

April 21, 2006

Mr. Gary Flamm
California Energy Commission
Sacramento California

Subject: 15 Day Language For Lighting Products

Mr. Flamm,

Advance wants to thank the California Energy Commission for the opportunity to comment on proposed rulemaking for Title 20 Standards for Metal Halide Luminaires.

The latest proposal of 88% ballast efficiency shows that the CEC has listened to industry and has come up with a proposal that will result in increased energy efficiency for the people of California while giving industry attainable goals in meeting that objective.

88% ballast efficiency represents a significant improvement in efficiency over what is typically attained in products today yet can be met with proven technology with the full range of metal halide lamps on the market – including the newest technology Ceramic metal Halide lamps.

Advance has two areas of comments concerning the latest proposal however that it wishes the CEC to consider.

1) Method of Measurement

All ballast efficiency levels discussed in all workshops to this point have been based on measurements of ballast input power and output power made according to ANSI C82.6 – 2005 Ballasts for High Intensity Discharge Lamps – Method of Measurement.

ANSI C82.6 specifies a time period for ballast measurement that results in what is referred to as a “cold ballast measurement” and is much shorter than 6 hours. “Cold ballast” measurements are considered more consistent and more representative of average ballast losses over the life of the lamp. When a “100 hour” lamp of “nominal voltage” is used for testing as defined by C82.6, this generally represents a “worst case” for ballast losses. As lamps age arc voltage tends to increase which typically results in ballast losses getting lower over the life of the lamp.

The test procedures recently made part of the Title 20 test procedures however specify measurements after a 6-hour period of operation. This 6-hour period is consistent with UL “hot ballast” test procedures used for ballast temperature ratings but is not consistent with C82.6. While a “hot ballast”, which results from a 6 hour stabilization specified by UL for temperature class measurements, will have more representative (worst case) losses for a ballast in application during this initial “high loss” operating period of the lamp’s life, a “cold

ballast” will have losses more representative of typical ballast losses during the lifetime of the system.

“Cold ballast” input power measurements according to ANSI C82.6 are what manufacturers use in rating their products and these measurements are what the CEC has used as data in determining Title 20 efficiency requirements.

Advance therefore respectfully requests that the CEC revise their ballast efficiency measurement procedures to keep the original intent of C82.6 by ELIMINATING;

(E) The power input, P_{in} and the power output, P_{out} are to be measured after 6 hours of operation using a true root-mean-square (rms) wattmeter rated for the voltages being measured.

2) Outdoor Exemption

All proposals for Title 20 ballast efficiency requirements up until now have included an exemption for outdoor luminaries. While there has been some comment on the wording of the exemption, there has not been any public disagreement on the need for an outdoor exemption to accommodate the particular performance and environmental requirements that outdoor application entail.

Roadway lighting, for example, typically specifies “regulated lag” ballast technology and sees some of the harshest environments in HID lighting. “Regulated lag” ballast technology does not meet the 88% ballast efficiency requirement being proposed in the power range of 150W – 500W.

Advance has talked with UL and finds that getting existing ballasts used in outdoor luminaries identified by UL as suitable for 60C ambient operation will not be overly burdensome.

Advance would therefore like the CEC to consider returning the definition of “Exempted Outdoor Luminaire” and its allowance to the original requirements.

Advance thanks the Commission for its consideration.

Sincerely,

Robert Erhardt
Director Technical Relations
Philips Lighting Electronics - Advance