DOCKETED

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On LPD Changes for 2019 Title 24 Code

Additional submitted attachment is included below.

EcoGreen Solutions

From:	Nicholas Rugulo <nick.r@ecogreen-solutions.net>
Sent:	Thursday, February 22, 2018
To:	Energy – Docket Optical System
Subject:	LPD Changes for 2019 Title 24 Code (Docket No. 17-BSTD-02)
Importance:	High

Re: Docket No. 17-BSTD-02

Dear Energy Commission Staff,

While I greatly appreciate the Commission's desire for input from industry professionals and the general public on the potential draft changes to Title 24 for the 2019 code cycle, on behalf of Ecogreen Solutions I regretfully submit our view that the LPD values outlined in the draft document are too aggressive and will have a dramatic negative impact on both efficiency projects as well as utility programs; in addition to these changes, removal of the "< 50% LPA" exemption for mandatory controls will further exacerbate the negative impact that will be directly felt by utility customers.

Analysis of the proposed Area Category Method LPA values compared to the 2016 code values shows an average cut of 30% across all space types, which increases to 34% when you include in the 80% LPA controls exception; this is compared to cuts averaging 8% across all space types from the 2013 to 2016 code cycle. These cuts grossly outpace the current market penetration of LED technology, specifically in existing buildings, as described in the California Energy Commission's "17-BSTD-02: 2019 Title 24, Part 6, Building Energy Efficiency Standards Rulemaking" document;

> *"A recent study completed on behalf of the California Public Utility Commission estimates that 82% of all lighting energy use is attributed to linear fluorescent technology...92% of lighting energy use in office and retailers is attributed to linear fluorescent lighting.*

The same study also mentions;

> *"...alternatives include light-emitting diode (LED) lamps designed to replace fluorescent products... These products constitute 1% of installed commercial lighting base per business size..."*

Based on the comparisons and studies referenced above, it is our opinion, and has been our experience, that LED technology is not implemented widely enough in existing buildings for the LPA baseline to assume that LEDs are installed. Analysis of several our projects based on the proposed LPA changes has shown that we would see an average 76% cut to the kW demand savings, and a 53.4% cut to the kWh savings, as shown in the tables below:

Project Name:	kW Savings:			
	Actual:	2016 Title 24:	2019 Title 24:	% Difference:
Police Station	3.8	0.87	0.33	-91.3%
High School	57.47	22.84	7.99	-86.1%
State Park	8.94	4.63	3.29	-63.2%
City Hall	23.3	11.38	6.04	-74.1%
City Hall 2	25	8.93	8.36	-66.6%
				-76.2%

Project Name:	kWh Savings:			
	Actual:	2016 Title 24:	2019 Title 24:	% Difference:
Police Station	19,442.73	11,127.50	10,394.44	-46.5%
High School	296,828.65	117,391.86	98,405.55	-66.8%
State Park	66,775.16	38,882.02	36,824.91	-44.9%
City Hall	60,127.52	34,460.77	27,904.06	-53.6%
City Hall 2	83,341.46	38,006.77	37,239.58	-55.3%
				-53.4%

These cuts, while drastic, are not a problem on their own, however many of our customers depend on utility rebates and OBF to help buy-down some of their project costs; by cutting Title 24 LPA too drastically, or by cutting LPA values without coordinating with utilities, it has the potential to kill projects. Even beyond making our own projects not economically feasible, these changes have the potential to substantially impact utility programs to the point where there is not enough participation to warrant continuing the programs.

In order to participate in many utility OBF programs, there is a minimum incentive amount that the project needs to receive in order to qualify for financing; for the past few years this threshold was a $2,200 minimum incentive, however it was recently announced that PG&E would be raising that threshold to $5,000.

Based on the same analysis shown in the tables above, and assuming an $.18/kWh electric rate and a 120-month loan term, the changes in LPA for the 2019 code cycle impact utility rebates and OBF as shown below:

Project Name:	Incentive Amounts:			
	Actual:	2016 Title 24:	2019 Title 24:	% Difference:
Police Station	$ 2,125.42	$ 1,020.70	$ 881.06	-58.5%
High School	$ 32,366.79	$ 12,817.35	$ 9,070.94	-72.0%
State Park	$ 6,683.01	$ 3,805.06	$ 3,439.49	-48.5%
City Hall	$ 8,305.20	$ 4,463.86	$ 3,138.32	-62.2%
City Hall 2	$ 10,417.32	$ 4,380.04	$ 4,233.17	-59.4%
				-60.1%

Project Name:	OBF Amounts:			
	Actual:	2016 Title 24:	2019 Title 24:	% Difference:
Police Station	$ 34,996.91	$ 20,029.50	$ 18,709.99	-46.5%
High School	$ 250,000.00	$ 211,305.35	$ 177,129.99	-29.1%
State Park	$ 120,195.29	$ 69,987.64	$ 66,284.84	-44.9%
City Hall	$ 108,229.54	$ 62,029.39	$ 50,227.31	-53.6%
City Hall 2	$ 150,014.63	$ 68,412.19	$ 67,031.24	-55.3%
				-45.9%

While the cuts to the incentive and OBF amounts shown above are dramatic on their own, a more impactful take-away is that only one of the projects analyzed above meets the new increased minimum incentive threshold that has been announced; a project that saves the customer 25 kW and 83,341 kWh annually would not be eligible for funding through utility On-Bill Financing Programs. The utilities that implement these incentives and OBF programs typically enjoy declaring the savings and financing figures from participating customers as justification for how well the program is doing as well as how impactful these types of programs are for helping reach statewide energy efficiency goals, however we can not accurately estimate the full extent of the impact to these utility programs.

In addition to the cuts described above, it is also proposed to remove the "< 50% LPA" exemption for mandatory controls; because these controls would be considered "code", they would get the customer no additional savings and would effectively only inflate project costs without getting the customer any additional incentives or financing.

Ecogreen Solutions strives to provide comprehensive energy efficiency projects to our customers, as well as we typically select product for each project in order to meet that <50% LPA exception; however the mandatory controls, in conjunction with the proposed LPA changes, would effectively force customers to choose between a comprehensive project, selecting a portion of their facility to get up to code with mandatory controls, or more likely would kill the project entirely because the customer would not qualify for OBF nor have appetite to fully fund the project out-of-pocket.

We hope that the Commission considers some of the points that we have brought up prior to making a final decision on the final language for the next code cycle, and we appreciate the opportunity to provide feedback on some of our concerns on where we see the program landscape headed.

Regards,

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