

MANAGING LEGACY MANUFACTURED GAS PLANT SITES

INFORMATION SHEET



Xcel Energy has provided gas and electricity service to hundreds of communities for more than a century through its predecessor companies or companies it acquired. Throughout our service territory, we have investigated and managed legacy manufactured gas plant (MGP) sites in different communities under unique situations or conditions, often improving property values and supporting community development. State and local officials have positively recognized our efforts in communities such as Eau Claire, Wisconsin, and Fargo, North Dakota, where we completed remediation projects.

What is a manufactured gas plant?

The EPA estimates that thousands of MGPs operated in the United States between 1815 and the 1960s. MGPs used large brick ovens to heat coal and other ingredients. As the fuels were heated, they produced gases that were distributed and used by customers for heating, lighting and cooking, much like natural gas is used today. The plants also produced byproducts, such as coal tar, that were marketed for other uses. Typically, they were in downtown or commercial districts to serve customers nearby.

By the 1950s, the production of manufactured gas declined as natural gas became available. MGPs were closed and usually dismantled, sometimes leaving behind remnants, including piping and other infrastructure, as well as the byproducts on site.

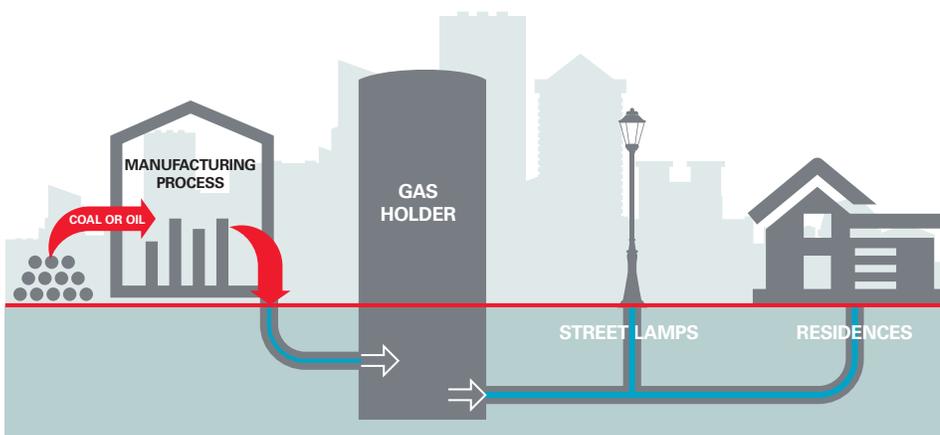
How did former MGPs operate and distribute gas?

MGPs generally had both a manufacturing process plant and one or more gas holders. From the plant, the gas was piped to other holders for storage and distribution or directly to communities and customers for their use.

In most cases, gas holders were located near the generating plant, although in some cases, the holders were further away.

Before it was distributed, the gas was purified, and byproducts were removed. The recovery and sale of MGP byproducts were important to plant economics, and byproducts were sometimes stored at the plant site.

A diagram of typical plant operations and distribution of manufactured gas is shown below.



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How do former MGP sites affect the environment?

Although MGPs were decommissioned by the mid-1900s, MGP remnants may remain in soils and groundwater. Generally, people have very limited opportunity for contact with MGP-related remnants because any impacted soils or groundwater are located deep below the ground surface in areas where groundwater is not used for drinking water. If cleanup is necessary to protect surface or drinking water, we excavate MGP remnants located below the ground and dispose of them at properly licensed landfills.

Historic industrial sites, including MGPs, can also potentially cause indoor air quality impacts. When some MGP byproducts are present in soils and groundwater, they can volatilize and turn into vapors and fill air pockets within the soil. The vapors may travel upward and vent into the environment or into structures. Through a process called vapor intrusion, soil vapors migrate through cracks or openings in a building's foundation and may potentially affect indoor air quality. A common solution for vapor intrusion is to install a vapor mitigation system, which is like a radon mitigation system. The system collects soil vapors below a building and vents them outside, preventing the vapors from entering the building.

Have MGP sites been investigated?

EPA and state environmental protection agencies investigated MGP sites across the country in the 1980s and 1990s for potential impacts to drinking water and identified which sites needed further investigation or remediation at that time.

Environmental cleanup practices and science continue to evolve. For example, little was known about vapor intrusion in buildings until recently. We continue to follow the guidance of EPA and work with our state agencies to use the latest science to protect public health and the environment when investigating or remediating historic MGP sites.

For additional questions, please email our offices.

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