Frequently Asked Lighting Questions

Saving energy for Maine

The lighting industry continues to develop new lighting technologies that can better meet your needs while saving on your electric bill. It is critical to use the right equipment for its best purpose. Our field and engineering teams are available to answer questions you may have about energy efficient lighting. Here are some of the typical and frequently asked questions we receive.

Q. We have had our fluorescent tube lights (T12s) for years but have more light than we need; so when bulbs go out, we don't replace them. With about ¾ of the bulbs out, we figure we're saving ¾ off our lighting bill. Is that correct?

A. *No. The fixture contains not only two lamps, but also a transformer called a "ballast." When one lamp fails, both the ballast plus the remaining lamp continue to consume electricity. A typical 2-lamp T12 fixture uses approximately 60-70% of its rated full power when driving only one lamp. The same fixture uses approximately 10-20% of its rated full power when you have two burned out lamps.*

Q. What is the difference between T12 and T8 lamps?

A. *Both are linear fluorescent lamps, commonly available in 2', 4', and 8' lengths. The "T" stands for "tubular." The number refers to the diameter of the lamp in ⅛" increments. A T8 lamp is a 1" diameter lamp (8 – 8ths of an inch) and a T12 is a 1.5" diameter lamp. Generally speaking, T8 lamps offer higher efficiency and improved lighting performance compared with T12 lamps.*

Q. We see in the incentive list, "High Performance T8s." How are these different than other T8 lamps?

A. *High Performance T8 refers to a lamp and ballast (transformer) system that is more efficient than standard T8 systems. These systems are sometimes referred to as "Super T8" systems. In addition to being more efficient, the lamps are rated for longer life, and in many cases render colors more accurately. A list of lamps and ballasts that qualify for the High Performance T8 incentive is available on our Web site at efficiencymaine.com/business at the bottom of the Energy Wise Tools page. Look for "CEE High Performance T8" or call us at 866-376-2463.*

Q. You also offer an incentive for High Intensity T8 fixtures. How do these differ from other T8 systems?

A. *High Intensity T8 systems are special high intensity fluorescent fixtures specifically designed for replacing high/low bay HID (metal halide, or high-pressure sodium) fixtures. They work particularly well in warehouses, manufacturing facilities, and gymnasiums.*

Q. We have heard that T8 fluorescent lamps are more efficient than T12 lamps, and we are thinking of changing to T8s. We also recently heard of T5 lamps. If T8s are more efficient than T12s, are T5s more efficient than T8s?

A. *T8s and T5s are comparable in their efficiency, but they are not used for the same situations. The optical qualities of T5s make them better suited for certain applications, such as where ceilings are high, as in warehouses and gymnasiums. If you have questions about your situation, call Efficiency Maine at 866-376-2463.*

Q. 4' T12 fluorescent lamps are supplied with 2 pins on the ends. When relamping with T8 lamps and ballasts, do the fixture sockets have to be replaced?

A. *In most cases, no. The two-pin T8 and T12 sockets are the same size and will work with either lamp. However, the sockets in older fixtures are often brittle and/or cracked and should be replaced when relamping.*

Q. What are the efficiency gains when converting from T12 to T8 fluorescent lamps and ballasts?

A. *There are now a variety of T8 systems available. All deliver more light (lumens) per watt than do T12 systems. Standard T8 systems offer energy savings ranging from 10-20% compared with T12 systems. High Performance T8 systems, also known as "Super T8" systems, offer energy savings of up to 35% compared with T12 systems. Savings of up to 60% are often obtained by replacing T12 systems with special low-wattage T8 lamps and ballasts, or by installing a smaller quantity of High Performance T8 lamps and ballasts. However, you will want to take into account that this conversion typically results in reduced lighting levels.*

Q. Can fluorescent lighting be used outdoors?

A. *Yes, if it is rated for low temperature operation. A ballast that is rated for cold starting must also be used. Keep in mind that most fluorescent lamps produce somewhat less light at lower temperatures.*

Q. Does Efficiency Maine provide an incentive for exterior lighting?

A. *Yes. Though not listed among the prescriptive incentives, exterior lighting is eligible through a Custom Application. To qualify, the lighting must include features that are more efficient than standard practice for the particular situation.*

Q. Can fluorescent lighting be dimmed?

A. *Yes. Dimmable ballasts are available and can be used for dimming T8 and T5 lamps. Also, there are now some screw-in compact fluorescent lamps that can be dimmed. They are clearly marked as "dimmable" on the packaging. Dimming fluorescent systems should only be used when the lights will be dimmed for significant time periods, as they are less efficient than non-dimming products when used at full output.*