

*California
Energy Commission*



California 2005 Residential Lighting Energy Efficiency Standards



Energy Hotline: 800-772-3300 (Please Call First)

CEC: <http://www.energy.ca.gov>

http://www.energy.ca.gov/title24/2005standards/2004-11-04_400-03-001F.PDF

Section 150 (k) Residential Lighting

Section 130 (c) How to determine wattage

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Today's Basic Energy Problems

- Current US annual energy consumption predicted to increase 28% in next 20 years
- World electricity consumption expected to double by 2025
- Chinese coal consumption rose by 28% in 2002



Today's Basic Energy Problems

- Energy Demand Exceeds Supply
- Electricity Usage Increasing $> 2\%/year$
- Electricity Rates Rising
- Natural Gas Rates High
- Electricity Generation produces pollution (sulfur dioxide, nitrogen dioxide, carbon dioxide)
- Not in my backyard

One solution:

- Reduce Demand with Energy Efficiency



Estimated Energy Savings from 2005 Building Energy Efficiency Standards

- Coincident Peak Demand 181.4 MW
- Annual Energy Savings 478.5 GWh
- Annual Gas Savings 8.8 Mil Therms

- Peak Savings in Each Consecutive Year



How Can I Participate?

- Discussions for 2008 will begin soon
- CEC List Server
www.energy.ca.gov
- Public Workshops
- Written Correspondence



Developing Consensus

- Measures go through a public consensus process prior to being adopted
- Measures must be cost-effective
- Measure must be technically feasible
- Measures must be reasonable and based on current best practice

Summary Table of 2005 Residential Lighting Standards

Kitchen	<ul style="list-style-type: none"> ✓ Electronic Ballasts \geq 13 Watts 	All	<p>Alternate option:</p> <ul style="list-style-type: none"> ✓ Up to 50% of rated WATTAGE can be other than high efficacy
Bathroom Garage Laundry Room Utility Room	<ul style="list-style-type: none"> ✓ Recessed fixtures in insulated ceilings: <ul style="list-style-type: none"> ➤ <i>zero-clearance insulation cover (IC)</i> ➤ <i>certified airtight</i> 	Hardwired	<p>Alternate option:</p> <ul style="list-style-type: none"> ✓ Manual-on occupant sensor
All other interior rooms (i.e.: Hallway, Dining Room, Bedroom)	<ul style="list-style-type: none"> ➤ <i>certified airtight</i> 	Must	<p>Alternate options:</p> <ul style="list-style-type: none"> ✓ Manual-on occupant sensor ✓ Dimmer
Outdoor lighting attached to buildings	<ul style="list-style-type: none"> ✓ Switch all high efficacy lighting separate from low efficacy lighting 	be	<p>Alternate option:</p> <ul style="list-style-type: none"> ✓ Motion sensor plus photo control
Common Areas of low-rise residential buildings \geq 4 units	<ul style="list-style-type: none"> ✓ Switch all high efficacy lighting separate from low efficacy lighting 	High	<p>Alternate option:</p> <ul style="list-style-type: none"> ✓ Occupant sensor
Residential parking lots and garages \geq 8 vehicles	<ul style="list-style-type: none"> ✓ Must meet 2005 Nonresidential Building Standards 		