Fueling the Future with Natural Gas: Bringing It Home

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Shale Gas Resources

Source: Energy Information Administration based on data from various published studies.
Natural Gas

More than 100 years supply here at home
Abundant Natural Gas: Our new energy landscape requires a new mind set.

Old Thinking  New Thinking

Anticipating Scarcity  Recognizing Abundance

Low and stable natural gas prices are part of our future.
Abundant natural gas from shale is already delivering low, stable prices.

Source: Energy Information Administration
Natural Gas **Price Outlook:**
Sustained low, stable prices in coming years

Thinking in terms of abundance: A pipeline expansion example

Start of life

Year 5

Year 20

Year 50
Low Cost Natural Gas gives our nation a competitive edge and creates new jobs.
• “The new outlook for natural gas cost and availability is contributing jobs and revenues to the economy at the national, state and local levels. It has also created new possibilities for making progress toward national goals of energy efficiency, cost efficiency, environmental protection and energy security.”

- Fueling the Future with Natural Gas: Bringing It Home, IHS CERA, 2014
The natural gas industry employs millions today.

- **622,000** jobs are directly involved in exploring for, producing, transporting and distributing natural gas (direct employment).

- **723,000** additional jobs are created in industries such as agriculture and manufacturing that support and supply goods and services to the natural gas industry (indirect employment).

- **1.5 million** jobs are supported when direct and indirect natural gas employees introduce their income back into the economy (induced employment).

The natural gas industry employs people in all 50 states.

Source: America’s Natural Gas Alliance; U.S. Department of Labor, Bureau of Labor Statistics
Over the last three years, metro area manufacturing employment has expanded by an average annual rate of 1.7%. Energy intensive industry, in particular, has been a key component in manufacturing’s expansion. Recently tapped unconventional shale plays ... have boosted growth in both the manufacturing sector and the national economy.


“The most active industry pursuing growth in the United States is chemicals, which is expected to invest $135 billion in new facilities and to increase its natural gas use by 3 bcf per day by 2035.”

- IHS CERA, Fueling the Future

• “Our country’s natural gas supply should help us maintain cost competitiveness in manufacturing, reduce greenhouse gas emissions through the mid-term, increase our energy independence, and create good paying jobs and leaseholder opportunities in many parts of the country.”

• John P. Surma, Chairman and CEO, U.S. Steel
Natural Gas Means Savings for Consumers Today.

$49 BILLION in savings for residential natural gas customers over the past four years.

$653 LESS PER YEAR ON AVERAGE than homes using electricity for the same applications.
IHS CERA estimates that by 2035, homeowners relying on electricity for heating and appliances will pay four times the monthly energy costs, on a national average, than homeowners using natural gas.

US Residential Heating Fuel Price Outlook, 2012$/MMBtu
New technologies will help us capture the benefits of abundant natural gas.
Combined Heat and Power Technologies

The use of natural gas, the preferred fuel choice for CHP applications, allows for new electricity generation to meet current and future demand at costs up to 50% less than traditional forms of delivered new baseload electricity.

Separate Production of Electricity and Heat
TOTAL EFFICIENCY: 51%

Combined Heat and Power Systems (CHP)
TOTAL EFFICIENCY: 75%
The new abundance of natural gas has changed our energy landscape – natural gas prices are independent of oil prices.
Natural gas vs conventional gasoline

On average, CNG costs 47% less than gasoline.

- West Coast: CNG - $2.36, Gas - $3.65
- Gulf Coast: CNG - $2.21, Gas - $3.85
- Rocky Mountain: CNG - $1.86, Gas - $3.50
- Central Atlantic: CNG - $2.17, Gas - $3.55
- Lower Atlantic: CNG - $2.12, Gas - $3.56
- New England: CNG - $2.70, Gas - $4.03

Source: CNG prices and gasoline prices from DOE Alternative Fuel Data Center, June 2014 report.
Picking up *Speed*

*Number of CNG Stations Nationwide*

80% growth in our national CNG refueling infrastructure since 2009
A Foundation Fuel
for our clean energy future.
0.24% of produced natural gas is emitted from the delivery systems operated by local natural gas utilities.

Emissions from natural gas distribution pipelines have been reduced by 30% since 1990.

Throughout the country, natural gas utilities are upgrading pipeline systems to make them safer and are driving down emissions in the process.

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