



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

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**Public Review Draft**

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

**First Public Review (July 2025)  
(Draft Shows Proposed Changes to Current Standard)**

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**ASHRAE, 180 Technology Parkway NW, Peachtree Corners, GA 30092**

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## FOREWORD

*This addendum proposes editorial changes to Table 12.5.1 to clarify requirements added into the ASHRAE 90.1 in Addendum ck to 90.1-2016 and Addendum bh to 90.1-2019. Specifically this addendum makes the following changes:*

- 1. Clarifies that the  $W/ft^2$  capacity in 10.5.1.1 should be used to determine capacity.*
- 2. Clarifies the correct Temperature Coefficient is Temperature Coefficient of Power.*
- 3. Corrects the conversion of the 45°C INOCT reference temperature to Fahrenheit.*

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

Modify Table 12.5.1, Part 15 On-Site Renewable Energy, Column B Budget Building Design, item b as follows:

- 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  $77^{\circ}F$  ( $25^{\circ}C$ ) and irradiance of  $317 \text{ Btu}/ft^2 \cdot h$  ( $1000 \text{ W}/m^2$ ).
  - Array Type: Rack-mounted array with installed nominal operating cell temperature (INOCT) of  ~~$103.113^{\circ}F$~~  ( $45^{\circ}C$ )
  - Total system losses (DC output to AC output): 11.3%
  - Tilt: 0-degrees (mounted horizontally)
  - Azimuth: 180 degrees