


# FROM FOSSIL TO FLAME



Locally, eight in 10 households use natural gas, making it the number one fuel choice for residential heating. Yet natural gas is far more versatile with dozens of uses ranging from household cooking and water heating to food processing and manufacturing. Knowing how natural gas is processed and distributed can help you make the most of this natural resource.


## **THE NATURAL GAS JOURNEY**

A fossil fuel, natural gas is located in pockets of porous rock trapped beneath the ground. Natural gas can be found throughout the nation, but not all states contain significant amounts. As a result, areas with large natural gas deposits - including Texas, Louisiana, Oklahoma, New Mexico, Alaska and the Gulf of Mexico - provide 60 percent of the nation's gas supply.

MLGW purchases natural gas from transmission companies that deliver the fuel to city gate stations. At these facilities, natural gas is measured and sold, pressure is adjusted to match the distribution system, and a chemical odorant is added. MLGW's distribution network, which measures more than 4,650 miles in length, delivers natural gas to individual homes and businesses. At the end of the distribution system, natural gas passes through a meter where consumption is recorded and pressure may be reduced again to match appliance needs.

## A User's Guide to NATURAL GAS

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### **FUEL FOR THOUGHT**

**American Gas Association (AGA)** – Trade organization which serves as a clearinghouse for gas energy information. AGA conducts natural gas research and product development programs for gas distribution and transmission companies, as well as education programs for the general public.

**Blue Star Seal** – An approval seal given by the AGA to natural gas appliances meeting established safety and performance criteria.

**British thermal unit (Btu)** – Unit for measuring the energy output of fuels and the energy requirement of gas appliances. One Btu is needed to raise the temperature of one pound of water one degree Fahrenheit.

**Carbon dioxide (CO<sub>2</sub>)** – Non-flammable gas created by the combustion process.

**Carbon monoxide (CO)** – Poisonous odorless vapor caused by incomplete combustion of natural gas and other fossil fuels.

**City gate** – Regulator station where natural gas is measured and sold to MLGW, pressure is adjusted to match the distribution system and an odorant added for safety.

**Combustion** – Process of burning fuel to produce energy.

**Fossil fuel** – Natural fuel created millions of years ago by the decay of organic materials and continuous pressure within the earth. Includes natural gas, oil and coal.

**Fuel line** – Pipe which leads from the outlet side of gas meter into the building. Customer is responsible for maintaining this part of the delivery system.

**Gas main** – Pipe used to deliver gas from the city gate to individual services. Measuring up to 26 inches in diameter, mains are buried beneath curbs, streets and other areas.

**Gas meter** – Device used to measure gas consumption at a home or business.

**Gas transmission company** – Company that transports natural gas from the wellhead to the local distribution company. Texas Gas and Trunkline are MLGW's primary suppliers.

**Hundred cubic feet (Ccf)** – Unit of measure used to define natural gas consumption.

**Individual services** – Smaller pipes which run from the gas main to the meter serving individual customers. MLGW is responsible for maintenance of individual services.

**Liquefied natural gas (LNG)** – A liquid form of natural gas obtained by chilling vapor gas to 259° below zero. MLGW uses LNG to meet demand during peak periods.

**Local distribution company (LDC)** – Company which distributes natural gas in the designated service area. MLGW is the local distribution company for Shelby County.

**Mercaptan** – An odorant added to pure natural gas to enable easy detection of gas leaks.

**Natural gas** – Clean-burning fossil fuel composed of carbon and hydrogen which is used in many residential, commercial and industrial applications.

**Natural gas vehicle (NGV)** – Environmentally-friendly vehicle which runs on compressed natural gas instead of gasoline.

**Pilot light** – A steady blue flame marking the point where natural gas combustion occurs. Many newer gas appliances have an automatic ignition system, so a pilot light is present only when the appliance is actually operating.

**Pipelines** – Network of large pipes used to transport natural gas from the wellhead to the city gate.

**Propane** – A gaseous hydrocarbon which is the primary component of liquefied petroleum. Propane appliances can often be converted to burn natural gas.

**Right-of-way** – Narrow span of property to which gas transmission and distribution companies have access in order to install and maintain pipelines.

**Tennessee One Call** – System which handles requests for marking buried gas mains, cables and other utility equipment prior to digging to avoid damage and service disruption.

**Therm** – Unit of measure for the quantity of heat equal to 100,000 Btu. One hundred cubic feet (1 Ccf) of natural gas is roughly equivalent to one therm.

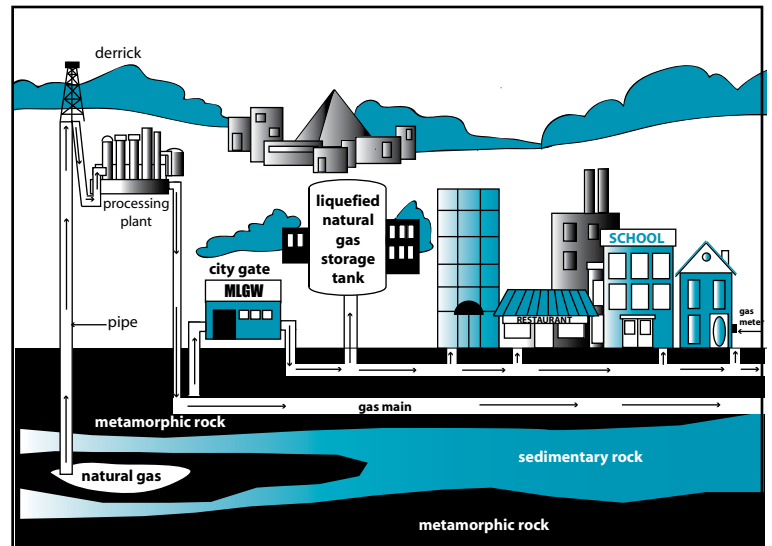
**Wellhead** – Spot where natural gas emerges from the earth.

## NATURAL GAS SAFETY

Natural gas is a safe, efficient energy form provided it is used properly. A correct natural gas flame burns steady and blue. Flames with yellow-orange tips, dancing flames, flames producing a hissing noise and flames without a defined shape are signs of incomplete combustion.

### Inspecting Vent Pipes

All natural gas appliances require permanent venting to ensure safe operation. Check equipment periodically to make certain vent pipes are securely attached to the appliance and outside opening. Also, regularly check for obstructions and signs of corrosion.



## Recognizing and Preventing Carbon Monoxide Poisoning

Carbon monoxide is a deadly vapor produced by incomplete combustion of natural gas and other fossil fuels. It is odorless and invisible. When breathed, the vapor invades the blood stream and robs the body of oxygen.

Signs of carbon monoxide poisoning resemble the flu, including nausea, headaches, dizziness and fatigue. Children, pregnant women, senior citizens and people in poor health are most susceptible to carbon monoxide poisoning. If you suspect carbon monoxide exposure, seek medical help immediately.

The best way to avoid carbon monoxide is to have all natural gas appliances inspected and serviced annually by a professional. Unsafe conditions should be corrected immediately to prevent serious injury or death.

Several brands of carbon monoxide detectors are available. MLGW does not recommend the use of carbon monoxide detectors as a substitute for annual equipment inspection and maintenance. However, detectors used in addition to regular maintenance should have AGA and Underwriters Laboratories (UL) seals of approval.

## Detecting Natural Gas Leaks

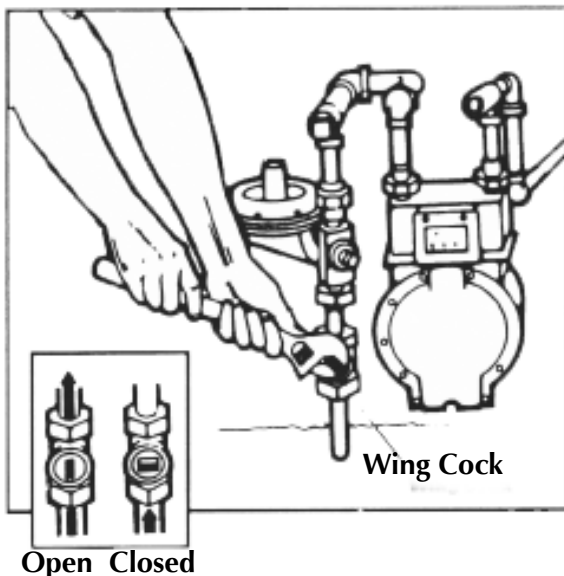
Natural gas delivered to homes and businesses has been treated with mercaptan to give it a distinct smell, so that a leak can be easily detected. There is no such thing as a “minor” gas leak. MLGW treats all potential gas leaks as emergencies; so should you. Know the steps to take:

- Open the windows and evacuate the building immediately.
- Do not smoke, or use anything that produces an open flame or spark.
- Do not operate equipment powered by batteries or electricity, including light switches, flashlights, or cell or landline phones. The slightest spark could cause an explosion.
- Call MLGW’s emergency line (528-4465) from a phone located away from the building, then stay out until an MLGW representative has deemed it safe to return. (The emergency line is for emergencies only. Individuals who report false gas leaks in an attempt to obtain other service more quickly will be charged a penalty.)

## Turning Off the Gas Meter

A natural disaster can damage or break pipes, mains and appliances, causing potentially deadly gas leaks. If a fire develops or you smell a strong odor of gas as a result of a natural disaster, turn off your gas if conditions are safe around the meter and you know the proper way to disconnect services.

Using an adjustable wrench, locate the wing cock or cut-off valve on the inlet side of the meter. Slowly turn the valve 90 degrees (one-quarter turn) until the valve core is in the horizontal position. This prevents the flow of gas into the



building. Once you have turned off the gas meter, you must have an MLGW representative purge air from the line before gas flow can be restored and pilots lit.

## IMPORTANT MLGW CONTACT INFORMATION

### Emergencies

**(901) 528-4465**

This is a dedicated line for reporting emergencies such as gas leaks, downed electric wires, broken water mains inside a building and unsafe street barricades. MLGW personnel are available 24 hours a day to respond to such emergencies.

### Customer Care Center (Residential Customers)

- To start, stop or transfer service: (901) 820-7878
- To place service requests: (901) 820-7878
- For billing-related questions, payment arrangements, balance inquiries and all other requests: (901) 544-MLGW (6549) or e-mail [MLGWCustomerCare@mlgw.org](mailto:MLGWCustomerCare@mlgw.org)

### Builder Services

Phone: (901) 367-3343

FAX: (901) 367-3339

E-mail: [builderservices@mlgw.org](mailto:builderservices@mlgw.org)

Hours: 7 a.m. to 3:30 p.m.,

Monday through Friday

### Tennessee One Call System

“Call before you dig”

1-800-351-1111



[www.mlgw.com](http://www.mlgw.com)