

Dealing with Power Outages

adapted from the Canadian Mortgage & Housing Corporation

Dealing with Power Outages

Lengthy power outages rarely occur in Canada, but when they do, they can affect your comfort and safety and may make it difficult to live in your home. When the power fails you may not have heating, hot water, lighting or plumbing. If you are not prepared, you could face major challenges. However, if you take the time now to prepare, a power failure can be just a temporary inconvenience.

In most buildings, electricity is necessary for lights, appliances, heating, air conditioning, cold and hot water delivery, ventilation systems, security systems and other conveniences. Electrically powered pumps pressurize the water system to deliver water to the upper floors for drinking, cooking, sinks, toilets and firefighting. Natural gas appliances and furnaces may have electronic ignitions and electric fans. Even today's sophisticated cordless phones require electricity to work.



Short power interruptions are a fact of life and many apartment buildings have backup systems to temporarily supply power for the most-essential services. UPS (uninterruptible power supply) systems, battery-powered emergency lighting and diesel generators kick into action when the power fails. In larger buildings, emergency power generators supply electricity for essential services, such as corridor and stairwell lighting, fire and smoke detectors and alarms, fire pumps, firefighter elevators and public address systems. Although generators can operate as long as fuel is available, they are not usually designed for continuous, long-term service.

Expect the unexpected and plan for it. Knowing what to do during a power failure will help you better control the situation and be in a better position to avoid problems.

Planning for a Power Failure

Be Prepared

A power failure can strike anywhere, at any time. It can be a local occurrence, such as a transformer failing or a nearby fire. Power failures can affect also a broad area, such as the 1998 ice storm that hit eastern Ontario and Quebec, or the 2003 power failure in Ontario and parts of the eastern United States. If you are prepared, you will be able to help yourself and your family members get through it safely and, perhaps, comfortably.

What to Expect When the Power Fails:

Know what to expect when the power goes off. The following probably won't work in your home in a power failure:

- Electric outlets, refrigerators, freezers
- Electric stoves, ovens and microwaves
- Lighting, electronic equipment (TVs, radios, etc.)
- Water and toilets above the sixth floor — this varies with municipal pumping capacity.

A power outage will also put the following systems out of action:

- Lighting — except emergency lights in corridors and stairwells
- Pumps for water systems
- Parking garage door

Put Up a List Emergency Numbers

Keep a list of key telephone numbers near your phone. Your electric company bill lists the company's emergency contact numbers. Most municipalities have emergency contact numbers in the red pages in the phone book.

You should have at least one telephone that is NOT a cordless model. Cordless phones need electricity to work. A fully charged cellphone is a good idea as well

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BUT remember that in a widespread power failure, cellphone systems may overload and not work.

Prepare an Emergency Kit

A simple emergency kit is useful in any emergency or disaster. The list below details contents for an all-purpose kit. Making one is easy and inexpensive — you probably already have most of the items you need.



Consider including a hands-free flashlight with LED bulbs. Worn on your head, it allows you to focus the light where needed and leaves your hands free for other activities.

Your kit should contain enough supplies to keep you and members of your household (including pets) self-sufficient for at least three days. Include any important prescription medicine — and a copy of the prescription. Remember to rotate and use food, water and medicine before their expiry dates.

Keep the emergency supplies in your apartment — not in a basement locker — in a container that is easy to store and carry.

Alternate Power

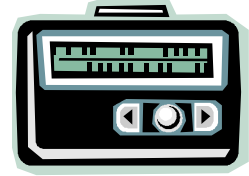
If you cannot safely use a generator, battery-operated devices, such as some UPS systems or a power box, can supply power for a short time to run a television or a small appliance. Small solar (photovoltaic) panels, readily available at hardware stores, will recharge a cellphone, laptop computer, flashlight or run a radio as long as you have access to the sun.

Consider having on hand a wind-up or crank radio and flashlight so you don't have to worry about batteries.

Your emergency kit should contain:

- Battery-operated or crank radio
- Flashlights and extra light bulbs
- Extra batteries

- Candles and holders, matches/lighter
- Water for drinking and cleanup
- Manual can opener
- Wind-up or battery-operated clock
- Waterless hand-cleaning liquid
- Utility knife
- First aid kit
- Essential medicines/prescriptions
- Disinfectant, chlorine bleach
- Cash and/or traveller's cheques
- Adjustable wrench, to shut off household gas and water, if necessary



Additional Items

- Easy-to-prepare, non-perishable food
- Bottled water
- Pet supplies
- Extra car keys
- ABC-type fire extinguisher
- Blankets/sleeping bags
- Bucket
- Plastic sheeting
- Rope
- Small Shovel
- Important papers
- Clothing; footwear (one change per person; more for children)
- Toilet paper; other personal supplies
- Backpack/duffel bag (in case you have to leave your apartment)
- Plastic garbage bags, ties
- Emergency preparedness manual
- Map of area and compass
- Whistle (to attract attention)
- Playing cards, games, paper, pencils
- Chocolate or other comfort food

Natural Gas Appliances

You may be able to use certain natural gasfired appliances in a power outage. You can use some natural gas fireplaces to heat a single room — others need

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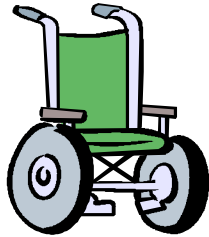
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electricity to operate. Find out if your gas appliances will work during an electricity outage.

You can use some natural gas stoves for cooking and for cooking only. Never use a gas stove for heating. If you can use a gas stove for cooking, make sure that a window is open while the stove is running and that you have battery-operated smoke, fire and carbon monoxide detectors that work. To avoid the threat of carbon monoxide poisoning, limit use of the stove. If you have a natural gas-fired hot water tank, ask your building manager or gas company about safety precautions for shutting off the gas if necessary.

People With Disabilities or Others Requiring Assistance

If you, a family member or a neighbour, has a disability or needs assistance, consider how a power outage may affect their ability to live in their apartment or leave it if evacuation becomes necessary. Consider:



- Your evacuation route — with and without elevator service.
- Planning for a backup power supply for essential medical equipment.
- Keeping a flashlight or chemical light stick and a cellphone handy to signal for help.
- Establishing a self-help network to assist and check on you or others in need during an emergency. Involve several people or family members, including a close neighbour, and give them a key to your apartment. Make sure they know how to contact you to help you in an emergency. Make sure neighbours in need know how to contact you as well.
- Enrolling in a medical alert program that will signal for help if you are immobilized.
- Keeping a list of facilities that provide life-sustaining equipment or treatment.
- Keeping a list of medical conditions and treatment.
- Preparing emergency supplies for an assistance dog.

- Telling the property management that you or others may need assistance staying in your apartment or that you must be evacuated if there is a power failure. This will allow the property manager to plan and make the necessary arrangements on your behalf.

Think a Power Failure is Likely?

Most often, power failures take us by surprise. However, it is sometimes possible to foresee a power failure. News reports about cold snaps or heat waves straining the electric power system are indicators that a power failure could happen soon. Sometimes, electricity producers post warnings on their websites. If you get a sense that a power failure may happen:

- fill large, clean, water containers with drinking water;
- fill the bathtub to provide water for toilet flushing;
- find and check your emergency kit and other things you will need;
- get anything you may need out of storage;
- think twice about using elevators;
- know where your flashlights, candles and holders are;
- in the summer, reduce power consumption by turning off your air conditioning, appliances and lighting;
- in the winter, reduce electricity usage, conserve heat by keeping windows and doors shut, but don't try to overheat your apartment — the effect will be limited;
- unplug computers, TVs, radios, stereos and other electric appliances (prevents damage when the power is restored);
- advise neighbours to take similar precautions.

Summer Power Failures

If the power goes off for more than a few minutes, the first thing to do is turn off and unplug all electronic equipment, tools and appliances and the air conditioning. This avoids the possibility of a start-up power surge damaging electronic equipment and

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reduces the load on the electrical system so power can be restored more easily. It also avoids injury, damage or fire from tools or appliances starting up automatically when the power comes back on. Make sure to shut off stovetop elements and the oven to prevent fires when the power returns.

Determine whether the power failure is just in your apartment (check the breaker panel, check the corridor lights, contact a neighbour, look out the window). If you cannot resolve the problem, contact your building manager and then the electricity company. Monitor the radio. Be informed; try to determine if the problem is widespread or local and if it is going to last for an extended period.

In general, stay in your apartment as long as you are safe, have water and are able to feed yourself. This is when planning and preparing an emergency kit makes all the difference. Check on disabled or elderly neighbours to make sure they are safe. Call 9-1-1 if there is an emergency. Make sure you are ready for night before it gets dark.

If you must use candles, use proper holders and put them on a fireproof surface. Never leave candles or oil lamps unattended — especially in the presence of children. Fires are a very real concern, particularly if the building has limited water pressure for firefighting. If the power failure is widespread, the fire department will likely be very busy handling other emergencies and you can expect that it will take firefighters much longer to arrive. LED flashlights and table lights are safe, bright, long-lasting, dependable alternatives to open flames. Keep a fire extinguisher handy. Extinguish candles and lamps if you leave the apartment.



Conserve water, buildings that would otherwise be habitable become uninhabitable when the toilets and sinks stop working. If this is a concern in your home, flush toilets only when absolutely necessary and store several large containers of extra water in your emergency kit.

If you have warning of the power outage and suspect water pressure will be a problem, fill your bathtub with water to use for toilet flushing. Fill clean containers with water for drinking and cooking. If you have a water tank in your apartment, it can provide toilet water through the tap at the base of the tank. Make sure the power supply to the tank has been disconnected and the natural gas line shut off before trying to draw water from the bottom of the tank. In older tanks the water at the bottom will likely appear rusty or filled with sediment — this water may only be good for toilet flushing. You can refill toilets by removing the tank lid and filling the tank to the waterline marked on its inside wall. To conserve water, you may be able fill the tank with less water.

Food spoiling in the refrigerator is a concern when the power is off for more than a few hours. A refrigerator typically keeps food cool for at least four hours, depending the original fridge temperature, how full it is, the room temperature and how often the fridge is opened. To keep food cold as long as possible, do not open the refrigerator or freezer unless it is absolutely necessary. To check on fridge temperature, use an thermometer. The fridge should not go above 4°C (40°F) for more than four hours. Chest freezers — if they are not opened often — should keep food frozen for more than 24 hours without power. To find out if food in a freezer has thawed, put loose ice cubes in a plastic container. If the ice cubes melt or refreeze in the shape of the container, assume other items have thawed and discard them.

Cooking without electricity is a challenge. You can use candle warmers and fondue pots indoors and a propane or alcohol camp stove on a balcony or deck. Never underestimate the risk of open flames. Never use fuel-burning camp stoves or charcoal burners inside a home. The fumes from these stoves can be deadly! Keep a fire extinguisher handy if cooking over open flames.

Store-bought canned foods are safe to eat from the can and are the safest and often the easiest choice for meals in a power failure.

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Winter Power Failure

Depending on its duration, a winter power failure can pose significant challenges. The possibility of your apartment's temperature falling to colder temperatures is a risk to be considered, and planned for, well in advance. If the power fails in the winter, it should be possible to stay warm, for a while, in an apartment.

Start by closing windows and doors tightly. Draw curtains and close blinds to help prevent heat loss (be aware that this may increase the amount of condensation that forms on your windows — be prepared to regularly wipe up the water as it pools at the base of the windows).

Food Safety

Throw out temperature-sensitive foods if the temperature of the fridge is above 4°C or 40°F. If food in the freezer has begun to thaw, check for ice crystals. You can safely refreeze the food if it still has ice crystals. When in doubt, throw the food out.

Temperature-Sensitive Foods

- meats/poultry
- dairy products
- egg products
- fish/shellfish
- cooked foods
- Durable Foods
- dry foods
- sweet or salty foods
- uncooked fruits or vegetables



As well as turning off and unplugging all electronic equipment, tools and appliances, turn the apartment thermostat down to minimum. This reduces the load on the power system when it restarts. This will also reduce fire hazards associated with belongings that could have come in contact with heating or cooking appliances during the outage.

If at all possible, stay in the apartment. Monitor the indoor temperature — if the temperature is above 15°C (60°F), it is chilly but not likely dangerous. If your

apartment stays at this temperature or drops, you will have to decide whether to stay. The decision depends on your ability, and the ability of children and the elderly, to keep comfortably warm.

Choose one room to live in — preferably one that receives direct sunlight. Keep everyone together for warmth and safety. Close inside doors to keep heat in your selected refuge.

Candles and oil lamps are very dangerous — particularly if fire and smoke detection and suppression systems do not work — but they can provide temporary warmth. Remember to use a proper holder placed on a fireproof surface. Never leave a candle unattended. Make sure to keep loose blankets and clothing away from open flame. Never leave children unattended in a room with an open flame. Fires are a very real concern, especially in winter when people are trying to stay warm. Keep a fire extinguisher handy when using candles or oil lamps and ensure all flames are out before going to sleep or leaving the apartment.

Do not use charcoal or gas barbecues, camp heating equipment or home generators to keep warm indoors. The chances of freezing to death in your apartment are small compared to the dangers of fire, carbon monoxide poisoning or lack of oxygen. Poor ventilation tends to be associated with sleepy, groggy feeling and the air will feel stuffy. Carbon monoxide cannot be detected by smell but people often feel nauseous or dizzy when exposed to it.

Water conservation is the same concern in the winter or summer. Refer to the summer information about water.

Food spoiling is generally not as great a concern in the winter. If you know the power will be off for some time and outdoor temperature is forecast to stay below freezing, you can store frozen food in containers on the balcony if temperatures permit. You can also store food you usually keep in a refrigerator outside — but be aware items may freeze. Again, monitor the temperature to make sure the food is cold enough. “If in doubt, throw it out” is a good strategy to follow. Always store food in bins or containers with tight-fitting lids so birds and pests can't get into it.

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If You Must Leave Your Home

If you decide that you must leave your home there are several things you should do to protect your home and belongings:

- Turn off the electrical power at the breaker panel.
- If possible, turn off the water.
- Shut off the supply of natural gas to gasfired appliances.
- If it's winter and you have a water shutoff valve, turn off the water, open and drain all taps and flush the toilet. If you cannot turn off the water, make sure all taps are closed. Unhook and drain clothes washing machine hoses.
- Empty the refrigerator and freezer (take the food with you or dispose of it) and wedge the doors open to prevent mold growth (ensure devices used to hold doors open cannot trap a child or pet inside).
- Take proof of identification.

- Make sure your home is secure (windows closed and locked, flames extinguished) before you leave.
- Telephone friends and family to let them know you have evacuated your apartment.
- If you have a hot water tank in your home consider draining it.

For further information about emergencies, visit these useful websites:

CMHC's Coping with Emergencies:

<http://www.cmhc.ca/en/co/maho/em/index.cfm>

Government of Canada Emergency Preparedness:

http://ww3.psepc-sppcc.gc.ca/info_pro/self_help_ad/fam_e.asp

When the Power goes Out, Government of California:

www.abag.ca.gov/energy/index.html

CMHC About Your House CE 11: When You Must Leave Your House Due to a Prolonged Winter Power Outage

www.cmhc-schl.gc.ca/en/co/maho/em/em_004.cfm