

# STANDARD

**ANSI/ASHRAE/IES Addendum g to  
ANSI/ASHRAE/IES Standard 100-2018**

# Energy Efficiency in Existing Buildings

Approved by ASHRAE and the American National Standards Institute on February 28, 2023, and by the Illuminating Engineering Society on February 2, 2023.

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## FOREWORD

Addendum g revises Section 5.2.1 to simplify and clarify the descriptive language for net energy consumption, deletes existing Figure 5-1 illustrating the net energy use concept and replaces it with a new Figure 5-1, and deletes the existing Table 5-1 completely as it does not add any useful information with respect to a building's net energy consumption.

## Addendum g to Standard 100-2018

**Modify Section 5 as shown. Existing Figure 5-1 is replaced with new Figure 5-1.**

### 5. ENERGY MANAGEMENT PLAN

[...]

#### 5.2 Building Energy Monitoring

[...]

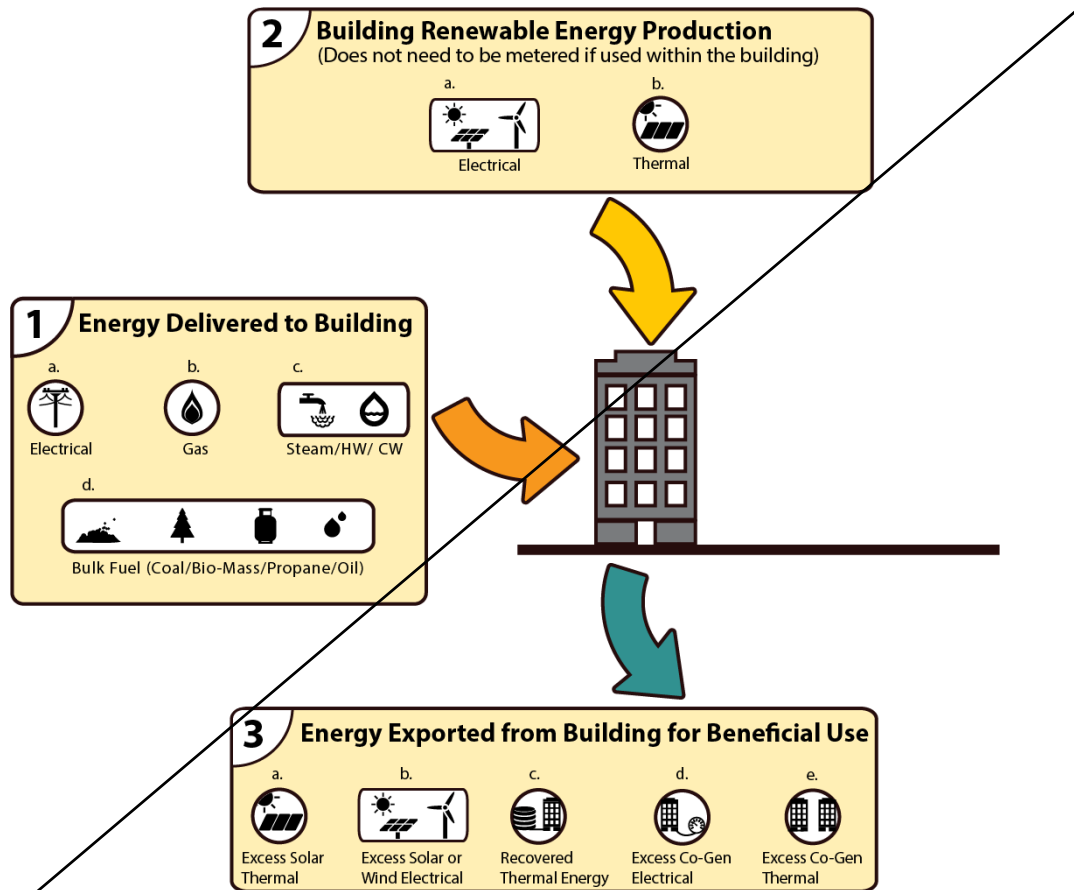
**5.2.1** Provide measured *net energy* consumption data for each *building*, including all forms of imported and exported energy from at least 12 consecutive months of data monitored in a period not to exceed two years prior to the efficiency audit. The *net energy* concept is illustrated in Figure 5-1 and Table 5-1 and is calculated in accordance with Section 5.2.4. A building's net energy use is as follows

$$\begin{aligned} \text{Net energy use} &= \\ \text{Energy Delivered to the Building} - \text{Excess Energy Exported from Building for Beneficial Use} \\ \text{Net energy use} &= (1a + 1b + 1c + 1d) - \\ &\quad (3a + 3b + 3c + 3d + 3e) \end{aligned}$$

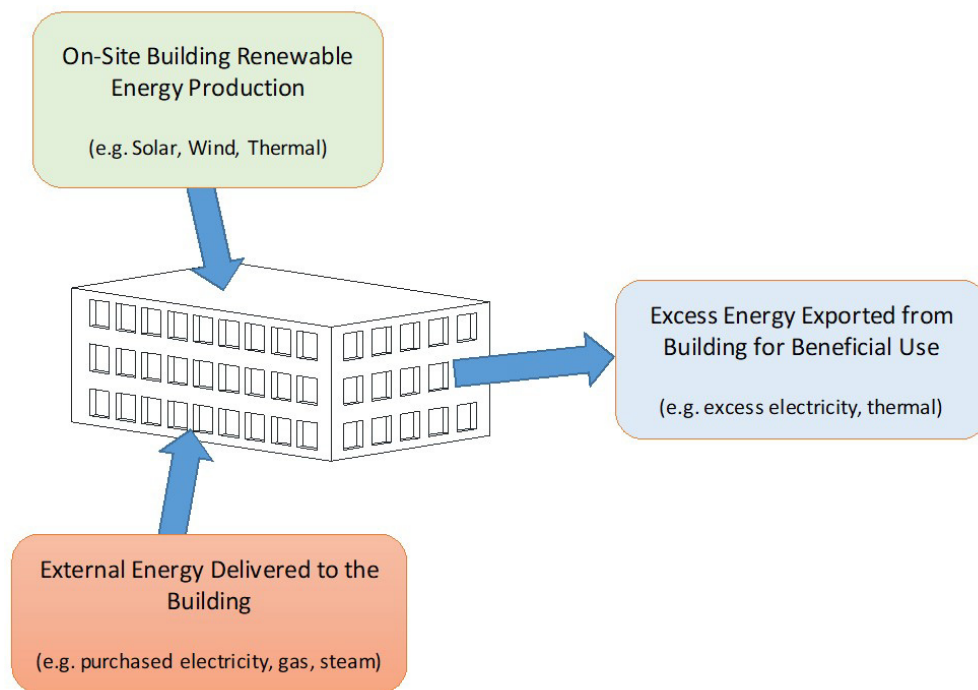
where 1a, 1b, 1c, and 1d are metered energy supplies that are used in the *building* (this includes bulk energy sources), and 3a, 3b, 3c, 3d, and 3e are metered energy excesses that are supplied to another *building* or grid as useful energy.

[...]

**Informative Note:** As shown in Figure 5-1, a *building's* total energy use is the sum of on-site *building* renewable energy production provided to the *building* (if there is any) plus purchased energy delivered to the *building* minus any excess energy exported from *building* for beneficial use. However, a *building's net energy* use does not include any energy that might be provided to the *building* from on-site *building* renewable energy production. Therefore, the *net energy* use equation above does not mention *building* renewable energy production.



**Figure 5-1 Net energy concept.**



**Figure 5-1 Net energy concept.**

**Table 5-1 Energy Flow Definitions**

<b>Energy Delivered to Building</b>	<b>Building Renewable Energy Production</b>	<b>Energy Exported from Building for Beneficial Use</b>
<del>1a. Electrical</del>	<del>2a. Electrical</del>	<del>3a. Excess solar thermal</del>
<del>1b. Gas</del>	<del>2b. Thermal</del>	<del>3b. Excess solar or wind electrical</del>
<del>1c. Steam/hot water (HW)/chilled and hot water (CHW)</del>		<del>3c. Recovered thermal energy</del>
<del>1d. Bulk fuel (coal/biomass/propane/oil)</del>		<del>3d. Excess co-gen electrical</del>
		<del>3e. Excess co-gen thermal</del>

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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.

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