

## Be Prepared for Severe Storms, Dangers Left in Their Wake

(March, 2007) The advent of spring and warmer weather also brings the potential for severe thunderstorms and tornados. As part of Severe Storm Preparedness Week, Safe Electricity advises everyone to be prepared for these storms and the electrical hazards they can leave behind.

“Assemble a kit of essentials, like battery-operated flashlight and radio,” says Molly Hall, Executive Director of Safe Electricity. “Keep a list of emergency phone numbers that includes the electric utility. Be prepared for the possibility of a prolonged outage due to power line and electric equipment damage.”

Fill spare containers with water for washing, and keep a supply of bottled drinking water on hand. Keep a supply of non-perishable food items, along with a hand opener for canned food.

During an outage, switch off lights and appliances to prevent overloading circuits and damaging appliances when power is restored. Leave one lamp or switch on as a signal for when your power returns.

If after a storm or disaster, the power to your home is out for a prolonged period, know important safety rules, such as never using a charcoal or gas grill to cook inside! And if you use a standby generator, make sure a transfer safety switch is used, or connect the appliance(s) directly to the generator. This prevents electricity from traveling back through the power lines, what’s known as “back feed.” Back feed creates danger for anyone near lines, particularly crews working to restore power.

When venturing outside after a severe storm, stay away from downed power lines and be alert to the possibility that tree limbs or debris may hide an electrical hazard. Assume that any dangling wires you encounter are electrical, and treat all downed or hanging power lines as if they are energized. Warn others to stay away and contact the electric utility.

If you are driving and come upon a downed power line, stay in your vehicle, warn others to stay away and contact emergency personnel or electric utility. Also when driving, be careful at intersections where traffic lights may be out. Stop at all railroad crossings, and treat road intersections with traffic signals as a four-way stop before proceeding with caution.

“Before re-entering storm-damaged buildings or rooms, be sure all electric and gas services are turned off,” says Jay Solomon, University of Illinois Extension educator. “Never attempt to turn off power at the breaker box if you must stand in water to do so. If you can’t reach your breaker box safely, call your electric utility to shut off power at the meter.”

Never step into a flooded basement or other area if water is covering electrical outlets, appliances or cords. Be alert to any electrical equipment that could be energized and in contact with water. Never touch electrical appliances, cords or wires while you are wet or standing in water.

“Cleaning up and using water-damaged appliances also carry safety risks,” says Solomon. “Electric motors in appliances that have been drenched or submerged should be thoroughly cleaned and reconditioned before they are put back into service. It may be necessary to repair or replace electrical appliances or tools that have been in contact with water. Do not use any water-damaged appliance until a professional has checked it out.”

For more information on electrical safety, visit [www.safeelectricity.org](http://www.safeelectricity.org)

Safe Electricity is an electrical safety public awareness program created and supported by a coalition of several dozen organizations, including electric utilities and cooperatives, educators and other entities committed to promoting electrical safety.

For more information on electrical safety, visit [www.SafeElectricity.org](http://www.SafeElectricity.org).

## **LOOK UP AND AROUND YOU**

Always be aware of the location of power lines, particularly when using long metal tools like ladders, pool skimmers and pruning poles, or when installing rooftop antennas and satellite dishes or doing roof repair work.

Be especially careful when working near power lines attached to your house. Keep equipment and yourself at least 10 feet from lines. Never trim trees near power lines - leave that to the professionals.

When designing an outdoor play area for your children, do not install playground equipment or swimming pools underneath or near power lines.

## **CALL BEFORE YOU DIG**

If your projects include digging, like building a deck or planting a tree, call your utility locating service before you begin. Never assume the location or depth of underground utility lines. Call at least two business days ahead of your dig date. This service is free, prevents the inconvenience of having utilities interrupted, and can help you avoid serious injury. For outdoor landscaping and decorative lighting, consider solar lighting units available for patios, steps and sidewalks.

## **SAFELY USE APPLIANCES AND TOOLS OUTDOORS**

Be careful using electrical appliances outdoors. Whether it is a lawn and gardening device, a bug zapper, an electric charcoal lighter, a radio or CD player, caution must be exercised. Be sure you use outlets that have weatherproof covers and ground fault circuit interrupters (GFCI) to prevent serious shock injuries. Use portable GFCIs for outdoor outlets that don't have them.

If you need to use extension cords outside, check them carefully for exposed wires; make sure they are in good shape, and not frayed or cracked. Use only extension cords that are rated and marked for outdoor use, and are large enough to handle the current needed for the device you are using. Check that the prongs on the extension cord plugs are clean, not broken or bent. Make sure the ground prong is intact in a three-prong plug, and avoid use of adapters for safety reasons.

Never use electric yard tools if it's raining or the ground is wet. Keep electrical appliances and tools at least 10 feet away from pools, ponds and wet surfaces.

For more information on electrical safety, visit [www.SafeElectricity.org](http://www.SafeElectricity.org).

## **Know what to do in auto accidents involving power lines.**

Instincts tell us to flee danger. Unfortunately, in vehicle accidents that involve downed power lines, these natural inclinations can lead to tragic results.

If your car hits a power pole, or otherwise brings a power line down, Safe Electricity urges you to stay inside the vehicle until help arrives. Getting out of the vehicle, with few exceptions, is the wrong thing to do until the line has been de-energized.

“You are almost always better off to stay in the car, especially if the line is in contact with the vehicle,” says Molly Hall, Executive Director of the Safe Electricity program. “If the power line is still energized and you step outside, your body becomes the path for that electricity and electrocution is the tragic result.”

“It’s best to wait until the electric utility crew arrives to make sure power to the line is cut off,” says Hall.

The only exception would be if fire or other danger, like the smell of gasoline, is present. In that case, the proper action is to jump – not step – with both feet hitting the ground at the same time. Jump clear, without touching the vehicle and ground at the same time. Shuffle or hop to safety keeping both feet together as you leave the area. Like the ripples in a pond or lake, the voltage diminishes the farther out it is from the source. Stepping from one voltage level to another allows the body to become a path for that electricity.

“Even if a power line has landed on the ground, there is still the potential for the area near your car to be energized,” Hall says. “Stay inside the vehicle unless there’s fire or imminent risk of fire.”

The same rules apply to situations involving large farm and construction equipment that comes in contact with overhead lines.

“Those working with large equipment should stay inside the cab or remain on the vehicle if equipment extensions come in contact with power lines.

“Warn others who may be nearby to stay away and wait until the electric utility arrives to make sure power to the line is cut off,” Hall adds. While driving, if you encounter a down wire on the road, always assume it is an electrical wire and energized, and stay in your car. If you come upon, or witness an accident involving toppled power poles and lines, don’t leave your vehicle to approach the accident scene.

“Often our inclination is to step in and help those in danger and offer assistance to the injured. But, in accidents involving power poles,” says Hall, “Call for help. Wait for trained assistance to arrive, or you could become an additional victim in need of rescue.”

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## **Escaping a Vehicle That's in Contact With Power Lines**

Remain calm, stay in the vehicle and call for help. Ask someone to call the electric utility, and a lineman will be sent to disconnect the power. If the power line is energized and you step outside, your body becomes the path and electrocution is the tragic result. Wait until the electric utility arrives to make sure power to the line is cut off.

The only exception would be if fire or the smell of gasoline were present. In that case, the proper action is to jump – not step – with both feet hitting the ground at the same time. Jump clear, without touching the vehicle and ground at the same time. Shuffle or hop to safety keeping both feet together as you leave the area.

Like the ripples in a pond or lake, the voltage diminishes the farther out it is from the source. Stepping from one voltage level to another allows the body to become a path for that electricity. A large difference in voltage between both feet could kill you.

Even if a power line has landed on the ground, there is still the potential for the area near your car to be energized. Stay inside the vehicle unless there's fire or imminent risk of fire. Be sure that at no time you or anyone touches the equipment and the ground at the same time. never should the occupants simply step out of the vehicle—they must jump clear.

For more information on electrical safety, visit [www.SafeElectricity.org](http://www.SafeElectricity.org).

## Play up Outdoor Electrical Safety to Children

Warm, sunny days beckon the child in us all to head outdoors to play. Safe Electricity recommends that families review and stress to children to follow simple electrical safety rules for safe outdoor play.

"Help keep your kids out of harm's way when they play outdoors," said Molly Hall, executive director of Safe Electricity. "Children often do not understand the dangers of electricity. Make them aware of overhead power lines and electrical equipment, and emphasize that they should never climb or play near them."

Safe Electricity recommends that children be taught to follow these rules:

Never climb trees near power lines. Even if the power lines aren't touching the tree, they could touch when more weight is added to the branch.

Fly kites and model airplanes in large open areas like a park or a field, safely away from trees and overhead power lines. If a kite gets stuck in a tree that's near power lines, don't climb up to get it. Contact your electric utility for assistance.

Never climb a utility pole or tower.

Don't play on or around pad-mounted electrical equipment.

Never go into an electric substation for any reason - even on a dare. Electric substations contain high-voltage equipment, which can kill you. Never rescue a pet or retrieve a ball or toy that goes inside. Call your electric utility instead.

When designing an outdoor play area for your children, do not install playground equipment or swimming pools underneath or near power lines. Protect all family members from serious shock and injuries by installing and using outdoor outlets with ground fault circuit interrupters (GFCI). Use portable GFCIs for outdoor outlets that don't have them. Be careful using electrical appliances outdoors, even if plugged into GFCI-equipped outlets.

"Water always attracts kids, but water and electricity never mix," warns Hall. "Teach older children to exercise caution before plugging in a radio, CD player, or any electrical gadget outdoors, and keep all electrical appliances at least ten feet away from hot tubs, pools, ponds, puddles and wet surfaces."

"Spring showers bring more than tempting puddles for kids to splash in, they can also leave electric hazards behind," Hall adds. "Flooded areas are never safe spots to wade or play in, and may be in contact with energized electrical equipment or fallen power lines."

Make sure all of your family members know to stay away from downed power lines and wires, and tell children to report to an adult any fallen or dangling wires.

"It's a good idea to include utility emergency numbers with other posted emergency phone numbers, and instruct children how to call for help in an emergency," advises Hall.

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## First Aid for Electric Shock Victims

### First Aid For Electrical Accidents

- Disconnect the appliances or turn off the power if a person is undergoing electric shock.
- Cover associated electric shock burns with a dry sterile dressing only.
- Never touch a person undergoing electric shock or you too could become a victim.

1. Don't touch them!
2. Unplug the appliance or turn off the power at the control panel.
3. If you can't turn off the power, use a piece of wood, like a broom handle, dry rope or dry clothing, to separate the victim from the power source.
4. Do not try to move a victim touching a high voltage wire. Call for emergency help.
5. Keep the victim lying down. Unconscious victims should be placed on their side to allow drainage of fluids. Do not move the victim if there is a suspicion of neck or spine injuries unless absolutely necessary.
6. If the victim is not breathing, apply mouth-to-mouth resuscitation. If the victim has no pulse, begin cardiopulmonary resuscitation (CPR). Then cover the victim with a blanket to maintain body heat, keep the victims head low and get medical attention.

## First Aid for Electrical Burn Victims

Electrical burns vary in severity depending upon: (1) how long the body is in contact with the electric current; (2) the strength of the current; (3) the type of current; and (4) the direction the current takes though the body. Often these burns are deep. There may be more than one area burned. One area may be where the current entered the body and another may be where it left. Electrical burn wounds may look minor on the outside, but could be severe on the inside.

If a person has received an electrical burn, check for shock and follow the steps outlined above. If the person is conscious and there are no signs of shock (such as being cold, clammy, pale and having a rapid pulse), begin treating the burned area. Do not apply grease or oil to the burn. Cover the burn with a dry, sterile dressing, but do not cool the burn. Keep the victim from getting chilled. Seek medical attention as soon as possible.

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