PSE&G Gas Safety

For Large Businesses

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Natural Gas Distribution System

Properties of Natural Gas

- PSE&G maintains the largest natural gas distribution system in New Jersey, safely supplying fuel to 1.9 million customers throughout the state.

- Primarily comprised of methane
- Odorless, colorless, & tasteless
- Mercaptan is added as an odorant
- Non-toxic
- Lighter than air
  - Will follow the path of least resistance to vent into the atmosphere.
  - **Propane, another common fuel, is heavier than air… an important distinction.**
- Ignition temperature 930^{o} F & greater
- Flammable / Explosive Range 5% to 15%

Environmental Benefits of Natural Gas

- **Natural gas is the cleanest burning fossil fuel with no soot, ash, or odor.**
- **It produces about 45% less carbon dioxide (CO_2) than coal, 30% less than oil, and 15% less than wood.**
- **It is non-toxic and, if inhaled in small amounts, not harmful or poisonous to humans.**
- **Natural gas is not stored on your property, minimizing the risks of oil spills, soil contamination, or tank corrosion.**

Gas Distribution from the Source to Your Community

Interstate Natural Gas Transmission Line

Natural Gas, a Fossil Fuel, flows through a series of pipelines and regulators as the pressure is lowered for consumer use.

Natural Gas Well

District Regulator

Natural Gas Metering & Regulating Station

Enters PSE&G's system

Customer Gas Meter

The odorant Methyl-Mercaptan is added to make the smell of leaking gas easily detectable.

What to Know About Your Gas Meter

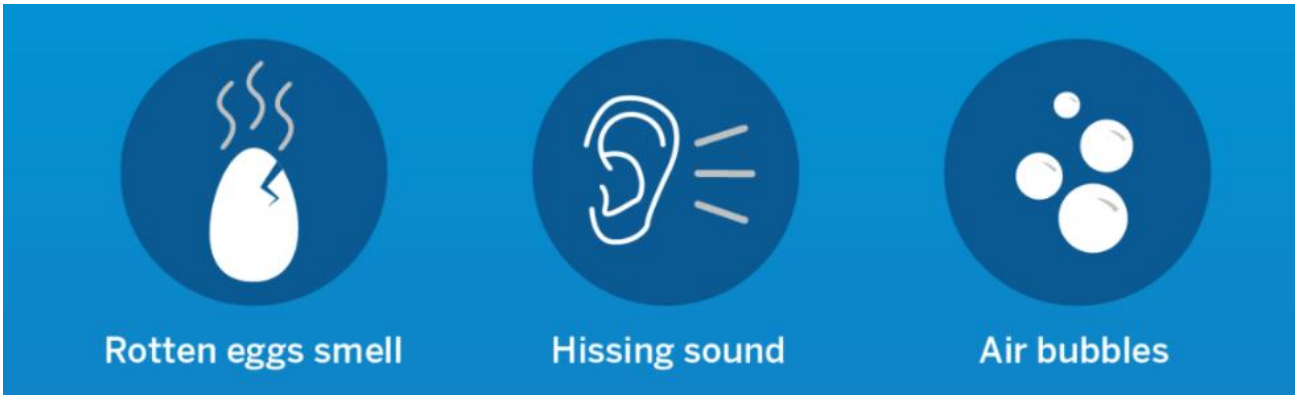
- **In areas where high pressure is delivered to the customer's meter, there will be a regulator.**
  - All new and most replaced gas services will have the meter outside.
  - Older businesses may have indoor meters – in this case the regulator vent will be visible on the outside of the building.
- **Regulator vents cannot be blocked off.**
  - Mulch, debris, snow, and ice must be carefully removed to ensure vents remain clear.
  - Blocked meter vents are dangerous and can cause over pressurized appliances.
- **Call PSE&G to see if your gas meter needs Bollards or Excess Flow Valves (EFVs)**
  - If your meter is located in an area where there is unimpeded vehicular traffic, a bollard should be installed – if you are concerned about the potential for your meter being struck by a vehicle, please contact us so we can assess the need for a bollard.
  - We offer the installation of EFVs that reduce the amount of gas released if a gas line is damaged.

Natural Gas Safety

Gas Leaks

How to Identify Natural Gas

- **SMELL –** A distinctive “rotten egg” smell
- **SOUND –** whistling, hissing, or roaring
- **SEE –** Blowing dirt, vapor, mist, fog, bubbles in standing water, or plants dying for no apparent reason



Suspect a gas leak? Don't Panic

What should you do?

- Evacuate the building and move at least 350 feet away, and take others with you.
- Leave the door open on the way out.
- Call PSE&G at 1-800-880-PSEG (7734) or 911.
- Incorporate these details into your emergency drills.

DO NOT…..

- Assume someone else will report the leak.
- Smoke or vape.
- Use light switches, doorbells, or electronics.
- Light a match or leave candles burning.
- Turn appliances or flashlights on or off.
- Start a car.
- Use a telephone or a cell phone.

What to Expect During a Gas Leak Investigation

PSE&G provides free 24-hour emergency service every day of the year.

- For gas safety incidents, a PSE&G technician will respond to the location within 60 minutes.
- Remain outside at a safe distance (at least 350 feet) from the building while the investigation is ongoing.
- In some events, a technician can make the area safe independently, however some events require the support of a large gas crew.
- We will inform you when it is safe to return and any follow up actions that are needed.
- In some cases, you may need to hire a plumber for final repairs.

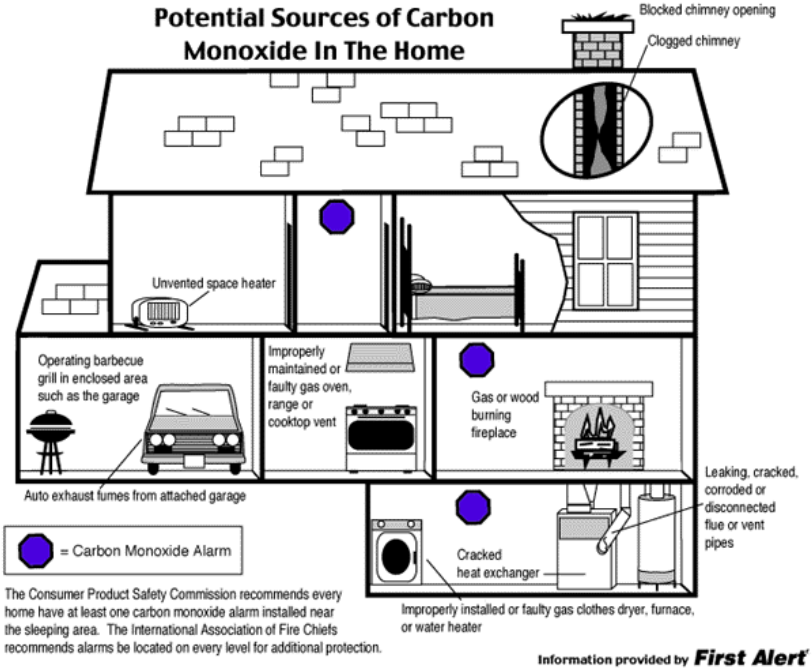
Considerations for Floods and Storms

- **System Reliability**
  - We need to inspect PSE&G equipment prior to turning gas back on after flooding.
- **Debris Removal**
  - All debris must be removed around PSE&G equipment and ensure no damage has occurred to facilities.
- **Compromised Equipment – appliances that have been submerged need to be inspected prior to turning the gas back on.**
  - Violations will be issued to defective gas equipment and the gas supply will be disconnected and capped.
- **Pumping out flooded basements prematurely may cause walls to collapse.**
  - This poses a risk of damaging the gas lines.
- **We replaced over 4,000 meters and 1,000 regulators affected by Hurricane Ida.**

Other Safety Considerations

Carbon Monoxide… a silent, deadly killer

- Lighter than air
- Colorless & often odorless
- Flammable range is 12.5% to 74%
- Ignition temperature is 1128^{o}F
- Extremely dangerous (interferes with the distribution of oxygen in blood stream)
- **Results from incomplete combustion of fossil fuels**



Know the Warning Signs for Carbon Monoxide

- Your carbon monoxide alarm is detecting an unsafe carbon monoxide level. Get outside and call 911. If the presence of carbon monoxide is confirmed, do not return until the problem is corrected.
- People are experiencing headache, nausea, dizziness, and weakness (flu-like symptoms). Get outside and call 911.
- Soot (black carbon powder) appears on or near appliances.
- You smell an alcohol-type (aldehydes) similar to engine exhaust.
- Moisture appears on inside walls or windows.
- Houseplants are dying.

Problems that may cause Carbon Monoxide to build up in your building

Improper pitch!

Corroded pipe!

Carbon buildup!

Separated pipe

Blocked chimney

Carbon Monoxide Typical Symptoms by PPM

Concentration in Parts Per Millions (PPM)	Symptoms
50	No adverse effects with 8 hours of exposure.
200	Mild headache after 2-3 hours of exposure.
400	Headache, nausea, and dizziness after 1-2 hours of exposure.
800	Headache, nausea, and dizziness after 45 minutes; collapse and unconsciousness after 2 hours of exposure.
1,000	Loss of consciousness after 1 hour of exposure.
1,600	Headache, nausea, and dizziness after 30 minutes of exposure.
3,200	Headache, nausea, and dizziness after 1-2 minutes of exposure; unconsciousness and danger of death after 10- 15 minutes of exposure.
12,800	Immediate physiological effects, unconsciousness, and danger of death after 1-3 minutes of exposure.

Carbon Monoxide Levels That Will Set Off Your Alarm

- **A carbon monoxide (CO) alarm is a time-weighted alarm.**
- **It works by measuring the buildup of carbon monoxide in a building over time.**
- **The response time will vary depending on the level of CO in the air.**
- **An alarm will sound after 3.5 hours of continuous exposure at a level of 50 ppm, but after only 8 minutes of exposure at a level of 400 ppm.**

Concentration in Parts Per Millions (PPM)	Alarm Response Time
40	10 hours
50	8 hours
70	1 to 4 hours
150	10 to 50 minutes
400	4 to 15 minutes

How can you prevent Carbon Monoxide Poisoning?

- The most important thing you can do is properly maintain heaters, boilers, stoves, and other gas or fuel-powered equipment by hiring a professional to inspect your company's equipment each year.
- Make sure that appliances using combustible gases are well ventilated to remove the carbon monoxide gas from the living space.
- Make sure appliances, vents, and chimneys are kept clear of debris.
- Carbon monoxide detectors are an important second line of defense. These inexpensive devices will sound a loud alarm in the case of dangerous levels of CO.
- The U.S. Consumer Product Safety Commission recommends placing a carbon monoxide alarm in every area of the building.
- Be sure to check the batteries of your carbon monoxide detector at least every six months.
- As a business, consider incorporating this into your emergency planning.

Additional Gas Concerns

- **Overheated Boiler or Furnace**
  - An overheated boiler is caused by a failure of safety controls and can results in an explosion or fire.
  - Your system may be overheating if it will not shut off, is a cherry red color, has paint peeling off, is leaking water or steam, or has temperature or pressure gauges at the highest levels.
  - Evacuate then call 911 and PSE&G Emergency line at 1-800-880-7734.
- **Building Fires**
  - PSE&G responds to building fires and may proactively shut off the gas if it is safe to do so.
- **Poor Pressure**
  - Some areas of the system may experience poor pressure during the winter.
  - If your business is experiencing issues with gas appliances not working appropriately, this may be a sign of poor pressure and you will need to call PSE&G to resolve the issue.

Be Proactive

- **Keep up with the maintenance schedules of your gas fired equipment.**
- **Have a plan to maintain the equipment and what to do when there is a failure.**
- **PSE&G offers 7 WorryFree® contracts to our commercial customers:**
  - Commercial Furnace/Boiler
  - Commercial Air Conditioner/Rooftop
  - Commercial Water Heater
  - Commercial Rooftop Heater
  - Commercial Split System AC

Call Before You Dig

The First Line of Defense

Pipeline Markouts

IT'S FREE & IT'S THE LAW!

In New Jersey it's illegal to dig anywhere in the state without first calling for a markout.

811 Know what's below. Call before you dig.

NJ State Law requires anyone planning to dig (excavation, demolition, blasting) small or large, construction project or homeowner to call 811 three (3) days in advance.

Who Should Call the NJ One Call Center?

"Excavate" or "excavation" or "demolition" means any operation in which earth, rock or other material in the ground is moved, removed or otherwise displaced by means of any tools, equipment or explosive

Up to and Including:

- Planting a Tree
- Mailbox
- Fencing & Dog Fence
- Sidewalks, Curbs
- Moving Dirt
- Pest Control
- Sprinkler
- Stump Removal
- Roadway Signs/Real Estate Signs

- Excavation
- Demolition
- Road Milling/Paving
- Paving
- Driveways
- Drainage
- Sewer or Water
- Utility

Things to Know:

- As a business, if you are hiring a contractor, make sure that the contractor has called the markout ticket in ahead of the project and request to see it.
- When calling in the markout, make sure the contact person listed is a valid contact, so that our markout inspector may call in the event they need clarification.
- Often times project sites are complex – it is a best practice to request a meeting with PSE&G to show the inspector exactly where the dig site is so that the markout is valid for the scope of work.
- Plan the excavation or demolition with reasonable care to avoid damages.
- Markout request (ticket) expires in 45 business days.
- If your project will extend past 45 business days you must call for a new markout for the project to continue.

What do the Colors Mean?

Gas System Modernization Program

PSE&G Infrastructure Enhancements

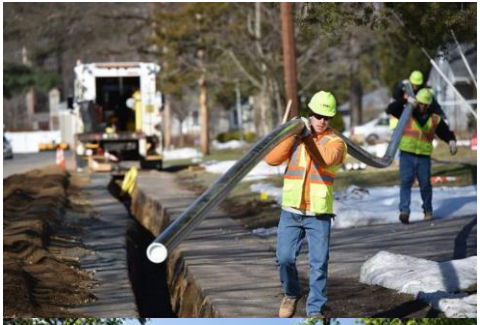
PSE&G is investing $1.875 billion to continue accelerating the modernization of its aging gas pipes in order to ensure the utility can continue to support a safe, clean and reliable gas system well into the future.

The first phase of the Gas System Modernization Program (GSMP I) replaced 450 miles of aging infrastructure from 2016 to 2019.

As of January 2019, PSE&G launched the second phase of the program, GSMP II.

GSMP II Benefits:

- Improves gas safety and service delivery
- Replaces 875 miles of pipes and other gas infrastructure improvements
- New pipes reduce greenhouse gas emissions equal to taking 30,000 vehicles off the road
- Creates 3,200 jobs



What to Expect near Your Business

While PSE&G is working in your area, you may see the following:

- Phase 1: Trench digging
- Phase 2: Installation of new pipes
- Phase 3: Connect gas services
- Phase 4: Restore the roads

We do our best to minimize impact and disruptions and make every effort to communicate planned work in advance to towns and communities via municipal channels.

You can always call your PSE&G Business Customer Advisor at any time if you have questions or concerns.

Links For More Information

Resource	Webpage
PSE&G Gas Safety	pseg.com/gassafety
New Jersey One Call Center	https://www.nj1-call.org/
Gas Work in Your Town	https://nj.pseg.com/inthecommunity/constructioninyourtown/gasworkinyourtown

Questions?

Contact your PSE&G Business Customer Advisor or public.awareness@pseg.com for any further questions

Thank You

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