



VIA EMAIL AND OVERNIGHT DELIVERY

February 26, 2020

California Public Utilities Commission
Public Advisor's Office
505 Van Ness Avenue
San Francisco, CA 94102

Re: Rulemaking 20-01-007; Order Instituting Rulemaking to Establish Policies, Processes, and Rules to Ensure Safe and Reliable Gas Systems in California and Perform Long-Term Gas System Planning

The American Gas Association (AGA) respectfully submits these comments in response to the California Public Utilities Commission's Order Instituting Rulemaking (OIR) to Establish Policies, Processes, and Rules to Ensure Safe and Reliable Gas Systems in California and Perform Long-Term Gas System Planning, R. 20-01-007. The Commission issued this OIR to "respond to past and prospective events that together will require changes to certain policies, processes, and rules that govern the natural gas utilities in California." The Commission proposes conducting this proceeding in three phases. Track 1A will examine reliability standards for gas transmission systems to determine, among other things, whether design changes are necessary to account for a warming climate and the service capacity of current and future gas system infrastructure. Track 1B will examine proposals for mitigating the impacts that operational issues with gas transmission systems have on wholesale and local gas market prices, and gas system and electric grid reliability. Finally, Track 2 will focus on "the regulatory solutions and planning strategy that the Commission should implement to ensure that, as the demand for natural gas declines, gas utilities maintain safe and reliable gas systems at just and reasonable rates, and with minimal or no stranded costs."

AGA's comments focus on ensuring a safe and reliable gas system and issues related to long-term natural gas policy, which are the primary focus of Tracks 1A and 2. As discussed in more detail below, the gas system is inherently, safe, reliable, and resilient, and AGA supports efforts at the state and federal levels that ensure these characteristics of the system. Furthermore, the affordability of natural gas due to the abundance of domestic supply has led to savings for customers on their utility bills and those savings are projected to continue. It is imperative that the Commission consider all of the benefits that the gas system in the state has provided to customers, and also fully examine the future contributions that the delivery system can provide to the economy and support policy changes.

Michael L. Murray *General Counsel*

Identity and Interest

The American Gas Association, founded in 1918, represents more than 200 local energy companies that deliver clean natural gas throughout the United States. There are more than 75 million residential, commercial and industrial natural gas customers in the U.S., of which 95 percent — more than 71 million customers — receive their gas from AGA members. Today, natural gas meets more than 30 percent of the United States' energy needs. California natural gas companies serve over 11.5 million customers in the state, delivering clean, safe and reliable natural gas.¹

Natural Gas Delivery Systems Are Safe and Reliable

The domestic shale production revolution has resulted in an abundant supply of clean, affordable, domestically produced natural gas. In turn, robust supply coupled with an extensive delivery infrastructure has translated into stable natural gas prices, delivering significant value to the increasing number of utility customers who use this resource in their homes and businesses for heat, hot water, cooking, fireplaces, BBQs, dryers, backup electricity generation, and other applications. Alongside this tremendous opportunity and increased use comes the absolute necessity of operating a safe and reliable pipeline infrastructure system to help ensure dependable natural gas delivery.

Unquestionably, pipeline safety is our industry's number one priority, and through critical partnerships with state and federal regulators, legislators, and other stakeholders to constantly improve pipeline safety, gas utilities continue to advance system integrity and support increased access to natural gas service for homes and businesses nationwide. The natural gas distribution pipelines operated by AGA member natural gas utilities or "local distribution companies" (LDCs) are the last link in the natural gas delivery chain that brings natural gas from the wellhead to the burner tip. As such, gas utilities are effectively the "face of the gas industry." AGA member companies are embedded in the communities they serve and interact daily with customers and with the state regulators who oversee pipeline safety locally. The industry and AGA take very seriously the responsibility of continuing to deliver natural gas to our families, neighbors, and business partners as safely, reliably, and responsibly as possible.

AGA and its members' safety efforts go far beyond regulation and are driven by our dedication to the continued enhancement of pipeline safety. All AGA member LDC's have signed on to AGA's *Commitment to Enhancing Safety*,² a public declaration that LDC's are committed to proactively collaborating with federal and state officials, emergency responders, excavators, consumers, safety advocates and the public to

¹ AGA, *Gas Facts*, Tables 8-5, 8-6, and 8-7.

² Available at: https://www.aga.org/globalassets/safety--standards/commitment_to_enhancing_safety_february2016.pdf

continue improving the industry's longstanding record of providing natural gas service safely, reliably and efficiently. This document also reflects LDCs' willingness to make safety an intrinsic part of their core business functions, including pipeline design and construction, operations, maintenance and training, as well as more public-facing programs like workforce development, pipeline planning, stakeholder engagement and first responder outreach. While these business activities will vary with each operator, it is the consensus of AGA members that implementing these priorities will help enhance pipeline safety, improve natural gas utility operations, reduce greenhouse gas emissions and provide better public accountability.

The natural gas system is also exceptionally reliable and resilient due to its physical characteristics and operational practices. Disruptions to natural gas service are rare. The natural gas system is not particularly vulnerable to weather-related events because the system is predominantly underground and protected from the elements. Therefore, the system is exceedingly resilient in the face of extreme weather events. Furthermore, the system is highly flexible with strong elasticity characteristics underscored by an interconnectedness which provides multiple pathways to reroute deliveries.

The Use of Natural Gas Has Reduced Greenhouse Gas Emissions

AGA and its members are committed to reducing greenhouse gas emissions through smart innovation, new and modernized infrastructure, and advanced technologies that maintain reliable, resilient, and affordable energy service choices for consumers. All sectors of the economy should contribute to reducing greenhouse gas emissions. Furthermore, an effective climate change program must be flexible and recognize the differences in sectoral contributions and potential sectoral reduction strategies. AGA supports thoughtful emission reduction pathways that are technology and fuel neutral and seek to balance costs while ensuring a reliable and resilient energy system.

The use of natural gas has led the reduction in United States greenhouse gas emissions. Moreover, the natural gas delivery system is flexible, reliable, and versatile, and enables increased integration of renewable energy. The use of natural gas, in combination with renewable energy and efficiency, has contributed to U.S. energy-related carbon dioxide emissions declining to the lowest levels in nearly 27 years.³

Any realistic plan for a clean and secure energy future must include natural gas as a cornerstone. Natural gas is a foundational fuel source that is clean, reliable, affordable, and safe. Furthermore, the natural gas resource base is abundant — AGA, along with the Potential Gas Committee (PGC), found that natural gas in the United States is 20 percent higher than the 2016 assessment — the highest resource evaluation in the

³ U.S. Energy Information Administration, *Monthly Energy Review*, available at: <https://www.eia.gov/totalenergy/data/monthly/>

PGC's 54-year history — ensuring that California's families and businesses can continue to rely on this necessary energy source for many generations.⁴

Natural gas utilities are recognized as leaders in the energy industry for their successful history of reducing emissions along the natural gas distribution system – a particular point of pride for AGA members. Between 1990 and today, methane emissions from the natural gas distribution system have declined 73 percent.⁵ An impressive achievement, considering 20 million customers and more than 760,000 miles of pipeline were added to the distribution system during this same period.⁶

AGA and its members are committed to reducing emissions through the smart and efficient use of our nation's abundant natural gas resources. Washington State University conducted a nationwide field study in 2015 that found that as little as 0.1 percent of the natural gas delivered nationwide is emitted from local distribution systems.⁷ Looking forward, the adoption of emerging natural gas direct-use technologies can contribute significantly to achieving public policy goals, including deep reductions in GHG emissions in the residential sector, with much lower costs than other options under consideration.⁸ Specifically, with widespread adoption of emerging natural gas direct-use technologies, emissions from natural gas can be reduced by 40% in the residential sector.⁹

Natural Gas Is Part of The Solution

When developing its long-term natural gas policy, the Commission should consider a broad range of solutions that can achieve environmental goals while also maintaining safe, affordable, reliable, resilient, and secure energy choices for consumers. All solutions should be considered. However, in recent years, there has been a shift in the types of policies proposed to reduce emissions. Many states and municipalities have contemplated mandating building electrification as a singular pathway to reduce greenhouse gas emissions from building energy use in pursuit of overall greenhouse gas emission reduction goals. Often, these electrification policies are proposed based

⁴ Potential Gas Agency, *Potential Supply of Natural Gas in the United States (December 31, 2018)*, available at: <http://potentialgas.org/biennial-report>

⁵ U.S. Environmental Protection Agency, *Inventory of US Greenhouse Gases and Sink: 1990-2017*, available at: <https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks-1990-2017>

⁶ *Understanding Updates to the EPA Inventory of Greenhouse Gas Emissions From Natural Gas Systems*, EA 2019-02, May 22, 2019, available at: <https://www.aga.org/contentassets/f4227be971f545bf8a869234d7220526/ea-2019-02-updating-the-facts-of-ghg-inventory-003.pdf>

⁷ Lamb, et al., "Direct Measurements Show Decreasing Methane Emissions from Natural Gas Local Distribution Systems in the United States." *Environmental Science & Technology*, March 31, 2015, available at: <https://pubs.acs.org/doi/abs/10.1021/es505116p>

⁸ American Gas Foundation, *Opportunities For Reducing Greenhouse Gas Emissions Through Emerging Natural Gas Direct-use Technologies* (2019), available at: <https://www.gasfoundation.org/2019/12/18/opportunities-for-reducing-greenhouse-gas-emissions-through-emerging-natural-gas-direct-use-technologies/>

⁹ *Id.*

on insufficient analysis on overall costs, benefits, the market implications of such policies, and without due consideration of alternative pathways.

AGA strongly urges the Commission to consider the following factors when developing long-term natural gas policy given California's decarbonization goals:

- The market challenges associated with the key assumptions for achieving emission reductions
- The impact on consumer choice and cost
- The actual emissions reduced
- The impact on market sectors and consumer segments that do not have readily available options for electrifying energy applications
- The impact on current energy infrastructure assets and the required build-out of new energy infrastructure assets
- The impacts on the energy system's ability to withstand and recover from deliberate attacks, accidents, or naturally occurring threats and incidents
- How the cost of emission reductions compares to other lower-carbon pathways

In 2018, AGA engaged a cross-functional team of experts at ICF to assist in the evaluation of policy-driven electrification of the U.S. residential sector. The study, *Implications of Policy-Driven Residential Electrification*,¹⁰ identified numerous challenges including:

- Cost-effectiveness
- Consumer impacts
- Transmission capacity constraints on the existing electrical system
- Current and projected electric grid emissions levels
- Requirements for new investments in the power grid to meet new growth in peak generation demand during winter periods

¹⁰ American Gas Association Study prepared by ICF, *Implications of Policy-Driven Residential Electrification*, available at: https://www.aga.org/globalassets/research--insights/reports/aga_study_on_residential_electrification.pdf. AGA engaged a cross-discipline team of experts at ICF to assist in the evaluation of AGA's residential electrification policy scenarios focused on space and water heating.

The study found that a policy targeting the electrification of the U.S. residential sector would result in a small fraction of greenhouse gas emissions reductions; could be financially burdensome to consumers; could have profound impacts and costs on the electric sector; and could be a very costly approach to emissions reductions.

Alternatively, integrating natural gas solutions in a more diverse approach to achieve emissions reduction goals would help meet growing energy needs; provide customers more choices; and improve affordability, reliability, resiliency and comfort. Many innovative natural gas technologies are available today in the residential and commercial sectors. These technologies offer a significant efficiency improvement potential which can contribute to achieving near-term emissions reductions. At the same time, natural gas utilities are working with policymakers to enhance energy efficiency programs designed to reduce energy consumption and emissions. Emission reductions are also being realized through pipeline safety-driven infrastructure modernization. Looking ahead, increased funding for research, development, and deployment of next-generation natural gas technologies and advancing renewable sources of gas supply provides further opportunities for achieving lower carbon goals.

Greenhouse gas emissions from natural gas customers have declined rapidly as more energy-efficient appliances, consumer conservation, and tighter building envelopes have reduced energy demand. In fact, the average US residential gas customer's CO₂ emissions have been cut in half since 1970, a downward trend that is expected to continue,¹¹ and largely a result of improvements in energy efficiency including contributions from utility efficiency programs. Nationally, natural gas utilities are spending \$4 million a day on energy efficiency programs.¹² Natural gas utilities operating in California have consistently been a national leader in energy efficiency investing upwards of \$265 million annually in efficiency programs.¹³

As the Commission works through the OIR process, AGA urges the Commission to recognize the ongoing contributions of natural gas utilities to lowering emissions. AGA strongly encourages the Commission to account for these efforts, while leveraging the existing pipeline network to support utilities in their mission to further drive down emissions. To that end, many natural gas utilities are looking toward renewable and lower sources of carbon-based fuel to reduce emissions and lower the carbon footprint of their customers. Renewable natural gas and hydrogen gas provide such opportunities.

¹¹ Based on AGA calculations of weather-normalized residential gas consumption per customer.

¹² Consortium for Energy Efficiency, *2018 State of the Energy Efficiency Program Industry Report*, May 2019, available at: <https://www.aga.org/contentassets/b1c7804ce34146d7bcc493b436a4ba3c/final---cee-2018-annual-industry-report.pdf>.

¹³ Consortium for Energy Efficiency, *2018 State of the Energy Efficiency Program Industry Report*, May 2019, Appendix A, available at: <https://www.aga.org/contentassets/b1c7804ce34146d7bcc493b436a4ba3c/energy-efficiency-appendix-a---natural-gas-efficiency-program-expenditures-and-budgets-by-state.pdf>.

Customers Should Have Access To Renewable Natural Gas

Innovation is at the core of the natural gas industry including advancements in safety, leak detection and pipeline replacement, the development of next-generation gas appliances, and advancing technologies to reduce the carbon content of delivered natural gas.

Renewable Natural Gas (RNG) is pipeline-compatible gaseous fuel derived from biogenic or other renewable sources that has lower lifecycle CO₂e emissions than geologic natural gas. It can come from a variety of sources including wastewater treatment facilities, landfills, and agriculture and farming operations. These examples use anaerobic digestion technology to harness the biogas generated through the natural decomposition of waste. The gas is captured, processed, and cleaned, and can be injected into the existing natural gas pipeline system. Anaerobic digestion is a well-established production technology with more than 100 facilities in the operation throughout the U.S. and Canada. And nearly 100 more projects are under development.¹⁴

Since RNG can be used interchangeably with today's natural gas, it represents tremendous opportunity to reduce emissions in homes, businesses, vehicles, manufacturing and heavy industry. Anaerobic digestion technology, however, is not the only means of producing RNG. As new production technologies for RNG are commercialized, they will expand and diversify the feedstocks eligible to turn waste into renewable energy and increase RNG's emission reduction potential.

Thermal gasification, one developing RNG production technology, recycles low-moisture carbon-based materials such as crop waste and forestry residue by subjecting them to high pressure, thereby producing a series of synthetic gases, including methane, which can be captured and blended into the natural gas system.

Power-to-gas, another technology, relies on renewable electricity to produce hydrogen via electrolysis. The hydrogen can be methanated with a source of carbon to produce renewable natural gas and injected into the natural gas pipeline system, providing a long-term storage solution for renewable electricity, an option that today's battery technology cannot provide. While power-to-gas technology is not yet fully commercialized, several pilot projects exist in Europe, and in the U.S. a research and demonstration power-to-gas project has been operating for several years at the National Renewable Energy Laboratory in Golden, Colorado. In contrast, battery long term storage technology has yet to be developed in the lab, let alone in a demonstration pilot.

¹⁴ See <http://www.rngcoalition.com/rng-production-facilities>.

The facts are clear – demand for renewable sources of gas is real and growing. In the transportation sector alone, demand has risen more than 500% in the last 5 years.¹⁵ In the distribution sector, natural gas utilities across the country are developing RNG programs to help their customers and communities achieve emission reduction goals. Today, 22 states have taken action to promote the use of RNG in the residential or commercial sector through either legislative, regulatory or utility led action, including California.¹⁶ Moreover, there are now nine natural gas utilities across the country, including two in California, that are developing or have implemented voluntary green energy tariffs to enable their customers to purchase RNG.¹⁷

AGA expects this trend to continue as more of our members' customers demonstrate a continued interest in reducing emissions. Importantly, each state or gas utility has taken a unique approach in devising a legislative or regulatory framework to encourage the use of RNG. Some states have supported a utility's ability to procure and sell renewable natural gas to customers that want it, passing along those costs to customers that elect into the program.¹⁸ This is similar in concept to customers that opt-in to purchase renewable electricity from their electricity provider. Alternatively, some utilities are seeking to procure RNG as a percentage of their contracted supply, effectively reducing the carbon footprint of the fuel delivered within their service territory.¹⁹

As new markets develop, and demand for RNG continues to grow, states can support these developments through innovative rate mechanisms and policy proposals that leverage existing infrastructure to deliver new products like RNG. In California, residents have invested billions of dollars into the state's safe and reliable natural gas infrastructure system. It is imperative that the Commission consider its natural gas pipeline delivery system as a critical resource, capable of evolving to meet the changing needs of a lower carbon economy during this process, particularly in Track 2. Leveraging this existing energy infrastructure to deliver new, lower-carbon sources of fuel, creates an inherently more reliable and more resilient energy system.

Two recently released studies by the American Gas Foundation focus specifically on reducing GHG emission through the use of emerging natural gas direct use technologies and the development of RNG. These studies demonstrate how America's vast, reliable

¹⁵ See <http://www.rngcoalition.com/infographic>.

¹⁶ Based on tracking of state RNG initiatives by AGA staff.

¹⁷ These utilities include CenterPoint Energy (MN); DTE Energy (MI); Dominion (UT); National Grid (NY); Northwest Natural (OR); San Diego Gas & Electric (CA); Southern California Gas (CA); Summit Utilities (ME); and Vermont Gas Systems (VT).

¹⁸ For example, see programs such as DTE's Smart Energy program in Michigan, Dominion Energy Utah's GreenTherm Program, or Vermont Gas' Renewable Natural Gas program.

¹⁹ For example, Southern California Gas intends to replace twenty percent of its contracted natural gas supply with renewable natural gas by 2030. Legislation enacted in Oregon (SB 98 - 2019) and Nevada (SB 154 - 2019) provides natural gas utilities with the resources to cost-effectively procure increasing percentages of RNG over time. Similar legislation is pending in Minnesota (MN SF 3013 - 2020) and Oklahoma (HB 3970 - 2020).

and safe natural gas infrastructure can be effectively used to deliver affordable energy and drive down emissions. The first study, *Opportunities For Reducing Greenhouse Gas Emissions Through Emerging Natural Gas Direct-use Technologies*,²⁰ was conducted by Enovation Partners and demonstrates how widespread adoption of emerging natural gas direct use technologies could significantly contribute to achieving deep reductions in GHG emissions in the U.S. residential sector at much lower costs than other options under consideration. This study estimates that natural gas residential emissions could be reduced by approximately 40 percent at a very competitive cost of \$66 per metric ton of CO₂ emissions.²¹ Additionally, consumers who install the emerging high-efficiency technologies modeled in the study would save \$271 on average annually compared to existing technologies.²²

The second study, *Renewable Sources of Natural Gas: Supply and Emissions Reduction Assessment*,²³ was prepared by ICF and outlines the potential domestic resource base for RNG, the corresponding potential for emission reductions and associated costs. Of note, this is the first study to examine power-to-gas technology as a production method for RNG. ICF estimates that, by 2040, approximately 4,513 trillion Btu of RNG could be produced annually.²⁴ This equates to a 235 million metric ton reduction in GHG emissions, or a 95 percent reduction in today's natural gas emissions from the residential sector.²⁵

These studies demonstrate that as utilities continue to modernize our natural gas infrastructure and connect homes and businesses to the system, new opportunities arise to achieve low-cost greenhouse gas emission reductions by leveraging new and existing natural gas infrastructure, advanced technologies, and the nation's abundant natural gas resources. The natural gas system's ability to integrate high-value sources of energy like renewable natural gas and hydrogen make it a critical component of our nation's, and California's, ability to reach ambitious greenhouse gas reductions goals.

AGA research suggests the electric capacity needed to support winter heating in the residential sector resulting from a widespread residential electrification policy could lead to significant increases in peak electric demand. On a nationwide basis, electrifying the entire residential sector by 2035 would increase peak electric system demand and could

²⁰ See, *supra*, *Opportunities For Reducing Greenhouse Gas Emissions Through Emerging Natural Gas Direct-use Technologies*, available at: <https://www.gasfoundation.org/2019/12/18/opportunities-for-reducing-greenhouse-gas-emissions-through-emerging-natural-gas-direct-use-technologies/>.

²¹ *Id.* at 13.

²² *Id.* at 14.

²³ American Gas Foundation, *Renewable Sources of Natural Gas: Supply and Emissions Reduction Assessment*, (2019), available at: <https://www.gasfoundation.org/2019/12/18/renewable-sources-of-natural-gas/>.

²⁴ *Renewable Sources of Natural Gas* at 62.

²⁵ *Id.* at 47.

require the size of the entire U.S. power generation sector to almost double.²⁶ These significant increases in electric power demand would require massive new investments in new electric generation, transmission, and distribution infrastructure. The total economy-wide increase in energy-related costs from policy-driven residential electrification could be significant. Nationwide, average household annual energy costs would increase by an average of 71 percent over the lifetime of the appliance equipment.²⁷ The cost of emissions reductions associated with the residential electrification policy modeled ranged from \$572 to \$806 per metric ton of CO₂ reduced (\$2016).²⁸

AGA acknowledges that the regional costs of a policy-driven approach to residential electrification and the applicability of these national results can vary. The AGA study was focused on national level impacts of potential policies requiring electrification of residential energy load. AGA did not evaluate the impact on natural gas distribution system costs to other customers or the impact on electric distribution system costs. A consideration of these costs would likely add to the overall costs of a residential electrification approach. Furthermore, the study did not address electrification policies targeted at other sectors of the economy, including the transportation sector, and the interactions of a residential electrification policy with other sectors. Given the complexity of the issues surrounding electrification policies, a full accounting of the benefits, costs, and implications of electrification policies would need to reflect all local conditions related to and including the differences in natural gas and electricity prices even within the same region, including, differences in housing stock, differences in the electric grid, and inclusion of distribution system cost impacts.

Pathways of emissions reduction that only emphasize electrification of the residential sector may be counterproductive and create significant challenges to quickly and effectively addressing the challenge of climate change.

To maximize GHG emission reductions while maintaining reliable and safe energy delivery, California should mobilize every tool at its disposal, including recognizing the contributions natural gas has made to emission reductions. The industry continues to develop new and innovative technologies to improve safety and reduce emissions: new pipelines, new leak detection technologies, direct-use technologies to improve efficiency, and renewable natural gas.

AGA and its members are committed to reducing emissions through the smart and efficient use of our nation's abundant gas resources and our extensive energy delivery

²⁶ American Gas Association, *Implications of Policy-Driven Residential Electrification*, at 3 (2018), available at: https://www.aga.org/globalassets/research--insights/reports/aga_study_on_residential_electrification.pdf.

²⁷ See generally, *Implications of Policy-Driven Residential Electrification*.

²⁸ *Implications of Policy-Driven Residential Electrification* at 7.

network. By integrating natural gas solutions into long-term resource planning, natural gas utilities can help states and localities achieve emission reduction goals and position themselves toward a cleaner energy future while not jeopardizing safe and reliable energy delivery. Through the expanded development of advanced natural gas technologies and renewable natural gas, a steep decline in emissions can be realized in a more cost-effective manner, that also preserves consumers' preference for natural gas.

The Commission Should Fully Examine the Usefulness of the Gas System

In the OIR, the Commission references various policies and regulations that it suggests will reduce gas demand. However, the Commission should not presuppose that issues exist in the natural gas industry before fully examining the matter. AGA recommends that the Commission use this proceeding as a first step in objectively gathering information, and that any possible change in policy for the natural gas industry must be fully vetted through the phases in this docket, or additional proceedings. As noted above, the current gas distribution system only minimally affects total GHG emissions. Additionally, as RNG and energy efficiency play a greater role, overall emissions can be further reduced. Today and through the transition to increasing RNG use, energy delivery is and will continue to be reliable, affordable and provide a desired choice for consumers. Therefore, AGA proposes that any analyses conducted by the Commission include the benefits provided by the gas system and reflect the technological improvements that are currently being deployed and will be deployed in the near term.

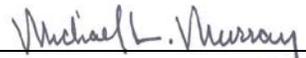
AGA is concerned that by presupposing a decline in gas use or a reduction in the need for a gas distribution system without understanding all of the possible implications, it will be ratepayers that ultimately bear the impact. AGA supports the proposal by the Commission to include a detailed analysis in Track 2 of cost allocation and rate design issues in this rulemaking. Rate issues are of critical importance as utilities and customers are directly affected by the by Commission policies regarding how rates are developed, and costs are allocated. The Commission should also fully consider how its rulemaking could affect future investments in the gas system, if it will impact the usefulness of a system, and how costs related to the Commission's determinations in this rulemaking are allocated.

AGA also supports a detailed examination of the potential impacts on the utility workforces. Utility employees are critical to maintaining the reliability and safety of the system; and the Commission should not lose sight of those employees and the impacts that its determinations may have on them.

Conclusion

The American Gas Association looks forward to sharing more about how natural gas utilities and our nation's pipeline infrastructure currently plays and will continue to play an integral role in reducing greenhouse gas emissions throughout this proceeding. Thank you for the opportunity to share how the natural gas energy delivery network can help provide a clean, low carbon, reliable, and affordable energy source to more California residents well into the future.

Respectfully submitted,



Michael L. Murray
General Counsel
American Gas Association
400 N. Capitol St., NW
Washington, DC 20001
mmurray@aga.org