ADDENDA

ANSI/ASHRAE/IBPSA Addendum f to
ANSI/ASHRAE Standard 209-2018

Energy Simulation Aided Design for Buildings Except Low-Rise Residential Buildings

Approved by ASHRAE and the American National Standards Institute on July 31, 2024. Approved by the International Building Performance Simulation Association on July 10, 2024.

This addendum was approved by a Standing Standard Project Committee (SSPC) for which the Standards Committee has established a documented program for regular publication of addenda or revisions, including procedures for timely, documented, consensus action on requests for change to any part of the standard. Instructions for how to submit a change can be found on the ASHRAE® website (www.ashrae.org/continuous-maintenance).

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FOREWORD

Addendum f makes changes to Section 6.7, which in the existing standard is called "Modeling Cycle #7—Energy Simulation-Aided Value Engineering." The changes expand the cycle to have broader applicability and purpose so that it can be used to responsively evaluate any proposed changes to the design that arise during the design process rather than confining the analysis to value engineering proposals that are likely to have negative consequences. In addition, the changes expand the focus beyond just the cost implications of design alternatives to be inclusive of the many goals and different scenarios for which modeling is being conducted. Informative notes were added with comments regarding typical practice related to analyzing first and operating cost differences and a tip to improve responsiveness by keeping the model up-to-date as the design changes during the design process. Lastly, Sections 6.7 and 4.2.1 were revised to change the name of the modeling cycle to "Modeling Cycle #7—Responsive Design Alternative Modeling."

Informative Note: In this addendum, changes to the current standard are indicated in the text by underlining (for additions) and ~~strikethrough~~ (for deletions) unless the instructions specifically mention some other means of indicating the changes.

Addendum f to Standard 209-2018

Modify Section 4.2.1 as shown.

4.2.1 The building design process shall meet the requirements of

a. Section 5
b. Section 6.3, "Modeling Cycle #3—Load Reduction Modeling"
c. At least one of the following sections:
   1. Section 6.1, "Modeling Cycle #1—Simple Box Modeling"
   2. Section 6.2, "Modeling Cycle #2—Conceptual Design Modeling"
   3. Section 6.4, "Modeling Cycle #4—HVAC System Selection Modeling"
   4. Section 6.5, "Modeling Cycle #5—Design Refinement"
   5. Section 6.6, "Modeling Cycle #6—Design Integration and Optimization"
   6. Section 6.7, "Modeling Cycle #7— ~~Energy Simulation Aided Value Engineering~~ Responsive Design Alternative Modeling"

Modify Section 6.7 as shown.

6.7 Modeling Cycle #7— ~~Energy Simulation-Aided Value Engineering~~ Responsive Design Alternative Modeling

6.7.1 Purpose. ~~To~~ Responsively provide information on the holistic implications of *project alternatives* as they arise, such as *value engineering* measures and/or other proposed design changes to project performance goals, to ensure more informed design decisions.

6.7.2 Applicability

6.7.2.1 This *modeling cycle* shall be used as *project alternatives* arise only if ~~first costs have been identified for each *project alternative* to be evaluated~~ the *project alternative* is likely to affect project performance.

Informative Note: This cycle is commonly performed during the construction documents design phase but can also be used at other design phases. In addition, first and operating cost differences are typically an important consideration in balancing the impact of the *alternative* on project goals and the cost savings benefits. These may include both direct and indirect costs.

~~**6.7.2.2** This *modeling cycle* shall be used only if the *project alternative* negatively affects project performance goals.~~

6.7.3 Analysis

6.7.3.1 Update the energy model to reflect the current design for parameters that interact with the *project alternatives* and/or have implications for meeting performance goals. ~~Identify *project alternatives* arising from at least one *value engineering* proposal.~~

Informative Note: To accommodate rapid turnaround times to meet project deadlines, update and maintain the energy model to reflect the current design as changes arise during the design process so that when *project alternatives* arise for evaluation during this modeling cycle, these updates have already been completed.

6.7.3.2 Use *energy modeling* to evaluate *project alternatives* arising from at least one *value engineering* or design change proposal. ~~Identify first-cost and operating-cost consequences to building systems directly and indirectly affected by the *value engineering* proposal~~.

~~**6.7.3.3** Use energy modeling to evaluate each project alternative.~~

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