

# Engaging with Customers about Natural Gas' Future on the Pathway toward Emissions Reduction

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Managing Director - Energy Markets  
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The American Gas Association (AGA) represents companies delivering natural gas safely, reliably, and in an environmentally responsible way to help improve the quality of life for their customers every day. AGA's mission is to provide clear value to its membership and serve as the indispensable, leading voice and facilitator on its behalf in promoting the safe, reliable, and efficient delivery of natural gas to homes and businesses across the nation.

Committed to utilizing America's abundant, domestic, affordable and clean natural gas to help meet the nation's energy and environmental needs.



# Climate Change Position Statement

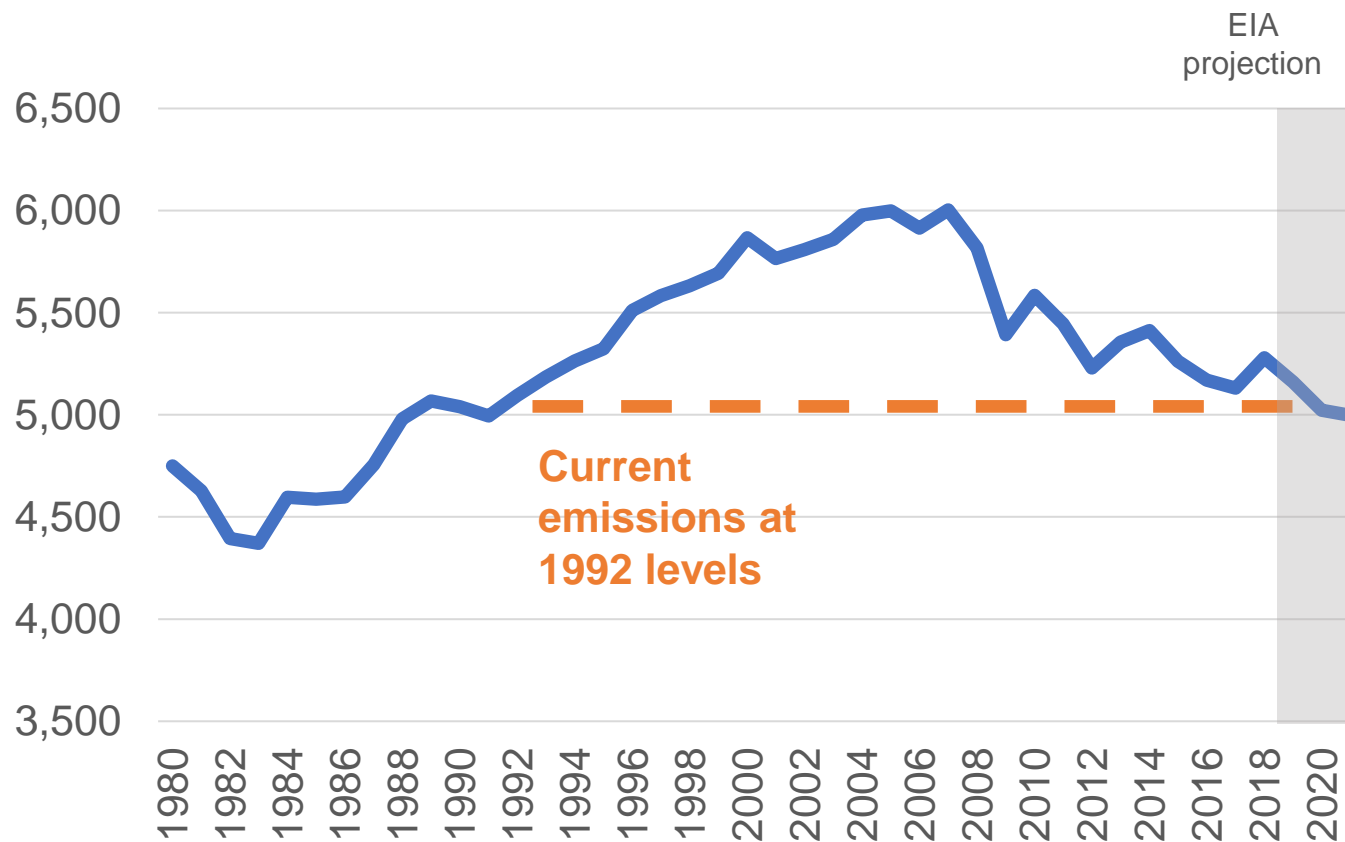
The American Gas Association is committed to reducing greenhouse gas emissions through smart innovation, new and modernized infrastructure, and advanced technologies that maintain reliable, resilient, and affordable energy service choices for consumers.

[www.aga.org/climate](http://www.aga.org/climate)

**Natural Gas Industry  
Contributions for Achieving  
U.S. Environmental and  
Energy Affordability  
Objectives**

Natural gas has led reductions in US CO<sub>2</sub> emissions to 27-year lows, and is projected to continue to decline

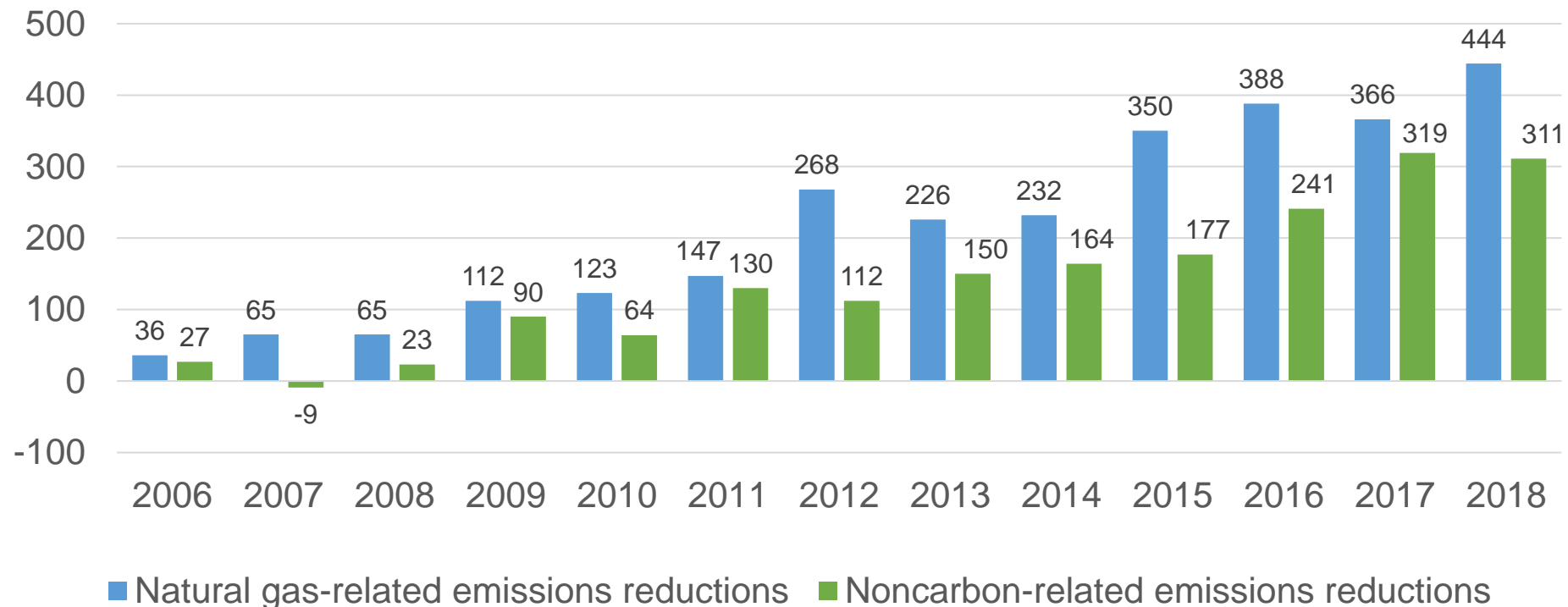
## US Carbon Dioxide Emissions from Energy Consumption (Million Metric Tons CO<sub>2</sub>)



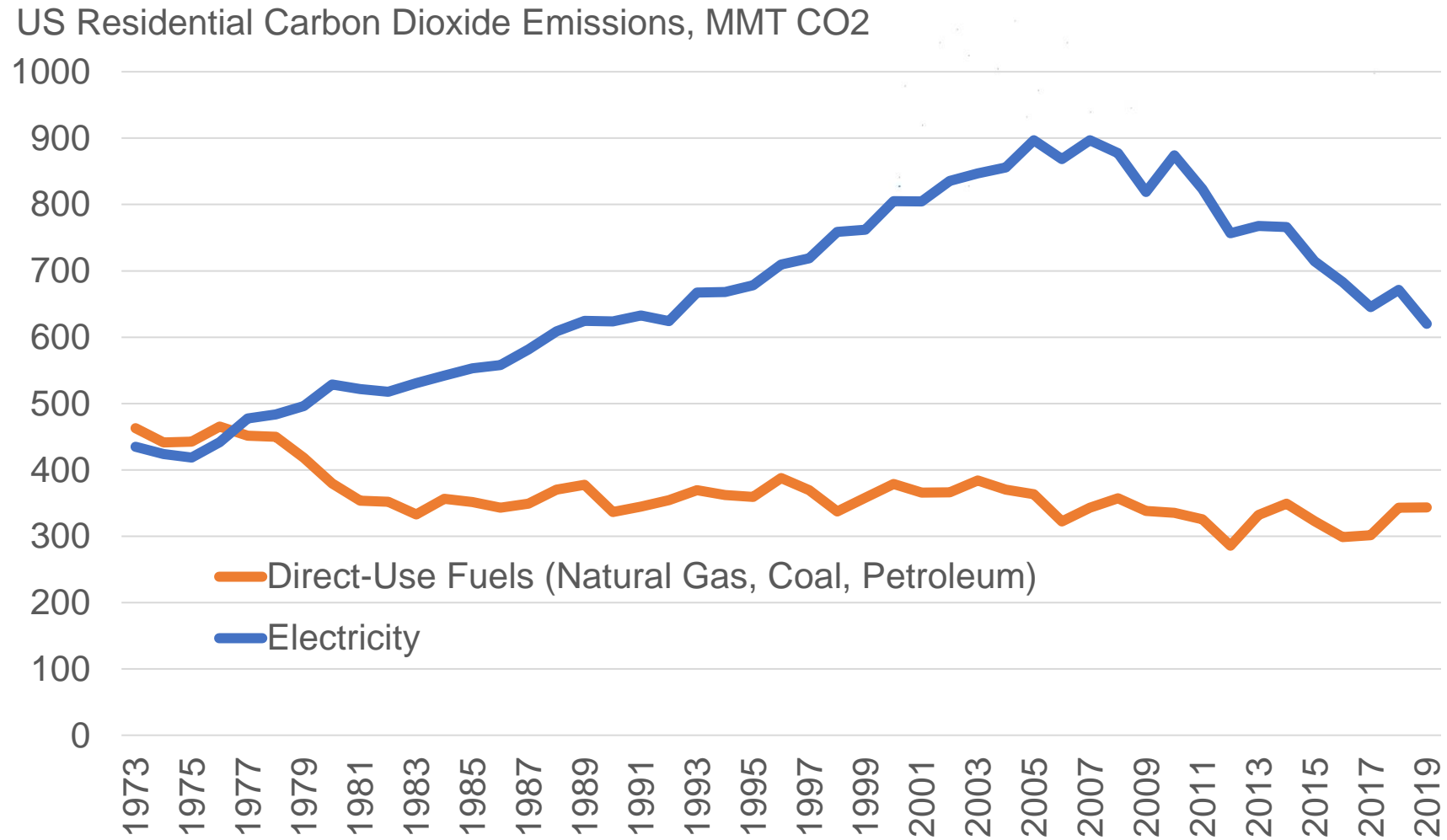
Source: US Energy Information Administration.  
Projection from EIA Short-Term Energy Outlook January 2020

# Natural gas is responsible for 61 percent of cumulative carbon dioxide emissions savings due to changes in the electricity generation fuel mix

Electricity generation CO2 savings from changes in the fuel mix since 2005  
Million Metric Tons CO2



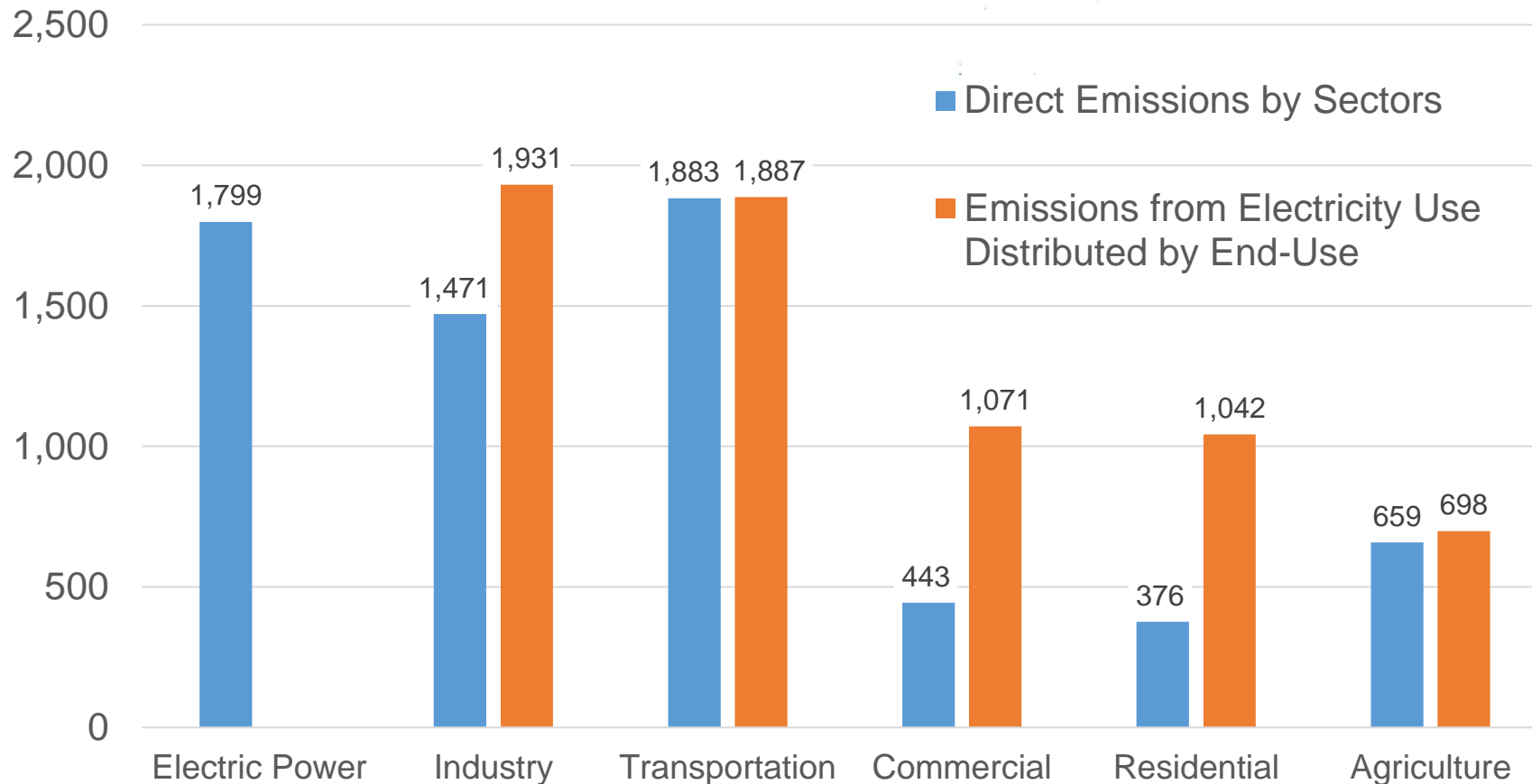
# Residential electricity CO<sub>2</sub> emissions declined as the power generation sector moved to natural gas and renewables



Source: US Energy Information Administration

# Direct emissions from residential and commercial buildings are a small but still important part of overall annual U.S. greenhouse gas emissions

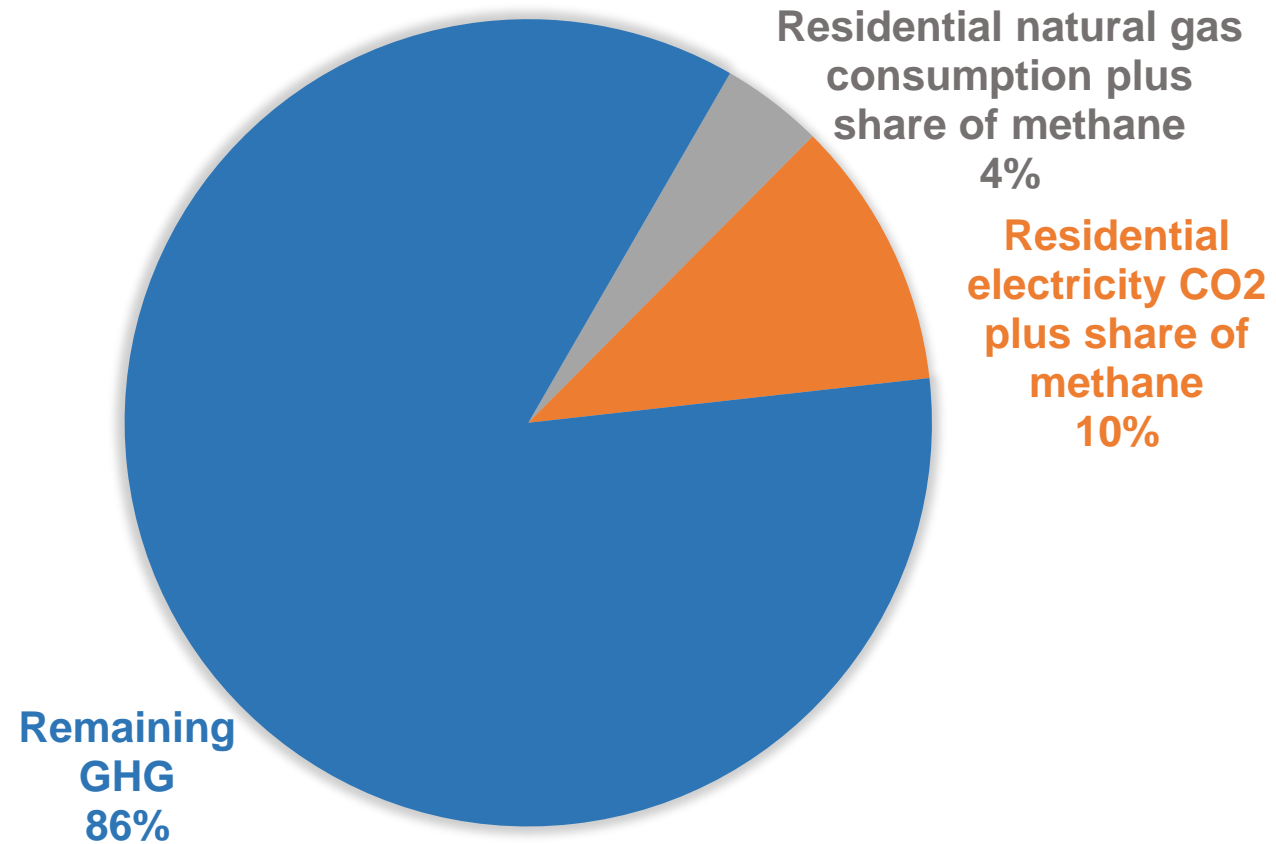
Comparison of 2018 U.S. Greenhouse Gas Emissions by Sector  
MMT CO<sub>2</sub>-Eq





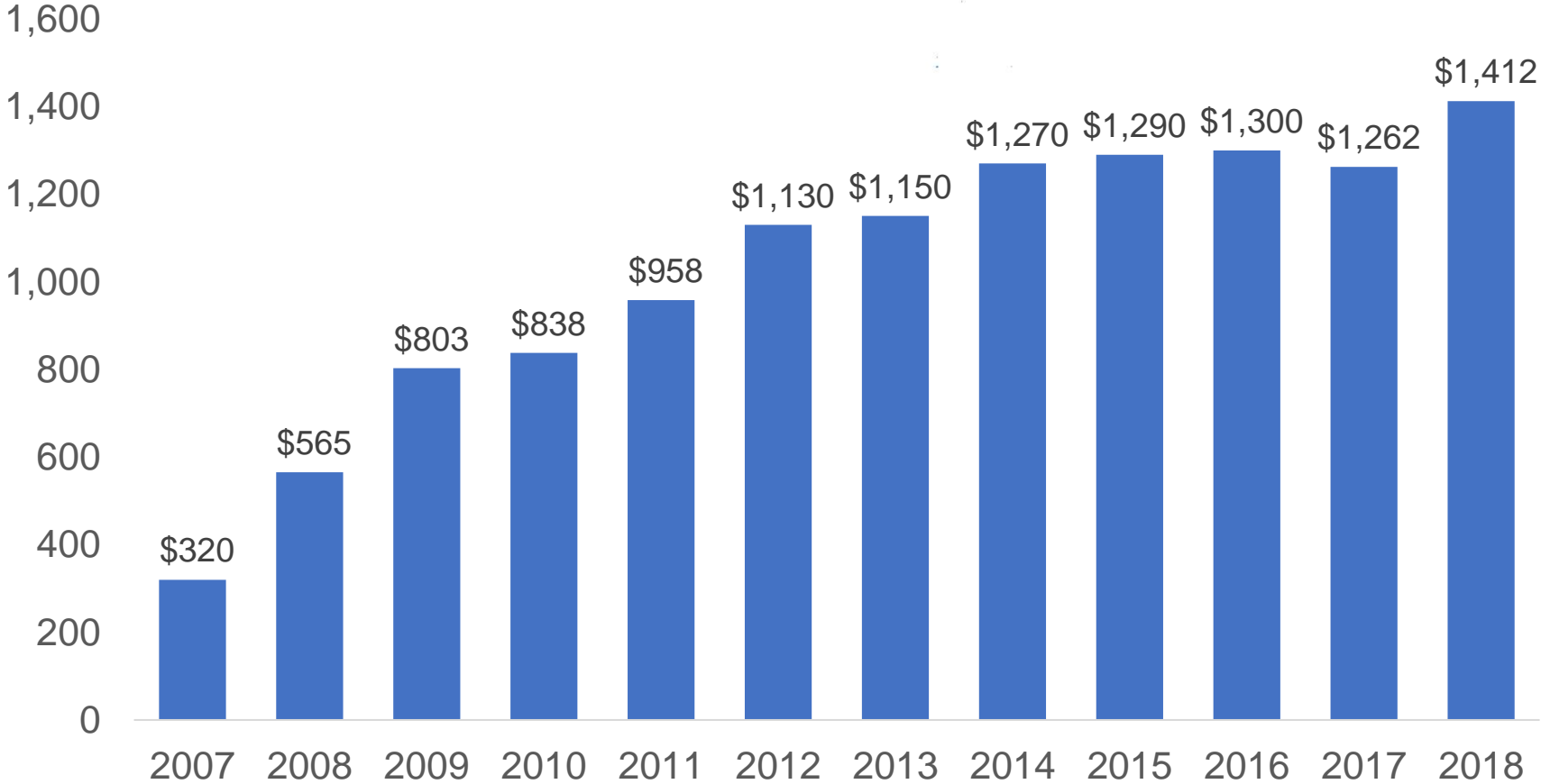
# Residential natural gas use accounts for 4% of total US greenhouse gas emissions

- Commercial natural gas use is 3%
- Commercial electric power use accounts for 9%
- Residential and commercial propane and oil use is 3%

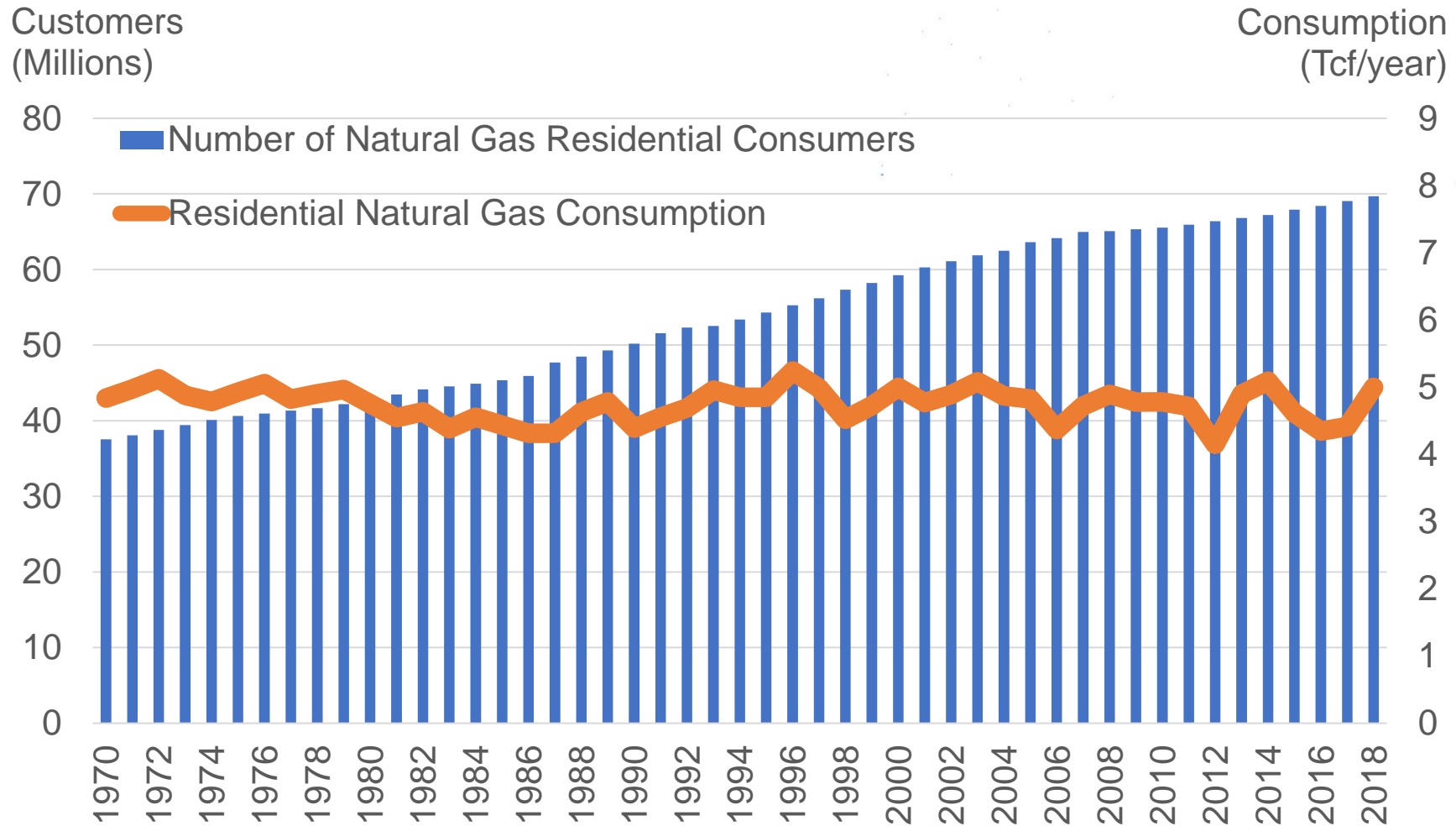


# Natural gas utility spending on energy efficiency programs has increased steadily

United States Natural Gas Efficiency Program Investments  
Million Dollars

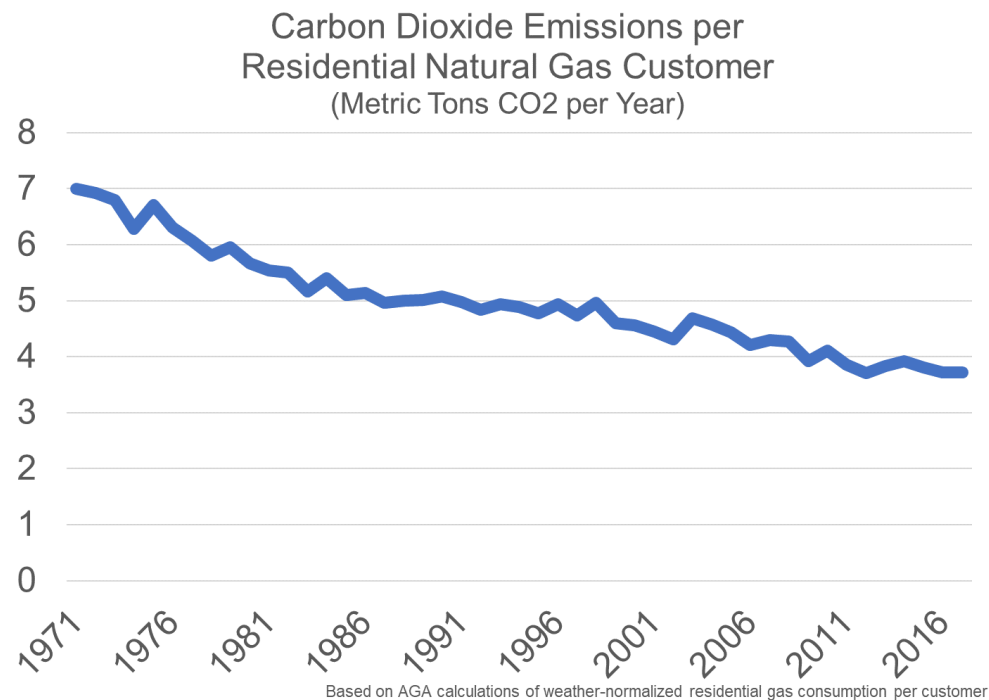


# Natural gas use in homes has remained flat since 1970 while the number customers served increased by 86%



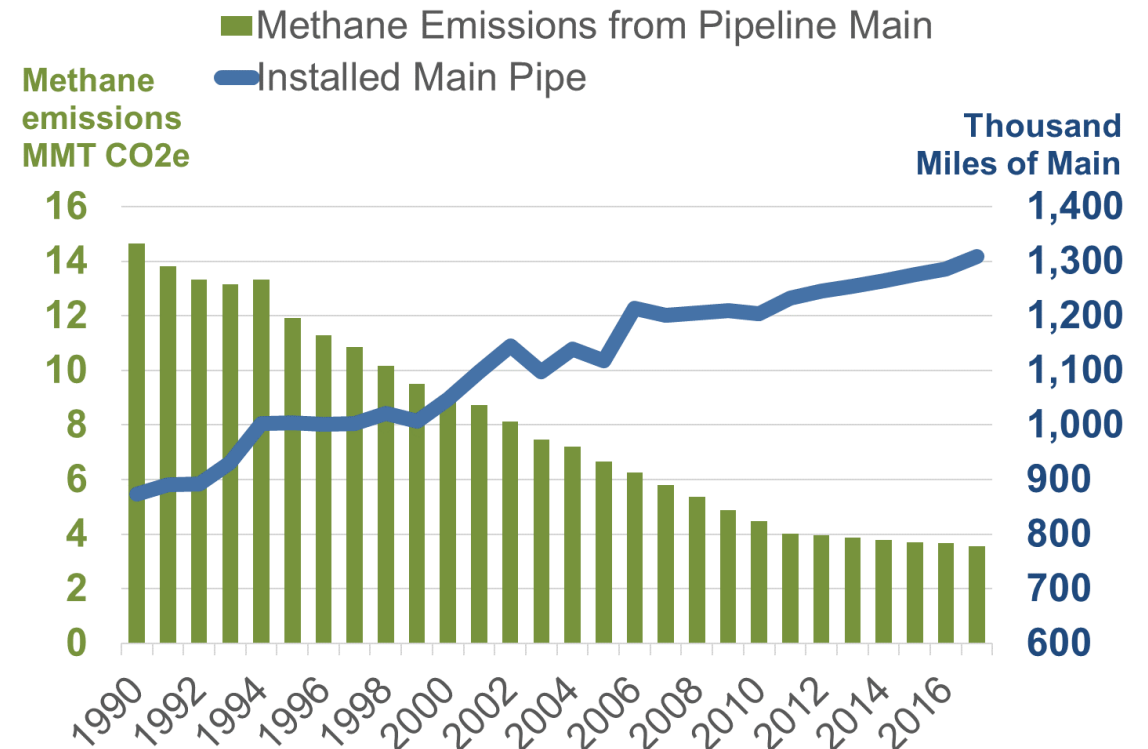
# Natural gas utilities and its customers have made significant progress reducing emissions

## Declining Customer CO<sub>2</sub> Emissions



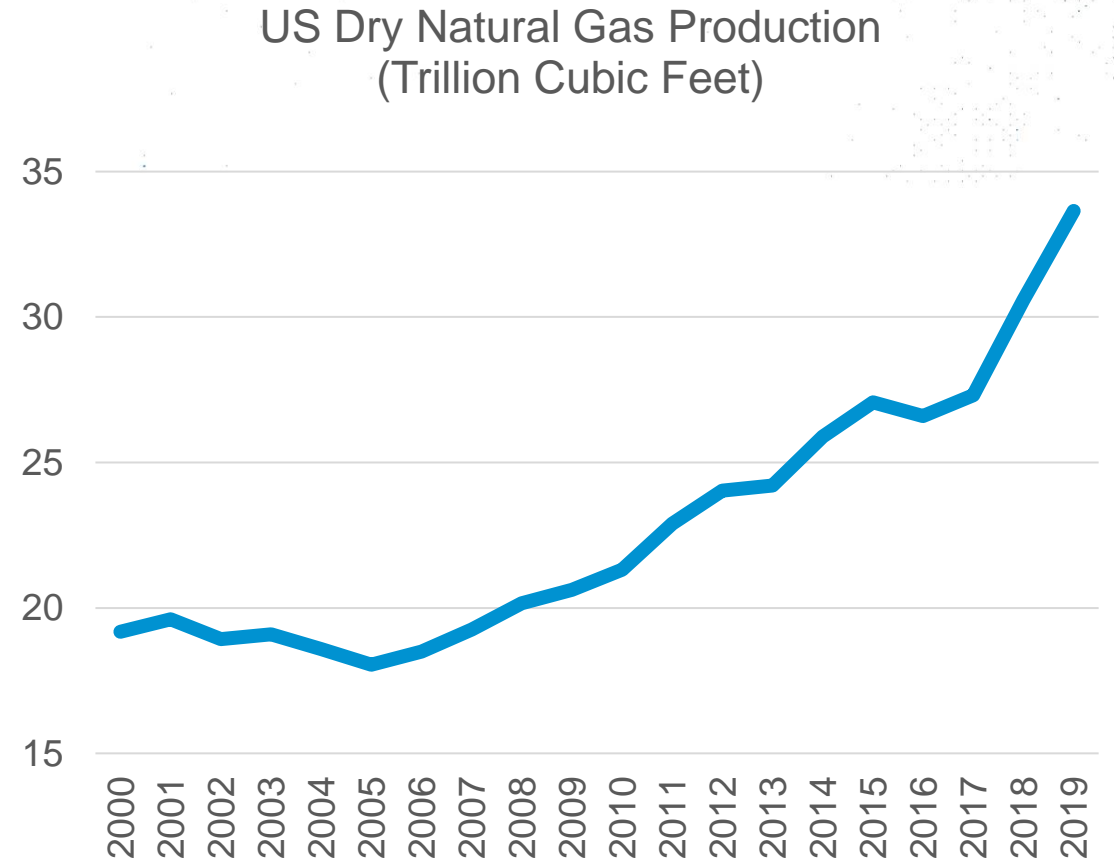
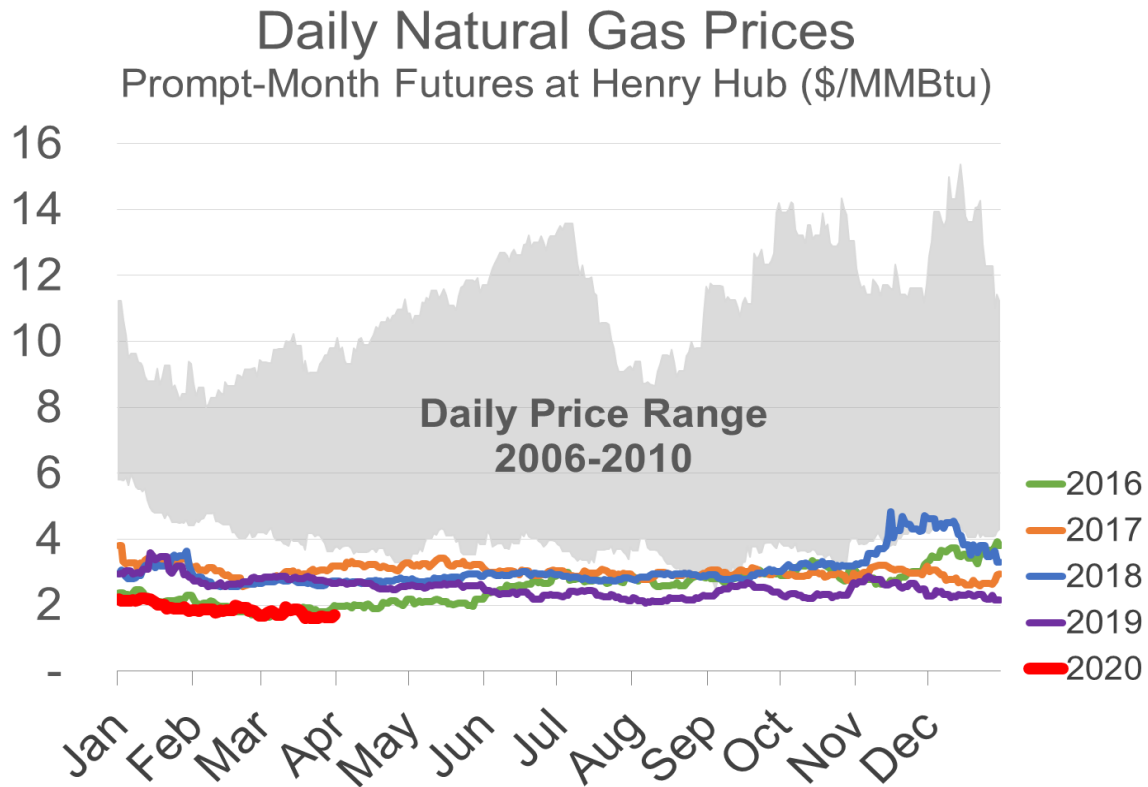
Based on AGA calculations of weather-normalized residential gas consumption per customer

## Reductions of Methane



Source: EPA Inventory of US Greenhouse Gas Emissions and Sinks: 1990-2017, EIA

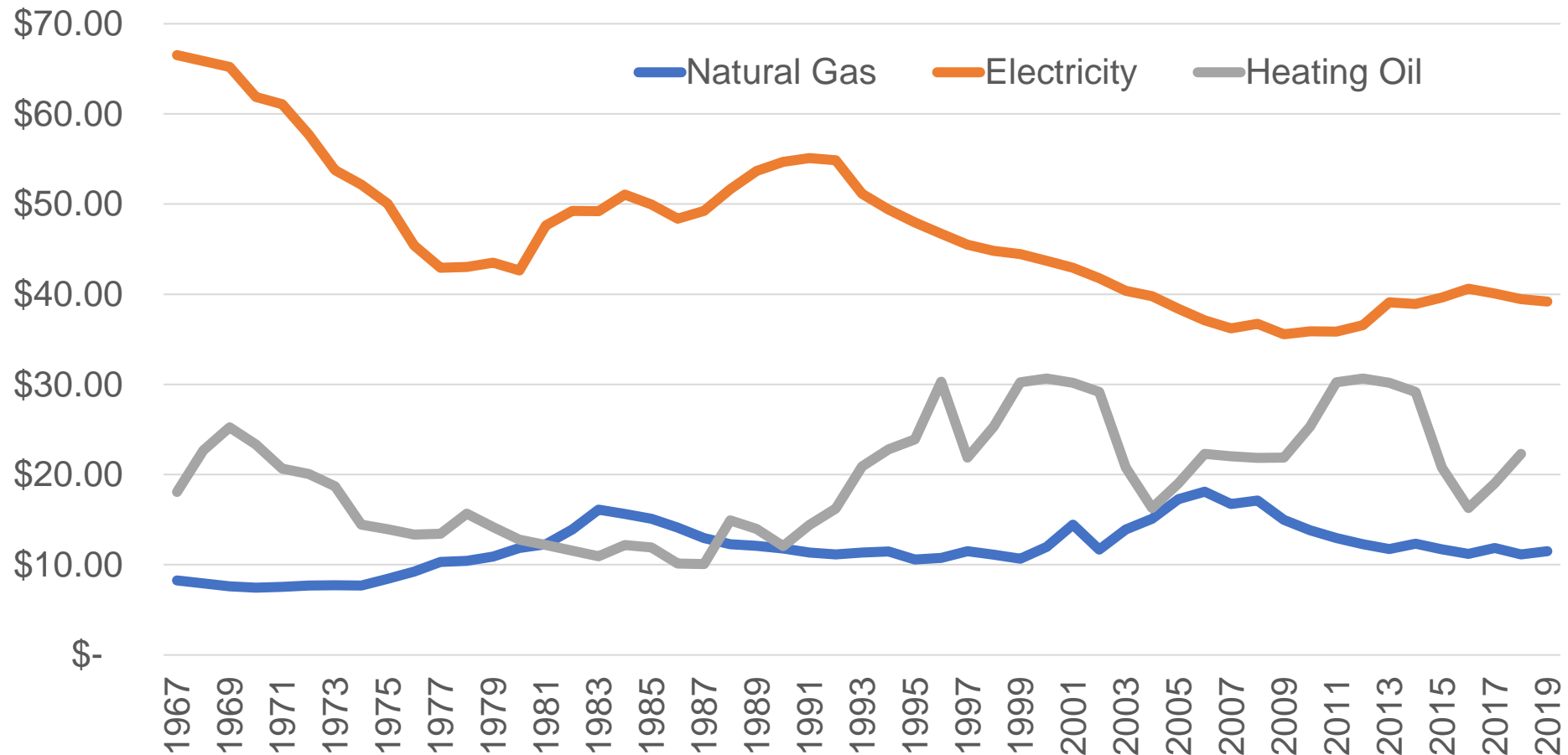
# Abundant natural gas supplies and production efficiencies have led to low and stable prices



Source: Energy Information Administration

# On an energy-equivalent basis, electricity rates are about 4 times higher than natural gas rates

Residential Price for Natural Gas, Electricity, and Heating Oil  
Inflation-adjusted, December 2019 dollars (\$/MMBtu)



Source: Energy Information Administration

# Natural gas appliances save money and benefit the environment

## Hot Water at a Lower Cost

Comparing Residential Water Heater Efficiency

### Tankless Natural Gas



Energy Cost\*  
**\$174**  
(annually)

Full-Fuel-Cycle Energy Consumption\*

**18.6 MMBtu**  
(annually)

CO<sub>2</sub> Emissions\*

**1.1 tons**  
(annually)

\*on average

### Natural Gas



Energy Cost\*  
**\$253**  
(annually)

Full-Fuel-Cycle Energy Consumption\*

**26.64 MMBtu**  
(annually)

CO<sub>2</sub> Emissions\*

**1.5 tons**  
(annually)

### Electric Resistance



Energy Cost\*  
**\$613**  
(annually)

Full-Fuel-Cycle Energy Consumption\*

**40.3 MMBtu**  
(annually)

CO<sub>2</sub> Emissions\*

**2.5 tons**  
(annually)

Source: American Gas Association

## Welcome!

The Energy Planning Analysis Tool can be used to support the US natural gas industry in positioning direct gas use as option for energy efficiency programs, building energy codes, proposed EPA Clean Power Plan, or in other areas of public policy.

The tool calculates source energy consumption and selected air emissions including Greenhouse Gas (GHG) emissions associated with annual site energy consumption by purchased fuel type of electric and natural gas applications defined by user-selectable and default inputs. It shows the potential energy and cost benefits of replacing or buying more energy efficient equipment, typically using natural gas as fuel.



<http://epat.gastechnology.org/Default.aspx>



**Even with a very strong value proposition, the natural gas industry is facing policy challenges**

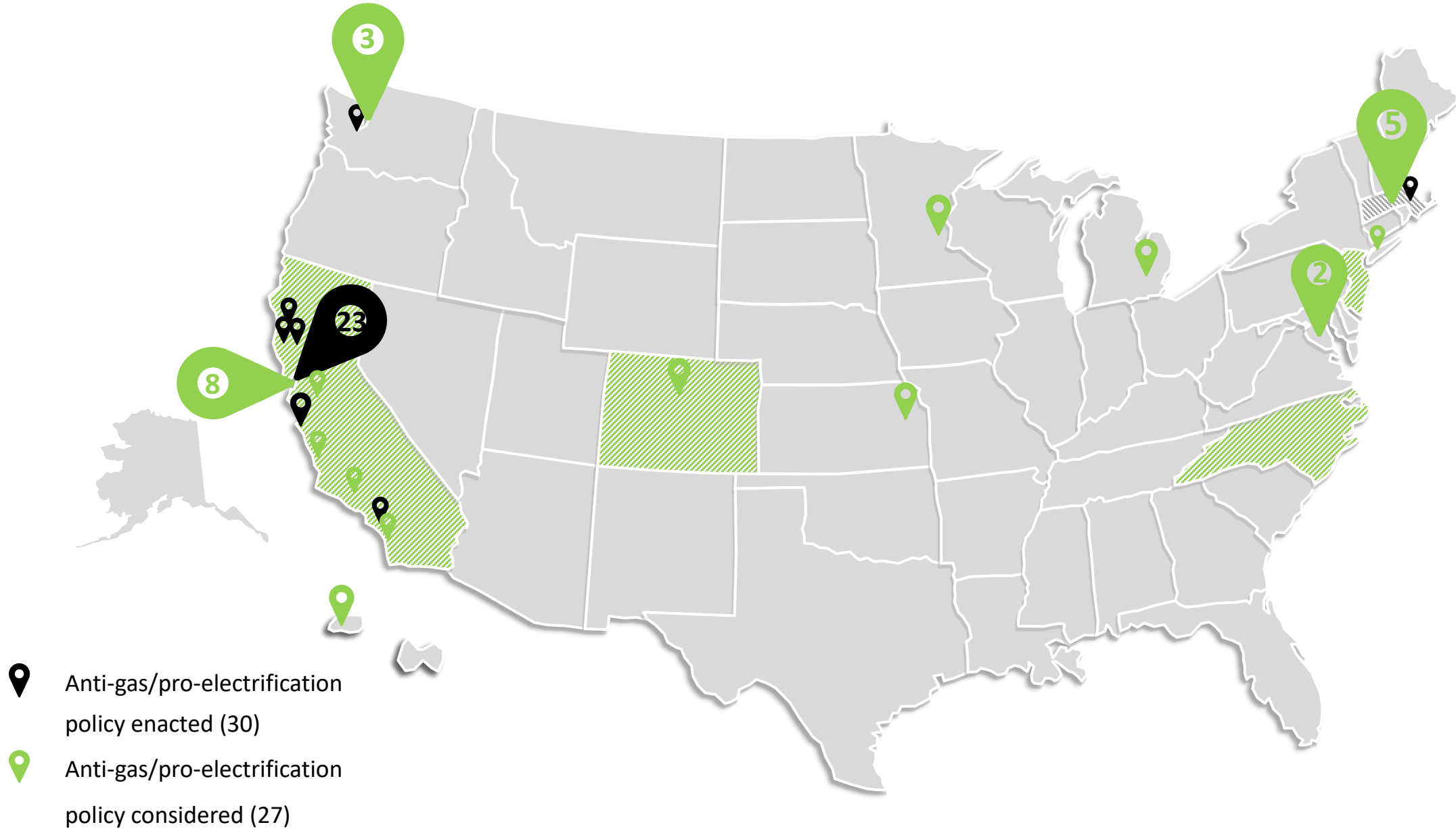
# Local efforts are shaping the current U.S. climate change debate

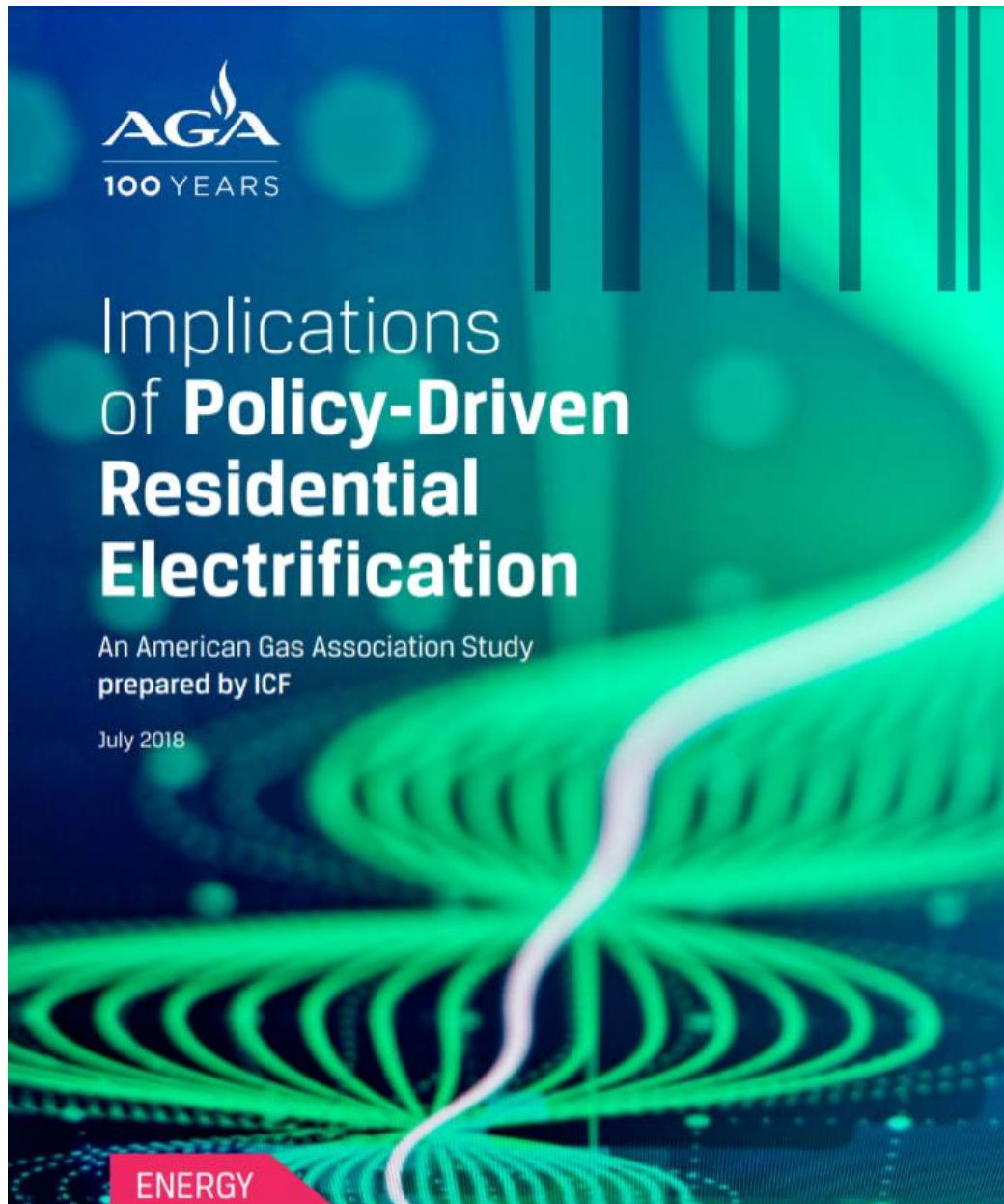
More than 400 U.S. #ClimateMayors,  
*representing 70 million Americans,*



have committed to adopt, honor, and uphold  
the climate goals of the Paris Agreement.

# Local Anti-Natural Gas Policies






## Key Findings

- **Incremental generation capacity requirements and transmission system upgrade costs**  
**\$155 to \$426 billion**
- **Overall US GHG emissions reduced by**  
**1% to 1.5%**
- **Total cost of policy-driven residential electrification**  
**\$1,060 to \$1,420 per year per converted household increase in energy costs**
- **Cost of carbon dioxide emissions reductions:**  
**\$572 to \$806 per ton**



# A Thoughtful Pathway

Towards U.S. Emissions Reductions



Natural gas technologies offer pathways to achieve our shared goal of reducing emissions while maintaining affordability, reliability and the quality of life that Americans enjoy.

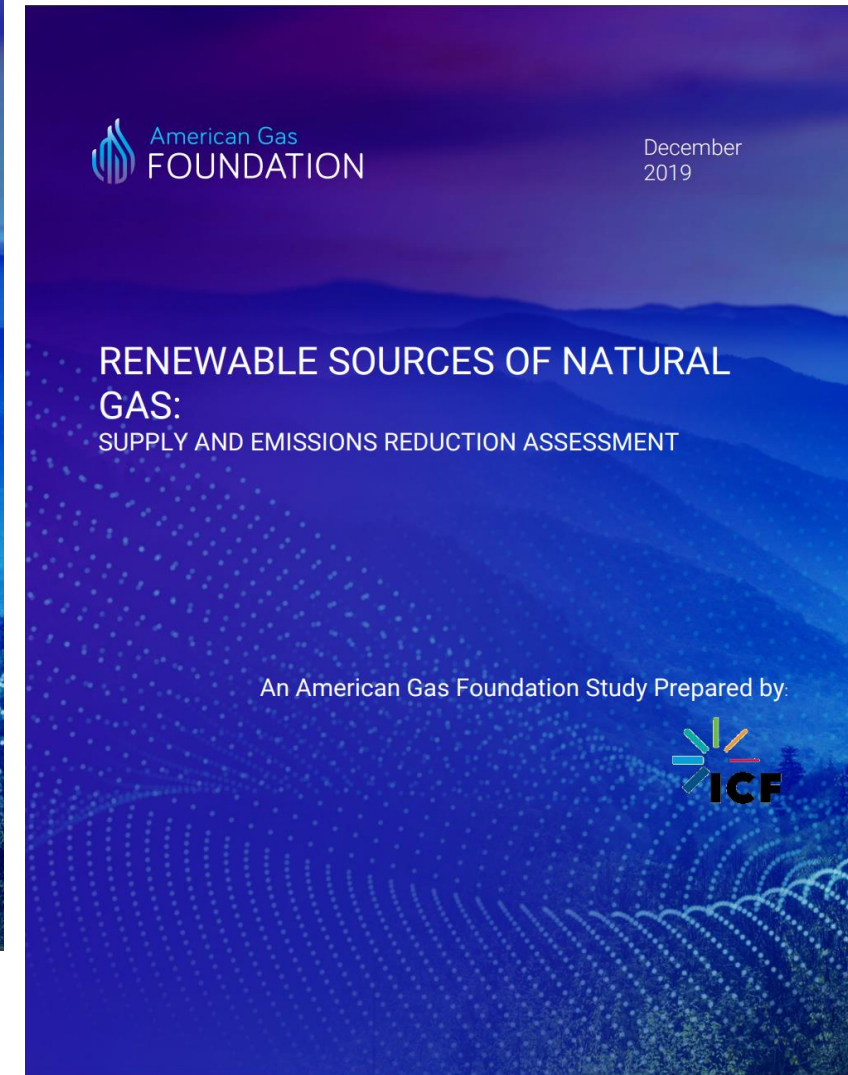
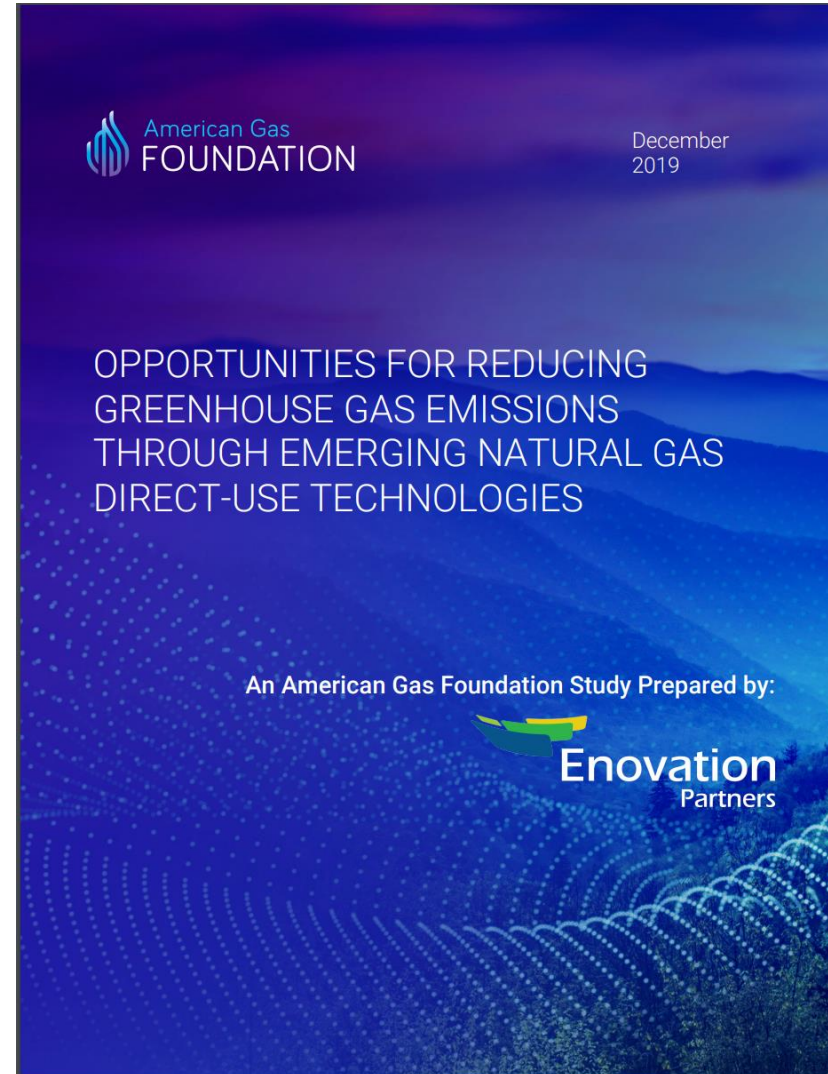
## Actions

- **Continued Commitment to Energy Efficiency**
- **Advance the deployment of next generation technologies**
- **Develop renewable sources of supply**



**The American Gas Foundation published two studies in December 2019.**

**The studies focused on specific components of the natural gas pathway to emissions reductions**



<https://www.gasfoundation.org/>

# The Direct-Use study examined the following questions

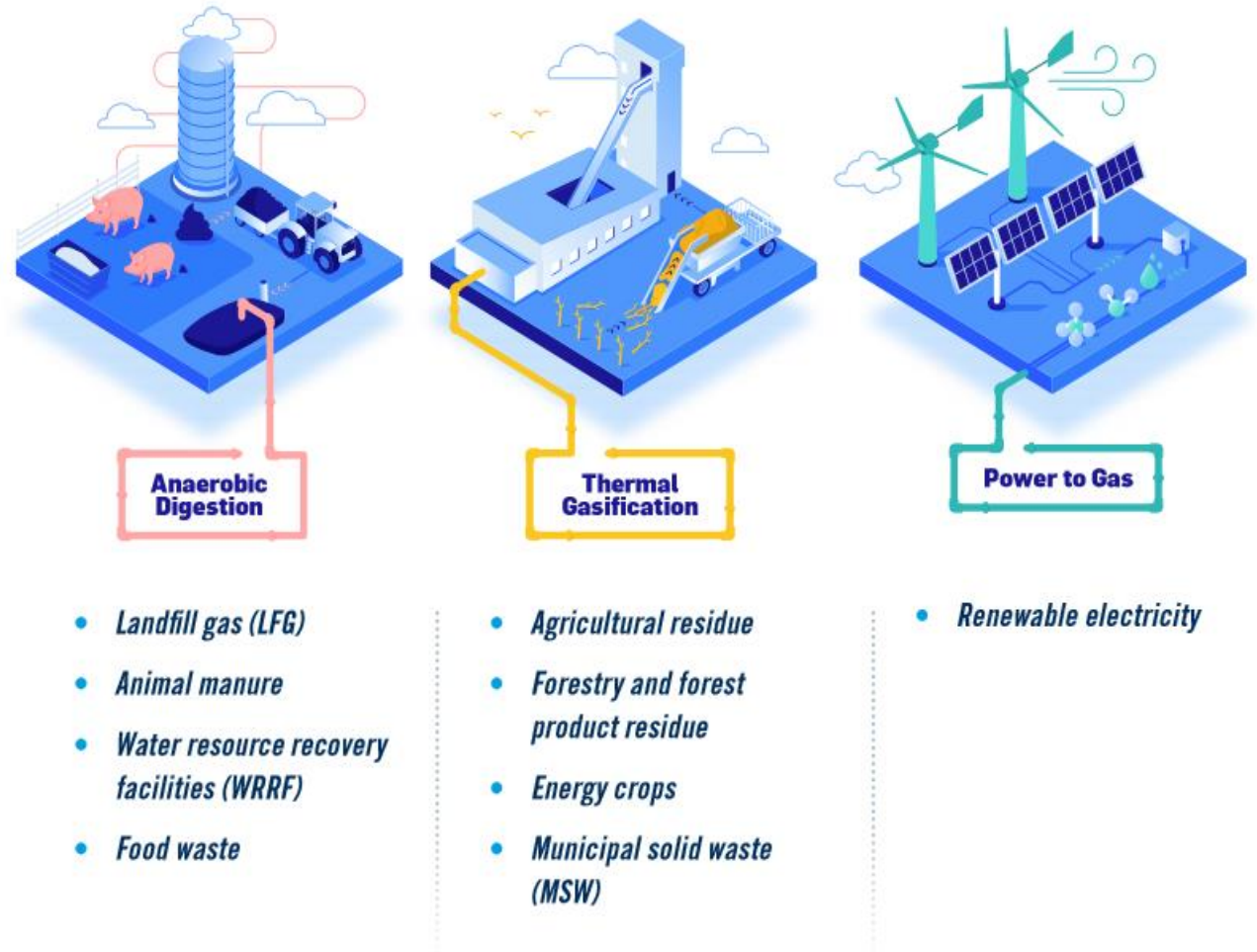
- How much could U.S. GHG emissions be reduced with next generation residential direct-use gas technologies?
- What is the expected cost (\$/Metric Ton) of achieving the emissions reductions?
- What benefits would customers see?
- What type and level of support would utilities and/or regulators need to provide in order to realize the full benefits of these technologies?



# RNG Study Objective

To contribute a fact-based analysis and provide current data to the ongoing policy discussions around renewable natural gas including projected estimates on:

- The supply potential of domestic RNG resources
- Greenhouse gas emission reduction potential
- RNG projected pricing
- Estimated cost per ton of emission reductions

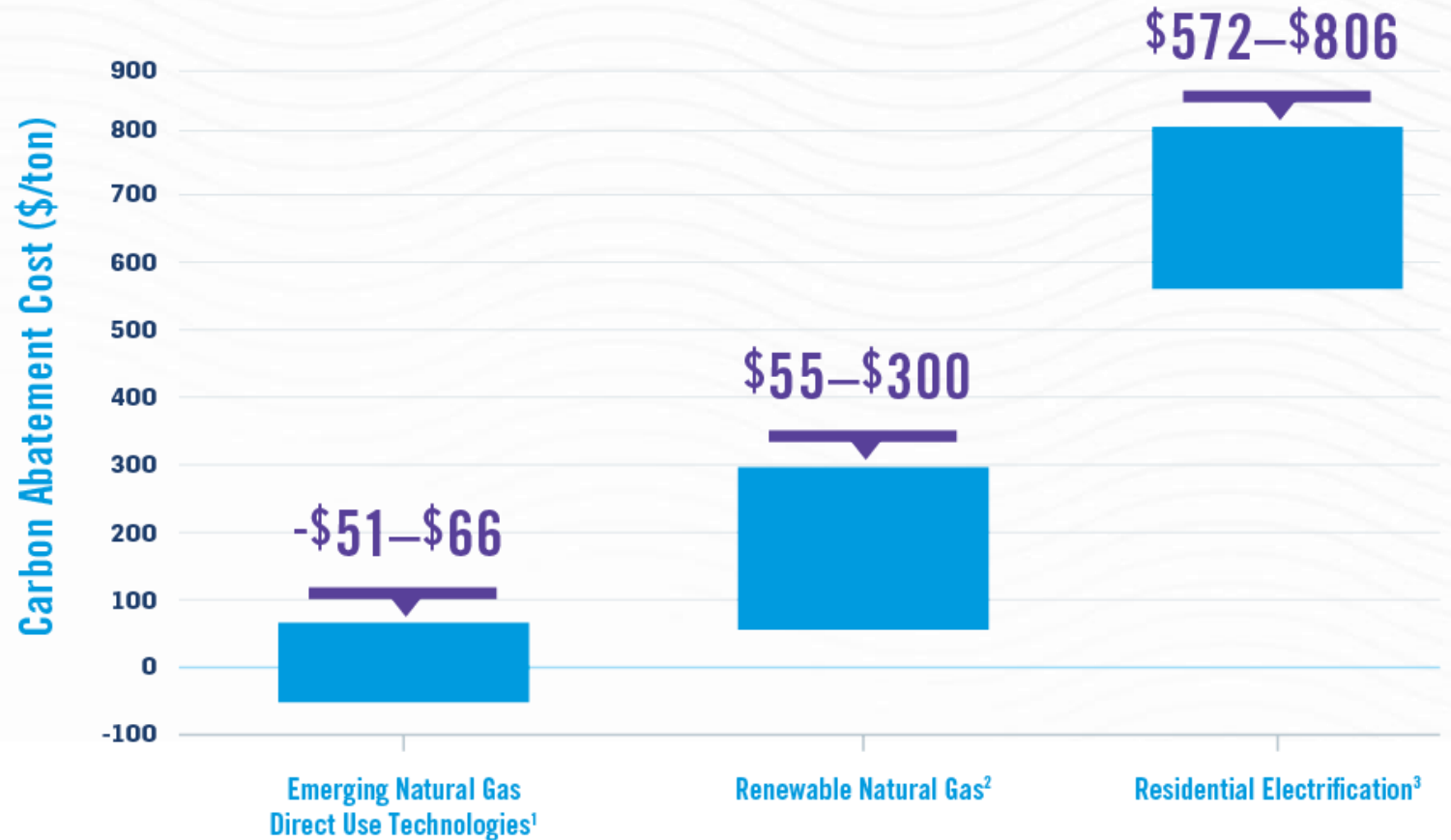




## Key Findings

1. Highly efficient, emerging direct use technologies could reduce natural gas CO2 emissions in residential sector by 2050 by 40% while reducing consumer energy costs by almost \$300 per year
2. The RNG resource potential is equivalent to 95% of current residential natural gas use with the majority of RNG to cost between \$7-\$20 per MMBtu.

## Cost Comparison of GHG Reduction Pathways



Deployment of **advanced natural gas technologies** and **renewable natural gas** resources provide **cost-effective pathways to emissions reduction.**

Actions to  
Educate Targeted  
Audiences and  
Address Industry  
Challenges



# What We Know

## Situational Awareness

- The environmental NGOs are taking a holistic approach to eliminating the use of natural gas.
- State, cities and localities are capitalizing on the groundwork laid by the large environmental groups in the form of message amplification, organizing support, tactical and legal expertise, and financial resources.

# Changing the Narrative

## AGA Goal & Strategy

- **Goal**

*Reframe the debate on the value proposition of natural gas and energy infrastructure as an integral part of a clean energy future.*

- **Strategy**

*AGA has created an interdepartmental team to leverage existing resources and build new initiatives to address these challenges.*

- *Proactive and Responsive*

# Proactive Actions

- **Support Member Driven Campaign Initiatives**
- **AGA Initiatives**
  - *Develop materials for influencers and stakeholders*
  - *Develop new data and analytics*
  - *National coalition with state and local reach*
  - *Create a new platform and outreach strategy to recruit and engage supporters of natural gas*
  - *Monitor any adverse changes to state and local building energy codes and standards*
  - *Support relevant legislation that recognizes value of natural gas in a clean energy future*

# Arizonans support a clean energy future with natural gas.

## WANTED

83% 

WANT natural gas in their homes\*

## PREFERRED

92% 

want the **CHOICE** of natural gas\*

## AFFORDABLE

80% 

consider natural gas more **AFFORDABLE** than other energy sources\*

## CLEAN

67% 

believe natural gas is a **CLEAN** energy source\*

## EFFICIENT

68% 

consider natural gas more **EFFICIENT** than other energy sources\*

## RELIABLE

65% 

view natural gas as **RELIABLE** energy source\*



## VOTE YES ON HB3619

MAKE SURE WE KEEP THE **POWER OF ENERGY CHOICE** IN OKLAHOMA

### NATURAL GAS

EFFICIENT.  
AFFORDABLE.  
ABUNDANT.



Some U.S. cities are proposing outright bans on the use of natural gas equipment and connections in new buildings and construction. However, banning natural gas would not only negatively impact local business, customers and communities, it also threatens to take away the right of the people to choose their energy.

**House Bill 3619 ensures Oklahomans continue to have access to energy choices**, including natural gas which offers a clear pathway to the shared goal of reducing emissions while maintaining the affordability, reliability and the quality of life that Americans enjoy.

### A PROVEN SOLUTION TO A SUSTAINABLE FUTURE

As the foundation for a safer, cleaner and more prosperous energy future, **natural gas is a vital part of Oklahoma**—reliably powering hospitals, schools, churches, restaurants, manufacturing plants and many other local businesses.

### AN ECONOMIC DRIVER

Not only does natural gas play a critical role in helping to reduce emissions, it offers the country **a path to energy independence** while strengthening the economy and increasing jobs in Oklahoma and nationwide.



### AFFORDABLE

Homes using natural gas for heating, cooking and drying clothes **saved an average of \$874 per year** compared to those using other energy sources.

### MAINTAINING CHOICE

HB3619 protects your constituents' choice for energy providers. It ensures that homeowners, builders or business owners have access to **balanced energy solutions** that are efficient, affordable and clean.



## VOTE YES!

Natural gas offers a clear pathway to the shared goal of **reducing emissions** while maintaining **affordability, reliability and the quality of life** that Americans enjoy.



AMERICANS FOR PROSPERITY  
OKLAHOMA



OKLAHOMA RESTAURANT ASSOCIATION



**Vote yes on HB3619 - Keep the power of energy choice in Oklahoma.**

*Oklahomans and Businesses Should Maintain the Right to Choose Their Energy Source*

# Responsive Actions

- **Responding to member company requests**
  - *Regional coalitions and initiatives*
- **AGA Resources**
  - *Fact checking opposition analytics and rebutting where appropriate*
  - *Executing targeted local media strategies*
- **Coalition Partners**
  - *Recruit additional coalition partners where appropriate*

# Building Resources for Members

## AGA Resources

- **Materials Available**
  - *State & Municipality Initiatives Tracking*
  - *State Specific data*
  - *Model Legislation*
  - *AGA Comment Letters*
  - *Individual Company Activity/Best Practices*
  - *Analyses and Studies*
- **Regular calls with member company contacts to develop state specific strategies**
- **AGA website houses facts and data**



## With AGA Support

# Member Company Engagement Options

- Create an interdepartmental team to build a strategic plan
- Build internal analytics including service territory facts
- Ensure government and community affairs teams are monitoring local municipalities actions
- Educate and engage your staff, retirees, customers, and supply chain on the benefits of natural gas
- Build a local and/or state consumer coalition to serve as the spokesperson for the natural gas industry



TrueBlueNaturalGas.org

AGA\_naturalgas

naturalgas

aga\_natgas

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 74 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 one-fourth of the United States' energy needs.

[www.aga.org](http://www.aga.org)