

## DOCKETED

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California Energy Commission  
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Re: Docket 15-BSTD-03, City of Palo Alto Proposed Local Ordinance; Comments of Ecology Action

August 28, 2015

To Whom It May Concern,

On behalf of Ecology Action, I respectfully submit the following comments concerning the City of Palo Alto's proposed *Application for Locally Adopted Energy Standards* in accordance with Section 10-106 of the California Code of Regulations, Title 24 Part 1.

Ecology Action is a 45 year old California-based nonprofit specializing in designing and delivering energy efficiency programs across the state. In the past decade, Ecology Action has implemented over \$84 million in energy efficiency contracts, specifically targeting Small and Medium Business (SMB) commercial customers and is widely recognized as one of the State's preeminent SMB retrofit leaders. Over the past five years alone, Ecology Action's lighting programs have delivered more than 166 GWh of energy savings to California utility ratepayers. In the City of Palo Alto, our *RightLights Plus* program (since renamed *EmPower*) has saved more than 20 MWh for CPAU commercial customers since 2005.

On June 29, 2015, the City of Palo Alto filed with CEC an application intending to adopt a new Energy Reach Code based on Title 24 2013. The current version of the Palo Alto Municipal Code has not affected Ecology Action's energy efficiency program for CPAU, as lighting-only retrofit projects were not covered by the ordinance. This situation could change dramatically and for the worse if the proposed Reach Code is adopted at this time.

### **Background**

Prior to July 1, 2014, Title 24 had little impact on the lighting retrofit industry because most lighting modifications were not covered by the Code and enforcement officials did not typically expect or require permits for these type of projects. That changed as of last July, and since that time the lighting retrofit industry has been decimated.

The 2013 update to Title 24 put in place significantly increased standards for lighting retrofits, essentially treating them much more like new construction. The most significant of these changes were the addition of complicated and expensive multilevel lighting and additional controls requirements in most situations, combined with significant commissioning and permitting costs. For these projects, the new requirements have more than doubled job costs with little if any corresponding increase in energy savings or utility rebate.

These changes have severely and negatively impacted the lighting retrofit industry, and resulted in a tremendous shift in the market away from Code-triggering jobs. The effects of this shift include sharply reduced savings delivered by utility programs, a return to “cherry picking”, illogical retrofit specification, stranded energy savings and an artificial shrinkage of overall market potential. Lighting retrofit contractors and maintenance firms that have been in business for decades are cutting staff or closing their doors entirely. Distributors have seen a precipitous decline in their sales of retrofit equipment, and even large ESCOs have shut down or left the California market altogether.

The dire seriousness of current conditions in the lighting retrofit market imposed by the 2013 Code cannot be overemphasized. CEC-docketed data from numerous stakeholders show that the 2013 Code has raised the bar so high that customers reject nearly all Code-triggering retrofit proposals. Stakeholders providing hard evidence include the nation’s largest municipal utility, four government partnerships, lighting distributors and recyclers, program implementers, licensed contractors and many more (see attached Impact Summary).

As a result of these stakeholder data detailing the unintended consequences of the 2013 Code’s overreach, over the last year CEC staff has revised the proposed 2016 Title 24 Lighting Alterations language in a way that would save appreciably more energy overall than the 2013 Code while providing much-needed relief for the lighting retrofit industry. The proposed 2016 Alterations language has widespread support from program implementers and the lighting retrofit stakeholder community. The Commission is expected to vote up or down on these revisions next month or no later than its October 2015 business meeting.

In summary, the 2013 Code will be obsoleted very shortly, and if Palo Alto bases its Reach Code on that version it will carry serious repercussions for the City in terms of stranded energy savings and lost jobs. On the other hand, if the City bases its Reach Code on Title 24 2016’s proposed Lighting Alterations language, it can expect increased energy savings from its energy efficiency program efforts such as EmPower. If modest changes are made to the proposed Reach Code that take into account the upcoming Title 24 changes, the intent of the ordinance will be preserved and the major pitfalls and unintended consequences can be avoided. Accordingly, Ecology Action believes it is critical that the City of Palo Alto postpone adoption of its proposed Energy Reach Code until it has a chance to review CEC’s Lighting Alterations language once it is adopted in the coming weeks.

Respectfully,

Gene Thomas

Senior Energy Analyst  
Ecology Action

(Stakeholder Impact Summary follows)

IMPACT SUMMARY - Stakeholder Data on Title 24 2013 Impacts			
Organization	Organization Type	Commenter	Specific Impacts and Comments
Los Angeles Department of Water & Power	Municipal Utility	David Jacot, PE	<p>The 2013 code has had severe impacts on our lighting portfolio, especially our Small Business Direct Install program. Negative code-related SBDI impacts include:</p> <ul style="list-style-type: none"> <li>• Average number of fixture modifications per site decreased by 48%.</li> <li>• 1,139 projects and over 50,000 fixtures were stranded, representing a loss of 10,752,254 kWh in achievable program savings (23% of the total).</li> </ul>
San Francisco Department of Environment	Government Partnership	Deborah O. Raphael	<p>In our experience the 2013 standards have been counter-productive for retrofit projects and have substantially reduced the real savings achieved by our program. We have seen energy efficiency retrofits to existing buildings drastically curtailed.</p> <ul style="list-style-type: none"> <li>• Before the 2013 code, bi-level jobs represented 10% of our projects and 23% of program savings. After the code took effect, no bi-level jobs have been sold.</li> <li>• T8 monthly project count is down 53% and T8 achieved kWh savings down by 70%.</li> <li>• Monthly LED project count down 35%, LED fixture achieved savings down 47%.</li> <li>• Overall, total program kWh down 29% and total project count down 14%.</li> </ul>
East Bay Energy Watch	Government Partnership	Ali Jones-Bey	<p>After Title 24 was enacted, our BEST program project completion rate for number of projects installed dropped 50%. Our average reported kWh savings dropped 40%, and average kWh committed dropped 36%. Average incentive dollars committed and paid out per project dropped 29%. Pre-T24 payback was at a 2.61 year average, but in 2015 so far the average has been 4.27 years.</p>
Redwood Coast Energy Authority	Government Partnership	Lou Jacobson	<p>Sampled project cost increased by 82%, net cost after incentive doubled; simple payback up by 77% since 2013 code began.</p>
Stanford University	Public University	Gerry Hamilton, PE	<p>Our group re-ballast efforts have halted entirely due to the 2013 Code.</p>

Avail Services	Energy Services Company	Anthony Orsini	<ul style="list-style-type: none"> <li>• With the implementation of the 2013 Title 24 Codes we have seen a 63% drop in sales for lighting retrofit projects.</li> <li>• In 2015 we had to lay off 25% of our lighting technicians due to decreased sales, longer than normal sales cycle and increased costs associated with Title 24 lighting retrofit projects.</li> <li>• The majority of customers are opting out of lighting retrofit programs or want a less expensive lamp-only replacement, significantly reducing energy savings.</li> <li>• Before the Title 24 Code changes we had great success with hard to reach small and medium sized customers. After the 2013 Code went into effect this market has become increasingly harder to reach.</li> <li>• Additional product needed to meet the control requirements and lighting code standards, the increased labor, detailed surveys, jurisdictional permitting costs and paperwork required for Title 24 has made retrofit lighting projects cost prohibitive for the average customer and contractor.</li> </ul>
Royal Wholesale Electric	Lighting Supplier/Distributor	Robyn Viviano	<p>As a lighting distributor, I am ready, willing and able to supply the market and make the programs a success, but Title 24 just needs to get out of the way. In my experience, the 2013 standards have nearly eliminated our fixture upgrade-to-LED business. Our business has changed dramatically:</p> <ul style="list-style-type: none"> <li>• All but a few very small jobs have been shelved.</li> <li>• LED Fixture replacement is down 90%.</li> <li>• Upgrades to T5 highbays has gone to zero.</li> <li>• 89% of our retrofit business is now screw-in lamp replacement, with most of that in HID replacement.</li> </ul>
Quick Light Recycling	Lighting Recycling Company	Pamela Woodard	<p>Our business is off by 25% since the 2013 Code took effect due to impacts on lighting retrofitters. Some of them who typically had truck-load shipments now have only an occasional small pick-up over a longer time frame. Our customers in the energy efficiency industry are pretty much dormant and that passes on to us.</p>

Ecology Action	Program Implementer	Gene Thomas	<p>We reviewed our data on lighting measures across all Ecology Action programs in the 1st half of 2014 vs. the 2nd half after the 2013 Code took effect. Some of the major changes we have experienced as a direct result of the 2013 Code include:</p> <ul style="list-style-type: none"> <li>• <b>Costs have doubled for Code-triggering projects.</b> The costs for establishing multilevel lighting and related controls are resulting in projects that are averaging ~2X their previous cost.</li> <li>• <b>Code-triggering jobs are not selling.</b> In the first half of 2014, 53% of our lighting savings came from projects that would have triggered Code under the 2013 rules; after the Code took effect in July, less than 2% of our savings came from Code-triggering projects. We have supplied CEC with actual cost data documenting this.</li> <li>• <b>Linear fluorescent retrofits have decreased dramatically.</b> As a percentage of our total lighting savings, LF kWh savings dropped by 46% (from 41% to 22%). Much of the 2013 Code's purported controls savings would supposedly have come from retrofitted ceiling fixtures.</li> <li>• <b>Lamp-only jobs are displacing more comprehensive retrofits.</b> Lamp-only jobs (screw-in and pin-based replacements) as a percentage of total lighting savings jumped from 38% to 55%, an increase of 43%.</li> <li>• <b>Per-project savings is significantly lower.</b> Average lighting kWh savings per customer dropped by 33%.</li> </ul>
Controlled Energy	Lighting Contractor	Don Link	<p>Since the 2013 Code's inception we have laid off 80% of our lighting staff and our sales is down by 80%. Our suppliers are affected too: we are only purchasing a few boxes of lamps and ballasts for the small Code-exempt jobs we are doing vs. the monthly pallet-loads we were purchasing previously, and the recycling companies we use for removed lamps and ballasts are now seeing very little business from us.</p>
American Lighting	Lighting Contractor	Neil Miller	<p>Since July 2014 work has dropped by 50%; staff has been cut by 25% with more layoffs anticipated; zero out of 100+ Code-compliant proposals have been accepted by customers.</p>
Dana Electric	Lighting Contractor	Troy McPeck	<p>I laid off my entire crew due to the 2013 Code.</p>
ABM Electrical & Lighting Solutions	Lighting Contractor	Joe Zentgraf	<p>We have not completed a single Title 24 compliant job since July 2014.</p>

Lumenature	Lighting Contractor	Mark Pursell	<ul style="list-style-type: none"> <li>• Our normal work crew is half or less than what we had prior to Title 24 2013.</li> <li>• A much higher percentage of our installs are lamp-only.</li> <li>• We have installed only one Title 24 triggering job since July 2014.</li> <li>• Our monthly number of jobs has dropped by 35% and gross volume by 37% in the 10 months following July 1, 2014 as compared to the 12 prior months.</li> </ul>
ABI Services	Lighting Contractor	Mark Spahn	Our revenue dropped by 58% in Q3 2014 after Code went into effect. Q2 profit \$138K, Q3 loss (\$64K). Laborers needed in Q2 was 8-9 FTE, in Q3 down to <1.5 FTE. Costs for Code-compliant projects nearly 2X previous costs. Have only sold 2 Code-compliant jobs since last July. Closed down our full services warehouse on 1/1/15 and split up the company in order to take on more profitable work that does not involve lighting retrofits.
Enlight	Lighting Contractor	Matt Tracy	<ul style="list-style-type: none"> <li>• Our install staff dropped by 41% in 2014 due to uncertainty about Title 24 implementation, and we haven't been able to rehire laid-off employees.</li> <li>• Interior retrofits are almost non-existent due to increased costs for code-compliant projects.</li> <li>• We are spending more money up front to design Title 24 compliant projects that subsequently don't sell because of the increased payback.</li> </ul>
Advanced Energy Services, Inc.	Lighting Contractor	Troy Stokes	Current Title-24 2013 code has had a devastating effect on my lighting retrofit business. We went from 12 full time installers down to 2 part time installers seven months ago as a direct result of the 2013 code. We don't see that changing anytime in the near future unless the current advanced lighting controls requirements are reversed. Of our active projects, they are significantly smaller in size and less comprehensive than what we were doing prior to 2013 code. Our revenue is down 60% from 1st and 2nd Quarters of 2014.