

ADDENDA

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

Energy Standard for Buildings Except Low-Rise Residential Buildings

Approved by the ASHRAE Standards Committee and ASHRAE Board of Directors on February 2, 2022; by the Illuminating Engineering Society on January 18, 2022; and by the American National Standards Institute on March 1, 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

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.

Addendum cb revises the title, purpose, and scope (TPS) of Standard 90.1 to apply to areas outside of the physical building. The addendum introduces a new term, "site," to define those types of environments where a physical building may not be present but where energy-consuming lighting and equipment are covered by provisions in the standard; incidental accessory buildings such as storage sheds, work sheds, pump houses, and similar small buildings associated with single-family dwellings are exempted, however.

Addendum cb also expands on the current definitions (Section 3) and administrative portions (Section 4) of the standard to support the correct application of the new scope. Specifically, definitions for "site," "existing site," and "structure" could be applied to projects that entail additions and alterations.

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 cb to Standard 90.1-2019

Modify title, purpose, and scope as shown (I-P and SI units).

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.
 - ~~4.4.~~ new *systems* and *equipment* in *existing buildings*, and
 - ~~5.5.~~ new *equipment* or *building systems* specifically identified in ~~the~~ this standard that are part of ~~industrial or manufacturing processes~~ applicationsand
- 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 for “site,” “existing site,” and “structure” and modify existing definitions as shown (I-P and SI).

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~~ *buildings*, ~~*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*~~ *building site*.

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

purchased energy rates: costs for units of *energy* or power purchased at the ~~*building*~~ *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*~~ *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*~~ *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*~~ *building site*.

[. . .]

structure: that which is built or constructed.

Add new Sections 4.1.1.6, 4.2.1.4, and 4.2.1.5 as shown (I-P and SI).

4.1.1.6 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 shown (I-P and SI).

10.4.6 Whole-Building Energy Monitoring. Measurement devices shall be installed at the ~~building~~ 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~~ 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 Normative Appendix G as shown (I-P and SI).

Table G3.1 Modeling Requirements for Calculating Proposed and Baseline Building Performance

No.	Proposed Building Performance	Baseline Building Performance
[...]		
10. HVAC Systems		
[...]		[...] Exception: For fossil fuel systems where natural gas is not available for the proposed building <u>building site</u> , as determined by the rating authority, the baseline HVAC systems shall be modeled using propane as their fuel.
11. Service Water-Heating Systems		
[...]		[...] h. Gas storage water heaters shall be modeled using natural gas as their fuel. Exception: Where natural gas is not available for the proposed building <u>building site</u> , as determined by the rating authority, gas storage water heaters shall be modeled using propane as their fuel. [...]
[...]		

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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