

SSL Postings

Fluorescent lighting dominates the commercial sector in the U.S., and half of the country's commercial fluorescent lighting fixtures are recessed troffers in 2'x4', 2'x2' and 1'x4' configurations. Those troffers, which number in the tens of millions, are in use for more than 10 hours a day on average and collectively consume more than 63 terawatt-hours of electricity each year. That's why DOE is working with the members of its [Commercial Building Energy Alliances](#) (CBEAs) to support the market introduction of high-performance, energy-efficient troffers in those same three configurations – the goal being to cut that energy use by a significant amount.

Created by DOE to improve the energy efficiency of commercial buildings, the CBEAs are composed of the [Retailer Energy Alliance](#), the [Commercial Real Estate Energy Alliance](#), and the [Hospital Energy Alliance](#). CBEA project teams are focused on reducing commercial building energy costs and consumption by working with various industry suppliers – including appliance, heating, cooling, and lighting manufacturers – to meet members' energy-efficiency needs. Lighting is one area that offers the potential for immediate returns, and rapid improvements in SSL provide an opportunity for increased energy efficiency and performance.

To date, CBEA teams have developed specifications for [LED parking lot lighting](#), [high-efficiency parking structure lighting](#), and [LED refrigerated case display lighting](#), and in June published one for [high-efficiency 2'x2' lighting troffers](#). Recently, they came out with a draft specification that builds upon the 2'x2' troffer spec to add 2'x4'

and 1'x4' options.

DOE is offering a [webcast](#) on the expanded high-efficiency troffer specification on October 25 from 1:00-2:30 p.m. Eastern Time. In the webcast, Jeff McCullough and Michael Myer of Pacific Northwest National Laboratory will review the energy-saving benefits of high-efficiency troffers, highlight their design and implementation considerations, and identify different troffer types. The 60-minute presentation will conclude with an overview of the expanded CBEA specification, followed by a live 30-minute question-and-answer session where attendees can direct specific questions to the expert speakers. For more information on the webcast, or to register, visit

http://www1.eere.energy.gov/buildings/ssl/events_detail?event_id=6223.

While LEDs have a strong potential to meet the new troffer specifications, those specs are technology-neutral and don't exclude other technologies, as long as they measure up – which effectively means either LED or fluorescent sources. If designed and installed properly, high-efficiency troffers can bring energy savings of 20 to 25 percent over traditional fluorescent lamps, and up to 50 percent if integrated with dimming, occupant, or daylight controls. In addition to the direct energy cost savings, maintenance costs are reduced because of the need for fewer and less frequent lamp replacements – since both LED and high-efficiency fluorescent sources have longer lifetimes than traditional fluorescent lamps.

The 2'x2' troffer specification that came out in June was developed in direct response to requests from CBEA members, including the U.S. General Services Administration, which has since put that spec into use in two new [GATEWAY](#) demonstrations to validate the energy savings and provide real-world experience. The expansion of the 2'x2' specification to include 2'x4' and 1'x4' configurations was also a result of CBEA member requests. The new, expanded troffer specification has been released in draft form for public comment, so

that it can be adjusted and refined to better meet the needs of CBEA members. You can find the specification online [here](#).

Specifications like this one provide end users with a reliable framework to help them select the right product for the right application and ensure that it's being used to maximum effect. By offering a broad forum, the CBEA helps spread the word, which promotes the adoption of the most energy-efficient technologies.

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