

January 29, 2013

## LA Achieves More Than Savings with LED Streetlights

Greetings from Long Beach, CA, where we're gathered for DOE's [tenth annual SSL R&D Workshop](#), along with several hundred lighting leaders from across the country. One of the plenary speakers didn't have to travel far to get here. Ed Ebrahimian is director of the Bureau of Street Lighting of the City of Los Angeles, which is just a short drive up the freeway from Long Beach, and he'll be talking later today about a program LA launched in 2009 to convert 140,000 of its 210,000 streetlights to LED.

We asked Ed to speak at the workshop not only because his LED-conversion program is the largest in the U.S., but because it's already saving the city substantially in energy and money, has been a big hit with Angelenos, and stands as a shining example (pun definitely intended) of LED street lighting done right. Tonight, after Ed has given his talk, workshop attendees will have a chance to see some of LA's LED streetlights in action on an optional guided bus tour that also takes in the city's street lighting museum and field operations yard.

To date, LA has converted more than 115,000 streetlights to LED – during which time the price of the LED fixtures has dropped from \$432 (2009) to \$245 (2012). The goal is to reach 140,000 by the end of June. As a result of the switchover, the city is already achieving an estimated 63.5 percent energy savings over the incumbent high-pressure sodium (HPS) streetlights, which translates into an annual savings of 60,000 megawatt-hours of electricity (worth \$5.4 million) and an annual reduction in carbon emissions of 35,600 metric tons. And largely because of the longer life of the LED fixtures (10-15 years), the city's annual street-lighting maintenance costs have dropped by an estimated \$2.5 million.

What's more, the LED streetlights have been found to provide better uniformity of light levels than their HPS counterparts. This, coupled with the change in light color – from HPS orange to LED white – has

improved visibility on the streets of LA, something that's been noticed by residents and police alike.

But all of this doesn't mean that it was a no-brainer to switch the city's streetlights to LED, and that all Ed and his crew had to do was find products at a good price and then buy and install them. Quite the contrary; LA's program has been such a success because, from the get-go, the folks involved have carefully and methodically done their homework to make sure they chose the right products and deployed them in the best possible ways, screening a number of street-lighting products to make sure they end up with the best ones. Because of the rapidity with which the SSL market is evolving, this screening is done on an ongoing basis.

LA has shared its knowledge with other municipalities through DOE's [Municipal Solid-State Street Lighting Consortium](#), which provides a convenient way for cities to navigate multiple sources of information in just one stop and offers a number of useful tools, such as the [Model Specification for LED Roadway Luminaires](#). LA is a leading member of the Consortium and has been influential in developing many of those tools.

Los Angeles has also been a leader in the exploration, deployment, and use of street-lighting controls. A networked control system has been installed on about 54,000 of the city's streetlights to date, primarily to take advantage of the ability to remotely monitor the performance of LA's unprecedented LED deployment. Ed and his colleagues are now investigating how they might best take advantage of the advanced commissioning, scheduling, dimming, and other features offered by the latest control solutions, in preparation for the city's planned expansion of its networked infrastructure to include nearly all of its LED streetlights.

There's a lot we can learn from LA's experience converting its streetlights to LED, and we're looking forward to Ed's presentation and tonight's tour. Tune in next week for some other highlights from the Long Beach workshop.

As always, if you have questions or comments, you can reach us at [postings@lightingfacts.com](mailto:postings@lightingfacts.com).

---