



**BSR/ASHRAE/ASHE Addendum n
to ANSI/ASHRAE/ASHE Standard 189.3-2021**

Public Review Draft

Proposed Addendum n to Standard 189.3-2021, Design, Construction, and Operation of Sustainable High-Performance Health Care Facilities

(Draft shows Proposed Changes to Current Standard)

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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

Addendum n makes two main changes. 189.1 removed the alternate renewables approach for compliance, and is keeping the standard renewables approach. This change updates the Table 7.4.1.1 for Renewable Energy Requirements by removing the alternate approach columns.

189.1 made updates to section 7.5 and tables 7.5.1 and 7.5.2 (in addendum m and ay) and table 7.5.2.2.1 (in addendum az) to provide consistent stringency with prescriptive energy requirements in sections 7.1 through 7.4, which reference standard 90.1-2022. To be consistent, we are updating our tables, and making converting them to vertical versions to fit into the standard similar to 189.1. In addition, tables got moved to section 7.6, so we are making that change to the document to match. Hospital and Specialized Outpatient Facility category values match with Hospital values listed in ASHRAE Standard 189.1-2023. Residential Health Facility values align with multifamily category values listed in ASHRAE Standard 189.1-2023. General Outpatient Facility values match with the Office category values listed in ASHRAE Standard 189.1-2023.

Note: This addendum makes proposed changes to the current standard. These changes are indicated in the text by underlining (for additions) and ~~striking through~~ (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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Change Table 7.4.1.1 as follows:

Table 7.4.1.1 Renewable Energy Requirement

Building Type	Standard Renewables Approach		Alternate Renewables Approach	
	kBtu/ft ² -year	kW/m ² -year	kBtu/ft²-year	kW/m²-year
Hospital	40	126	36	113
Residential health facility ^a	22	68	20	62
Specialized outpatient facility	38	120	34	107
General outpatient facility	14	44	13	40

a. [189.3] **Exception:** Applicable for new construction only.

Modify section 7.5.1 as follows:

7.5.1 Annual Energy Cost

a. Follow Standard 189.1 Section 7.5.1, “Annual Energy Cost,” except that building performance factor (BPF) shall be taken from Table 7.6.1 of this standard.

Modify section 7.5.2 as follows:

7.5.2 Zero Annual Carbon Dioxide Equivalent (CO₂e) Emission Factor (zCEF). Follow Standard 189.1 Section 7.5.2, “**Zero Annual Carbon Dioxide Equivalent (CO₂e) Emission Factor (zCEF)**,” except that PCI target shall be determined in accordance with Standard 189.3 Section 7.5.1, “Annual Energy Cost.”

Add modifications with new Building Types and values to Table 7.6.1 and 7.6.2:

Table 7.6.1 Building Performance Factors for Cost (BPFc) and Renewable Fraction (RFc)

	Climate Zone	Building Type			
		Hospital	Residential Health Facility	Specialized Outpatient Facility	General Outpatient Facility
Building Performance Factor for Cost	<u>0A</u>	<u>0.62</u>	<u>0.69</u>	<u>0.62</u>	<u>0.51</u>
	<u>0B</u>	<u>0.60</u>	<u>0.68</u>	<u>0.60</u>	<u>0.52</u>
	<u>1A</u>	<u>0.63</u>	<u>0.72</u>	<u>0.63</u>	<u>0.50</u>
	<u>1B</u>	<u>0.60</u>	<u>0.69</u>	<u>0.60</u>	<u>0.51</u>
	<u>2A</u>	<u>0.60</u>	<u>0.73</u>	<u>0.60</u>	<u>0.46</u>
	<u>2B</u>	<u>0.56</u>	<u>0.73</u>	<u>0.56</u>	<u>0.47</u>
	<u>3A</u>	<u>0.57</u>	<u>0.74</u>	<u>0.57</u>	<u>0.45</u>
	<u>3B</u>	<u>0.57</u>	<u>0.76</u>	<u>0.57</u>	<u>0.48</u>
	<u>3C</u>	<u>0.54</u>	<u>0.68</u>	<u>0.54</u>	<u>0.40</u>
	<u>4A</u>	<u>0.58</u>	<u>0.74</u>	<u>0.58</u>	<u>0.45</u>
	<u>4B</u>	<u>0.56</u>	<u>0.75</u>	<u>0.56</u>	<u>0.46</u>
	<u>4C</u>	<u>0.53</u>	<u>0.74</u>	<u>0.53</u>	<u>0.43</u>
	<u>5A</u>	<u>0.57</u>	<u>0.73</u>	<u>0.57</u>	<u>0.48</u>
	<u>5B</u>	<u>0.54</u>	<u>0.76</u>	<u>0.54</u>	<u>0.48</u>
	<u>5C</u>	<u>0.55</u>	<u>0.75</u>	<u>0.55</u>	<u>0.46</u>
	<u>6A</u>	<u>0.58</u>	<u>0.72</u>	<u>0.58</u>	<u>0.49</u>
	<u>6B</u>	<u>0.57</u>	<u>0.73</u>	<u>0.57</u>	<u>0.49</u>
<u>7</u>	<u>0.59</u>	<u>0.71</u>	<u>0.59</u>	<u>0.48</u>	
<u>8</u>	<u>0.60</u>	<u>0.73</u>	<u>0.60</u>	<u>0.52</u>	
Renewable Fraction	<u>0.35</u>	<u>0.50</u>	<u>0.35</u>	<u>0.50</u>	

Table 7.6.2 Building Performance Factors for Emissions (BPF_e) and Renewable Fraction (RF_e)

	Climate Zone	Building Type			
		Hospital	Residential Health Facility	Specialized Outpatient Facility	General Outpatient Facility
Building Performance Factor for Greenhouse Gas Emissions	<u>0A</u>	<u>0.63</u>	<u>0.68</u>	<u>0.63</u>	<u>0.51</u>
	<u>0B</u>	<u>0.61</u>	<u>0.67</u>	<u>0.61</u>	<u>0.53</u>
	<u>1A</u>	<u>0.63</u>	<u>0.71</u>	<u>0.63</u>	<u>0.51</u>
	<u>1B</u>	<u>0.60</u>	<u>0.69</u>	<u>0.60</u>	<u>0.51</u>
	<u>2A</u>	<u>0.60</u>	<u>0.71</u>	<u>0.60</u>	<u>0.46</u>
	<u>2B</u>	<u>0.57</u>	<u>0.71</u>	<u>0.57</u>	<u>0.48</u>
	<u>3A</u>	<u>0.48</u>	<u>0.74</u>	<u>0.48</u>	<u>0.46</u>
	<u>3B</u>	<u>0.47</u>	<u>0.72</u>	<u>0.47</u>	<u>0.48</u>
	<u>3C</u>	<u>0.56</u>	<u>0.66</u>	<u>0.56</u>	<u>0.41</u>
	<u>4A</u>	<u>0.59</u>	<u>0.68</u>	<u>0.59</u>	<u>0.43</u>
	<u>4B</u>	<u>0.57</u>	<u>0.70</u>	<u>0.57</u>	<u>0.46</u>
	<u>4C</u>	<u>0.55</u>	<u>0.67</u>	<u>0.55</u>	<u>0.43</u>

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<u>5A</u>	<u>0.58</u>	<u>0.65</u>	<u>0.58</u>	<u>0.46</u>
<u>5B</u>	<u>0.56</u>	<u>0.68</u>	<u>0.56</u>	<u>0.48</u>
<u>5C</u>	<u>0.58</u>	<u>0.67</u>	<u>0.58</u>	<u>0.47</u>
<u>6A</u>	<u>0.60</u>	<u>0.64</u>	<u>0.60</u>	<u>0.47</u>
<u>6B</u>	<u>0.60</u>	<u>0.65</u>	<u>0.60</u>	<u>0.49</u>
<u>7</u>	<u>0.61</u>	<u>0.62</u>	<u>0.61</u>	<u>0.46</u>
<u>8</u>	<u>0.63</u>	<u>0.64</u>	<u>0.63</u>	<u>0.49</u>
<u>Renewable Fraction</u>	<u>0.35</u>	<u>0.50</u>	<u>0.35</u>	<u>0.50</u>

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Add modifications with new Building Types and values Table 7.6.2.2.1

Table 7.6.2.2.1 Building Performance Factors for Emissions (BPFE) and Renewable Fraction (RFE) for Use with LRMER

	Climate Zone	Building Type			
		Hospital	Residential Health Facility	Specialized Outpatient Facility	General Outpatient Facility
Building Performance Factor for Greenhouse Gas Emissions	0A	<u>0.63</u>	<u>0.70</u>	<u>0.63</u>	<u>0.51</u>
	0B	<u>0.63</u>	<u>0.70</u>	<u>0.63</u>	<u>0.51</u>
	1A	<u>0.63</u>	<u>0.70</u>	<u>0.63</u>	<u>0.51</u>
	1B	<u>0.63</u>	<u>0.70</u>	<u>0.63</u>	<u>0.51</u>
	2A	<u>0.60</u>	<u>0.70</u>	<u>0.60</u>	<u>0.47</u>
	2B	<u>0.59</u>	<u>0.68</u>	<u>0.59</u>	<u>0.49</u>
	3A	<u>0.58</u>	<u>0.72</u>	<u>0.58</u>	<u>0.47</u>
	3B	<u>0.60</u>	<u>0.64</u>	<u>0.60</u>	<u>0.49</u>
	3C	<u>0.63</u>	<u>0.57</u>	<u>0.63</u>	<u>0.44</u>
	4A	<u>0.58</u>	<u>0.63</u>	<u>0.58</u>	<u>0.43</u>
	4B	<u>0.59</u>	<u>0.59</u>	<u>0.59</u>	<u>0.47</u>
	4C	<u>0.60</u>	<u>0.51</u>	<u>0.60</u>	<u>0.43</u>
	5A	<u>0.59</u>	<u>0.60</u>	<u>0.59</u>	<u>0.45</u>
	5B	<u>0.59</u>	<u>0.54</u>	<u>0.59</u>	<u>0.47</u>
	5C	<u>0.68</u>	<u>0.49</u>	<u>0.68</u>	<u>0.49</u>
	6A	<u>0.61</u>	<u>0.57</u>	<u>0.61</u>	<u>0.46</u>
	6B	<u>0.65</u>	<u>0.52</u>	<u>0.65</u>	<u>0.47</u>
	7	<u>0.64</u>	<u>0.53</u>	<u>0.64</u>	<u>0.43</u>
8	<u>0.63</u>	<u>0.62</u>	<u>0.63</u>	<u>0.49</u>	
Renewable Fraction	<u>0.35</u>	<u>0.50</u>	<u>0.35</u>	<u>0.50</u>	