

**Why is Benton PUD giving customers 11 CFLs? Savings!**

**Savings for our customers** – CFLs will help our customers save energy and money today and in the future. By replacing incandescent light bulbs with CFLs, you will save approximately \$50 a year. CFLs use less energy, last longer and produce 75% less heat than incandescent bulbs.

**Savings for Benton PUD** – As our population grows and our customers use more power around their homes, more electricity is required to serve our growing energy needs. By using CFLs, Benton PUD residential customers will save up to \$2 million a year and reduce the need for more expensive power purchases. The more energy we save now, the less Benton PUD has to spend on more expensive power in the future.

The conservation savings from this CFL distribution will help Benton PUD meet the mandated requirements in the Energy Independence Act (Initiative 937). These savings will also help provide Benton PUD a higher allotment of low-cost hydroelectric power from the BPA. Additionally, the savings can be resold back into the wholesale market and generate revenues to help buy down retail rates.

**Savings for our environment** – CFLs use one-quarter the energy as incandescent light bulbs and help reduce carbon dioxide emissions. For every CFL used, as many as eight fewer incandescent light bulbs end up in landfills.

**What kind of CFLs will customers receive?**

Each customer will receive a box in the mail with five 19-watt (equivalent to a 75-watt incandescent) and six 13-watt CFLs (equivalent to a 60-watt incandescent light). There is information in the box about the CFL savings and the conservation program.

**When will I get my CFLs?**

The boxes will be mailed to residential customers over several weeks in February.

**Where should I use CFLs?** The 19-watt CFLs generally replace a 75-watt incandescent light bulb and the 13-watt CFLs generally replace a 60-watt incandescent light bulb. CFLs work in any standard light socket. (The CFLs provided by Benton PUD are not designed to work with a dimmer switch.)

**How much is this going to save me?**

If you replace five 75-watt incandescent bulbs with 19-watt CFL and six 60-watt incandescent bulbs with 13-watt CFL, you will save an estimate \$4 each month and \$243 over five years. The Energy Star rated CFL light bulbs are expected to last 12,000 hours, fit most existing light fixtures, and use about 66% less energy than standard incandescent bulbs.

**How was this project funded? Why is Benton PUD spending money on CFL distribution?**

The CFLs are part of the Benton PUD conservation program as mandated by the Energy Independence Act (Initiative 937). This project enables Benton PUD to pass conservation savings to all our residential customers with the immediate result of energy savings. Other conservation projects such as rebates on energy efficient appliances are limited to those customers who are in the market for new appliances.

**How does it help Benton PUD?**

Benton PUD is allocated a portion of the hydropower available from BPA. To meet the growing needs of our customers, Benton PUD must purchase additional power which costs more. Energy saved – conservation – is the least cost power available. In other words, distributing CFLs to our customers costs less than having to purchase more expensive power on the market. Benton PUD customers will save up to \$2 million a year.

**Was the increase in the rates to pay for the CFLs?** No. Rates went up because of the overall increase in wholesale power costs for Benton PUD. The cost of the CFL distribution program will be recovered with energy cost savings well within six months if everyone installs them the first year.

**How much did this cost me on my bill?** Nothing, the program could reduce your bill for the next 7-10 years.

**How do I dispose of them?** Benton PUD offers a recycle program for CFLs. Just drop off the used CFLs to a Benton PUD office located in Kennewick and Prosser. An individual household can drop them in their normal waste, but Benton PUD would prefer that they be dropped off for better disposal.

**If CFLs have mercury, aren't they hazardous to the environment?** As with any item that is disposed, recycling is the best way. CFLs have a very small amount of mercury.

**FAQs: General information about CFLs**

**What is a CFL? And why use one?** CFL stands for compact fluorescent light bulb. It is a small fluorescent light bulb that uses at least 2/3 less energy than a traditional incandescent bulb and can be screwed into a regular light socket. ENERGY STAR® qualified CFLs must pass extensive testing to ensure they produce only the highest quality light. Qualified bulbs labeled "warm white" or "soft white" produce light like typical incandescent light bulbs. CFLs that have a cooler color (similar to bright white incandescent bulbs) are usually labeled "bright white" or "daylight" on the product packaging.

**How do they save energy?** Standard incandescent bulbs haven't changed much since Thomas Edison invented them in 1879. Only 10% of the energy they use makes light – the other 90% is wasted as heat. Some halogen bulbs burn so hot – around 1,000 degrees – that they can be a fire hazard. ENERGY STAR® CFLs provide the same high quality light as incandescent bulbs, but operate at temperatures below 100 degrees, wasting far less energy than incandescent bulbs.

**How much can I save?** CFLs use less than one third of the energy of incandescent bulbs, reducing your energy cost by 66% and they last up to ten times as long. Over the life of one CFL, you can avoid replacing up to 13 incandescent bulbs. With current electricity rates, the super efficient performance of CFLs means you can save at least \$35 in energy costs over the life of each CFL that replaces an incandescent bulb.

**How does a compact fluorescent light bulb work?** Regular bulbs (also known as incandescent bulbs) create light by heating a filament inside the bulb; the heat makes the filament white-hot, producing light. A fluorescent bulb contains a gas that produces invisible ultraviolet light (UV) when the gas is excited by electricity. The UV light hits the white coating inside the fluorescent bulb and the coating changes it into light. Because fluorescent bulbs don't use heat to create light, they are far more energy-efficient than regular incandescent bulbs.

**What compact fluorescent light bulb do I buy to replace a 60-, 75-, 100- or 150-watt regular bulb? How are the watts calculated?** Because CFLs are more efficient, you can buy a 13-watt compact fluorescent bulb that produces the same amount of light as a 60-watt regular incandescent bulb. The equivalent regular watts are on the package. Just look for the wattage you would normally buy in a regular bulb.

60 watts incandescent = 13 watts compact fluorescent  
75 watts incandescent = 19 watts compact fluorescent  
100 watts incandescent = 26-29 watts compact fluorescent  
150 watts incandescent = 38-42 watts compact fluorescent  
250-300 watts incandescent = 55 watts compact fluorescent

**Can I turn my CFL on and off frequently? I've been told I have to turn it on and leave it on all day.** Turning a CFL on and off frequently can shorten its life. To take full advantage of the energy savings and long life of ENERGY STAR® qualified CFLs, it is best to use them in light fixtures you use the most and are on for at least 15 minutes at a time. Good locations include outdoor light fixtures, indoor fixtures in the living room, family room, kitchen, bedroom, recreation room, etc. This is not to say you should leave your lights on all day if you use ENERGY STAR® qualified CFLs. It is still a good habit to turn the lights off when you leave the room for an extended period of time.

**Can CFLs be used with dimmer switches?** Yes, certain ENERGY STAR® qualified CFLs are made to work on dimmers. Be sure to check the fine print on the back of the packaging for the proper applications to see if there are any restrictions on the product's use. Dimming an ENERGY STAR® qualified CFL that is not designed to work with a dimmer switch can shorten its life significantly.

**Why does my compact fluorescent light bulb flicker or appear dim when I first turn it on?** The first compact fluorescent bulbs flickered when they were turned on because it took a few seconds for the ballast to produce enough electricity to excite the gas inside the bulb. Thanks to the refined technology there is now no significant flicker (less than 1 second). However, these bulbs do require a short warm-up period before they reach full brightness, which is why they may appear dim when first turned on. Compact fluorescent bulbs are best used in fixtures that are left on for longer periods of time, rather than in fixtures that are turned off and on frequently.

**Can I use a compact fluorescent light bulb in an enclosed light fixture?** Compact fluorescent light bulbs may generally be used in enclosed fixtures as long as the enclosed fixture is not recessed. Totally enclosed recessed fixtures (for example, a ceiling can light with a cover over the bulb) create temperatures that are too high to allow the use of a compact fluorescent bulb.

**Can compact fluorescent bulbs create interference with electronic equipment, such as radios?** Many electronic devices, such as radios, televisions, wireless telephones, and remote controls, use infrared light to transmit signals. Infrequently, these types of electronic devices accidentally interpret the infrared light coming from a compact fluorescent bulb as a signal, causing the electronic device to temporarily malfunction or stop working. (For example, your television might suddenly change channels.) Fortunately, this only happens when light is produced at the same wavelength as the electronic device signals, which is rare.

To reduce the chance of interference, avoid placing compact fluorescent bulbs near these kinds of electronic devices. If interference occurs, move the bulb away from the electronic device, or plug either the light fixture or the electronic device into a different outlet.

**Can I use a compact fluorescent light bulb with an electronic timer or photocell (AKA electric eye)?** Some electronic timers and photocells contain parts that are incompatible with compact fluorescent light bulbs; using these bulbs in incompatible products will result in a shorter light bulb life. To find out if an electronic timer or photocell is compatible with compact fluorescent bulbs, check with the manufacturer of the timer or photocell.

**How do I dispose of my compact fluorescent light bulbs? Is the disposal different than for regular bulbs?** Benton PUD will recycle the bulbs for you – just drop them off at either office. In most states, fluorescent and compact fluorescent light bulbs used at home can be disposed of in the same way as regular light bulbs. While all fluorescent bulbs contain a trace amount of mercury, the quantity is so minute that disposal is not regulated by federal standards (established by the EPA, the Environmental Protection Agency). You would have to dispose of an incredibly large amount of fluorescent bulbs — around 360 4-foot fluorescent tubes — before you would be subject to federal disposal standards.

**Do light bulbs (such as compact fluorescent bulbs) give off hazardous amounts of ultraviolet (UV) light?** Regular fluorescent light bulbs used in your home and office do not produce a hazardous amount of ultraviolet light (UV). Most light sources, including fluorescent bulbs, emit a small amount of UV, but the UV produced by fluorescent light bulbs is far less than the amount produced by natural daylight. (Ultraviolet light rays are the light wavelengths that can cause sunburn and skin damage.)