



Using Natural Gas Safely

energy + time



**Including: About Natural Gas
Your Natural Gas Appliances
If You Smell Gas**

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About Natural Gas

Natural gas is the cleanest fuel. It burns efficiently, it is economical and most natural gas used in the U.S. is produced in North America. It is easy to see why natural gas is increasingly popular for household and commercial uses, and even as a fuel for vehicles.

All sources of energy used in the U.S. have good safety records, but any can be dangerous if improperly used. This booklet is about the safe use of natural gas and gas appliances.

Properties of Natural Gas

Natural gas has no color, smell or taste. We add an odor to it so that you can smell escaping gas. Natural gas is not toxic. Breathing it will not hurt you so long as you get plenty of oxygen, too.

Natural gas is lighter than air. When released, it rises and mixes with the air. Outdoors, it dissipates into the atmosphere.

Natural gas burns only when it is mixed with air in certain concentrations *and ignited*—by a spark, a match or some other intense source of heat.

When Natural Gas Burns

Natural gas appliances are designed to mix natural gas with air at a controlled rate. The burner flames from your natural gas appliances should always be blue and



steady. The bright blue color shows that the correct amounts of gas and air are combining for safe operation. Yellow or wavering flames indicate that natural gas is not burning completely.

One exception is natural gas fireplaces, which may have a luminous yellow flame, yet still burn completely without the formation of carbon monoxide. These types of fireplaces have a safety device that automatically turns off the unit if the oxygen level falls below what is needed for proper combustion.

Some gas appliances have pilot lights that burn all the time. When operating, gas appliances always produce flames, even if you can't see them.

Flammable Products

Flammable vapors in the air may be drawn to a flame and ignite or even explode. Aerosol sprays—such as pesticides, hair spray and spray cement—should never be used near an open flame. Both the propellant and the contents may be flammable.

Similarly, painting materials, cleaning solvents, adhesives, gasoline cans and oily rags should never be stored near a gas appliance or in the same room. These materials, too, may produce flammable vapors.

Indoor Air

It is important to have a good supply of fresh air indoors. Gas appliances and fireplaces use oxygen from the air to operate. Breathing also consumes oxygen. When a home is sealed tightly, the oxygen inside can be used up and not replaced fast enough. The lack of air can cause incomplete burning allowing carbon monoxide to form. Never enclose gas furnaces, hot water heaters and dryers in a closet or small room without good air circulation.

Venting

Indoor air quality can be affected when the products of gas combustion are not vented to the outside. If your appliances are vented through metal pipes, also known as flues, a match test can be used to find out if your venting is effective. Once the burner is lit and operating normally, wait approximately 30 seconds and then hold a lighted match just below the flue at the top of the water heater, or the flue-diverter on furnaces.

If the flame leans toward you, flutters downward or goes out, the system is not drawing gas combustion particles outside through the vent or the flue. *If you notice these signs, turn off the equipment, introduce fresh air into the building and call a qualified natural gas contractor immediately to inspect the equipment.*

If the appliance is in an area with an attic fan or a kitchen or bathroom fan, the fan can set up vent or flue back-drafts. Have a qualified contractor check your venting.

Carbon Monoxide

Carbon monoxide (CO) is a colorless, odorless, toxic gas, created when fossil fuels are not burned completely. Most CO-related incidents involve car exhausts, but some result from blocked furnace or boiler vents and chimneys, or inadequately maintained appliances.



CO Detection

You can't see or smell CO. Warnings signs of CO in your home can include stuffy, stale air; condensation on windows; back drafts from a fireplace,

furnace or water-heater chimney; yellow burner flames (except from natural gas fireplaces and logs); or burner flames or pilot lights that flutter or keep going out. *If you see these warnings, contact a qualified contractor to have the equipment inspected.*

The U.S. Consumer Product Safety Commission has recommended that CO detectors be installed in homes near sleeping areas. Several models have been certified and approved by national authorities and are available in local hardware stores.

CO Poisoning

When you breathe CO, it replaces oxygen in red blood cells. At high concentrations, CO can kill in minutes. Lower concentrations inhaled over a long period of time are also dangerous.

The flu-like symptoms of CO poisoning are dizziness, fatigue, nausea and vomiting, headaches, ringing in the ears, blurred vision, stinging eyes and fainting.

If you suspect CO poisoning, *leave the building immediately* and call **911** from a neighbor's house.

About Gas Appliances

Many gas appliances have open burners. Older models also have pilot lights that burn continuously. It is very important to keep the area around your appliances clear of flammable substances and objects, particularly gasoline and any fuel containers, paints, adhesives, cleaning solvents and oily rags, which create a fire hazard.

In addition, any gas appliance located in a garage or similar location must be installed according to the applicable building code, so that all burners and burner ignition devices are at least 18 inches above the floor. Don't use or store flammable products such as those mentioned above in the same room or area where your water heater or any other gas appliance is installed.

When you are buying a gas appliance, look for evidence that the model has been tested and approved by a recognized testing agency. Such approvals are particularly important for new and unconventional designs.

For information about licensed contractors, call Washington Gas's *Appliance Program and Referral Line* at **1-888-941-HEAT (941-4328)**.

Keep your appliance owner's manual handy. These booklets are provided by the makers of the particular models you own and contain the most complete information about them.

Knowing how to use and maintain each of your appliances properly is your best guarantee of safety. Make sure your children learn about appliance and natural gas safety, too.

Your Gas Hot Water Heater

Water Temperature

Every year, numerous people are scalded by hot tap water. Children, seniors, and people with disabilities are most at risk.



Set your water heater thermostat to 120 degrees Fahrenheit. At this temperature, burns appear after 5 to 9 minutes. The “warm” or “low” setting shown on some thermostats should be about 120 degrees Fahrenheit.

If your dishwasher or other equipment calls for a higher water temperature, have your plumber install anti-scald devices.

Flammable Vapors

Because the burner is located at the bottom of the water heater, it is particularly important not to use or store flammable products—including cleaning solvents, painting materials, and gasoline—anywhere nearby. These materials produce vapors that may collect on the floor and create a serious risk of fire or explosion.

If you don't have a safety sticker on your water heater, ask us to send you one. It will remind your family and service workers about these risks.

Your Gas Heating System

Washington Gas **strongly recommends** that you have a qualified technician check your system each fall to make sure it is operating properly. If you see or suspect that some-

thing is wrong with your heating system, turn it off and call a repair service or Washington Gas at **1-888-941-HEAT** for a referral.

Filters and Ducts

Clean or replace air filters every month when your heating system is in use and every three months during the rest of the year. Clean filters help your heating unit operate properly and reduce your energy bills.



Doors and Grills

Furnace panels and grills must be in place and the fan compartment door closed when a furnace is in use. Leaving doors open could allow combustion products to enter living areas.

Remember to keep the area around the furnace clear and clean.

Vents

Breaks, rust, unsealed gaps or rotted-out areas in flue venting pipes release combustion products indoors. Have the flues replaced and appliances checked by a qualified technician.

Chimneys

Bird and animal nests, leaves or loose tiles inside the chimney can block the venting of combustion products produced by gas appliances, posing a carbon monoxide or fire hazard. Have your chimney checked by a qualified contractor annually during your heating system inspection.

Your Gas Range

Gas Burners

Gas burners may not light when turned on, or may go out when a pot boils over. In both cases, gas still is being released. **Turn the burner off** and wait about five minutes to let gas concentrations drop before attempting to re-light the burner.

Sometimes, part of a burner does not light at all or the flames look ragged and yellow. This usually means that the burner ports are clogged. Turn off the gas and clean out the tiny holes of the burner with an open paper clip or metal wire. Do not use a toothpick, which may break off in the burner.



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During cooking, burner flames should **not** be allowed to rise up around the outside of a pan. Adjust the flame to the size of the pan.

Gas Ovens

Air must circulate inside gas ovens when they are operating. For that reason, do not cover the holes in the bottom of the oven with foil. Always leave a one inch space between pans and oven walls.

Using the oven to heat a room or apartment during winter emergencies is dangerous for two reasons. First, leaving burner flames on and unwatched is a fire hazard.

Second, oven burners operating continuously can use up indoor oxygen and lead to the production of deadly carbon monoxide.

Cooking Fires

Cooking accidents are the most common cause of home fires. Here are some ways to avoid common cooking accidents:

- Keep the range clean and wipe up spills promptly. Do not store fats and oils on or over the range.
- Keep paper, aerosol cans of all kinds and fabrics — blowing curtains, loose or long sleeves — away from burners.
- Do not cover broiler pan holes with foil. Fats can collect and may ignite.
- Remember to check cooking progress often.

Children

Toddlers love the smell of food cooking. They sometimes reach for flames, too. Teach children that hot things can hurt them, and turn pot handles so they don't stick out over the edges of the range.

Your Gas Clothes Dryer

Fire Hazards

Clean the lint filter before every load. Lint build-up wastes energy and can catch fire.

Items cleaned with a spot remover or similar product give off flammable vapors. They should never be dried in a gas dryer. Air dry them instead.

Children

Teach your children never to crawl into or play with a dryer. Dryers are no place for family pets, either.

Venting



Gas dryers are vented to the outdoors through a flexible metallic vent pipe or rigid vent pipe. Manufacturers do not recommend flexible vinyl hoses. Check venting periodically to remove lint and dust. Lint in the vent pipe can

cause a fire. If there are cracks or holes in the vent pipe, it needs to be replaced. Outdoors, make sure the vent hood is in place and the flapper inside it moves freely.

Your Gas Grill

Gas grills must be lighted with the top open. A natural gas grill intended for outdoor use should never be used indoors. All outdoor grills can produce deadly carbon monoxide and are designed to vent in the open air.

Always open the hood of a gas grill when lighting it. Otherwise, natural gas can concentrate in the hood and explode when ignited.

Your Gas Logs or Fireplaces

When installing gas logs or inserts in a conventional wood-burning fireplace, special attention must be given to the manufacturer's venting specifications. Many log sets need a fully open chimney damper when burning, and some require direct venting to the outside.

Do not let food drop on and plug up the burner ports in gas logs.

Our Gas Pipes and Yours

We strive to provide safe, reliable service while ensuring that the gas piping owned by the company is properly maintained. We make these efforts to avoid the potentially damaging effects of leaks and corrosion.

Washington Gas owns and maintains all natural gas piping up to and including the gas meter.

Each gas customer is responsible for the maintenance and monitoring of all aboveground and buried piping on the customer's side of the meter. If this piping is not maintained, it may corrode or leak. You should periodically inspect buried gas piping located on your side of the meter for leaks and corrosion, and have it repaired if any unsafe condition is discovered. For information on companies that can perform maintenance and monitoring of all piping on your side of the meter, call Washington Gas at **703-750-1000**.

Call Before You Dig or Build

When planning any outdoor home improvement, landscaping or construction project that requires digging or excavating, have underground utility lines located and marked. Planting shrubs or trees or installing fence or decking posts can damage gas piping. Markings will show where all the lines are buried so you avoid damaging piping. Damage to underground utility lines may cause serious injuries, costly repairs and service outages for you and your neighbors.

For Maryland residents, one toll-free call to *Miss Utility* at **1-800-257-7777** brings out workers who will mark the location of underground utility service lines on your property. In the **District of Columbia**, the same service is available through *D.C. One Call* at **202-265-7177**. Call at least 48 hours before you plan to start your project. In **Virginia**, call **1-800-552-7001** at least two business days before digging. All three services are FREE.

You need to know where not to dig for everyone's safety and to avoid unnecessary expense. **By law, property owners and contractors must pay for damage to our pipes and meters.**

Buildings

Federal and state regulations and Washington Gas policy prohibit building an enclosed structure over a natural gas line. If you have an enclosed structure over your gas line, or believe you do, please contact us at **703-750-1000** to arrange for a locating inspection.

Meters

It is unsafe and illegal to build over or block off the meter. Washington Gas must be able to reach and service the meter at all times. In an emergency, the quickest place to turn off gas is at the meter.

Tampering with the meter is a **criminal offense**—and is also dangerous. Neighbors who know of or suspect this kind of activity can call **703-750-4570** and leave a recorded message. No names are required, just the address where the suspected tampering is taking place. By reporting such offenses, everyone's gas costs are kept down.

If You Smell Gas



Because we add an odor to natural gas, your nose is your best leak detector. In most cases, you smell escaping gas long before it becomes dangerous. If the odor is faint, call Washington Gas. Open nearby windows or doors. Do not look for the source of the leak with any flame, or a lighted cigarette. In some cases, even using a flashlight could be dangerous.

If the odor is *very strong*, or you hear a blowing or hissing noise, leave! Leave doors open behind you for ventilation.

Do not use anything that could generate a spark—do not telephone, or turn light switches or equipment using electricity on or off. Go to a neighbor's house and call **911**.

Outdoors, hissing or blowing noises, dust or dirt thrown into the air or a smell of gas may indicate broken gas piping. As above, leave the area immediately and call **911** from a neighbor's phone. *Do not* turn vehicle ignitions on or off.

When Washington Gas and emergency personnel respond to a call regarding a gas leak, they need access to the residence or building. Customers must be available to provide access.

Telephone Numbers

Customer service
(translation services
available)

703-750-1000

If you smell natural gas

703-750-1400

Outside the local
calling area

1-800-752-7520

Hearing Impaired
Voice Relay and TTY/TDD
711

Washington Gas
referral service
for qualified contractors
1-888-941-HEAT

Use your natural gas appliances with pleasure and confidence—secure because you know how to do so safely.

