

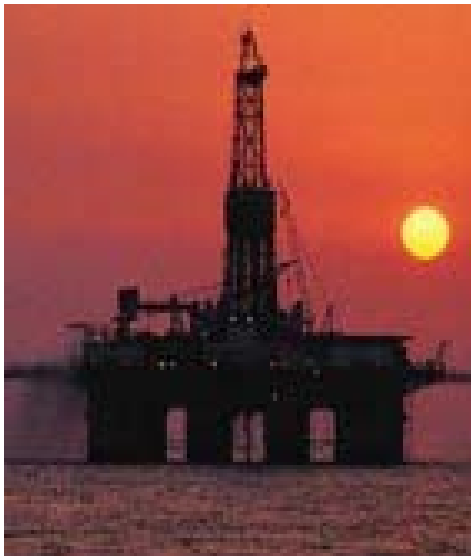
# Gas Utility Details and the Site Selection Process

Basic Training for Our Economic Development Allies



# The Natural Gas System

Production



Interstate Pipeline



Distribution



Natural Gas Details

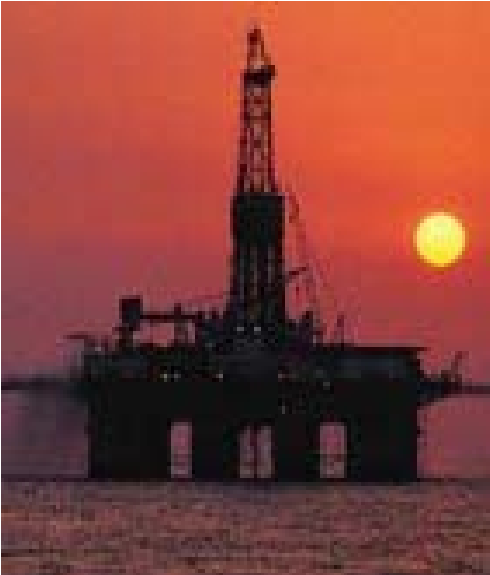
UNREGULATED

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](http://www.utilityeda.com/utility_term_glossary.asp)
  
- **Utility Usage Worksheet:**  
[www.utilityeda.com/UEDA\\_EnergyWorksheet.pdf](http://www.utilityeda.com/UEDA_EnergyWorksheet.pdf)
  
- **Electric and Gas Industry:**
  - Federal Energy Regulatory Commission      [www.ferc.gov](http://www.ferc.gov)
  - Electric Power Research Institute      <http://my.epri.com>
  - Edison Electric Institute (*EEI*)      [www.eei.org](http://www.eei.org)
  - American Gas Association      [www.aga.org](http://www.aga.org)
  - Energy Information Administration      [www.eia.doe.gov](http://www.eia.doe.gov)
  - Natural Gas Supply Association      [www.ngsa.org](http://www.ngsa.org)
  - Public Utilities Reports      [www.pur.com](http://www.pur.com)

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