

Docket # 15-BSTD-01

2016 Building Standards Update, and hopefully also 2013 improvement

Advanced Controls Are Not Ready Yet

November 25, 2015

Greetings

Although some people and companies have been trying to mandate advanced controls to improve their image, legacy or business, it is too early to mandate advanced controls if they should ever be mandated.

This message is not just from me, but also from other experts, especially Dr. Robert Karlicek.

At this time we do not know which companies, platforms and protocols will be the winners and losers. Plus, why push advanced controls now, when they will be much better and much less expensive in the future?

Does the CEC want to get sued from end-customers, which were basically forced into advanced controls for its new construction or retrofit projects, and those advanced control system were expensive, did not save that much energy, had a bad financial return, and the controls company

- Which had a private protocol, went out of the business forcing the end-customers to basically start from scratch?
- Stopped making that line of control products and replacement parts for it, because that technology became obsolete?

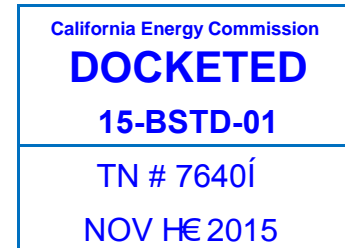
Here is an existing example of that second part of the question. I am consulting for a large client, which one of its buildings got the Ledalite Ergolight lighting and control system about ten years ago. Some of the electronic cards in each fixture have failed, and Ledalite stopped making replacements. So the client has to start over. At least nobody mandated those controls.

This type and other types of problems will probably extrapolate with current and soon to come numerous wired, wireless, IoT, PoE and LiFi strategies and companies. If many new lighting and/or control companies, which only have start up money for one to three years, do not have terrific sales or get bought by a larger company, there is a very good chance that they will go out of business, which could leave their customers deserted.

End-customers could also sue the CEC for mandating basic controls. Examples are elementary classrooms and private offices, where people used to do a great job manually turning off lights when they left rooms, but after occupancy sensors were installed, people allowed the sensors' automatic 10 – 15 minute delay to turn off lights, so annual hours of operation increased after the customers paid for the parts and labor for those sensors. This can be proved with before and after data logger testing.

Now with low wattage LED products and relatively expensive controls, those controls are often not effective. But in five or so years, when sensor pricing gets down to a dime or at least less than a buck and sensors can fit into a dimple of a golf ball and can learn and adapt on their own, advanced controls will become much more cost effective saving energy.

Let the free market decide where and when basic and advanced controls are cost effective saving energy. The CEC is just getting in the way of cost effective lighting and controls retrofits for saving energy.



It is my understanding that several speakers and others at the recent DOE meetings in Portland, Oregon basically laughed at the CEC for good reasons. It can easily be considered that the CEC is disgracing the people and state of California.

Advanced controls can provide numerous other benefits, including

- Provide cumulative hours of operation of lighting products
- Notify certain lighting products are not working properly
- Turn on the next hibay for forklift drivers that motion sensors will not trigger fast enough
- Improve security
- Proper billing various tenants in master metered buildings
- Inform how and when various rooms are being used
- Interior GPS
- Measure carbon dioxide and humidity
- And what is probably most important, Human Centric Lighting

It is important to understand that those benefits are not for saving energy.

Business Energy Magazine will publish my 'When Are Lighting Controls Cost Effective?'

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