

**ANSI/ASHRAE/ICC/USGBC/IES Addendum ay to  
ANSI/ASHRAE/ICC/USGBC/IES Standard 189.1-2020**

# Standard for the Design of High-Performance Green Buildings

Except Low-Rise  
Residential Buildings

*The Complete Technical Content of the International Green Construction Code<sup>®</sup>*

Approved by ASHRAE and the American National Standards Institute on May 31, 2023; by the International Code Council and the the Illuminating Engineering Society on May 22, 2023; and by U.S. Green Building Council on May 29, 2023.

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ASHRAE obtains consensus through participation of its national and international members, associated societies, and public review.

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## **FOREWORD**

*Addendum ay updates Tables 7.5.1 and 7.5.2 to provide consistent stringency with the prescriptive energy requirements in Standard 189.1, Sections 7.1 through 7.4, which reference Standard 90.1-2022. This addendum modifies tables in published Addendum m to Standard 189.1-2020, available on the ASHRAE website at [www.ashrae.org/addenda](http://www.ashrae.org/addenda).*

**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 ay to Standard 189.1-2020**

***Modify Tables 7.5.1 and 7.5.2 as shown.***

**Table 7.5.1 Building Performance Factors for Cost (BPF<sub>c</sub>) and Renewable Fraction (RF<sub>c</sub>)**

	Climate Zone	Building Type									
		Multifamily	Healthcare/ Hospital	Hotel/ Motel	Office	Restaurant	Retail	School	Warehouse	All Others	
Building Performance Factor for Cost	0A/1A	0.61	0.56	0.51	0.48	0.62	0.48	0.37	0.36	0.51	
	0B/1B	0.62	0.55	0.49	0.52	0.62	0.51	0.45	0.40	0.53	
	2A	0.58	0.53	0.49	0.45	0.58	0.46	0.36	0.38	0.46	
	2B	0.58	0.50	0.47	0.51	0.59	0.52	0.41	0.40	0.48	
	3A	0.61	0.53	0.49	0.49	0.58	0.48	0.36	0.41	0.46	
	3B	0.59	0.50	0.48	0.51	0.60	0.52	0.41	0.42	0.50	
	3C	0.50	0.50	0.48	0.42	0.57	0.48	0.39	0.40	0.47	
	4A	0.66	0.51	0.48	0.47	0.61	0.48	0.36	0.42	0.50	
	4B	0.66	0.49	0.48	0.47	0.56	0.52	0.39	0.41	0.48	
	4C	0.67	0.50	0.47	0.45	0.60	0.51	0.38	0.44	0.50	
	5A	0.63	0.53	0.45	0.47	0.62	0.47	0.36	0.47	0.47	
	5B	0.65	0.47	0.47	0.47	0.59	0.50	0.39	0.44	0.47	
	5C	0.66	0.49	0.46	0.44	0.63	0.51	0.36	0.45	0.45	
	6A	0.62	0.54	0.46	0.49	0.65	0.47	0.35	0.51	0.47	
	6B	0.65	0.49	0.47	0.48	0.62	0.48	0.36	0.48	0.47	
	7	0.61	0.55	0.46	0.46	0.66	0.46	0.35	0.54	0.47	
	8	0.65	0.55	0.47	0.49	0.69	0.47	0.36	0.53	0.43	
	0A	0.69	0.62	0.64	0.51	0.63	0.46	0.51	0.25	0.55	
	0B	0.68	0.60	0.63	0.52	0.61	0.44	0.54	0.27	0.55	
	1A	0.72	0.63	0.66	0.50	0.61	0.42	0.55	0.21	0.61	
	1B	0.69	0.60	0.61	0.51	0.60	0.42	0.54	0.24	0.54	
	2A	0.73	0.60	0.61	0.46	0.60	0.38	0.51	0.20	0.58	
	2B	0.73	0.56	0.61	0.47	0.60	0.36	0.52	0.21	0.59	
	3A	0.74	0.57	0.60	0.45	0.62	0.36	0.50	0.21	0.57	
	3B	0.76	0.57	0.62	0.48	0.62	0.37	0.50	0.20	0.60	
	3C	0.68	0.54	0.59	0.40	0.62	0.35	0.52	0.17	0.48	
	4A	0.74	0.58	0.62	0.45	0.64	0.37	0.47	0.27	0.56	
	4B	0.75	0.56	0.59	0.46	0.64	0.37	0.47	0.21	0.56	
	4C	0.74	0.53	0.60	0.43	0.65	0.38	0.50	0.23	0.54	
	5A	0.73	0.57	0.63	0.48	0.66	0.37	0.49	0.32	0.59	
	5B	0.76	0.54	0.62	0.48	0.65	0.37	0.48	0.26	0.57	
	5C	0.75	0.55	0.60	0.46	0.67	0.40	0.47	0.23	0.54	
	6A	0.72	0.58	0.65	0.49	0.67	0.37	0.48	0.35	0.57	
	6B	0.73	0.57	0.62	0.49	0.65	0.39	0.45	0.30	0.53	
	7	0.71	0.59	0.64	0.48	0.67	0.38	0.47	0.32	0.56	
	8	0.73	0.60	0.66	0.52	0.69	0.40	0.48	0.34	0.61	
	<b>Renewable Fraction</b>		0.50	0.35	0.50	0.50	0.10	0.50	0.50	0.50	0.50

**Table 7.5.2 Building Performance Factors for Emissions (BPF<sub>e</sub>) and Renewable Fraction (RF<sub>e</sub>)**

	Climate Zone	Building Type								
		Multifamily	Healthcare/ Hospital	Hotel/ Motel	Office	Restaurant	Retail	School	Warehouse	All Others
<b>Building Performance Factor for Cost</b>	0A/1A	0.64	0.57	0.55	0.53	0.49	0.50	0.39	0.38	0.51
	0B/1B	0.64	0.57	0.55	0.53	0.49	0.50	0.39	0.38	0.51
	2A	0.63	0.58	0.54	0.50	0.50	0.47	0.37	0.40	0.50
	2B	0.65	0.52	0.54	0.55	0.48	0.47	0.43	0.40	0.51
	3A	0.63	0.56	0.54	0.51	0.51	0.49	0.38	0.43	0.50
	3B	0.66	0.55	0.57	0.55	0.53	0.50	0.45	0.42	0.53
	3C	0.61	0.55	0.57	0.48	0.54	0.50	0.38	0.37	0.50
	4A	0.60	0.56	0.52	0.48	0.53	0.51	0.35	0.49	0.50
	4B	0.65	0.55	0.52	0.51	0.52	0.51	0.42	0.44	0.52
	4C	0.60	0.56	0.54	0.47	0.57	0.53	0.44	0.47	0.52
	5A	0.57	0.56	0.51	0.49	0.56	0.53	0.37	0.53	0.52
	5B	0.62	0.53	0.49	0.51	0.53	0.52	0.45	0.48	0.52
	5C	0.62	0.55	0.54	0.48	0.57	0.54	0.37	0.45	0.51
	6A	0.55	0.55	0.52	0.49	0.59	0.54	0.38	0.57	0.52
	6B	0.57	0.53	0.53	0.50	0.57	0.54	0.37	0.53	0.52
	7	0.53	0.55	0.51	0.46	0.60	0.50	0.37	0.53	0.51
	8	0.56	0.55	0.52	0.48	0.65	0.50	0.41	0.53	0.52
	0A	0.68	0.63	0.67	0.51	0.65	0.46	0.52	0.25	0.56
	0B	0.67	0.61	0.66	0.53	0.63	0.44	0.55	0.27	0.56
	1A	0.71	0.63	0.68	0.51	0.62	0.43	0.56	0.21	0.61
	1B	0.69	0.60	0.63	0.51	0.62	0.43	0.55	0.24	0.55
	2A	0.71	0.60	0.64	0.46	0.63	0.39	0.53	0.20	0.58
	2B	0.71	0.57	0.65	0.48	0.63	0.37	0.53	0.21	0.59
	3A	0.74	0.58	0.65	0.46	0.66	0.39	0.54	0.24	0.59
	3B	0.72	0.58	0.66	0.48	0.65	0.38	0.52	0.20	0.59
	3C	0.66	0.56	0.64	0.41	0.65	0.36	0.55	0.16	0.49
	4A	0.68	0.59	0.65	0.43	0.68	0.40	0.47	0.32	0.54
	4B	0.70	0.57	0.61	0.46	0.67	0.39	0.49	0.24	0.56
	4C	0.67	0.55	0.65	0.43	0.68	0.41	0.54	0.26	0.53
	5A	0.65	0.58	0.65	0.46	0.69	0.41	0.50	0.39	0.57
	5B	0.68	0.56	0.65	0.48	0.68	0.40	0.50	0.31	0.56
	5C	0.67	0.58	0.64	0.47	0.69	0.43	0.49	0.26	0.55
6A	0.64	0.60	0.66	0.47	0.69	0.41	0.49	0.43	0.56	
6B	0.65	0.60	0.65	0.49	0.69	0.43	0.46	0.36	0.54	
7	0.62	0.61	0.66	0.46	0.70	0.42	0.46	0.38	0.54	
8	0.64	0.63	0.66	0.49	0.71	0.44	0.48	0.40	0.60	
<b>Renewable Fraction</b>		0.50	0.35	0.50	0.50	0.10	0.50	0.50	0.50	0.50

**POLICY STATEMENT DEFINING ASHRAE'S CONCERN  
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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.

ASHRAE will take the lead with respect to dissemination of environmental information of its primary interest and will seek out and disseminate information from other responsible organizations that is pertinent, as guides to updating Standards and Guidelines.

The effects of the design and selection of equipment and systems will be considered within the scope of the system's intended use and expected misuse. The disposal of hazardous materials, if any, will also be considered.

ASHRAE's primary concern for environmental impact will be at the site where equipment within ASHRAE's scope operates. However, energy source selection and the possible environmental impact due to the energy source and energy transportation will be considered where possible. Recommendations concerning energy source selection should be made by its members.

### **Standard 189.1 and the International Green Construction Code**

Standard 189.1 serves as the complete technical content of the International Green Construction Code<sup>®</sup> (IgCC). The IgCC creates a regulatory framework for new and existing buildings, establishing minimum green requirements for buildings and complementing voluntary rating systems. For more information, visit [www.iccsafe.org](http://www.iccsafe.org).

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