Comments on Title 24 Residential Lighting

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Today’s Comments

• Eliminate dimming option in selected rooms

• Fast track work on hotel room – “master shut-off” switch

• Hotel room loophole
Current Title 24 Res. Lighting Code

For many room types:
A. Use efficient luminaire

OR

B. Install dimmer or manual on/auto off sensor

As dimmer is much lower cost option, it will be used most frequently.
Concerns About Installing An Inefficient Fixture and Dimming It

- Dimming seldom used. Results in very little savings compared to occupancy sensor or high-efficacy fixture.
- “Regular” screw-based CFLs not compatible with dimmers. Will result in shorter CFL life and bad consumer experience.
- Potential Nightmare – will turn consumer off from screw-based CFLs in other sockets and huge lost savings opportunities.
Qualitative Energy Use Comparison

Inefficient Fixture

Dimmer

Manual on/auto off control

Hi-efficacy fixture

Hi-efficacy fixture w/control
Potential Fixes

• Proposed Section 10 allows dimmers as compliance path for bedroom, living room, hallway, stairway, den, family room, etc.
  
  – **Option A** - Remove dimming option for bedroom and hallways. Wide range of efficient luminaires available for these applications.
  
  – Bedroom savings (assume base case of 2 sockets with 75 W lamps vs. 2 @ 18 W), up to 170 kWh/yr per bedroom
### Savings from Moving to Hi-efficacy Bedroom Fixture

<table>
<thead>
<tr>
<th></th>
<th>2 hours/day</th>
<th>3 hours/day</th>
<th>4 hours/day</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Energy savings (kWh/yr)</strong></td>
<td>85</td>
<td>127</td>
<td>170</td>
</tr>
<tr>
<td><strong>1 year electric bill savings</strong></td>
<td>$11.9</td>
<td>$17.8</td>
<td>$23.8</td>
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<tr>
<td><strong>10 year electric bill savings</strong></td>
<td>$119</td>
<td>$178</td>
<td>$238</td>
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Option B – Dimmers w/CFLs

• Continue to allow inefficient screw-base fixture with dimmers in all these rooms but require builder to install screw-based dimmable CFL. This will:
  – Ensure savings are achieved until 1st CFL dies and hope they come back for more
  – Prevent owner from having bad experience with screw based (single wattage) CFLs
  – Provides another option to occupancy sensor or high efficacy luminaire.
Option C – One Inefficient Fixture Per Room

- Limit number of “inefficient” luminaires to one per room
  - This will discourage current trend of multiple inefficient cans in hallways, living rooms, etc.
FastTrack Hotel Master Shut-Off Switch

• Around the world (Europe, China, Australia) hotels have master shut-off switch for lights and selected outlets.

• Why? – Guests/maids frequently fail to turn off lights when they leave the room.

• Could provide dramatic energy savings

• System often use key as switching device (take key out, lights go off after X minute delay).
Remove Hotel Lighting Loophole

- Remove current 130(b) exception from high-rise residential living and hotel/motel room

“Up to 10% of the guest rooms in a hotel/motel need not comply”