DOCKETED

Docket Number:	17-BSTD-01
Project Title:	2019 Building Energy Efficiency Standards PreRulemaking
TN #:	220434
Document Title:	enlighted Comments on Non-Residential Lighting Measures for 2019 Standards
Description:	N/A
Filer:	System
Organization:	enlighted/Philip Hall
Submitter Role:	Public
Submission Date:	7/27/2017 3:38:55 PM
Docketed Date:	7/27/2017

Comment Received From: Philip Hall
Submitted On: 7/27/2017
Docket Number: 17-BSTD-01

ADR 2019 recommendations 2019 Building Energy Efficiency Standards PreRulemaking

See attached document

Additional submitted attachment is included below.

PHILIP HALL
Director - Lighting Control Systems + Code Compliance Programs
Enlighted
C 510.410.0400
philip.hall@enlightedinc.com | www.enlightedinc.com
930 Benicia Ave., Sunnyvale, CA 94058

CALCTP
Certified California Lighting Control Acceptance Test Technician

July 27, 2017

California Energy Commission
Docket No. 17-BSTD-01
Docket Unit, MS-4
1516 Ninth Street
Sacramento, CA 95814-5512

Re: Docket No. 17-BTSD-01 – Non-Residential Lighting Measures for 2019 Standards

The following comments represent the views of Enlighted Inc. on the important energy code issue of automated demand-response (ADR) capability in non-residential buildings.

To improve non-residential lighting standards under Title 24 for 2019, we urge the Commission to adopt proposals that will mandate installation of advanced lighting control systems in non-residential buildings and spaces over 10,000 square feet in area (regardless of lighting power allowance in the space) that can receive and respond to standard ADR signals. California utilities use OpenADR 2.0a or later. Therefore, we believe the requirement should be for a gateway that receives an Open ADR signal or can communicate with either OpenADR (directly) or BACnet to premises equipment (installed EMS system) capable of receiving an ADR2.0 signal. After receiving the signal, the lighting power should be changed from the then current lighting power consumption. That is, if the lights are already at 85% of total installed power, they should be further reduced. The total percentage change would be negotiated between utilities and their customers. We note that future ADR events may require a temporary increase in power consumption in order to balance grid loads.

The ADR controls should include at least 75% of the building's installed lighting power, to allow for minor non-controlled areas such as closets, storerooms and utility areas. We believe this important goal can be achieved in an economical and straightforward manner using equipment that is accessory to the lighting system.

We also recommend that the Commission adopt language extending similar ADR capability and load reduction levels to a minimum of 75% of a building's exterior lighting load (e.g., parking areas, facades, and path lighting).

We also recommend a change in the Title 24 Acceptance Testing Procedures for demand response. The current procedure of testing 7 spaces and then calculating out the square footage and lighting power reduction for the entire building really only verifies that 7 spaces are correctly working. The sampling of 7 spaces with the procedures currently required are likely to need little modification, but additionally there needs to be a power measurement for the entire Lighting Control System throughout the building showing current conditions, and a power measurement for the entire Lighting Control System throughout the building showing the reduction during an ADR event. Additionally it needs to be verified (maybe just in the 7 spaces) that lights can be lowered, or turned off BUT NOT raised when an ADR active signal is present.

Incorporating these recommendations in the 2019 version of Title 24 will correct an inadvertent oversight in the 2016 code, which requires ADR capability but does not require installation of ADR receiving equipment useful to utilities and grid operators. Making these changes will result in substantial power reduction off the grid when needed.

Thank you.

Sincerely,

Philip Hall

cc: Payam.Bozorgchami@energy.ca.gov, Thao.Chau@energy.ca.gov, Gabriel.Taylor@energy.ca.gov, Peter.Strait@energy.ca.gov