California Energy Commission
DOCKETED
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Stakeholder Impacts and Comments Regarding Title 24 2013

Organization	Organization Type
Los Angeles Department of Water & Power	Municipal Utility
California Municipal Utilities Association	Municipal Utility Association
Southern California Public Power Authority	Joint Powers Authority
Association of Monterey Bay Area Governments	Government Partnership
San Francisco Department of Environment	Government Partnership
East Bay Energy Watch	Government Partnership
Sierra Business Council	Government Partnership
Redwood Coast Energy Authority	Government Partnership
Cree, Inc.	Lighting Manufacturer
Oracle	IT Company
Stanford University	Public University
California Business Property Association	Trade Association
Opterra Energy Services	Energy Services Company
Ameresco	Energy Services Company
ABM Electrical & Lighting Solutions	Energy Services Company

Royal Wholesale Electric	Lighting Supplier/Distributor
Regency Lighting	Lighting Supplier/Distributor
AERC Recycling Solutions	Lighting Recycling Company
Quick Light Recycling	Lighting Recycling Company
Ecology Action	Program Implementer
The Energy Alliance Association	Program Implementer
EnerPath Services	Program Implementer
Richard Heath & Associates	Program Implementer
Controlled Energy	Lighting Contractor

American Lighting	Lighting Contractor
Dana Electric	Lighting Contractor
ABM Electrical & Lighting Solutions	Lighting Contractor
Lumenature	Lighting Contractor
ABI Services	Lighting Contractor
Enlight	Lighting Contractor
Alamo Lighting	Lighting Contractor
New Light Energy Design	Lighting Contractor
Savemorenergy.com	Lighting Designer/Installer
Lighting Wizards	Lighting Designer/Installer
Steve Robinson	Lighting Designer/Installer

Commenter	Supports Proposed Changes (v9)
David Jakot, PE	Y
Tony Andreoni, PE	Y
Tanya DeRivi	Y
Elisabeth Russell	Y
Deborah O. Raphael	Y
Ali Jones-Bey	Y
Jennifer Rosser	Y
Lou Jacobson	y
Eric Leber	Y
George Denise, CFM, CPM, FMA, RPA	Y
Gerry Hamilton, PE	Y
Matthew Hargrove	Y
Mark Emerson	Y
Kendall H Marks, CEM, CDSM	Y
Joe Murnin	Y

Robyn Viviano	Y
Jeff Spedding	Y
Frank Alioto	Y
Pamela Woodard	Y
Gene Thomas	Y
Ken Moore	Y
Jonathan Baty	Y
Dr. James O'Bannon	Y
Don Link	Y

Neil Miller	Y
Troy McPeek	Y
Joe Zentgraf	Y
Mark Pursell	Y
Mark Spahn	Y
Matt Tracy	Y
Robert Ofsevit	Y
Bret Walburg	Y
Damion J. Remsburg	Y
Stan Walerczyk	Y
Steve Robinson	Y

Specific Impacts and Comments
The 2013 code has had severe impacts on our lighting portfolio, especially our Small Business Direct Install program. Negative code-related SBDI impacts include: • Average number of fixture modifications per site decreased by 48%. • 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).
We recommend that the CEC also consider a “reach-back” provision that modifies the 2013 Title 24 Code & Standards language to include the proposed language edits you have outlined for the 2016 Title 24 amendments.
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. • 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. • T8 monthly project count is down 53% and T8 achieved kWh savings down by 70%. • Monthly LED project count down 35%, LED fixture achieved savings down 47%. • Overall, total program kWh down 29% and total project count down 14%.
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.
The current Title 24 code requirements have negatively impacted the implementation of our energy efficiency projects.
Sampled project cost increased by 82%, net cost after incentive doubled; simple payback up by 77% since 2013 code began.
These changes would clearly boost energy efficiency with retrofit projects and bring us closer to our 2020 state goals.
As sustainability manager for Oracle and a recipient of the Governor’s Energy and Economic Leadership Award (GEELA), I support these proposed changes and encourage their passage and implementation.
Our group re-ballast efforts have halted entirely due to 2013 Code.

In my experience, the 2013 standards have nearly eliminated our fixture upgrade-to- LED business. Our business has changed dramatically: • All but a few very small jobs have been shelved • LED Fixture replacement is down 90% • Upgrades to T5 highbays has gone to zero • 89% of our retrofit business is now screw-in lamp replacement, with most of that in HID replacement As a lighting distributor, I am ready, willing and able to supply the market and make the programs a success - Title 24 just needs to get out of the way.
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.
We reviewed our data on lighting measures across all Ecology Actionprograms 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: **• Costs have doubled for Code-triggering projects.** The costs for establishing multilevel lighting and related controls are resulting in projects that are averaging ~2X their previous cost. • **Code-triggering jobs are not selling.** 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. **• Linear fluorescent retrofits have decreased dramatically.** As a percentage of our total lighting savings, LF kWh savings dropped by 46% (from 41% to 22%). Much of CPUC's purported controls savings would supposedly have come from retrofitted ceiling fixtures. **• Lamp-only jobs are displacing more comprehensive retrofits.** 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%. **• Per-project savings is significantly lower.** Average lighting kWh savings per customer dropped by 33%.
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.

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.
I laid off my entire crew due to 2013 Code.
We have not completed a single Title 24 compliant job.
• Our normal work crew is half or less than what we had prior to Title 24 2013. • A much higher percentage of our installs are lamp-only. • We have installed only one T24 triggering job since July 2014. • 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.
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.
• Our install staff dropped by 41% in 2014 due to uncertainty about Title 24 implementation, and we haven't been able to rehire layed-off employees. • Interior retrofits are almost non-existent due to increased costs for code-compliant projects. • We are spending more money up front to design Title 24 compliant projects that subsequently don't sell because of the increased payback.