

ADDENDA

**ANSI/ASHRAE/IES Addendum dd to
ANSI/ASHRAE/IES Standard 90.1-2022**

Energy Standard for Sites and Buildings Except Low-Rise Residential Buildings

Approved by ASHRAE and the American National Standards Institute on December 5, 2025, and by the Illuminating Engineering Society on December 3, 2025.

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FOREWORD

Addendum dd modifies Table 12.5.1 to clarify requirements added by ASHRAE Standard 90.1-2016 Addendum ck and Standard 90.1-2019 Addendum bh. Specifically, this addendum makes the following changes:

- Clarifies that the W/ft^2 capacity in Section 10.5.1.1 should be used to determine capacity.
- Clarifies the correct temperature coefficient is temperature coefficient of power.
- Corrects the conversion of the 45°C INOCT reference temperature to Fahrenheit.

Informative 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 dd to Standard 90.1-2022

Modify Table 12.5.1, #15 On-Site Renewable Energy, Column B Budget Building Design, item b as shown (I-P and SI).

- b. Where no *system* exists or is specified to provide *on-site renewable energy* in the *proposed design*, *on-site renewable energy* shall be modeled as an unshaded photovoltaic system with the following physical characteristics:
- Size: Rated capacity, in W/ft^2 (W/m^2), per Section 10.5.1.1.
 - Module Type: Crystalline silicon panel with a glass cover, 19.1% nominal efficiency and temperature coefficient of power of $-0.19\%/^{\circ}F$ ($-0.35\%/^{\circ}C$); performance shall be based on a reference temperature of 77°F (25°C) and irradiance of 317 Btu/ft²·h (1000 W/m²).
 - Array Type: Rack-mounted array with installed nominal operating cell temperature (INOCT) of ~~403~~113°F (45°C)
 - Total system losses (DC output to AC output): 11.3%
 - Tilt: 0-degrees (mounted horizontally)
 - Azimuth: 180 degrees

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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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