



ADDENDA

**ANSI/ASHRAE/IES Addendum bl 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 April 30, 2025, and by the Illuminating Engineering Society on March 31, 2025.

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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- participation in the next review of the Standard,
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FOREWORD

Definition Changes

Although the aquatics industry breaks down the types of pools and spas further than what is being proposed, Addendum bl only makes changes to the following necessary items:

- Removes “whirlpool” from the definition of “pool,” as this is a type of bathtub and not a pool or spa
- Adds therapy as an activity that can be performed in a pool to ensure therapy pools are covered
- Clarifies that a portable electric spa (PES) is not a pool, providing a separate definition for PES that follows the U.S. Department of Energy (DOE) definition, adding to the definition that to qualify as a PES, they must also be tested to the ANSI/APSP/ICC-14 Standard or Appendix GG to 10 CFR Part 430

Additional Background for PES Changes

The DOE has established a test procedure for PES and is expected to issue a notice of proposed rulemaking for a corresponding energy conservation standard. Therefore, the definition of “pool” notes that PES are not included. The addendum then defines “PES,” which follows the DOE’s definition of this factory-built appliance as well as what the aquatics industry considers a PES.

The ANSI/APSP/ICC-14 Standard, 2019 edition, is the energy efficiency standard for PES that has been adopted in California Title 20, the International Swimming Pool and Spa Code (ISPSC), and the International Energy Conservation Code (IECC).

Pool Cover Requirements

The 2022 edition of ANSI/ASHRAE/IES Standard 90.1 has the same pool/spa energy requirements as the ISPSC and IECC but for the pool cover section. This addendum attempts to align those requirements as follows:

- Clarifies that the requirements apply to outdoor pools
- Strikes the R-12 cover requirement
- Increases the stringency that must be met to qualify for the exception from having a vapor-retardant pool cover if the pool is heated

Additional Background for the Removal of an R-12 Cover

For those types of artificial bodies of water defined under “pool,” R values are not an industry norm when manufacturing pool covers and are rarely discussed. Further, but for a rare case of a custom-built cover, there are no R-12 covers to provide those who would attempt to meet the current Standard 90.1 requirement. The critical aspect is that a pool that is heated is covered with any type of vapor-retardant cover. The DOE provides information on how using a pool cover can significantly reduce swimming pool heating costs, but by far, the largest source of energy loss is water evaporation, which pool covers also minimize.

The DOE website states, “Covering a pool when it is not in use is the single most effective means of reducing pool heating costs. Savings of 50%–70% are possible.”¹ It does not state that a pool should be covered with an R-12 cover. In fact, requiring R-12 covers would encourage consumers not to use them, as they would be too unwieldy and heavy to take on and off. It can be difficult to encourage compliance with any type of cover; by eliminating the R-12 cover requirement, the focus can be on providing a vapor-retardant cover on a heated pool that will provide the benefits as cited by the DOE. This could be a thermal, solar bubble cover, or automatic pool cover, which also provides the additional benefit of complying with safety barrier requirements for water safety purposes.

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.

1. <https://www.energy.gov/energysaver/swimming-pool-covers>

Addendum bl to Standard 90.1-2022

Modify Section 3.2 as follows (SI and I-P).

pool: any *structure*, basin, or tank containing an artificial body of water for swimming, diving, therapy, or recreational bathing. The term includes (but is not limited to) swimming *pools*, ~~whirlpools~~, spas, and hot tubs that are not portable electric spas.

portable electric spa: a factory-built electric spa or hot tub, supplied with equipment for heating and circulating water at the time of sale or sold separately for subsequent attachment, and tested to APSP 14 or Appendix GG to 10 CFR Part 430.

Modify Section 7.4.5.2 as follows:

7.4.5.2 Pool Covers. ~~Outdoor~~ Heated *pools* shall be equipped with a vapor retardant *pool* cover on or at the water surface. ~~*Pools* heated to more than 90°F shall have a *pool* cover with a minimum insulation value of R-12.~~

Exception to 7.4.5.2: Pools deriving over ~~60~~75% of the energy for heating, computed over an operating season of not fewer than three calendar months, from site-recovered energy or on-site renewable energy.

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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