

GOING OFF GRID: UTILITY OUTAGES

FACILITATOR GUIDE



FEMA

ACTIVITY: PREPARING A CHECKLIST FOR GOING OFF GRID

Purpose: The purpose of this activity is to educate individuals and families on how to prepare for a utility outage.

Objectives:

- List the critical items to have and actions to take in a utility outage.
- Identify how to practice for a utility outage.

Preparation and Needed Materials: Prior to conducting this activity, you may want to:

- Gather information about local utility companies (phone numbers and Web sites) and where people can find information in the local area when utilities go out (radio stations, phone numbers of local emergency management offices, chapters of the American Red Cross, etc.).
- Try the suggested “Family Off the Grid Night” activity so you can share lessons learned with participants.
- Work with local merchants to get donations of essential items such as flashlights, batteries, appliance thermometers, etc.

Presentation Tips:

- Welcome participants to the session.
- Explain that by the end of the session, they will be able to take steps at home to prepare for utility outages.
- Ask the participants the following discussion questions: When was the last time the power went out? How often does it happen? How long does the average power outage last in this area? How long should you plan to take care of yourself until heat or power or water is restored?
- Acknowledge the answers and then present the following key points:
 - The length of power outages can really vary, from a few hours to several days. Severe weather can prolong them. Plan to get by without utilities for at least 3 days.
 - You can take steps ahead of time in your own home to make life off the grid easier. These basic steps are not time consuming or expensive. Many of the items you need may be found around your home.

GOING OFF GRID: UTILITY OUTAGES

FACILITATOR GUIDE



FEMA

ACTIVITY: PREPARING A CHECKLIST FOR GOING OFF GRID

Presentation Tips: (Continued)

- Distribute the Outage Checklist handout. Briefly review the items, and give the participants local numbers and information so that they may begin filling in the checklist.
- Suggest that families may want to plan a “Family Off the Grid Night” to practice the steps on a checklist before an actual outage occurs. Besides revealing things you haven’t considered, unplugging for the evening can be fun for the family as well. It is an opportunity to relate to one another without the distractions of phones, computers, and television.
- Optional Activity: If feasible, demonstrate how a “Family Off the Grid Night” might work.
 - Divide the groups into teams and have each one pick a type of outage. The outages can also be combined. For example, extreme cold weather or storms can cause electrical outages, which in turn can freeze pipes causing a water outage.
 - Ask them to discuss assessing their neighborhoods. How would they handle the tasks on their checklists in their households? Who would do what? What items do they need to find or purchase?
 - Reassemble the participants and review what they discovered in exploring the checklist.
 - If you’ve done the activity beforehand, share the lessons you learned with the group.
- Optional Demonstrations: If feasible, demonstrate where some of the utility cut-offs are in your meeting place and discuss what tools you might need to shut down service.
- Conclude the session by noting there are other diagrams and handouts they may find helpful. Ask participants if they have any questions about the items on the checklist. Thank the participants for attending the session.

GOING OFF GRID: UTILITY OUTAGES

OUTAGE CHECKLIST: HANDOUT



FEMA

Important Phone Numbers

- Electric company phone number/Web site: _____
- Natural gas company phone number/Web site: _____
- Water company phone number/Web site: _____
- Plumbing company phone number/Web site: _____
- Oil/gas heat service phone number/Web site: _____
- Telephone company phone number/Web site: _____
- For more information about outages and public shelters, listen to or contact: _____

If you use medical equipment that requires electricity to operate, register with your power company and health care provider to learn about alternatives.

Assess Your Neighborhood

- If there is a utility outage, who may need extra support because of their functional or medical needs?
- Does anyone in the neighborhood have special skills who can help others?

Electricity Outages

- Locate and label utility shutoff (see diagram at the end of this handout).
- Post instructions next to fuse box or circuit breaker.
- Are there enough flashlights on hand (at least one for each person in the house)? Are the batteries working? (Tip: Store batteries in the refrigerator for longer life.)
- Do not use candles. They are a fire hazard.
- Keep on hand ready-to-eat meals that don't require cooking or cooling.

GOING OFF GRID: UTILITY OUTAGES

OUTAGE CHECKLIST: HANDOUT



FEMA

Electricity Outages (Continued)

- Freeze water in plastic water bottles or old milk containers, leaving about an inch at the top for frozen water to expand. When placed in a refrigerator and freezer, they will keep food cold for several hours.
- Know where to get dry ice to keep food cold as necessary.
- Are there cordless phones that need electricity to run? If so, what can be used as a backup? (Standard telephone with cord, cell phone, etc.)
- Find a new or used battery-operated radio to get updates on information, shelters, etc.
- Is there an alternate heating source? Make sure it is properly vented and in good working order. Make sure all chimneys are clean and all flues are operational. Do you have enough wood, pellets, or heating fuel?
- If heating system involves an electronic ignition or fan, know who to call for service/restarting assistance.
- If there is an electric garage door opener, where is the manual release? Post instructions on how to use it and practice!
- When possible, keep car gas tanks at least half full. Gas stations need electricity to power the pumps.

When the power goes out . . .

- Are all the pots and pans off the stove? Are the stove range and oven turned off?
- If you have a space heater, make sure it's at least 3 feet away from furniture or other flammable objects. Keep it unplugged when not in use.
- In cold weather, maximize heat coming from the sun. Open shades, curtains, or louvers so that sun may heat the glass. Close them when the sun is no longer shining directly to hold in the heat. In hot weather, minimize heat by closing shades, curtains, and louvers.

POST THIS PAGE IN YOUR HOME!

GOING OFF GRID: UTILITY OUTAGES

OUTAGE CHECKLIST: HANDOUT



FEMA

Natural Gas Outages

- Locate and label gas shutoff valve(s). There may be more than one (see diagram at the end of this handout).
- Post shutoff instructions near the meter and make sure a nonsparking wrench is stored nearby.
- If your gas meter is located inside your home, you should only shut off gas flow when instructed to by local authorities.

Also see “Electricity Outages” above for more tips.

Water Outages

- Locate and label main water cutoff. Make sure any special tools needed are stored nearby. (Tip: The main water cutoff is usually on the outside wall of the house where the water meter is. With a well, the cutoff is usually on the well pump.)
- Have 3 days of drinking water stored (1 gallon of water per person per day).

If pipes may freeze . . .

- Wrap insulation, tape, newspapers, or rags around them.
- Store water in buckets or bathtubs to flush toilets.
- Leave water trickling out of the faucets.

If pipes do freeze . . .

- Remove any insulation or newspaper and wrap them in rags.
- Completely open all the faucets. If you can still heat water, pour hot water over the pipes, starting with where they are most cold. If you have electricity, try using a blow dryer.

If pipes burst . . .

- Know where circuit breakers and fuses are and how to shut off the power. See “Electricity Outages” above.
- Never enter a flooded basement or walk through standing water to shut off electrical supply because water conducts electricity.

GOING OFF GRID: UTILITY OUTAGES

OUTAGE CHECKLIST: HANDOUT



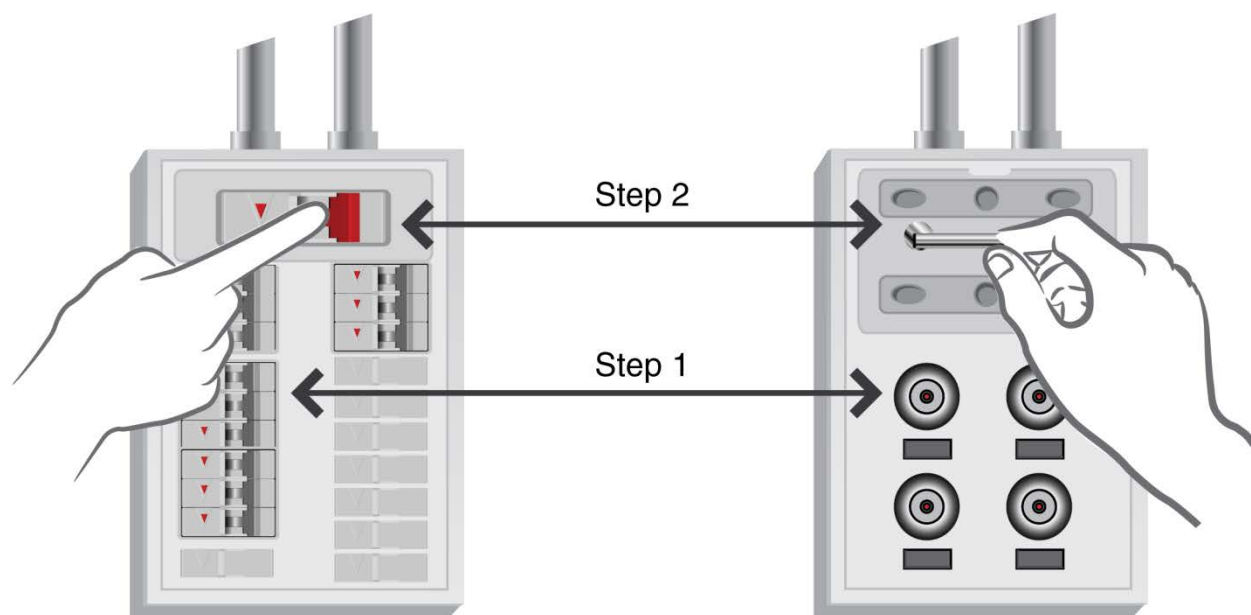
FEMA

Phone Outages

- Have on hand a backup way to communicate (cell phone, computer via cable connection, etc.).

Shutting Off Electricity

Unscrew individual fuses or switch off smaller breakers first, then pull the main switch or breaker. When restoring power, turn on main switch or breaker, then screw in smaller fuses or turn on smaller breakers, one at a time.



Circuit Breaker Box With Shutoff

Shutoff steps:

- Step 1: Shut off individual breakers.
- Step 2: Shut off main breaker.

Fuse Box With Shutoff

Shutoff steps:

- Step 1: Pull out individual fuses.
- Step 2: Pull out main fuse.

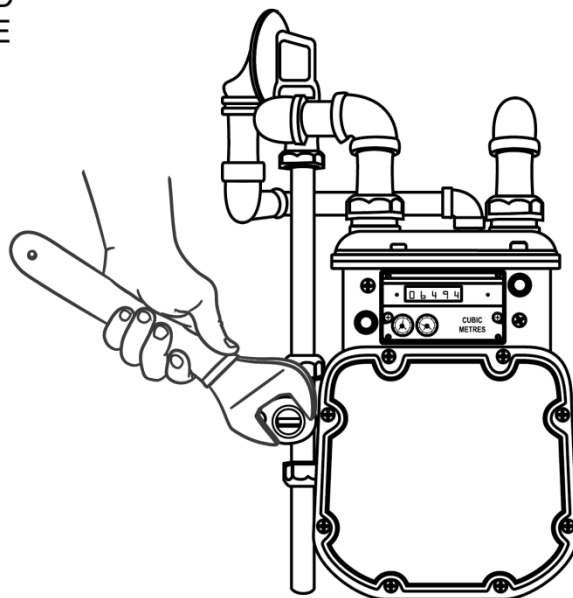
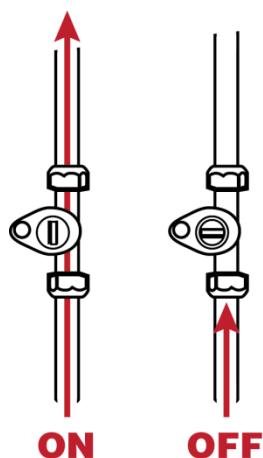
GOING OFF GRID: UTILITY OUTAGES

OUTAGE CHECKLIST: HANDOUT



FEMA

GAS METER AND SHUT-OFF VALVE



Shutting Off Gas

The gas meter shutoff diagram indicates the shutoff valve location on the pipe that comes out of the ground. To turn off the valve, use a nonsparking wrench to turn the valve clockwise one-quarter turn. Remember that, in all cases, natural gas flow should only be turned on by a licensed technician.

Please note: Some gas meters have automatic shutoff valves that restrict the flow of gas during an earthquake or other emergency. These are installed by a licensed plumber, downstream of the utility point of delivery. If you are unsure whether your home has this shutoff device, contact your gas service company. If this shutoff device is closed, only a qualified professional should restore it.

Gas Meter in the Home

If you smell gas or see the dials on your meter showing gas is flowing even though appliances are turned off, you should evacuate the premises and call 911. Do not attempt to shut off the gas from inside the building if gas may be in the air.

Gas Meter Outside the Home

You should turn off the meter from outside the building if you smell gas or you see dials on the meter showing gas is flowing even though appliances are turned off. If there is a fire that you cannot extinguish, call 911 and turn off the gas only if it is safe to do so.

GOING OFF GRID: UTILITY OUTAGES

OUTAGE CHECKLIST: HANDOUT



FEMA

Keep the refrigerator and freezer doors closed. Food should be okay for around 4 hours. Refer to the chart below to know when to save food and when to throw it out.

FOOD IN REFRIGERATOR	Held above 40 °F for over 2 hours
MEAT, POULTRY, SEAFOOD: Any raw, leftover, or thawing. Also includes soy meat substitutes, salads, lunch meats, pizza, cans that have been opened, fish, or meat sauces.	Discard
CHEESE: Any soft cheeses, shredded cheeses, or low-fat cheeses	Discard
Hard cheeses such as cheddar, colby, swiss, parmesan, provolone, romano, or hard cheeses grated in can or jar	Safe
DAIRY: Milk, cream, sour cream, buttermilk, evaporated milk, yogurt, eggnog, soy milk, opened baby formula	Discard
Butter, margarine	Safe
EGGS: All eggs and egg products, such as puddings	Discard
CASSEROLES, SOUPS, STEWS	Discard
FRUITS: Fresh fruits, cut	Discard
Opened fruit juices or canned fruits, along with fresh fruits, coconut, raisins, dried fruits, candied fruits, dates	Safe
SAUCES, SPREADS, JAMS: Opened mayonnaise, tartar sauce, horseradish	Discard if above 50 °F for over 8 hours
Other sauces, including soy, barbecue, taco. Also peanut butter, jelly, relish, mustard, catsup, olives, pickles, and vinegar-based dressings.	Safe
Opened creamy-based dressings and opened spaghetti sauce	Discard
BREAD, CAKES, COOKIES, PASTA, GRAINS, PASTRY: Bread, rolls, cakes, muffins, quick breads, tortillas, waffles, pancakes, bagels, fruit pies	Safe
All other rolls, dough, cooked pasta, rice, potatoes, pasta salads, fresh pasta, cheesecake, cream-filled pastries or pie	Discard
VEGETABLES: Fresh raw vegetables or mushrooms, herbs, spices	Safe
All other pre-cut, pre-washed, cooked vegetables, tofu, opened vegetable juice, garlic in oil, potato salad	Discard

GOING OFF GRID: UTILITY OUTAGES

OUTAGE CHECKLIST: HANDOUT



FEMA

FOOD IN FREEZER	Still contains ice crystals and feels as cold as if refrigerated	Thawed; held above 40 °F for over 2 hours
MEAT, POULTRY, SEAFOOD	Refreeze. However, seafood will have some texture and flavor loss.	Discard
DAIRY: Milk and soft or semi-soft cheese	Refreeze. May lose some texture.	Discard
Eggs (out of shell) and egg products	Refreeze	Discard
Ice cream, frozen yogurt	Discard	Discard
Hard and shredded cheeses, casseroles with dairy products, cheesecake	Refreeze	Refreeze
FRUITS: Juices, packaged fruits	Refreeze. However, home or commercially packaged fruits will have texture and flavor change.	Refreeze. Discard if mold, yeasty smell, or sliminess develops.
VEGETABLES: Juices, packaged vegetables	Refreeze. Vegetables may suffer texture and flavor loss.	Discard after held above 40 °F for 6 hours
BREADS, PASTRIES: Breads, rolls, muffins, cakes (without custard fillings)	Refreeze	Refreeze
Cakes, pies, pastries with custard or cheese filling	Refreeze	Discard
Pie crusts, commercial and homemade bread dough	Refreeze. Some quality loss may occur.	Refreeze. Quality loss is considerable.
OTHER: Casseroles – pasta, rice based	Refreeze	Discard
Flour, cornmeal, nuts, waffles, pancakes, bagels	Refreeze	Refreeze
Frozen meals	Refreeze	Discard

For more information, see <http://www.foodsafety.gov/keep/emergency/index.html>