



STATE OF WASHINGTON

STATE BUILDING CODE COUNCIL

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November 2012 Motions for Rule Making Actions

Main Motion: Adopt 2012 Energy Code as proposed in WAC 51-11R and 51-11C; repeal WAC 51-11

Amendment to the main motion:

Modify amendment to minimum required skylight area, Section C402.3.2:

C402.3.2 Minimum skylight fenestration area. For single story buildings only, in an enclosed space greater than 10,000 square feet (929 m²), directly under a roof with ceiling heights greater than 15 feet (4572 mm), and used as an office, lobby, atrium, concourse, corridor, ~~storage~~, gymnasium/exercise center, convention center, automotive service, manufacturing, nonrefrigerated warehouse, retail store, distribution/sorting area, transportation, or workshop, the total daylight zone under skylights shall be not less than half the floor area and shall provide a minimum skylight area to daylight zone under skylights of either:

1. Not less than 3 percent with a skylight VT of at least 0.40; or
2. Provide a minimum skylight effective aperture of at least 1 percent determined in accordance with Equation C4-1.

Skylight Effective Aperture = (0.85 x Skylight Area x Skylight VT x WF)/Daylight zone under skylight

(Equation C4-1)

where:

- | | | |
|------------------|----|---|
| Skylight area | = | Total fenestration area of skylights. |
| Skylight VT | = | Area weighted average visible transmittance of skylights. |
| WF | = | Area weighted average well factor, where well factor is 0.9 if light well depth is less than 2 feet (610 mm), or 0.7 if light well depth is 2 feet (610 mm) or greater. |
| Light well depth | := | Measure vertically from the underside of the lowest point of the skylight glazing to the ceiling plane under the skylight. |

- EXCEPTION: Skylights above daylight zones of enclosed spaces are not required in:
1. Buildings in Climate Zones 6 through 8.
 2. Spaces where the designed *general lighting* power densities are less than 0.5 W/ft² (5.4 W/m²).
 3. Areas where it is documented that existing structures or natural objects block direct beam sunlight on at least half of the roof over the enclosed area for more than 1,500 daytime hours per year between 8 a.m. and 4 p.m.
 4. Spaces where the daylight zone under rooftop monitors is greater than 50 percent of the enclosed space floor area.

Rationale: Single-story buildings have more available roof area and simpler structures. Storage occupancies are already required to have other lighting controls. The amendment limits the number of buildings requiring mandatory skylights, thereby reducing costs.