

Transit is Lighting the Way to Lower Costs

In 2006, soon after light-emitting diode (LED) technology became available, the Anchorage Public Transportation Department (Transit) began replacing its facility and bus stop lighting with LED fixtures. This change has not only eliminated the need to change out light bulbs, thus reducing labor needs, it has lowered operational costs by reducing both utility and vehicle fuel consumption. And staff availability has been increased for other tasks. Transit believes it will realize additional savings when it replaces the lighting in its administration building in the near future.

More recently, through a \$1 million American Recovery & Reinvestment Act (ARRA) grant, Transit replaced more than 900 light fixtures on its campus with LEDs and high-efficiency fluorescent lamps, coupled with new lighting controls including new timers, motion sensors, and photo cells. The higher quality lighting has provided maintenance staff a more productive and safer work environment and reduced Transit's electrical utility costs by 35% across its five acres of buildings.



The Evolution of Light Bulbs

It's coming! The phase-out of several types of incandescent light bulbs is underway. The Energy Independence and Security Act of 2007 laid out requirements for energy savings through improved standards for both appliances and lighting, among many other energy-saving initiatives.

On December 31, 2011, manufacturers stopped production of 100-watt incandescent light bulbs. You're probably still able to buy them, however, because the Act does not forbid retailers from selling existing inventory. Other wattages will be discontinued soon, but like the 100-watt bulbs, you'll be able to buy these bulbs as long as stores still have them. Most specialty, colored, candelabra, and other shaped bulbs are not affected by these phase-outs.

So when they are gone, what do you do? You have three choices: compact fluorescent lamps (CFLs), light-emitting diodes (LEDs), and halogen light bulbs. These new light sources offer more light (lumens) for the amount of energy used (watts), making them more efficient but, to make the switch, you may need to learn a new number system. Since we've all gotten used to wattage as a way to buy light bulbs, and we have a good sense of how bright a 75-watt or a 100-watt bulb is, most labels now compare to incandescent wattage to help us buy CFLs or LEDs. Other labels are leading us toward understanding how many lumens we want so we're not relying on wattage numbers.

In general, a 23-watt CFL replaces a 100-watt incandescent. LEDs aren't yet bright enough to replace a 100 watt bulb, but you can expect to see several that do in the next one or two years. If CFLs and LEDs are a little too different, halogens may be for you. A 72-watt halogen replaces a 100-watt incandescent and looks and functions almost identically to an incandescent.

JANUARY 2012:

- **100-watt incandescent bulbs no longer produced, but you can continue to buy existing inventory.**
- Replace them with a 23-watt CFL or a 72-watt halogen.
- No LEDs to replace them yet, but expect them soon.

JANUARY 2013:

- **75-watt incandescent bulbs no longer produced, but you can continue to buy existing inventory.**
- Replace them with an 18-watt CFL or a 53-watt halogen.
- No LEDs to replace them yet, but expect them soon.

JANUARY 2014:

- **Both 40-watt and 60-watt incandescent bulbs no longer produced, but you can continue to buy existing inventory.**
- Replace a 40-watt bulb with a 9-watt CFL or a 29-watt halogen.
- Replace a 60-watt bulb with a 13-watt CFL or a 43-watt halogen.
- Plenty of LEDs to replace these, of various wattages.

HOW MUCH LIGHT DO I NEED?

Incandescent Bulbs (Watts)	Minimum Light Output (Lumens)	Common CFLs (Watts)
25	250	4 – 9
40	450	9 – 13
60	800	13 – 15
75	1,100	18 – 25
100	1,600	23 – 30
125	2,000	22 – 40
150	2,600	40 – 45