program* implement the rules of Section 12 that *control* simulation inputs and outputs be adopted for the purposes of easier use and simpler compliance.

C3.1 Simulation Program. The *simulation program* shall be a computer-based software program for the analysis of *energy* consumption in *buildings*. The *simulation program* shall include calculation methodologies for the *building* components being modeled.

Informative Note: ~~Examples of *simulation programs* include, but are not limited to, EnergyPlus and DOE 2.~~

G2.2 Simulation Program. The *simulation program* shall be a computer-based program for the analysis of energy consumption in *buildings* (a program such as, but not limited to, DOE 2, BLAST, or EnergyPlus). ~~The *simulation program* shall include calculation methodologies for the *building* components being modeled. For components that cannot be modeled by the *simulation program*, the~~ The exceptional calculation methods requirements in Section G2.5 shall be used for components that cannot be modeled by the *simulation program*. The *simulation program* shall include calculation methodologies for all other *building* components being modeled.

Informative Note: For the ease of use and consistent application, the *simulation program* should automatically implement the requirements of this appendix to generate the baseline design and *proposed design* models based on the user model of the *proposed design*.