



**BSR/ASHRAE/IES Addendum n
to ANSI/ASHRAE/IES Standard 90.1-2025**

Public Review Draft

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

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

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FOREWORD

This addendum adds language to Appendix G Section 2.5, Exceptional Calculation Methods, to clarify that when supporting calculations are used to derive a specific simulation output (such as, annual energy use, demand, cost, performance, or savings), these calculations represent an exceptional calculation even when a simulation program is used. These calculations may be used to adjust model inputs to derive a specific output, or they may be used to adjust the model output through post-processing. When this is done, the requirements specified in Section 2.5 apply.

This addendum impacts an optional performance path in the standard designed to provide increased flexibility and therefore was not subjected to 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 n to 90.1-2025

Update Appendix G2.5 with the following changes:

G2.5 Exceptional Calculation Methods. When the simulation program does not model a design, material, ~~or~~ device, control sequence, or operational strategy of the proposed design based on its physical, thermodynamic, control, or operational characteristics, an exceptional calculation method shall be used as approved by the rating authority. Where there are multiple designs, materials, or devices that the simulation program does not model, each shall be calculated separately and exceptional savings determined for each.

Where supporting calculations are used to determine annual energy use, demand, cost, performance, or savings, and either,

1. the simulation model is subsequently adjusted to match or approximate that externally calculated result, or,

2. the simulation outputs are adjusted or post-processed based on the external method,

the supporting calculations shall be documented and reviewed as an exceptional calculation method in accordance with this section.

At no time shall the total exceptional savings constitute more than half the difference between the baseline building performance and the proposed building performance. All applications for approval of an exceptional method shall include the following:

- a. Theoretical and empirical information verifying the method's accuracy, and step-by-step documentation of the exceptional calculation method performed, detailed enough to reproduce the results.
- b. Copies of all spreadsheets used to perform the calculations.
- c. A sensitivity analysis of energy consumption when each of the input parameters that is estimated is varied from half to double the value assumed.
- d. The calculations shall be performed on a time-step basis consistent with the simulation program used.
- e. The Performance Cost Index calculated with and without the exceptional calculation method.

Informative Notes:

1. Supporting calculations used to develop simulation inputs representing physical, thermodynamic, control, or operational characteristics of the modeled system do not constitute exceptional calculation methods, provided that the simulation program calculates the resulting energy and cost impacts using its normal calculation procedures.
2. Exceptional calculations include scenarios where simulation inputs are derived or adjusted to reflect an externally calculated result, rather than to represent the relevant physical, thermodynamic, control, or operational characteristics of the proposed design. For example, where elevator annual energy use is calculated outside the simulation program using ISO 25745-2, and the simulation model is then adjusted by modifying elevator or process load power, capacity, or schedules to reproduce the calculated annual kWh, the ISO 25745-2 calculation is an exceptional calculation method. In this case, the simulation program is not calculating elevator energy use from the physical or control characteristics of the elevator system, but is instead being used to reflect the result of an external calculation.