

DOCKETED

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Stakeholder process lacks transparency and engagement

I am resubmitting to this docket my verbatim comments submitted to the CASE team in July 2020.

During this stakeholder feedback process, I was personally instructed by CEC staff, by telephone, to submit comments to the CASE team, and that the comments would all be shared with the CEC team along with the final CASE report. I was specifically informed that CC'ing the CEC members or staff was unnecessary. I encouraged others to submit comments this way, only to learn that not only did the CASE team not pass along the comments, but they refused to disclose them when asked about it from numerous participants during the CEC October 17 workshop. I believe that at least 120 other comments were silenced in this manner as well.

I am disappointed by the lack of public transparency on this project.

Our original comments are attached. Our comments regarding the quality of the analysis will follow under separate submission.

Additional submitted attachment is included below.

These comments from July 31, 2020 are being re-submitted to the CEC Docket in response to the CASE team's refusal to share public comments received during the Investor Owned Utility funded CASE Team's solicitation for "public" feedback in July 2020. We have requested that all comments be shared for public viewing; the CASE team and CEC staff declined this request.

July 31, 2020

Dear Kyle and the Title 24 CASE Team,

Seinergy LLC is an energy and utility rebate consulting company with a focus on horticulture energy efficiency programs and policy. Seinergy's founder, Bob Gunn, author of these comments, has worked with or for utilities on matters related to energy efficiency program planning and evaluation, codes, standards, market research and market transformation since 2008.

Seinergy offers the following comments with respect to the proposed Title 24 regulations for indoor horticulture.

For lighting, we propose the following:

- The 2.1 umol/j minimum standard for indoor horticulture facilities is too high for the regulated market to bear.
- The CEC should consider a minimum standard of no greater than 1.7 umol/j for indoor grows.
- Consider vegetative and mother plant canopy only for any proposal that restricts growers to use only LED technology.
- We request that the Energy Commission (with support from the utilities or perhaps as a part of a national effort) invest in a statistically-significant data collection effort such as a baseline study, sales data collection effort, end-use survey or industry standard practice evaluation.

Other comments regarding the lighting sections of the report:

- A standard of 1.7 would eliminate the least efficient fixtures in use today (fluorescents and single-ended high-intensity discharge lights) in favor of double-ended fixtures that are 35% more efficient and LEDs that are capable of much higher electrical efficiencies.
- The draft report failed to address grower acceptance of LEDs and the non-financial barriers to entry. Switching to LED can affect HVAC systems and setpoints, dehumidification, watering regimes, CO2 levels, nutrient regimes, yields and standard operating procedures.
- The draft report failed to model how cannabis growers would be able to pay for the added cost of LEDs, considering banking and financing opportunities for such businesses.
- The draft report did not adequately address the yields achieved from LED relative to HPS.
- Focusing initial regulations on vegetative canopies would have greater market acceptance. Vegetative canopies have 50% longer hours of operation (thus 50% more kWh savings potential watt-for-watt), and transitioning to LEDs in vegetative growth poses less difficulty for growers than in flowering stage.

- The draft report failed to include the implicit and explicit transition costs of converting to LED. Many growers and manufacturers indicate that a transition period of 6-12 months is usually required to tune in new LED lighting systems, during which yield reductions and crop loss are expected.
- The draft report failed to state the saturation of LEDs versus other technology.
 - Based on 2017 Department of Energy study, which the report acknowledges, the proposed allowable technology only has a 4% market penetration. (This report was updated in July 2020, after the release of the draft report, raising the penetration rate of LED to 11%.)
 - The statement from Cannabis Business Times indicating that “21% use LEDs” should not be interpreted as a market saturation number with any validity. Rather this is an indication of how many of the surveyed growers had any LEDs in use.
- The report is misleading in stating that 80% of DLC listed fixtures today would meet the proposed new specification. The manner in which this is presented leads the reader to believe that the market saturation for the proposed technology is 80%, when in fact it is closer to 4%, as of the 2017 DOE report.
- The stakeholder engagement process has is disingenuous in stating that it is technology agnostic while setting the minimum efficiency 23% higher than is achievable by any technology other than LED.
- The report fails to address the impact that the proposed regulation might have on the illicit cannabis market, despite documented comments from utility stakeholders related to the concern.
- The stakeholder engagement process was inadequate and failed to incorporate input directly from growers, growers associations, greenhouse associations, farm bureaus, etc. Only limited secondary research is cited with regard to market barriers, technology use, yields and other inputs.

Regarding the proposed dehumidification regulations, we propose:

- Allowing for refrigerant-based dehumidification equipment for grows of any size if they meet a certain efficacy threshold.
- Enforce a minimum efficiency of 1.7 l/kWh for standalone dehumidifiers.
- Eliminate the 2,000 SF cutoff for standalone dehumidification restrictions.
- We request that the CEC invest in data regarding market saturation for existing equipment versus proposed systems, and validate the appropriateness of the proposed systems with growers directly.
- Eliminate the requirement that dehumidification is handled only by whole facility systems.
- Strike the language about desiccants as a proposed efficient dehumidification option

Comments

- The draft report fails to demonstrate that proposed whole-facility dehumidification strategies will use save energy compared to higher-end standalone dehumidification units or compared to industry standard practice.
- The draft report fails to characterize industry standard practice using either sales data or primary research.
- The proposed approach to whole facility HVAC integrated dehumidification will limit flexibility and the ability to add or reduce dehumidification capacity for a room or facility over time. This lack of flexibility may result in major capital costs for operators.

- The proposed language will require that HVAC and dehumidification systems are purpose-built for a specific crop, layout, watering technique and CO2 strategy, and standard operating procedure. Any changes to these operational inputs may require changes to the dehumidification demands of a room or a facility, which would not be as easily accommodated by whole-building dehumidification systems as they would be with refrigerant-based, efficient standalone units.
- Since ASHRAE does not yet have standards for measuring and modelling energy savings from dehumidification for CEH facilities, it is premature for the CEC or the CASE to propose the energy savings suggested in the draft report. Energy modelling and performance verified testing should be completed and peer-reviewed before suggesting such major capital investments for CEA facilities.
- Desiccant dehumidification is not generally regarded as appropriate or efficient for indoor horticulture applications. Desiccant dehumidification is generally regarded as advantageous in lower temperature (e.g.: cold storage) applications than is typically encountered in controlled environment agriculture.

Kind regards,
Bob Gunn
CEO, Seinergy LLC