

**DRAFT**

**Recommendations for Determining Green Building and Energy Efficiency Performance Requirements for Density Bonuses in Ellensburg**

**Density Bonus Methodology**

To encourage and promote energy efficiency in new developments within the City, density bonuses can be structured in two ways. First, they can either be attributed to the achievement of a percentage of energy savings beyond code minimum standards (either through prescriptive or performance pathways) or they can be tied to a green building certification program such as LEED, Building Green, Energy Star, or the Living Building Challenge. There are benefits and drawbacks to both.

Energy Efficiency Density Bonus	Benefits	Drawbacks
Tied to projected energy savings (i.e. 30% more efficient than code)	If tied to WSEC, may be easier to verify and enforce <sup>1</sup>  May be easier to achieve than full certification	Only looks at building-related electricity and gas energy use  Based on predicted energy use; does not necessarily represent actual energy savings
Tied to green building certification (i.e. Built Green, LEED, etc.)	Promotes more comprehensive approach to reducing negative environmental impacts- not just energy  Can also address energy related to a building’s water use, increased heating loads from heat island effect, and transportation related energy  Puts ownership of compliance on third-party entity (i.e. Built Green or GBCI) rather than city staff May encourage greater energy performance  Added marketing benefits for developer/builder  Outcome-based standards like LBC can encourage actual (vs. predicted) energy performance	Certification typically happens at occupancy or years after; more challenging to enforce compliance at time of land development approval <sup>2</sup>  Certification programs don’t all promote the same level of energy efficiency (i.e. Energy Star vs. Living Building Challenge); requires analysis and updating as certification standards change  May be more challenging to achieve than “% better than code” path  No Built Green standard for multifamily

<sup>1</sup> except for Net Zero Energy projects which would actually be more challenging

<sup>2</sup> penalties used to enforce compliance, typically % of construction costs.

### Proposed Thresholds for Energy Efficiency

It is recommend that Ellensburg consider 4 tiers of density incentives to promote increasing levels of efficiencies in new developments: 15%, 30% and 60% energy use reductions, and net zero energy. The following table outlines possible compliance paths for single family, duplex and townhomes developments, particularly those in the R-S and R-L zones.

Energy Performance Thresholds	15% Savings	30% Savings	60% Savings	Net Zero Energy
<b>Compliance Paths</b>				
Outcome-Based			Passive House (OBC?)	Living Building Challenge
Prescriptive or Modeled Performance-Based	Built Green 4-star*	Built Green 5-star*		
	LEED-Homes** Min. 2 points EAc1 (OBC?)	LEED-Homes** Min. 13 points EAc1 (OBC?)	LEED-Homes** Min. 26 points EAc1 (OBC?)	
	Northwest Energy Star (13%***)			
	Prescriptive compliance through WSEC**** 2 additional credits beyond code	Prescriptive compliance through WSEC**** 4 additional credits beyond code	Prescriptive compliance through WSEC**** 7.5 additional credits beyond code	

\* from Built Green remodel checklist which is the only one available online. Assumes the single-family checklist is identical in energy requirements but needs to be confirmed.

\*\* if interested in promoting other environmental aspects, include requirements for certification at the Silver or Gold levels.

\*\*\* according to WSU Energy Extension office.

\*\*\*\* Washington State Energy Code, Chapter 9, Table 9-1 energy credits.

For multifamily developments, particularly in the R-M, R-H and R-O zones, consider allowances to building heights or FARs instead of density bonuses. Thresholds could be allocated per the table below.

Energy Performance Thresholds	15% Savings	30% Savings	60% Savings	Net Zero Energy
<b>Compliance Paths</b>				
Outcome				Living Building Challenge
Performance	LEED-NC certified** w/min 3 points earned for EA c1 (16% energy savings)	LEED-NC certified** w/min 10 points earned for EA c1 (30% energy savings)		

**Proposed Density Threshold**

Based on the above analysis and similar density bonuses adopted by Bainbridge Island in 2009, the following are recommended thresholds for density bonuses to promote energy efficiency in new residential developments. It is also recommended that density bonuses be allowed through normal administrative review processes to further encourage developers to meet these standards.

Energy Performance Threshold	15% Savings	30% Savings	60% Savings	Net Zero Energy
Proposed Density Bonus	1.25 x base density OR FAR increase*	1.5 x base density OR FAR increase*	2 x base density OR FAR increase*	2.5 x base density OR FAR increase*

\*recommended FAR increase to be determined.