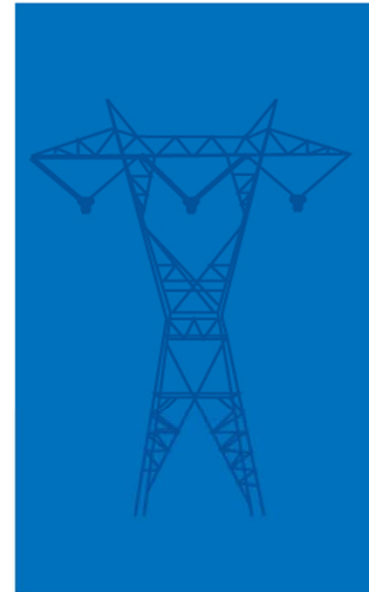


Gas Utility Details and the Site Selection Process

Basic Training for Our Economic Development Allies



VECTREN
Live Smart

The Natural Gas System

Production



Interstate Pipeline



Distribution



Natural Gas Details

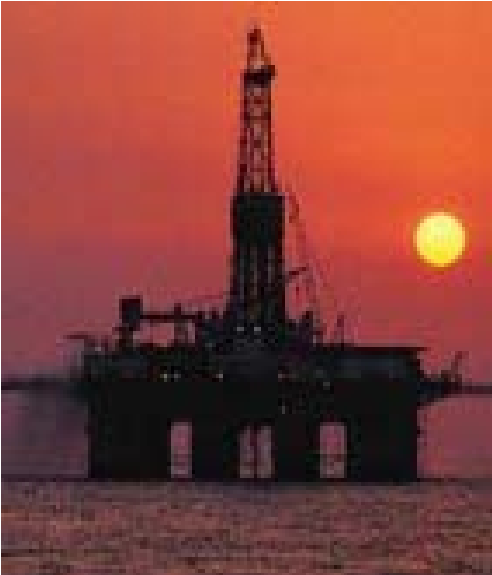
UNREGULATED

REGULATED

Production

Interstate Pipeline

Distribution



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

Equivalent 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

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

What defines a “Natural Gas Ready” site?

Gas facilities matched to proposed use

- Heavy industry – Easy access to large, high pressure lines
- Light industry/distribution – In close proximity to medium pressure lines
- Office & high-tech – Low to medium pressure lines are easily accessible

What is a “Natural Gas Ready” Site?

Proximity to Natural Gas Facilities – The Closer the Better

- **Low or no Customer Charges for Line Extension Costs** – high charges for system improvements and/or extensions can jeopardize projects
- **Time Requirements for System Upgrades/Line Extensions** – lengthy extensions and system upgrades can require a considerable amount of time, this doesn't always meet the customer's timeframe

Summary

- Prospect requirements are changing and are becoming more sophisticated
- While utility service Details rarely make projects happen, they certainly can prevent them from happening
- Communities should identify “utility-ready” sites
- When planning and working with prospects, involve your utility early in the process

- **Glossary of Utility Terms:**
www.utilityeda.com/utility_term_glossary.asp

- **Utility Usage Worksheet:**
www.utilityeda.com/UEDA_EnergyWorksheet.pdf

- **Electric and Gas Industry:**
 - Federal Energy Regulatory Commission www.ferc.gov
 - Electric Power Research Institute <http://my.epri.com>
 - Edison Electric Institute (*EEI*) www.eei.org
 - American Gas Association www.aga.org
 - Energy Information Administration www.eia.doe.gov
 - Natural Gas Supply Association www.ngsa.org
 - Public Utilities Reports www.pur.com

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