



# Skamania County PUD's

**Special  
Edition  
On**

## **Generators**

**& THEIR DANGERS  
OF BACKFEED**

**Remember, never  
plug a generator  
directly into a wall  
outlet—causes  
dangerous **BACK-  
FEED****

**Remember  
Safety First**

**PUD #1 of  
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## **Standby Electric Generators Safety Tips for Installation and Operation**

Standby electricity generators have long been installed in places like hospitals that can not tolerate a lengthy power outage. Today, many people also are installing generators in homes and businesses to keep important equipment running if the power goes out. We want to make sure that if you buy a generator you know how to install it correctly and operate it safely. After you've read this brochure, we encourage you to talk with electrical suppliers and contractors about your options. Most vendors are familiar with the utility's safety requirements for standby generation and they can help you select the best equipment for your generating needs.

### **Portable Generators**

**WARNING: NEVER PLUG A GENERATOR DIRECTLY INTO A  
WALL OUTLET  
This causes **B A C K F E E D** that will injure PUD linemen  
working to restore your power**

**P**ortable generators are the least expensive alternative for emergency power, particularly if you need 5,000 watts of electricity or less. Generators usually are powered by gasoline and diesel and can be moved from place to place to provide emergency electricity to particular appliances or other equipment. Because of the fumes they produce, these generators should always be located outside.

For example, if the power goes out and you want to keep your refrigerator operating, fire up your generator outside and **directly** plug the refrigerator into it, either with the appliance cord or with an extension cord. It's best to use an extension cord that's approved for outdoor use and has three wires, one of which is grounded.

### **Permanent Generators**

**P**ermanent generators can produce more electricity than portable models, and they should be wired directly into your home's electrical system with a transfer switch. Permanent generators are more expensive, but the best option if you want enough emergency electricity to keep several appliances operating.

## To install a permanent generator in your home.

You'll need to hire an electrician or do the work yourself. You will need an electrical permit, and the installation must comply with the National Electric Code and codes of local enforcing authorities. You can get code information from the state electrical inspectors at the Washington Department of Labor and Industries office in Vancouver at (360) 896-2360. Your generator supplier may not have all the necessary code information, but if you hire an electrical contractor to install the generator, they should know the existing codes.

### Other Things to Consider

**Power and reliability:** How much emergency power do you need? How often do you think you'll need it? Will it be used for anything other than an emergency? Answering these questions will help you choose the size and type of generator you need.

**Fumes:** Generators must be placed in well-ventilated areas outside, away from windows, doors or ventilation intakes that could allow exhaust fumes into your home.

**Fuel and Oil:** If you expect long, unattached operation of your generator, make sure fuel capacity and low-oil protection features are adequate for extended use. For an additional charge, most generators can be converted to the fuel of your choice.

### Transfer switches avoid generator's biggest danger: **B A C K F E E D**

For Safety reasons, we strongly recommend that you install a transfer switch with your generator (they're required on any permanent generator installation). Transfer switches prevent a generator's power from feeding backward into utility lines. Transfer switches should be "break before make" types—that means the connection to the utility power system will be cut off before the generator starts to produce power.

When the power goes out, it's tempting to fire up a portable generator and plug it into a wall outlet in your home. This is a potentially fatal move, unless you first disconnect from the utility's electric system, which a transfer switch forces you to do. Without that disconnect, a working generator plugged into a wall outlet can feed electricity into power lines. A lineman working to restore electricity service can be seriously injured or killed by this "backfeed" and you risk having your generator destroyed when PUD power is restored.

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