



**BSR/ASHRAE/IES Addendum by
to ANSI/ASHRAE/IES Standard 90.1-2016**

Public Review Draft

Proposed Addendum by to Standard 90.1-2016, Energy Standard for Buildings Except Low-Rise Residential Buildings

**Second Public Review Draft (May 2019)
(Draft Shows Proposed Independent Substantive
Changes to Previous Public Review Draft)**

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FOREWORD

In response to comments from the first public review of addendum BY, two additional exceptions are being added to (a) exempt smaller buildings and additions from this requirement, and (b) clarify that alterations (e.g. roof equipment, lighting, or other replacement or upgrades) do not trigger this requirement. The original addendum was determined to be cost effective per ASHRAE's scalar cost effectiveness analysis, and these additional exceptions will increase adoptability and cost effectiveness.

[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 BY to 90.1-2016

Modify the standard as follows (IP and SI Units)

10.5.1.1 On-site renewable energy.

The *building* site shall have *equipment* for *on-site renewable energy* with a rated capacity of not less than 0.25 W/ft² or 0.85 Btu/ft² (2.7W/m²) multiplied by the sum of the *gross conditioned floor area* for all floors up to the three (3) largest floors.

Exceptions to 10.5.1.1:

1. Any *building* located where an unshaded flat plate collector oriented towards the equator and tilted at an angle from horizontal equal to the latitude receives an annual daily average incident solar radiation less than 3.5 kWh/m²·day (1.1 kBtu/ft²·day).
2. Any *building* where more than 80% of the *roof* area is covered by any combination of *equipment* other than for *on-site renewable energy systems*, planters, vegetated space, *skylights* or occupied *roof* deck.
3. Any *building* where more than 50% of *roof* area is shaded from direct-beam sunlight by natural objects or by structures that are not part of the *building* for more than 2,500 annual hours between 8:00 AM and 4:00 PM.

4. New construction and *additions* in which the sum of the *gross conditioned floor area* of the three largest floors is less than 10,000 ft²(1,000 m²).
5. *Alterations* that do not include *additions*.