



SERVICE



VALUE



IMPACT



FUELING STRONG
Communities



NATURAL GAS

At a Glance

1+ PER MINUTE

More than one new residential customer signs up for natural gas service every minute on average, and approximately 60 businesses begin new natural gas service every day.

FAMILIES CHOOSE NATURAL GAS

Consumers prefer natural gas over electric heat pumps by a ratio of 4 to 1.

\$1,030

Households that use natural gas for heating, cooking and clothes drying save an average of \$1,030 per year compared to homes using electricity for those applications.

\$37B

America's natural gas utilities invest \$37 billion each year in enhancing the safety of natural gas distribution and transmission systems.

↓ 70%

Emissions from the natural gas distribution system have declined 70% since 1990. Natural gas and its delivery systems will play a crucial role in helping the U.S. reach a net-zero emissions future.



189M

More than 189 million Americans and 5.8 million businesses use natural gas because it is affordable, reliable, safe and essential to improving our environment.

The American Gas Association is 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.



A MESSAGE FROM THE AGA

CHAIR OF THE BOARD

America's natural gas utilities are an integral part of the communities we serve, and as an industry, we work hard every day to put customers and families first with affordable, reliable and safe energy that is sustainable. American natural gas fuels our homes, businesses and livelihoods. It makes our communities resilient and strong, keeping buildings warm and critical infrastructure, such as hospitals, functioning through even the worst disasters. As artificial intelligence, advanced manufacturing and new economic development opportunities drive growing energy needs, natural gas utilities are focused on planning, investing and modernizing to fuel the economy of the future.

Sid McAnnally

President and Chief Executive Officer, ONE Gas, Inc.
Chair, American Gas Association



A MESSAGE FROM THE AGA

CHIEF EXECUTIVE OFFICER

America's natural gas is abundant, affordable and reliable, making our nation's energy supplies and systems the envy of the world. Natural gas utilities have been meeting rising demand for decades, all while keeping customers' bills near record lows and lowering emissions. While many energy sources will play a role in America's future, there is only one that can provide the reliability, flexibility and scalability to keep America at the head of the race against our adversaries and protect affordability and reliability for American families. Natural gas is America's strategic advantage, playing an essential role in American homes and businesses while enabling a competitive and secure future for our country.

Karen A. Harbert

President and Chief Executive Officer, American Gas Association

The Strengths

OF THE NATURAL GAS SYSTEM

AFFORDABLE

American Families Use Natural Gas Because it is Affordable

Households that use natural gas for heating, cooking and clothes drying save an average of \$1,030 per year compared to homes using electricity for those applications.

RELIABLE

Natural Gas is There When You Need it Most

Through natural disasters and extreme weather events, the industry's underground delivery system provides reliable energy Americans can count on.

SAFE

Safety is Our Top Priority

America's natural gas utilities invest \$37 billion each year in enhancing the safety of natural gas distribution and transmission systems.

SUSTAINABLE

Proven Emissions Reduction Track Record

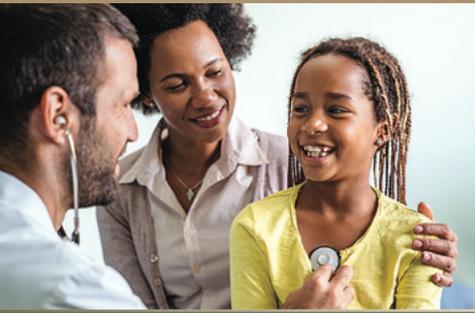
Natural gas utilities are cutting emissions from their operations, helping customers shrink their carbon footprints and working with other industries to reduce their impact on the environment.

INNOVATIVE

Ambitious Innovation Agenda

The promise of integrating high-value sources of energy, such as renewable natural gas and hydrogen, and advancing energy efficiency is a critical component of our nation's ability to reach ambitious greenhouse gas reduction goals.

HEALTHCARE



MANUFACTURING



AGRICULTURE



PHARMACEUTICALS



HOSPITALITY



ESSENTIAL Energy

Natural gas fuels critical sectors
of the American economy.

Natural gas plays a vital role that
helps businesses, customers and
communities thrive.

NATURAL GAS

Fuels American Manufacturing

A study from the Center for Strategic and International Studies, with support from the American Gas Foundation, demonstrates the role of natural gas in maintaining energy security and the competitiveness of U.S. manufacturing along pathways to a low-carbon economy, especially as energy demand continues to rise.

"To effectively and successfully compete on the global economic stage when facing countries like China — and others — the U.S. must deploy all of its advantages, including our energy advantage."

KAREN A. HARBERT
President and CEO,
American Gas Association

SEE THE STUDY

www.gasfoundation.org





NATURAL GAS

Making Medicine More Affordable

Natural gas helps keep America's medical costs more affordable, ensuring that necessary prescriptions and products are accessible to those who need them most.

The pharmaceutical manufacturing supply chain consumes approximately the same amount of natural gas delivered to the state of Missouri with a population of more than 6.1 million.

CRITICAL FEEDSTOCK

Natural gas is a critical feedstock for producing active pharmaceutical ingredients, as well as producing packaging and bottles for final products.

FUELING MANUFACTURING

Pharmaceutical manufacturing facilities use natural gas to maintain stable heating and temperature control, a critical factor in storing pharmaceuticals.

NATURAL GAS FUELS

America's Healthcare

The U.S. healthcare sector consumes more than 271 billion cubic feet of natural gas, more than the annual consumption of 14 individual states.

RELIABLE ENERGY

74%

74% of U.S. hospitals use natural gas for space heating and water heating.

WITHOUT NATURAL GAS

HIGHER COSTS FOR PATIENTS

↑ \$16.3B

Mandated electrification would cost the healthcare sector an additional \$16.3 billion through 2050.



THE HEALTHCARE
SECTOR IN THE
U.S. SUPPORTS

17.5M

DIRECT JOBS

7M

INDIRECT JOBS

12.4M

INDUCED JOBS

NATURAL GAS FUELS

America's Hospitality Sector

Natural gas keeps restaurants cooking, hotels running and amusement parks buzzing nationwide.

387 Bcf

OF NATURAL GAS PER YEAR

The U.S. hospitality sector and its supply chain consume 387 Bcf of natural gas per year.





WITHOUT NATURAL GAS

HIGHER COSTS FOR BUSINESSES

↑ \$23.2B

Mandated electrification would cost the hospitality industry an additional \$23.2 billion in increased fuel expenditures through 2050, threatening an industry that supports 16.9% of all U.S. jobs.

NATURAL GAS CONSUMPTION

Texas, California and New York consume the most natural gas in the hospitality industry.

Growing, Fertilizing, Feeding

The availability of affordable natural gas – an important feedstock for many key agricultural inputs – has directly benefited the U.S. agriculture sector. Those benefits extend to farms, ranches and beyond through jobs and tax revenue.

FUELING TAX REVENUE

\$225B

IN FEDERAL, STATE AND LOCAL TAX REVENUES

WITHOUT NATURAL GAS

Natural gas helps the U.S. economy produce agrochemicals like fertilizer, which increases crop yields. The U.S. agriculture sector would be in a precarious position if it were to lose access to natural gas as a result of policy choices.



FUELING JOBS

5M

 DIRECT U.S. AGRICULTURE JOBS

The U.S. agriculture sector and its suppliers make up almost 15% of all U.S. commercial and industrial consumption, making it one of the largest consumers of natural gas.

Natural gas is

AFFORDABLE

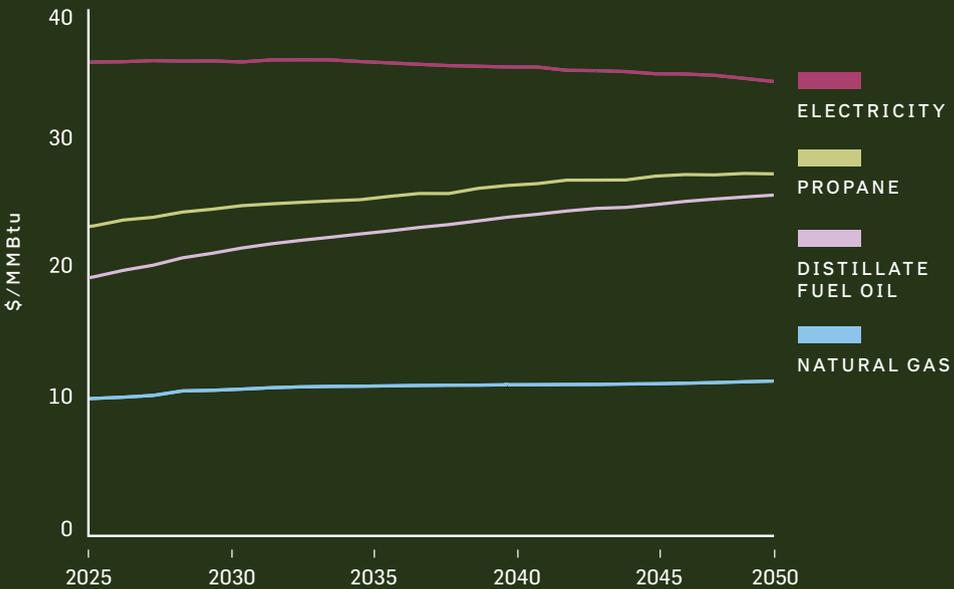
America's abundance of natural gas resources and extensive energy infrastructure can satisfy current and future domestic energy demand while keeping prices affordable and stable for decades into the future.

NATURAL GAS IS

Affordable. Stable. Predictable.

Natural gas is projected to be one-half to one-third the price of other fuels through 2050.

RESIDENTIAL PRICES BY FUEL



Natural gas has more consistent month-to-month energy costs compared to an equivalent all-electric home, offering homeowners further financial security.

3.5X MORE AFFORDABLE THAN ELECTRICITY

Natural gas is 3.5 times more affordable than electricity and significantly more affordable than several other residential energy sources for the same amount of energy delivered.

PROJECTED COST

It is projected that natural gas will cost significantly less than electricity for the next 30 years.



Natural Gas Savings

Households that use natural gas for heating, cooking and clothes drying save an average of \$1,030 per year compared to homes using electricity for those applications.

BUSINESSES SAVED

\$655B+

OVER TEN YEARS

Commercial and industrial customers have saved more than \$655 billion over the last decade by using natural gas.

FAMILIES SAVED

\$99B

OVER TEN YEARS

The low cost of natural gas has saved families a total of \$99 billion over 10 years.



Delivering natural gas to
your community.

Right Now

Somewhere in the U.S., a home or business is signing up for natural gas service.

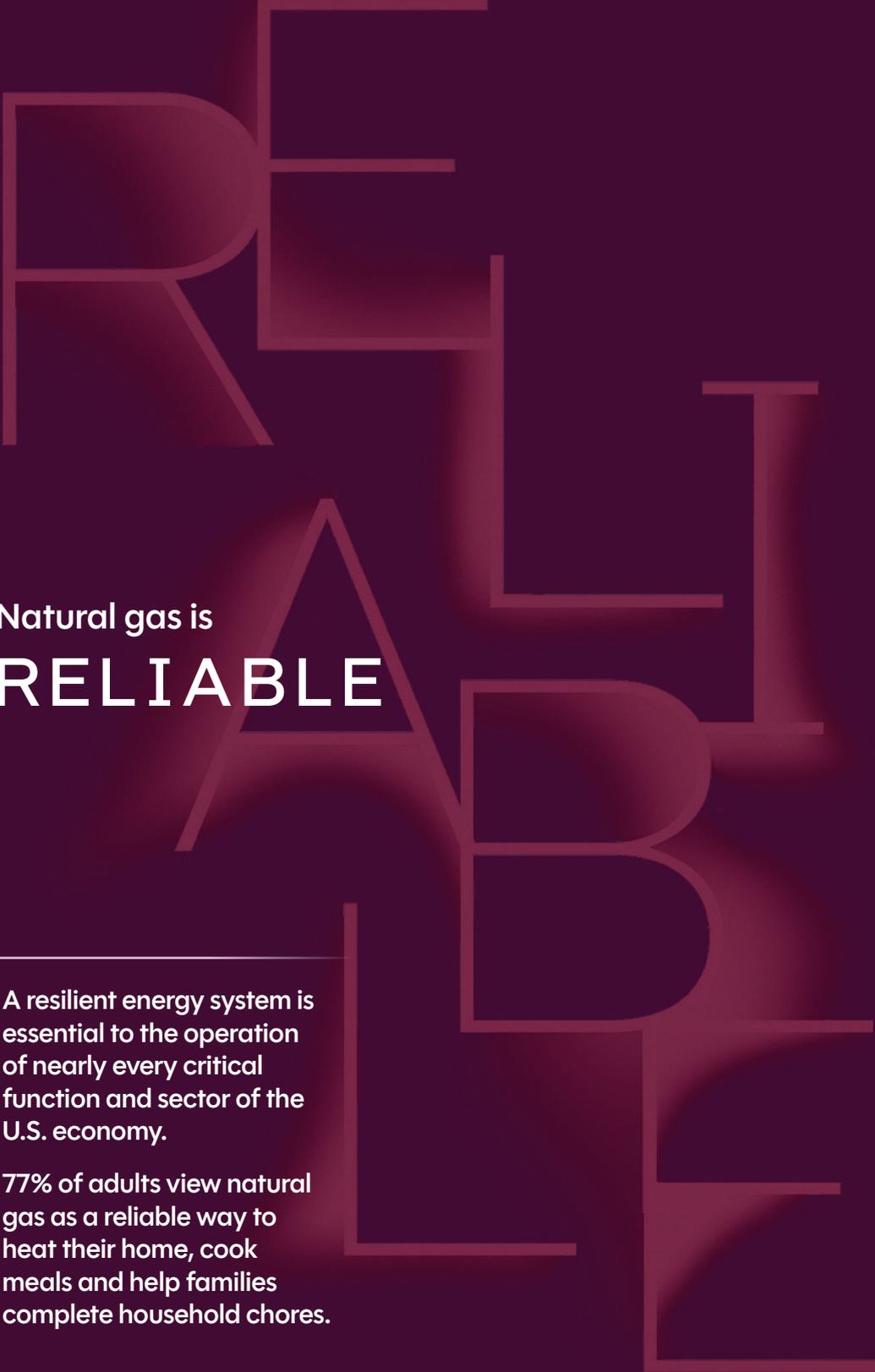
THOUSANDS OF BUSINESSES

21,000

More than 21,000 businesses sign up to use natural gas each year.

1+ PER MINUTE

In 2024, 20,000 miles of new distribution lines were added across the United States, serving one new customer every minute of every day.



Natural gas is
RELIABLE

A resilient energy system is essential to the operation of nearly every critical function and sector of the U.S. economy.

77% of adults view natural gas as a reliable way to heat their home, cook meals and help families complete household chores.

Stability

The natural gas system's physical characteristics provide stability to the energy system.



Pipeline infrastructure is predominantly underground, looped and shielded from many major disruptive events.



Much of the natural gas delivery system runs on its own supply.



The ability to store more natural gas further strengthens the self-reliant attributes of the system.



On the coldest day of the year, the natural gas system delivers 3X more energy than the electric system delivers on the hottest day of the year.



When it Matters the Most

Natural gas provides safe and reliable service to customers with few interruptions. **Nearly 7 in 10 adults** using natural gas in their homes are confident that their natural gas service and systems can withstand a severe weather event.

STORAGE MORE IMPORTANT THAN EVER

Rapidly increasing demand pressures necessitate a rapid buildout of natural gas storage at a time when growth in underground storage capacity has slowed to just 0.1% per year. Action by policymakers is essential to avoid potential service interruptions during extreme weather, price shocks for consumers and impacts on grid reliability, particularly in integrating variable renewable energy sources.



Energy You Can Depend On

Only 1 in 628 customers are expected to experience a planned or unplanned natural gas outage in any given year.

Electric distribution systems have an average of one outage per year per customer.

83%

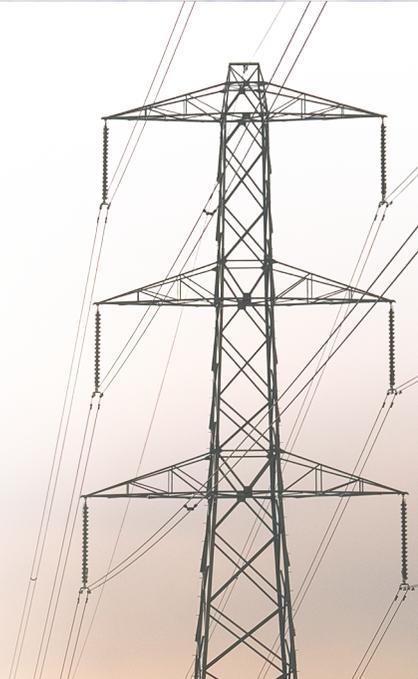
83% of adults using natural gas in their home rely on it to keep their families warm during the winter.



Coordination with the Electric System

The electric system is relying on natural gas more than ever before.

AGA has partnered with the National Association of Regulatory Utility Commissioners to administer Natural Gas Readiness Forums and regional meetings to boost coordination between the natural gas and electric sectors to ensure preparedness for potential disaster and emergency situations. This program was endorsed in a report from the National Petroleum Council.



A RELIABLE

Investment

A report by the American Gas Association and the Canadian Gas Association shows that investor sentiment towards North American natural gas utilities is strong. Investors view natural gas utilities as attractive investments for maintaining stability in their portfolios while supplying a reliable and predictable return on equity (ROE).

SEE THE STUDY

www.aga.org/investment

“Investors choose to invest in utilities because they provide a stable revenue stream accompanied by the low-risk level inherent to the business. Investors increasingly recognize the value of natural gas and related infrastructure to provide affordability, resilience and energy security for decades to come.”

JUAN ALVARADO

Managing Director,
Energy Analysis, AGA

The natural gas delivery system is 92% efficient from production to customer.

DIRECT USE OF NATURAL GAS

SOURCE ENERGY

100
MMBtu

EXTRACTION, PROCESSING
& TRANSPORTATION

▼ 7% ENERGY LOSS

93 MMBtu



GENERATION



DISTRIBUTION

▼ 1% ENERGY LOSS

92 MMBtu



DELIVERED TO CUSTOMER

92
MMBtu



CONVERTING TO ELECTRICITY

SOURCE ENERGY

100
MMBtu

EXTRACTION, PROCESSING
& TRANSPORTATION

▼ 5% ENERGY LOSS

95 MMBtu



GENERATION

▼ 60% ENERGY LOSS

39 MMBtu



DISTRIBUTION

▼ 5% ENERGY LOSS

38 MMBtu



DELIVERED TO CUSTOMER

38
MMBtu



SAFE

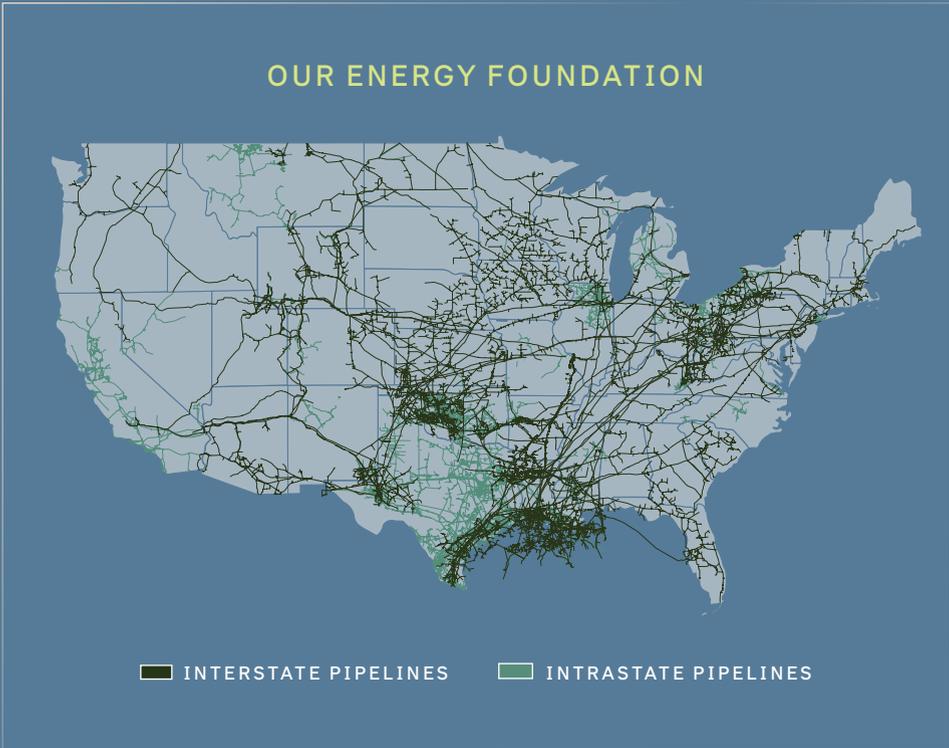
Natural gas is
SAFE

82% of adults using natural gas
in their home trust their service
to heat their home safely.



THE SAFEST WAY TO
Deliver Energy

Natural gas is delivered to customers through a 2.8-million-mile underground pipeline system. This includes approximately 2.4 million miles of local utility distribution pipelines and 400,000 miles of transmission and gathering pipelines that stretch across the country.



\$37B

America's natural gas utilities invest \$37 billion each year in enhancing the safety of natural gas distribution and transmission systems.



Advancing Safety, Every Day

Pipeline Safety Management Systems (PSMS) includes the identification, prevention and remediation of safety hazards.

At the heart of PSMS is a culture of safety, risk awareness and mitigation, the sharing of lessons learned and consistent self-evaluation. By cultivating pipeline safety practices at a systems level, PSMS helps organizations identify potential hazards and address them before accidents occur. PSMS manages pipeline safety through continuous monitoring and improvement and its "Plan-Do-Check-Act" cycle.





THE ENHANCED
Peer Review Program

Operational Controls,
Procedures, System
Controls and Management
of Change

Safety Assurance: Audits,
Evaluations, Audit and
Evaluation Review/
Closure, and Performance
Measurement

Management Review and
Continuous Improvement,
Documentation and
Record Keeping

**ENHANCED PEER REVIEW
PROGRAM**

The AGA Peer Review Program is a voluntary safety and operational practices program that enables participating companies to receive peer feedback, exchange leading practices, and identify opportunities to better serve customers and communities.

Each review features a panel of fellow natural gas utility professionals who provide the company with insights to help enhance safety and efficiency.

160
PEER REVIEWS

Since the national program began in 2015, AGA has administered 160 peer reviews and virtual assessments for member companies on 385 different topics and engaged with more than 1,800 subject matter experts.

AGA's Commitment

TO CYBER AND PHYSICAL SECURITY

Our commitment to cyber and physical security demonstrates dedication to ensuring that natural gas pipeline infrastructure remains resilient to growing and dynamic cyber and physical security threats.

SECURITY THROUGH THREAT SHARING AND ANALYSIS

The Downstream Natural Gas Information Sharing and Analysis Center (DNG-ISAC) is the premiere cyber and physical threat sharing and analysis organization for the natural gas industry in the U.S. and Canada. DNG-ISAC facilitates situational awareness and threat communication between operators and with the federal government.



CONTINUOUS IMPROVEMENT

The Peer Cyber Review Program allows AGA member utilities to consult with peer utility cyber subject matter experts and walk through a comprehensive AGA-developed assessment that aligns with Transportation Safety Administration (TSA) Pipeline Security Guidelines.



SECURITY



Natural Gas Exercise (NGX)

In 2026, AGA will host the third NGX, a nationwide tabletop drill focused on natural gas distribution and transmission cybersecurity, physical security and business continuity.

Hundreds of industry and government professionals, including natural gas utilities, transmission companies, and federal and state government agencies from across the United States and Canada will participate in the event.

INCIDENT PREPAREDNESS

The goal of the exercise is to plan and prepare for a cyber or physical event.

WORKING TOGETHER

Participants represent all parts of the natural gas value chain and the federal government.

SUS TAINABLE FUTURE

Natural gas is essential for a more

**SUSTAINABLE
FUTURE**

Emissions

REDUCTION OPPORTUNITIES

AGA's comprehensive and detailed analysis demonstrates that incorporating gas technologies, infrastructure and strategies is an essential part of continuing to reduce CO₂ and methane emissions.

The Path Forward



Energy Efficiency and Improved Energy Management



Advanced Gas End-use Technologies



Renewable Gases



Methane Mitigation Technologies and Strategies



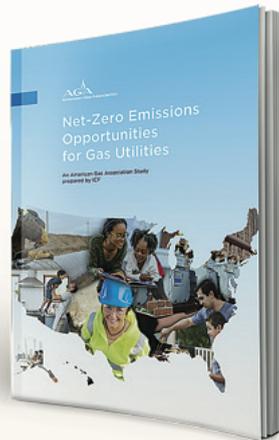
Negative Emissions Technologies



Infrastructure Modernization



Workforce Development



SEE THE STUDY

www.aga.org/netzero

Upgrading our nation's pipeline network has both enhanced safety and contributed significantly to a declining trend in emissions.

AS LITTLE AS

0.1%

Local distribution systems release as little as 0.1% of the natural gas they deliver.

3.6X

INCREASE SINCE 1990

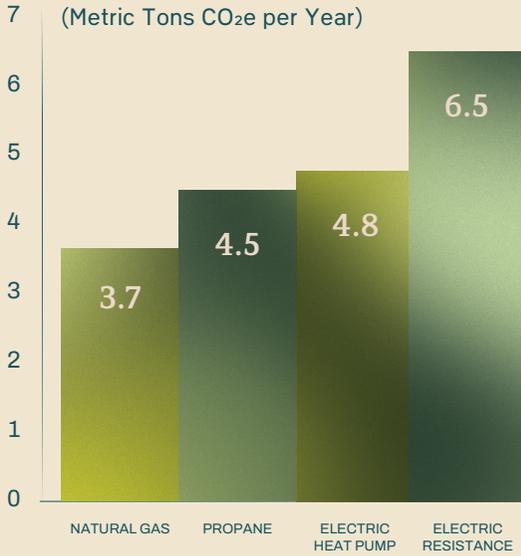
Since 1990, the miles of natural gas mains made of more modern materials has more than tripled.



↓ 70%

Emissions from the natural gas distribution system have declined 70% since 1990.

GREENHOUSE GAS EMISSIONS FROM HOME ENERGY USE



Whole-home emissions based on Energy Star-rated equipment where applicable for heating, water, cooking and drying.

Cleaner Heating

22% LOWER EMISSIONS

Carbon dioxide emissions from homes using natural gas for space and water heating, cooking and clothes drying are 22% lower than those attributable to an all-electric home.

40% LOWER EMISSIONS

Efficient gas equipment is expected to cut home greenhouse gas emissions up to 40% by 2040.



MORE FAMILIES HEAT WITH NATURAL GAS

Families choose natural gas heat pumps over electric heat pumps at a ratio of 4 to 1.



**REDUCING THE
CARBON FOOTPRINT**

1.1% **DECLINE
IN CARBON
EMISSIONS**

Carbon emissions from the average home using natural gas decline 1.1% per year.

Investing in Efficiency

\$3.89M Per Day

In the U.S., natural gas utilities invest \$3.89 million per day in energy efficiency programs to help customers install tighter-fitting windows and doors, upgrade insulation and purchase more efficient natural gas appliances.

371M

Natural gas utilities saved 371 million therms of energy through energy efficiency programs in 2023, the same savings as removing 457,871 gasoline-powered cars from the road.

AGA's Climate Change Position Statement

The American Gas Association is 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 customers.

www.aga.org/climatechange

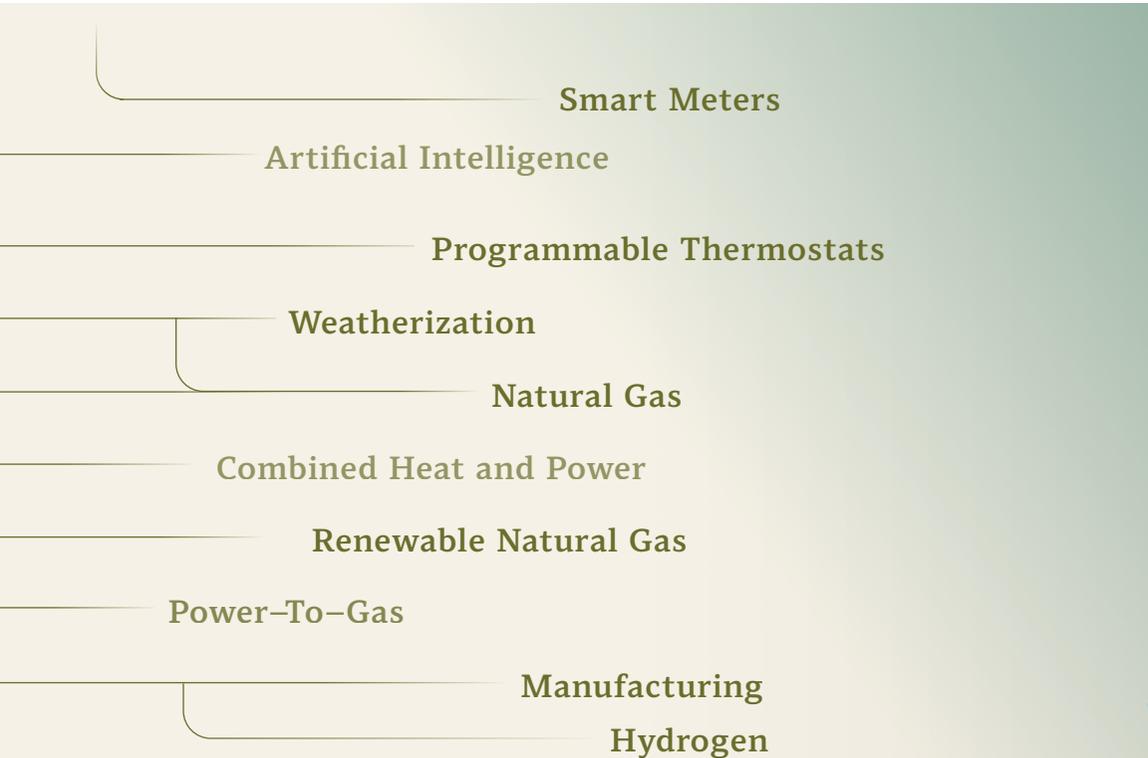
America's natural gas utilities are committed to reducing greenhouse gas emissions through smart innovation.

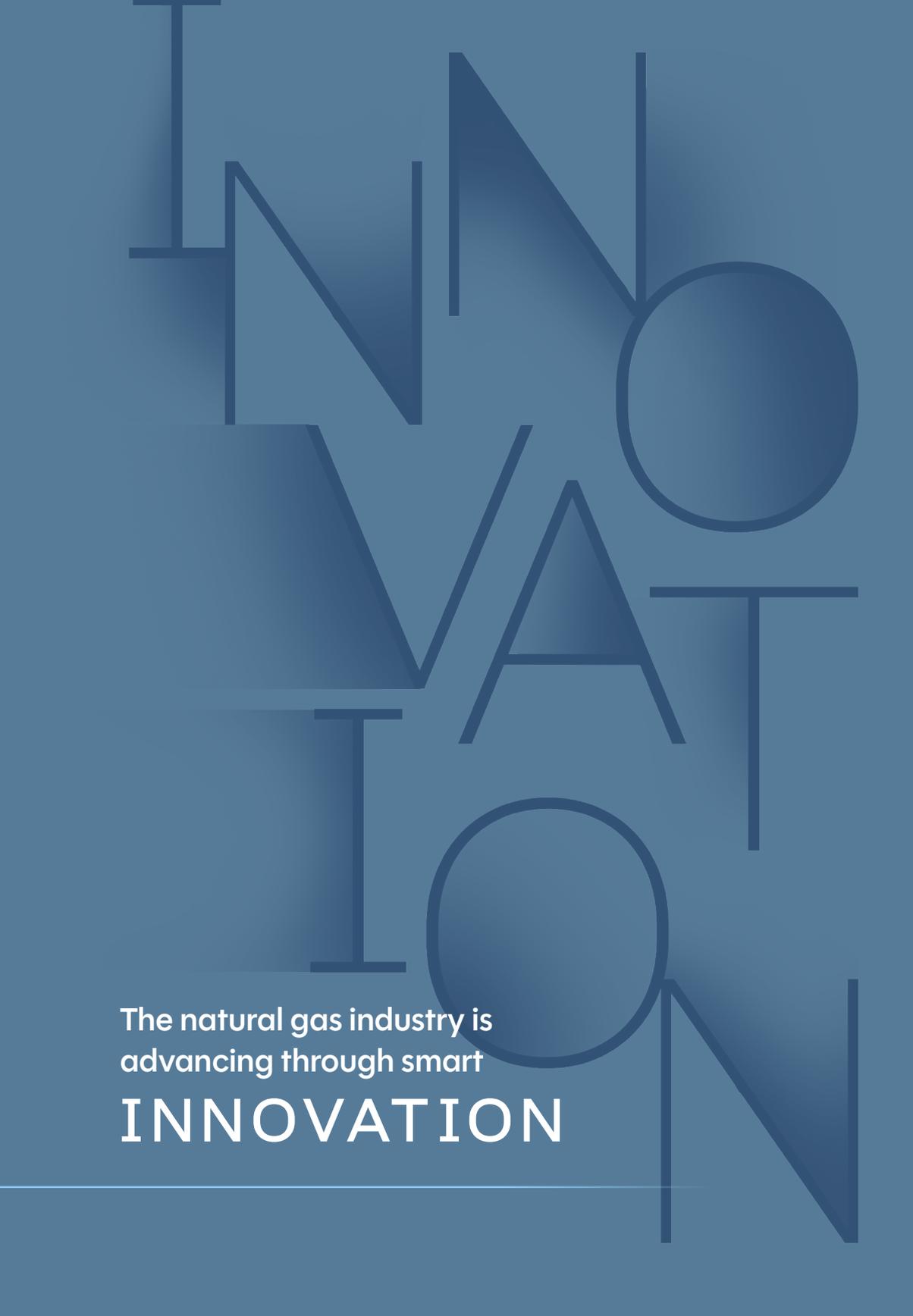
↓61% EMISSIONS REDUCTION

Emissions from the power sector have declined 61% due to increased use of natural gas for electricity generation.

40-Year Lows

Natural gas efficiency and the growth of renewable energy have led to energy-related carbon dioxide emissions decreasing to levels comparable to 40 years ago.





The natural gas industry is
advancing through smart

INNOVATION

Fueling Rising Demand

Natural gas is America's strategic advantage in meeting rising energy demand.

The growing demand for energy requires scale, and natural gas utilities have been meeting rising demand consistently with nearly 50% growth since 2006. With more than **100 years of abundant domestic supplies**, the natural gas industry is poised to sustain continued growth to meet rising demand while maintaining reliability and affordability and reducing emissions.

50%
GROWTH

Affordable energy means affordable American-made goods.

The long-term savings natural gas provides compared to other energy sources mean cheaper products, lower energy bills and a more robust economy. Commercial and industrial natural gas customers have saved more than **\$655 billion** over the last decade by using natural gas.

Permitting reform is a key component of meeting rising demand while safeguarding affordability and reliability for American families and businesses. National Association of Regulatory Utility Commissioners (NARUC) regulators unanimously support permitting reform to expand natural gas pipeline infrastructure and promote greater certainty and durability for energy projects. The National Petroleum Council also delivered concrete recommendations for permitting reform in 2025.



RENEWABLE

Natural Gas

Renewable Natural Gas (RNG) transforms unavoidable waste into valuable and reliable domestic energy sources, providing new economic opportunities for communities, local governments, and sectors like agriculture and waste management.



RNG can be produced from various waste streams including farms, landfills and wastewater treatment facilities or from renewable electricity.

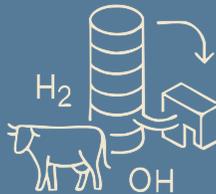
RNG is versatile and fully compatible with the U.S. pipeline system, so it can lower emissions in homes, businesses and heavy industries, such as manufacturing.

Utilities throughout the country offer RNG to their customers as another option to lower household emissions.



POWER TO GAS

Renewable electricity is used to split water into hydrogen and oxygen through a process called electrolysis. This renewable hydrogen can be blended into the pipeline or combined with CO₂ to create RNG.



ANAEROBIC DIGESTION

The most common way to produce RNG today, organic material such as animal or plant waste is broken down by microorganisms creating methane.



THERMAL GASIFICATION

Low moisture biomass such as forestry waste or crop residue is converted into RNG through a high-pressure chemical process.



0 CARBON EMISSIONS

Hydrogen does not create any carbon emissions when it's used for energy.

OUR CLEAN

Hydrogen Future

The U.S. possesses the most extensive natural gas pipeline delivery network in the world, and extensive research and testing is underway now to advance leveraging this infrastructure to deliver clean hydrogen (H₂). Natural gas utilities are connecting hydrogen production to end users nationwide.

Natural gas infrastructure can play a key role in connecting H₂ production and supply to demand centers and customers. Continued use of natural gas infrastructure can increase the likelihood of successfully reaching decarbonization goals.

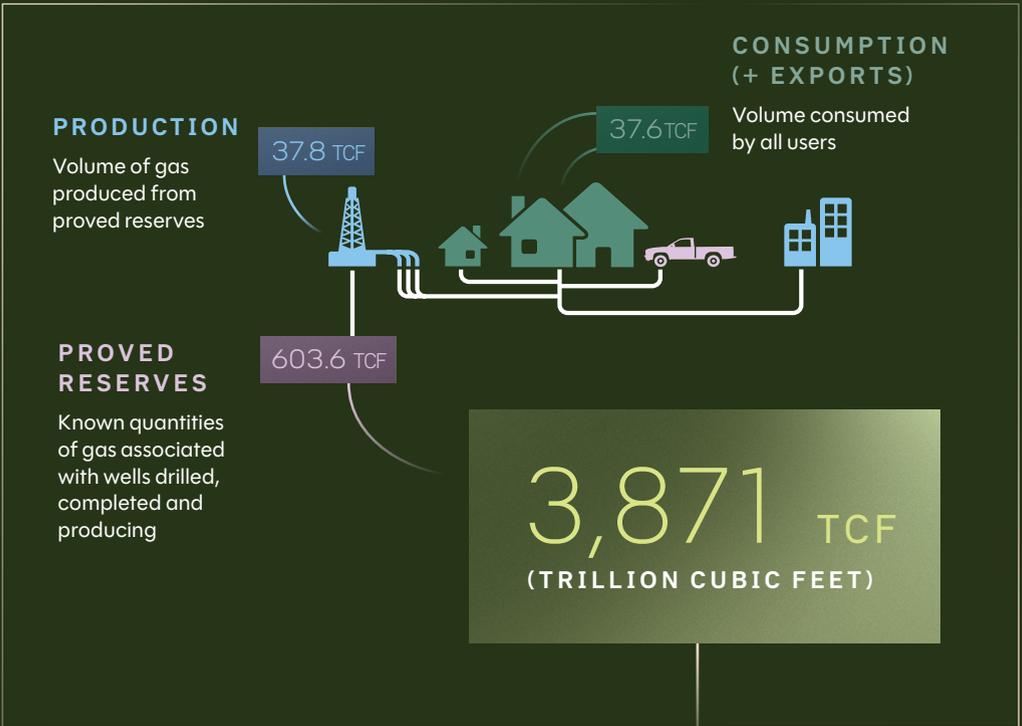


Natural gas
DATA



TECHNICALLY RECOVERABLE

NATURAL GAS RESOURCES



ABUNDANT SUPPLY AND VAST INFRASTRUCTURE

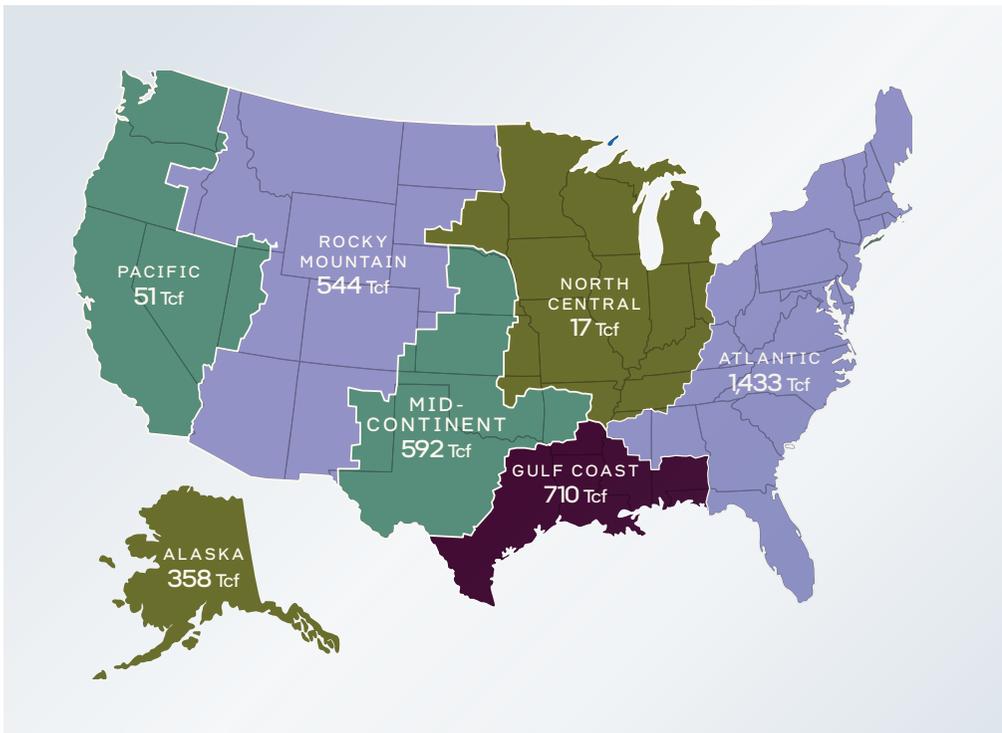
With 3,871 trillion cubic feet of natural gas available in future supply and 2.8 million miles of pipelines, natural gas is available where you need it, when you need it.

REGIONAL NATURAL GAS

Resource Assessment

3,871 TRILLION CUBIC FEET

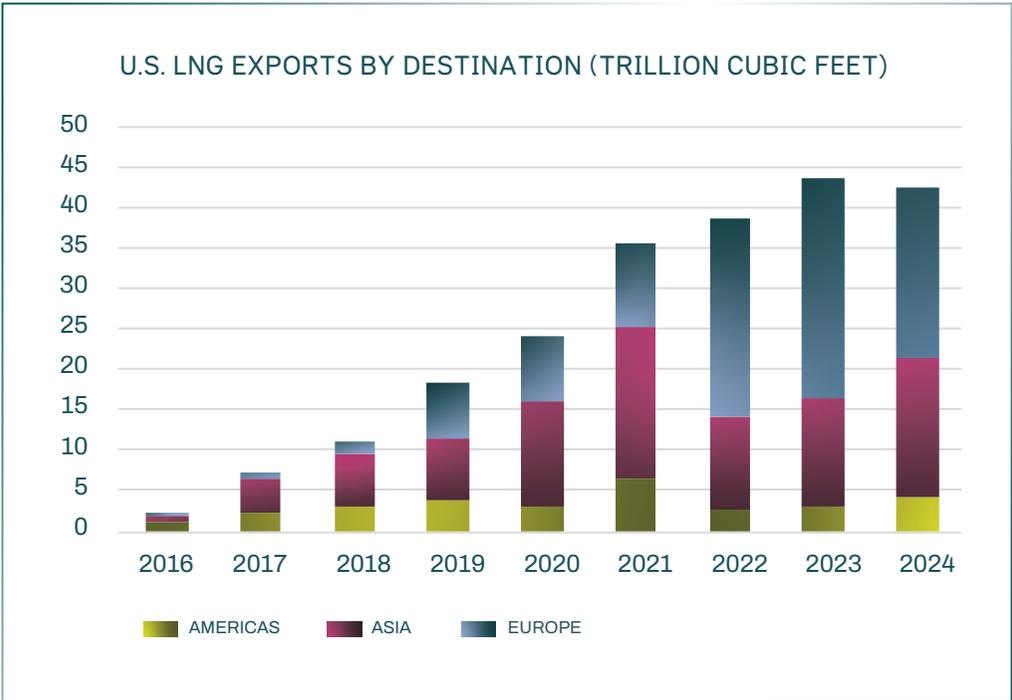
The United States has 3,871 trillion cubic feet of technically recoverable natural gas resources.



* Total numbers, listed in trillion cubic feet (Tcf), account for traditional, coalbed and offshore natural gas resources.

Global Abundance

Liquefied natural gas (LNG) has become the bedrock for European gas supplies, and the U.S. is playing an outsized role in serving that demand.



AMERICA'S STRENGTH

Global exports of LNG increased in 2024. The U.S. continued to solidify its position as the top exporter of LNG, thus strengthening America's and the world's energy security.

GROWING EXPORT CAPACITY

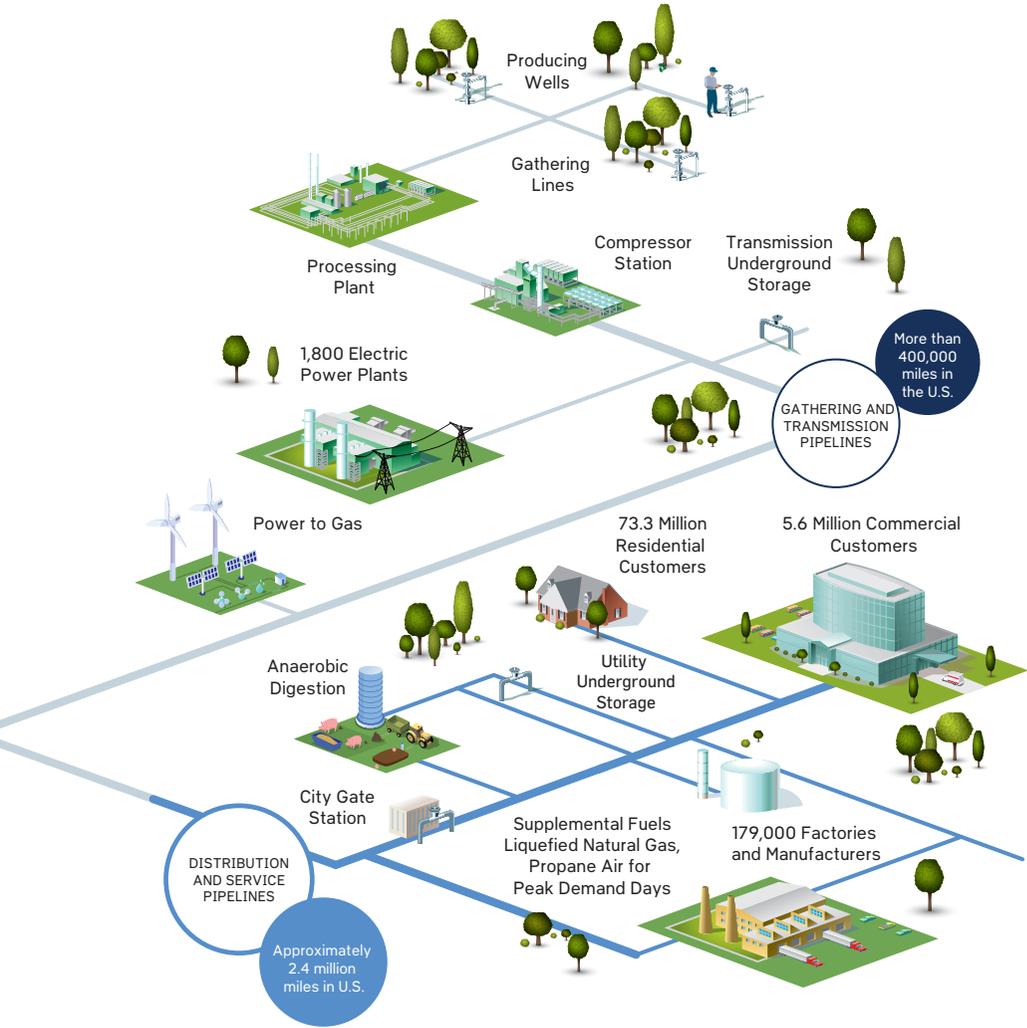
28.7 Bcf PER DAY

The U.S. Energy Information Administration projects that North America's LNG export capacity could increase from about 11.4 billion cubic feet per day in early 2024 to roughly 28.7 billion cubic feet per day by 2029.



NATURAL GAS

Delivery System





VIEW, SHARE AND DOWNLOAD

THE AGA PLAYBOOK IS DIGITAL
Playbook.AGA.org





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 79 million residential, commercial and industrial natural gas customers in the U.S., of which 94 percent — more than 74 million customers — receive their gas from AGA members. AGA is an advocate for natural gas utility companies and their customers and provides a broad range of programs and services for member natural gas pipelines, marketers, gatherers, international natural gas companies, and industry associates. Today, natural gas meets one-third of the United States' energy needs.

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