ANSI/ASHRAE Addendum b to
ANSI/ASHRAE Standard 90.4-2016

Energy Standard for
Data Centers

Approved by the ASHRAE Standards Committee on January 20, 2018; by the ASHRAE Technology Council on January 24, 2018; and by the American National Standards Institute on January 25, 2018.

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FOREWORD

Addendum b cleans up redundant wording in Section 4.1.1.2 and creates a more level planning field in Section 4.2.1.2 while eliminating inappropriate text. The addendum clarifies the exception in Section 6.1.1.2 that addresses the case where existing HVAC systems and equipment serve an addition, and it adds parallel criteria to Section 8.1.3 for electrical equipment.

The exception to Section 4.2.1.2 is deleted. The exception addresses increases in floor area and increases in connected load. In terms of the first aspect, providing an exemption for an increase in area is inequitable: there is no exemption for 10% of the floor area in a new building, and some additions to existing buildings can be as large as a stand-alone new building. All new floor area should be treated the same. Further, codes in general require compliance for new construction, and this change would better align Standard 90.4 with codes. In terms of the second aspect, this is the wrong location to address most increases in connected load. A build-out or expansion of ITE within the shell of an existing building envelope is considered an alteration, not an addition. Consequently, increases in connected load are most appropriately addressed in the alterations section.

In Section 6, the base requirements for additions to existing data centers remain unchanged. The exception to Section 6.1.1.2 is revised to clarify the distinctions between the use of existing HVAC systems and equipment to serve a new addition versus the installation of new HVAC systems and equipment. The language parallels the requirements in Standard 90.1, Section 6.

Section 8 in Standard 90.4 did not specifically address additions to existing data centers. The proposed base requirements match the requirements in Standard 90.1, Section 8. The new exception to Section 8.1.3 is written to parallel the exception in Section 6 above. (Standard 90.1, Section 8, does not contain such an exception.)

This addendum only addresses additions to existing data centers. The issue of alterations to existing data centers is addressed in Addendum a.

Note: In this addendum, changes to the current standard are indicated in the text by underlining (for additions) and strikethrough (for deletions) unless the instructions specifically mention other means of indicating the changes.
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Through its Handbook, appropriate chapters will contain up-to-date Standards and design considerations as the material is systematically revised.

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