

# The horizon brightens

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An improving outlook for gas

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# The horizon brightens

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- Gas price outlook
  - Forecasts & our view on equities
- North American demand
  - Power generation and weather
- North American supply
  - The rig count and efficiency gains
- Global gas markets
  - Potential for shale and the LNG market

# Gas price outlook

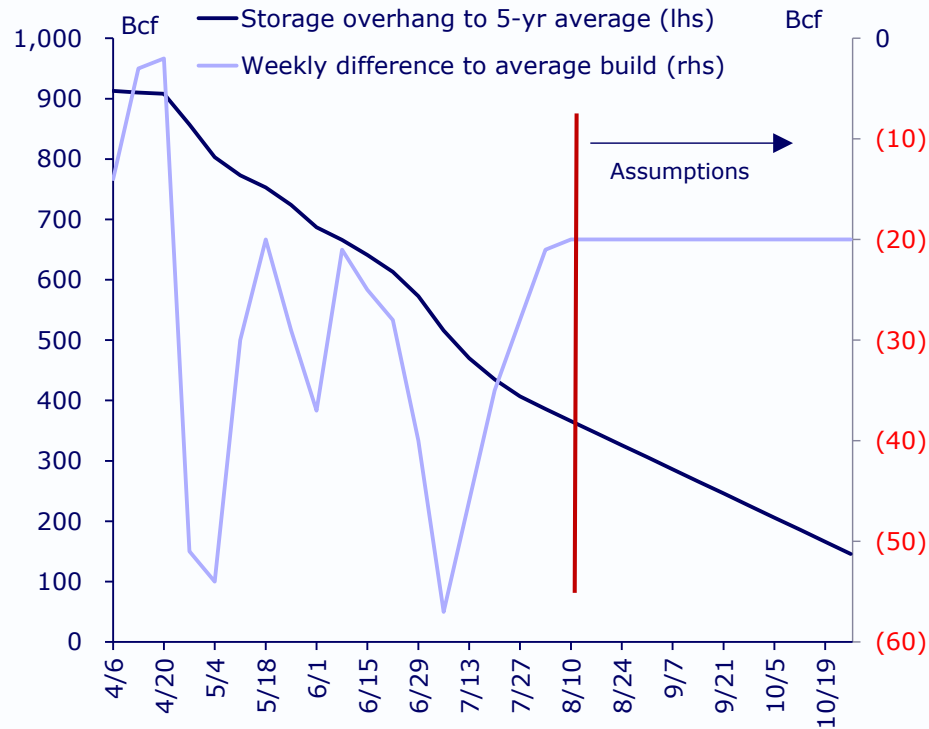
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- 2012: \$2.65/MMBtu
  - Near-term swoon possible as fall shoulder season approaches
  - Looking for \$3.35/MMBtu in 4Q12
- 2013: \$4.00/MMBtu
  - Dependent upon return of normal winter temperatures
- Long-term equilibrium: \$5.00/MMBtu
  - Potential range of \$4.00/MMBtu - \$6.00/MMBtu
  - Assumes LNG exports only from Cheniere's Sabine Pass

# Gas price outlook

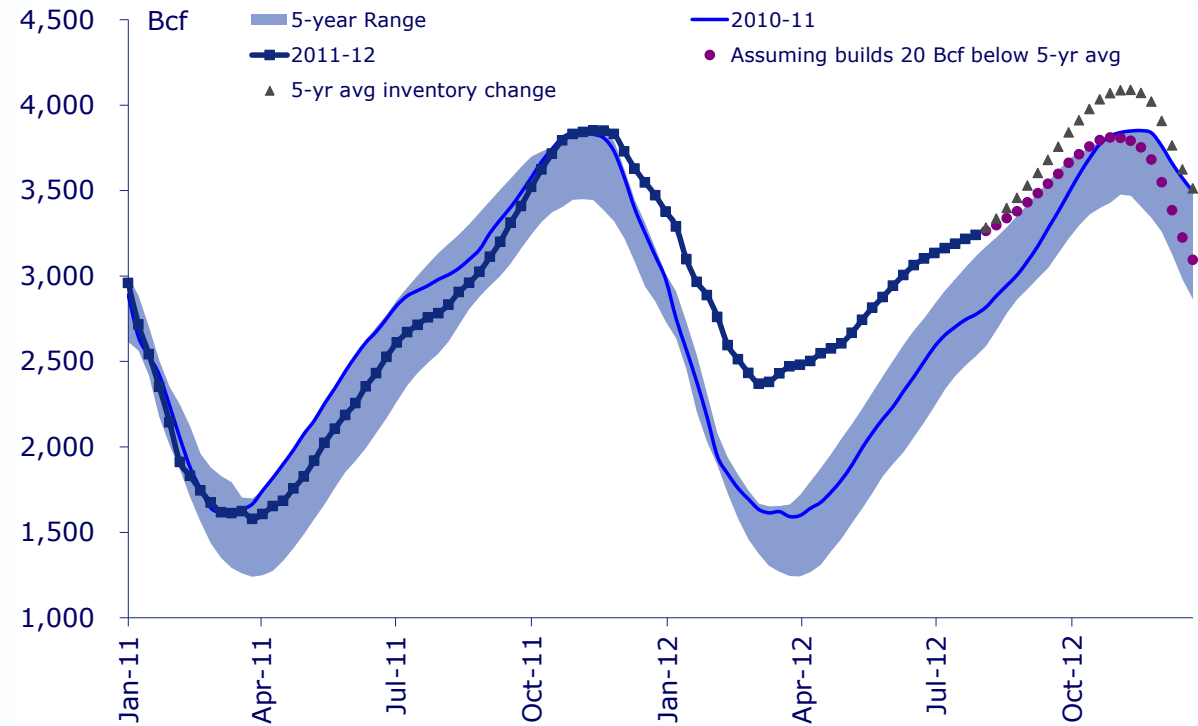
- The near-term key is unwinding the storage overhang
  - Overhang is now less than half of what it was in early April

## Inventory overhang



Source: EIA, Credit Agricole Securities (USA)

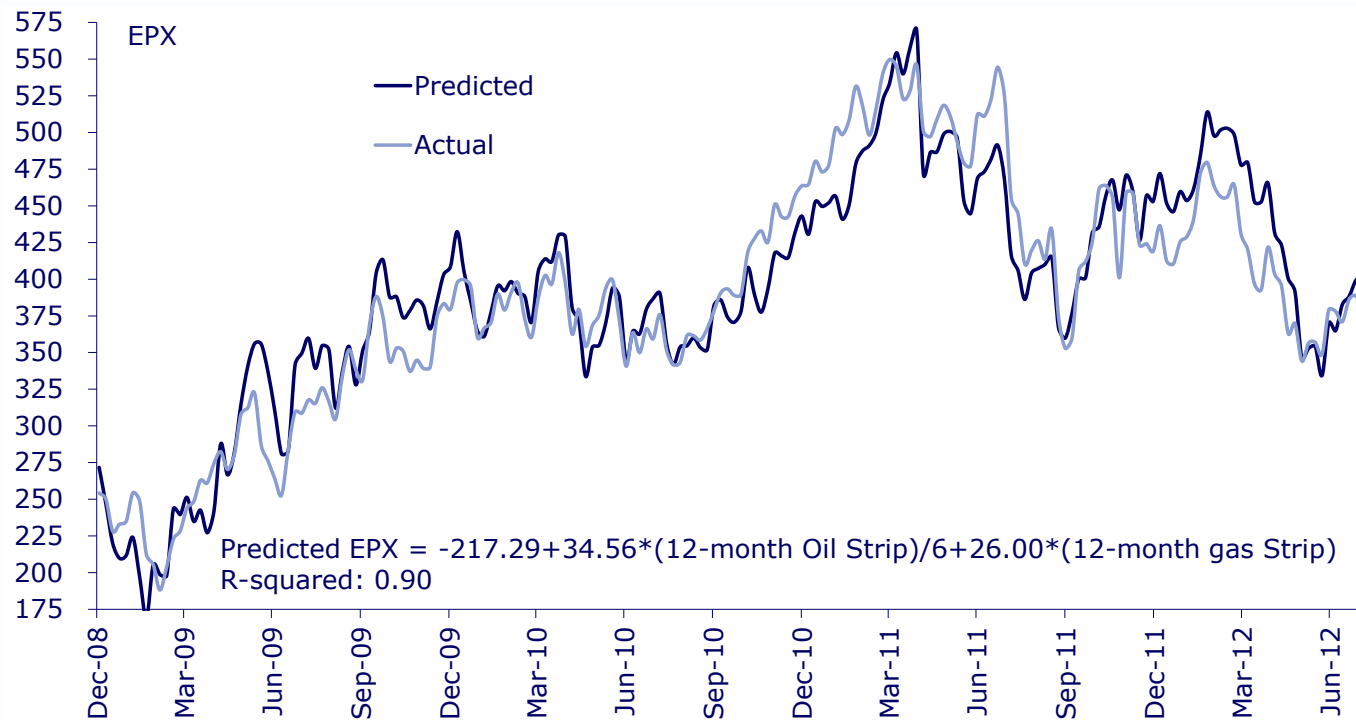
## Inventory projections



# View on equities

- Favor gas-levered names to oil-levered E&P names
- The space is trading roughly in line with the rolling 12-month oil and gas forward curves

## Regression analysis



Source: FactSet, Credit Agricole Securities (USA)

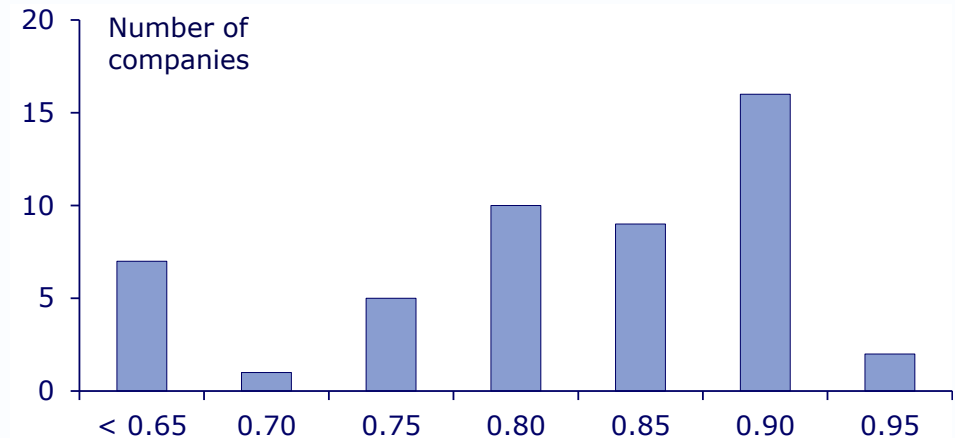
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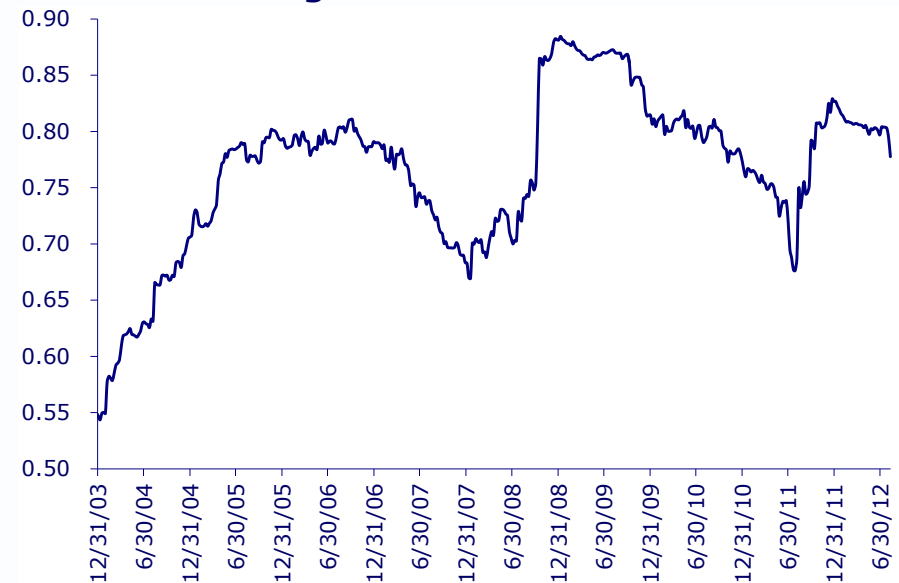
# View on equities

- High correlations stress the importance of macro and commodities view
  - 75% of stocks have a correlation of 0.75 or higher to each other
- Current trend indicates that performance is now diverging
  - Gas vs oil

**52-week correlation comparison**



**52-week rolling correlation**



Source: FactSet, Credit Agricole Securities (USA)

# North American demand drivers

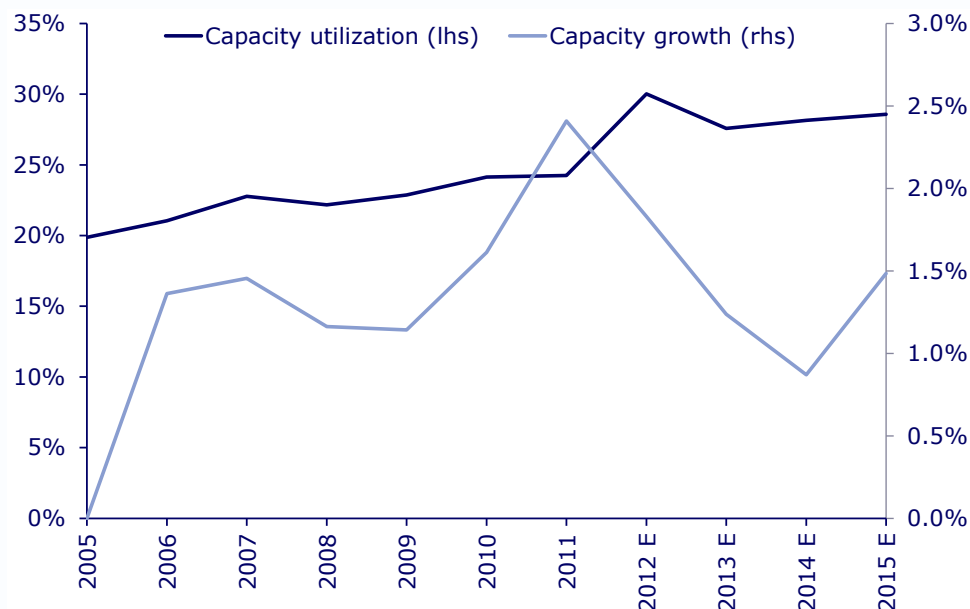
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- The warm winter was the other shoe that needed to drop
  - 13% warmer than average and the warmest since 2002-03
  - Heating-related demand plummeted 17% from the prior winter
- Coal-to-gas switching has come to the rescue
  - Power-related demand is up 35% ytd through May
  - Rising gas price likely to cause a material amount of switching to unwind in 2013
- A normal winter would easily offset any lost power generation

# North American demand potential

- Power generation key to long-term growth demand
  - Secular growth provides some insulation to changes in GDP
  - Modest growth in industrial demand: chemicals, refinery exports
  - Transportation not likely to be a factor this decade

## Natural gas power generation



Source: EIA, Credit Agricole Securities (USA)

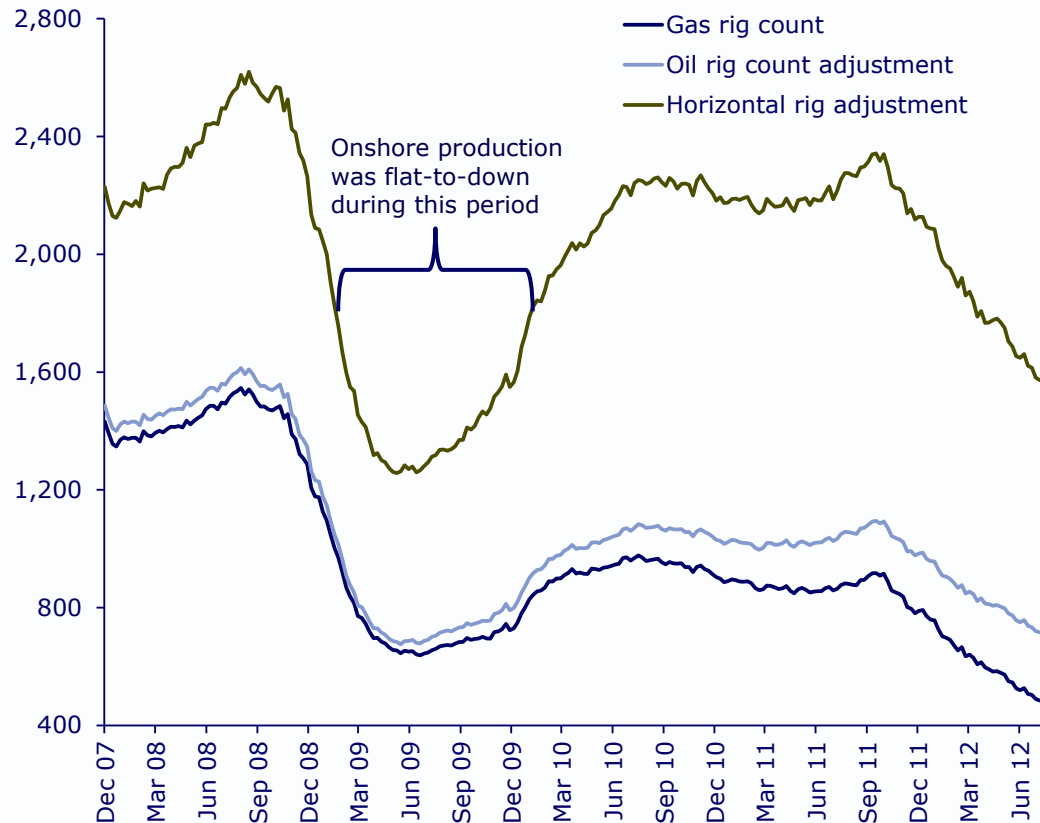
## Tesla Model S



Source: Tesla Motors

# North American supply growth

**Adjusted gas rig count**



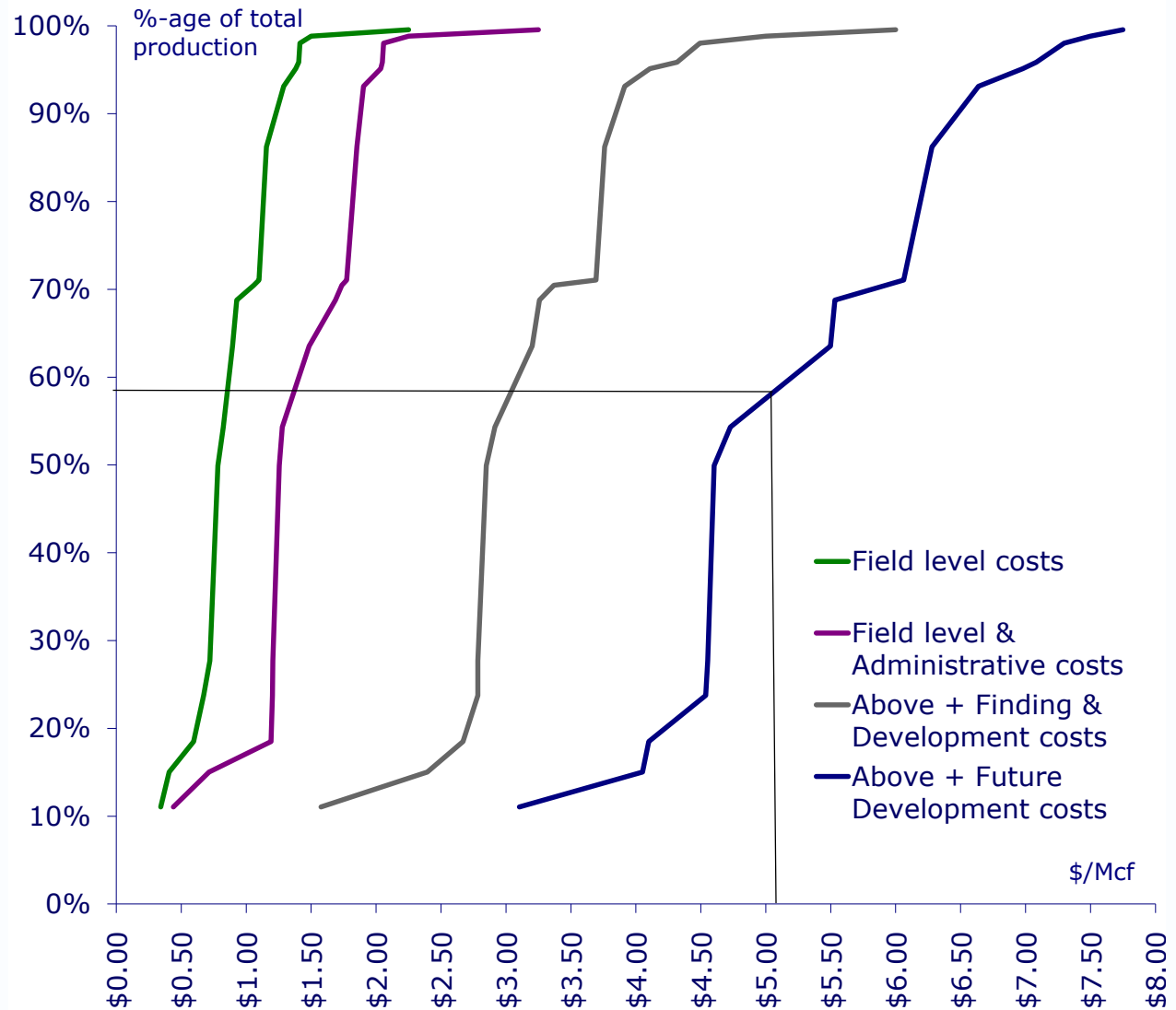
Source: Baker Hughes, Credit Agricole Securities (USA)

- In our view supply growth is beginning to slow
- Domestic growth slowing from 8% in 2011 to 4.5% in 2012
- Gulf of Mexico production has fallen to 6% of total production from 19% prior to Hurricanes Katrina and Rita
- LNG and Canadian imports are in rapid decline
- 12-15 month lag between the decline in the rig count and a supply response

# North American supply cost curve

- Incremental dry gas activity requires a much higher price
  - Strong economics drilling for oil at \$90/Bbl serves as an added disincentive
- Several forces will cut off the top of the curve
  - Associated gas
  - Low-cost plays
  - Efficiency gains
  - Technological innovation

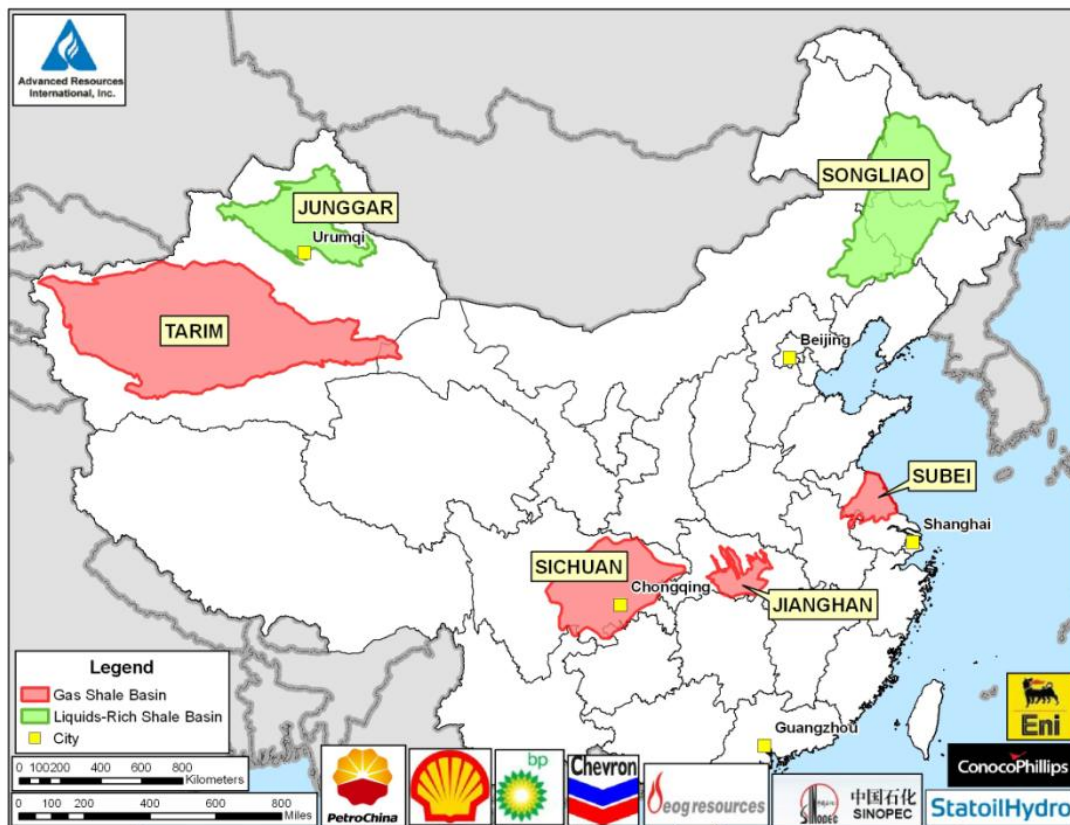
Domestic natural gas supply cost curve



Source: Company reports, Credit Agricole Securities (USA)

# Global shale potential

## China shale basins



Source: Advanced Resources International, Inc

- The promise of a global shale gas revolution is probably overstated
- Argentina's Neuquen Basin is the most prospective
  - Targeting oil in Vaca Muerta formation
- Jury is still out on Poland
  - ExxonMobil's exit is not the end
- Tremendous potential in China
  - Can it be economically developed?

# Global LNG market

- LNG facing oversupply
  - Mozambique, Canada, and Qatar could flood the market
  - Bad news for high-cost Australia
- US likely to remain a marginal player
  - The push for Energy Independence likely to be a hurdle to export growth
    - A big issue in the next election cycle
  - Cheniere's Sabine Pass to begin exports in 2016

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## Global LNG

Sector outlook

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20 July 2012

### Global Oil & Gas

#### LNG buyers

Chubu Electric (9502 JP - O-PF)  
CNOOC (883 HK - U-PF)  
Kansai Electric (9503 JP - BUY)  
Osaka Gas (9532 JP - U-PF)  
PetroChina (857 HK - BUY)  
Petronas Gas (PTG MK - O-PF)  
Petronet LNG (PLNG IB - BUY)  
PTT (PTT TB - BUY)  
Sinopec (386 HK - BUY)  
Tokyo Gas (9531 JP - O-PF)

#### LNG sellers

Anadarko (APC US - BUY)  
Apache (APA US - BUY)  
Hess (HES US - BUY)  
Inpex (1605 JP - BUY)  
Mitsubishi Corp (8058 JP - BUY)  
Mitsui (8031 JP - BUY)  
Oil Search (OSH AU - BUY)  
Origin Energy (ORG AU - SELL)  
Santos (STO AU - O-PF)  
Woodside (WPL AU - SELL)

#### Service providers

Chiyoda (6366 JP - U-PF)  
JGC (1963 JP - BUY)  
WorleyParsons (WOR AU - BUY)

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# Upcoming CLSA Forums

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## Investors' Forum 2012

10-14 September, Hong Kong



## India Forum 2012

5-7 November, Gurgaon



## Japan Forum 2013

25-28 February, Tokyo

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