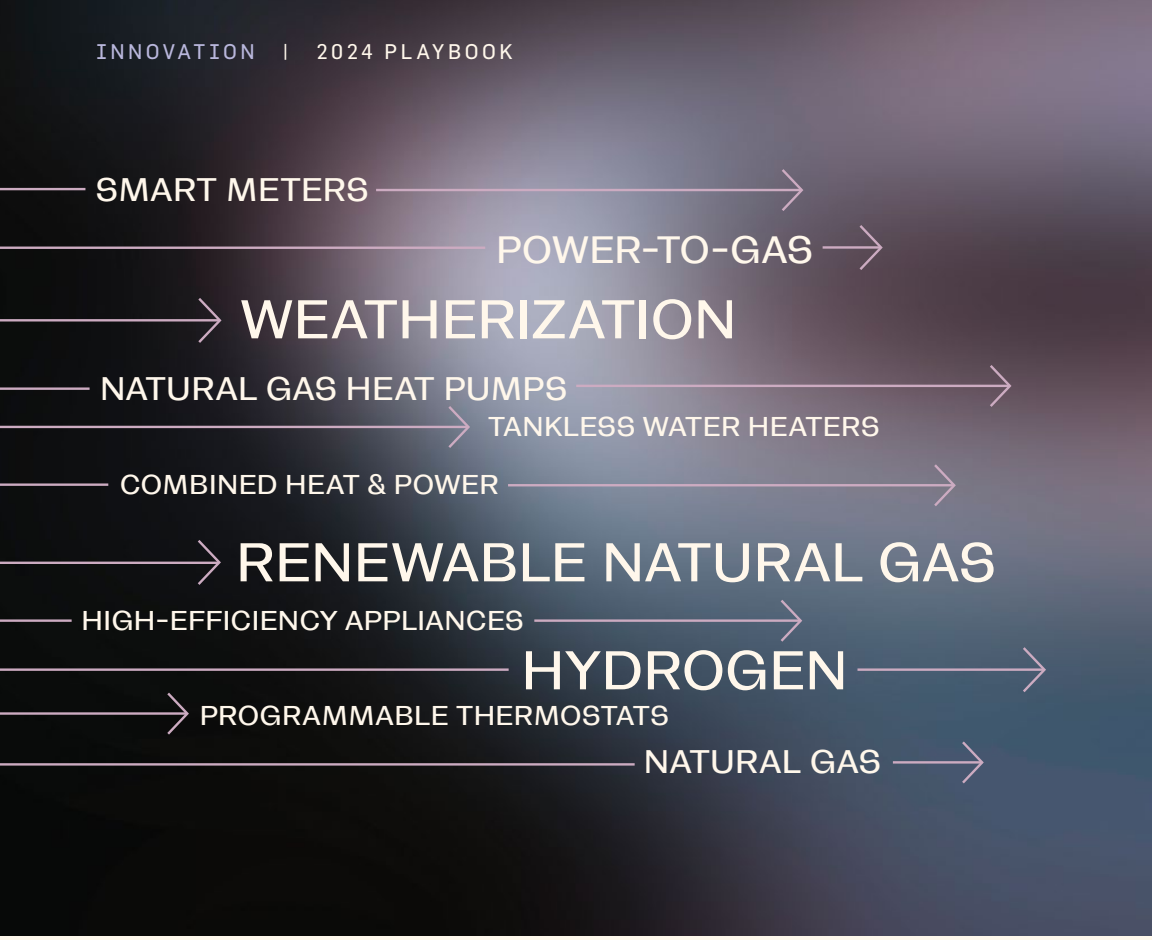
NATURAL GAS IS
ADVANCING THROUGH SMART

# INNOVATION




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

REDUCTION

**61%** EMISSIONS REDUCTION

Carbon dioxide emissions from electricity generation have declined 61% due to increased use of natural gas.

EFFICIENCY

**40** YEAR LOWS

Natural gas efficiency and the growth of renewable energy have led to energy-related carbon dioxide emissions hitting **40-year lows.**

## INVESTING IN EFFICIENCY

**$4.3M** PER DAY

Natural gas utilities invest up to $4.3 million per day in energy efficiency programs to help customers reduce their residential energy use.

Natural gas utilities saved 1.7 million metric tons of greenhouse gas emissions through energy efficiency programs in 2020.

## REDUCING THE CARBON FOOTPRINT

**1.3%** DECLINE IN CARBON EMISSIONS

Carbon emissions from the average natural gas home decline 1.3% per year.

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.

VISIT
**www.aga.org/climate**

COMMITMENT

## 10 COMMITMENTS TO REDUCE EMISSIONS

**AGA members have made 10 commitments to further reduce methane emissions from natural gas utility systems.**

PRINCIPLED POLICY

## 8 PRINCIPLES FOR EFFECTIVE NATIONAL POLICY

We proposed eight principles for an effective national policy approach to reducing greenhouse gas emissions and addressing climate change.

RENEWABLE

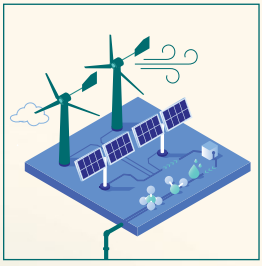
# NATURAL GAS

Renewable Natural Gas (RNG) is pipeline compatible gaseous fuel derived from biogenic or other renewable sources that have lower lifecycle carbon dioxide equivalent emissions than geological natural gas.

RNG can be produced from various waste streams including farms, landfills and water resource recovery facilities or from renewable electricity.

RNG is carbon neutral, 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 are starting to offer RNG to their customers as another option to lower household emissions.

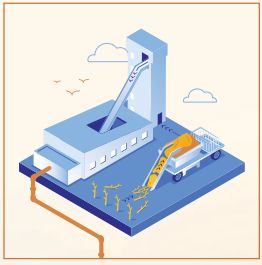


### POWER TO GAS

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 $CO_2$ 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.

# OUR CLEAN

## HYDROGEN FUTURE

The U.S. possesses the most extensive gas pipeline delivery network in the world, and extensive research and testing is underway now to make leveraging this infrastructure to deliver **clean hydrogen** in the future a reality. Gas utilities are connecting hydrogen production to end users nationwide.

Natural gas infrastructure can play a key role in connecting $H_2$ production and supply to demand centers and customers. Continued utilization of gas infrastructure, existing and purpose-built, can increase the likelihood of successfully reaching decarbonization goals.

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CARBON EMISSIONS

Hydrogen does not create any carbon emissions when it's used for energy. The only byproduct is water vapor.