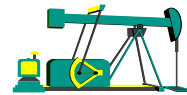


Natural Gas and Economic Development



Gas Industry Sectors

- Gas Producers



- Interstate Pipelines

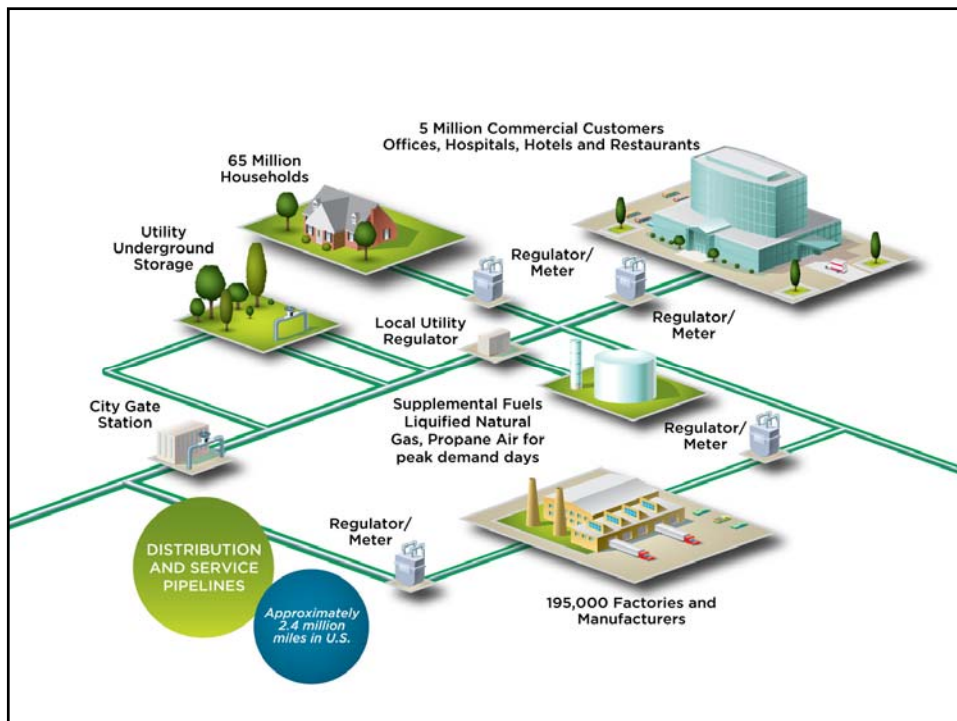
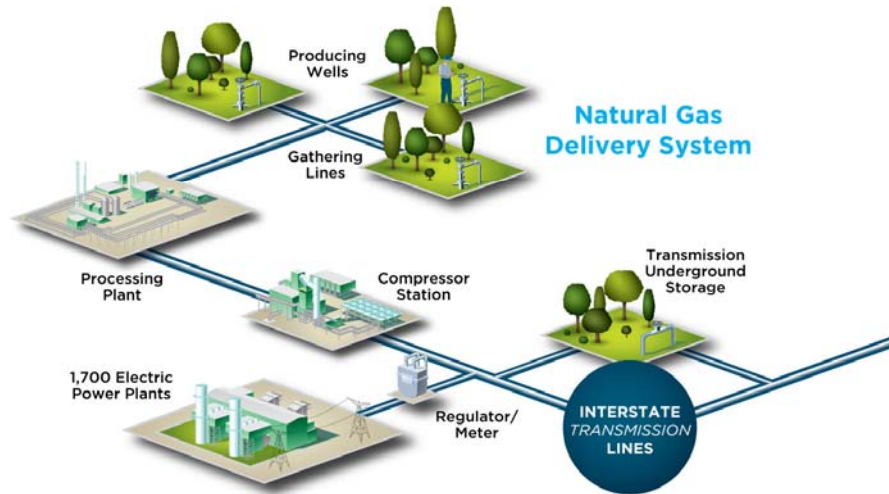


- Local Distribution Companies



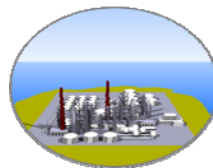
NATURAL GAS

Getting it to Homes, to Businesses, and to Work for America



Gathering Systems

- Include wells, gathering pipes and gas processing plants
- Gas processing plants separate useful byproducts such as propane and butane, and remove contaminants such as water



Transmission Systems

- Transmission lines carry natural gas from the gathering system to the city gate, or Town Border Station
- Compression stations every 50-100 miles maintain gas pressure in the transmission line.



Distribution Systems

- At the city gate, the gas is:
 - Metered (measured)
 - Transferred to the Local Distribution Company
 - Odorized with Mercaptan
 - Pressure reduced to distribution system level

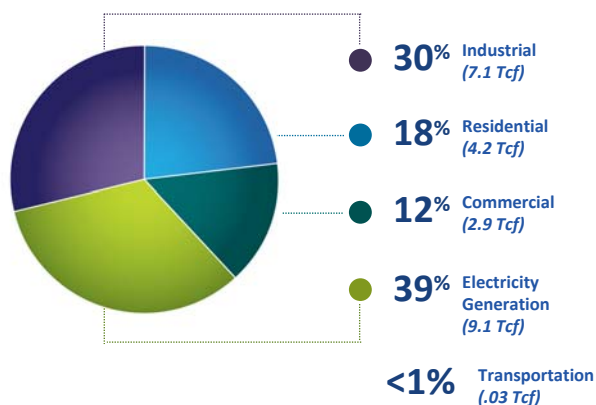


CLEAN NATURAL GAS

Touching Every Segment of American Life

2012 NATURAL GAS

U.S. Consumer Consumption by Sector = 23.4 Tcf



Gas Uses

- Traditional Heat/Hot Water
- Process, Production or Manufacturing
- Electric Generation
- Transportation (CNG and LNG)

Gas Terms

Important Terms:

•**Gas Load** - a customer's gas needs that may include *peak flow, volume* and required *pressure*

•**Peak Flow (or Demand)** - expressed in cubic feet per hour

•**Volume** - quantity of gas used over a defined period of time, ordinarily expressed in cubic feet or Therms

•**Pressure** - applicable to gas lines, expressed in PSI -pounds per square inch or PSIG - pounds per square inch gauge

•**Regulator** – A device that is frequently used to reduce gas main pressure to serve a customer at a lower pressure

•**British Thermal Unit (Btu)** - a standard unit of measurement used to express heat value or energy content

Gas Values

1 cf = 1,000 Btu = .01 Therm

1 cf = 0.02832 cubic meters

1Ccf = 100 cf = 100,000 Btu = 1 Therm

1Mcf = 1,000 cf = 1,000,000 Btu = 10 Therms

1Mcf = 10 Therms = 1 Decatherm (dt) = MMBtu = 1.054615 gigajoules (GJ)

1Mcf = 1,000 cf = 1,000,000 cf

This table assumes that one cubic foot of gas contains 1,000 Btu. If one cubic foot of gas has a different Btu content, the above table would require a correction factor

The Missouri Public Service Commission

Informed Consumers. Quality Utility Services, and a Dedicated Organization for Missourians in the 21st Century

YOUR NATURAL GAS BILL

Your natural gas bill is based primarily on the volume of gas delivered to your residence or business, and the per unit price of that gas. It consists of three main parts:

- Commodity costs** - the cost of the gas itself. The local gas company passes the commodity cost to you without any additional markup or profit. This is unregulated; the marketplace dictates price, not a federal or state agency.
- Transportation costs** - to move the gas by pipeline from its source (e.g., the Gulf Coast) to your local gas company (or utility). Regulated by the Federal Energy Regulatory Commission (FERC).
- Distribution costs** - to bring the natural gas to your residence. Regulated by the Missouri Public Service Commission.

Billing Information (See sample bill on back)

Purchased Gas Adjustment (PGA) - The PGA reflects the wholesale cost of gas paid by the company to its suppliers. The local natural gas company may adjust rates --up or down -- a maximum of four times a year to reflect projected gas costs from suppliers. The actual wholesale cost of natural gas represents approximately 65 to 80 percent of a customer's bill.

Customer Charge - This charge is the same every month. However, each customer class -- residential, commercial and industrial -- pays a different rate. The charge is designed to allow the company to recover a portion of its cost of operation and a rate of return on its investment. Regardless of use, the company still must maintain and operate the facilities necessary to serve its customers.

Energy Charge - This charge represents what the company charges per unit of gas (Ccf or therm) delivered to each customer. This charge is designed to allow the company to recover operational costs not covered by the Customer Charge, such as pipes, wages, equipment, supplies and other expenses, including an authorized rate of return. Both the Customer Charge and the Energy Charge are regulated by the Missouri Public Service Commission.

Ccf - Natural gas is sold according to the volume of gas used. Ccf is the abbreviation for 100 cubic feet. A Ccf is approximately equal to a therm. An Mcf is 1,000 cubic feet of gas.

Franchise Fee - This is a tax that is levied by local municipalities which the company collects and passes on to those cities. This fee varies from city to city and is not regulated by the Public Service Commission.



Key Factors That Affect Price

A prolonged cold spell or brief episode of severe winter weather would increase demand in the high-consumption winter months.
Limited natural gas supplies could affect storage inventories and market prices.
Problems in other energy supplies, such as a prolonged disruption in oil supplies could increase gas demand.

For more information

Created in 1913, the Missouri Public Service Commission regulates investor-owned telecommunications, water and sewer, natural gas, electric and steam utilities. The PSC works to ensure that Missouri citizens receive safe, reliable and reasonably priced utility services. If you have an inquiry, billing question or service-related problem that your utility provider cannot answer, please call the PSC at 1-800-392-4211 or visit www.psc.mo.gov

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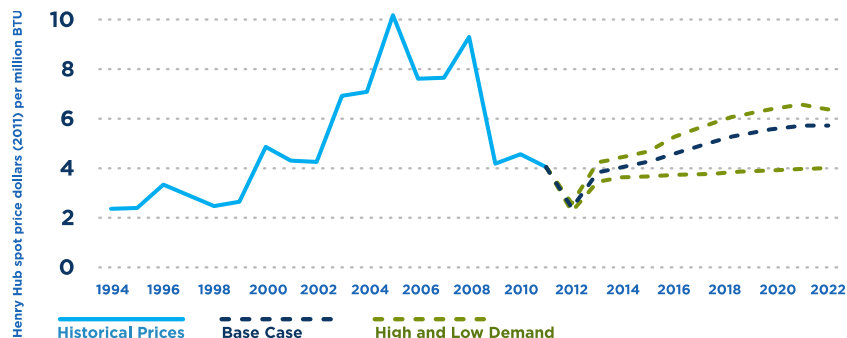
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Rate Structure

- Residential
- Commercial Classes
- Industrial

Natural Gas Price Outlook

Our nation's strong natural gas supply fundamentals and robust and reliable natural gas delivery infrastructure suggest that over the next decade, a range of demand scenarios can be met by a diverse and responsive supply market within an estimated price band of \$4.00 to \$6.50 per MMBtu.



Source: *Rethinking Natural Gas, A Future for Natural Gas in the U.S. Economy*, p.6, American Gas Association, ©2012, Citing Source: Wood MacKenzie Spring 2012. See paper for outlook limitations.

Information Needed for a Capacity Assessment and/or Rate Estimate

Minimum Information Needed

- Site(s) Location (address, intersection or map)
- Peak Hourly Load (Mcf/hr)
- Delivery Pressure Required (PSI or PSIG)
- Usage (Mcf or Therms per month/year)
- Time Frame for Response
- Service Required Date

Information Needed for a Capacity Assessment and/or Rate Estimate

(continued)

Helpful Information – in addition to minimum

- Type of Business
- Type of Equipment
- Equipment Use (hours of operation)
- Site Plans
- Usage history from similar facility
- Future expansion plans

Why does the Utility need this information?

To determine the best way to serve the Customer

- Customer service requirements, especially peak demand, are critical to determine line capacities & ability to serve.
- Accurate anticipated load data is needed to assure that the addition of the new customer doesn't harm other customers

To prepare energy cost estimates

- Tariff structures and customer charges reflect load patterns.....how much energy is needed and when.
- Well defined customer requirements can present opportunities to explore other service options

Why Bring Utility in on Development Projects?

- **To Manage Customer and Community Expectations**
 - Review by engineers and planners
 - Determine best way to serve the customer
 - Determine if impending change will affect service to other customers
 - Determine potential customer charges

Jobs, Jobs, JOBS

The new era of abundant and affordable natural gas has impacted our economy through customer savings and significant job creation. The natural gas industry employs people in all 50 states and supports direct, indirect and induced jobs.



Source: The Contributions of the Natural Gas Industry to the U.S. National and State Economies, IHS Global Insight, September 2009

The Numbers

622,000 jobs are directly involved in exploring for, producing, transporting and distributing natural gas (direct employment)

723,000 additional jobs are created in industries such as agriculture and manufacturing that support and supply goods and services to the natural gas industry (indirect employment).

1.5 million

jobs are supported when

direct and indirect natural gas employees introduce their income back into the economy and create demand for further goods and services (induced employment).

Missouri Natural Gas Companies

- Investor Owned Utilities
 - Ameren – Central, Eastern and South Eastern
 - Columbia, Jefferson City, Wentzville, Rolla
 - Empire District Gas Company – West Central, Northern and NorthWest
 - Sedalia, Maryville, Chillicothe, Clinton
 - Laclede Gas & Missouri Gas Energy – Eastern, Western, and Southwest
 - St. Louis, Kansas City, Joplin, St. Joseph
 - Liberty Utilities – Northeast, Southeast, and West
 - Kirksville, Hannibal, Charleston, Butler
 - Summit Utilities – Lake Ozark and South Central
 - Lake Ozark, Branson, Lebanon, Gallatin
- Municipally Owned Systems
 - City Utilities of Springfield
 - Numerous other communities across Missouri

Gas Company Representatives

- Investor Owned Utilities
 - Ameren – Mike Chell 314 - 554 - 2375
 - Empire District Gas Company – Dan Klein 816 - 431 - 3055
 - Laclede Gas & Missouri Gas Energy – Cliff Garrett 314 - 575 - 4789
 - Liberty Utilities – Steve Green 573 - 755 - 0096
 - Summit Utilities – Phil Marcum 800 - 927 - 0787 x652
- Municipally Owned Systems
 - City Utilities of Springfield – Ben Jones 417 - 831 - 8560
 - Numerous other communities across Missouri

Questions/Comments?