BSR/ASHRAE/IES Addendum i
to ANSI/ASHRAE/IES Standard 90.1-2022

Public Review Draft

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

Second Public Review (November 2026)
(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 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 or by calling 404-636-8400 or 1-800-727-4723 (for orders in the U.S. or Canada).

This standard is under continuous maintenance. To propose a change to the current standard, use the change submittal form available on the ASHRAE website, www.ashrae.org.

The appearance of any technical data or editorial material in this public review document does not constitute endorsement, warranty, or guaranty by ASHARE of any product, service, process, procedure, or design, and ASHRAE expressly disclaims such.

© 2026 ASHRAE. This draft is covered under ASHRAE copyright. Permission to reproduce or redistribute all or any part of this document must be obtained from the ASHRAE Manager of Standards, 180 Technology Parkway NW, Peachtree Corners, GA 30092. Phone: 404-636-8400, Ext. 1125. Fax: 404-321-5478. E-mail: standards.section@ashrae.org.

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

© 2026 ASHRAE
This draft is covered under ASHRAE copyright. The appearance of any technical data or editorial material in this publication document does not constitute endorsement, warranty, or guaranty by ASHRAE of any product, service, process, procedure, design or the like and ASHRAE expressly disclaims such. Permission to republish or redistribute must be obtained from the MOS.

(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

One commenter to the first public review of this addendum suggested language that improved the clarity of the requirement that if a certification program exists, a test report from an independent laboratory not more than five years old be provided. The new language is clearer and provides a firm date of not more than five years before the permit application.

The same commenter suggested that clarity around embedded fans and embedded fan arrays can be improved by creating a definition for embedded fan arrays and separating them in the exceptions to Section 6.5.3.1.3.

Another commenter offered an improvement to the title of Table 6.4.1.4, which is shown below.

Cost justification: Not required because these changes do not increase stringency.

[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 ~~strikethrough~~ (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 i -2nd PR ISC to 90.1-2025

Add a new definition to Section 3.2 (SI and I-P):

***embedded fan array*:** a *fan array* that is part of a manufactured assembly where the assembly includes functions other than air movement.

Modify Section 6.4.1.4 as follows (SI and I-P):

6.4.1.4

…

c. Where a certification program exists for the *equipment*, and it includes provisions for verification and challenge of equipment efficiency ratings, but the product is not listed in an existing certification program, the ratings shall be verified by an independent laboratory in a test report dated not more than five years before the construction permit application. The report shall include all data and the resulting efficiency rating determined by the referenced test procedure for that equipment. ~~, including all data required by the referenced test procedure for that equipment and the resulting rating, a test report dated within the past five years, and data shall be furnished by the manufacturer~~

…

Table 6.4.1.4 Equipment ~~that Must~~ Required to Meet the Efficiency Verification Requirements of Section 6.4.1.4

Equipment shown in Tables 6.8.1-1 through 6.8.1-22
Equipment required to be rated in accordance with Section 6.4.7
Fans and *fan arrays* that are required to meet a minimum FEI in Section 6.5.3.1.3
Low power fans required to meet a minimum efficacy in Section 6.5.3.7
Exhaust air energy recovery *equipment* described in Section 6.5.6

Modify the exception to Section 6.5.3.1.3 as follows (SI and I-P):

6.5.3.1.3 Fan Efficiency. Each fan and *fan array* shall have a *fan energy index (FEI)* of 1.00 or higher at its highest design airflow rate. Each fan and *fan array* used for a *variable-air-volume system* that meets the requirements of Section 6.5.3.2.1 shall have an *FEI* of 0.95 or higher at its highest design airflow rate. The *FEI* for *fan arrays* shall be calculated in accordance with AMCA 208 Annex C.

Exceptions to 6.5.3.1.3:

1. Fans that are not *embedded fans* with a motor *nameplate horsepower* of less than 1.0 hp or with a *fan nameplate electrical input power* of less than 0.89 *kW* or where air power at the design airflow results in greater than 150 hp.
2. *Embedded fans* ~~and *fan arrays*~~
3. *Embedded fan arrays*