



**TITLE 24, PART 6**

**2025 CODE CYCLE**



# Lighting Language Cleanup

Simplification of Allowance Calculation Methods  
Nonresidential and Multifamily Indoor Lighting



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May 16, 2023

Utility Sponsored Stakeholder Meeting – Round 2



# Agenda

## Overview of Code Change Proposal

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### Stakeholder Feedback

- Necessary Space Functions
  - Options Being Considered
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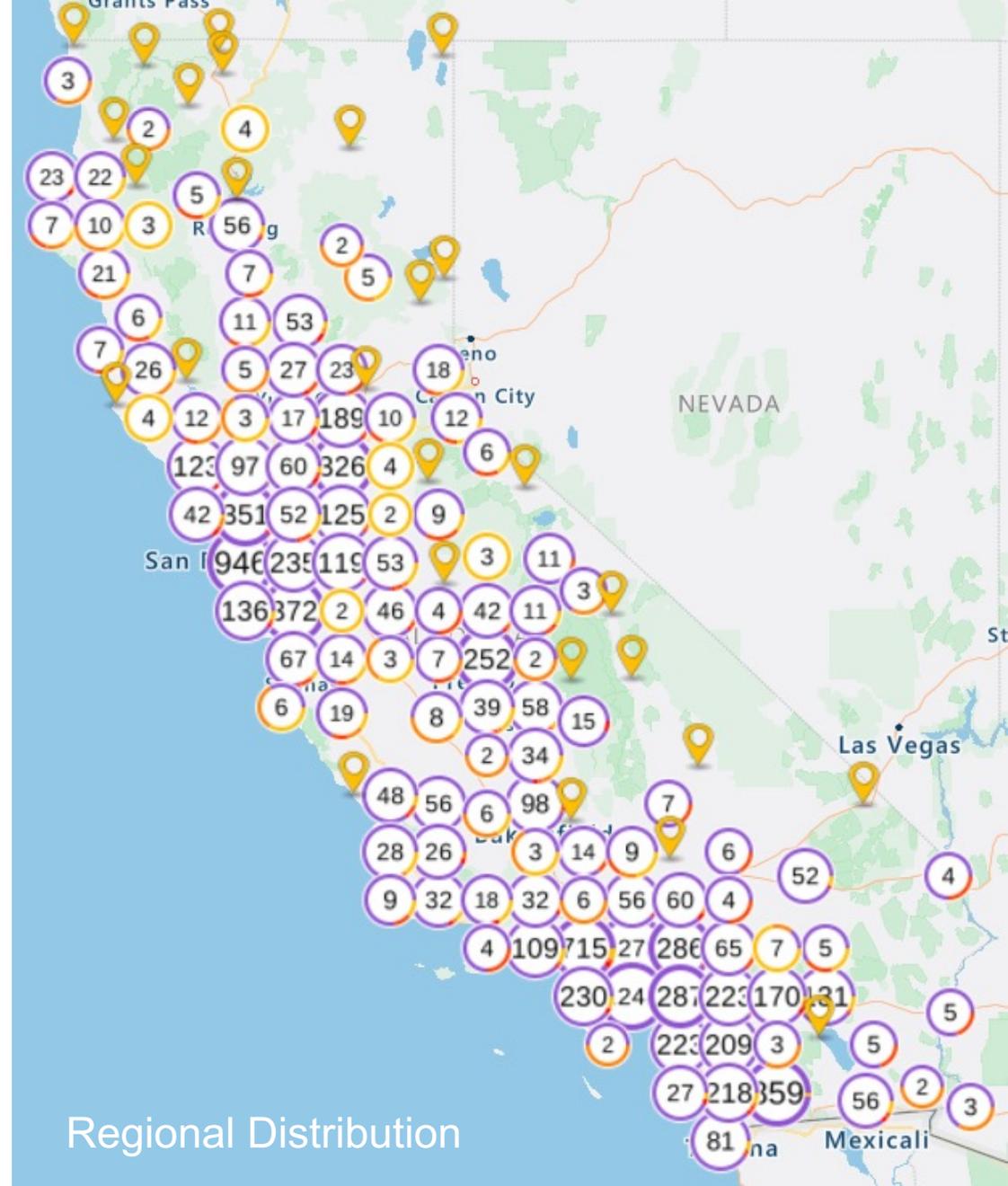
### Next Steps



# Simplify Based on Compliance Data

- Looked at how real projects are complying
- Dataset includes 12,520 indoor lighting projects
- Projects are from all over the State
- New construction & alterations

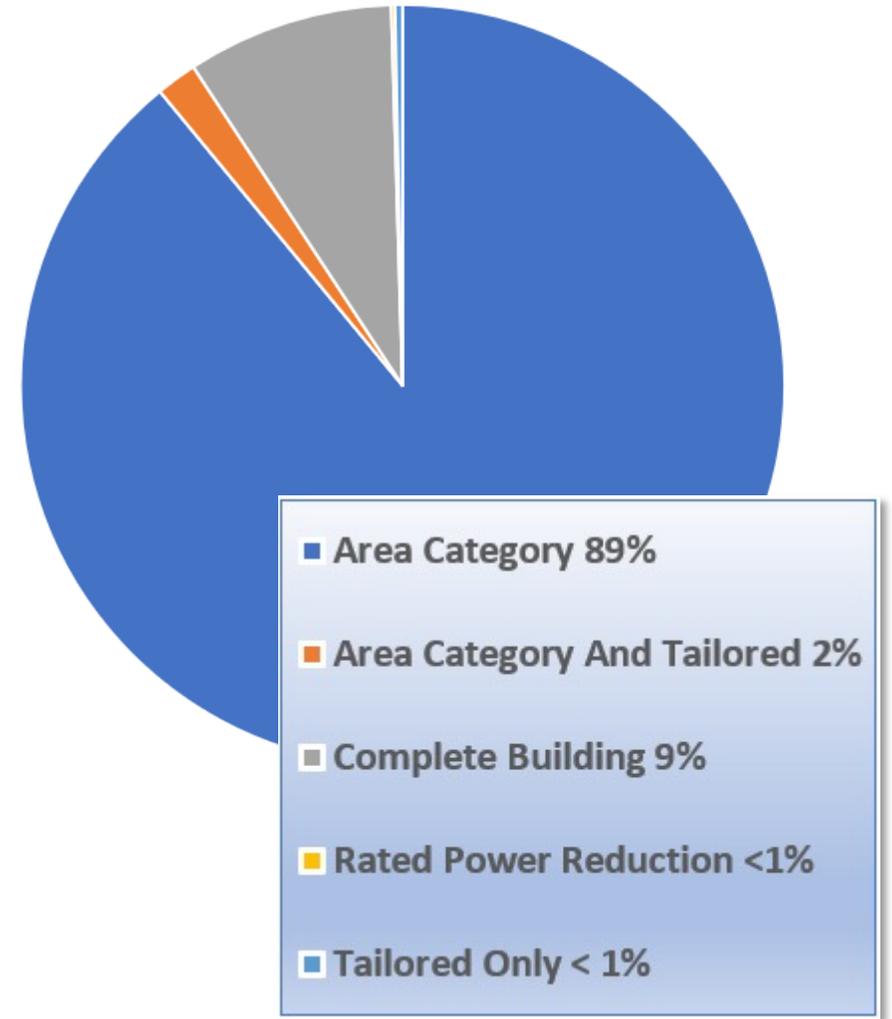
\* Data collected through [Virtual Compliance Assistant](#) and EnergyPro under the 2019 Standards



# Data Showed....

- 98% of projects use Area Category or Complete Building
- Of projects using Tailored, only a few space types are utilized

Space Function	Tailored	Area Category	Complete Building
Retail Merchandise Sales	409 (19%)	1517 (72%)	180 (9%)
Dining Area	62 (6%)	850 (80%)	152 (14%)
Multipurpose Area	18 (0.5%)	3025 (99.5%)	-
Exhibit Museum Area	12 (21%)	45 (79%)	-
Main Entry Lobby	7 (0.2%)	2798 (99.8%)	-
Conference Area	4	See Multipurpose	-
Showroom Area	3	-	-
Religious Worship Area	2	58	4
Grocery Store Area	2	272	6
Meeting Center Area	1	See Multipurpose	-
Auditorium Area	1	34	-



# Poll Request

- **Measure Name:** Lighting Clean-up: Allowance Calculation Simplification
- **Type of Poll:** Multiple choice (multiple answer)
- **Question:** Which of the following Function Areas need allowances for wall display, floor/task or very valuable display case lighting? (Select all that apply)
- **Answers:** Auditorium, Convention/ Conference/ Multipurpose/ Meeting, Bar Lounge/ Fine Dining, Museum Exhibit, Lobby, Religious Worship, Retail Merchandise Sales, Grocery, Showroom
- **Placement:** after slide 4 (Data Showed....)
  - Present simultaneously with Table on Slide 4 if possible (ie can we show slide 4 first, then go to this poll, but keep slide 4 up?)

# Proposed Code Change

## OPTION 1:

- Eliminate Tailored Method, include additional wall/floor/task and display case allowances under Area Category for some function areas

## OPTION 2:

- Eliminate Tailored Method, bring the IECC allowances into Area Category for some function areas

## OPTION 3:

- Simplify Tailored requirements and code language including Table 140.6-D



# Option 1: Remove Tailored & Add Specialty Allowances to Area Category Method

▲ TABLE 140.6-C AREA CATEGORY METHOD - LIGHTING POWER DENSITY VALUES (WATTS/FT<sup>2</sup>)

Primary Function Area		Allowed Lighting Power Density for General Lighting (W/ft <sup>2</sup> )	Additional Lighting Power	
			Qualified Lighting Systems	Additional Allowance (W/ft <sup>2</sup> , unless noted otherwise)
Convention, Conference, Multipurpose and Meeting Area		0.75	Decorative/ <del>Display</del> <a href="#">Wall Display MH &lt;= 10'6"</a> <a href="#">Wall Display MH 10'7" - 14'</a> <a href="#">Wall Display MH &gt; 14'</a> <a href="#">Floor &amp; Task MH &lt;= 10'6"</a> <a href="#">Floor &amp; Task MH 10'7" - 14'</a> <a href="#">Floor &amp; Task MH &gt; 14'</a>	0.25 <a href="#">2 W/ft</a> <a href="#">2.35 W/ft</a> <a href="#">2.66 W/ft</a> <a href="#">0.30</a> <a href="#">0.35</a> <a href="#">0.40</a>
Retail Sales Area	Grocery Sales	1.00	Decorative/ <del>Display</del> <a href="#">Wall Display MH &lt;= 10'6"</a> <a href="#">Wall Display MH 10'7" - 14'</a> <a href="#">Wall Display MH &gt; 14'</a> <a href="#">Floor &amp; Task MH &lt;= 10'6"</a> <a href="#">Floor &amp; Task MH 10'7" - 14'</a> <a href="#">Floor &amp; Task MH &gt; 14'</a> <a href="#">General Lighting Ceiling Height &gt; 10'</a>	0.35 <a href="#">6.60 W/ft</a> <a href="#">7.76 W/ft</a> <a href="#">8.80 W/ft</a> <a href="#">0.60</a> <a href="#">0.70</a> <a href="#">0.80</a> <a href="#">0.10</a>
	Retail Merchandise Sales	0.95	Decorative/ <del>Display</del> <a href="#">Wall Display MH &lt;= 10'6"</a> <a href="#">Wall Display MH 10'7" - 14'</a> <a href="#">Wall Display MH &gt; 14'</a> <a href="#">Floor &amp; Task MH &lt;= 10'6"</a> <a href="#">Floor &amp; Task MH 10'7" - 14'</a> <a href="#">Floor &amp; Task MH &gt; 14'</a> <a href="#">Valuable Display Case</a> <a href="#">General Lighting Ceiling Height &gt; 10'</a>	0.35 <a href="#">9.5 W/ft</a> <a href="#">11.2 W/ft</a> <a href="#">12.7 W/ft</a> <a href="#">0.45</a> <a href="#">0.52</a> <a href="#">0.60</a> <a href="#">0.50</a> <a href="#">0.10</a>

# Option 2: Remove Tailored & Add IECC Allowances to Area Category Method

TABLE 140.6-C AREA CATEGORY METHOD – LIGHTING POWER DENSITY VALUES (WATTS/FT<sup>2</sup>)

Primary Function Area	Allowed Lighting Power Density for General Lighting (W/ft <sup>2</sup> )	Qualifying Lighting	Additional Allowance (W/ft <sup>2</sup> ), unless noted otherwise)
Auditorium Area	<del>0.7</del> <u>0.57</u>	Decorative/Display	<del>0.45</del> <u>0.55</u>
Convention, Conference, Multipurpose, and Meeting Center Areas	<del>0.75</del> <u>0.88</u>	Decorative/Display	<del>0.25</del> <u>0.55</u>
Bar Lounge & Fine Dining Areas	<del>0.45</del> <u>0.76</u>	Decorative/Display	<del>0.35</del> <u>0.55</u>
Exhibit, Museum Areas	<del>0.60</del> <u>0.55</u>	Decorative/Display	<del>0.45</del> <u>0.70</u>
Hotel Function Area	<del>0.85</del> <u>0.88</u>	Decorative/Display	<del>0.25</del> <u>0.55</u>
Lobby, Main Entry	<del>0.7</del> <u>0.80</u>	Decorative/Display	<del>0.25</del> <u>0.66</u>
Religious Worship Area	<del>0.95</del> <u>0.75</u>	Decorative/Display	<del>0.25</del> <u>0.55</u>
Retail Sales Area			
<del>Grocery</del>	<del>1.00</del>	<del>Decorative/Display</del>	<del>0.35</del>
Retail Merchandise Sales <u>and Grocery</u>	<del>0.95</del> <u>0.85</u>	Decorative/ <del>Display</del> <u>Initial Watts per Bldg</u> <u>Sales Display Retail 1</u> <u>Sales Display Retail 2</u> <u>Sales Display Retail 3</u> <u>Sales Display Retail 4</u>	<del>0.35</del> <u>0.55</u> <u>750 W</u> <u>0.40</u> <u>0.40</u> <u>0.70</u> <u>1.00</u>
Motion picture Theatre	<del>0.5</del> <u>0.27</u>	Decorative/Display	<del>0.25</del> <u>0.55</u>
Performance Arts Theatre	<del>0.8</del> <u>1.09</u>	Decorative/Display	<del>0.25</del> <u>0.55</u>

# Option 3: Simplify Tailored Requirements in S140.6

TABLE 140.6-D TAILORED METHOD LIGHTING POWER ALLOWANCES

Primary Function Area (specified RCR*)	General Illumination Level (Lux) Allowed LPD for General Lighting (W/ft <sup>2</sup> )	Additional Lighting Power	
		Qualified Lighting Systems	Additional Allowance
Convention, Conference, Multipurpose, and Meeting Center Areas	<del>300</del>	Wall display lighting (W/ft)	<u>2.0</u>
RCR < 2.0	<u>0.55</u>	Floor Display, Task & Decorative (W/sf)	<u>0.65</u>
<u>2.0 &lt; RCR &lt;=3.5</u>	<u>0.70</u>		
<u>3.5 &lt; RCR &lt;=7.0</u>	<u>0.85</u>		
<u>7.0 &lt; RCR</u>	<u>1.20</u>		
Bar/ Lounge and Fine Dining Areas	<del>200</del>	Wall display lighting (W/ft)	<u>1.25</u>
RCR < 2.0	<u>0.4</u>	Floor Display, Task & Decorative (W/sf)	<u>0.80</u>
<u>2.0 &lt; RCR &lt;=3.5</u>	<u>0.5</u>		
<u>3.5 &lt; RCR &lt;=7.0</u>	<u>0.65</u>		
<u>7.0 &lt; RCR</u>	<u>0.85</u>		
Exhibit, Museum Areas	<del>150</del>	Wall display lighting (W/ft)	<u>11.20</u>
RCR < 2.0	<u>0.35</u>	Floor Display, Task & Decorative (W/sf)	<u>0.70</u>
<u>2.0 &lt; RCR &lt;=3.5</u>	<u>0.40</u>		
<u>3.5 &lt; RCR &lt;=7.0</u>	<u>0.50</u>		
<u>7.0 &lt; RCR</u>	<u>0.65</u>	Valuable Display Case (W/sf-floor)	<u>0.50</u>

\*RCR is the room cavity ratio of the enclosed space containing the primary function area and is calculated according to Section 140.6(c) 3.F.i.

# Poll Request

- **Measure Name:** Lighting Clean-up: Allowance Calculation Simplification
- **Type of Poll:** Ranking
- **Question:** Please rank the three options we just talked about in order of most desirable (1) to least desirable (3).
- **Answers:** Option 1: Remove Tailored, Add Specialty Allowances to Area Category, Option 2: Remove Tailored, Add IECC Allowances to Area Category, Option 3: Simplify S140.6 Tailored Language
- **Placement:** after slide 10 (Option 3....)

# Thank You

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