

Title 24 - Overview of 2013 Changes



The 2013 changes to California's Building Energy Efficiency Standards mean a range of new requirements for lighting controls and other systems in both residential and non-residential buildings.

These changes apply to all cities and counties in the state of California beginning July 1st, 2014.

Compliance is required for all new construction, tenant improvements, and retrofits where more than 40 light fixtures or over 10% of existing fixtures are altered. (§ 141.0)

Enlighted systems are already compliant with the lighting requirements in the 2013 revision of Title 24 and in many cases go above and beyond what is required.

- Title 24 will create many additional new requirements for projects. Implementing the Enlighted system now enables you to comply with changes to Title 24 and avoid additional costs and delays.
- Utility incentives will change – new utility incentives are being created for systems that can meet or exceed Title 24 requirements. Implementing Enlighted will simplify the utility rebate process.
- Utilities cannot incent code compliance, only solutions that exceed code. Implementing the Enlighted system now captures today's utility incentives and positions you to immediately receive any new incentives after Title 24 is activated.

This guide contains an overview of major changes to the standards. To ensure you are fully compliant with Title 24, please contact your local Enlighted representative, or reach out to us at:

title24@enlightedinc.com

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Table 130.1-A Multi-Level Lighting Controls and Uniformity Requirements			
Luminaire Type	Minimum Required Control Steps (Percent of Full Rated Power)	Uniform Level of Illuminance Shall Be Achieved by:	Future-Proof for Title 24 with Enlighted
LED luminaires and LED source systems (with appropriate driver)	Continuous dimming 10–100%		* Enlighted sensors have their own control, reliably hard-wired and powered by the light fixture
Pin-based compact fluorescent > 20W (with appropriate ballast)	Continuous dimming 20–100%		* Enlighted continuously dims in tune with the ambient light level, space occupancy and the individual's preferences and work at hand * Enlighted system is distributed and does not require centralized control * Enlighted is the only advanced lighting system that can be quickly modified as the floor plan changes
Pin-based compact fluorescent ≤ 20W (with appropriate ballast)	Minimum one step between 30–70%	<ul style="list-style-type: none"> · Stepped dimming or · Continuous dimming or · Switching alternate lamps in a luminaire 	* Enlighted can be configured for continuous dimming * Continuous dimming according to the activity and ambient light is preferable for both people's comfort and superior energy savings
Linear fluorescent and U-bent fluorescent ≤ 13W (with appropriate ballast)			
Linear fluorescent and U-bent fluorescent > 13 W (with appropriate ballast)	Minimum one step in each range 20–40% 50–70% 80–85% 100%	<ul style="list-style-type: none"> · Stepped dimming or · Continuous dimming or · Switching alternate lamps in each luminaire, having a minimum of 4 lamps per luminaire, illuminating the same area and in the same manner 	* The Enlighted system continuously dims to optimize both energy and people efficiency for every 100 square feet of space
Track lighting (with appropriate ballast)	Minimum one step between 30–70%	<ul style="list-style-type: none"> · Stepped dimming or · Continuous dimming or · Switching alternate lamps in each luminaire, having a minimum of 2 lamps per luminaire, illuminating the same area and in the same manner 	* The Enlighted system continuously dims or brightens according to the amount of daylight present in the space
HID > 20W (with appropriate ballast)	Minimum one step between 50–70%	<ul style="list-style-type: none"> · Stepped dimming or · Continuous dimming or · Switching alternate lamps in each luminaire, having a minimum of 2 lamps per luminaire, illuminating the same area and in the same manner 	* The Enlighted system continuously dims or brightens according to the amount of daylight present in the space
Induction > 25W (with appropriate ballast)			
Other light sources			

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Other Required Measures		
Area	Requirement	Enlighted Solution
Stairwells, Corridors, Library Stacks & Warehouse Aisles	Mandatory partial on/off occupancy sensors in corridors, stairwells, library stacks and warehouse aisles. (§130.1(c))	* Enlighted smart sensors provide occupancy control in all required areas.
Emergency/Egress Lighting	Security and egress lighting must be switched off automatically after operational hours. (§130.1(c))	* UL924 is the device that conforms to local and national electrical code, life safety code, and local codes. NOT energy codes. Using a UL924 device allows the Enlighted control unit to be bypassed in the event of loss of normal power.
Outdoor Lighting	Mandatory photocontrol and time scheduling for outdoor luminaires.	* Enlighted system provides the required control outdoors.
Outdoor Lighting below 24ft	Mandatory partial on/off occ sensing for outdoor luminaires mounted at 24' or less.	* Enlighted system provides the required control outdoors.
Parking Garage Lighting	In parking garages, parking areas, loading and unloading areas, general lighting must be controlled by occupancy sensing controls having at least one control step between 20% and 50% of design lighting power. No more than 500 watts of rated lighting power shall be controlled together shall be controlled together as a single zone. A reasonably uniform level of illuminance shall be achieved in accordance with applicable requirements in TABLE 130.1A. The occupant sensing controls shall be capable of automatically turning the lighting fully ON only in the separately controlled space, and shall automatically activate from all designed paths of egress. (§ 130.1(c)1B)	* Enlighted smart sensors provide occupancy control in all required areas.
Demand Response	Mandatory demand response in all buildings >10,000 sf. (§130.1(e))	* Enlighted System is OADR 2.0 tested and compliant.
Daylight Harvesting	Threshold for mandatory photocontrols in primary daylight zone reduced from 2,500 sf to 120 Watts. (§130.1(d)2D)	* Enlighted controls provide daylight harvesting at all fixtures.
Skylight Daylight Harvesting	Skylight zones take precedence over primary sidelit zones. If a light overlaps zones, it will be in part of Skylit zone. Calculations for zones is found on page 95 of the non-residential compliance manual.	The granular flexibility of Enlighted programming makes it easy to define areas (groups) that need to be controlled together.
Secondary Daylight	Prescriptive photocontrols in secondary daylight zone.	* Enlighted controls provide daylight harvesting at all fixtures.
Load Disaggregation	Electrical power distribution systems shall be designed to permit the disaggregated measurement of electrical load energy uses downstream from the service meter. (Table 130.5-B)	* The Enlighted sensor is unique with utility-grade and verified metering, collecting and communicating energy usage data every 5 minutes allowing the property owner to avoid the required rewiring under this section.
Plug-Load Controls	In all buildings, both controlled and uncontrolled 120 volt receptacles shall be provided in each private office, open office area, reception lobby, conference room, kitchenette in private office spaces, and copy room. (130.5(d))	* Enlighted Plug-Load control complies and switches affected sockets off when space is unoccupied.