

ADDENDA

**ANSI/ASHRAE/IES Addendum cu to
ANSI/ASHRAE/IES Standard 90.1-2019**

Energy Standard for Buildings Except Low-Rise Residential Buildings

Approved by ASHRAE and the American National Standards Institute on June 30, 2022, and by the Illuminating Engineering Society on June 10, 2022.

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FOREWORD

Section 6.5.6.3, “Heat Recovery for Space Conditioning” requires that heat recovery be used in most acute inpatient hospitals. The existing language refers to “condenser heat recovery.” The intention was that the heat source be the chilled water return, and the economic justification was built on that.

Use of the term “condenser heat recovery” led some users to believe the heat source could be water leaving the chiller condenser. While this method does recover heat, it does not reduce load on the chillers. Using the chilled-water return water as the heat source saves much more energy.

Addendum cu clarifies existing requirements. The economic justification was completed when Section 6.5.6.3 was introduced in Standard 90.1-2019. The exception for site recovered energy was removed because there is no first-cost increase to use the chilled-water return system as the heat source rather than the chiller condenser water. The exception for site renewable energy was removed because there are now separate requirements for site renewable energy elsewhere in the standard.

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 cu to Standard 90.1-2019

Modify the standard as shown (I-P and SI).

6.5.6.3 Heat Recovery for Space Conditioning. Where heating water is used for space heating, a ~~condenser-heat-pump~~ chiller meeting the requirements of Table 6.8.1-16 for heat recovery system that uses the cooling system return water as the heat source shall be installed, provided all of the following are true:

- a. The building is an acute inpatient hospital, where the building or portion of a building is used on a 24-hour basis for the inpatient medical, obstetric, or surgical care for patients.
- b. The total design chilled-water capacity for the acute inpatient hospital, either air cooled or water cooled, required at cooling *design conditions* exceeds 3,600,000 Btu/h (1,100 kW) of cooling.
- c. Simultaneous heating, including reheat, and cooling occurs above 60°F (16°C) *outdoor air temperature*.

The required heat recovery *system* shall have a cooling capacity that is at least 7% of the total design chilled-water capacity of the acute inpatient hospital at peak *design conditions*.

Exceptions to 6.5.6.3:

1. ~~Buildings that provide ≥60% of their reheat energy from on-site renewable energy or site recovered energy.~~
2. Buildings in Climate Zones 5C, 6B, 7, and 8.

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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.

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