

Yankee Gas Services Company Update: Balancing Commercial– Industrial Energy Loads*

SUMMARY.

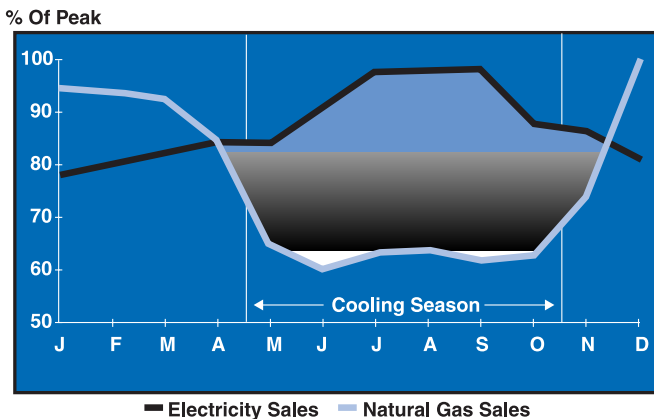
As businesses search for ways to reduce power costs, electrical power expenses are undergoing intense scrutiny. Although electrical deregulation is expected to produce cheaper power through a more competitive marketplace, so far that expectation has not been realized. Against this background, many businesses are looking to natural gas-based systems to help balance their overall energy load and reduce costs for electrical power.

BACKGROUND.

Electric rates vary. Some are based on temperature, others based on the time of day when electrical power is in demand. Electric power providers and the Department of Public Utility Control (DPUC) determine those rates and the criteria on which they are based. When a business requires heavy usage of electrical power, it experiences a "spike" in its energy load and its energy cost because electricity costs increase when demand increases. Sometimes this is by a factor of 20-50 times over low-demand periods. Example: A customer spending \$0.05 per kilowatt hour (kWh) during a low-demand period may pay as much as \$2.50/kWh during a peak demand period.

HOW INCREASED DEMAND FOR NATURAL GAS CAN LOWER OVERALL ENERGY COSTS.

In contrast to electric-based power, customers who use more natural gas can save money because the rate for natural gas does not fluctuate in accordance with demand during summer months, a peak demand period for electricity because of cooling demands. Overall cost savings can be achieved by reducing reliance on electricity when it costs the most by using natural gas instead. The result is an overall "flattening" of a company's energy load profile and reduced annual power costs.



Many businesses still use the most electricity during summer months, when its cost is at its highest, while natural gas usage is generally greatest during winter months. By using natural gas-based cooling systems during summer months, businesses can reduce the spike of summer costs, save money, and flatten their overall energy load.

COOLING AND NATURAL GAS.

Natural gas-based cooling technologies are now emerging as a way for businesses to defray the summer's high electrical costs and balance their overall energy load. Studies have shown that the capital outlay for gas-based cooling is offset by cost savings within a few years.

For this reason, more companies are now using "hybrid" systems that include both natural gas and electric chillers. Automated rate-monitoring equipment can determine which system can be operated at a lower cost.

The environmental impact of cooling with natural gas is less than with electric because most natural gas systems do not use any CFCs (chlorofluorocarbons, the refrigerant used in many electric air conditioning systems) or HCFCs (hydrochlorofluorocarbons). This is significant since, as of December 31, 1995, CFCs can no longer be produced or imported into the United States.

THE PRESENT AND FUTURE OF ENERGY LOAD BALANCING.

As the electric industry becomes fully deregulated, a more competitive environment for power generators will develop. Because many businesses already use natural gas for heating, using natural gas-based cooling systems to reduce electrical costs is a logical and "built-in" way for them to flatten their overall energy profile. Moreover, because of the abundance, environmental soundness and availability of efficient natural gas cooling systems, this trend is expected not only to continue, but to accelerate as natural gas and electricity compete in fully deregulated markets.

*For more information on this subject – or any energy-related matters – contact the Yankee Gas Business Response Center at 1-888-2YANKEE or visit the Yankee Energy web site at www.yankeenergy.com.