



**BSR/ASHRAE/IES Addendum ci  
to ANSI/ASHRAE/IES Standard 90.1-2022**

**Public Review Draft**

# **Proposed Addendum ci to Standard 90.1-2022, Energy Standard for Sites and Buildings Except Low- Rise Residential Buildings**

**Second Public Review (July 2025)  
(Draft Shows Proposed Changes to Current Standard)**

This draft has been recommended for public review by the responsible project committee. To submit a comment on this proposed standard, go to the ASHRAE website at [www.ashrae.org/standards-research--technology/public-review-drafts](http://www.ashrae.org/standards-research--technology/public-review-drafts) and access the online comment database. The draft is subject to modification until it is approved for publication by the Board of Directors and ANSI. Until this time, the current edition of the standard (as modified by any published addenda on the ASHRAE website) remains in effect. The current edition of any standard may be purchased from the ASHRAE Online Store at [www.ashrae.org/bookstore](http://www.ashrae.org/bookstore) or by calling 404-636-8400 or 1-800-727-4723 (for orders in the U.S. or Canada).

This standard is under continuous maintenance. To propose a change to the current standard, use the change submittal form available on the ASHRAE website, [www.ashrae.org](http://www.ashrae.org).

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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

*This addendum updates the Building Performance Factors (BPFs) that are used for determining compliance with Appendix G (see section 4.2.1.1). The BPFs represent the regulated energy savings of a design minimally compliant with the current edition of Standard 90.1 compared to design compliant with Appendix G PRM baseline requirements. The BPFs are updated each cycle to align with changes made to the prescriptive and mandatory requirements of the Standard as quantified by energy simulation using prototype building models approved by SSPC 90.1 (<https://www.energycodes.gov/prototype-building-models>).*

*This 2<sup>nd</sup> PRD adjusts the BPF to align with the proposed ISC for addendum ca that adjusts the required energy credits in Table 11.5.1. The other change in this 2<sup>nd</sup>PRD is the removal of data center loads in the Large Office prototype when calculating the regulated energy for the BPF calculation. The Office occupancy BPF are all lower as a result of this change.*

### Cost effectiveness

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.]*

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## Addendum ci to 90.1-2022

Revise Table 4.2.1.1 as follows:

**Table 4.2.1.1 Building Performance Factor (BPF)**

**Table I3-1 Building Performance Factors (BPF), Site Energy**

Building Area Type	Climate Zone																		
	0A	0B	1A	1B	2A	2B	3A	3B	3C	4A	4B	4C	5A	5B	5C	6A	6B	7	8
Multifamily	0.72	0.71	0.75	0.73	0.76	0.76	0.77	0.75	0.70	0.61	0.71	0.64	0.56	0.63	0.63	0.54	0.57	0.54	0.56
Healthcare/hospital	0.67	0.66	0.68	0.65	0.65	0.61	0.62	0.64	0.63	0.62	0.63	0.61	0.65	0.63	0.68	0.64	0.68	0.69	0.71
Hotel/motel	0.69	0.69	0.72	0.68	0.69	0.68	0.69	0.70	0.71	0.65	0.69	0.68	0.63	0.66	0.67	0.60	0.64	0.59	0.58
Office	0.54	0.54	0.53	0.52	0.52	0.52	0.50	0.54	0.47	0.47	0.52	0.48	0.49	0.52	0.49	0.48	0.50	0.43	0.46
Restaurant	0.64	0.61	0.60	0.59	0.60	0.57	0.61	0.62	0.61	0.66	0.65	0.66	0.69	0.69	0.68	0.71	0.71	0.72	0.74
Retail	0.51	0.49	0.48	0.48	0.44	0.43	0.43	0.44	0.44	0.47	0.45	0.50	0.52	0.47	0.52	0.52	0.50	0.48	0.49
School	0.52	0.57	0.57	0.56	0.52	0.53	0.53	0.52	0.55	0.42	0.49	0.53	0.44	0.50	0.51	0.43	0.42	0.42	0.44
Warehouse	0.26	0.26	0.22	0.25	0.21	0.22	0.25	0.21	0.18	0.38	0.27	0.31	0.46	0.37	0.31	0.49	0.42	0.43	0.47
All others	0.63	0.62	0.65	0.61	0.56	0.53	0.55	0.55	0.59	0.55	0.55	0.58	0.57	0.57	0.61	0.57	0.57	0.56	0.58

Building Area Type	Climate Zone																		
	0A	0B	1A	1B	2A	2B	3A	3B	3C	4A	4B	4C	5A	5B	5C	6A	6B	7	8
Multifamily	0.61	0.57	0.60	0.57	0.59	0.57	0.58	0.58	0.46	0.55	0.57	0.55	0.54	0.56	0.57	0.53	0.53	0.54	0.59
Healthcare/hospital	0.60	0.59	0.59	0.60	0.60	0.60	0.58	0.59	0.56	0.56	0.57	0.58	0.58	0.57	0.53	0.57	0.55	0.55	0.57
Hotel/motel	0.58	0.56	0.57	0.56	0.55	0.54	0.54	0.54	0.53	0.53	0.53	0.52	0.53	0.53	0.53	0.53	0.53	0.52	0.53
Office	0.43	0.42	0.40	0.41	0.37	0.39	0.37	0.38	0.35	0.35	0.37	0.36	0.37	0.37	0.37	0.38	0.36	0.36	0.39
Restaurant	0.57	0.55	0.56	0.55	0.55	0.55	0.58	0.56	0.54	0.59	0.57	0.60	0.62	0.59	0.61	0.63	0.61	0.64	0.67
Retail	0.41	0.40	0.38	0.39	0.33	0.34	0.34	0.34	0.34	0.35	0.36	0.37	0.36	0.36	0.38	0.37	0.37	0.38	0.41
School	0.45	0.45	0.43	0.44	0.41	0.43	0.43	0.39	0.37	0.37	0.38	0.38	0.38	0.38	0.38	0.38	0.37	0.38	0.41
Warehouse	0.24	0.25	0.21	0.24	0.20	0.21	0.24	0.21	0.18	0.24	0.21	0.21	0.28	0.24	0.22	0.31	0.28	0.29	0.32
All others	0.53	0.51	0.50	0.51	0.44	0.42	0.43	0.42	0.42	0.43	0.42	0.44	0.44	0.43	0.45	0.44	0.44	0.45	0.47