

# FUELING THE FUTURE

## Fueling the Future with Natural Gas: Bringing it Home

The growth of domestic U.S. natural gas production over the last few years provides an opportunity to increase the number of end uses for consumers, businesses, industries and communities – all while lowering carbon emissions and taking advantage of low prices. Our nation's new abundance of clean and affordable natural gas requires a visionary approach focused on increasing its use throughout the economy. "Fueling the Future with Natural Gas: Bringing it Home," a new study conducted by IHS CERA with support from the American Gas Foundation, examines these possibilities.

There are many more uses of natural gas than people think and the benefits of expanded use are significant. The "Fueling the Future with Natural Gas: Bringing it Home" study aims to tell the natural gas utility story and highlight specific sector-wide opportunities for greater and more efficient use of natural gas, and barriers to realizing these pathways to growth.



The domestic market for natural gas can be greatly expanded beyond its current usage to encourage new demand.

### RESIDENTIAL AND COMMERCIAL

Natural gas has a strong price advantage over fuel oil and electricity when it comes to heating American homes, and this advantage will continue to grow over the coming decades. IHS CERA projects that by 2030, consumers using electricity to heat their homes will spend *three and a half times* as much as owners of natural gas-heated homes, based on national averages.

With concerns about natural gas availability and price subsiding, IHS CERA finds that there is a clear opportunity for natural gas utilities to increase deliveries to existing customers and expand their systems to serve new customers.

### INDUSTRIAL

U.S. industrial gas demand is reversing a long-term decline in response to the growing availability of low-cost natural gas and natural gas liquids. The competitive position of certain domestic gas-intensive industries is improving, leading to a wave of planned capacity expansions for industries including iron, steel and chemicals.

Natural gas-using industrial and power facilities can serve as anchor tenants for natural gas utility system expansions and as engines for economic development.

### POWER GENERATION

Centralized power generation is one of the largest markets for natural gas. Its abundance and sustained affordable prices have game-changing implications for power generation, increasing market share for natural gas-fired generators and resetting the cost and environmental benchmarks for new generation capacity additions.

Switching to a natural gas-heated home saves U.S. consumers an average of **\$5,731\***



\*over 15 years

For more information on how natural gas can further fuel the future, visit [www.FuelingTheFuture.org](http://www.FuelingTheFuture.org).

# FUELING THE FUTURE

Fueling the Future with Natural Gas: Bringing it Home

According to the study, the growing role of gas in power generation will require closer coordination between gas suppliers and power generators. If current delivery shares are maintained, natural gas utilities will deliver 12 Bcf per day to power companies in 2035. Natural gas utilities could provide valuable services in the harmonization of the two systems.

## TRANSPORTATION

In the transportation sector, the long-term prospects for a sustained differential between natural gas and oil prices provide an opportunity for natural gas to progress from a niche fuel to a key contributor.

IHS CERA expects natural gas prices to remain in the \$4-5 per mmBtu range (in constant 2012\$) on an annual average through 2035. In contrast, the price of crude oil is projected to be \$90 per barrel, or almost \$16 per mmBtu. This translates to projected retail costs for gasoline and diesel fuel that are approximately twice the natural gas price. IHS CERA expects the volume of natural gas used as a transportation fuel in the U.S. to triple by 2020.

**A natural gas vehicle will save you an average of \$4,500 in fuel costs over 5 years compared to a gasoline vehicle.**



The full journey of natural gas, from production to consumption, provides significant energy efficiency benefits, and delivers long-term sustainable cost savings to consumers.

## EFFICIENCY AND ENVIRONMENTAL BENEFITS

Because natural gas is transported directly into homes and businesses, and does not go through a power plant, it delivers energy to the customer with 92 percent efficiency, compared to just 40 percent for energy that powers an appliance after going through a power plant. Natural gas combustion emits less carbon dioxide than coal or oil and negligible amounts of SO<sub>2</sub>, NO<sub>2</sub>, mercury, particulates, and ash.

To help residential, commercial and industrial consumers fully realize energy cost-savings and reduce greenhouse gas emissions, and improve air quality, energy efficiency policies should focus on the full fuel-cycle and not energy efficiency at the point of consumption.

## NEW THINKING AND VISIONARY POLICIES

Since many existing natural gas policies were developed during a time when natural gas was perceived to be scarce and market fundamentals were different than they are today, our nation's new reality of affordable, abundant natural gas requires new thinking and visionary policies. Re-evaluating the local, state and federal natural gas policies will help identify new opportunities for natural gas utilities and bring home the benefits of natural gas to more consumers. All Americans stand to gain if we make investments and update our policies now to realize the full potential of a natural gas-fueled future.

For more information on how natural gas can further fuel the future, visit [www.FuelingTheFuture.org](http://www.FuelingTheFuture.org).