

STATE OF WASHINGTON STATE BUILDING CODE COUNCIL

Washington State Energy Code Development **Standard Energy Code Proposal Form**

Code being amended: 🔃 Con	nmercial Provisions	Residential Provisions	
Code Section #C401.2 &	c C402.2		
Brief Description:			
The commercial code references lighting efficiency. However, the market due to increased federal lighting. Because of this, the cod	definition of "high-effica minimums and greater a	cy lamps" has not been update ailability/affordability of LED a	d to reflect the changes in the nd other high-efficiency
Proposed code change text: (Copnew text and strikeout for text to	•	he Integrated Draft, linked abo	ive, and then use <u>underline</u> for
Add Definitions:			
LAMP EFFICACY. The ballast measured in lume		m a light source to the power c	onsumed by the lamp and

LIGHT FIXTURE EFFICACY: Light output of an entire luminaire divided by the total power consumed by the lamps and ballasts measured in lm/W

Revise C405.1 as follows:

C405.1 General (Mandatory). This section covers lighting system controls, the maximum lighting power for interior and exterior applications, electrical energy consumption, vertical and horizontal transportation systems, and minimum efficiencies for motors and transformers.

No less than 90% of the permanently installed lighting serving dwelling units shall be provided by lamps with an efficacy of not less than 65 lm/W or light fixtures with an efficacy of not less than 55 lm/W, or with Sections C405.2.4 and C405.3. Dwelling units within multi-family buildings shall comply with Section R404.1. All other dwelling units shall comply with Section R404.1, or with Sections C405.2.4 and C405.4. Sleeping units shall comply with Section C405.2.4, and with Section R404.1 or C405.4.

Lighting installed in walk-in coolers, walk-in freezers, refrigerated warehouse coolers and refrigerated warehouse freezers shall comply with the lighting requirements of Section C410.2.

Purpose of code change:

The proposal solves this problem by replacing the reference to the residential lamp efficacy requirements with built-in lighting requirements that reflect what is actually "high-efficacy" in today's market. The proposal also simplifies the requirement by reducing the number of wattage categories since those wattage categories were driven by the typical wattages of older lighting technologies and are less relevant to the current market. The categories in the residential code an artifact of incandescent and early compact fluorescent lamp wattages. As lamps have gotten more efficient, the higher wattage categories have become less meaningful. Note that DOE the lamp efficacy requirement could be increased to 70 or 75 lumens/watt based on what will be available for technology when the code is published. The efficacy proposed in this change represents is achievable for both LED and high end CFL light sources.

Your amendment must meet one of the following criteria. Select at least one:						
Addresses a critical life/safety need.			Consistency with state or federal regulations			
Addresses a specific state policy or statute. (Note that energy conservation is a state policy)			Addresses a unique character of the state.			
			Corrects errors and omissions.			
Check the building types that would be impacted by your code change:						
Single family/duplex/townhome		Multi-family 4 + stories		Institutional		
☐ Multi-family 1 – 3 stories		Commercial / Retail		Industrial		
Your name	Eric Makela		Email address	ericm@newbuildings.org		
Your organization	New Buildings Institute		Phone number	503-761-7339		
Other contact name Click here to enter text.						
Instructions: Send this form as an email attachment, along with any other documentation available, to:						

sbcc@des.wa.gov. For further information, call the State Building Code Council at 360-407-9278.

Economic Impact Data Sheet

Briefly summarize your proposal's primary economic impacts and benefits to building owners, tenants and businesses.

Provide your best estimate of the construction cost (or cost savings) of your code change proposal? (See OFM Life Cycle Cost <u>Analysis tool</u> and <u>Instructions</u>; use these <u>Inputs</u>. Webinars on the tool can be found <u>Here</u> and <u>Here</u>)

\$Click here to enter text./square foot (For residential projects, also provide \$Click here to enter text./ dwelling unit)

Show calculations here, and list sources for costs/savings, or attach backup data pages

Provide your best estimate of the annual energy savings (or additional energy use) for your code change proposal?

Click here to enter text.KWH/ square foot (or) Click here to enter text.KBTU/ square foot

(For residential projects, also provide Click here to enter text.KWH/KBTU / dwelling unit)

Show calculations here, and list sources for energy savings estimates, or attach backup data pages

List any code enforcement time for additional plan review or inspections that your proposal will require, in hours per permit application: