

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

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

Tandem Wiring	<p>9.2.2 Covers:</p> <ul style="list-style-type: none"> • 1 or 3 lamp linear fluorescent > 30W <p>Exceptions:</p> <ul style="list-style-type: none"> • Recessed luminaires > 10' apart • Surface or pendant mounted luminaires that are not continuous • Luminaires using single-or-three-lamp high frequency electronic ballasts (or 3 lamp electromagnetic) • Luminaires on an emergency circuit • Luminaires with no available pair 	<p>805.3 Covers:</p> <ul style="list-style-type: none"> • 1 or 3 lamp linear fluorescent > 30W <p>Exceptions:</p> <ul style="list-style-type: none"> • Recessed luminaires > 10' apart • Surface or pendant mounted luminaires > 1' apart • Luminaires using single-or-three-lamp high frequency electronic ballasts • Luminaires on an emergency circuit • Luminaires with no available pair 	
Exit Signs	<p>9.2.3 Covers:</p> <ul style="list-style-type: none"> • Exit sign luminaires > 20W <p>Requires:</p> <ul style="list-style-type: none"> • 35 LPW <p>NOTE: Addendum AI changes this to match IECC</p>	<p>805.4 Requires:</p> <ul style="list-style-type: none"> • ≤ 5W/side 	
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"> • Controlling all lamps or luminaires, or • Dual switching of alternate rows, luminaires or lamps, or • Switching middle lamps, or • Switching each lamp or luminaire <p>Exceptions:</p> <ul style="list-style-type: none"> • Areas with only 1 luminaire • Areas controlled by occupancy sensing • Corridors, storerooms, restrooms or public lobbies 	
Interior Lighting Power	<p>9.2.4 Uses:</p> <ul style="list-style-type: none"> • Building Area Method, or • Space-by-Space Method 	<p>805.5 Uses:</p> <ul style="list-style-type: none"> • Entire building method, or • Tenant area or portion of building method 	<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"> 60 LPW for building grounds lighting if > 100 watts <p>9.3.2 Sets LPDs <u>(2004 version expands lists of specified exterior applications)</u></p> <ul style="list-style-type: none"> Exceptions: <ul style="list-style-type: none"> Specialized signal, directional or marker lighting associated with transportation Signage for advertising <u>or directional</u> <u>Integral to equipment</u> <u>Theatrical</u> <u>Athletic playing fields</u> <u>Temporary lighting</u> <u>Industrial production, material handling, transportation sites & associated storage areas</u> <u>Theme elements in them parks</u> Highlight public monuments etc. 	<p>805.6 Requires:</p> <ul style="list-style-type: none"> 45 LPW <p>Exceptions:</p> <ul style="list-style-type: none"> Low voltage landscape lighting For reasons of historical, safety, signage or emergency considerations. 	
Electrical Energy Consumption	NONE	805.7 Requires that in spaces with individual dwelling units that the electrical consumption be separately metered.	
Power – Section 8 of 90.1 vs. Sections 803 & 805 of IECC			
Voltage Drop	<p>8.2.1 Requirements:</p> <ul style="list-style-type: none"> 2% max. drop in feeder conductors 3% max. drop in branch circuits 	None	
Manuals	<p>8.2.2.2 O&M Manual to include: (this section is in the Power section of the document)</p> <ul style="list-style-type: none"> Submittal data Required routine maintenance actions Name & address of at least one qualified service agency Complete narrative on intended operation 	<p>803.3.8.3 O&M Manual to include: (this is provided by the mechanical contractor)</p> <ul style="list-style-type: none"> Equipment capacity & required maintenance actions O&M Manual HVAC details Complete narrative on intended operation 	
Other Equipment – Section 10 of 90.1 vs. No such section			
Electric Motor Efficiency	10.2 Electric motors to comply with EPAAct/1992 per Table 10.2	None	