



**BSR/ASHRAE/IES Addendum w
to ANSI/ASHRAE/IES Standard 90.1-2019**

Public Review Draft

Proposed Addendum w to Standard 90.1-2019, Energy Standard for Buildings Except Low-Rise Residential Buildings

**First Public Review (November 2020)
(Draft Shows Proposed Changes to Current Standard)**

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ASHRAE, 180 Technology Parkway NW, Peachtree Corners, GA 30092

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FOREWORD

The proposed change to Section G3.1.3.7 and Table G3.1.3.7 clarifies that baseline building design chillers should be sized based on the total peak coincident cooling load of baseline HVAC systems of type 7, 8, 11, 12 and 13. The current language requires that the building peak cooling load be used for sizing baseline chillers and this creates confusion in instances where a building may have a large portion of the cooling load served by DX cooling systems.

This addendum impacts an optional performance path in the standard designed to provide increased flexibility and therefore was not subjected to cost effectiveness analysis.

[Note to Reviewers: This addendum makes proposed changes to the current standard. 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 current standard 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 changes.]

Addendum w to 90.1-2019

Modify the standard as follows (IP and SI Units)

G3.1.3.7 Type and Number of Chillers (Systems 7, 8, 11, 12, and 13)

Electric chillers shall be used in the *baseline building design* regardless of the cooling *energy* source, e.g. direct-fired absorption or absorption from purchased steam. The *baseline building design*'s chiller plant shall be modeled with chillers having the number and type as indicated in Table G3.1.3.7 ~~as a function of building~~ based on the peak coincident cooling load of baseline HVAC systems using chilled water.

Exception to G3.1.3.7

Systems using purchased chilled water shall be modeled in accordance with Section G3.1.1.3.

G.3.1.3.7 Type and Number of Chillers

<u>Building Peak Coincident Cooling Loads of Baseline HVAC systems using chilled water</u>	Number and Type of Chillers
≤300 tons (1055 kW)	1 water-cooled screw chiller
>300 tons (1055 kW), <600 tons (2110 kW)	2 water-cooled screw chillers sized equally
≥600 tons (2110 kW)	2 water-cooled centrifugal chillers minimum with chillers added so that no chiller is larger than 800 tons (2813 kW), all sized equally