

STANDARD

**ANSI/ASHRAE/IES Addendum b to
ANSI/ASHRAE/IES Standard 100-2018**

Energy Efficiency in Existing Buildings

Approved by ASHRAE and the American National Standards Institute on September 30, 2021, and by the Illuminating Engineering Society on September 27, 2021.

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FOREWORD

Addendum b adds energy efficiency measures to Informative Annex E, "Energy Efficiency Measures."

Note: In this addendum, changes to the current standard are indicated in the text by underlining (for additions) and ~~striketrough~~ (for deletions) unless the instructions specifically mention some other means of indicating the changes.

Addendum b to Standard 100-2018

Modify Informative Annex E as shown. The remainder of Informative Annex E is unchanged.

INFORMATIVE ANNEX E ENERGY EFFICIENCY MEASURES

[...]

E2. HVAC SYSTEMS

[...]

E2.3.16 Install a Fault Detection and Diagnostic (FDD) system and address identified faults. A FDD system should utilize *building* analytic algorithms to convert data provided by sensors and devices to automatically identify faults in *building* systems and provide a prioritized list of actionable resolutions to those faults based on cost or energy avoidance, comfort, and maintenance impact.

[...]

E5. ENERGY GENERATION, AND DISTRIBUTION, AND MONITORING

[...]

E5.5 Energy System Monitoring

E5.5.1 Install a metering system to monitor the electrical energy use for each of the major electrical energy using loads. These loads may include, but are not limited to, *HVAC systems*, water heating systems, cooking equipment, laundry equipment, interior lighting, exterior lighting, parking lots, parking ramps, elevators, escalators, and receptacle circuits.

E5.5.2 Install a metering system to monitor the fossil fuel energy use for each of the major fossil fuel energy using loads. These loads may include, but are not limited to, space heating systems, water heating systems, pool heating systems, cooking equipment, clothes drying equipment, gas lighting, outdoor equipment, and all other miscellaneous fossil fuel end-uses.

E8. ELECTRIC SYSTEMS, MOTORS

[...]

~~**E8.2** Install electrical meters for submetering lighting, elevators, plug loads, and HVAC equipment.~~

~~**E8.3**~~**E8.2** Reduce demand charges through load shedding, operational changes, and procedural changes.

~~**E8.4**~~**E8.3** Replace oversized electric motors with right-sized or slightly oversized motors.

~~**E8.5**~~**E8.4** Replace existing three-phase, 1 hp (746 W) and greater electric motors with premium-efficiency motors (often a better choice than rewinding motors).

~~**E8.6**~~**E8.5** Replace existing one-phase, 1 hp (746 W) and less motors with electrically commuted motors.

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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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