BSR/ASHRAE/IES Addendum r
to ANSI/ASHRAE/IES Standard 90.1-2025

Public Review Draft

Proposed Addendum r to Standard 90.1-2025, Energy Standard for Sites and Buildings Except Low-Rise Residential Buildings

First Public Review (November 2026)
(Draft Shows Proposed Changes to Current Standard)

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FOREWORD

This addendum adds the requirement for regenerative drives for downward travel or reversible direction escalators in section 10.4.4. The current language of 10.4.4 only requires escalators and moving walks to slow to minimum speed in accordance with ASME A17.1/CSA B44 and is moved 10.4.4.1.

The basis of this addendum has the same approach for new construction versus retrofit applications. The current escalator speed control requirements result in the installation of a VFD with this proposal having the added cost of the regenerative drive components (converter and conductors).

This is an energy saving addendum and is expected to save 15-20% based on certain assumptions used for the cost-effectiveness analysis.

Cost-effectiveness analysis was conducted for three applications based on run-time hours and a minimum of two installed escalators. The finding is that the regenerative drive meets the scalar limit under the following conditions: 4,000 hours of operating; standard electricity price;15-year equipment lifetime; 90% drive efficiency; and 50% people usage factor.

[Note to Reviewers: This addendum makes proposed changes to the current standard. 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 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 r to 90.1-2025

[...]

10.4.4 Escalators and Moving Walks. Escalators and moving walks shall comply with the following: ~~automatically slow to the minimum permitted speed in accordance with ASME A17.1/CSA B44 or applicable local code when not conveying passengers.~~

10.4.4.1 Reducing speed when unoccupied. Escalators and moving walks shall *automatically* slow to the minimum permitted speed in accordance with ASME A17.1/CSA B44 or applicable local code when not conveying passengers.

10.4.4.2 Regenerative Drives. Escalators shall utilize regenerative drives. The regenerated electricity shall be used by the *building* or *site*, or be exported to the grid.

Exceptions to 10.4.4.2:

1. *Buildings* or *sites* with only one escalator.
2. Escalators installed for only one-way up operation.
3. Escalator drives with a nominal electrical power rating less than 15 kilowatts.

[...]