

# Preventing electrocutions from generators plugged into household circuits

**Never install any generator that requires hard-wiring into an existing electrical circuit. This requires a licensed, trained, qualified electrician.**

When power lines are down, you can restore energy to your home by using a portable generator.

If the generator is plugged into a household circuit, or if it is improperly sized, installed or operated, the electrical current could reverse, go back through the circuit to the power grid and then increase in voltage. If a worker attempts to repair power lines when this happens, the worker could be electrocuted. This is called *backfeed* or feedback in the electrical energy in power lines.

Backfeed can seriously injure or kill repair workers or people in neighboring buildings. Following the safety guidelines below can reduce this risk. Once your generator has been installed by a qualified electrician, be sure that the main circuit breaker is OFF and locked out prior to starting the generator. This will help protect utility workers from possible electrocution.

## Effects of Backfeed

The problem of backfeed in electrical energy is a constant risk for electrical energy workers. Electrocutions are the fifth leading cause of all reported occupational deaths.

Treat all power lines as “hot” unless the lines have been de-energized and grounded. Because of the possibility of a feedback circuit, the worker should ground all lines on both sides of the work area unless he/she is wearing the proper personal protective equipment including eye/face protection and National Electric Code (NEC) rated and approved gloves and sleeves.

Power lines should not be repaired or otherwise accessed without adequate personal protective equipment, including eye/face protection and NEC rated and approved gloves and sleeves.

## Other Generator Hazards

Generator use is also a major cause of carbon monoxide poisoning. Generators should only be used in well ventilated areas. Do not use generators or other gas-powered equipment in your garage, on a porch or in an area near open windows. Carbon monoxide from generators can kill you and your family in minutes.

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