



**BSR/ASHRAE/IES Addendum e
to ANSI/ASHRAE/IES Standard 100-2024**

Public Review Draft
Proposed Addendum e to Standard 100-2024,
Energy and Emissions Building Performance
Standard in Existing Buildings

First Public Review (August 2026)
(Draft Shows Proposed Changes to Current Standard)

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FOREWORD

The addendum aims to adapt Standard 100 to better address the issues of shared ownership, specifically the needs of owners who have multiple buildings within a jurisdiction implementing the standard. Owners who have multiple buildings within the jurisdiction enacting a building performance standard (BPS) may be better able to meet the requirements of the standard by creating a weighted average target, often referred to as a “blended target”, which will allow the owner to make strategic updates across their building portfolio without necessarily having to address each building individually. This addendum focuses on two types of multiple building ownership structures: a complex and a portfolio.

A complex, often referred to as a “campus”, is a collection of two or more buildings that is already defined in Standard 100. These buildings share a common physical element, either the ground they sit on, physical connection points, or HVAC systems. These buildings often function as a single property with a single shared primary function, meaning they collectively serve a common purpose, even though they may contain many discrete use types within them. The availability of a weighted average target option for complexes is often essential, especially as the buildings are tied together in planning processes and may share energy systems. Given the unique nature of certain buildings in complexes there are also significant financial and planning benefits to being able to consider energy reductions across the complex rather than requiring retrofits on all individual buildings.

A portfolio differs from a complex in that a building in a portfolio will not share any common physical elements. Some or all these buildings are physically removed from one another, with no need to share any common function or purpose. Their relationship with each other may be through legal ownership only. Portfolio approaches are appealing for both public-sector and private-sector owners who tend to do aggregate capital planning and investment analysis. They can also increase near-term reductions in energy and emissions by allowing owners to focus resources on the worst-performing buildings first, saving the buildings with less low-cost savings opportunities until later. In this way, a weighted average target provides the benefit of aligning upgrades with capital planning events without requiring a more complex alternative compliance path.

Both groups of buildings are given the option in this addendum to meet the BPS requirements through a weighted average target and through audit compliance. Creating clear pathways as the two that currently exist in the standard for single buildings. Adopting jurisdictions may consider based on their own building stock and stakeholder interests to adopt only the option for complexes or portfolios instead of both.

This addendum acknowledges the existence of district energy and other shared systems, as these are common in complexes and need to be accounted for in a situation of shared ownership, but does not attempt or intend to address additional changes that may need to be made to the standard to fully support the needs of complexes with these systems. The committee recognizes additional changes may need to be made to the standard for district energy and defers those to a separate addendum.

Links to the forms in the new Appendix Table A-2, A-3, and B-2 are [linked here](#) for review. The spreadsheet is meant for ease of use to fill out and include more rows and columns as needed for the portfolio and not meant for calculation.

Note: In this addendum, changes to the current standard are indicated in the text by underlining (for additions) and strikethrough (for deletions) unless the instructions specifically mention some other means of indicating the changes. Only these changes 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 substantive changes.

Addendum e to Std. 100-2024

Modify Section 3 as follows:

3. DEFINITIONS

complex: a group of individual or interconnected *buildings* on contiguous property.

Informative note: For compliance with this standard, the common term “campus” would most often match the definition of complex. Buildings can be considered interconnected or on contiguous property where they have the same ownership and the only interruption(s) is by a public right of way, e.g., a campus where buildings have public streets that pass between the taxable property boundaries.

Add new definition as follows:

portfolio: two or more *buildings* or *complexes* on one or more noncontiguous lots owned by the same entity within the area of jurisdiction of the *AHJ*.

Informative note: The definition of ownership of every *building* or *complex* in the *portfolio* may be verified by the official property records used by the *AHJ*, and is at the discretion of the *AHJ*. A *portfolio* would be different from a complex, as the buildings in a *portfolio* are on non-contiguous properties across the jurisdiction.

4. COMPLIANCE REQUIREMENTS

Revise text as follows:

4.2.1 Nonresidential Building

4.2.1.1 A ~~building or complex of buildings~~ whose majority of gross floor area has activities number 1 through 50 and/or 55 in Table 7-1 has *performance targets* and shall comply with the requirements of Sections 4.3, 4.4.1, and 4.4.2.

Add new section 4.2.4 text as follows:

4.2.4 Complex and Portfolio

4.2.4.1 All *buildings* included in a *complex* or *portfolio* complying through Section 4.2.4 shall have a performance target defined by activities number 1 through 50 and/or 55 in Table 7-1 or shall be able to calculate a performance target in compliance with Section 7.2.3 and must comply with the requirements outlined in 4.2.1. If any *building* does not have a *performance target*, it must be separated from the *complex* or *portfolio*.

4.2.4.2 Pre-Compliance Approval of Complex or Portfolio Composition. Prior to the submission for compliance as a *complex* or *portfolio*, the *building owner* shall submit Form A-2 for *AHJ* approval of the buildings comprising the *complex* or *portfolio*. The *AHJ* shall provide documented notice to the party submitting Form A-2 that the group of buildings is approved to submit for compliance as a *complex* or *portfolio*. The compliance form submission required in 4.2.4.3 shall not occur until the *AHJ* has evaluated and provided approval.

4.2.4.3 The *qualified person* determining compliance shall

- a. Establish a weighted average performance targets for the *complex* or *portfolio* according to Sections 7.2.5 and 7.3.4.
- b. Complete Form B-2 for the *complex* or *portfolio*.
- c. Complete Forms A-1 and A-3 and indicate on Form A-3 if compliance is for a *complex* or *portfolio*.
- d. Complete Forms C-1 and C-3 for each building in the *complex* or *portfolio* if compliance requires *site energy*.
Complete Forms C-2 and C-3 for each building in the *complex* or *portfolio* if compliance requires *source energy*. If

buildings that qualify for inclusion in a *complex* or *portfolio* share an aggregate meter, their energy use can be reported together for the purpose of compliance as part of the *complex* or *portfolio*.
e. Submit Forms A, B-2, C-1 or C-2, and C-3 to the *authority having jurisdiction (AHJ)*. C-1 shall be submitted if compliance requires *site energy*. C-2 shall be submitted if compliance requires *source energy*.

Revise section 4.4 as follows:

4.4.1 Measured Energy Use Intensity and Greenhouse Gas Intensity. The qualified person shall calculate the *building's* measured energy use intensity (*EUI*) and greenhouse gas intensity (*GHGI*) for the building, complex or portfolio by completing Forms C-1, C-2, and C-3 according to Section 5.2.

4.4.2 Buildings, Complexes or Portfolios with Performance Targets

4.4.2.1 Compliance Process. *Buildings, complexes or portfolios* with performance targets shall comply with the requirements of Sections 4.4.2.2 and 4.4.2.3. Figure 4-1 illustrates the compliance process for *buildings* with performance targets.

4.4.2.2 Building, Complex or Portfolio Meets the Performance Targets. If the *building's* measured *EUI* is less than or equal to ~~its~~ the applicable *EUI* target, and the *building's* measured *GHGI* is less than or equal to ~~its~~ the applicable *GHGI* target, then the *building, complex or portfolio* complies.

Informative Note: The *AHJ* has the authority to remove either the *EUI* or *GHGI* requirement above and to specify whether the *EUI* target is based on site *EUI* or source *EUI*.

4.4.2.3 Building, Complex or Portfolio Does not Meet the Performance Targets. If either the *building's* measured *EUI* is greater than the applicable *EUI* target or the *building's* measured *GHGI* is greater than the applicable *GHGI* target, then the building, complex or portfolio shall comply with the requirements of one of Sections 4.4.2.3.1 or 4.4.2.3.2.

4.4.2.3.1 Audit Compliance for Building. An energy audit with decarbonization assessment shall be performed. A qualified energy auditor shall complete an energy audit according to Section 8. *EEMs* and *ERMs* that will reduce energy use and GHG emissions to meet the *EUI* target and *GHGI* target shall be implemented according to Section 9. Upon completion of the implementation of all required *EEMs* and *ERMs*, a building shall be granted conditional compliance.

Add new section 4.4.2.3.2 as follows:

4.4.2.3.2 Audit Compliance for Complex or Portfolio. A qualified person shall complete a complex or portfolio wide assessment and determine which buildings will complete an energy audit with decarbonization assessment. The qualified person shall determine whether any district energy systems included as part of the complex or portfolio shall be included in the energy audit with decarbonization assessment. Once identified, a qualified energy auditor shall complete an energy audit according to Section 8 on all selected buildings. EEMs and ERMs shall be identified to meet the target. Where there are not enough EEMs and ERMs to meet the target, additional buildings in the complex or portfolio shall be identified and audited until the target for the complex or portfolio can be met. EEMs and ERMs that will reduce energy use and GHG emissions to meet the EUI target and GHGI target shall be implemented according to Section 9. Upon completion of the implementation of all required EEMs and ERMs, a complex or portfolio shall be granted conditional compliance.

4.4.2.4 Verification of Compliance. Within fifteen months after the completion of Section 4.4.2.3.1 or 4.4.2.3.2 the *EUI* and *GHGI* shall be recalculated by the energy manager from 12 consecutive months of measured energy use, and Form A-1 shall be resubmitted to the *AHJ*. Form A-3 shall additionally be resubmitted if complying as a complex or portfolio. If the *building's* postimplementation *EUI* is less than or equal to the *EUI* target, and the *building's* postimplementation *GHGI* is less than or equal to the *GHGI* target, the *building, complex or portfolio* complies with the standard. If the *building's* postimplementation measured *EUI* is greater than the *EUI* target, or the *building's*

postimplementation measured *GHGI* is greater than the *GHGI target*, the *building, complex or portfolio* does not comply with the standard and the conditional compliance is suspended until either

- a. Additional *EEMs* and *ERMs* have been implemented that reduce the subsequently measured *EUI* and *GHGI* to less than or equal to the *EUI target* and *GHGI target*, respectively, and a new Form A-1 is submitted to the *AHJ*, along with Form A-3 if complying as a *complex* or *portfolio*, or
- b. The *AHJ* revokes conditional compliance

7. ENERGY USE AND GREENHOUSE GAS EMISSIONS ANALYSIS AND TARGET REQUIREMENTS

Add new section 7.2.5 and 7.3.4 as follows:

7.2 Determining Energy Use Intensity Target

7.2.5 Energy Use Intensity Targets for Complex and Portfolio

The *EUI target* for *complexes* or *portfolios* shall be determined using weighted averages of *building activity EUI target (EUI_t)* for each area using Equation 7-5 and shall be reported on Form B-2:

$$EUI_t = [A_1 \times S_1 \times (EUI_{t1})_1 + \dots + A_i \times S_i \times (EUI_{t1})_i + \dots + A_n \times S_n \times (EUI_{t1})_n] \quad (7-5)$$

where

A_i = percentage of the gross floor area with single building activity i

$(EUI_{t1})_i$ = *building activity target* from Table 7-2 or 7-3 for space i

S_i = operating shifts normalization factor from Table 7-7 for space i

Exceptions to 7.2.5:

1. Spaces less than 10% of the gross floor area with a unique building activity can combine their floor area with the floor area within the building that has a similar building activity as determined by the EM or other qualified person.

7.3 Determining Greenhouse Gas Intensity Target

7.3.4 Greenhouse Gas Intensity Targets for Complex and Portfolio

The *GHGI target* for *complexes* or *portfolios* shall be determined using weighted averages of *building activity GHGI target (GHGI_t)* for each area using Equation 7-X and shall be reported on Form B-2:

$$GHGI_t = [A_1 \times S_1 \times (GHGI_{t1})_1 + \dots + A_i \times S_i \times (GHGI_{t1})_i + \dots + A_n \times S_n \times (GHGI_{t1})_n] \quad (7-X)$$

where

A_i = percentage of the gross floor area with single building activity i

$(GHGI_{t1})_i$ = *building activity target* from Table 7-4 for space i

S_i = operating shifts normalization factor from Table 7-7 for space i

Exceptions to 7.3.4:

1. Spaces less than 10% of the gross floor area with a unique building activity can combine their floor area with the floor area within the building that has a similar building activity as determined by the EM or other qualified person.

Modify Informative Appendix J as follows:
INFORMATIVE APPENDIX J: GUIDANCE FOR LOCALLY DERIVED BUILDING PERFORMANCE TARGETS

J3. DATA COLLECTION/GENERATION

Revise table as follows:

J3.1.1 Choosing Building Types.

...

Table J3-1 Comparison of Individual Building vs. ~~Campus or Complex or Portfolio~~ Benchmarking Reporting

Reporting Resolution	Advantages	Disadvantages
Individual <i>building</i>	Simple to conceptualize; boundaries are drawn per- <i>building</i> , with some exceptions.	Owners may have difficulty establishing metering of all energy systems.
Campus/complex or Portfolio	Less work for <u>owners of a complex or portfolio</u> owners ; owners can implement district energy systems or other larger scale measures to meet goals.	<u>Complex or Portfolio</u> owners are allowed to have multiple <i>buildings</i> that would not meet targets by themselves, which may be perceived as unfair to other similar <i>buildings</i> not located on a campus.

One other consideration is whether to consider ~~campuses or complexes~~ of *buildings* with central energy plants, shared metering, or shared heating or cooling systems as individual *buildings* or a campus (Table J3-1). Individual *buildings* within a campus may not be individually metered for district energy consumption or for other grid utility consumption. In this case, owners may want to meet their responsibilities ~~via a portfolio of buildings at the complex level~~, rather than on a *building-by-building* basis.

Modify Normative Appendix A as follows:

NORMATIVE APPENDIX A: FORMS

Revise Form A title and text after title:

Form A-1—Compliance with Standard 100

If complying as a complex or portfolio:

See Form A-2 for fields that will need to be filled out per-building. Fields filled out in Form A-2 shall not be filled out in Form A-1. These fields shall contain text “See Form A-2”.

Add Form A-2 after form A-1

Form A-2—Pre-Compliance Approval of Complex or Portfolio Composition

Form A-2 is a spreadsheet available electronically at [\[\[LINK\]\]](#).

Add Form A-3 after form A-2

Form A-3—Compliance with Standard 100 as a Complex or Portfolio, Per-Building Information

Form A-3 is a spreadsheet available electronically at [\[\[LINK\]\]](#).

Revise Form B title as follows:

Form B-1— Building Activity and Energy Use Intensity (EUI) Target and Greenhouse Gas Intensity (GHG) Target

Add Form B-2 after form B-1

Form B-2—Complex or Portfolio Activity and Energy Use Intensity (EUI) Target and Greenhouse Gas Intensity (GHG) Target

Form B-2 is a spreadsheet available electronically at [\[\[LINK\]\]](#).