





Questions Administered by Ed Hild of Buchanan Ingersoll & Rooney

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Ed has extensive experience in the authorization and appropriation processes in Congress, especially as it relates to the energy and natural resources industry and the defense industry.

1. Let's talk a little bit about the new Presidential administration and what impact it might have on the gas industry. Throughout the campaign, President Trump spent a lot of time talking about relaxing regulations on natural gas production. How do you think things will move forward under the new administration and what impact do you think that will have on utility companies?

It is still unclear how things will move forward under the new administration, but it is clear that any approach to achieving our national goals will include natural gas. Looking at some of the President's expressed priorities, from building infrastructure to boosting our manufacturing base, natural gas will play a key role.

The savings from low domestic natural gas prices have led to almost \$50 billion nationwide over the past four years for customers who have used natural gas for direct use applications such as heating, cooking and clothes drying. Commercial customers have not seen natural gas prices this low in 40 years and natural gas access contributed to 1.9 million jobs economy-wide in 2015. Low natural gas prices put an extra \$1,337 back in the pocket of the average American family that year because of the costs of goods coming from manufacturing plants that use natural gas.

Everywhere you look, natural gas is having a positive impact on our nation and there is additional room for wise and efficient growth of natural gas in today's domestic energy market, including significant potential for demand in residential, commercial, industrial and transportation sectors

over the long-term. That includes exporting liquefied natural gas as well.

2. Now that the five member FERC Commission has three Republican openings and the acting Chairman is a Democratic appointee, it's in a holding pattern to conduct business. One of the actions the new President will likely undertake soon is the appointment of a new Chairman of FERC. How will that move affect the industry and specifically utility companies?

A new FERC Chairman will set the priorities for the Commission going forward. One priority that American Gas Association (AGA) hopes will be at the top of the list is to ensure the continued timely review of interstate pipeline infrastructure projects - through appropriate consideration and balancing of the benefits and the adverse impacts on stakeholder interests in each certificate proceeding - including consideration of ways to further streamline the process. Increasing opposition to natural gas infrastructure is causing delays, increased costs, and great uncertainty for new pipeline projects and their customers. Since gas utilities are often the anchor or foundation shippers that have and continue to sign up for firm capacity that support the development of a new pipeline project or expansion to serve the needs of their customers, AGA members have a continued interest in the ability to build infrastructure where it is needed in accordance with FERC policy and procedures.

Over the past several years with the continued increase in the use of natural gas as a fuel for power generation, FERC



has had as a priority the improved coordination between the gas and electric industries, and has supported the industries in seeking to improve such coordination to further meet the needs of natural gas-fired generation. As this priority may continue under the next FERC Chair, it is critically important that FERC policies regarding gas-electric interdependency/coordination address the reliability of both the gas and electric systems in a coordinated manner, not one at the expense of the other. Policy decisions should be made with a full understanding of the needs of all shippers on the gas system and should seek to preserve and hopefully enhance, reliability for all natural gas system customers.

3. When it comes to pipeline construction, even with smaller distribution lines, it always seems that people have a "not it my backyard" mentality. What is the industry doing to ensure that pipelines are being built safely with minimal impacts to the communities where they are being built?

Every backyard is different and so each of our member companies approach this in their own unique way. Their customers are their neighbors, family and friends, and utilities enjoy positive reputations with their local leadership and decades of safe and reliable service. All of that was true even before our nation's abundance of natural gas created an era of affordable and stable prices and now it is even more so.

Broadly speaking, we know that Americans want natural gas. More people in this country use natural gas than ever before and that number continues to increase. AGA members receive calls every day from people that do not have natural gas service and want it. Furthermore, natural gas pipelines are the safest form of energy transportation in the country according to the U.S. Department of Transportation. So there are efforts underway to connect these ideas and remind people that pipelines make the things they hold dear possible—like a comfortable home, warm food and hot showers. There are 177 million natural gas customers in this country and their voices make a potent political force.

4. Switching gears, let's talk about cybersecurity. The AGA identifies cybersecurity infrastructure as an advocacy priority on its website. What are some of the priorities for the industry moving forward when it comes to addressing cybersecurity challenges?

At AGA, security awareness is part of our culture and daily practice. Through public/private partnerships with Federal, State and local governments, we are able to remain vigilant and strengthen our offensive security posture, helping ensure the continued safe and reliable delivery of natural gas to our customers. The AGA and its members have developed and adopted the AGA Commitment to Cyber and Physical Security, demonstrating their dedication to ensuring that

natural gas pipeline infrastructure remains resilient to growing and dynamic cyber and physical security threats.

Voluntary actions adopted by AGA members include implementation of the TSA Pipeline Security Guidelines and the application of the National Institute of Standards and Technology (NIST) Framework for Improving Critical Infrastructure Cybersecurity.

Additionally, AGA members are utilizing a number of available security standards, models, guidelines and information sharing resources such as the NIST Framework, but also the U.S. Department of Energy Cybersecurity Capability Maturity Model, U.S. Department of Homeland Security Industrial Control System Computer Emergency Readiness Team, TSA Pipeline Security Smart Practices Observations, and TSA Intermodal Security Training Exercise Program. Further enhancing our collective information sharing efforts, AGA member utilities and transmission companies have access to the Downstream Natural Gas Information Sharing and Analysis Center.

5. Somewhat related to cybersecurity, the use of new technology to improve customers' lives is increasingly a focus for a lot of utilities, whether in the form of customer portals, communications systems or new smart grid technologies. What's on the horizon for the utility sector and what technologies do you see as most promising?

Demand is growing for energy sector security services, and investments are expected to reach almost \$35 billion by 2020, according to the MarketsandMarkets research firm. Preventing cyberattacks on natural gas and oil companies is the focus of the demand, with increased government pressure, security compliance and regulations. Standard surveillance tools and audits continue to offer effective solutions. Meanwhile, an increase in mobile device usage at worksites presents a different focal point for network security companies to consider when keeping communication lines secure for their energy company clients.

To that end, adapting call centers with a variety of means of contact for customers is another trend we are seeing on the horizon. Traditionally, customers would call their local utility to communicate about any issues they may be having with their bill, energy usage, yearly rates, etc. However, today people may be more inclined to visit their utilities website, use a mobile application and/or text messaging for a more convenient way to communicate. And that can pose a problem as sending information across the internet has the possibility of being easily intercepted by a hacker or outside party before getting to the call center. Another challenge for utilities is adapting communication styles for a variety of audiences. Additionally, utilities need to make sure a range of



methods are working properly to ensure safety and efficiency. This includes smart metering and the ability customers have to access their usage, turn on or off their energy when they are in a different location as well as adjusting the thermostat remotely. It is important for utilities to have the security implications for smart metering top of mind, since it can lead customers to become vulnerable to an outside party trying to hack their device.

6. We've seen a steep drop in natural gas prices over the last few years because of the glut in the market. Looking out a year, five years and 10 years from now, do you think everything will even itself out, or have policies designed to address climate change fundamentally changed market dynamics?

The price of natural gas is based solely on supply and demand. We have an abundance of natural gas that has led to affordable and stable prices for customers. While demand continues to rise, supply also continues to grow. We have more than a one hundred year supply at current consumption rates and the advances in exploration and production continue to astound. A few months ago the U.S. Geological Survey said a deposit in West Texas, the Wolfcamp shale, is the largest continuous oil and gas deposit ever discovered in the United States with 20 billion barrels of oil and 16 trillion cubic feet of natural gas. That is nearly three times more petroleum than North Dakota's Bakken shale. This supply points to expected low and stable prices for decades.

7. Where do you see the greatest opportunities for the gas industry? Do you think domestic consumption will continue to rise?

AGA and its member companies have worked tirelessly to promote the use of natural gas and help ensure its safe and reliable delivery to the more than 177 million Americans that use it today. While there have been concerns in previous decades about a shortage of natural gas, thanks to technology developments, natural gas is now domestically abundant with more than a 100-year supply. At the same time, because of the incredible gains the nation has made in energy efficiency, the average home now uses 50 percent less natural gas than a home in 1970, despite homes today being 61 percent larger.

Because of its value to customers and our economy, more Americans want natural gas. We are seeing states recognize the intrinsic economic benefits of natural gas and looking to expand their infrastructure as a way of increasing opportunity, giving more citizens and businesses access to this domestic fuel source. Thirty-nine states have adopted or are currently considering innovative pipeline expansion proposals to get

gas to communities that don't yet have it—a number that continues to increase.

Natural gas utilities invest in research and development of new and emerging technologies and programs to integrate these technologies into our business models. Distributed generation is one advantageous option including Combined Heat and Power, also known as CHP. Natural gas is the preferred fuel choice for CHP applications, which generate electricity at costs up to 50 percent less than traditional forms of delivered new baseload electricity and capture useful heat simultaneously to increase the overall efficiency of an energy system. CHP applications are eligible for renewable electricity credits in many states. CHP is a proven and cost-effective technology, representing 8% of electric capacity in the U.S. Projects already exist in all 50 states and significant technical and economic potential remains.

In addition to providing energy for homes and businesses, natural gas is also used in transportation, generating electricity and has prompted incredible growth in the manufacturing industry as a feedstock as well. The foundation for this progress is not only the abundance but also the 2.5 million miles of natural gas pipelines that carry the product throughout the nation. As a result, natural gas is a clean and affordable solution that will continue to provide affordable energy to customers, create jobs and improve energy security well into the future.