



# OPALCO SAFETY MATTERS

## VEGETATION & TREE TRIMMING

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Orcas Power & Light Cooperative performs an aggressive Right-Of-Way (ROW) maintenance program to help create a reliable electrical system. We trim and remove trees and other vegetation under or near our power lines to reduce the frequency of power interruptions caused by overhanging branches and trees. This also helps create easier access for our line crews to make repairs, thus shortening the outage time. The removal of potentially hazardous trees helps all members of the cooperative to have a more reliable system and a safer environment.

The following are some frequently asked questions about our vegetation / tree trimming program:

### **WHAT SHOULD A MEMBER DO WHEN THEY WANT TO REMOVE A TREE ON THEIR PROPERTY THAT IS GROWING CLOSE TO THE POWER LINES?**

To remove a tree that is in close proximity to our energized lines can be a dangerous undertaking. Please call OPALCO so that we can advise and assist in the tree's removal.

### **WHAT ABOUT A DANGEROUS TREE THAT THREATENS OUR POWER LINES THAT IS OUTSIDE OF OUR ROW?**

Our crews are always vigilant about inspecting our lines and when a danger tree that threatens our lines is noticed, we work with the property owner and get permission to remove the tree that is deemed a potential hazard to our electrical system. Please do not attempt to cut a dead or dying tree that is leaning heavily toward our lines. Call OPALCO so that we can advise and assist in its removal.

### **WHY DOES OPALCO CUT SMALL TREES THAT ARE GROWING UNDER THE LINES WHEN IT WOULD BE MANY YEARS BEFORE THEY WOULD GET INTO OUR POWER LINES?**

It is definitely more cost effective for us to remove small trees early by hand cutting or by mobile power mowing the area underneath the lines than to trim or cut the tree down when the tree is growing in and around the energized lines. Another reason is that by keeping the area under the lines clear, it gives the line crews better access to our lines when restoration is needed during a power interruption.

### **WHAT HAPPENS TO THE TREES AND LIMBS AND BRUSH AFTER WE CUT IT IN OUR ROW?**

OPALCO maintains a minimum of 10 foot ROW on each side of our lines and we try to remove or trim to this specification so that we can have a certain number of years before the need to return to the area. We will chip up the brush and limbs. There will be times, when we will just fall the trees and leave them in the woods when access to chipping is not feasible. The trees are the property of the land owners and are left for them, unless other arrangements are made. Occasionally, in remote areas, we will blow the chips into the woods to decompose.

For more information, please contact Russell Guerry,  
Manager of Engineering & Operations  
376-3589  
[rguerry@opalco.com](mailto:rguerry@opalco.com)

## **FAQ: SURGE PROTECTION**

### **WHAT IS A SURGE?**

A surge occurs when the power line voltage goes higher than nominal, and stays there longer than 10 milliseconds.

### **WHAT CAUSES POWER SURGES?**

Although many people think lightning causes most surges, in reality they're one of the less common causes. In fact, about 80% of all power surges are created by electronic equipment inside your home (air conditioners, refrigerators) because such high-powered devices use a lot of energy to turn on/off and can gradually be worn down over time. You might be surprised to know that only 15% or less come from unexpected lightning strikes. Other sources of power surges include phone and cable lines, faulty home wiring, utility equipment problems, and downed power lines. The wires and transformers that bring power to your home or office is quite complex, having many possible failure points, and many potential errors that can start an uneven power flow. As mentioned, power surges are unavoidable, especially when you consider the many unpredictable factors such as weather, animals, birds and autos hitting poles.

### **CAN THESE SURGES CAUSE DAMAGE?**

Yes. Today's computerized appliances and electronics can be damaged or destroyed by over-voltage surges or spikes. Large appliances like air conditioners or refrigerators are less susceptible, but can be damaged as well.

### **CAN A SURGE HARM MY EQUIPMENT IF I'M NOT USING IT?**

Yes. Many electrical devices have electronic timers, clocks, or remote controls which remain in operation even when it is not in use. Also, some appliances cycle off and on at random like air conditioners, water heaters, pumps, or refrigerators and they could be on during a surge.

### **WHY DO I NEED SURGE PROTECTION?**

There are several reasons why power quality has become such an important issue: today's computer chips are far more dense than they were even a few years ago, and subsequently, much more sensitive to even slight surges. Clock speeds, or operating frequencies, have increased and reached the frequency range of high-voltage transients. Slower processors ignored them, but high-speed processors may actually interpret a transient as a command sequence. Most homes and offices are using more pieces of equipment that draw electricity than ever before. Each time an electric device is turned on, transient voltages may be generated. More microprocessor technology is being used than ever before in household appliances such as refrigerators, washers, dryers and dishwashers.

### **WON'T MY CIRCUIT BREAKERS PROTECT MY EQUIPMENT?**

No. Circuit breakers are only designed to protect against over current, not a voltage spike or drop.

### **WHAT IS A SURGE SUPPRESSOR?**

A surge suppressor is a piece of equipment designed to protect sensitive equipment from voltages above nominal on the power line. They provide an alternative pathway for excessive voltage.

### **WHY DO I NEED ONE?**

The problems caused by disturbances in the power line may not surface immediately. They can cause the gradual breakdown of electronic circuitry. They are often unexplainable problems that show up on the repair bill as "No Trouble Found." Many times such problems are no more than surge induced damage. Any new piece of equipment should be protected when installed.

### **DO THESE SUPPRESSORS HANDLE ALL VOLTAGE PROBLEMS?**

Probably not, though they do handle the most frequent and destructive ones. More sophisticated technologies, i.e. hybrid power conditioners and uninterruptible power systems, are available to handle complex power problems.

### **WHAT IS THE PURPOSE OF THE PHONE JACKS ON SURGE SUPPRESSORS?**

Some of the surge suppressors incorporate protection circuitry for telephone equipment. There are two sockets on these products. By plugging a phone line through the sockets, you can minimize the effects of a surge coming into your equipment through the phone line. FAX machines, cordless phones and answering machines are especially sensitive, and computers with internal modems can be completely destroyed by spikes on the phone line.

### **WHAT IS THE DIFFERENCE BETWEEN A SURGE SUPPRESSOR AND ARRESTER?**

Suppressors are usually devices that plug into the wall outlet and can handle surges up to 6,000 volts. Arresters are usually devices that are installed at the service entrance (meter or electrical panel) and can handle surges up to 20,000 volts. Arresters divert excess energy to the ground, reducing voltage surges to a level that can be handled by your electrical system and surge suppressors located downstream from the electrical panel.

### **IS THE UL LABEL AN INDICATION OF A QUALITY PRODUCT?**

No! Many manufacturers misrepresent their products. Some claim a UL listing for their products if they use a single UL listed component such as the power cord. Other products have never been tested as anything more than a Temporary Power Tap, UL's term for an extension cord. Many claim that they meet standards or that it has passed UL standards, when in fact, they have never been tested by UL.