



Bureau of Planning and Sustainability
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Effective Date: December 14, 2018

ADMINISTRATIVE RULE

Energy Efficient Building Requirements for Planned Development Bonuses

SUMMARY:

The Energy Efficient Building Requirements for Planned Development Bonuses administrative rule specifies the minimum energy performance targets necessary for buildings to receive the Planned Development Bonus as implemented through the Portland Zoning Code sections 33.130.212 Floor Area and Height Bonus Options, and 33.270.200 Additional Requirements for Planned Development in the Commercial/Mixed-Use Zones. The intent of the rule is to encourage property owners and builders to design highly energy efficient buildings in planned developments.

AUTHORITY:

Pursuant to the authority granted by City Council adoption of Ordinances #188958 and #189243, I hereby approve the attached Administrative Rule governing the Energy Efficient Building Requirements for Planned Development Bonuses.

Joe Zehnder, Interim Director
Bureau of Planning and Sustainability

12/14/18
Date



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TABLE OF CONTENTS

1.0 SCOPE, PURPOSE AND BACKGROUND.....	Page 3
2.0 AUTHORITY OF DIRECTOR.....	Page 3
3.0 DEFINITIONS.....	Page 4
4.0 SUBMITTAL REQUIREMENTS.....	Page 6
5.0 COMPLIANCE ENFORCEMENT	Page 8

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PART 1.0 SCOPE, PURPOSE AND BACKGROUND

These Administrative Rules describe the standards for the Energy Efficient Buildings requirements described in the City of Portland Zoning Code for Planned Development bonuses, sections 33.130.212 Floor Area and Height Bonus Options, and 33.270.200 Additional Requirements for Planned Development in the Commercial/Mixed-Use Zones.

Portland's 2015 Climate Action Plan established goals to reduce carbon emission 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050. Buildings are the largest source of carbon emissions in the City. The key Climate Action Plan objective for new construction is to achieve zero net carbon emissions in all new buildings and homes by 2030. Establishing minimum energy performance targets for the planned development bonus is identified as a near-term action to achieve this objective.

PART 2.0 AUTHORITY OF DIRECTOR

A. Director's Rulemaking Authority. The Director of the Bureau of Planning and Sustainability (BPS) [the Director] adopts these Administrative Rules under the authority granted by City Council Ordinances No. 188958 and No. 189243.

B. Adoption and Revision of Rules

1. Any rule adopted or revised according to the authority of the City Code shall require a public review process. Not less than 10 nor more than 30 days before such public review process, notice shall be given by publication in a newspaper of general local circulation. Such notice shall include the place, time, and purpose of the public review process and the location at which copies of the full set of the proposed rules may be obtained.
2. During the public review, the Director or the Director's designee shall hear testimony or receive written comment concerning the proposed rules. The Director shall review the recommendations, taking into consideration the comments received during the public review process and shall either adopt the proposed rule, modify the proposed rule or reject the comments.

If a substantial modification is made, additional public review shall be conducted, but no additional notice shall be required if such additional review is announced at the meeting at which the modification is made. The Director or the Director's designee shall determine whether a modification is substantial or not. Unless otherwise stated, all rules shall be effective upon adoption by the Director and shall be filed in the Office of the Director.

3. Notwithstanding paragraphs 1. and 2. of this section, an interim rule may be adopted by the Director without prior notice upon a finding that failure to act promptly will result in serious prejudice to the public interest or the interest of the

affected parties, including the specific reasons for such prejudice. Any rule adopted pursuant to this paragraph shall be effective for a period of not longer than one year (365 days). Within five business days of the adoption of such interim rule, BPS staff shall send notice of the rule change and invite comments by email from the BPS list of interested parties.

PART 3.0 DEFINITIONS

As used in these administrative rules, the following words and phrases shall be construed as defined in this Section, unless the context indicates a different meaning is intended.

- A. “As-Built Design Energy Use Intensity (EUI)”** means a final post-construction numerical value that represents the anticipated annual energy consumption within a building relative to its Gross floor area, reported in thousand British thermal units per square foot (kBtu/sf). If solar energy is generated onsite, the annual amount of generated solar energy may be subtracted up to 20 percent of the annual energy consumed.
- B. “Baseline Energy Use Intensity”** means an EUI that is calculated using the Architecture 2030 Zero Tool for commercial buildings, and the Northwest Energy Efficiency Alliance (NEEA) 2016-2017 Residential Building Stock Assessment (RBSA II) for multifamily buildings, reported in thousand British thermal units per square foot (kBtu/sf).
- C. “Design EUI”** means an EUI that represents the anticipated annual energy consumed within a building relative to its Gross floor area based on an energy model of the building at time of permit. If solar energy is generated onsite the annual amount of generated solar energy may be subtracted up to 20 percent of the annual energy consumed.
- D. “Director”** means the Director of the Bureau of Planning and Sustainability or their authorized representative, designee or agent.
- E. “EUI Standard”** means the minimum building EUI necessary to qualify for the Planned Development Bonus and is calculated as a percentage reduction from the Baseline EUI.
- F. “Gross Floor Area”**, for the purposes of this rule, means the total number of enclosed square feet as measured between the principal exterior surfaces of the fixed walls of a building, including all supporting functions such as offices, lobbies, rest rooms, equipment storage areas, mechanical rooms, break rooms, elevator shafts, etc. Atriums should only include the base floor area that they occupy. Conditioned, occupied floor area below grade must be included. The total gross

floor area does not include outside loading bays or docks, or separately metered parking structures.

- G. “Owner”** means any Person possessing title to a property where a building is seeking the Planned Development Bonus.
- H. “Person”** means a representative of the Owner, including any natural person, joint venture, joint stock company, partnership, association, club, company, corporation, business trust, organization, and/or the manager, lessee, agent, servant, officer, or employee of any of them.
- I. “Planned Development Bonus”** means the City of Portland Zoning Code for Planned Development bonuses, Chapter 33.130.212 Floor Area and Height Bonus Options.
- J. “Project Valuation”** means the total value as determined by the construction permit or building permit for the project. The value is calculated using the square footage and building type based on the International Code Council Building Valuation Data Tables.
- K. “Zero Tool”** means the scale and online tool for measuring building energy performance as maintained by Architecture 2030 (<https://zerotool.org/zerotool/>).

PART 4.0 SUBMITTAL REQUIREMENTS

- A. To qualify for the Planned Development Bonus, a Person proposing a new building, or an addition to an existing building where the floor area of the existing building is being increased by 10% or more, must demonstrate that the building will achieve a Design EUI that is equal to or lower than the following EUI Standards for the Use Types listed in Table 1.

Table 1: Energy Efficiency Standards for Planned Development Bonus

Use Type	Baseline EUI (kBtu/sf)	Baseline Reduction (percentage)	EUI Standard (kBtu/sf)
Residential			
Multifamily Dwelling	55.3	50	27.7
Commercial			
Financial Office*	73.1	70	21.9
Fitness Center	42.6	70	12.8
Hotel	69.3	70	20.8
Medical Office*	77.5	70	23.2
Office*	79.3	70	23.8
Retail*	72.0	70	21.6
Institutional			
Adult Education	71.0	70	21.3
College	131.9	70	39.6
K-12 School*	71.1	70	21.3
Library	103.6	70	31.1
Meeting Hall	30.7	70	9.2
Performing Arts	37.4	70	11.2
Preschool	73.2	70	22.0
Residence Hall*	74.2	70	22.2
Senior Care	107.5	70	32.2
Vocational School	63.1	70	18.9

* For these Use Types, the Baseline EUI and EUI Standard varies depending on building size, and the values presented on Table 1 are based on a 50,000 square foot building. The online Architecture 2030 Zero Tool may be used as an alternative to the table to determine the size-specific Baseline EUI. The size-specific EUI Standard is calculated by multiplying the Baseline EUI by a 70 percent reduction factor.

- B. If a Use Type is not listed in Table 1 and comprises more than 20 percent of the Gross Floor Area, then the online Architecture 2030 Zero Tool must be used to determine the EUI Standard; the qualifying EUI Standard is calculated by multiplying the Baseline EUI for the Use Type by a 70 percent reduction factor.

- C. For a mixed-use building, a Person may adjust the Baseline EUI and EUI Standard to be proportional to the floor area for the mix of use types in the building design.
- D. A Person may select a custom Baseline EUI and EUI Standard by participating in the Energy Trust of Oregon Path to Net Zero program.
- E. The ground floor of multi-story buildings can be excluded from the As-Built Design EUI and Design EUI.
- F. Alteration permits to buildings that existed within the Planned Development site area prior to Planned Development Bonus approval must comply with current Oregon Energy Efficiency Specialty Code and can be excluded from the As-Built Design EUI and Design EUI.
- G. Planned Development Review and Building Design Review will include a condition of approval requiring the applicant to demonstrate compliance to BPS with energy efficiency requirements of this administrative rule at the time of building permit application
- H. Qualification for the energy efficiency requirements of the Planned Development Bonus will be determined by BPS staff when a Person submits a building permit application to BDS. The Person must submit the following evidence by email to bps@portlandoregon.gov with the subject line “Energy Efficient Building Planned Development Bonus”:
 - 1. The building name, street address and permit application date.
 - 2. The Person’s name and email address, and the property Owner’s name and mailing address.
 - 3. The building Baseline EUI and EUI Standard, including any supporting calculations or references to Zero Tool inputs.
 - 4. Submittal of a qualifying Design EUI certified by a licensed Professional Engineer or Registered Architect, or a qualifying Design EUI from the Energy Trust of Oregon.
 - 5. A copy of the official registration and documentation that the building project is participating in at least one of the following programs and meets minimum thresholds specific to each program, as published and updated by BPS in alignment with the EUI Standards:

- a. Earth Advantage Zero Energy, Small Commercial or Multifamily certification,
 - b. Energy Trust of Oregon Path to Net Zero program,
 - c. Green Building Initiative Green Globes certification,
 - d. The Institute for Living Future (ILFI) Living Building Challenge (LBC) or Zero Energy Building certification,
 - e. The Passive House Institute US (PHIUS) + Passive Building Standard, or
 - f. The US Green Building Council Leadership in Energy and Environmental Design™ (LEED) certification.
6. A covenant signed by the Person and recorded with the appropriate county to ensure that the energy efficiency features qualifying the building for the Planned Development Bonus continue to be provided for a period of 20 years after Certificate of Occupancy, including any tenant improvements. The covenant must comply with the standards in 33.700.060, Covenants with the City.
- I. Following every update to the State of Oregon's Energy Efficiency Specialty Code, BPS may update Baseline EUI and EUI Standards.
- J. Within two years of receiving a Certificate of Occupancy for the main building or shell permit from BDS, the Person must provide a copy of the official project certification from the organization responsible for the approved program in Section 4.0.G.5, and submittal of the As-Built Design EUI certified by a licensed Professional Engineer or Registered Architect, the As-Built Design EUI from the Energy Trust of Oregon, or an actual EUI if Earth Advantage Zero Energy certification, or ILFI's LBC or Zero Energy Building certification is used to demonstrate compliance based on 12 months of utility data for all of the energy consumed in the building.
- K. The As-Built Design EUI or actual EUI will be published by BPS.

PART 5.0 COMPLIANCE ENFORCEMENT

A. Standard for Determining Violation

- 1. Any building that receives a Planned Development Bonus that fails to meet the EUI Standard required by Section 4.0. may be in violation of City Code Chapter

33.130.212.E and 33.270.200.C and this Administrative Rule. In determining whether a violation has occurred, the Director will evaluate the totality of the circumstances related to the violation.

2. A penalty of up to five percent of the Project Valuation set forth in the building permit for the project that received the Planned Development Bonus may be assessed for noncompliance with City Code and this Administrative Rule. The maximum amount of the penalty shall be a percentage of project valuation based on the extent of EUI Reduction, as shown in Table 2. This penalty will be in addition to any other applicable penalty or fee provided by law.

Table 2 – Maximum Penalty Calculation

Percentage of EUI Reduction	Penalty (percentage of Project Valuation)
95 to less than 100	0.5%
90 to less than 95	1.0%
85 to less than 90	1.5%
80 to less than 85	2.0%
75 to less than 80	2.5%
70 to less than 75	3.0%
65 to less than 70	3.5%
60 to less than 65	4.0%
less than 60	5.0%

Percentage of EUI Reduction = (Baseline EUI – As-Built Design EUI) / (Baseline EUI – EUI Standard determined in Section 4.0.)

3. Upon determining that a violation has occurred, the Director of BPS will notify the Director of BDS and request code enforcement as prescribed in City Code Chapter 33.700, Chapter 3.30, and Title 22.

B. Payment of Assessments and Right of Appeal

1. Violation of a code requirement shall be enforced by the Bureau of Development Services as prescribed in City Code Chapter 3.30. The monthly penalty for non-compliance shall be \$0.10 per square foot of total building floor area per month, assessed up to the maximum penalty set forth by the Director of BPS as prescribed by Table 2 – Penalty Calculations.
2. Appeals to the Code Hearings office may be considered as allowed by Chapter 3.30 and Chapter 22.10.