



**BSR/ASHRAE/IES Addendum cb  
to ANSI/ASHRAE/IES Standard 90.1-2019**

**Public Review Draft**

# **Proposed Addendum cb to Standard 90.1-2019, Energy Standard for Buildings Except Low-Rise Residential Buildings**

**Second Public Review (August 2021)  
(Draft Shows Proposed Independent Substantive  
Changes to Previous Public Review Draft)**

This draft has been recommended for public review by the responsible project committee. To submit a comment on this proposed standard, go to the ASHRAE website at [www.ashrae.org/standards-research-technology/public-review-drafts](http://www.ashrae.org/standards-research-technology/public-review-drafts) and access the online comment database. The draft is subject to modification until it is approved for publication by the Board of Directors and ANSI. Until this time, the current edition of the standard (as modified by any published addenda on the ASHRAE website) remains in effect. The current edition of any standard may be purchased from the ASHRAE Online Store at [www.ashrae.org/bookstore](http://www.ashrae.org/bookstore) or by calling 404-636-8400 or 1-800-727-4723 (for orders in the U.S. or Canada).

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**(This foreword is not part of this standard. It is merely informative and does not contain requirements necessary for conformance to the standard. It has not been processed according to the ANSI requirements for a standard and may contain material that has not been subject to public review or a consensus process. Unresolved objectors on informative material are not offered the right to appeal at ASHRAE or ANSI.)**

## **FOREWORD**

*SSPC 90.1 explored areas outside of the physical building where energy savings would be possible by applying provisions presently in the Standard. Examples include lighting in parking lots that may not be directly associated with a building or lighting and equipment associated with campus environments or parks.*

*This Independent Substantive Change (ISC) revises the 1<sup>st</sup> Public Review Draft of Addendum cb, which modifies the Title Purpose and Scope (TPS) of Standard 90.1 to apply to areas outside of the physical building. The original intent did not intend to include incidental accessory buildings such as storage sheds, work sheds, pump houses and similar small buildings associated with single family dwellings. This ISC exempts these types of buildings.*

*The ISC revises Chapter 4 “Administration and Enforcement” to clarify the limits of Standard 90.1 when applied to sites with or without buildings by addressing additions and alterations. As part of these additional Chapter 4 revisions further modifications to definitions are needed to add “site” and to define “existing site” and “structure” to assist in applying the new scope to additions or alterations.*

*Further, the ISC revises changes originally proposed for Chapter 10 and Appendix G in the 1<sup>st</sup> Public Review Draft, and reverts back to the present language in the Standard for these sections.*

***[Note to Reviewers: This public review draft makes proposed independent substantive changes to the previous public review draft. 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 previous draft 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 substantive changes.]***

## Addendum cb to 90.1-2019

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*Modify the standard as follows (IP and SI Units)*

### **\*MODIFY SECTION 2.2 AS FOLLOW:**

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

### **1 Purpose**

#### **1.1**

To establish the minimum *energy efficiency* requirements of *buildings* other than *low-rise residential buildings*, and *sites* for

- a. design, *construction*, and a plan for operation and maintenance; and
- b. utilization of on-site, renewable *energy* resources.

### **2 Scope**

#### **2.1**

This standard provides

- a. minimum *energy-efficient* requirements for the design and *construction*, and a plan for operation and maintenance of
  1. new *buildings* and their *systems*,
  2. new portions of *buildings* and their *systems*,
  3. new *systems* and *equipment* specifically identified in this standard that are part of a *site*,
  4. new *systems* and *equipment* in *existing buildings*, and
  5. new *equipment* or *building systems* specifically identified in this standard that are part of *process applications* and
- b. criteria for determining compliance with these requirements

#### **2.2**

The provisions of this standard do not apply to

- a. single-family houses and related incidental structures, multifamily structures of three stories or fewer above *grade*, manufactured houses (mobile homes), and manufactured houses (modular) or
- b. *buildings* that use neither electricity nor *fossil fuel*.

#### **2.3**

Where specifically noted in this standard, certain other *buildings* or elements of *buildings* or *sites* shall be exempt.

#### **2.4**

This standard shall not be used to circumvent any safety, health, or environmental requirements.

## **\*ADD NEW DEFINITIONS AND MODIFY EXISTING DEFINITIONS AS FOLLOWS:**

**addition:** an extension or increase in the floor area or height of a *building* outside of the *existing building envelope* or the equipment or systems to a site.

**alteration:** a replacement or addition to a *building* or structure, or its *systems* and *equipment*; routine maintenance, repair, and service, or a change in the *building's* or structure use classification or category shall not constitute an *alteration*.

**construction documents:** drawings and specifications used to construct, add to, or alter a building's, building systems or equipment, or portions thereof.

**existing equipment:** *equipment* previously installed in an *existing building* or on an existing site.

**existing system:** a *system* or *systems* previously installed in an *existing building* or on an existing site.

**existing site:** A site or portion thereof that was previously approved by the authority having jurisdiction.

**on-site renewable energy:** *energy* generated from renewable sources produced at the building *site*.

**purchased energy:** *energy* or power purchased for consumption and delivered to the building *site*.

**purchased energy rates:** costs for units of *energy* or power purchased at the building *site*. These costs may include *energy* costs as well as costs for power *demand* as determined by the *adopting authority*.

**site:** An area of land that is under the control of a single owner or entity, which contains *systems* or *equipment*.

**site-recovered energy:** waste *energy* recovered at the building *site* that is used to offset consumption of purchased *fuel* or electrical *energy* supplies.

**site-solar energy:** thermal, chemical, or electrical *energy* derived from direct conversion of incident solar radiation at the building *site* and used to offset consumption of purchased *fuel* or electrical *energy* supplies. For the purposes of applying this standard, *site-solar energy* shall not include passive heat gain through *fenestration systems*.

**solar energy source:** source of thermal, chemical, or electrical *energy* derived from direct conversion of incident solar radiation at the building *site*.

**structure:** that which is built or constructed.

**\*MODIFY SECTION 4.1.1.6 AND ADD NEW SECTIONS 4.2.1.4 AND 4.2.1.5 AS FOLLOWS:**

**Chapter 4 – Administration and Enforcement**

**4.1.1.6 New Sites and New Site Systems and Equipment**

*Sites*, with or without a contiguous building or buildings, and *site systems* and *equipment* using or producing *energy*, such as site lighting, motors for pumps (for example, fountain pumps and water movement equipment) and transportation equipment (for example, elevators and escalators) shall comply with the standard as described in Section 4.2 for *systems* and *equipment* specifically identified in the standard.

**4.2.1.4 New Sites and New Site Systems and Equipment**

New Sites and new site systems and equipment shall comply with either the provisions of

- a. Section 6, “Heating, Ventilating, and Air Conditioning”; Section 7, “Service Water Heating”; Section 8, “Power”; 9, “Lighting”; and Section 10, “Other Equipment,” or
- b. Section 11, “Energy Cost Budget Method.”

**4.2.1.5 Additions and Alterations to Existing Sites and Site Systems and Equipment**

Additions and alterations to existing sites and existing site systems and equipment shall comply with the provisions of Sections 5, 6, 7, 8, 9, and 10, or Section 11. This section shall not apply to buildings on the site where the alterations or additions are to be performed except as required by Sections 4.2.1.2 and 4.2.1.3.

**\*MODIFY SECTION 10.4.6 AS FOLLOWS:**

**10.4.6 Whole-Building Energy Monitoring**

Measurement devices shall be installed at the building site to monitor the *energy* use of each new *building*.

**10.4.6.2 Recording and Reporting**

The *energy* use of each *building* on the building site shall be recorded at a minimum of every 60 minutes and reported at least hourly, daily, monthly, and annually. The *system* shall be capable of maintaining all data collected for a minimum of 36 months and creating user reports showing at least hourly, daily, monthly, and annual *energy* consumption and *demand*.

**\*MODIFY APPENDIX G AS FOLLOWS:**

**Normative Appendix G, Table G3.1, 10. HVAC Systems, Baseline Building Performance...**

**Exception:** For *fossil fuel systems* where natural gas is not available for the proposed ~~site or~~ building site as determined by the *rating authority*, the baseline *HVAC systems* shall be modeled using propane as their *fuel*.

**Normative Appendix G, Table G3.1, 11. Service Water-Heating Systems, Baseline Building Performance ...**

**Exceptions:** Where natural gas is not available for the proposed ~~site or~~ building site, as by the *rating authority*, gas storage *water heaters* shall be modeled using propane as their *fuel*.