



U.S. Department of Energy
Energy Efficiency and Renewable Energy



Building Energy Codes

ASHRAE/IESNA 90.1 Lighting What's new for 2007 and beyond

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What's new in Lighting for 90.1-2007

- 90.1-2007 is scheduled to be out later this year – honest!
- It will include several needed flexibility updates:
 - Ballasted lighting calculation method
 - Line voltage track calculation options
 - Task light exemption
- Plus a much needed revision of the *Additional Lighting Power Allowances*

Flexibility updates

- “Maximum labeled wattage” calculation method added for ballasted/transformer lighting
 - 9.1.4 (b) The wattage of luminaires with permanently installed or remote ballasts or *transformers* shall be ...maximum lamp/auxiliary (wattage)... or shall be the maximum labeled wattage of the luminaire.

- Exemption added for “furniture mounted task lights with auto shutoff” (Exception (p) to 9.2.2.3)

Flexibility updates

- “Permanent current limiter” and “circuit breaker” added as Line voltage track calculation options
 - 9.1.4 (c) ...wattage of line-voltage lighting track and plug-in busway...shall be:
 - the specified wattage of the luminaires included in the system with a minimum of 30 W/lin ft., or
 - the wattage limit of the system’s circuit breaker, or
 - the wattage limit of other permanent current limiting device(s) on the system.

Additional Power Allowance revision

The current allowances:

1.6 W/ft² times the area of specific display OR

3.9 W/ft² times the area of specific display for valuable merchandise, such as jewelry, fine apparel and accessories, china and silver, art, and similar items, where detailed display and examination of merchandise are important.

Additional Power Allowance revision

The revised allowances:

Additional Interior Lighting Power Allowance = 1000 watts +
(Retail Area 1 x 1.0 W/ft²) +
(Retail Area 2 x 1.7 W/ft²) +
(Retail Area 3 x 2.6 W/ft²) +
(Retail Area 4 x 4.2 W/ft²),

Where:

Retail Area 1 = the floor area for all products not listed in Retail Area 2, 3 or 4.

Retail Area 2 = the floor area used for the sale of vehicles, sporting goods and small electronics.

Retail Area 3 = the floor area used for the sale of furniture, clothing, cosmetics and artwork.

Retail Area 4 = the floor area used for the sale of jewelry, crystal, and china.

Exception: Other merchandise categories may be included in Retail Areas 2 through 4 above, provided that justification documenting the need for additional lighting power based on visual inspection, contrast, or other critical display is approved by the authority having jurisdiction.

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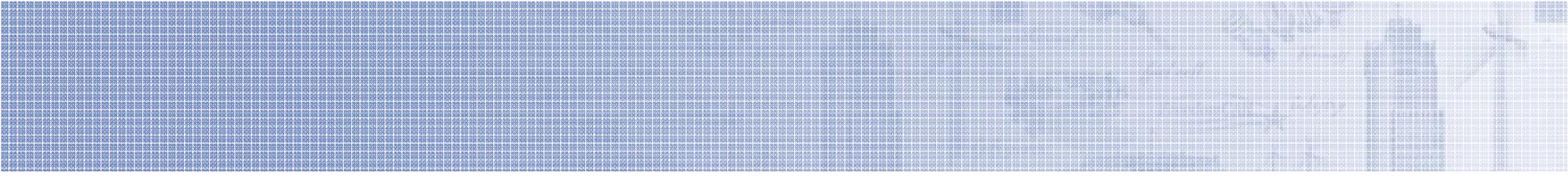
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Application of the 2007 updates

- Application of updates generally depends on adoption of the printed standard
 - Typical adoption lag for state/local jurisdictions
 - Potential application lag due to “new code” learning curve
- Consider their use anyway? (pre-adoption where practical)
 - As a code official – apply where reasonable while still meeting the code intent
 - As a user/builder – suggest application where practical but meet all other requirements

Beyond 2007 – what's in the works for lighting?

- Next printed version is 2010 with several proposals in various stages of development/public review
- Major changes for 2010 (in public review):
 - Exterior LPD limits split into 4 exterior lighting zones
 - Skylighting and interior control
 - Hotel bathroom lighting control
- Other potential changes in development
 - Additional controls
 - Auto shutoff for smaller buildings
 - More required occupancy sensor control
 - Alternative energy use compliance path



Questions?