



OUTLOOK FOR NATURAL GAS PRICES: CREDIT MARKETS AND LIQUIDITY

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Bethesda, Maryland

NY Energy Forum

November 11, 2008

AGENDA

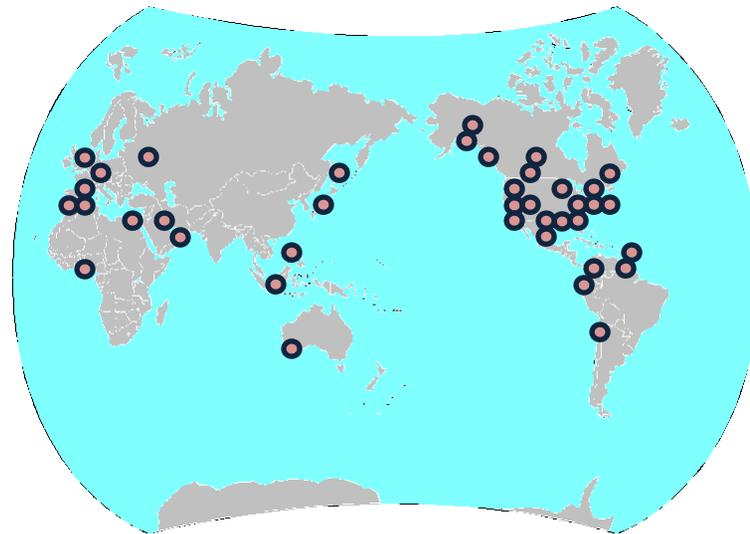
- Introduction
- Gas supply, demand, price
- Changing economic geography
- Capital investment requirements
- Conclusions: looking beyond

BSA INC., INDEPENDENT CONSULTANTS

Expertise

- Energy economics and contracting, price risks and rate design.
 - Market research
 - Lender due diligence – power, storage, LNG
 - Litigation support/rate cases, 16 jurisdictions
- 500+ assignments since founding in March 1984.

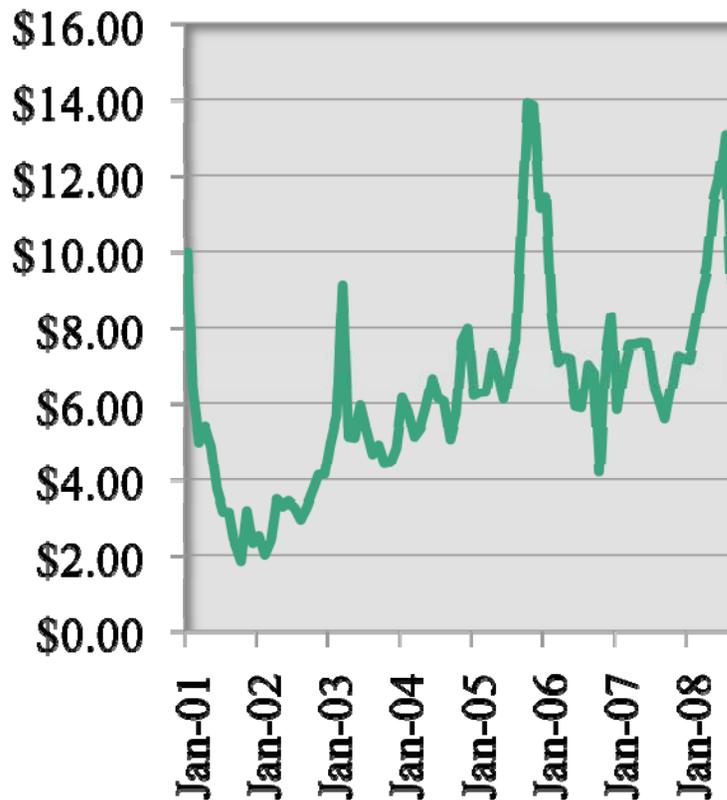
Major Assignments



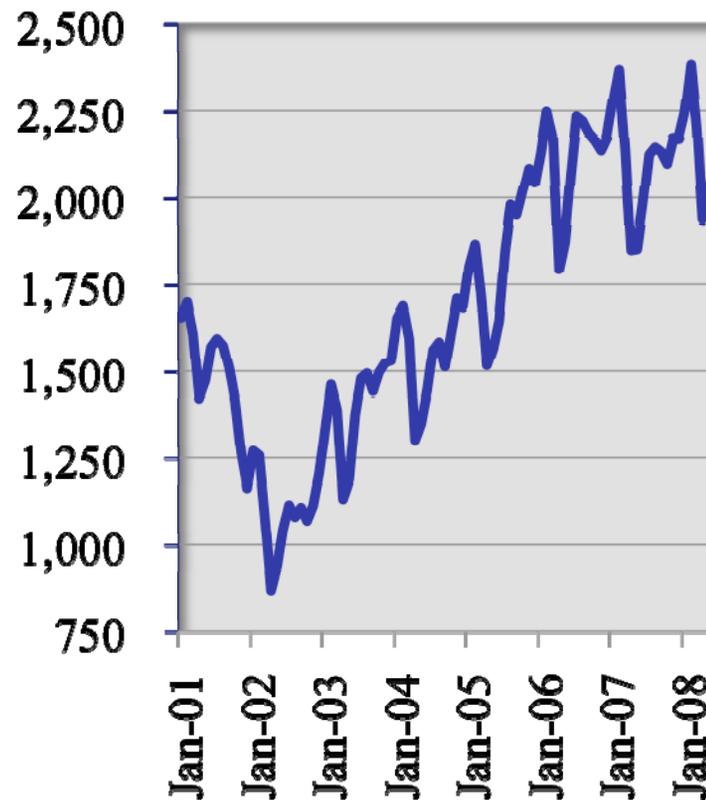
Clients: Gas traders, power generators, utilities, banks, governments, universities.

GAS WELL DRILLING HAS RISEN AND FALLEN WITH WELLHEAD PRICES.

Henry Hub Price



Rotary Rig Count

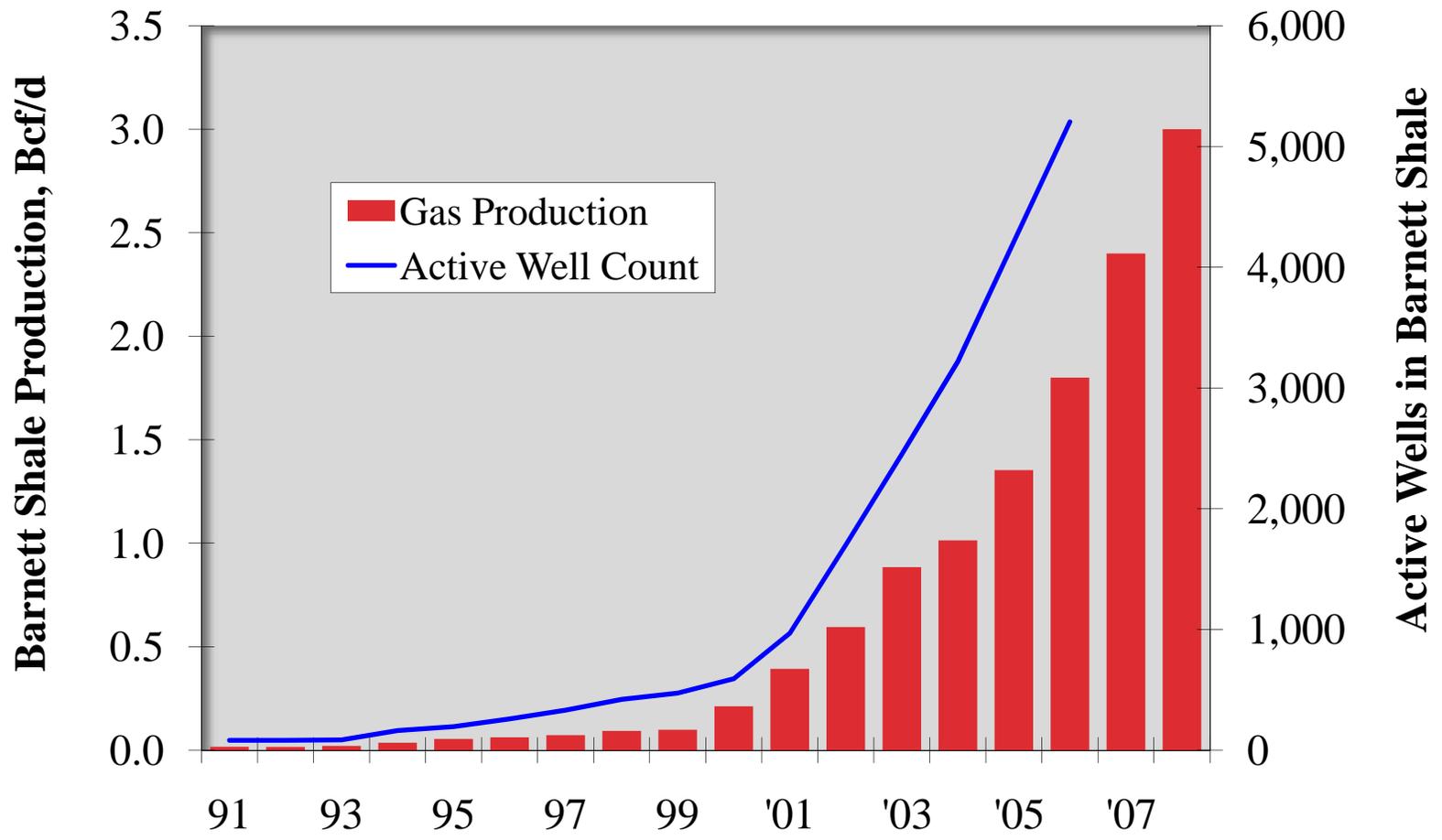


SUPPLIES AND RESERVES OF UNCONVENTIONAL GAS ARE EXPANDING.

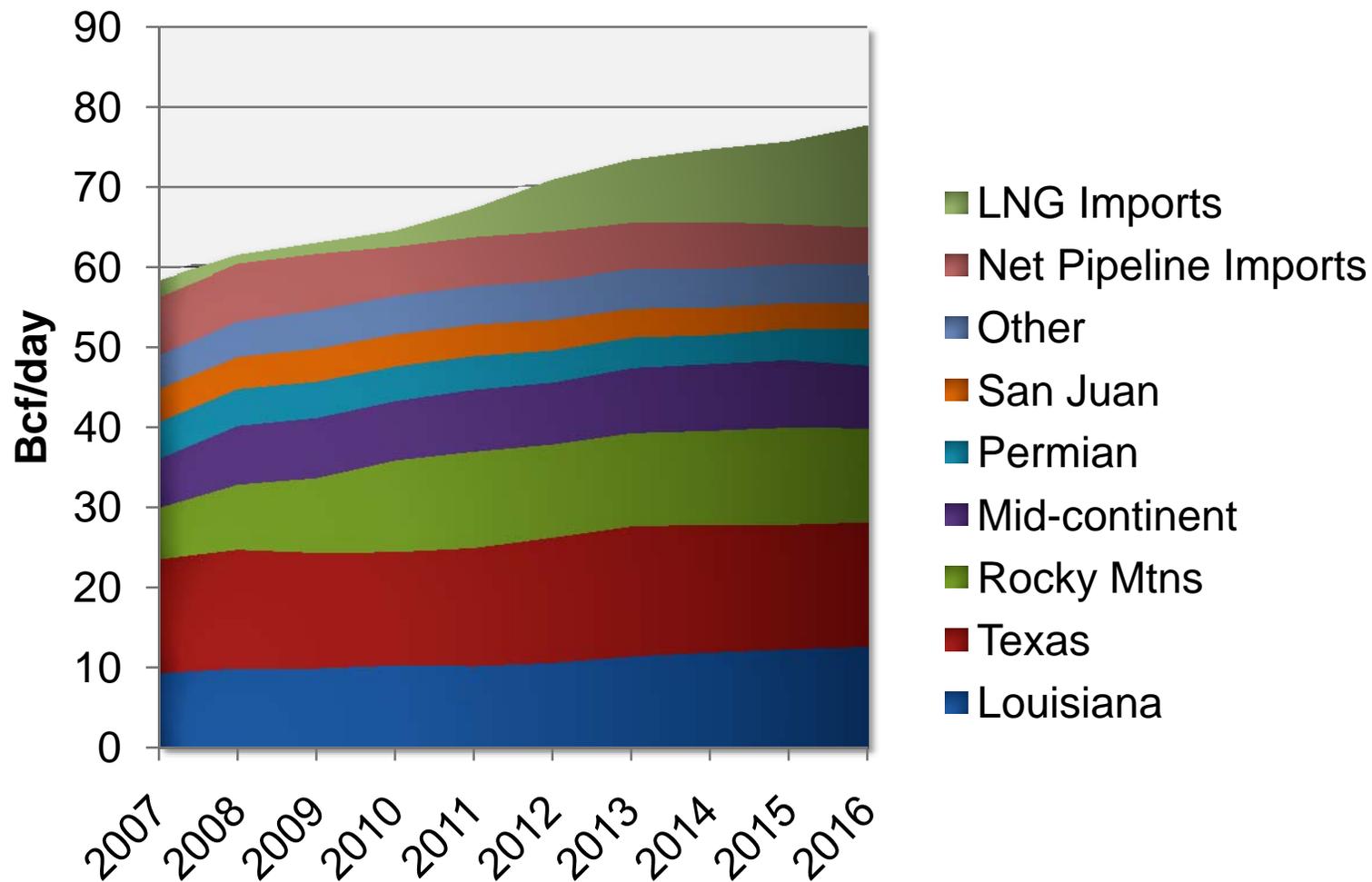
- Shale gas – Barnett (Texas), Fayetteville, Marcellus
- Coal-bed methane - Rockies/San Juan, Gulf Coast, Alberta
- Tight sands in the Rockies, Texas, other.

But unconventional gas E&P activity is going to suffer at prices below around \$4.00 to \$5.00 per MMBtu.

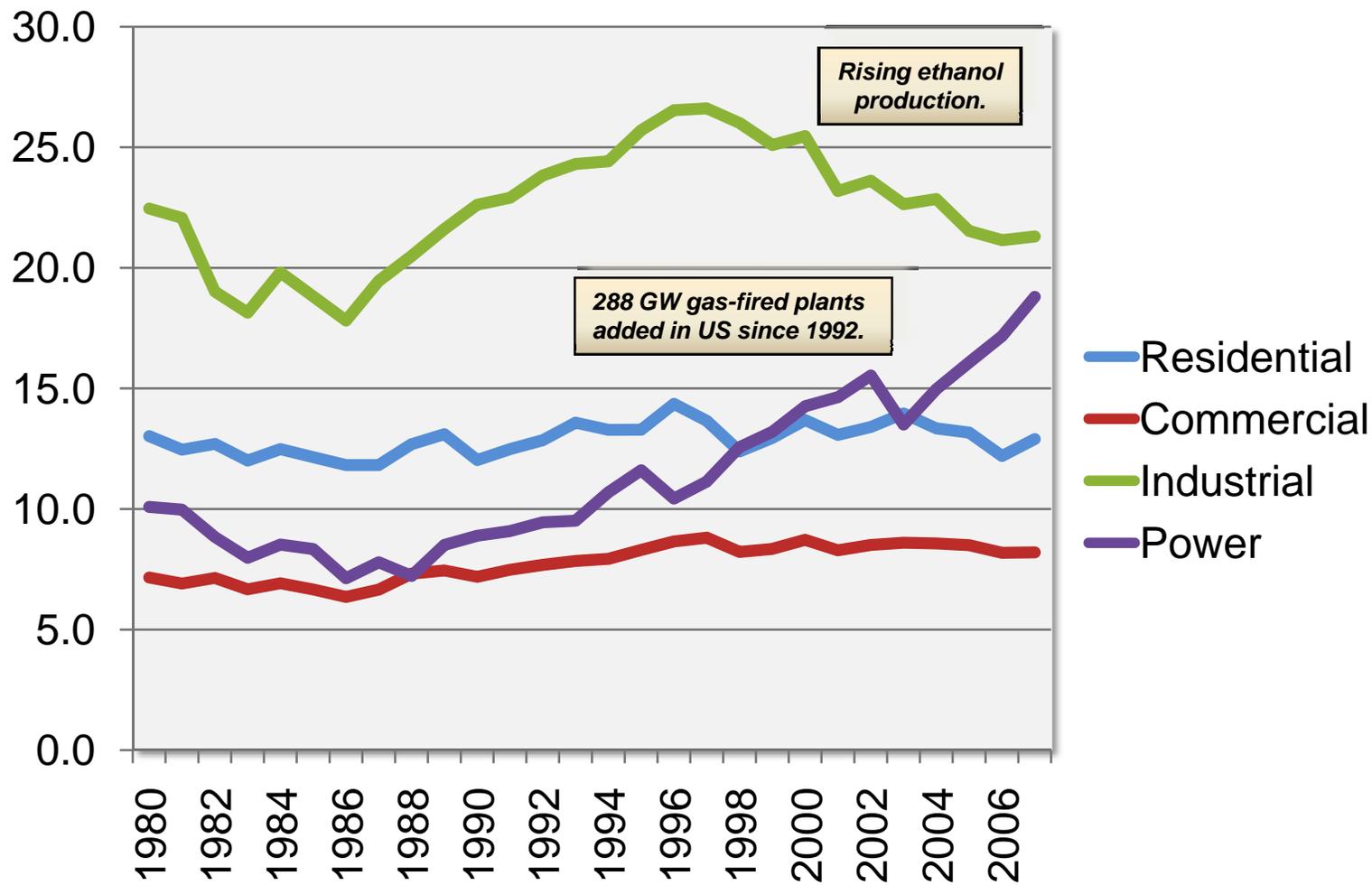
BARNETT SHALE GAS HAS NOW REACHED THE ALASKAN NORTH SLOPE POTENTIAL.



INCREASED LNG IMPORTATION WILL LIKELY BE DEFERRED TILL THE EARLY '10S.



WE EXPECT THE 2008+ RECESSION TO HIT INDUSTRIAL GAS DEMAND, WEAKEN PRICES.



BUT MOST SCHEDULED NEW US COAL ELECTRIC POWER PLANTS ARE HEADING OFF A CLIFF!

- TU, WE, others have cancelled major near-term coal-fired plants.
- Obama Administration rules may accelerate this.
- Gas will fill the gap:
 - Fastest entry to service
 - Lowest capital cost
 - Solar, wind can't keep up.
- US gas demand could gain 10 Bcf/day by 2020.

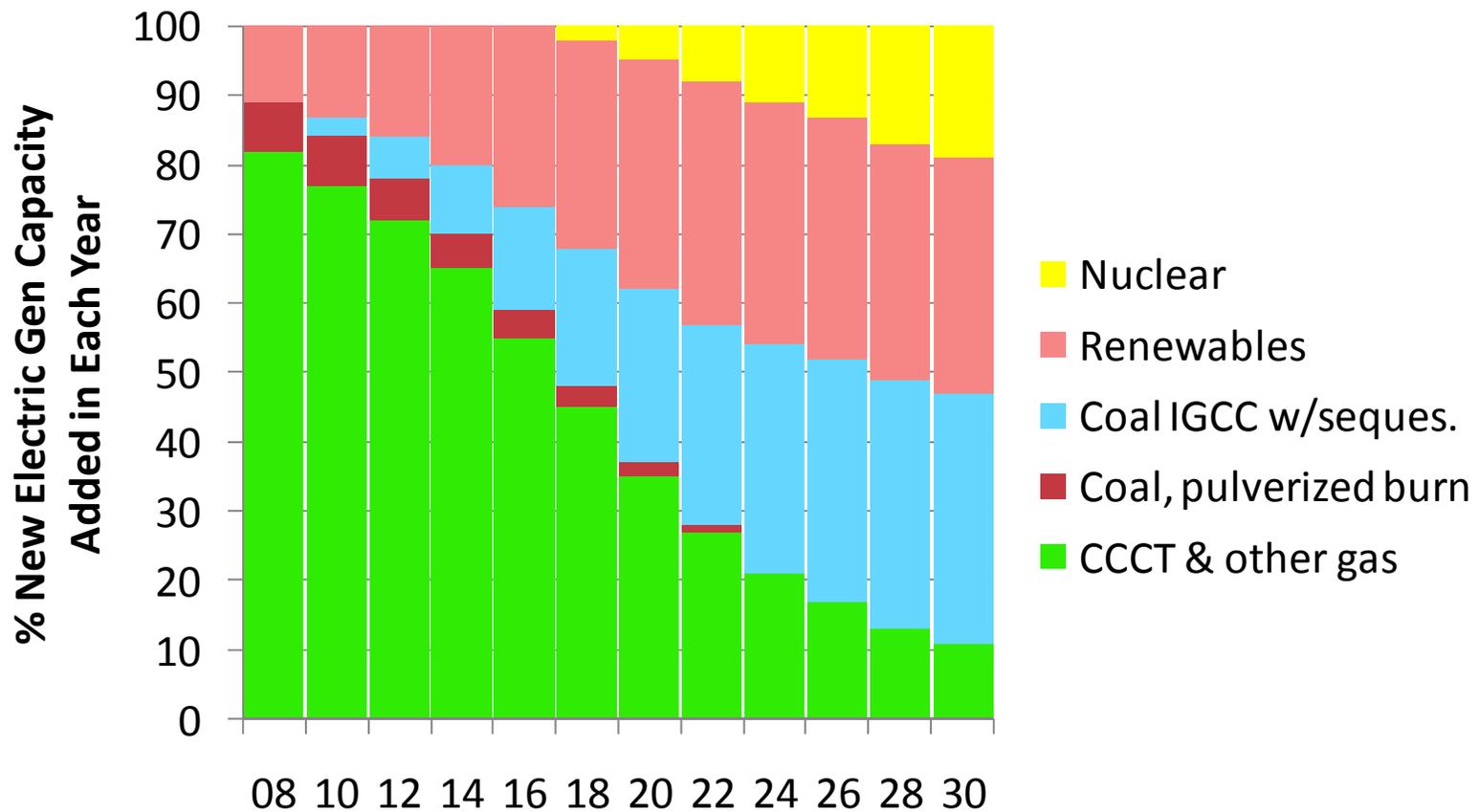


Cliffs of Moher
County Clare, Ireland

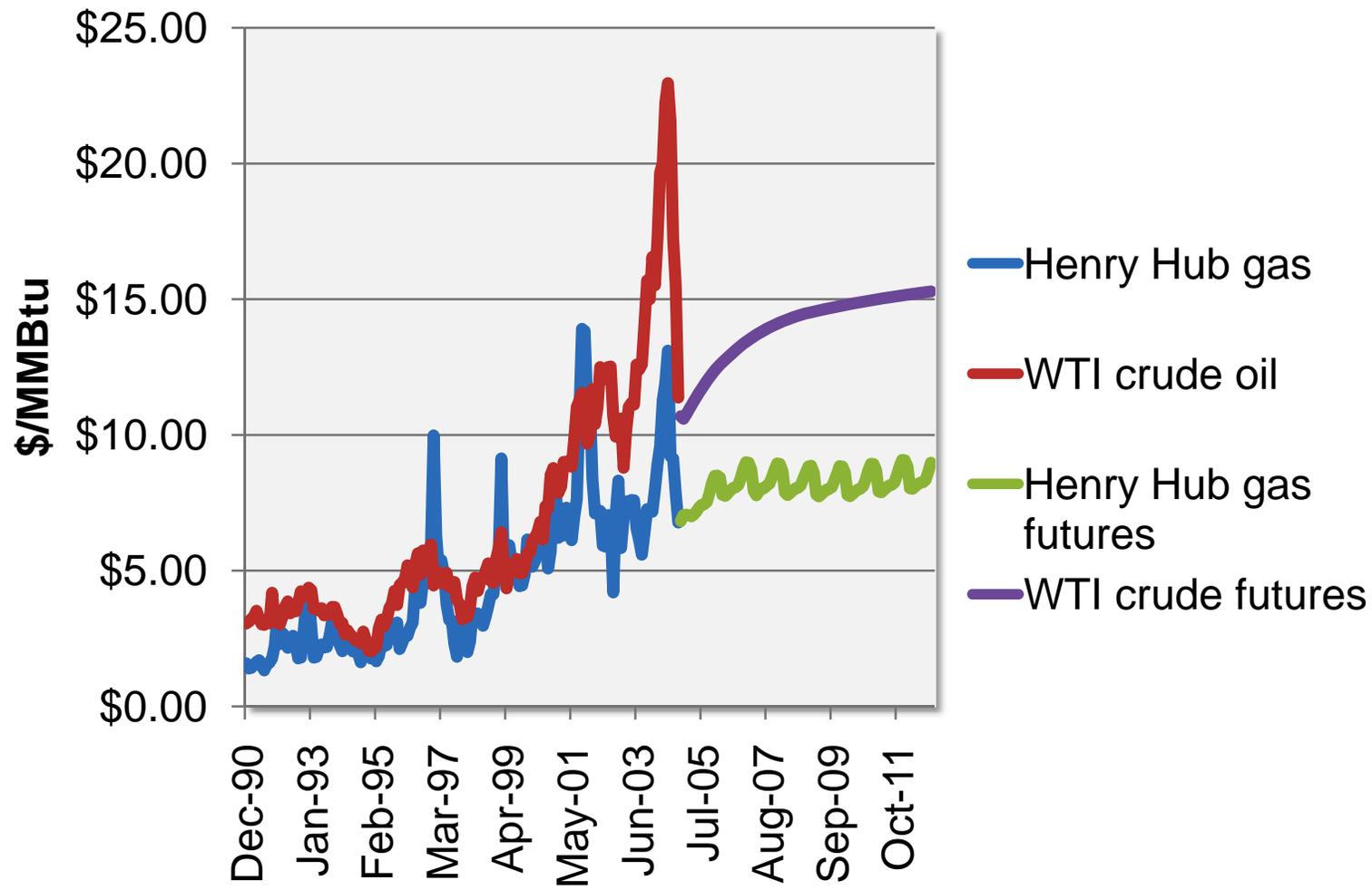
ACTUALLY, THIS WAS OUR FOGGY SNAPSHOT!



NATURAL GAS WILL CONTINUE TO DOMINATE NEW US POWER PLANT BUILDS FOR A DECADE.

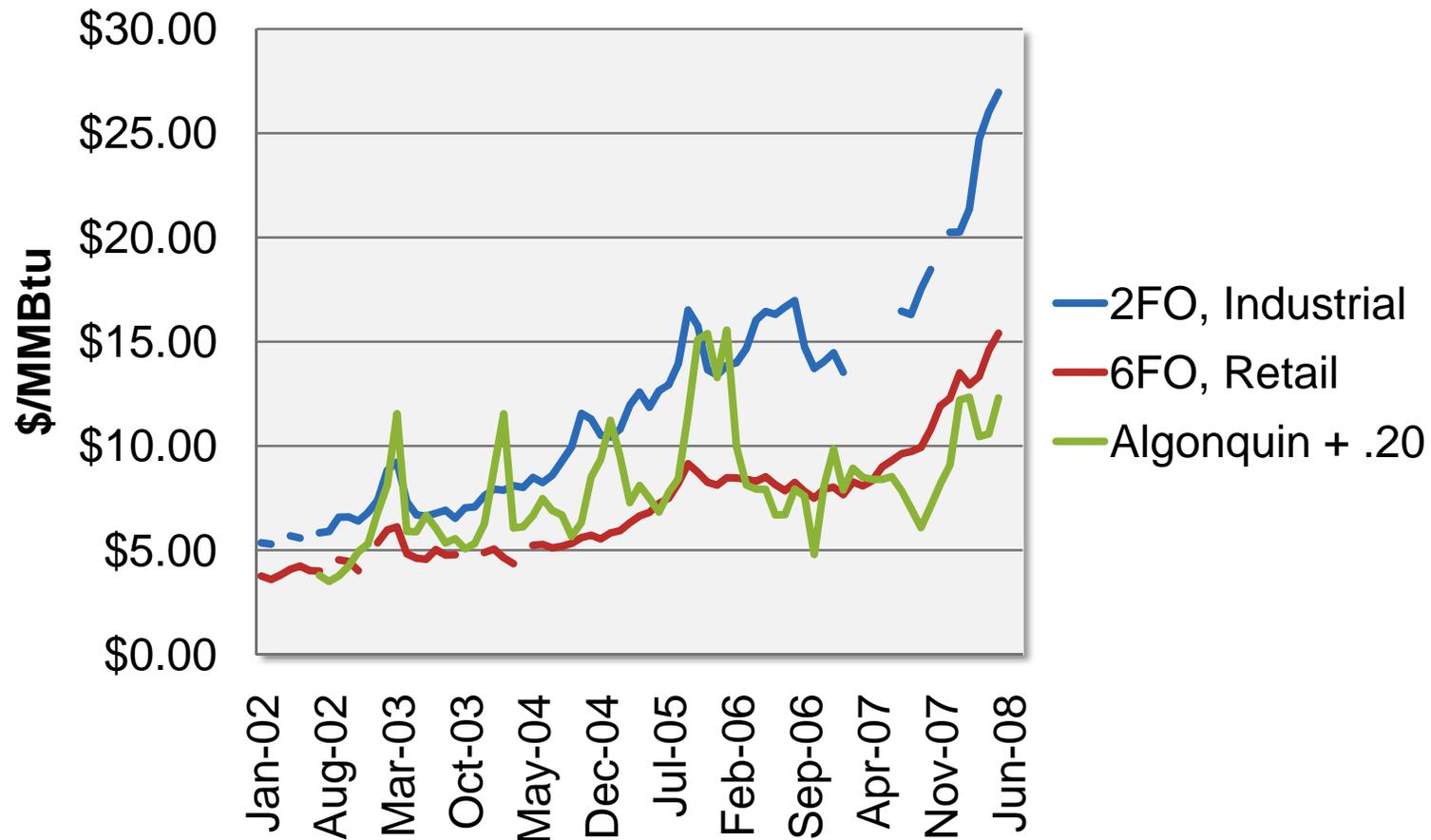


GAS AND OIL PRICES HAVE DECOUPLED, LEAVING GAS HIGHLY COMPETITIVE.



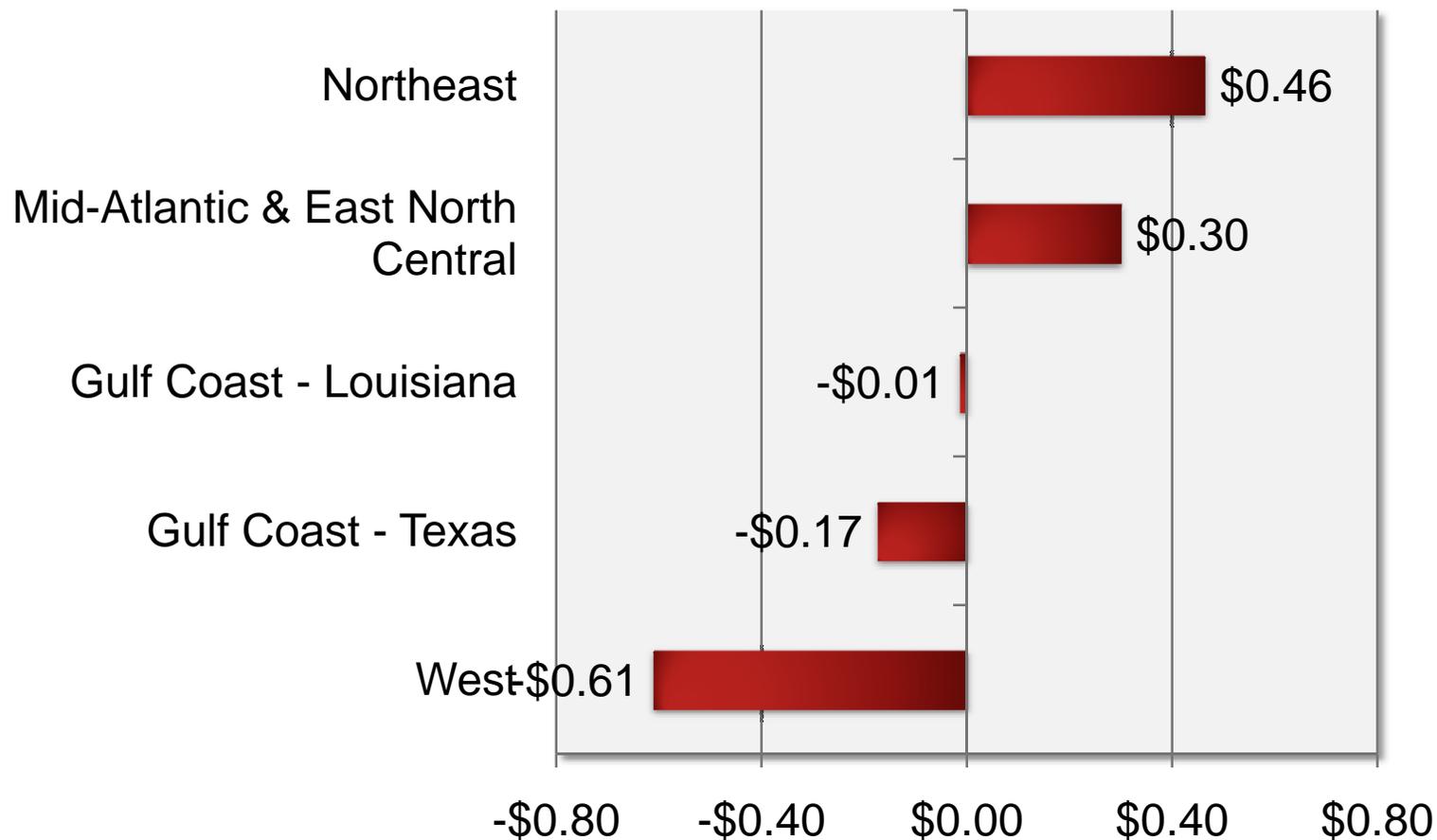
FOR EXAMPLE, NEW ENGLAND OIL PRICES HAVE RUN AWAY FROM GAS PRICES.

Delivered Fuel Prices – Mass.

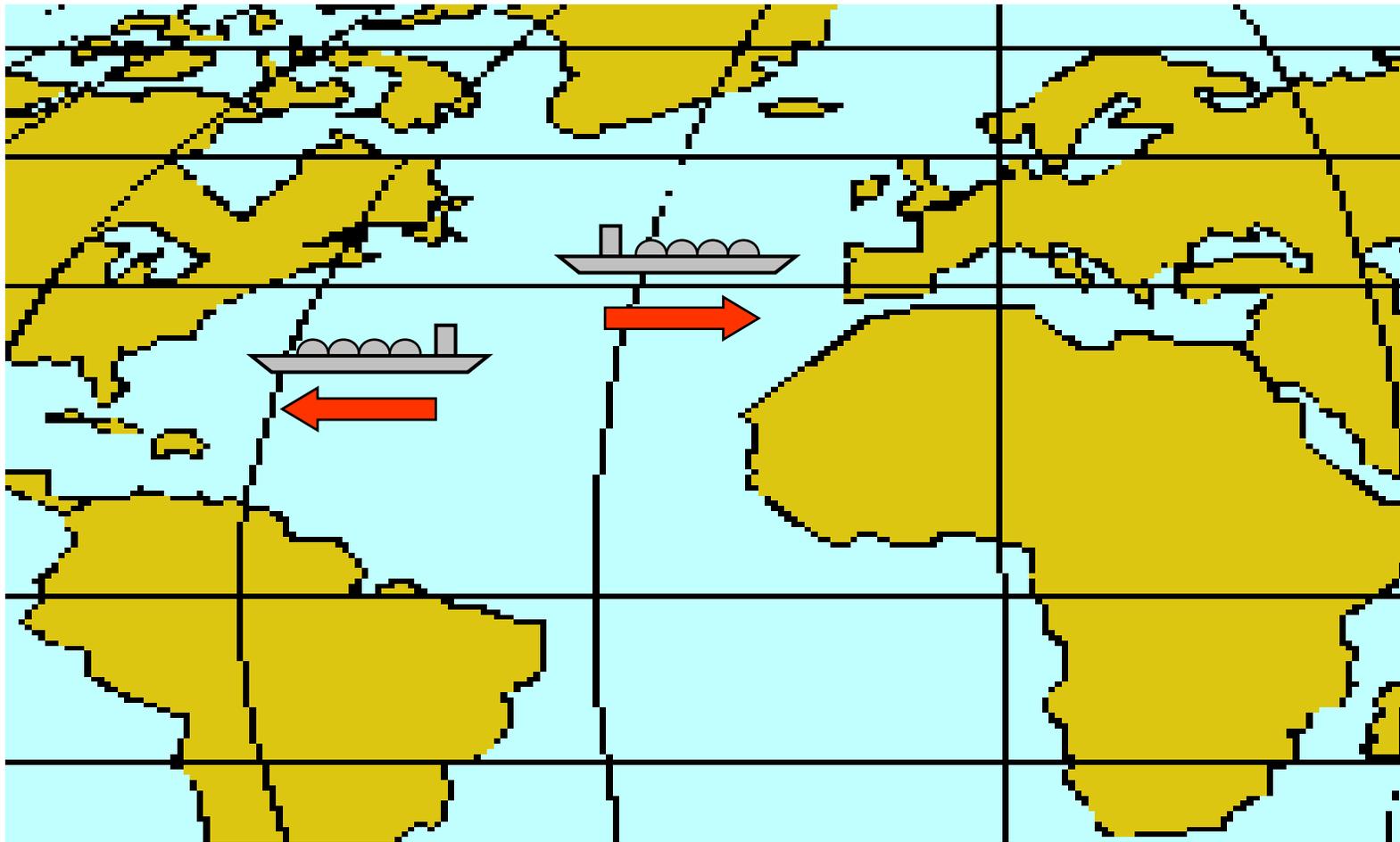


NORTHEAST POWER PLANT GAS DEMAND GREW 14%, COMPOUNDING BASIS PRESSURES.

Change in HH Basis, September 2007 – July 2008

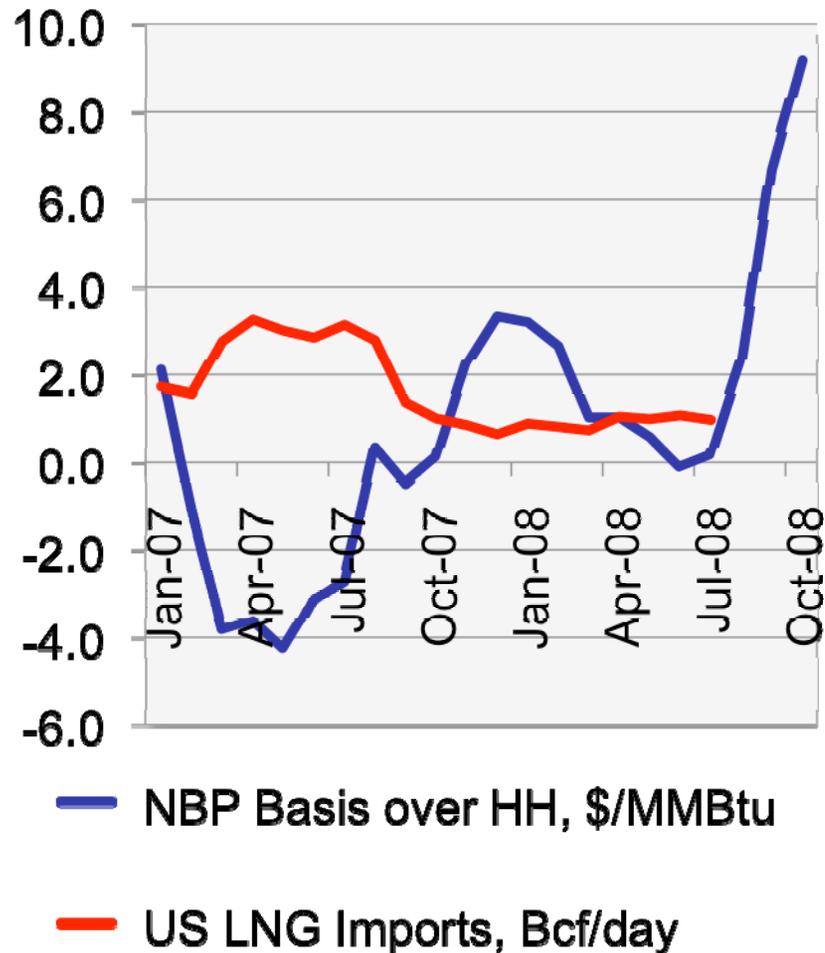


ON THE MARGINS, LNG MARKETS ARE ACTING LIKE PIPELINE MARKETS.



SINCE 2006, BASIS HAS STEERED LNG CARGOES IN THE ATLANTIC BASIN MARKET.

- In early 2006, LNG went to Spain despite high post-hurricane US prices.
- Then, deliveries to Lake Charles increased as NBP basis fell.
- Since then, high NBP basis has kept LNG to maintenance levels.



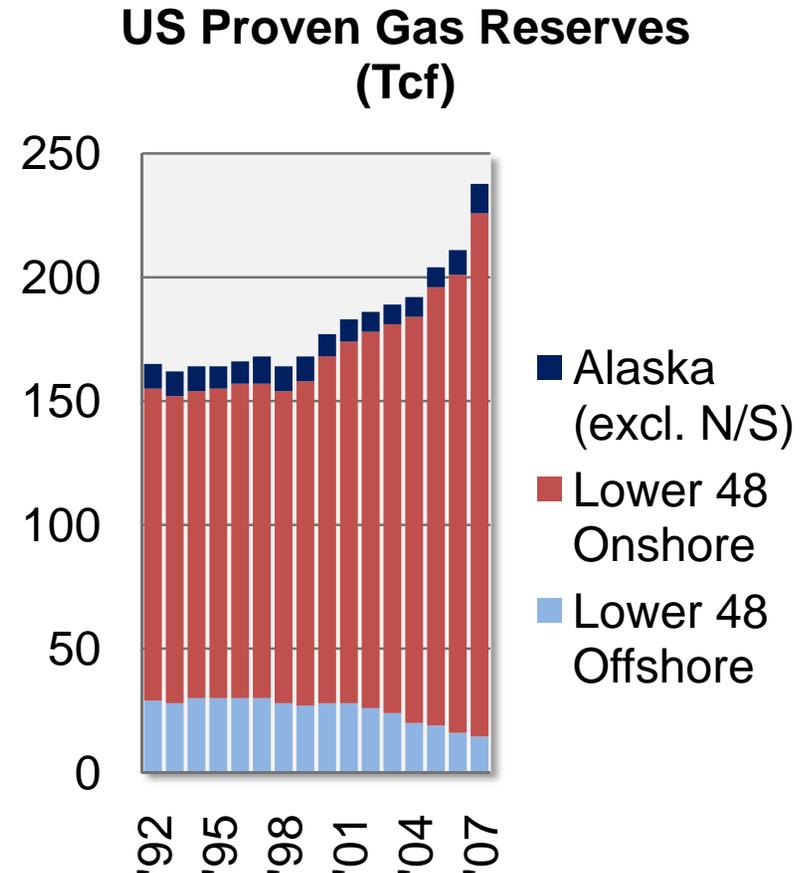
CONCLUSION #1: CHANGING GAS INDUSTRY GEOGRAPHY IS FORCING CAPITAL INVESTMENT.

- Westward supply development, isolated shales.
- Gas-fired power generation additions in the Northeast, Eastern Canada, even the Mid-West.
- Storage expansions in Appalachia, California, Gulf Coast.
- LNG deliveries.
- Alaskan North Slope.

The gas industry's capital investment requirements will need to outpace its market growth rates.

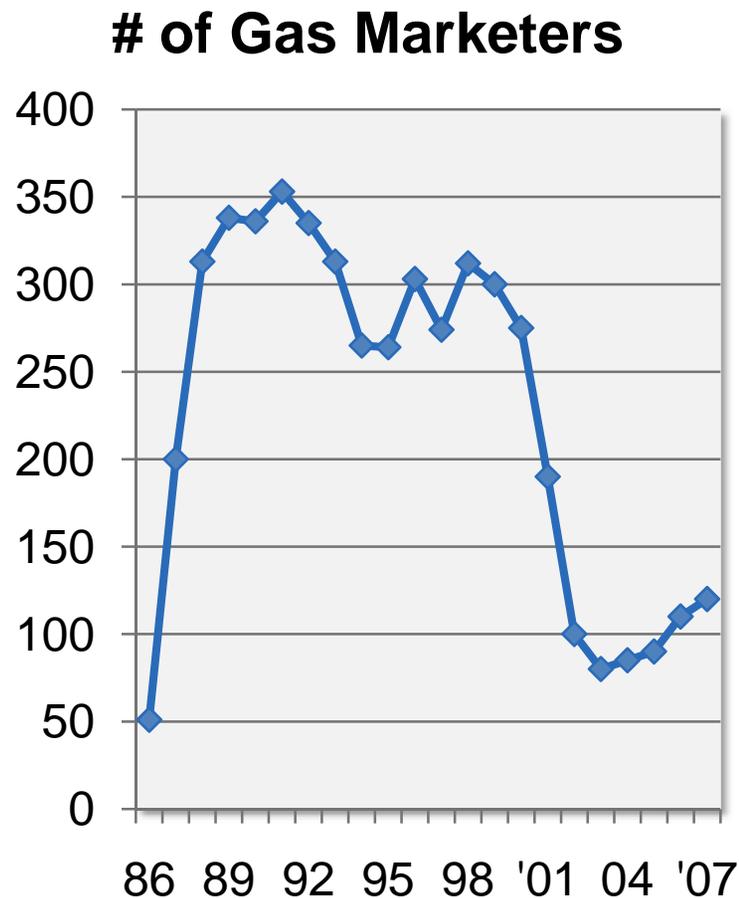
CONCLUSION #2: LOW PRICES AND CREDIT WOES WILL REDUCE UNCONVENTIONAL SUPPLY.

- Shale gas E&P is slowing down for 2009.
- But supply impact of big US gas reserves jump will linger for 3-5 years.
- And some key new LNG supplies will weaken prices in 2010-12.
- Gas demand strength will depend on CO₂ rules.



CONCLUSION #3: US GAS INDUSTRY IS PARTLY IMMUNE TO THE CREDIT CRISIS.

- Rapid 15-year growth in energy marketing crashed in '01-'02 with Enron, California and price reporting crises.
- Only well-capitalized traders remain, but that included AIG & others!
- One effect: falling industrial demand will cut gas prices.



BOTTOM LINE: REDUCED INDUSTRIAL DEMAND AND CONTINUED SHALE GAS PRODUCTION WILL TRUMP UPWARD FORCES (E.G., LESS CANADIAN GAS EXPORTS, MORE ELEC GEN DEMAND) THUS...

GAS PRICES WILL REMAIN WEAK THROUGH LATE-2009, THEN RECOVER TO \$7.00 - \$8.00 PER MMBTU RANGE, FALLING TEMPORARILY EACH TIME MAJOR NEW LNG SUPPLY PROJECTS COME ON LINE.

NOW WE WAIT!



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