Appliance safety

Maintain your appliances

Regular inspection, cleaning and maintenance ensures your safety and helps keep your gas appliances operating at their best.

As a customer, you have a role in using natural gas equipment safely in your home. This includes looking after piping, appliances, venting, combustion air supply and above-ground or buried piping past your gas meter. The owner's manual that comes with your natural gas appliances is the best source of maintenance information and other operating instructions.

A qualified gas contractor should inspect your gas appliances. When selecting a contractor, make sure that personnel are licensed gas fitters and experienced at inspecting all types of gas appliances for safe operation.

Safety checklist

- Make sure the areas around gas appliances and vent pipes are kept clear of combustible materials like laundry, paper, paints, solvents and propane cylinders.
- Do not store lawnmowers, motorcycles and other gasoline-powered equipment or vehicles indoors or near gas appliances.
- Remember that gas appliances have open flames and can be a source of ignition. Do not use combustible products such as solvents and glues in the area.
- Make sure there is an adequate supply of air to gas appliances. Do not block off the duct bringing in outside air and check with your local gas inspector or heating contractor before enclosing appliances.
- Know where to find the shut-off valve for each appliance and how to use it — the gas is "off" when the valve handle is at a right angle to the gas pipe.

Inspect buried piping for leaks or corrosion periodically and repair if necessary. Your gas contractor can locate, inspect and repair your buried gas piping. Or, look up "Corrosion Control" in the Yellow Pages for a list of other professionals providing this service.

Care of your meter

For safe measure

Your natural gas meter measures the amount of natural gas you use. It’s also the point where natural gas enters your home or building. To ensure your meter remains accurate, accessible and safe, follow these suggestions:

- Don’t attach anything to your meter (or gas piping) – clotheslines, skipping ropes, etc.
- Don’t store or lean anything against your meter or piping.

- Keep your meter accessible at all times. Never enclose it within a building or deck.
- Keep the area clear of plants and landscaping.
- When digging around your meter, dig by hand. Remember – if you damage any of this equipment, you may be responsible for the cost of repairs.
- Know where your gas meter's shut off valve is (normally located at your meter) and know how to turn your meter off.
- In alleys and narrow walkways, businesses need to keep obstacles such as dumpsters away from their meters
- Business owners need to ensure waste management companies will not damage the piping or meter during waste removal

Meter safety for winter

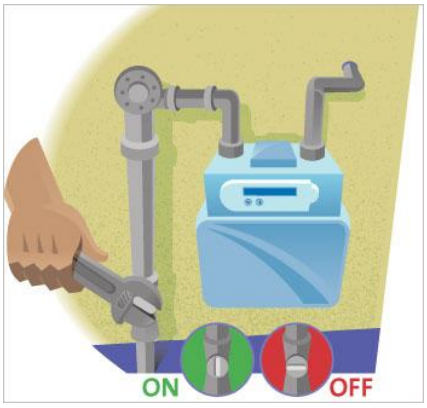
- Keep your meter clear of ice and snow.
- Remove any built-up snow by hand until the regulator and shut off valve are clear.
- If ice builds up on your meter or regulator, call FortisBC at **1-888-224-2710**.
- Never kick or hit a meter to break ice or snow build-up.
- Don't use a snowplow or blower near your meter.
- When shovelling snow, don't pile it up against or around your meter.

Meter damage?

Call FortisBC right away at **1-800-663-9911**.

How to turn off your meter

You can turn your gas off at the main shut-off valve on the inlet pipe next to your gas meter.



Using a wrench or other suitable tool, give the valve a quarter turn in either direction so that it is crosswise to the pipe (see diagram).

Find a natural gas contractor.

Caution! Once the gas is shut off at the meter, DON'T try to turn it back on. Only a registered gas contractor can turn the gas on safely. Call FortisBC, or the British Columbia Safety Authority to find a licensed gas fitter to restore gas service.

Gas pipe maintenance

FortisBC maintains your home's gas meter, and the gas service line that extends to it from the street.

As a customer, it's your responsibility to maintain the gas piping that extends past the meter into your home, and any piping that may run underground to detached buildings, pools or outside appliances like barbecues or patio heaters.

Over time, pipe may degrade or corrode

A registered gas contractor, or leak inspector (look under Inspection Services in the Yellow Pages), will locate and conduct specialized tests to ensure your buried gas piping is functioning safely and efficiently.

Learn more about gas contractors (link)

It's a good idea to have a registered gas contractor inspect visible and buried gas lines at the same time you're having your gas appliances, furnace or boiler serviced. Not sure how often natural gas appliances need servicing? Check your owner manuals for recommended frequencies.

To find a registered gas contractor: BC Safety Authority: Choosing a natural gas contractor.

Learn more about appliance maintenance and safety (link)

Fireplaces

Maintain your fireplace

Here is some basic information to keep your fireplace working safely and efficiently:

1. **Call a professional**
   Schedule regular inspections, cleaning and any needed maintenance or repairs with a registered gas contractor. Refer to your fireplace owner's manual for directions on frequency of servicing (usually at least once a year), and what that maintenance should involve.
2. **Basic fireplace safety measures**
   Keep small children, pets and combustibles away from hot surfaces. Consider erecting a childguard fireplace screen for burn prevention.

If your fireplace is being installed in a home during construction or renovations, do not operate it until the area is thoroughly cleaned; drywall dust and other contaminants may harm the fan, motors and burners.

3. **Be alert to problems**

   If your fireplace is malfunctioning or in need of service, you're likely to see warning signs such as:

   - pilot light outages
   - "booming" noises upon ignition
   - delayed ignition (slow to start up)
   - excessive soot or corrosion inside the fireplace or on the vent
   - a "rotten egg" or sulfur smell (that's the odourant in the natural gas) that may cause eyes to sting
   - symptoms of the presence of carbon monoxide: nausea, headaches, lethargy or other flu-like symptoms.

Furnaces

Maintaining your furnace or boiler

Regular inspection and maintenance is the best way to keep your furnace working well and to keep it running at top efficiency. A registered gas contractor should do a regular inspection and service. Between visits, here's what you can do:

Safety note: WHEN INSPECTING OR CHANGING FILTERS OR FAN BELTS, SHUT OFF THE ELECTRICITY AT THE FURNACE SWITCH AND AT THE CIRCUIT BREAKER PANEL FIRST.

- Change or clean filters at least every three months and keep the fan compartment door tightly closed. Filters are located at or near the blower compartment of the furnace and are held in place by a clip.
- If your furnace has a fan belt, inspect it for cracks or signs of wear (and replace if necessary) at the same time you change the furnace filters.
- Keep vents and air returns clear of obstructions like furniture, lint, dust or pet hair. Check the chimney and appliance vent system at least once a year to ensure that the pipe is connected securely, that there are no signs of corrosion or damage and that nothing has fallen into the base of the chimney or into the flue.
- Keep the area around the furnace clear. Don't store items against the furnace. Don't store flammable items in the furnace room. If your furnace motor has oiling points, apply one or two drops of SAE 20 non-detergent oil every heating season. Avoid over-oiling!

Watch for warning signs

There are almost always warning signs that a furnace isn't working properly:

- frequent pilot light outages (not all furnaces have pilot lights — check your manual)

- delayed ignition (mid- and high-efficiency furnaces have an intentional delay — check your manual)
- a yellow or wavering flame
- excessive soot or corrosion on the appliance or vent system (white, brown or black streaks)
- too much or too little heat
- any continuous or intermittent odour – either the "rotten egg" or sulfur smell of the odourant in natural gas or a sharp odour that may cause eyes to sting
- symptoms of carbon monoxide poisoning: nausea, headaches, lethargy or other flu-like symptoms
- indications that the flame has 'rolled-out' of the furnace — scorch marks by the door or other opening

If your pilot light goes out

Most natural gas appliances with pilot lights are designed to shut off automatically if the pilot goes out. To relight the pilot, follow the manufacturer's instructions (usually located on a metal plate near the furnace burner or gas controls). If it fails to relight, turn off the manual valve in the natural gas supply to the furnace and call a registered gas contractor.

NOTE: Many newer gas furnaces do not have a pilot light. Check your owner's manual.

Earthquakes

BEFORE an earthquake

Secure the natural gas equipment in your home

- Securely strap your hot water tank. This is the most important preparation you can make, as it will keep the water line and gas line from breaking and ensure a source of water. You can do this very inexpensively.
- Anchor other gas appliances wherever possible. Use flexible metal connectors to connect appliances to rigid gas piping. Securing all your gas appliances properly reduces the need for a seismic shut-off valve.
- Remove pictures from over beds, or attach them securely.
- Attach heavy furniture such as dressers to the wall.
- Install special film on windows to prevent them from shattering, especially in children's rooms.
- Have your home inspected for sheer wall strength and attachment to foundations.
- Always keep the area around gas appliances clear of combustible materials, eg. paper, paints/solvents, even laundry, and especially propane cylinders, barbecues and gasoline-powered lawnmowers and vehicles
- Make an emergency kit. Stock up at least a three-day supply of food, water, clothes, medical supplies and other necessary equipment for everyone in your family. Make sure everyone knows where to find them.
- Decide where and when to reunite your family.

- Locate the shut-off valves for water, gas and electricity. Learn how to shut off the valves before a quake. If you have any questions, call your utility company.
- Choose a person outside the immediate area to contact if family members are separated. Long distance phone service will probably be restored sooner than local service. Don't use the phone right after an earthquake.
- Know the policies of the school or daycare centre your children attend. Make plans to have someone pick them up if you are unable to get to them.
- Know the safest place in each room - it will be difficult to move from one room to another during a quake.
- Establish all the possible ways to exit your house. Keep those areas clear.
- If you have a family member who does not speak English, prepare an emergency card written in English indicating that person's identification, address and any special needs such as medication allergies. Tell that person to keep the card with him/her at all times.
- Practice taking cover as if there were an earthquake and learn the safest places in your home and workplace.
- Practice getting out of your home and check to see if the planned exits are clear and if they can become blocked in an earthquake.
- Review how to turn off the gas, but don't actually turn it off unless there’s an emergency.

DURING an earthquake

Protect yourself

- Duck, cover and hold under a desk, table or other furniture. If that's not possible, seek cover against an interior wall (preferably in a corner) and protect your head and neck with your arms. Avoid danger spots near windows, hanging objects, mirrors or tall furniture.
- If you take cover under a sturdy piece of furniture, hold on to it and be prepared to move with it. Stay where you are until the ground stops shaking and it is safe to move.
- When in a high rise building, move against an interior wall (preferably in a corner) if you are not near a desk or table. Protect your head with your arms. Don't use the elevators. Don't run into the street - there may be extreme danger from falling glass.
- When outdoors, move to a clear area away from trees, signs, buildings or downed electrical wires and poles.
- When on a sidewalk near buildings, duck into a doorway to protect yourself from falling bricks, glass, plaster and other debris.
- When driving, pull over to the side of the road and stop. Avoid overpasses and power lines. Stay inside your vehicle until the shaking stops.
- When in a crowded store or other public place, move away from display shelves containing objects that could fall. Don't rush for the exit.

- When in a stadium or theatre, stay in your seat, get below the level of the back of the seat and cover your head with your arms.

AFTER an earthquake

- Check your natural gas appliances and equipment.
- **If you do not smell or hear gas escaping, consider leaving the** gas on to provide a source of energy for heat, hot water and cooking. Check the vents, chimney and connections at each gas appliance to be sure they have not been dislodged or blocked.
- **If you think you smell gas or hear gas escaping, act fast**.
    - Turn off your gas meter, if it's safe to do so, and
    - Leave the building and call 1-800-663-9911

Appliance shutoff valves

Know where the shut-off valve for each appliance is and how to use it. Make sure that you and your family know the location of your main gas shutoff valve and ensure there is a clear path to it.

Supplemental safety shut-off valves

While not required by provincial or national installation codes, some homeowners may install supplemental safety shut-off valves. Properly installed and maintained, a seismic or gas detector system can automatically turn your gas off at the meter. This can be especially advantageous if you are not at home when an earthquake occurs.

As with any automatic system, there is a potential for malfunction or false alarms. The units may shut off the gas even though the piping is not damaged or leaking.

Resetting the valve

After the valve closes, you must have it reset. Piping, appliances, vents and chimneys should always be checked before gas is turned back on. **Call a qualified gas contractor to turn your gas back on**. After a major earthquake it may take days or weeks before a technician can respond. You could be without gas for cooking, hot water and heat.

Floods

Keeping on top of a flood

If you have enough advance warning prior to a flood, here's how to protect your appliances:

- Have a registered gas contractor remove the electric motor, burner and controls from your furnace, and shut off the gas and electric supply.
- Have the contractor remove hot water tanks, clothes dryers and ranges from your building.
- Have the contractor cap and properly seal the gas pipe leading to the appliance shut-off valve. This is to prevent the back flow of flood water into the gas piping system. If you have natural gas clothes dryers, ranges and other appliances removed, ensure the gas supply valve is shut off to the appliance first.

If you don't have enough time or a registered gas contractor is not available:

- Turn off electrical power to each appliance and leave it off. Shut off the gas supply valve to the appliance. Do not drain hot water tanks. Just shut off the water supply leading to and from the tank.

If you are evacuating your premises

Shut off your gas valve at the meter if you know how. You can turn your gas off at the main shut-off valve on the inlet pipe next to your gas meter. Using a wrench or other suitable tool, give the valve a quarter turn in either direction so that it is crosswise to the pipe.

After a flood

Floodwater may have shifted your home or caused other stresses to the gas piping.

All electrical wiring in buildings that has been partially or fully covered by flood water must be checked by a qualified electrician or electrical inspector before being put into service again. Any loose wires should be considered "live" and a definite hazard.

If you find one of the following when you return home, have FortisBC inspect your meter and regulator before using your natural gas system:

- Your gas meter has been covered with flood waters.
- A red outage tag is hanging from your meter.
- A red outage tag is hanging from your front door.

The number to call is 1-877-711-8877.

After FortisBC completes its inspection of your meter and regulator, call a registered gas contractor to inspect and reconnect your natural gas appliances.

CAUTION: If you smell gas, or if there is evidence of a gas leak, don't enter the building. Call our 24-hour emergency line at **1-800-663-9911**, your local fire department or **911**.

Always call a registered gas contractor

Don't try to put natural gas appliances back in service yourself. Gas appliances that have been flooded should not be used until inspected by a registered gas contractor.

The contractor will check, clean, repair and pressure test all gas pipes that have been clogged with mud or debris. Switches, controls, thermostats, furnace heat exchangers, burner and pilot parts and rusting metal parts can also be damaged.

Please note: the cost of restoring some appliances to a safe operating condition could potentially exceed the cost of a new appliance. It may be more cost-effective to purchase a newer and more energy-efficient model.

Forest fires and evacuation alerts

FortisBC holds public and employee safety as a main priority and we work with provincial emergency officials to monitor various forest fire situations in B.C. We also work with local fire and emergency authorities to ensure public safety, and protect our natural gas infrastructure.

Natural gas service outages

If fire or emergency officials request FortisBC to do so, we will turn off natural gas service as a precautionary measure, or if there is an immediate threat to FortisBC infrastructure. Once fire or emergency officials confirm the situation is safe, there are a number of steps that FortisBC takes to safely restore natural gas service:

- assess the natural gas system in the affected area, repair any damage and reactivate the affected system
- visit each home to relight all affected appliances and restore gas service at the meter, if required
- if you are not at home, a FortisBC technician will leave a door tag that provides contact information. Call **1-877-711-8877** for relights.

What to do when you return home

The decision to lift the evacuation order is made by local fire officials after consultation with other agencies, including FortisBC. Once the order is lifted, customers will be able to return to their homes.

- If gas has been turned off due to an emergency, FortisBC will first ensure the natural gas system is safe. Once complete, FortisBC crews will visit your home to relight your appliances.
- If the service valve on your meter is turned to the off position, do not turn it on. If you have concerns with the natural gas system, or if you detect the rotten egg or sulphur smell of natural gas, leave your home immediately and call the FortisBC 24-hour emergency number at **1-800-663-9911.**

Always call a registered gas contractor

Don't try to put natural gas appliances back in service yourself. Do not use any gas appliances that have been damaged, until they have been thoroughly inspected by a registered gas contractor.

The contractor will check repair and pressure test all gas pipes that may have been affected by the forest fire. They will also check that all your gas equipment is safe to operate.

Carbon monoxide

What is carbon monoxide?

Carbon monoxide (CO) is a colourless, odourless, toxic gas that interferes with the blood's ability to absorb and transport oxygen. Carbon monoxide causes flu-like symptoms of headaches, drowsiness, nausea and loss of muscle control.

Carbon monoxide is produced when fuels are burned incompletely. Tobacco smoking, idling gasoline-powered vehicles and the burning of oil, coal, wood, charcoal, kerosene, propane or natural gas can all produce carbon monoxide.

Carbon monoxide poisoning

If carbon monoxide is inhaled, it depletes the amount of oxygen in your red blood cells, resulting in specific symptoms. Depending on the amount inhaled and the length of time you have been exposed, symptoms could include the following:

- chronic headaches
- nausea
- drowsiness
- impaired judgment
- loss of coordination

Signs that carbon monoxide may be present include:

- an unidentified chronic odour inside the building
- condensation on cool, indoor surfaces

Exposure to high amounts of carbon monoxide can lead to unconsciousness, brain damage and death.

The risk of carbon monoxide poisoning from natural gas appliances is extremely low. A very small percentage of carbon monoxide deaths are actually caused by natural gas appliances. Most are caused by fires and car exhaust.

If you suspect carbon monoxide poisoning

- move the person to fresh air right away
- call for medical assistance

Avoid problems with CO

While carbon monoxide alarms are an added safety measure, the best solution is regular appliance maintenance. You can easily reduce the risk of carbon monoxide poisoning by following some simple guidelines:

- Always have a licensed gas contractor who is registered with the BC Safety Authority, install, inspect and service your natural gas appliances and check vents regularly to make sure that they are not disconnected, blocked or corroded. Licensed contractors are required to maintain a performance bond.
- Make sure your contractor uses a licensed gas fitter (ask to see the gas fitter license). Also ask if the gas fitter knows how to check heat exchangers —companies that only clean furnaces and ducting may not be qualified to do this kind of inspection.
- ALWAYS keep furnace fan compartment doors and/or the filter access panel in place.
- Check that outside air ducts are clear. Be sure to clean bug screens before every heating season.
- Open the damper of your wood-burning fireplace. If you have an open wood-burning fireplace, open the damper and partially open a window or door at or below the level of the fireplace when the fireplace is in use; close the damper after each fire, but only after the ashes are cool.
- Remove vehicles from the garage immediately after starting the engine.
  Be sure that all vent hoods and pipes from fuel-burning equipment are in place and secure.
- Ensure that an external vent is used for all gas appliances that are designed to be vented.
- Never operate a barbecue, camp stove or lantern in an enclosed space.
- Buy equipment that bears the seal of an approved certification agency such as the Canadian Gas Association or the Canadian Standards Association.
- Keep the area around your furnace clear for proper air circulation.
- Install a carbon monoxide alarm.

If you suspect the presence of carbon monoxide in your home:

- Open all doors and windows.
- Get fresh air immediately outside.
- Seek medical attention if needed.
- Turn off any appliances that you suspect are faulty.
- Have a qualified gas contractor inspect your appliances or contact FortisBC.