The compliant solutions listed below are suggested based on total installed cost, simplicity of design, and basic functional needs for the space. These solutions represent one of multiple compliant options to meet lighting and receptacle control requirements. ASHRAE 90.1 2013 can also be used as a compliance option in meeting IECC 2015 requirements.

<table>
<thead>
<tr>
<th>Suggested energy code solutions for commercial buildings</th>
</tr>
</thead>
<tbody>
<tr>
<td>The compliant solutions listed below are suggested based on total installed cost, simplicity of design, and basic functional needs for the space. These solutions represent one of multiple compliant options to meet lighting and receptacle control requirements. ASHRAE 90.1 2013 can also be used as a compliance option in meeting IECC 2015 requirements.</td>
</tr>
</tbody>
</table>

### Manual Control
- **Switch**
- **Dimmer or scene control**

### Automatic ON/OFF Control
- **Timeclock**
- **Occupancy sensor**
  - **Full ON**
  - **Partial ON**
  - **Manual ON**
  - **Full OFF**
  - **Partial OFF**

### Daylight responsive control
- **Daylight responsive control**
- **Receptacle control**
- **Demand response**

### Diagram key:
- **= New construction**
- **= Lighting retrofit**
- **= New construction and retrofit**

### As noted below, manual or automatic controls are required for the following:

- **Esprit lighting control**
- **Dimmer**
- **Scene control**
- **Manual ON**
- **Partial ON**
- **Manual OFF**
- **Partial OFF**

### Go to lutron.com/energycodes for complete details

### Energy Codes Email
- energycodes@lutron.com

### Energy Codes Hotline
- 1THINKCODE (1.844.652.6330)

### Energy Code Lookup Tool
- lutron.com/energycodes

### Energy Code Application Guides
- lutron.com/appguides

### Rebate Lookup Tool
- lutron.com/rebates

### 24/7 Energy Code Hotline
- 1THINKCODE (1.844.652.6330)

1. All retrofits altering more than 50% of the luminaires, or 10% with alterations to controls and/or circuits, must comply with all new construction requirements.
2. To comply with some life safety code requirements for egress illumination, automatic full OFF is not suggested. For non-egress areas, the occupancy sensor should turn the lights to full OFF and a switching control may be used.
3. Timeclock ensures the lights are on when typically occupied. Occupancy sensor controls lights when typically unoccupied.
4. Astronomical timeclock shall ensure all lights are off during daylight hours. Lights should be scheduled to Partial OFF during night hours. See section C405.2.5 for scheduling times.
5. Not a code requirement. Lutron recommends this solution for spaces designated as a path of egress.
6. Continuous Daylight Dimming to OFF.
Code requirement summary

<table>
<thead>
<tr>
<th>Minimum control type</th>
<th>Description</th>
<th>Code provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switch</td>
<td>Lighting shall be capable of turning ON and OFF. There shall be at least one manual device for control of the lighting within a space. See code for spaces that allow remote location of control.</td>
<td>C405.2.2.3</td>
</tr>
<tr>
<td>Dimmer or scene control</td>
<td>Lighting shall be capable of being reduced by at least 50% of maximum lighting power. There shall be a manual device allowing an occupant to reduce lighting by at least 50% of maximum lighting power within a space. See code for spaces that allow remote location of control. Automatic daylight control may be used instead of manual control.</td>
<td>C405.2.2.2</td>
</tr>
<tr>
<td>Timeclock</td>
<td>Interior: Scheduled control, based on time-of-day, turns lighting ON or OFF based on typical occupancy. Occupancy sensors also comply as an alternate to using a timeclock. Exterior: Scheduled control, based on time-of-day and sunrise/sunset (requires astronomical timeclock), turns lighting ON or OFF based on typical occupancy and daylight.</td>
<td>C405.2.2, C405.2.5</td>
</tr>
<tr>
<td>Occupancy sensor</td>
<td>Automatic control turns lighting ON upon occupancy or OFF after a vacancy of 30 minutes or less.</td>
<td>C405.2.1, C405.2.1.1 Exception</td>
</tr>
<tr>
<td>Full ON</td>
<td>When initiated by a timeclock or occupancy sensor, lighting is automatically turned ON to maximum lighting power.</td>
<td>C405.2.1.1, C405.2.1 Exception</td>
</tr>
<tr>
<td>Partial ON</td>
<td>When initiated by a timeclock or occupancy sensor, lighting is automatically turned ON to 50% or less of maximum lighting power.</td>
<td>C405.2.1.1, C405.2.1 Exception</td>
</tr>
<tr>
<td>Manual ON</td>
<td>Lighting is turned ON manually by an occupant.</td>
<td>C405.2.1.1, C405.2.1 Exception</td>
</tr>
<tr>
<td>Full OFF</td>
<td>When initiated by a timeclock or occupancy sensor, lighting is automatically turned OFF.</td>
<td>C405.2.1.1, C405.2.1 Exception</td>
</tr>
<tr>
<td>Partial OFF</td>
<td>When initiated by a timeclock or occupancy sensor, lighting is automatically reduced by at least 50% of maximum lighting power (30% for parking garages). Automatic full OFF also complies.</td>
<td>C405.2, C405.2.2, C405.2.5 Exception</td>
</tr>
<tr>
<td>Daylight responsive control</td>
<td>Interior: A sensor which adjusts lighting in response to available daylight is required for sidelighted and skylighted zones. Some spaces, including offices and classrooms require dimming. See the “Daylight Zone Requirements” diagrams for more information. Exterior: A photosensor can be used as an alternate to the dawn/dusk operation of an astronomical timeclock.</td>
<td>C405.2.3, C405.2.5, C405.2.2, C405.2.5 Exception</td>
</tr>
<tr>
<td>Receptacle control</td>
<td>Receptacle control is not required by this energy code.</td>
<td>N/A</td>
</tr>
<tr>
<td>Demand response</td>
<td>Demand response is not required by this energy code.</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Daylight Exception: Daylight control is not required when the total lighting power of a daylight zone is 150 W or less, or when the total glazing area is 24 sq. ft. or less. Other exceptions exist, based on space type, window area, neighboring obstructions, and glass transmittance.

Daylight zone requirements

Daylight Zone Requirements:
Sidelighted daylight zones must be controlled separately from toplighted zones. North, South, East, and West zones must also be controlled separately.

Sidelighting (Window)

Toplighting (Skylight)

This document summarizes the lighting and receptacle control requirements for commercial buildings. It is for information purposes only. It is not meant to replace your state’s or local jurisdiction’s official energy code. Please refer to your local building energy code or authority having jurisdiction for your precise requirements. Only the authority having jurisdiction can guarantee code compliance.