

**Comparison of the Lighting Requirements of IECC-2003 vs. 90.1-2001 (2004 items have also been added in red)**

Category	90.1-2001 (2004 addenda in red, bold, underline)	IECC-2003	Comments
<b>Lighting – Section 9 of 90.1 vs. Section 805 of IECC</b>			
General	9.1 Covers: <ul style="list-style-type: none"> <li>• Interior spaces</li> <li>• Exterior features</li> <li>• Exterior building grounds</li> </ul> Exceptions: <ul style="list-style-type: none"> <li>• Emergency</li> <li>• Living units</li> <li>• Regulated</li> <li>• Decorative gas</li> </ul>	805.1 Covers: <ul style="list-style-type: none"> <li>• Controls</li> <li>• Ballasts</li> <li>• Interior LPDs</li> <li>• Exterior lighting equipment</li> </ul> Exceptions: <ul style="list-style-type: none"> <li>• Dwelling units</li> </ul>	
Automatic Lighting Shutoff	9.2.1.1 Covers: <ul style="list-style-type: none"> <li>• Buildings &gt; 5,000 sq.ft</li> </ul> Allows: <ul style="list-style-type: none"> <li>• Time-of-day control covering no more than 25,000 sq.ft or one floor, or</li> <li>• Occupant sensor (30 min), or</li> <li>• Signal from another control or alarm system</li> </ul> Exceptions: <ul style="list-style-type: none"> <li>• 24 hour operations</li> </ul>	805.2.2.2 Covers: <ul style="list-style-type: none"> <li>• Buildings &gt; 5,000 sq.ft</li> </ul> Allows: <ul style="list-style-type: none"> <li>• Time-of-day control covering no more than 25,000 sq.ft or one floor, or</li> <li>• Occupant intervention</li> </ul> Requires: <ul style="list-style-type: none"> <li>• Occupant Override               <ul style="list-style-type: none"> <li>○ Readily accessible</li> <li>○ Located to see the lights or is annunciated</li> <li>○ Manually operated</li> <li>○ 2 hr. max</li> <li>○ Covers ≤ 5,000 sq.ft</li> <li>○ Exceptions                   <ul style="list-style-type: none"> <li>▪ Malls, arcades, auditoriums, single-tenant retail spaces, industrial and arenas where override may exceed 2 hours and cover up to 20,000 sq.ft</li> </ul> </li> </ul> </li> <li>• Holiday Scheduling               <ul style="list-style-type: none"> <li>○ Exceptions: Retail stores and associated malls, restaurants, grocery stores, churches and theaters</li> </ul> </li> </ul> Exceptions: <ul style="list-style-type: none"> <li>• Areas with only 1 luminaire</li> <li>• Areas controlled by occupancy sensing</li> <li>• Corridors, storerooms, restrooms or public lobbies</li> </ul>	

Space Control	<p>9.2.1.2 Covers:</p> <ul style="list-style-type: none"> <li>• Spaces enclosed by ceiling height partitions</li> <li>• Covers no more than 2,500 sq.ft per control in spaces less than 10,000 sq.ft and no ore than 10,000 sq.ft per control in larger spaces</li> <li>• Requires override of no more than 4 hours</li> <li>• Readily accessible and can see the lighting</li> </ul> <p>Allows:</p> <ul style="list-style-type: none"> <li>• Manual, or</li> <li>• Occupancy sensor <ul style="list-style-type: none"> <li>○ <u>Required in certain classrooms, conference/meeting rooms and employee lunch and break rooms if no multi-scene control.</u></li> </ul> </li> </ul> <p>Exceptions:</p> <ul style="list-style-type: none"> <li>• Remote location allowed for reasons of safety and security if has pilot light and is clearly labeled</li> </ul>	<p>805.2.1 Covers:</p> <ul style="list-style-type: none"> <li>• Spaces enclosed by ceiling height partitions</li> <li>• Within area or remote with status lights</li> </ul> <p>Exceptions:</p> <ul style="list-style-type: none"> <li>• Security/emergency</li> <li>• Egress lighting for stairways and corridors.</li> </ul>	
Exterior Lighting Control	<p>9.2.1.3 Covers:</p> <ul style="list-style-type: none"> <li>• Exterior lighting when sufficient daylight is available or when lighting is not needed</li> </ul> <p>Requires:</p> <ul style="list-style-type: none"> <li>• <u>10 hour power backup</u></li> </ul> <p>Allows:</p> <ul style="list-style-type: none"> <li>• Photosensor (<u>only if dusk-to-dawn operation</u>)</li> <li>• Astronomical time switch</li> </ul> <p>Exceptions:</p> <ul style="list-style-type: none"> <li>• Covered vehicle entrances/exits for buildings or parking structures where required for safety, security or for eye adaptation</li> </ul>	<p>805.2.3 Covers:</p> <ul style="list-style-type: none"> <li>• Exterior lighting</li> </ul> <p>Allows:</p> <ul style="list-style-type: none"> <li>• Photosensor</li> <li>• Automatic switching <ul style="list-style-type: none"> <li>○ 7-day &amp; seasonal daylight adjustment</li> <li>○ 4-hour power backup</li> </ul> </li> </ul> <p>Exceptions:</p> <ul style="list-style-type: none"> <li>• 24 hour operations</li> </ul>	
Additional Controls	<p>9.2.1.4 Covers:</p> <ul style="list-style-type: none"> <li>• Display or accent lighting</li> <li>• Case lighting</li> <li>• Hotel/Motel Guest Room Lighting</li> <li>• Task lighting</li> <li>• Nonvisual lighting</li> <li>• Demonstration lighting</li> </ul>	<p>805.2.2.3 Covers:</p> <ul style="list-style-type: none"> <li>• Guestrooms</li> </ul> <p>Exceptions:</p> <ul style="list-style-type: none"> <li>• Areas with only 1 luminaire</li> <li>• Areas controlled by occupancy sensing</li> <li>• Corridors, storerooms, restrooms or public lobbies</li> </ul>	

Tandem Wiring	<p>9.2.2 Covers:</p> <ul style="list-style-type: none"> <li>• 1 or 3 lamp linear fluorescent &gt; 30W</li> </ul> <p>Exceptions:</p> <ul style="list-style-type: none"> <li>• Recessed luminaires &gt; 10' apart</li> <li>• Surface or pendant mounted luminaires that are not continuous</li> <li>• Luminaires using single-or-three-lamp high frequency electronic ballasts (or 3 lamp electromagnetic)</li> <li>• Luminaires on an emergency circuit</li> <li>• Luminaires with no available pair</li> </ul>	<p>805.3 Covers:</p> <ul style="list-style-type: none"> <li>• 1 or 3 lamp linear fluorescent &gt; 30W</li> </ul> <p>Exceptions:</p> <ul style="list-style-type: none"> <li>• Recessed luminaires &gt; 10' apart</li> <li>• Surface or pendant mounted luminaires &gt; 1' apart</li> <li>• Luminaires using single-or-three-lamp high frequency electronic ballasts</li> <li>• Luminaires on an emergency circuit</li> <li>• Luminaires with no available pair</li> </ul>	
Exit Signs	<p>9.2.3 Covers:</p> <ul style="list-style-type: none"> <li>• Exit sign luminaires &gt; 20W</li> </ul> <p>Requires:</p> <ul style="list-style-type: none"> <li>• 35 LPW</li> </ul> <p><b>NOTE: Addendum AI changes this to match IECC</b></p>	<p>805.4 Requires:</p> <ul style="list-style-type: none"> <li>• ≤ 5W/side</li> </ul>	
Light Reduction	NONE	<p>805.2.2.1 Requires occupant being able to reduce connected lighting load by at least 50% by:</p> <ul style="list-style-type: none"> <li>• Controlling all lamps or luminaires, or</li> <li>• Dual switching of alternate rows, luminaires or lamps, or</li> <li>• Switching middle lamps, or</li> <li>• Switching each lamp or luminaire</li> </ul> <p>Exceptions:</p> <ul style="list-style-type: none"> <li>• Areas with only 1 luminaire</li> <li>• Areas controlled by occupancy sensing</li> <li>• Corridors, storerooms, restrooms or public lobbies</li> </ul>	
Interior Lighting Power	<p>9.2.4 Uses:</p> <ul style="list-style-type: none"> <li>• Building Area Method, or</li> <li>• Space-by-Space Method</li> </ul>	<p>805.5 Uses:</p> <ul style="list-style-type: none"> <li>• Entire building method, or</li> <li>• Tenant area or portion of building method</li> </ul>	<p>IECC-2003 lower than 90.1-2001. IECC-2003 and 90.1-2004 are equivalent in most cases.. Both use equivalent adders for decorative, VDT and retail display lighting.</p>

Exterior Building Lighting Power	<p>9.2.6 Requires:</p> <ul style="list-style-type: none"> <li>60 LPW for building grounds lighting if &gt; 100 watts</li> </ul> <p>9.3.2 Sets LPDs <b><u>(2004 version expands lists of specified exterior applications)</u></b></p> <ul style="list-style-type: none"> <li>Exceptions: <ul style="list-style-type: none"> <li>Specialized signal, directional or marker lighting associated with transportation</li> <li>Signage for advertising <b><u>or directional</u></b></li> <li><b><u>Integral to equipment</u></b></li> <li><b><u>Theatrical</u></b></li> <li><b><u>Athletic playing fields</u></b></li> <li><b><u>Temporary lighting</u></b></li> <li><b><u>Industrial production, material handling, transportation sites &amp; associated storage areas</u></b></li> <li><b><u>Theme elements in them parks</u></b></li> <li>Highlight public monuments etc.</li> </ul> </li> </ul>	<p>805.6 Requires:</p> <ul style="list-style-type: none"> <li>45 LPW</li> </ul> <p>Exceptions:</p> <ul style="list-style-type: none"> <li>Low voltage landscape lighting</li> <li>For reasons of historical, safety, signage or emergency considerations.</li> </ul>	
Electrical Energy Consumption	NONE	805.7 Requires that in spaces with individual dwelling units that the electrical consumption be separately metered.	
<b>Power – Section 8 of 90.1 vs. Sections 803 &amp; 805 of IECC</b>			
Voltage Drop	<p>8.2.1 Requirements:</p> <ul style="list-style-type: none"> <li>2% max. drop in feeder conductors</li> <li>3% max. drop in branch circuits</li> </ul>	None	
Manuals	<p>8.2.2.2 O&amp;M Manual to include: (this section is in the Power section of the document)</p> <ul style="list-style-type: none"> <li>Submittal data</li> <li>Required routine maintenance actions</li> <li>Name &amp; address of at least one qualified service agency</li> <li>Complete narrative on intended operation</li> </ul>	<p>803.3.8.3 O&amp;M Manual to include: (this is provided by the mechanical contractor)</p> <ul style="list-style-type: none"> <li>Equipment capacity &amp; required maintenance actions</li> <li>O&amp;M Manual</li> <li>HVAC details</li> <li>Complete narrative on intended operation</li> </ul>	
<b>Other Equipment – Section 10 of 90.1 vs. No such section</b>			
Electric Motor Efficiency	10.2 Electric motors to comply with EPAAct/1992 per Table 10.2	None	