OGA Marketer Meeting

Presented by Scott White

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THE POWER OF TOMORROW®
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AGENDA

- **Brief overview of IGS Energy**
- **US Energy and Natural Gas Market**
- **Opportunities**
- **Questions**

Who is IGS Energy?

A brief overview

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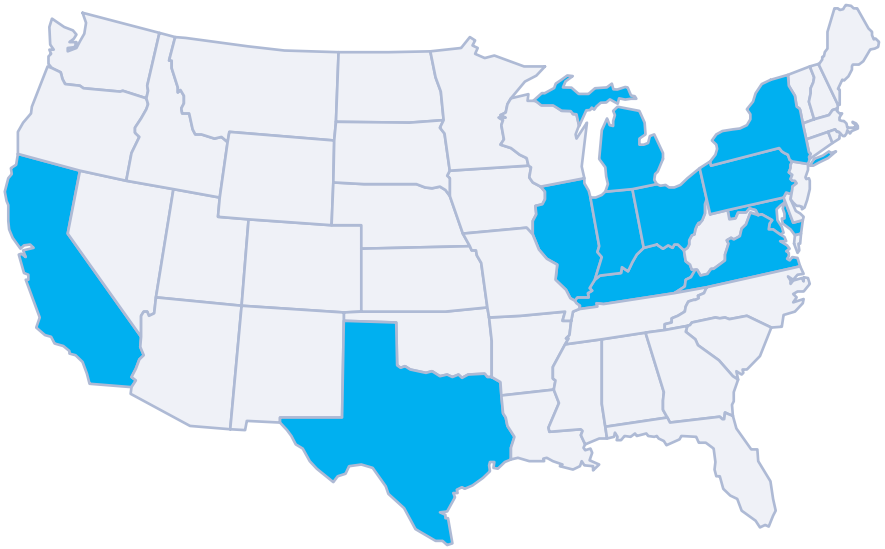
About IGS Energy

Company Profile

- Founded in 1989 by Marvin and Scott White
- Privately held with annual revenue of roughly one billion
- Headquartered in Dublin, Ohio at 6100 Emerald Parkway
- Ohio's largest residential Natural Gas supplier
  - ~1.2 Million residential gas and electric customers
  - 30,000 Commercial and Industrial customer locations
- 450 employees
- Operations in 11 states and over 44 utilities



IGS Energy LEED – Platinum

IGS Energy's corporate headquarters building

Also home of OGA's headquarters!

Natural Gas

AMERICA'S RESOURCE

clean

With lower carbon content and fewer impurities, natural gas is the cleanest burning of all fossil fuels.

WHEN USED IN LIGHT-DUTY VEHICLES, NATURAL GAS EMITS *90% less carbon monoxide and 25% less carbon dioxide* THAN GASOLINE ENGINES.

-CO²

ON AN ENERGY EQUIVALENT BASIS, NATURAL GAS EMITS *45% less CO2 than coal, and 27% less CO2 than oil.*

abundant

Domestic natural gas deposits can provide enough energy for another 100 years, reducing our dependence on foreign oil.

99% OF THE NATURAL GAS USED IN THE UNITED STATES *comes from North America.*

WITH THE DEVELOPMENT OF NEW PRODUCTION TECHNIQUES IN SHALE FORMATIONS, *estimates of U.S. natural gas reserves have increased 39% since 2006.*

flexible

Natural Gas is particularly useful for electric generation, with plants that are easy to build, scalable, and can quickly ramp up or down to meet demand.

COAL AND NUCLEAR GENERATION PROVIDE BASE LOAD CAPACITY, BUT THOSE PLANTS ARE LARGE SCALE PROJECTS THAT ARE LESS NIMBLE. *Nearly 90% of new generation plants are natural gas.*

WHILE WIND AND SOLAR ARE IMPORTANT RENEWABLE SOURCES, THEIR ABILITY TO GENERATE POWER IS NOT PREDICTABLE *and literally can change with the weather.*

reliable

An established infrastructure of pipelines makes natural gas available virtually everywhere from coast to coast.

THERE ARE APPROXIMATELY *2.4 million miles* OF UNDERGROUND NATURAL GAS DISTRIBUTION LINES IN THE U.S.

PRODUCTION AND DELIVERY OF NATURAL GAS IS HIGHLY EFFICIENT: *92% of all natural gas produced reaches customers as usable energy.*

IGS Energy

What is an Energy Retailer?

- **This means we sell Natural Gas and Electricity directly to the customer (in cooperation with the local utility company)**
- **We sell the commodity - not the distribution**

Natural Gas prices can be locked in as far out as 10 years!

Who do we serve?

- **Customers could be very large like Ohio University or Cleveland Clinic or very small like a residential or small business.**
- **As such we operate with primary two business units**
  - Business to Business commodity (C&I),
  - Mass market commodity (Residential and small Commercial)
- **We provide customers risk management by offering fixed prices and long term contracts**

Vision, Mission and Beliefs

Vision

An engaged society seeking positive changes in the way we manage and consume our energy resources.

Mission

To serve our customers by bringing transparency, simplicity and ease to energy pricing through the competitive marketplace.

Beliefs

- We believe in an energy-independent United States, powered by domestically-produced, environmentally-responsible resources.
- We believe in the value of developing alternative sources and uses of energy.
- We believe in free markets, where competition, transparency and accountability drive innovation and efficiency.
- We believe in the individual consumer who will play a vital role in shaping the future of energy.

Our Future: Moving beyond the Commodity

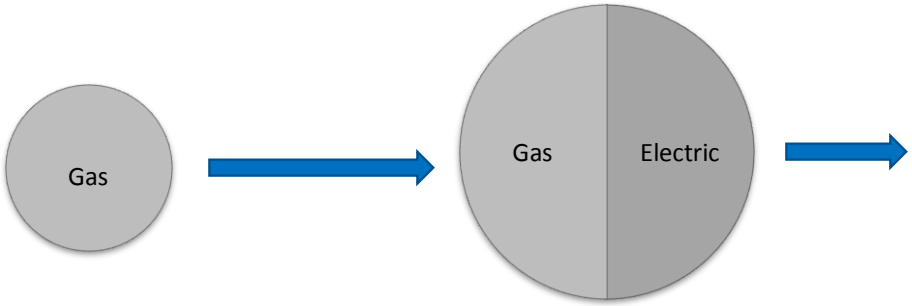
We are committed to developing consumer markets consistent with our beliefs and values.

How will we accomplish this?

1. **Building and operating customer-based infrastructures:**
   - CNG and CHP
2. **Patient Capital**
   - Longer term view allows for exploring newer less mature technology which may not yield immediate returns

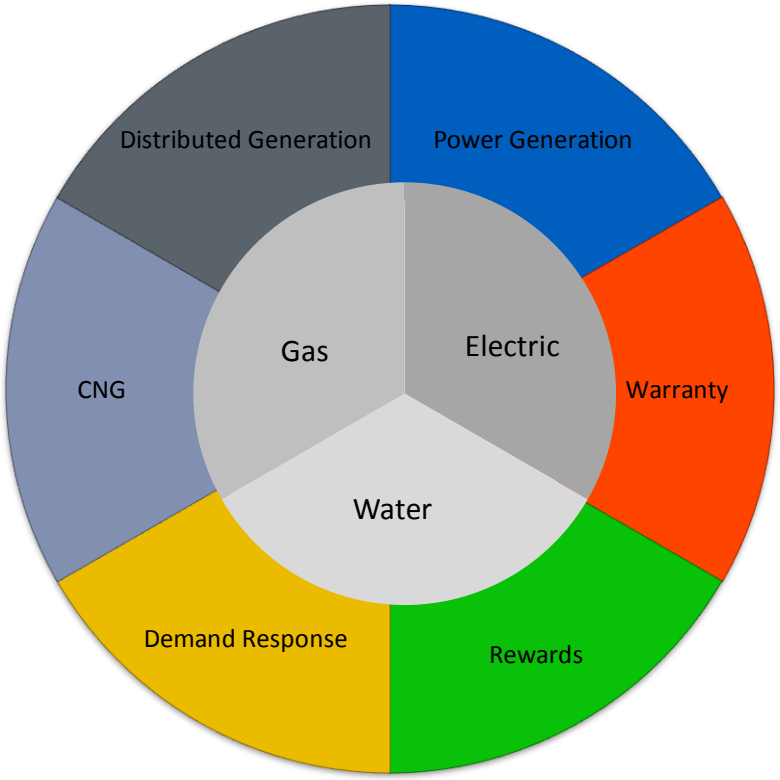
IGS Energy Vision

"An engaged society seeking positive changes in the way we manage and consume our energy resources."



1989

2011



US Energy and Natural Gas Markets

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Just a few short years ago in 2008…

A worsening outlook

- US Natural Gas was becoming scarce and relatively expensive.
- US reserves and production were declining and we were becoming increasingly dependent on imports to balance supply and demand.
- Prices were higher than Coal and while cheaper than oil they are highly correlated with European LNG markets.

2008 was not a good time to be in the Natural Gas industry

Do you remember 2008 Headlines?

May 29, 2008

Global Demand Squeezing Natural Gas Supply

By CLIFFORD KRAUSS

Oil Tops $147 Setting New Record

By MADLEN READ, Associated Press | July 11, 2008

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SPIKED TO A NEW RECORD ABOVE $147 A
g hostilities between the West and Iran and
t investors rushing back to energy markets.

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OPEC Leader Khelil Says Dollar Will Drive Oil to $170 (Update1)

By Ahmed Rouaba - June 28, 2008 11:34 EDT

So what has happened since 2008?

The Laws of Supply and Demand and Free Market Fundamentals Worked

- This has completely changed the out look for US natural gas production.
- The world outlook for energy is now dramatically different today.

High prices provided the right incentives for US producers to develop new sophisticated fracking techniques.

Our Current Outlook

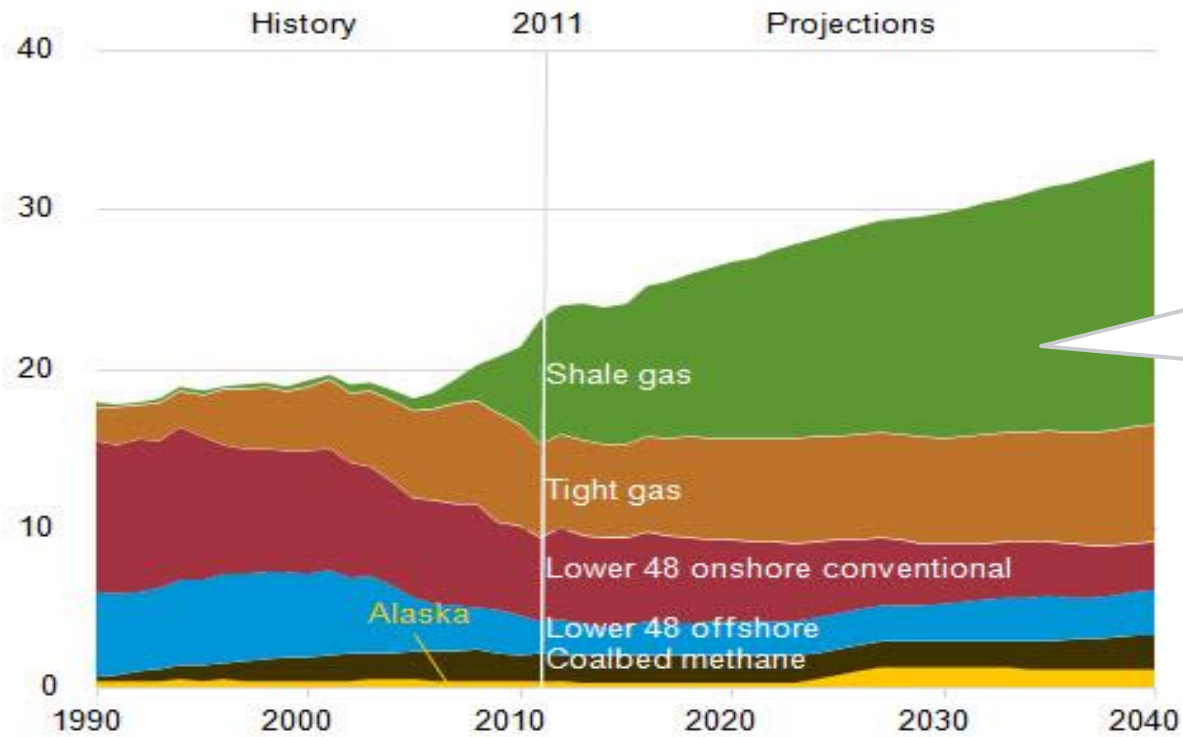
Factors at play

- US Natural Gas is abundant and relatively cheap.
- Prices are competitive with Coal and much cheaper than oil or Natural Gas prices in other major world markets.
- Reserves and production are increasing, giving the US the opportunity to be a net exporter.
- Ultimately, Natural Gas is still a fossil fuel and as such ultimately should be treated as a finite resource.

It is a great time to be in the natural gas industry - especially in the US!

Our Current Outlook

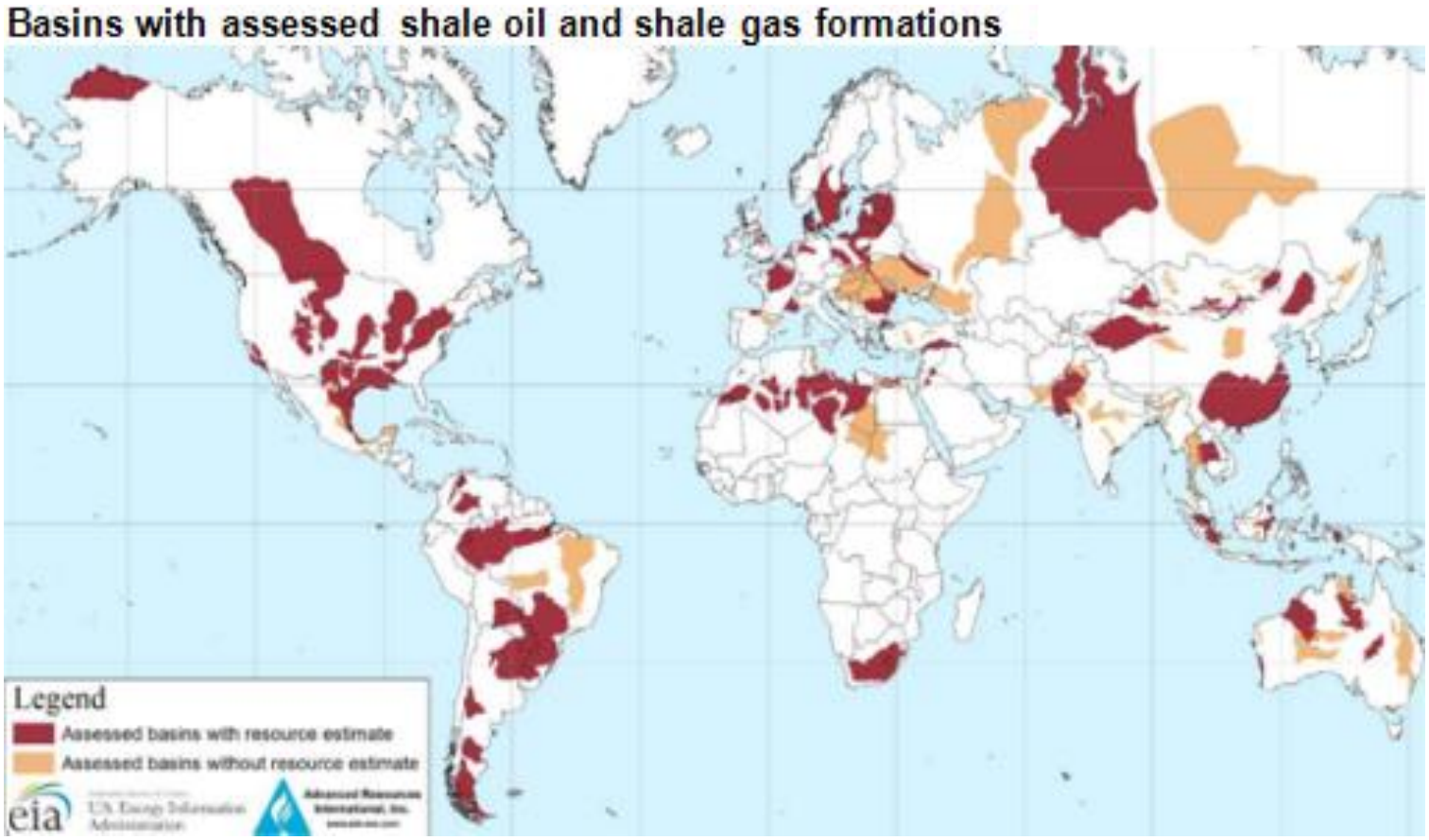
Figure 91. Natural gas production by source, 1990-2040 (trillion cubic feet)



Shale gas is critical to our supply

eia

International supplies are improving



Energy is an incredibly volatile global commodity.

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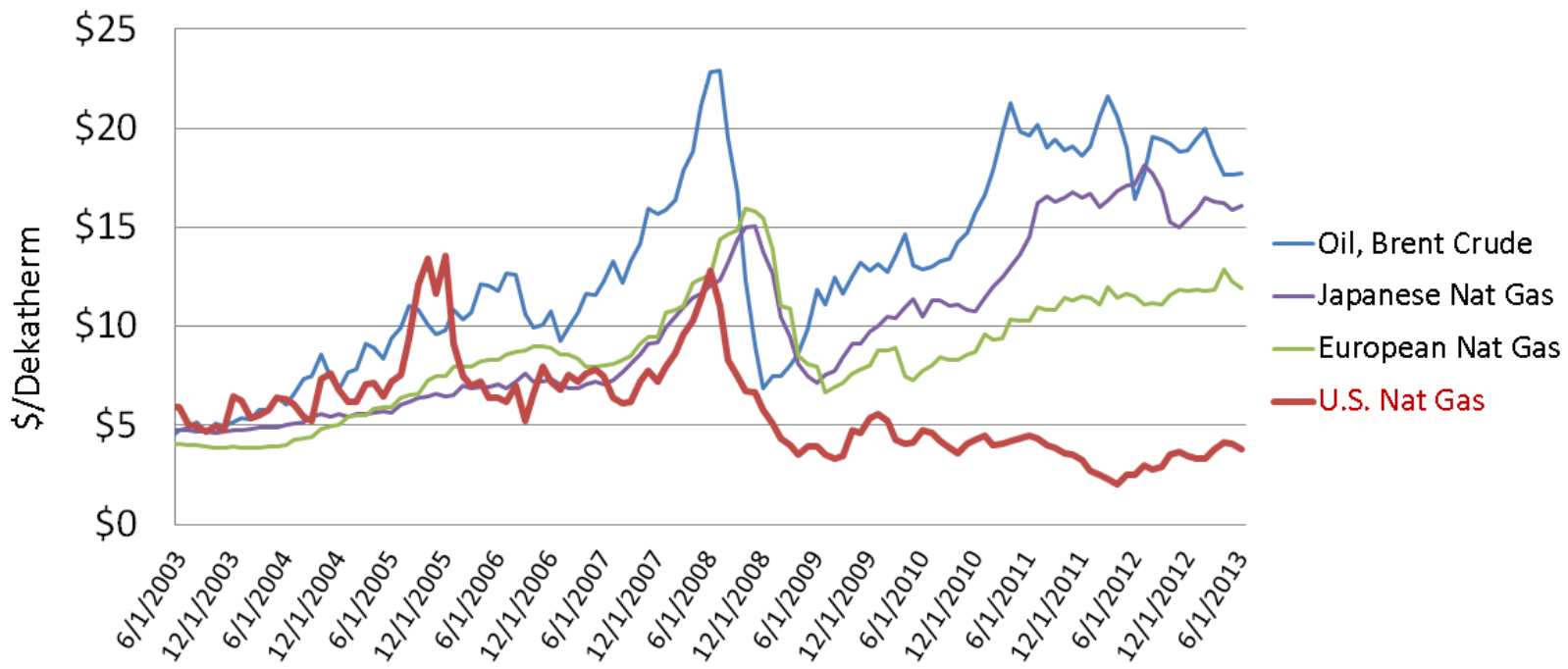
US Natural Gas supplies are quickly becoming greater than our demand. However it is not as easy to transport Natural Gas over seas as it is Oil.

US Natural Gas, captive to North America, is trading at a discount to world markets!



Source: Federal Reserve, World Bank, CME, IGS Energy. Prices are monthly averages converted to nominal US Dollars per dekatherm. American Nat Gas is NYMEX continuous prompt, European and Japanese Nat Gas are import prices, Brent Crude Oil is daily spot.

Free Markets do work and the Law of Supply and Demand will prevail overtime.

Industry will locate in the US to take advantage of low energy prices and producers will want to get access to international markets through new LNG terminals.

Prices are expected to increase overtime

Figure 86. Annual average Henry Hub spot natural gas prices, 1990-2040 (2011 dollars per million Btu)

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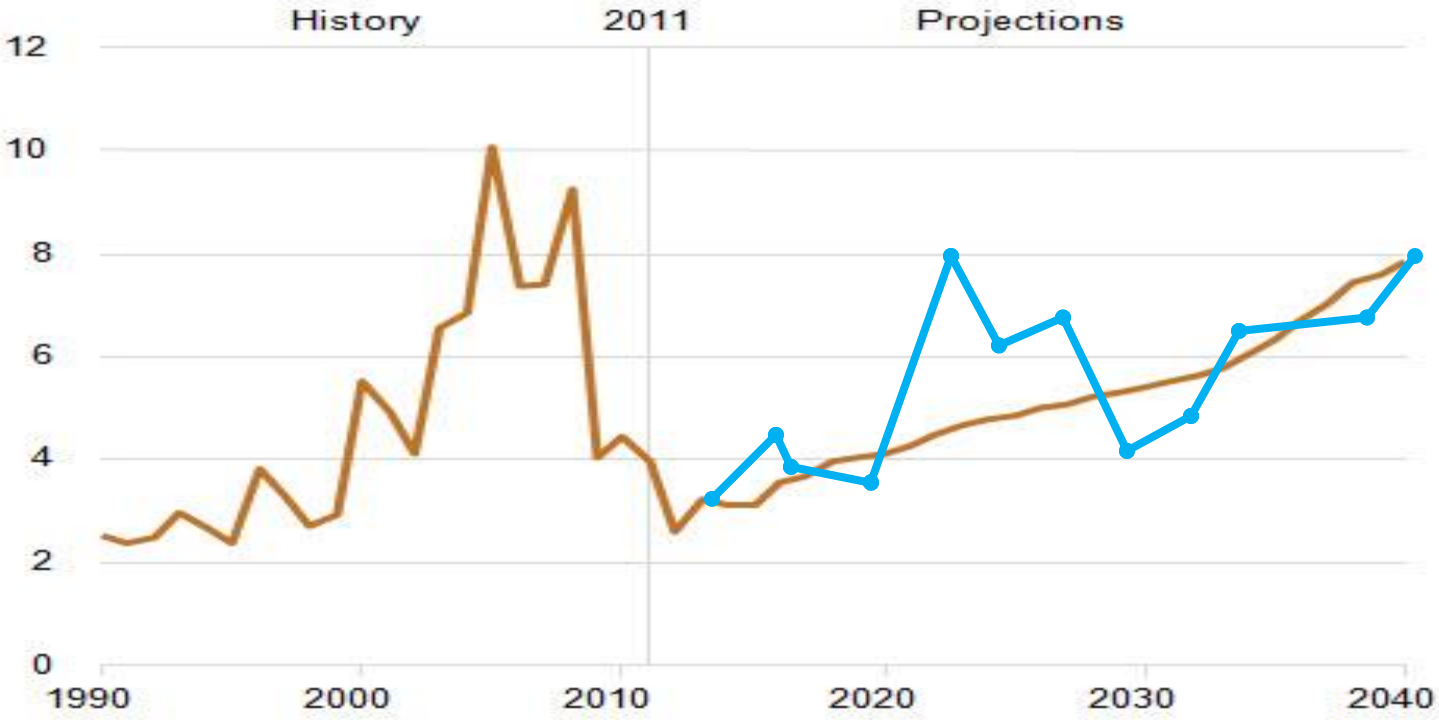

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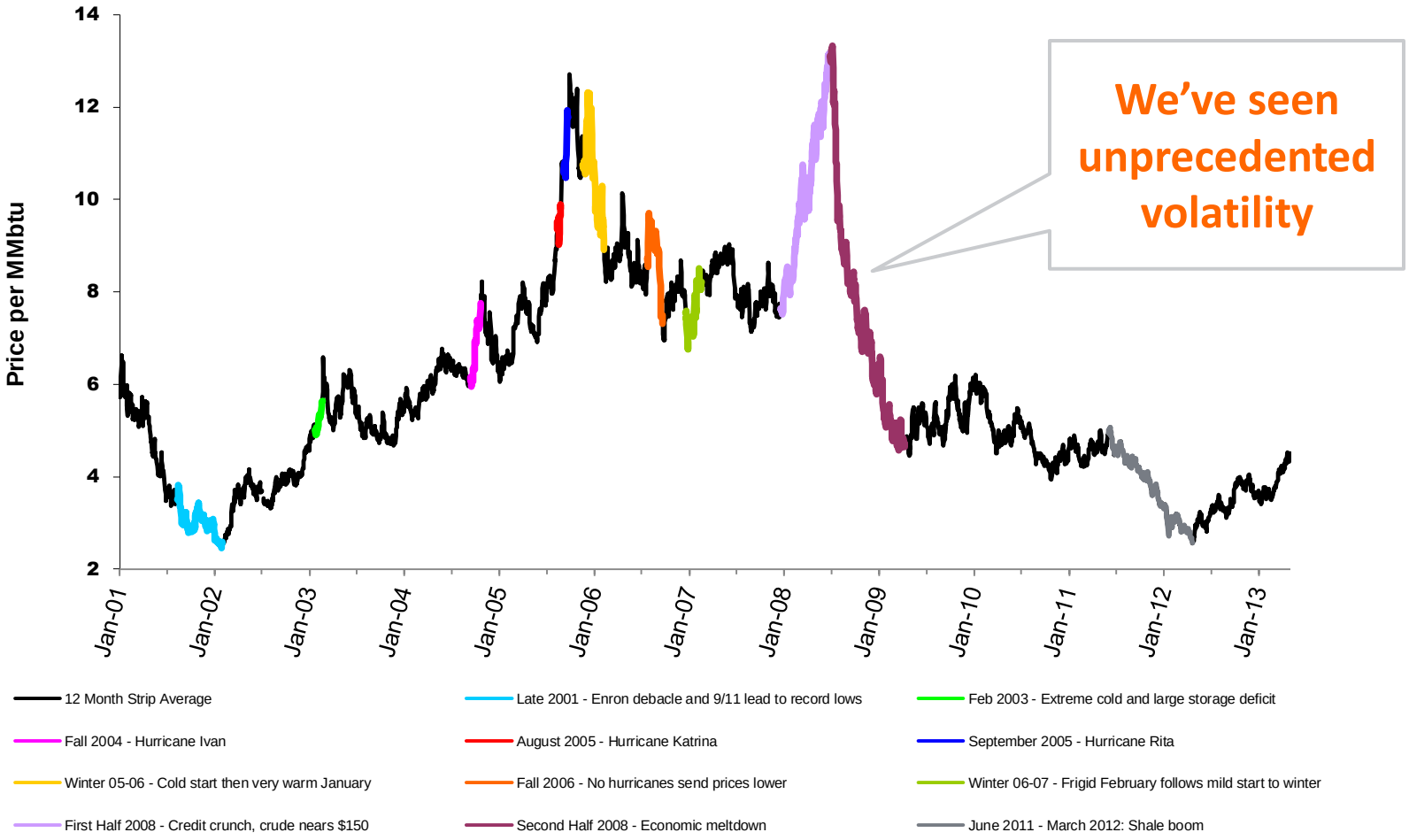
NYMEX Natural Gas 12 month Strip (Avg) Price



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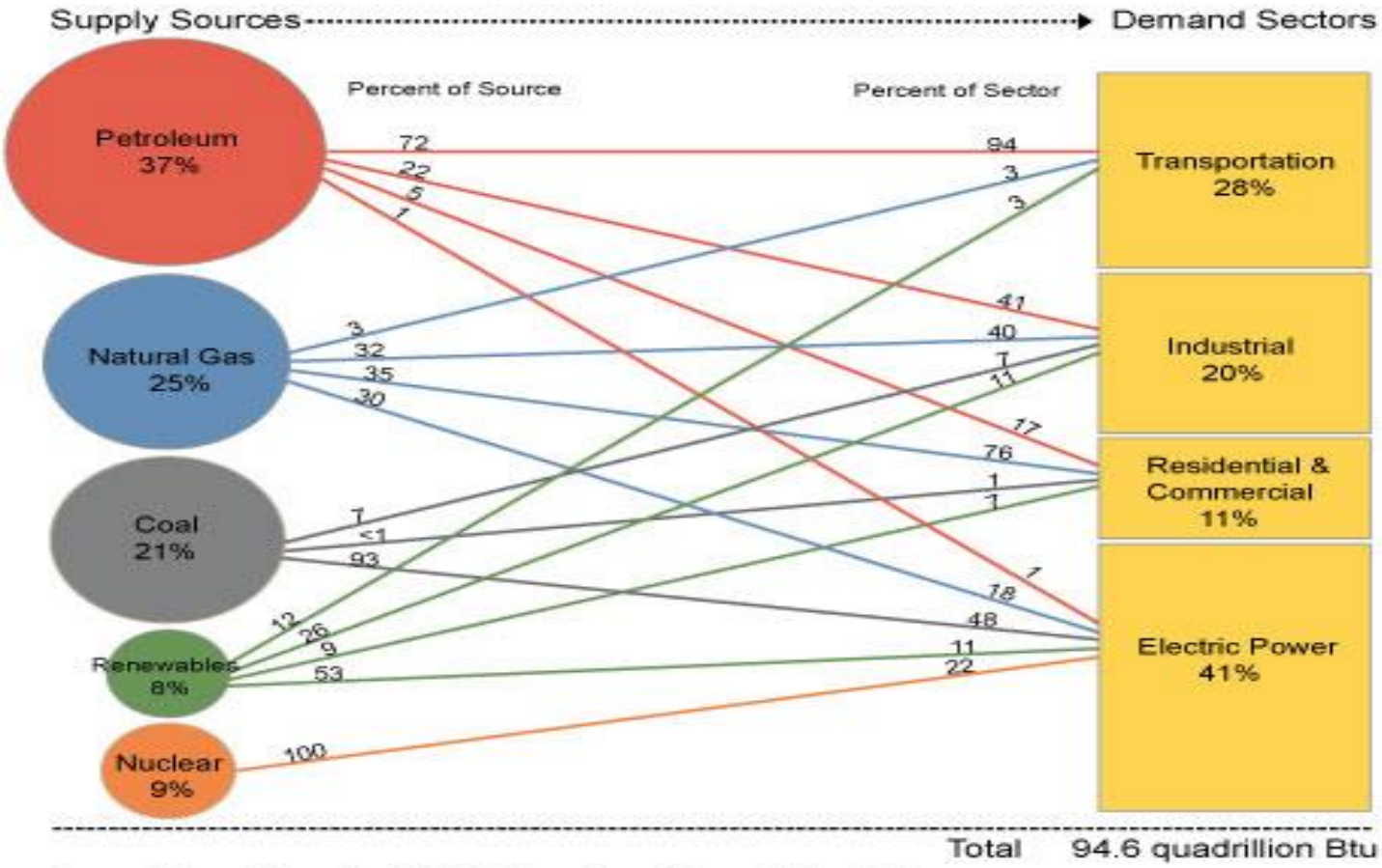
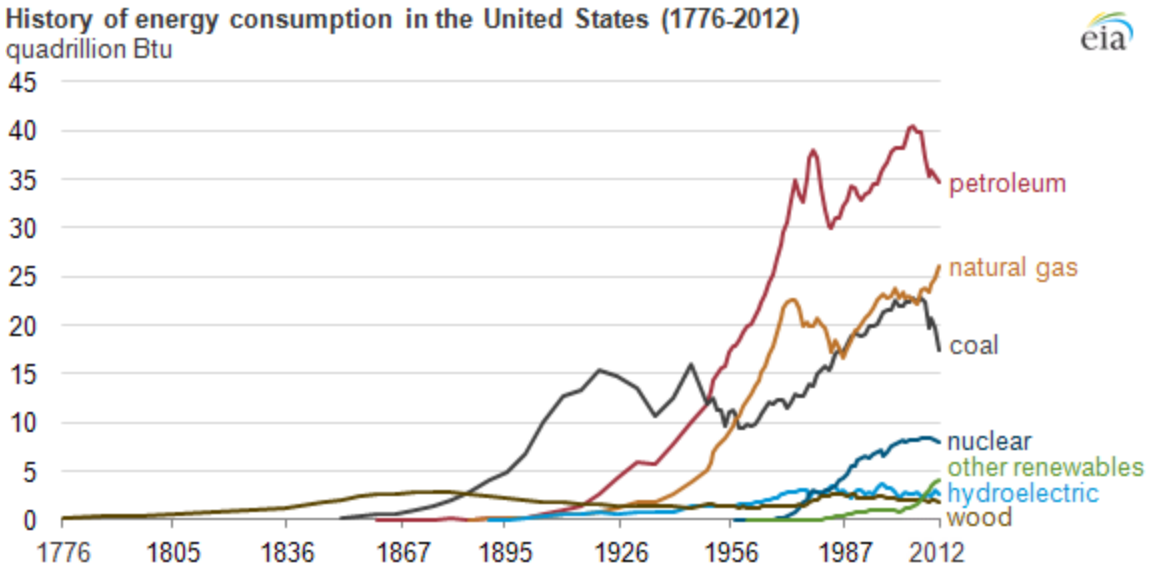
Natural Gas and Electric markets are becoming increasingly connected.

US Energy Mix



Source: Energy Information Administration, *Annual Energy Review 2009*

Natural Gas use is growing



What are the opportunities for Natural Gas?

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A Large Industry with Diverse Opportunities

Industry-wide growth opportunities

- Production
- Midstream/Processing
- Gathering and Transmission
- Distribution
- Electric Generation

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IGS ENERGY CNG SERVICES

Compressed Natural Gas Vehicles

IGS energy GENERATION

Combined Heat and Power

IGS is focused on finding ways to help domestic customers use Natural Gas

IGS will build own and operate fueling solutions for customers who want to convert to CNG

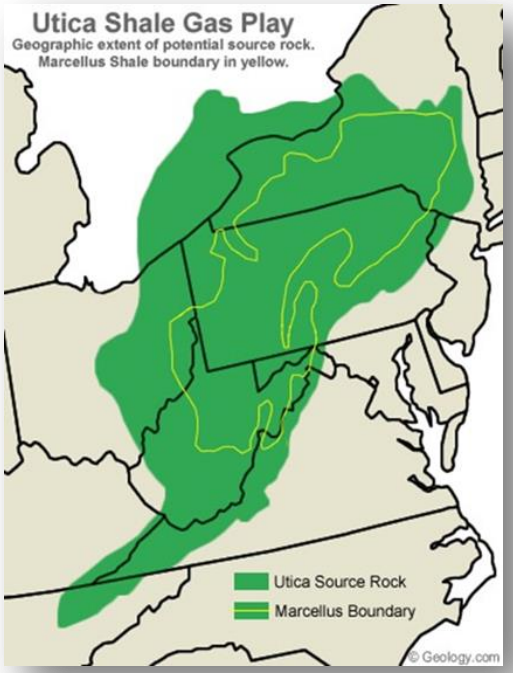
Complements our core business.

CNG infrastructure projects are long term propositions.
IGS has the commodity expertise and capability to lock in prices for up to ten years.

Why CNG?

Advancement in production technology allows previously unobtainable gas to be extracted economically

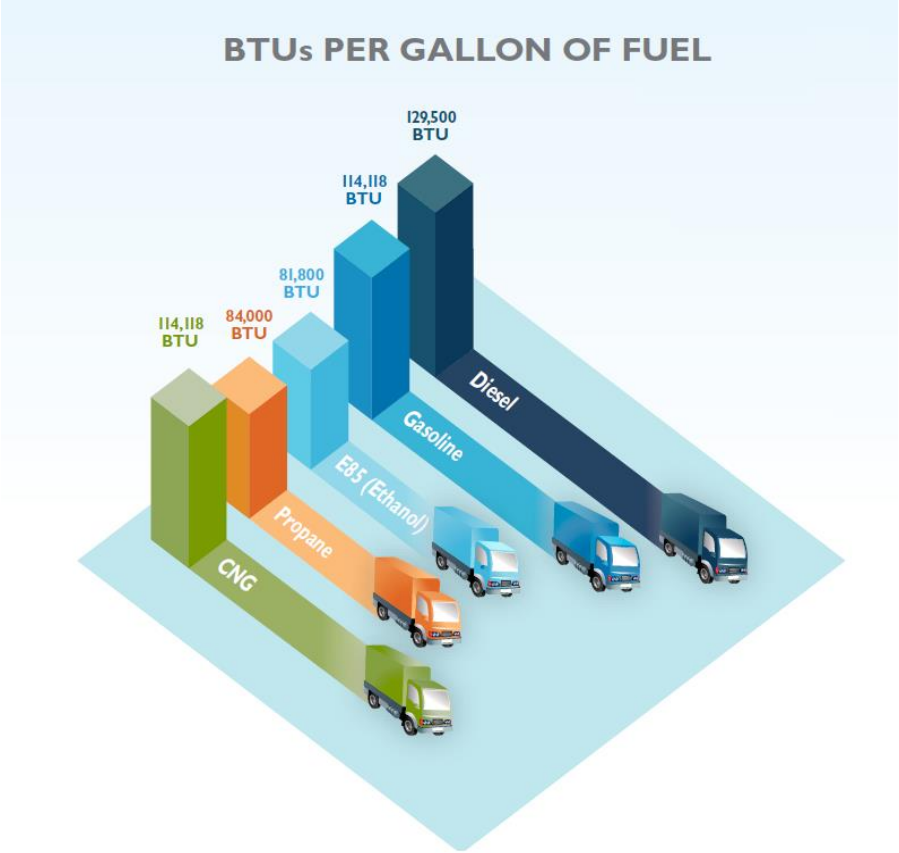
- **Abundant:** We now have an estimated 100 year supply of natural gas
- **Affordable:** Retail cost of $2.00-$2.50 per GGE
- **Clean:** Reduces CO2 by 30%, NOx & particulate matter by 90%
- **Domestic:** 98% of all natural gas used in the United States comes from North America



CNG vs. Other Fuels

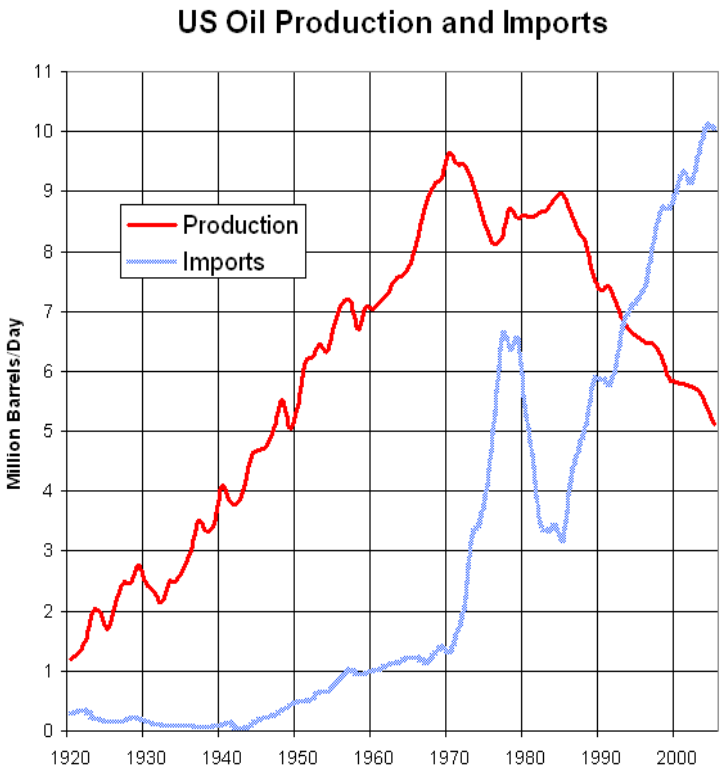
NATIONWIDE AVERAGE PRICE (IN GGEs)

Diesel:	$3.99
E85 (Ethanol):	$4.48
Propane:	$3.70
Gasoline:	$3.69
CNG:	$2.10



"We believe in an energy-independent United States, powered by domestically-produced, environmentally-responsible resources."

- **Barrels of Oil Imported by the U.S.:**
  - 296 Million (In March 2013)
- **Money Sent Overseas:**
  - $32.1 Billion (In March 2013)



IGS®
GENERATION

A new solution to an old problem..

IGS will develop small scale distributed generation projects These can include natural gas fired CHP projects

What is DG?

Distributed Generation

Generating electricity from decentralized sites

- **On-site generation**
- **Our interest lies in bio-gas projects**
  - **Landfill to Energy**
  - **Methane Digesters**
- **Or Combined Heat and Power**
- **DG works when fuel costs are very low**
- **Different technologies**
  - **Microturbines**
  - **Reciprocating Engines**
  - **Wind turbines**
  - **Solar panels**

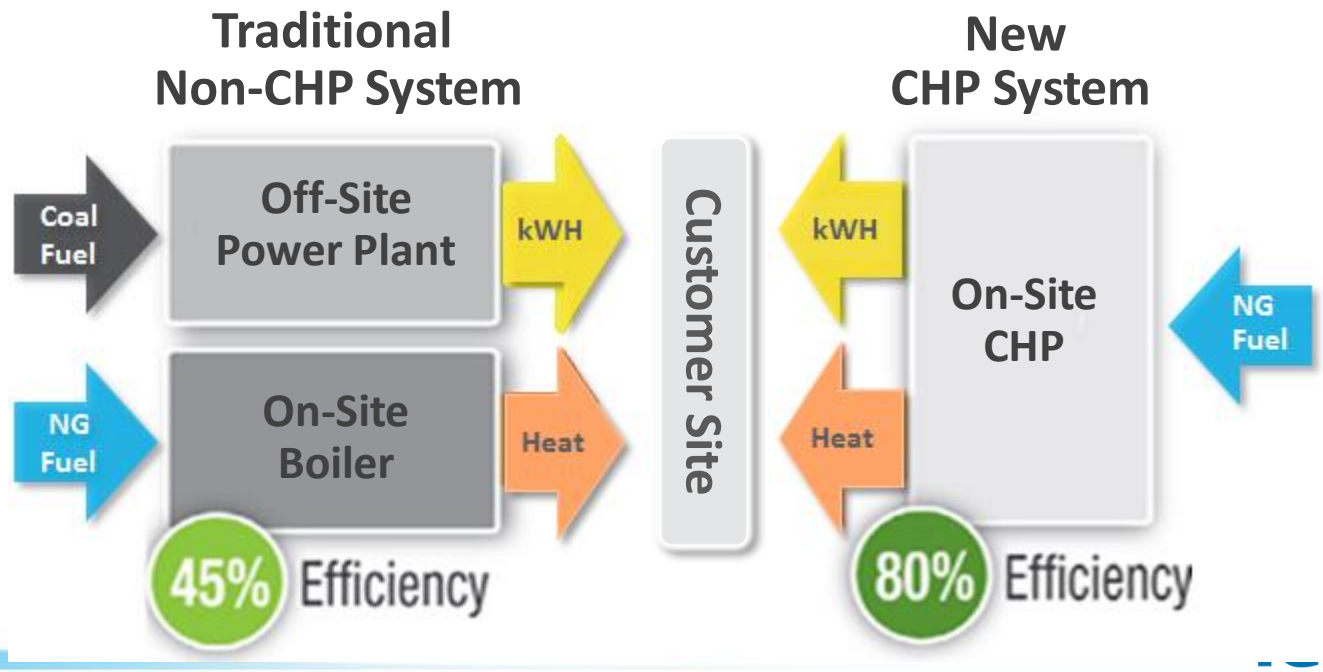
Hardy Road bio-gas conditioning and cleaning skid

What is Cogeneration or CHP?

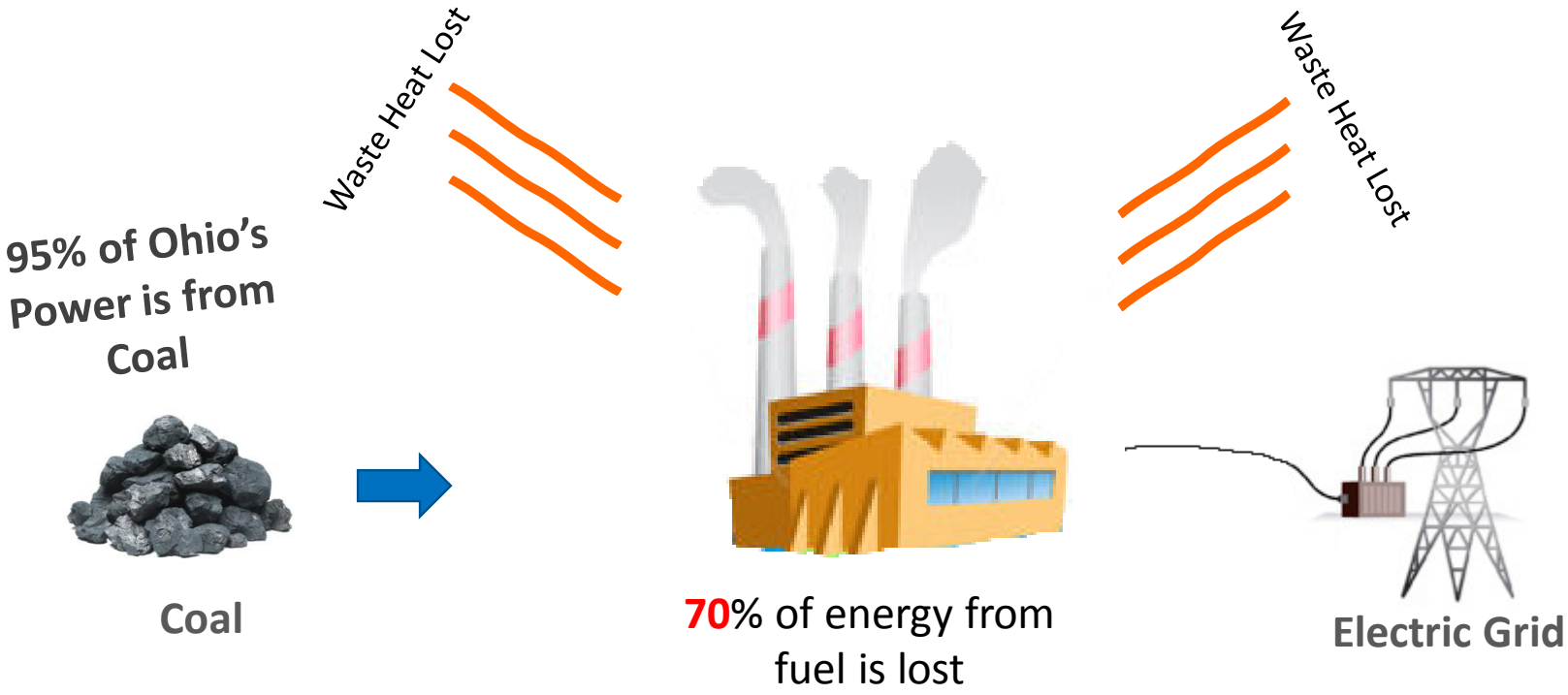
Combined Heat and Power

Concurrent production of both electricity and *usable* thermal energy from a single system

- **Single fuel source**
- **Must use exhaust heat in some way**
- **A type of Distributed Generation (DG)**
  - On-Site generation
- **Improved energy efficiency**



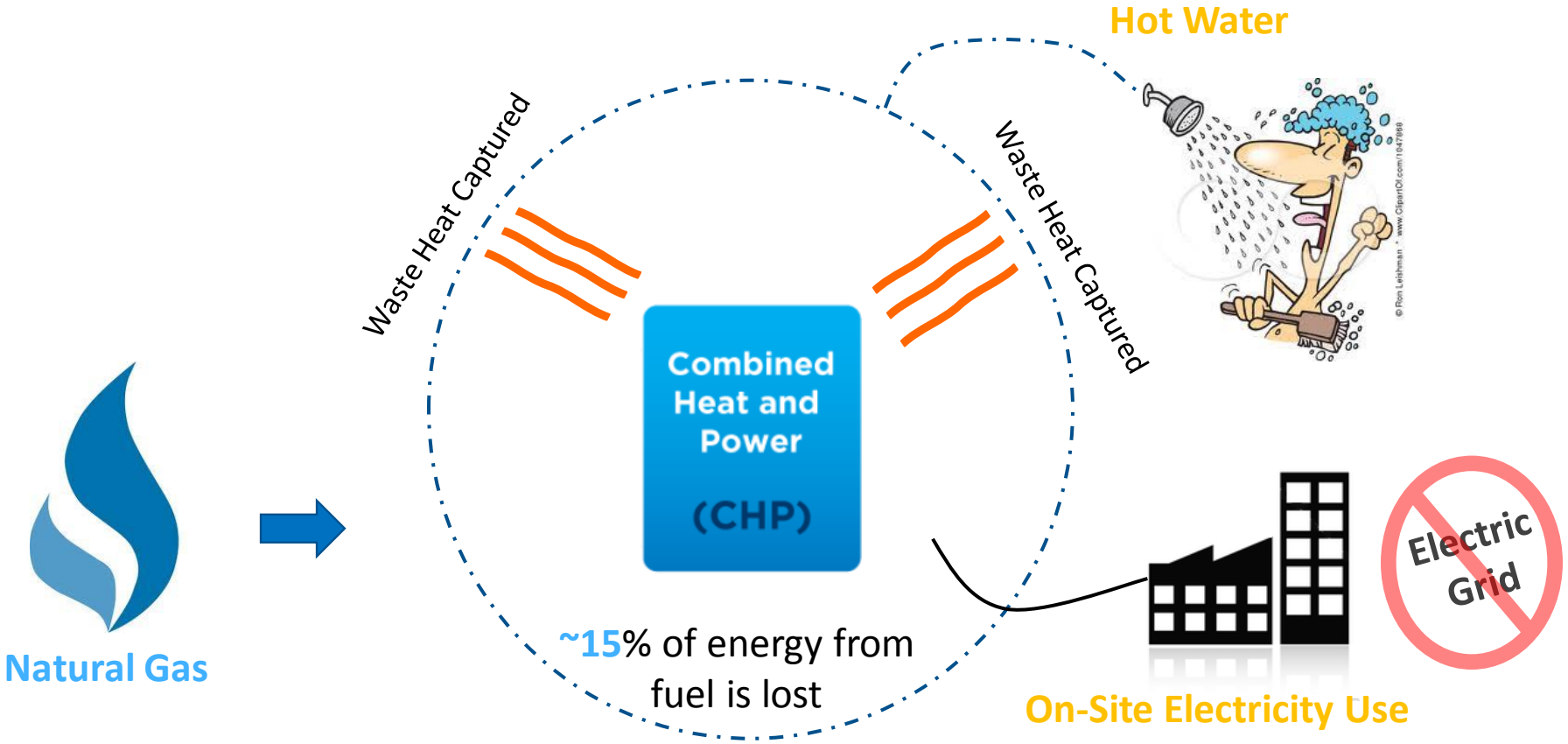
How Traditional Power is Generated and Distributed



Energy Content through generation

100% **~35%** **~30%**

How Combined Heat & Power is Generated and Used



Energy Content through generation

100% **~85%** **~85%**

Complements our core business.

CHP Generation projects are long term propositions. IGS has the commodity expertise and capability to lock in prices for up to ten years.

Conclusion

We feel US Natural Gas will be an abundant long term resource.

Natural Gas and Electric markets are becoming increasingly connected.

Natural Gas and Electricity are still commodities and both will see some volatility.

Demand for Natural Gas will grow and we look to grow our commodity business. In addition we plan to help customers use natural gas in new ways.

Thank You!