

# Generator Safety

## Don't Get Left Out in the Cold

**Even if Kansas escapes major snow events** in the next few months, high winds and ice can bring down power lines resulting in extended power outages. Depending on the extent of the damage, power could be restored within a few hours or may take much longer if there is widespread damage. The illustration on page 19 explains the steps co-op line crews take in safely restoring power.

To get an idea of the damage and potential power restoration timeline, monitor your electric cooperative's website, Facebook page or other social media accounts. Here you can learn more about the outage, which will help you determine the best course of action for your family. Extra clothes and blankets may suffice for short outages, as will a properly vented wood burning stove or fireplace, but extended outages in bitterly cold temperatures may force you to shelter elsewhere until the power is restored. If it's safe for you to travel and you need help finding the nearest shelter, Text SHELTER + your ZIP code to 43362 (4FEMA) to find one. (Example: shelter 12345)

If you have a generator to use during power outages be mindful of risks such as electric shock and toxic exhaust.



**If you are not careful with the preparation of a portable or standby generator, you can put the lives of others in danger.**

According to the U.S. Consumer Product Safety Commission, more than half of the annual accidents with generators occur between November and February, the coldest months of the year. Safe Electricity provides the following tips on the safe preparation and operation of generators this winter:

- ▶ **Because carbon monoxide is colorless and odorless, always run the machine outdoors,** as carbon monoxide levels may be fatal within minutes in enclosed areas. Be aware of the symptoms of carbon monoxide poisoning, which include headaches, dizziness, confusion, fatigue and nausea. If you suspect that someone has been exposed to carbon monoxide, move them into fresh air immediately. It is also a good idea to install carbon monoxide detectors in your home. Follow the instructions in the manufacturer's guide for proper placement, and test the batteries regularly.
- ▶ **Carbon monoxide** produced by generators is not the only hazard from generator use. If you are not careful with the preparation of a portable or standby generator, you can put the lives of others in danger because of backfeed. Backfeed is a situation where a generator is feeding electricity back through your electrical system and meter into the power lines. This jeopardizes the safety of line crews working

to restore power as well as anyone who may be near the downed or sagging line that becomes energized.

- ▶ **Generators come in a variety of sizes,** capacities and power sources, so it's important to thoroughly read and follow all manufacturer instructions. Also before you use a generator, inspect it for damage. If no damage is found, prepare it for use in an area outside of the home and away from dangerous or wet conditions.
- ▶ **To prevent backfeed,** standby generators should have a transfer safety switch installed by a professional. This device automatically separates your home system from the utility system. Portable generators should never be plugged directly into a home outlet or electrical system. Use a heavy-duty, outdoor-rated extension cord to plug appliances into an outlet on the generator for power. Your generator should have more output than the wattage of the appliances you will plug into it.
- ▶ **Be sure to keep pets and children a safe distance away.** When the generator needs a refill on gasoline, first reduce flammability by turning off the machine for at least 10 minutes so that fumes can dissipate.

Safety is of prime importance in a heating emergency. Fire, asphyxiation from lack of oxygen and carbon monoxide poisoning are much greater dangers than your chances of freezing in your home.

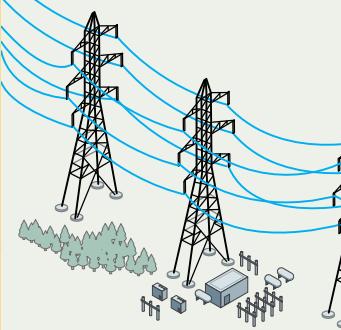
For more information on winter safety, visit [SafeElectricity.org](http://SafeElectricity.org). **KCL**

## Powering Up

When electricity goes out, most of us expect power will be restored within a few hours. But when a major storm causes widespread damage, longer outages may result. Co-op line crews work long, hard hours to restore service safely to the greatest number of consumers in the shortest time possible. Here's what's going on if you find yourself in the dark.

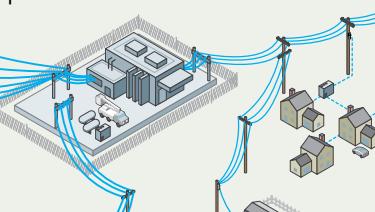
### 1 High-Voltage Transmission Lines

Transmission towers and cables that supply power to transmission substations (and thousands of members) rarely fail. But when damaged, these facilities must be repaired before other parts of the system can operate.



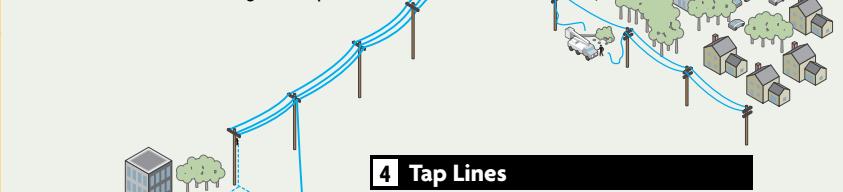
### 2 Distribution Substation

Each substation serves hundreds or thousands of consumers. When a major outage occurs, line crews inspect substations to determine if problems stem from transmission lines feeding into the substation, the substation itself, or if problems exist down the line.



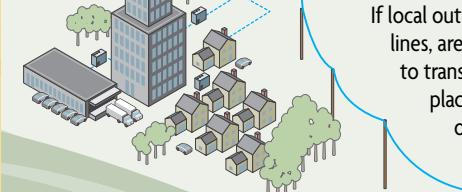
### 3 Main Distribution Lines

If the problem cannot be isolated at a distribution substation, distribution lines are checked. These lines carry power to large groups of consumers in communities or housing developments.



### 4 Tap Lines

If local outages persist, supply lines, called tap lines, are inspected. These lines deliver power to transformers, either mounted on poles or placed on pads for underground service, outside businesses, schools, and homes.



### 5 Individual Homes

If your home remains without power, the service line between a transformer and your residence may need to be repaired. Always call to report an outage to help line crews isolate local issues.

graphic by Funnel Inc.