DOCKETED	
Docket Number:	18-BSTD-02
Project Title:	2019 ENERGY CODE COMPLIANCE MANUALS
TN #:	224350
Document Title:	Proposed update to the Nonresidential Indoor Lighting chapter
Description:	N/A
Filer:	System
Organization:	Pawel Smietanka
Submitter Role:	Public
Submission Date:	8/2/2018 2:08:29 AM
Docketed Date:	8/2/2018

Comment Received From: PaweÅ, Åšmietanka
Submitted On: 8/2/2018
Docket Number: 18-BSTD-02

Proposed update to the Nonresidential Indoor Lighting chapter

Proposed update to the Nonresidential Indoor Lighting chapter for 2019 Draft Nonresidential Compliance Manual including:
* Manual Override Feature
* Example Methods for complying with the mandatory daylight control requirements

Additional submitted attachment is included below.

Proposed update to the 2019 Draft Nonresidential Compliance Manual

5. Nonresidential Indoor Lighting

5.4.4 Automatic Daylighting Controls

Manual Override Feature

For an area with both daylighting controls and dimmers for the lighting system, the daylighting controls are likely to be doing the control most of the time. When the building user/occupant wants to use the dimming to adjust the light level, the user/occupant should be able to do so. User should be able to manually override the level of light provided by the lighting system with manual dimming and scenes feature (switching the light in the zone to the predefined level) according to the needs for the duration of the activity. Ways to accomplish this may include also using the dimmer control for lowering and raising an upper bound on the amount of light provided by the system, or treating the dimmer control as setting a total lighting level that the daylighting control then achieves by balancing the amount of natural and artificial light in the space. The important thing is that the occupant receives the benefits of both controls, rather than one control locking out the use of the other.

When the activity is finished, the lighting control shall restore to normal operation (automatic mode). If occupancy sensing controls are used to comply with automatic shut-off requirements light control shall restore to automatic mode when the shut-off is triggered, e.g. within 20 minutes after the area has been vacated. If there are no occupancy sensing the controls should allow the lighting to remain overridden for no more than 20 minutes when an override is initiated and after this time the light level should restore to be controlled by the daylight controls.

Use case example:

In a daylight controlled zone an occupant can trigger a lighting scene “cleaning” that switches on all lights in the zone to maximum power output even if it is above the light level dimmed by the daylight controls. As long as the user is cleaning the room the light level does not change. 20 minutes after the space is vacated the light is shut-off and returns to automatic control by daylight control.

Example
Methods for complying with the mandatory daylight control requirements

To comply with automatic daylighting controls requirements, per luminaire daylight controls may be installed where each luminaire is controlled individually by independent automatic daylighting controls, e.g. integrated in the luminaire. Each lamp sets a separate, independently controlled daylight zone. When this kind of a dylight control system is installed there are no need to show daylight zones on the plans (as required by section 130.1(d)1) and there is no need to do calculations as each luminaire sets the daylight zone. This approach maximises energy savings as the control is most granular and reduces the cost of design, commissioning and setup as well.