

ANSI/ASHRAE/IESNA Standard 100-2006
(Supersedes ANSI/ASHRAE/IESNA Standard 100-1995)



ASHRAE STANDARD

Energy Conservation in Existing Buildings

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NOTE

When addenda, interpretations, or errata to this standard have been approved, they can be downloaded free of charge from the ASHRAE Web site at <http://www.ashrae.org>.

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FOREWORD

This revision of ANSI/ASHRAE/IESNA Standard 100-1995 is part of ASHRAE's continuing program of updating its standards. The cognizant technical committee recognized that the standard needed revising to bring it in line with other published ASHRAE documents, specifically ANSI/ASHRAE/IESNA Standard 90.1-2004, Energy Standard for Buildings Except Low-Rise Residential Buildings, and the 2003 ASHRAE Handbook—HVAC Applications. While these revisions were being made, other less extensive improvements were also made to the standard.

1. PURPOSE

1.1 This standard provides criteria that will result in the conservation of energy resources in existing buildings.

1.2 This standard is directed toward

- a. providing procedures and programs essential to energy-conserving operation, maintenance, and monitoring,
- b. increasing the energy efficiency of the energy-using systems and components, and
- c. upgrading the thermal performance of the building envelope.

2. SCOPE

This standard applies to existing buildings, portions of buildings, and complexes, including the envelope and all energy systems in the building, except process systems.

3. DEFINITIONS

brightness controls: restriction or redirection of light from windows and task lighting luminaires to maintain satisfactory illumination levels for productive use of the lighted areas.

building: a facility having one or more uses within continuous boundaries under one contiguous roof system, including mobile homes, manufactured homes, and other factory-built buildings.

complex: multiple individual or interconnected buildings on contiguous property.

conditioned area: an area that is provided with a positive supply of heating and/or cooling capable of maintaining the temperature of the area between 10°C (50°F) and 30°C (86°F).

conditioned floor area: the sum of the conditioned floor areas of all of the floors of the building, including basements, mezzanine and intermediate-floor tiers, and penthouses with

at least 2.29 m (7.5 ft) of headroom height. The floor area is measured from the exterior faces of exterior walls or from the centerline of walls separating buildings.

efficient use of nonrenewable energy: the use of nonrenewable energy in a manner that is—or is nearly—the most economical and least wasteful manner as determined by economic and engineering measurement.

energy manager: the individual responsible for the energy consumption in the building. Note that, in a given building, the functions of the energy manager may be the responsibility of multiple individuals since these functions include policy, management, engineering, operations and maintenance, and accounting.

nonrenewable energy: energy other than renewable or recovered energy.

process system: a system used in support of a manufacturing, industrial, or commercial process other than conditioning spaces and maintaining comfort and amenities for the occupants of a building.

recovered energy: energy reclaimed for useful purposes that would otherwise be wasted.

renewable energy: energy obtained from sunlight, wind, earth, geothermal sources, or bodies of water.

zone: a space or group of spaces within a building for which the heating, cooling, or lighting requirements are sufficiently similar that desired conditions can be maintained throughout by a single controlling device.

4. COMPLIANCE REQUIREMENTS

4.1 A building or complex of buildings complies with this standard if the requirements of Sections 4.2, 4.3, and 4.4 have been met and so recorded on Form A.

4.2 A person or persons determining compliance shall conduct an energy survey according to Section 5.

4.3 The person or persons determining compliance shall state in writing that the operating and maintenance requirements of Section 6 have been met.

4.4 The person or persons determining compliance shall state in writing that the building and equipment modification requirements of Section 7 have been met.

Exception: No individual requirement need be met that would compromise the historical integrity of a building or part of a building designated by a government body for long-term preservation in its existing state (such as "historical monuments").

5. ENERGY SURVEY REQUIREMENTS

This section establishes requirements for the survey of energy use in existing buildings for which compliance with this standard is claimed.

5.1 Building Type Classification

Each building shall be classified by type according to Form B.