



**BSR/ASHRAE Addendum a
to ANSI/ASHRAE Standard 90.4-2022**

Public Review Draft

Proposed Addendum a to Standard 90.4-2022, *Energy Standard for Data Centers*

Second Public Review (September, 2024)

(Draft Shows Proposed Changes to Previous Addendum)

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(This foreword is not part of this standard. It is merely informative and does not contain requirements necessary for conformance to the standard. It has not been processed according to the ANSI requirements for a standard and may contain material that has not been subject to public review or a consensus process. Unresolved objectors on informative material are not offered the right to appeal at ASHRAE or ANSI.)

Foreword

The primary goal and responsibility of the SSPC 90.4 Committee is to publish a consensus standard  mandatory language that sets practical and technologically feasible energy efficiency requirements for data centers on a consistent schedule. *Addendum a* continues to abide by that mission. However, within this primary goal the SSPC and its working groups have the further ongoing charge to position the standard as an essential reference to the data center industry and broader Built Environment discipline. Accordingly, the SSPC is responding to two (2) developments that it considers matters of importance, both to its constituency and to the wider ASHRAE ecosystem:

- The advent and ascendance of Environmental, Social, Governance (ESG) as core policy for many businesses, and the corresponding goal setting and reporting discipline around sustainability these organizations have adopted.
- ASHRAE's recently declared positions on decarbonization of the Built Environment, and the elimination of Greenhouse Gas (GHG) emissions from the built environment, as essential elements in addressing climate change.

With respect to the first development, many companies have established a Net Zero Emission pledge, GHG emission reduction targets, and water conservation goals as distinguishing features of their ESG programs.

ASHRAE's decarbonization and standards harmonization priorities are now components of ASHRAE's Strategic Plan, and the organization is actively coordinating joint building decarbonization initiatives with other organizations to this end. Significantly, ASHRAE is working internally to strengthen the decarbonization components of ASHRAE standards, including:

- Developing and revising guidelines and standards to reduce GHG emissions while maintaining or improving building indoor environmental quality, sustainability, and resilience
- Coordinating with the standards project committees to address GHG emissions
- Identifying gaps to address both operational and embodied carbon standards
- Harmonizing standards to respond to industry and members' needs

Addendum a therefore aims to provide alignment between Standard 90.4, ASHRAE's Strategic Plan and contemporary industry needs. Standard 90.4 currently regulates data center energy consumption. However, under its current purpose statement, it does not clearly encompass related data center greenhouse gas emissions, environmental impact, water consumption, or other resources or considerations beyond energy. *Addendum a* expands the purpose statement to include resources and considerations beyond direct energy use that contribute to data center sustainability and decarbonization.

[Note to Reviewers: This addendum makes proposed changes to the current standard. These changes are indicated in the text by underlining (for additions) and ~~strikethrough~~ (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 a to 90.4-2022

Modify the Purpose and Scope as follows:

1. PURPOSE

The purpose of this standard is to establish ~~the~~ minimum *energy efficiency* ~~and resource~~ requirements for the design, construction, and planned operation and maintenance of data centers, and to balance those requirements with related factors affecting the environment. ~~in service of decarbonization and reduction of greenhouse gas emissions.~~

~~Resources include but are not limited to:~~

Factors to be evaluated include:

- a) Non-renewable energy consumption
- b) Renewable energy consumption
- c) Water consumption
- d) Greenhouse gas emissions

2. SCOPE

2.1 This standard applies to

- a. new *data centers*, or portions thereof, and their *systems*;
- b. new *additions* to *data centers*, or portions thereof, and their *systems*; and
- c. modifications to *systems* and *equipment* in existing *data centers* or portions thereof.

2.2 The provisions of this standard do not apply to

- a. *telephone exchanges*,
- b. *essential facilities*, and
- c. *information technology equipment (ITE)*.

2.3 Where specifically noted in this standard, certain other buildings or elements of buildings shall be exempt.

2.4 This standard shall not be used to circumvent any safety, health, or environmental requirements.