

Docket # 15-BSTD-01

2016 Building Standards Update, and hopefully also 2013 improvement

With Title 24, Diminishing Returns And No Light Fixture Maintenance, To Get Many Lighting Retrofits Approved, Human Centric Lighting Benefits Are Necessary And The CEC Will Need To Help

November 25, 2015

Greetings

With Title 24, even with 15-day language, diminishing returns and IBEW cancelling light fixture maintenance classification, lighting retrofit savings will be much lower than before July 1, 2014, because costs are higher and there are often not enough hard savings, which are energy savings, rebates and reduced maintenance costs, for end-customers to approve projects.

Basic soft savings, such as improved light levels and contrast ratios and reduced glare can help, but often are not sufficient.

Often advanced soft savings, which are mainly Human Centric Lighting benefits, are required. These benefits from the nonvisual or biologic part of the visual system can dwarf hard savings and basic soft savings combined.

Here is information on a free webinar on this.

How To Get More Human Centric Lighting Projects

By John Hwang, Mike Lambert and Stan Walerczyk

December 2, 2015

9 – 10 AM Pacific time

One of the Human Centric Lighting Society's (HCLS) goals is to get more Human Centric Lighting (HCL) projects in the United States and the rest of the world. This can start as mock-ups in individual private offices, special needs classrooms, break rooms, aged care multi-purpose rooms, patient rooms, nursing stations, etc. and then maybe expand to entire facilities. It is so important to educate end-customers that lighting should no longer be considered a commodity and on the value of the non-visual or biologic part of the visual system. In this age of diminishing returns, since there is very little low hanging fruit left, hard savings, which are reduced electric cost, rebates and lower maintenance costs, are often no longer sufficient to get lighting retrofit projects approved, and that soft savings, especially HCL ones, need to be included. This webinar also applies to new construction and remodels. Several tools will be provided to reduce your time and effort for HCL projects.

We are all officers of the HCLS and have significant experience educating end-customers and getting HCL projects approved, designed, specified, installed, commissioned and evaluated.

Please email me at stan@lightingwizards.com if you are interested in attending.

The CEC can help in the three following ways.

1. CEC allows retrofitting the way it was generally done before July 1, 2014. Although the 15-day language may be sufficient for the various 3rd party utility rebate programs, it is not even close to be good enough for the general lighting retrofit industry.

2. For both retrofit and new construction, CEC does not include the extra wattage for the extra light to help suppress melatonin production for improved short and long term alertness, learning, productivity, sleep and general well-being, as long as that extra lighting may only be on 30 – 45 minutes in the morning and maybe also for the post lunch dip and is controlled by an automatic timer

What is the sense of saving every KWH, if student performance or worker productivity is reduced as little as 1%? The abstract of The Economics of Biophilia includes “Today productivity costs are 112 times greater than energy costs in the workplace. We believe that incorporating nature into the built environment is not just a luxury, but a sound economic investment in health and productivity, based on well researched neurological and physiological evidence.” So more focus should be made on productivity than energy savings. <http://www.terrapinbrightgreen.com/report/economics-of-biophilia/>

Another very good document is ATKearney’s 2015 Quantified benefits of Human Centric Lighting, which shows substantial learning, working, healing and other benefits from higher light levels and often with blue enriched light. Those benefits dwarfed the cost of the extra wattage. http://www.lightingeurope.org/uploads/files/Quantified_Benefits_of_Human_Centric_Lighting_April_2015.pdf

But energy savings can still be achieved.

3. CEC works directly with the DesignLights Consortium (DLC) and indirectly with it through utilities to get the DLC to allow tunable LED products, which can be used above and below 5000K, and fixed over 5000K LED products, as long as those products meet the other DLC requirements of minimum lumens, LPW, CRI and warranty.

The bottom line is that the CEC could actually help increase energy savings and quality of light for the visual and nonvisual or biologic parts of the visual system, instead of being an out of date obstacle.

Stan Walerczyk

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