

ADDENDA

**ANSI/ASHRAE/IES Addendum au to
ANSI/ASHRAE/IES Standard 90.1-2019**

Energy Standard for Buildings Except Low-Rise Residential Buildings

Approved by ASHRAE and the American National Standards Institute on January 21, 2022, and by the Illuminating Engineering Society on January 18, 2022.

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 (<https://www.ashrae.org/continuous-maintenance>).

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FOREWORD

Currently, the Simplified Path (Section 6.3) is exempt from the requirements of Section 6.4.1.5, "Verification of Equipment Efficiencies." To rectify this, compliance with Section 6.4.1.5 has been added for the applicable heating and cooling equipment allowed under the Simplified Path. Additionally, the exception to Section 6.2.2 has been moved as an exception to Section 6.2.1 for clarity, as Section 6.2.1 lists the requirements for all compliance paths. These modifications will not increase the cost of construction and will help to ensure fully rated equipment is used to comply with the Simplified Path.

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

Addendum au to Standard 90.1-2019

Modify the standard as follows (IP and SI Units)

6.2 Compliance Paths. Mechanical equipment and systems providing heating, cooling, ventilating, or refrigeration shall comply with Section 6.2.1 and Section 6.2.2.

6.2.1 Requirements for all Compliance Paths. Mechanical equipment and systems shall comply with Section 6.1, "General"; Section 6.4, "Mandatory Provisions"; Section 6.7, "Submittals"; and Section 6.8, "Minimum Equipment Efficiency Tables."

Exception to 6.2.1: When compliance is shown using Section 6.2.2(a), compliance with Section 6.4 is not required unless required in Section 6.3.2.

6.2.2 Additional Requirements to Comply with Section 6. Mechanical equipment and systems shall comply with one of the following:

- a. Section 6.3, "Simplified Approach Building Compliance Path for HVAC Systems"

~~**Exception to 6.2.2(a):** When compliance is shown using Section 6.2.2(a), compliance with Section 6.4 is not required.~~

- b. Section 6.5, "Prescriptive Compliance Path"

Exception to 6.2.2(b): HVAC systems only serving the heating, cooling, or ventilating needs of a computer room with IT equipment load greater than 10 kW shall be permitted to comply with Section 6.4, "Mandatory Provisions" and Section 6.6, "Alternative Compliance Path."

6.3 Simplified Approach Building Compliance Path for HVAC Systems

6.3.1 Scope. The simplified approach is an optional path for compliance when the following conditions are met:

- The building is two stories or fewer in height.
- Gross floor area is less than 25,000 ft² (2300 m²)
- Each HVAC system in the building complies with the requirements listed in Section 6.3.2.

6.3.2 Criteria. The HVAC system must meet all of the following criteria:

- The system serves a single HVAC zone.
- The equipment must meet the variable flow requirements of Section 6.5.3.2.1.
- Cooling (if any) shall be provided by a unitary packaged or split-system air conditioner that is either air cooled or evaporatively cooled, with efficiency meeting the requirements shown in Table 6.8.1-1 (air conditioners), Table 6.8.1-2 (heat pumps), or Table 6.8.1-4 (packaged terminal and room air conditioners and heat pumps) for the applicable equipment category. Cooling equipment shall also comply with Section 6.4.1.5.
- The system shall have an air economizer meeting the requirements of Sections 6.5.1 and 6.4.3.12.
- Heating (if any) shall be provided by a unitary packaged or split-system heat pump that meets the applicable efficiency requirements shown in Table 6.8.1-2 (heat pumps) or Table 6.8.1-4 (pack-

aged *terminal* and *room air conditioners* and heat pumps), a *fuel*-fired furnace that meets the applicable *efficiency* requirements shown in Table 6.8.1-5 (furnaces, duct furnaces, and unit heaters), an *electric resistance* heater, or a baseboard *system* connected to a *boiler* that meets the applicable *efficiency* requirements shown in Table 6.8.1-6 (*boilers*). Heating equipment shall also comply with Section 6.4.1.5.

- f. The *system* shall meet the exhaust air *energy* recovery requirements of Section 6.5.6.1.
- g. The *system* shall be controlled by a *manual* changeover or dual *set-point thermostat*.
- h. If a heat pump equipped with auxiliary internal *electric resistance* heaters is installed, *controls* shall be provided that prevent supplemental heater operation when the heating load can be met by the heat pump alone during both steady-state operation and *setback* recovery. Supplemental heater operation is permitted during outdoor coil defrost cycles. The heat pump must be controlled by either (1) a digital or electronic *thermostat* designed for heat pump use that energizes auxiliary heat only when the heat pump has insufficient capacity to maintain *set point* or to warm up the *space* at a sufficient rate or (2) a multistage *space thermostat* and an *outdoor air thermostat* wired to energize auxiliary heat only on the last stage of the *space thermostat* and when *outdoor air* temperature is less than 40°F (4.4°C).

[. . .]

POLICY STATEMENT DEFINING ASHRAE'S CONCERN FOR THE ENVIRONMENTAL IMPACT OF ITS ACTIVITIES

ASHRAE is concerned with the impact of its members' activities on both the indoor and outdoor environment. ASHRAE's members will strive to minimize any possible deleterious effect on the indoor and outdoor environment of the systems and components in their responsibility while maximizing the beneficial effects these systems provide, consistent with accepted Standards and the practical state of the art.

ASHRAE's short-range goal is to ensure that the systems and components within its scope do not impact the indoor and outdoor environment to a greater extent than specified by the Standards and Guidelines as established by itself and other responsible bodies.

As an ongoing goal, ASHRAE will, through its Standards Committee and extensive Technical Committee structure, continue to generate up-to-date Standards and Guidelines where appropriate and adopt, recommend, and promote those new and revised Standards developed by other responsible organizations.

Through its *Handbook*, appropriate chapters will contain up-to-date Standards and design considerations as the material is systematically revised.

ASHRAE will take the lead with respect to dissemination of environmental information of its primary interest and will seek out and disseminate information from other responsible organizations that is pertinent, as guides to updating Standards and Guidelines.

The effects of the design and selection of equipment and systems will be considered within the scope of the system's intended use and expected misuse. The disposal of hazardous materials, if any, will also be considered.

ASHRAE's primary concern for environmental impact will be at the site where equipment within ASHRAE's scope operates. However, energy source selection and the possible environmental impact due to the energy source and energy transportation will be considered where possible. Recommendations concerning energy source selection should be made by its members.

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As an industry leader in research, standards writing, publishing, certification, and continuing education, ASHRAE and its members are dedicated to promoting a healthy and sustainable built environment for all, through strategic partnerships with organizations in the HVAC&R community and across related industries.

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