LNG outlook

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During the 1980s and 1990s, commodity markets went through a long period of deflation. Low prices resulted in limited investment in new production capacity.

The decade up to 2013 was an investment phase: costs increased, productivity declined and commodity currencies appreciated, but prices increased even further. High prices eventually led to surplus production capacity.
Power demand has decelerated in key emerging markets – with the exception of India. This compounds the stagnation of power demand in many OECD markets.

Given a context of slower energy demand growth, LNG consumers may struggle to absorb the significant increase in new supply over 2016-20 unless gas takes market share from other fuels.
The changing dynamics of fuel competition in the UK illustrate the role that spot prices play in oversupplied markets.

We see a similar trend playing out in the global gas market.
Oil
Shale has flattened the cost curve

Breakeven of non-plateau oil assets [cumulative production of identified projects worldwide (pre-sanction, under-development and producing - Iran, Saudi, Libya, Kuwait not included) vs. their breakeven (oil price required to generate an adequate rate of return)]

Source: Goldman Sachs Global Investment Research – source is annual Top Project report.
Oil

Cost curve downside risk comes from higher OPEC production

Source: BH
Oil

Competition for capital could marginalize US shale

Source: BH
LNG

There are no infrastructure constraints in Europe

- Europe is a large gas consumer with enough infrastructure to a) import more LNG and b) consume more natural gas in the power sector given the large fleet of highly efficient combined cycle gas turbines built since 2000.

Source: IHS, Goldman Sachs Global Investment Research
China LNG
The giant is not fully awoken yet

Import routes and key gas pipelines

Source: IHS, Goldman Sachs Global Investment Research
The share of coal in the fuel mix is well above the OECD average, and the gap is particularly wide in the industrial and residential sectors that account for nearly 1 Bt of coal burn per year.

Efforts to reduce pollution include the gradual replacement of coal with gas, particularly in urban areas. Meanwhile, the development of the domestic pipeline network is increasing the number of households connected to the gas grid.
In spite of the limitations of central planning, Chinese gas demand has responded to the latest price cuts and we expect LNG demand to grow strongly. However, gas demand could benefit from further deregulation across the entire supply chain.

Stronger demand in China should support higher utilization rates among swing LNG suppliers in the US, although the impact on LNG prices may be modest.
For a period, both China and India were rapidly increasing coal consumption. However, the cycle has turned and China is now offsetting demand growth in other emerging markets. While coal use peaks and declines, cleaner fuels continue to grow.
Creditors are the ultimate beneficiaries of production cuts in China. If regulators are able to maintain domestic prices near the level of marginal cost, the c.US$17 billion in operating cash flow can help to reduce the significant debt burden of the coal sector.

Government intervention may continue until 2020, keeping coal prices well supported while the Chinese mining industry restructures.
Thermal coal
Chinese mining costs to drive global coal prices

- If the policy objective is to ensure the domestic mining industry is commercially viable, production constraints should target a price range around marginal costs.
US as a LNG supplier

Utilization rate likely to hover near 50% at the end of the decade

- We see the United States – and CBM projects in Eastern Australia – as swing suppliers with higher marginal costs relative to traditional LNG producers.
- In the absence of further regulation to stimulate gas demand, the new LNG equilibrium requires low spot prices to close the US export arbitrage on a regular basis.
US C2G
Coal burn should increase this year, then resume a secular decline

Share of coal and gas in US power generation

Source: EIA, Goldman Sachs Global Investment Research
North American gas market
An increasingly integrated market

- There is greater convergence between regional gas prices as a result of growing LNG supply and the transition from oil-indexed prices to global gas benchmarks.
- US pipeline gas is on track to meet >50% of Mexican demand by the end of the decade.

Sources: EIA, IHS, Goldman Sachs Global Investment Research
Competition with coal is intensifying because there is surplus production capacity in both markets and many countries are able to switch between fuels.

The convergence of global gas prices is likely to last well into the next decade, undermining the traditional indexation of gas contracts to oil prices.
The next generation of LNG projects has lower costs than the US$12-15/Mbtu of some projects under construction, but higher prices associated with a tight market are still some way off.

LNG demand is sensitive to prices, particularly in markets where coal-to-gas switching can be partially reversed and/or where LNG competes with pipeline gas.
Disclosure Appendix

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