

NATURAL GAS

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# Abundance and Opportunities

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Chairman  
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## NATURAL GAS

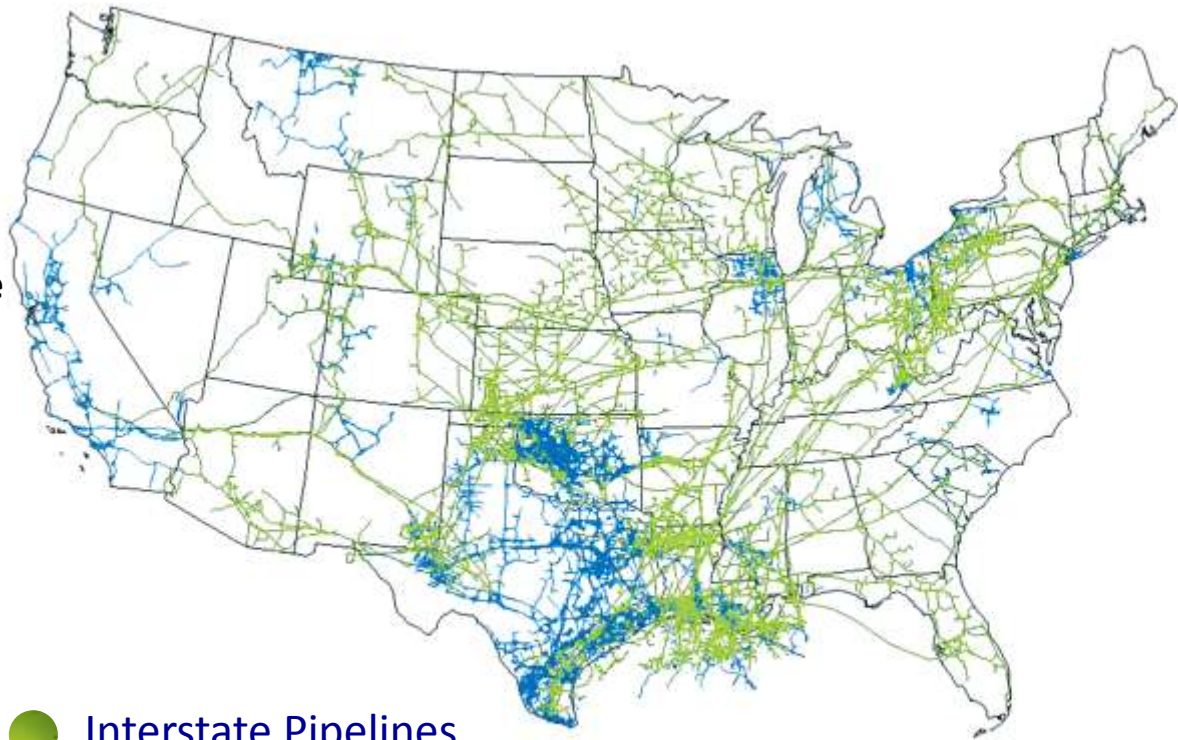
# A Foundation Fuel

- This clean, efficient, affordable and abundant energy has a fundamental role to play in an emerging green economy
- America's natural gas abundance can benefit consumers worldwide and create tremendous opportunities
- Together, we can find solutions to our common challenges



# *SAFELY TRANSPORTED* Across the Country

- The safest, most reliable energy delivery system in the nation
- 2.4 million miles of pipeline
- Committed to promoting positive safety cultures throughout the natural gas distribution industry
- \$7 billion per year to help ensure the safety and reliability of the natural gas infrastructure



- Interstate Pipelines
- Intrastate Pipelines

## BY THE NUMBERS

# Extraordinarily Clean & Efficient

- **92%** of natural gas produced at the wellhead delivered to customer as usable energy
- Direct use results in **28%** less energy consumption than a similar home with all-electric appliances.
- Water heaters are nearly **50%** more efficient on a full-fuel-cycle energy comparison. And CO<sub>2</sub> emissions are **50%**
- Furnaces and boilers are up to **96%** efficient

## Residential Water Heater Efficiency

Storage Water Heaters



Energy Cost (annually)

**\$282**

**\$554**

Full-Fuel-Cycle Energy Consumption (annually)

**27.6 MMBtu**

**52.0 MMBtu**

CO<sub>2</sub> Emissions (annually)

**1.5 tons**

**3.1 tons**

*Yet the federal minimum efficiency ratings for natural gas water heaters (.59 EF) and electric water heaters (.90 EF) are calculated at point of use and do not take the full fuel cycle into account.*





## *And then* there was abundance

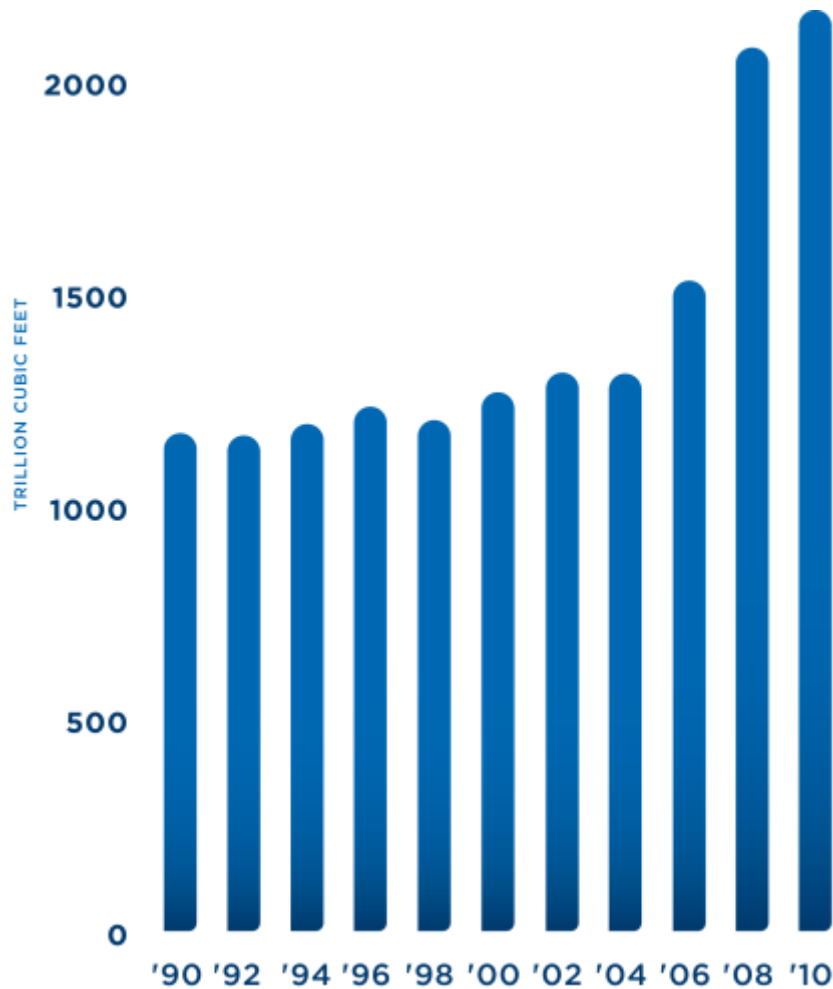
**Since 2007, U.S. natural gas production has grown by 22%.**

**Most of the increase can be attributed to the emergence of natural gas from shale formations.**

**Growth in supply has limited imported pipeline gas from abroad.**

**Abundant domestic gas supply has contributed to the possibility of the U.S. becoming a world LNG exporter.**

*UNITED STATES*  
**Abundance**



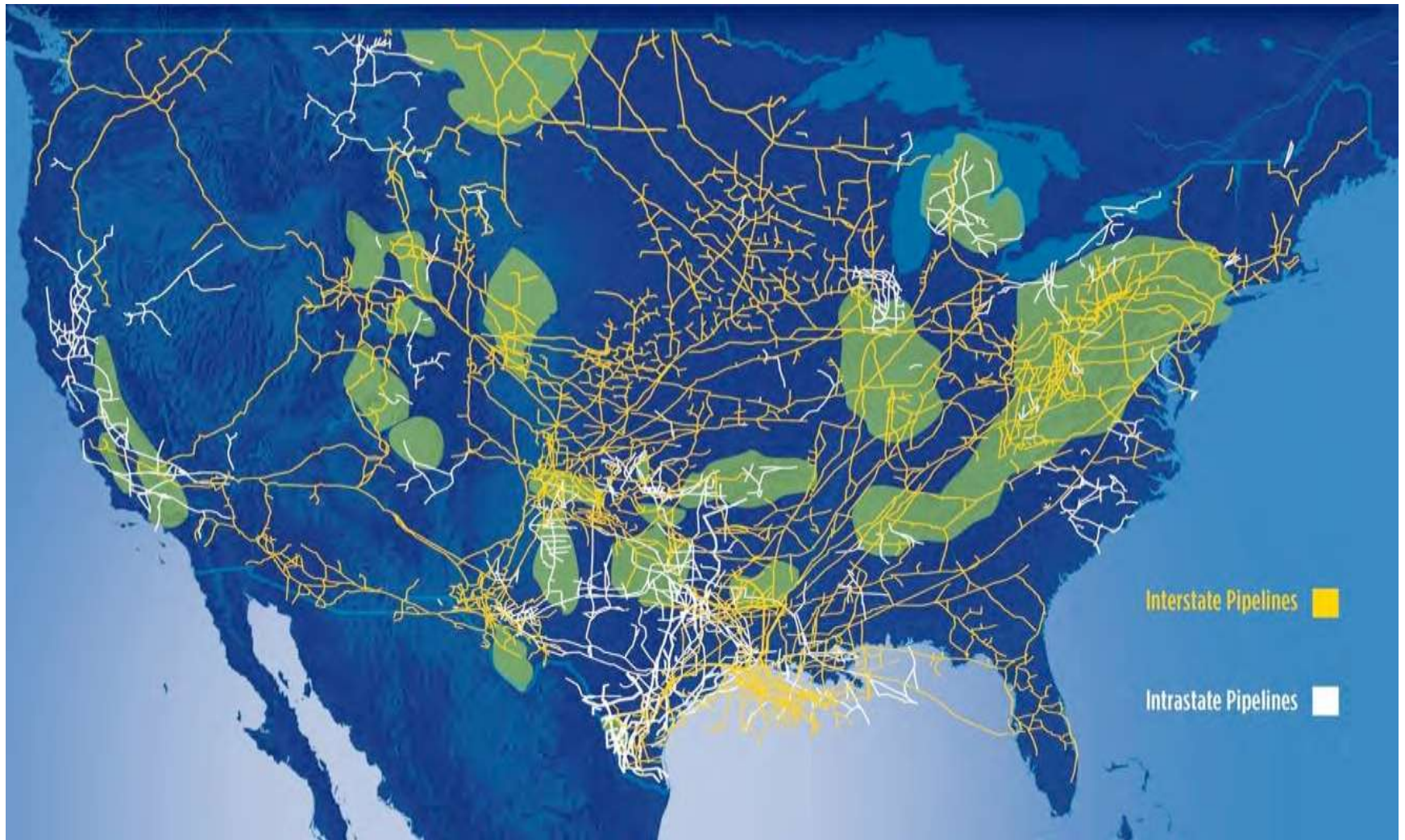
The U.S.  
has  
enough  
natural gas  
to meet  
America's  
diverse  
energy  
needs for  
*100 years*

# Shale Gas Plays in the United States





# Shale Basins and the U.S. Pipeline Grid

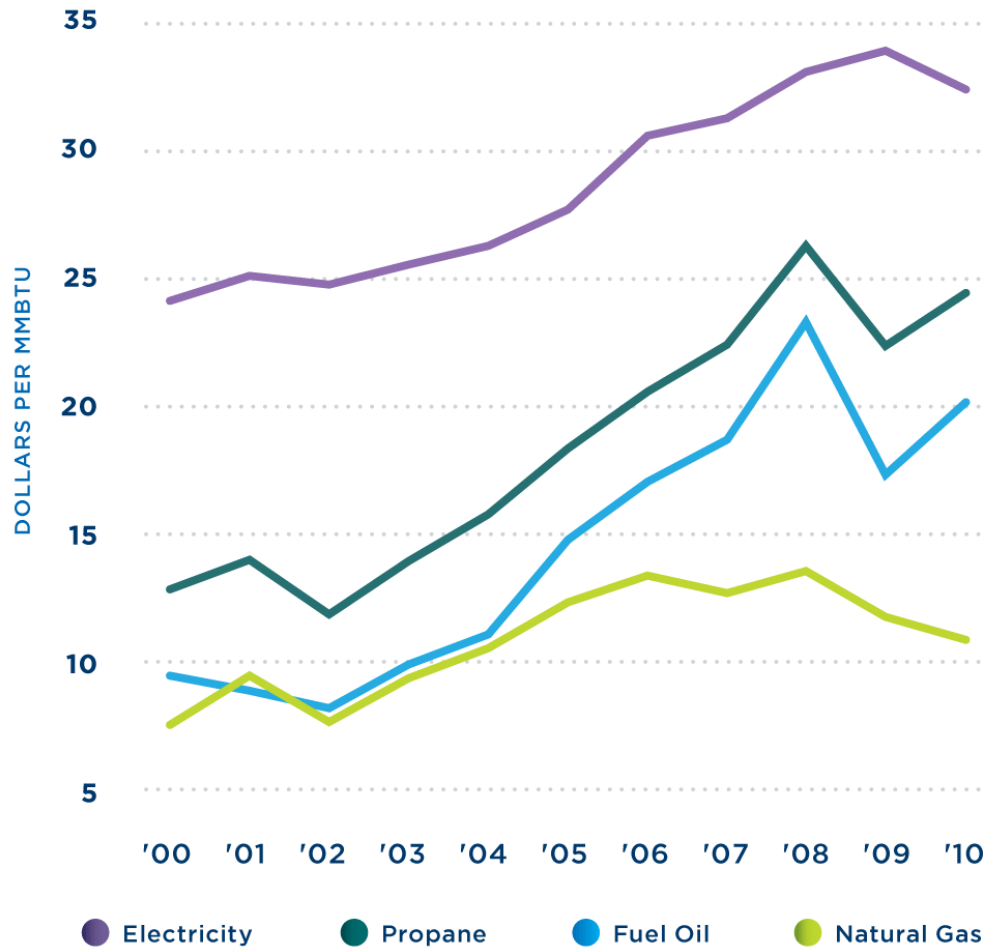


Source: American Clean Skies Foundation.



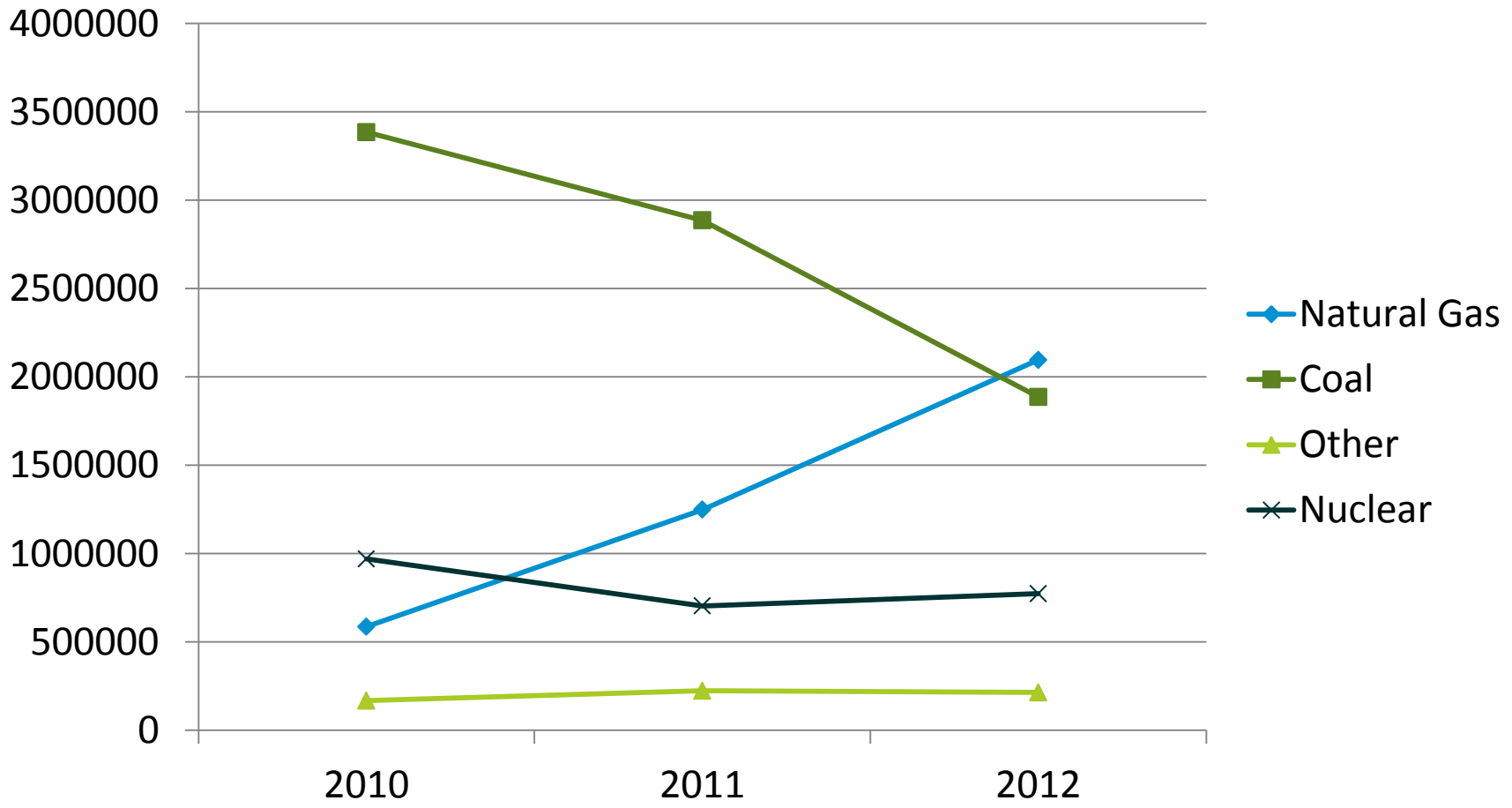
# Creating Opportunity

*With Stable Prices*



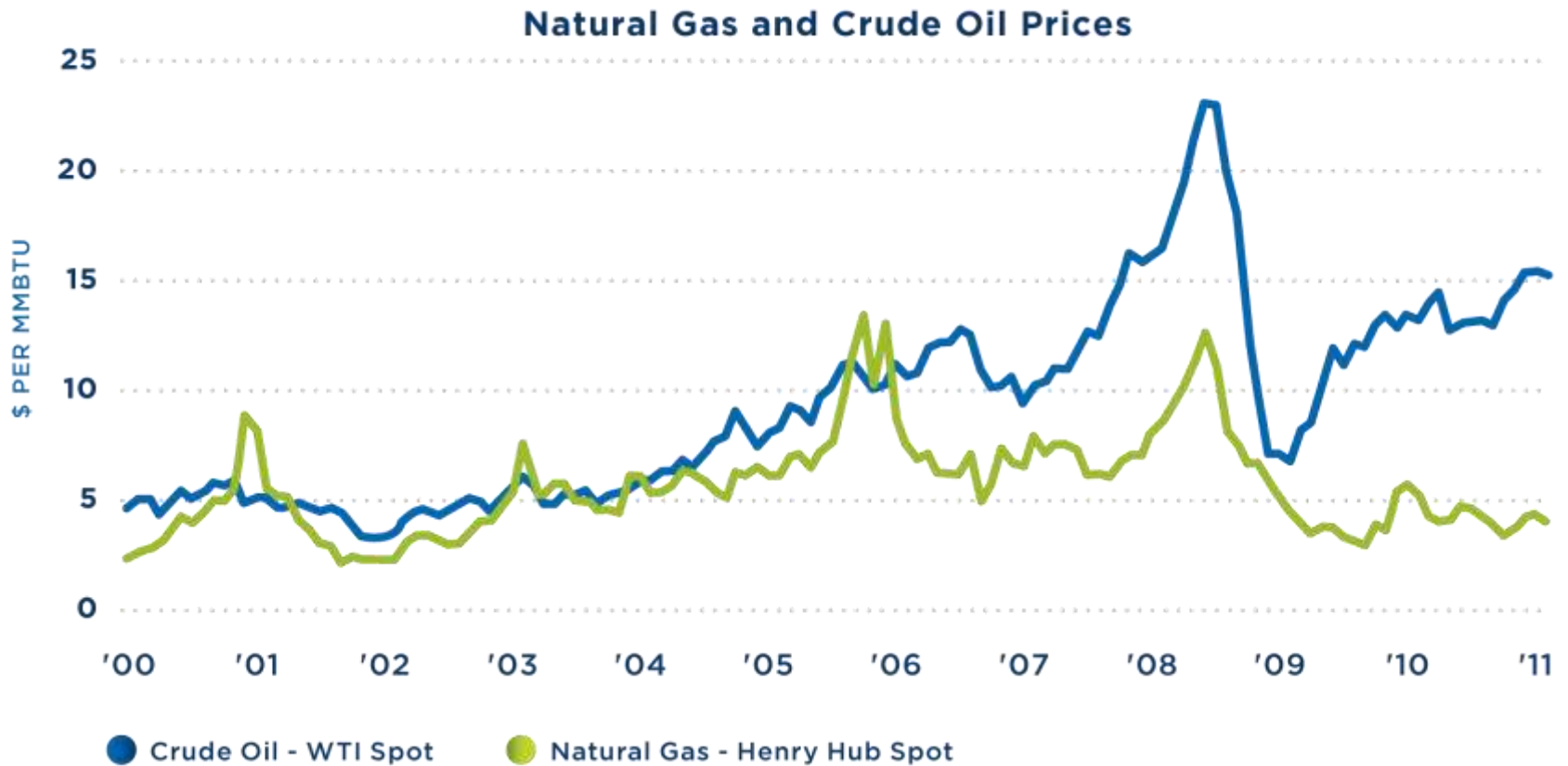
- *Benefiting residential, commercial and industrial markets.*
- *Certain industries returning*
- *Creating new opportunities.*

# Natural Gas to Coal Switching In Electric Generation



(in Mwhs - YTD through April)

Prices continue to remain *relatively low and stable*.



## TRANSPORTATION

# A Growth Opportunity

CNG costs **47% less than gasoline** on average on the U.S.

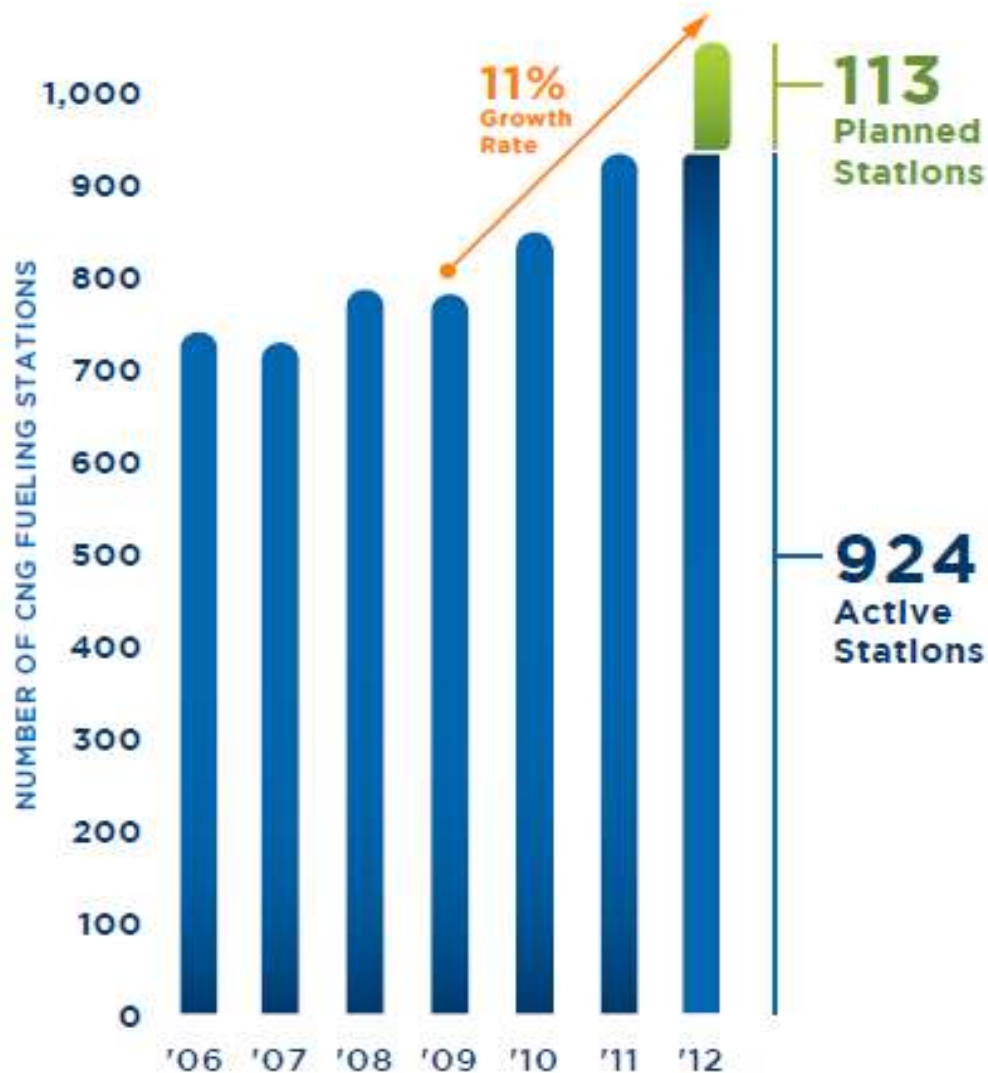


There are more than **12.7 million natural gas vehicles** on the road worldwide – but less than **125,000 are in the United States.**



**Our national CNG refueling infrastructure is growing each year.**

The period 2009 to 2012 shows a **growth rate of 11 percent annually.**



# Natural Gas Vehicles Give Residential and Fleet Consumers an Option to Lessen “Pain at the Pump”



On average,  
CNG costs  
47% less than  
gasoline.



# Natural Gas Utilities

*A SOLID INVESTMENT*

Natural gas is the energy choice - today and into the future.

Opportunities have never been more plentiful.

In these uncertain times, natural gas utilities are a solid, safe investment.



[www.aga.org](http://www.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 71 million residential, commercial and industrial natural gas customers in the United States, of which 92% — more than 65 million customers — receive their gas from AGA members. Today, natural gas meets almost one-fourth of the United States' energy needs.