



NATURAL GAS **UTILITIES**

Securing the Future



Executive Summary

Natural gas utilities in the US are in the midst of perhaps the most exciting and challenging time in their long history. Although natural gas prices are low and seemingly stable, geographic sources of natural gas have changed and electric utilities are using significantly more gas for power production than just a short time ago. That puts increasing pressure on an often aging pipeline infrastructure that is under increased scrutiny by regulators in terms of public safety. Environmental questions have been raised about the technology used in achieving this new supply abundance. In addition, consumers are more conservation-oriented and this, combined with technology improvements in appliance efficiency, has continued the long decline in gas usage per customer. As a result, natural gas utilities must communicate with their customers about rates, about safety, about environmental concerns and about the positive value of natural gas. And these communications need to be made to an increasingly savvy audience that lives in a digital world, where information is instantly served via social media and a myriad of service options are provided via an app on a smart phone. With so much available at the touch of a button, that same audience also expects more from their service providers, and natural gas utilities can benefit by integrating into that model. Partnering with innovative companies that can provide additional value-added products and services that customers now expect can help forward-thinking natural gas utilities increase their customer satisfaction scores – leading to higher ROE. With happy customers comes happy regulators and an environment in which natural gas utilities can prosper.

Threats and OPPORTUNITIES

The landscape facing natural gas utilities is constantly changing. Domestically, the ongoing shale boom has oil and natural gas production levels near their peak, contributing to dramatically lower commodity prices. The industry has ongoing concerns over aging infrastructure and safety. These challenges are testing the industry's ability to plan for much needed strategic and operational investments.

In addition, one of the more familiar challenges is the long-term trend of declining usage per customer. According to a report published by the Energy Information Administration (EIA), residential usage declined by 22% over the 19-year period ending in 2009.¹

Nationally, population shifts to warmer climates, energy-efficient housing construction, increased appliance efficiency and a rising trend of natural gas customers who do not use natural gas as their primary heating fuel have contributed to this significant reduction in usage.² Further, declining usage can translate into a lost customer, as customers who switch individual appliances to electric can eventually shift from being a natural gas and electric household to one served only by electricity.

As consumers become increasingly conservation-minded, they are seeking out new technologies, such as tankless water heaters, in an effort to further reduce energy consumption.

Tankless water heaters are increasingly being adopted by end-users as they are more energy-efficient than conventional water heaters and require less installation space. Between 2006 and 2009, shipments of gas tankless water heaters grew by 30%. As of September 2010, there were 600 Energy Star-rated gas tankless water heater models on the market. With water heating being the second largest consumer of energy in the home behind heating and cooling, the

growing trend of tankless water heater installation translates to a continued reduction in natural gas usage in the home.³

In addition to the trend of declining usage, a still-evolving challenge for natural gas utilities is pipeline safety. Although pipelines are generally recognized as the safest and most reliable means of transporting energy products⁴ over the past ten years, there have been a number of high-profile incidents, most notably the San Bruno explosion in California. These incidents have triggered legislation and regulations that require natural gas utilities to expend more than \$22 billion annually⁵ to assess, repair and replace pipeline assets.

The US Department of Energy forecast for the average residential gas customers during the 2015-2016 winter indicated savings in annual heating costs of \$248 compared to the winter of 2008-2009. These savings represent a 30% advantage for consumers.⁶

Consumers in the US have become increasingly conscious of the impact of their energy choices on the environment, and regulators in many states are mandating use of more renewable sources of energy, impacting both the electric and gas industries. Despite being a lower carbon content fuel source, natural gas is still a fossil fuel, and as such is subject to consumer concerns.

Even here, in the area of energy choices, natural gas utilities have a great story. The direct use of natural gas is incredibly efficient. A study commissioned by the American Gas Foundation in 2008 stated that the increased use of natural gas in residential and commercial applications can increase the productivity of available energy supplies, reduce overall energy cost and reduce related CO2 emissions.⁷

How do natural gas utilities best meet these various challenges and, in fact, successfully grow?

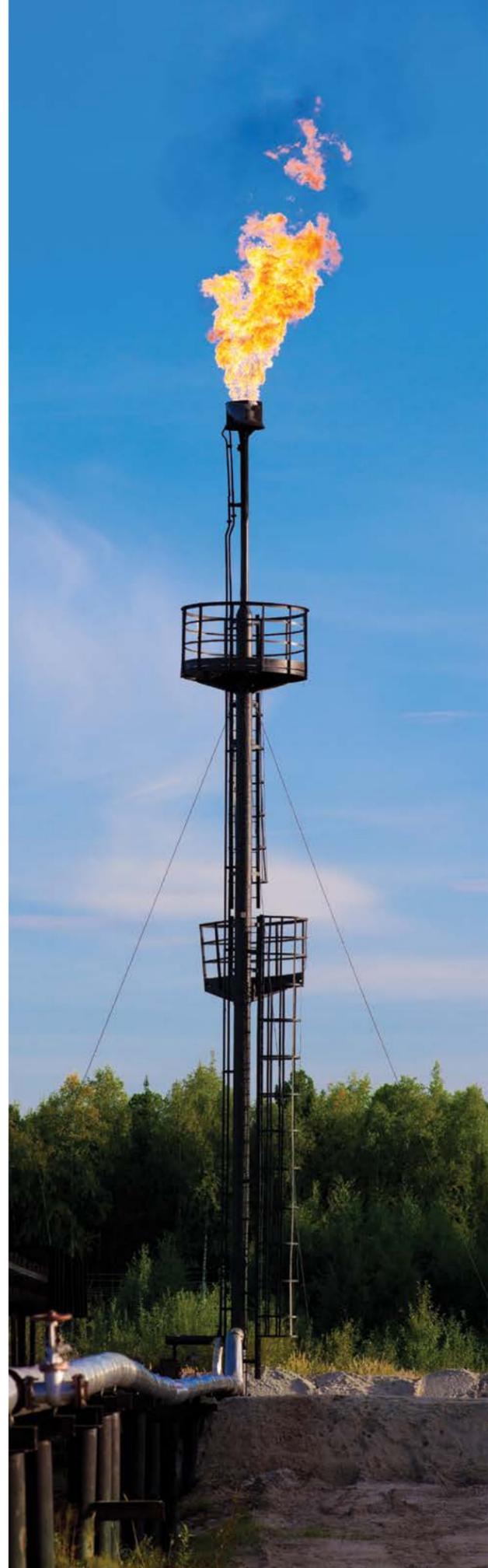


Through a different LENS

The changing picture of domestic natural gas supply and demand over the last 40 years could not be more dramatic. In 1978 the Power Plant and Industrial Fuel Use Act actually prohibited the use of natural gas as the primary energy source in new major fuel-burning installations like steam electric power plants. Supply was so uncertain at the time that many gas utilities were reluctant to sign up new customers. Contrast that with today, where widespread use of hydraulic fracturing technology has dramatically increased supply with an accompanying decline and stabilization of natural gas prices. In fact, an IHS CERA study stated that the US natural gas resource base is now widely agreed to be sufficient to last 100 years at the current rate of consumption.⁸

Long-term lower prices have made natural gas very competitive with other energy sources. So gas utilities have had to alter their forecasts and modernize their marketing and customer service practices. That means more emphasis on reaching potential new customers and keeping the current ones.

**Utilities with top
customer satisfaction
scores realize higher
approved ROE.**



Becoming a TRUSTED PARTNER

The chief way to attract and retain customers is to make customer satisfaction the center of the utility's mission.

According to an Accenture Global Consumer Trends Survey, in 2013, 51% of consumers in the US switched brands or businesses due to poor customer service, a 5% increase from the previous year, and 81% of those who switched said the company could have done something to stop them. Customers, now more than ever, feel empowered to make a switch, knowing that if a current company or service is not providing them with adequate attention and recognition, someone else in the marketplace will.⁹

In a 2014 report titled "The Future of Customer Service" compiled by TrendWatching, when 1,620 consumers were tested under laboratory conditions, 63% said they felt their heart rate increase when they thought about receiving great customer service. The lesson learned is clear: when it comes to delivering a great customer service experience, it's not about what consumers think, it's about how they feel.¹⁰

But can a utility expect their customers to have a warm and fuzzy feeling about the pipes bringing natural gas into their homes or the appliances that use the fuel? The perhaps surprising answer is yes, as customer satisfaction ratings from the top performing utilities show.

According to a J.D. Power report on customer satisfaction in the Natural Gas Utility space, overall customer satisfaction with residential gas utilities increased by 27 points in 2015, buoyed by improvement in satisfaction regarding price (+30 points) and corporate citizenship (+31). Interestingly, the report notes that "stable low pricing and familiarity with conservation programs help drive satisfaction with price. In the corporate citizenship factor, satisfaction is driven by customer awareness of their utility's efforts to support economic development in local communities; improve the impact on the environment; and foster public safety."¹¹



And the value doesn't end there. A December 2015 study of the electric utility industry, published jointly by McGraw Hill Financial and J.D. Power, found increases in customer satisfaction are associated with increases in return on equity (ROE), identifying a measurable link between satisfaction and a key financial metric for regulated utilities. In general, utility brands in the top two quartiles of customer satisfaction scores realize higher approved rates of return on equity than those in the lower two quartiles.¹²

Despite the clear correlation between customer satisfaction and ROE, and between customer satisfaction and retention, many utilities' primary interaction with their customer is the monthly paper bill. In order to be successful in today's more complex and interconnected world, natural gas utilities must chart a course toward improved customer satisfaction that moves beyond simply the traditional bill. To achieve this, forward-thinking utilities must become a trusted partner in their customers' eyes.

Gas utilities have long communicated with customers via bill inserts about safety and reliability. Much space has been devoted to what to do if you smell gas, etc. Safety education has also been introduced in school systems, with utility employees teaching classes on safety. Additional effort has gone into impressing upon customers how reliable US utilities are through information about actions to take in the unlikely event of an outage. These communication subjects are still very important (and some are required by regulations), but utility customers in the US have become so used to the safety and reliability of natural gas that the subjects are largely taken for granted.

So what do customers now want from their utility? How do they move critically forward in partnership with their customers? There are two components to consider. They still want value for their energy dollar. Is the energy there when I need it and in the amounts I need it? Can I afford it and will the utility work with me on payment plans? Is this energy source priced competitively with alternatives? These are still fairly routine questions and most utilities adequately handle them. But that is no longer enough.

Specifically, there is a large and growing percentage of new decision makers on energy matters – millennials. What do millennials want and expect from their utility? Millennials are budget conscious, environmentally and socially aware, and utilize social media extensively. They want value for their total dollar. Is my utility providing value in the way it communicates with me about my energy use, for example, with on-line bill presentment and payment and one-call resolution of problems? Am I doing the right thing with my energy choices? Is my energy source derived from domestic sources? Is it energy efficient? Is it environmentally responsible? Is it reliable? Is my utility providing value beyond traditional utility services? Is it a partner in providing access to innovative companies providing new services or technologies?

This last category is a critical one that is often ignored. Utilities need to explore nontraditional services in order to strengthen their customer relationships. Utilities don't need to do this alone – there are innovative companies with which to partner to offer services that enhance the customer experience, leading to greater

CSAT and Regulators

Most utilities are subject to rate regulation at a state level. Whether elected or appointed, state utility commissioners are keenly attuned to how a utility's customers view their service levels – that is, how satisfied they are with their utility provider. Most rate proceedings are accompanied by "service hearings" or other forums designed to solicit direct input from customers. And most state commission staffs keep close track of customer complaints, often comparing one utility against another and requiring utilities to explain their performance. All this may seem rather subjective but may play a role in influencing a key driver of utility earnings – the authorized return on equity (ROE) established in state regulatory proceedings.

customer satisfaction.

One area of innovation that could be useful in engaging this audience, amongst others, is the increased use of vehicles powered by Compressed Natural Gas (CNG). CNG is an alternative to gasoline that's made by compressing natural gas to less than 1% of its volume at standard atmospheric pressure and can be drawn from domestically drilled natural gas wells or in conjunction with crude oil production.

While most are accustomed to seeing these vehicles as part of a corporate or industrial fleet, there is some movement in the consumer market in the U.S. While "natural gas powers more than 12 million vehicles on the road today...only about 250,000 of these are being used in the U.S." Analysts believe that that one way to increase this number is to expand the number of CNG fueling stations. Investment in such infrastructure seems sound for the long term, as a large study of U.S. natural gas production supply "far exceeds government forecasts – and storage levels assure reasonable prices for the foreseeable future."

And there are other innovations in this space, including home refueling. Consumers can purchase a small compressor appliance that is mounted on a garage wall or pedestal, using electricity connected to a home's natural gas line to refuel the vehicle overnight.

With gasoline prices remaining high, "American interest in CNG is rising" as "CNG costs about 50% less than gasoline or diesel" with fewer emissions than gasoline. "It's clean, affordable abundant and American."¹⁵



Partnerships THAT DELIVER

When consumers today need information or answers, whether energy-related or not, they typically will turn to an internet search engine. We "google it" with such frequency that the word has entered our lexicon as a verb. But utilities need to understand that the same technology companies that provide these answers are also increasingly looking to provide energy-related services to the utility's customers. For example, Apple recently received permission to market excess power to third parties.¹⁴ Successful utilities of the future will be the ones that keep third parties out of the customer relationship by providing its customers timely, value-added services to complement traditional utility services, thus building a solid basis for customer loyalty. The following are proven partnerships that can enhance customer satisfaction with a utility.

Moving Assistance

Aside from the chore of packing and unpacking, the biggest burdens most moving householders face are the lengthy checklist of contacting and scheduling providers of electricity, natural gas, telephone, satellite or cable TV, internet, security monitoring and water/wastewater, and in some cases garbage/trash pickup, etc. And in many cases decisions must be made over bundling these services, deposit arrangements and agreement terms. Utilities can truly endear themselves to new customers by providing a one-stop resource for coordinating these details. Customers will then return to this new trusted source for additional needs after the move is complete. And if the utility offers other nontraditional services such as home repair solutions it has a ready audience.

Home Repair Solutions

37 million households report having a heating, plumbing or electrical problem every year.¹⁵ Most of these involve a repair that is not covered by homeowner's insurance or the utility, meaning the homeowner must pay for and arrange the repair themselves. And over 60% of Americans don't have \$500 in savings to pay for these repairs.¹⁶

Home repair service providers can offer homeowners an affordable and timely solution. And unique to the gas utility is the fact that many customers still call the gas utility for help when experiencing a problem with their gas appliance. Partnering with a provider who can provide those services to your customers when they need them is a great way to build trust. HomeServe, for example, provides home service plans to millions of customers in the US and Canada.

"During my tenure at SourceGas, who provided appliance warranty protection to tens of thousands of customers, I saw evidence of this trust firsthand. While on "ride-alongs" with our service employees, I often heard very positive feedback from customers. They needed this service and truly appreciated being able to rely on a trusted source – their utility – to receive it."

–Bill Cantrell, President and CEO
SGA and Gas Machinery Research Council

This area is a straightforward opportunity for a utility to partner with an industry leader to perform essential repair services for its customers.

Mobile Applications

A variety of mobile applications are available to utilities that can facilitate customer dialogue and enhance the customer experience. These include mobile apps that provide tools customers have come to expect, including online bill presentment and payment, energy usage reports or trends, as well as requests for service; these are important tools in communicating with your customers according to their preferences. A recent briefing published by TrendWatching indicated what we all know – that customers are becoming increasingly impatient when it comes to ineffective customer assistance via web or phone. Partners such as HomeServe offer a mobile app that allows the customer to track their repair experience similar to Uber. Increasingly, customers want mobile and face-to-face interactions.

A good example of this in action is the Mayday button on the Amazon Kindle Fire HDX tablet. This button connects tablet owners with an Amazon customer service rep via webcam technology. Amazon calculates that among tablet owners, 75% of all customer service interactions now arrive via the button.¹⁷

Whatever combination of partnerships are chosen, it is critical to continually assess how the programs are working and whether they are truly serving the needs of the customer. Opening a dialogue with your customers, via surveys, customer service interactions and the use of social technologies, will ensure the partnership is delivering. The utility needs to

emphasize to the customer its role as a trusted partner, crystallizing how that role translates into added value.



Benefits to the Utility

So how does this translate to benefits to the utility? Utilities which meet and exceed customer expectations by improving communications and providing nontraditional services will see improvements in customer satisfaction and therefore improved financial performance. Solve your customer's problems, improve your brand image and earn their loyalty. Survey results and utility experience from across related industries provide strong proof of this.

A more in-depth look at the McGraw Hill Financial-JD Power Study cited earlier provides further detail to support the relationship between customer satisfaction and ROE in the electric utility market. The most outstanding benefit borne out of this study is the positive impact to ROE.

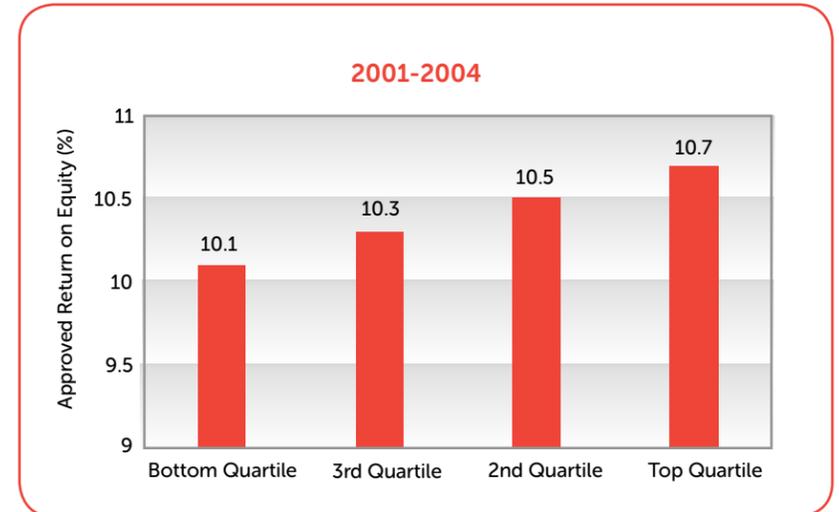
These lessons translate well across the gas utility space, as the following data shows.

CUSTOMER SATISFACTION Correlates to ROE

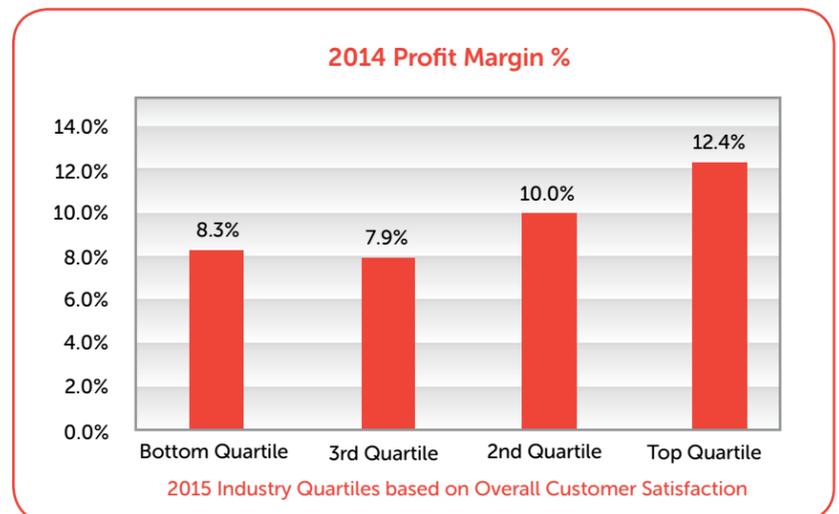
There is an increase in ROE among utilities who ranked in the top quartile of customer satisfaction one year prior to their rate case; on average, top quartile utilities earned 10.7% ROE, whereas bottom quartile utilities earned 10.1%.



Further research conducted by J.D. Power shows a positive relationship between the level of satisfaction and profit margin. Electric utilities in the top quartile of customer satisfaction typically report profits 3%-4% higher than utilities in the three lower quartiles.



Source: J.D. Power Electric Utility Residential Customer Satisfaction Studies, 2001-2014 and Regulatory Research Associates, a division of SNL Energy



Sources: J.D. Power 2015 Electric Utility Residential Customer Satisfaction Study and Federal Energy Regulatory Commission (FERC) Data



CSAT and CREDIT RATINGS

In a 2005 report, S&P Rating Services provided insights regarding how it uses customer satisfaction data when determining utility credit ratings.¹ The report included findings from an internal study conducted by S&P that compared the opinions of credit analysts about the regulatory environment of particular utility companies with a utility's customer satisfaction index score, as measured by J.D. Power. S&P's analysis identified a correlation between the credit analysts' view of regulatory risk and customer satisfaction. Furthermore, based on those findings, S&P clarified its methodology would include customer satisfaction as one of the many variables they use to assess risk and, ultimately, their credit ratings.¹²

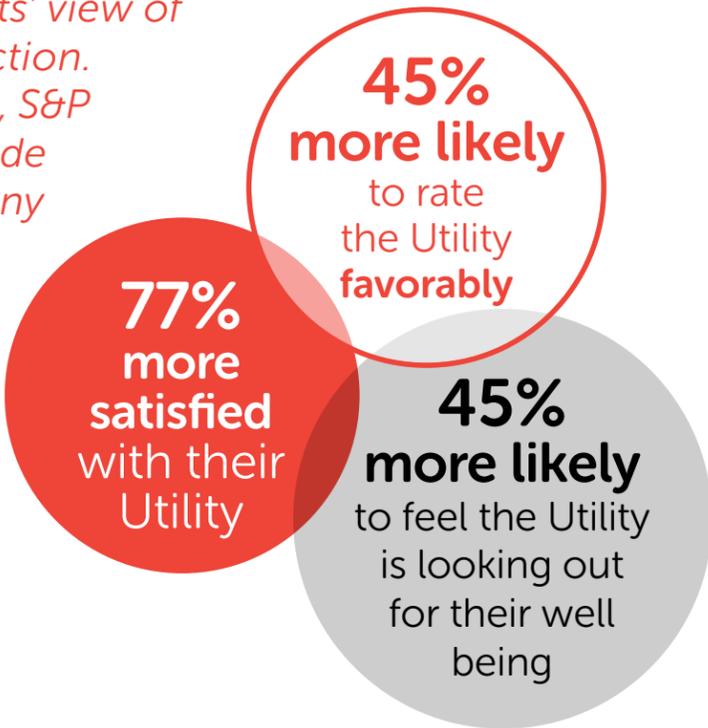
Holders of Home Repair Policies are¹⁸...

The results are clear.

Higher customer satisfaction translates to higher profitability and ROE. And delivering innovative products and services is a good way to get there. Forward-looking utilities are building mobile apps that provide information on outages, allow consumers to report problems, manage their accounts, and make payments, in one easy-to-access place.¹⁹

Products such as home repair service plans are an example of such in-demand products. For example, according to a recent survey of customers of various utilities in the Pacific Northwest, 1 in 3 customers have had a heating, cooling or electric repair in the last two years.²⁰ And it is in these instances that the customer often turns first to their utility for help.

The data demonstrate that partnering with proven, reliable providers to deliver innovative products to customers positively, and significantly, impacts utility satisfaction ratings.



Conclusions/Securing THE OPPORTUNITY



Natural gas utilities in the US are in the midst of perhaps the most exciting and challenging time in their long history, and these pressures are not expected to diminish. Nevertheless, it can be the most successful period in their history. The proactive natural gas utility can overcome the challenges of declining usage per customer and the requirement to address pipeline safety issues by successfully engaging the customer through a combination of smart, timely communications and the introduction of nontraditional products and services that position them as a trusted partner to their customers. The trusted partner role is facilitated by assessing what customers need and expect and finding experienced partners to secure the opportunities thus presented. Exceeding customers' expectations leads to higher customer satisfaction, and higher customer satisfaction leads to increased ROE. Further, customers today have been conditioned by other forward-looking companies, such as Amazon and Google, to expect digital engagement that delivers information at the touch of a button. The natural gas utility can be part of this customer experience evolution by engaging with industry-leading partners to provide digital access as well as nontraditional products and services and thereby position itself solidly for future success.

Be part of the customer experience revolution through engaging in **INNOVATIVE PARTNERSHIPS.**

About the Author



Commissioner Emeritus Timothy Alan Simon was appointed to the California Public Utilities Commission CPUC by Governor Schwarzenegger in 2007 and ended a six-year term in December of 2012. He served as a member of the National Association of Regulatory Utility Commissioners (NARUC) Board of Directors, Chair of NARUC 's Gas Committee is a current member of the National Petroleum Council. A securities banking and energy industry attorney, he actively promotes diversity in utility procurement and employment. In 2013 Simon founded TAS STRATEGIES, a legal and strategic advisory firm focused on utility infrastructure, energy, broadband and financial services. He also serves as an Adjunct Professor of Law at Golden Gate University School of Law. He teaches Securities Regulation, Merger and Acquisition and an Advisor in International Securities Regulations in the U.S. Legal Studies Program. He is a frequent public speaker and panelist. Simon received a BA in Economics from the University of San Francisco (Distinguish Alumni 2012) and a Juris Doctorate from UC Hastings College of Law.

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