

## DOCKETED

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**Why 2013 and 2016 Title 24s for lighting retrofits should be cancelled**

*Additional submitted attachment is included below.*

April 1, 2016 (and this is definitely not a joke)

Dear Sirs and Madams

### **Why 2013 and 2016 Title 24s For Lighting Retrofits Should Be Cancelled**

First of all, although the CEC has been praised for California's history of efficiency, let's examine that. Based on my 27 years on lighting retrofits, the main reasons have been high electrical savings, substantial rebates and good lighting retrofitters. These 'carrots' have been very effective in California. Now that Massachusetts also has these carrots, it has overtaken California, and other New England states are close behind.

Over the years lighting retrofitters, including me, have retrofitted relatively new spec grade buildings that the new owners wanted to be considerably more efficient than Title 24 new construction requirements.

So, was that praise was misplaced?

The 2010 and previous Title 24s worked very well for lighting retrofits, because they were non-factors. For people not aware, it was basically if there was bilevel lighting, there had to be checkerboarding, and if more than half of the fixtures were replaced, which was almost never done, a basic permit was required. That would continue to work quite well, but with diminishing returns and the IBEW cancelling light fixture maintenance labor category last summer, there would be less energy savings now and in the future. But I cannot think of anything better than something similar to the 2010 Title 24 or no restrictions on lighting retrofits.

Although Title 24 was a non-factor before July 1, 2014 for lighting retrofits, the problem began on that date with the 2013 Title 24.

Based on my understanding, Doug Avery really pushed for dimming, controls and ADR. While at SCE Avery had special rebates for them. After Avery found out that a majority of the existing lighting controls systems were not functioning well or not working at all, instead of realizing how fickle these systems, he pushed for control technicians to certify control systems in Title 24. It is also my understanding that Avery got Jim Benya, who has also been a long time proponent of dimming and controls to help push them in Title 24. There were many long meetings that most people could not attend because of their jobs, but reps from dimming and control companies could and did attend. Gary Flamm and Owen Howlett, who were at the CEC, allowed a lot of this push in this Title 24, and after it was approved both left the CEC. During that process a number of lighting retrofitters, including me, showed time after time the CEC and others that these strategies were not cost effective, but they did not let reality get in their flawed vision of the future.

Soon after July 1, 2014 it became quite evident that the 2013 Title was terrible for lighting retrofit projects, energy savings, lighting companies and workers, and now we have had to live with it for close to two years. Diminishing returns and the IBEW cancelling light fixture maintenance category last summer have made it worse. The saving graces have been numerous lighting retrofitters have been avoiding Title 24, several jurisdictions do not require Title 24 for energy saving lighting retrofits, CEC carelessly allowing TLEDs with existing ballasts not triggering code, Prop 39 funds, and other factors that I previously listed.

Last year I heard second hand that some proponents of dimming, controls and ADR were still promoting them for retrofits in public events, but since I did not hear first hand, I will not list names in this public document.

But since I personally debated Bernie Kotler, the co-chair of California Advanced Lighting Training Program, at LightShow West last fall, I can mention that he strongly promoted ADR. In my November 3, 2015 'How To Proceed After Bernie Kotler's And Stan Walerczyk's Title 24 Debate' letter to the CEC and others, I listed that lighting is getting so efficient that it is often no longer cost effective for ADR, and that electric car chargers, addressable HVAC, micro-turbines and various storage systems are much better solutions. During that debate, he kept bringing up how good it was that the CEC mandated double pane windows quite a while ago, which I did not see the relevance and even if the CEC did not mandate them, the free market would have switched to them when cost effective.

If the CEC would have listened to real retrofiters and knowledgeable end-customers, nearly two years would have not been wasted with the existing Title 24.

The CEC listening to various proponents of controls, who do not have substantial lighting retrofit experience, can easily be considered a wasteful effort. California sure does not need an extra layer of people certifying lighting retrofit projects. Instead of wasting money for that, those people should do real useful work, like trying to sell, design and install cost effective lighting retrofit projects. As advanced controls evolve, those systems should be able to self-commission, learn and adapt, so control technicians will probably become obsolete.

It is bad enough that the CEC has prevented optimal lighting retrofits for close to two years, but if it does not finally listen to real lighting retrofiters and knowledgeable end-customers now, lighting retrofits will continue to be stifled through at least 2019.

Trying to do anything with the 2013 and 2016 Title 24s is not worth the effort, because they should have never have been approved for lighting retrofits.

15 day language with the 2013 and 2106 Title 24s is no where sufficient since the 2013 Title 24 has decimated the lighting retrofit industry for close to two years, and the damage would have been worse if several retrofiters did not avoid Title 24, several jurisdictions have not required Title 24 for lighting retrofits, TLEDs with existing ballasts does not trigger codes and several other reasons, I have previously listed.

What I have seen of the 15 day language is not fair to end-customers, who did good retrofits in the past and want to do re-retrofits now, because they may not be able to reduce wattage by 35% or 50%, while other end-customers who have kept inefficient lighting will have no problem. Controls are often not cost effective saving energy even when considerably more than two LED fixtures in a room.

To save the most energy from lighting retrofits, the CEC should trash the 2013 and 2016 Title 24s, because they should have never been approved in the first place and go back to how lighting retrofits were generally done before July 1, 2014 or totally exclude retrofits in Title 24. The bottom line is that with diminishing returns and no light fixture maintenance category for prevailing jobs, any additional costs will kill many lighting retrofit projects.

Also, why hasn't the CEC allowed extra wattage for the extra lumens, when only on for a short amount of time and is automatically controlled, for Human Centric Lighting when there is so much evidence showing the benefits? What is the sense of saving every KWH if worker productivity or student learning is sacrificed even 1%?

Instead of trying match lighting retrofits with new construction, let the free market find what works best for lighting retrofits, and then those strategies could be used for new construction.

Until the CEC admits it totally screwed lighting retrofits with the 2013 Title 24 and basically gets out of the way to allow the free market to optimize lighting retrofits, so many people in and out of California will continue to laugh at the CEC and feel sorry for those who have been hurt by it.

Until the CEC does the right thing, others and I will continue showing the world in seminars, magazines and other ways that the CEC has been wasting tax payer money and preventing energy savings.

At least the State of Hawaii appreciates my help so it does not repeat California's mistakes.

Lastly, as I asked several times without an answer, what right does the CEC have to mandate how California tax paying end customers do lighting retrofits as long as they are safe?

Stan

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