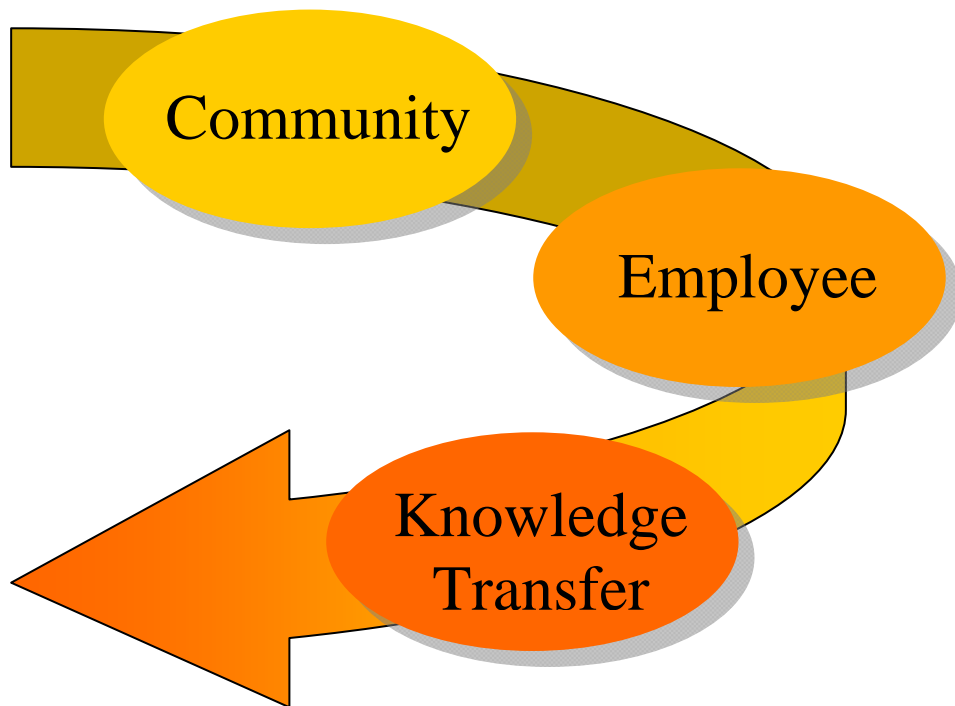
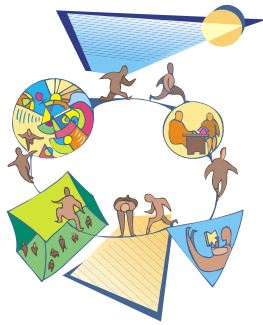




Emerging Supply/Demand Issues



Introduction



The energy industry is facing several issues that could greatly impact the ability to provide reliable natural gas (NG) and liquefied natural gas (LNG) delivery to customers. This includes residential, commercial, and industrial customers as well as power generation companies. As demand increases, there are several issues that affect the ability to deliver reliable NG and LNG.

Companies will need to examine their infrastructure to make sure they can meet future demand requirements. Transmission, storage, and distribution organizations will all need to examine their infrastructure for. Customers will also need to look at infrastructure needs. Generation companies need to determine how they will be able to secure reliable NG/LNG supply to manage peak demand issues.

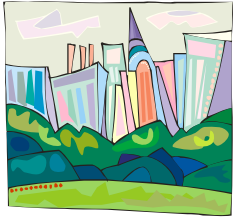
Customer demand will need to be examined. There could be new markets emerging, changes in the way customers use NG and LNG, or changes in the number of peak seasons. Companies will need to think of future need, regulations, and societal changes when examining demand.

Securing the needed supply of NG/LNG will also need to be examined. Domestic and imported NG/LNG contracts will need to be secured. Environmental, governmental, and infrastructure issues will affect supply. Companies will need to start now to make sure they are able to project and manage future demand.

With the potential of peak demand happening more than once a year, companies will need to find ways to improve the efficiency of injection/extraction techniques. Generation companies might need to ensure proper storage is available to make sure they will have the necessary quantities for peak summer seasons.

It is time for Production, Transmission, Distribution, and Electric Generation companies to work together to find solutions. These companies will need to work with customers to address needs. They will also need to work with governmental entities to address regulatory and policy issues.

Infrastructure



As the need for natural gas and LNG grows, the need for improved and expanded infrastructure grows. Not only will the current infrastructure need to handle the transportation of current NG and LNG demand, but will also need to quickly grow and expand to areas where the products are being produced. This means that Natural Gas companies will need to plan ahead to be able to quickly add or improve transportation, storage, and processing capabilities.

Action Item #1: Identify and make a plan to address the infrastructure issues facing you company. Address the real or potential risks and reliability issues that are associated with infrastructure.

List one or more infrastructure problems that your company will need to address to ensure reliable service to your customers. Think about your end use customer’s needs, peak demand, shifts in the market, or future growth. This could address your infrastructure or that of your supplier.

Identify one or more solutions to the problem(s) listed above. These could be changes you need to make internally or externally, recommendations to suppliers, or issues to discuss with regulators.

Customers/Demand



The needs of customers are changing. Houses are growing in size and require more appliances which use natural gas. Electricity consumption is growing. The potential CO₂ regulation could require greater demand from electric generation. There are potentially customers who have not even been identified yet. All of these factors lead to a greater demand for NG and LNG. In order to ensure reliable service in the future, Natural Gas companies will need to examine who their customers are and what their needs will be.

Action Item #2: Identify real or potential changes in who your customers are and what those customers will need.

Identify at least one real or potential new customer.

Make a list of potential demand needs for each customer.

Make a list of the things that you are doing or will need to do to anticipate and meet those needs.

Identify the one thing that will have the most impact in your ability to meet your customers needs.

Production/Supply



As the demand from customers grows, the supply will need to be able to meet that demand. There are vast reserves in the United States but not necessarily readily available. There are exports from other countries but not necessarily reliable. Factors impacting Natural Gas supply have grown to include not only weather but now include hurricanes, floods, and environmental legislation. There is also a growing summer peak because of the need for NG in electricity generation. With all these factors involved in the supply of NG and LNG, companies will need to plan ahead to try to anticipate their customer’s needs in order to maintain reliability.

Action Item #3: Identify supply issues facing you and/or your customers. Make a list of actions to take to help resolve those issues.

Make a list of current customer needs.

List one or more areas where you could see growth in demand.

List the actions you are taking or should take to meet peak demand issues.

List the issues that could potentially impact your ability to meet the NG or LNG demand of your customers and/or your supplier's ability to meet your demand.

Make a list of potential solutions to those issues.

Storage



As the need for gas increases and demands are anticipated, companies will need to maintain larger amounts of NG and LNG in storage in order to maintain reliability. This storage capacity will need to grow. Also, the need for a second peak demand during the summer will require companies to have methods and equipment to inject and extract NG and LNG with a faster turn-around time. Instead of once a year, it could be twice a year or more. There will also need to be ways to quickly provide the supply to generation companies. These issues will require companies to create plans for how to handle storage issues in the future to ensure reliability.

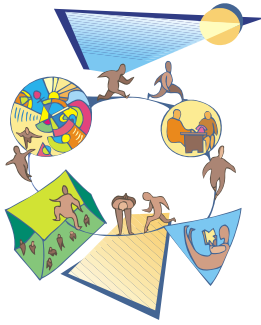
Action Item #4 Identify ways to improve storage capacity to meet your needs and those of your customers both now and in the future.

List some steps you can take to ensure that you are able to meet your or your customer’s storage needs when summer peak continues from electricity generation?

Make a list of things you can do to begin to improve the injection/extraction efficiency in your company.

Identify ways in which you can grow your or your customer's storage needs.

Reliability



Reliability and a company’s ability to manage risk will become more and more critical as the country becomes more dependent on NG and LNG. Companies will need to think of innovative solutions to bring increased amounts of NG and LNG to market and be able to react to large swings in demand. Being able to provide solutions will probably require collaboration and cooperation within the industry, with regulatory bodies, and with customers. Proactively examining future issues be the key to creating a more reliable market that will be flexible enough to meet peak demand issues.

Action Item #5 Create a plan to meet with key stakeholders for your company to address reliability issues. Use the information you developed in this workbook to create a dialogue with those stakeholders.

Make a list of companies that you can meet with to discuss reliability issues.

Make a list of things that can be done to bring stability to the gas market. Include the things your company is doing now.

Make a list of issues that you anticipate will impact the market in the future.
