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Getting the Facts Straight about LED Street Lighting

Recent reports from a wide variety of news media have raised concerns about LED street lighting. Virtually all of those reports were sparked by community guidance that was issued in June by the American Medical Association (AMA), citing the potential for increased blue-wavelength light in the night sky resulting from the ongoing conversion of high-pressure sodium (HPS) street lighting to LED. The applicability of that guidance, however, critically depends on the accuracy of a number of underlying assumptions and other relevant factors that, unfortunately, are not covered in the AMA document — as we explained in a [previous Posting](#).

So in keeping with its role as an impartial source of the best information currently available, [DOE's Solid-State Lighting Program](#) will host a [webinar](#) that examines key issues related to the concerns raised by the AMA, sorting what we know from what we don't know. Presented by Bruce Kinzey of Pacific Northwest National Laboratory, the webinar will be held on October 20 from 1:00 – 2:00 p.m. ET, and will include a 30-minute presentation followed by a 30-minute live Q&A session.

The material Bruce will cover is based on a presentation he gave last month at the Illuminating Engineering Society's 2016 Street and Area Lighting Conference. He'll address the issues underlying the AMA concerns and their applicability to LED street lighting, provide essential background context related to exposure to light at night, and review activities currently being supported by DOE's Solid-State Lighting Program to fill in existing knowledge gaps.

In publishing its guidance, the AMA has added another influential voice to issues that have been discussed in the lighting community for some time now regarding light at night, its potential impacts on human health and the environment, and how best to minimize those impacts. The AMA's guidance focuses on LEDs in particular, even though these issues are neither new nor restricted to LED technology. There's nothing inherently different about the blue light emitted by LEDs, which is the same as that emitted by any other source type at the same power and wavelength.

While some of the media coverage of concerns about blue light, light at night, and dark-sky issues can give the impression that LED products are the source of the issues raised, they are, in fact, a key part of the solution, due to a number of advantages SSL has over other lighting technologies. For example, their dimming capability means LED street lighting systems can be dialed in to provide only the level of illumination needed at any given time — a nearly impossible task for conventional street lighting products. In addition, given their small size and directional emission, LEDs used in well-designed streetlights also offer a high degree of control over the direction in which light is emitted, making it much easier to reduce glare, light trespass, and uplight. This improved control also means an LED streetlight can

often meet the illumination requirement with only half of the total lumens of the conventional incumbent (such as HPS) it replaces. All of these features serve to offset much of the increased blue content contained in LEDs, but this is typically neglected in the current media coverage.

The scientific community continues to search for definitive answers to the questions that have been raised about the effect of electric light on living organisms. DOE's position is to watch as the science develops, and to report the unvarnished facts. A good way to learn those facts is to attend next week's webinar. To register, [click here](#).

Best regards,
Jim Brodrick

As always, if you have questions or comments, you can reach us at postings@akoyaonline.com.