The Evolving Role of Gas in China

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Gas and climate policy

Where it replaces more carbon-intensive fuels or aids the integration of renewables, natural gas can be a good fit for decarbonising energy systems.
Asia at the heart of energy demand growth

Share of primary energy demand, 2040

Asia absorbs an increasing share of global energy commodity trade – 80% of coal, 75% of oil and 60% of gas in 2040
Asia Electricity Generation, 2015 (TWh)

Source: Economist Intelligence Unit.
Global Coal Capacity (2010-15) and Planned Additions (GW)

Source: CoalSwarm.
Chart by Carbon Brief.
China’s Future CO2 Emissions

- **Baseline**
- **Low-Carbon**
- **INDC**
- **2º scenario**
China: a global leader in renewable energy and energy savings

China has the world’s largest wind and solar capacity

China contributed more than half of the global energy savings 1990-2010

Top 5 wind power producing countries in 2014

Source: Global Wind Energy Council

Source: WB Global Tracking Framework
Gas and LNG Prices (1995-2018)

Source: Platts, Heren, IPE, Petroleum Association of Japan and Bloomberg (Jan 2016)

Note: Asia long-term proxy = 14.85% JCC(-3) + 0.50; Oil parity = JCC = Japanese average crude price; JCC actuals to Oct 2015 and based on Brent thereafter.
U.S. Example of Decarbonization

**U.S. net electricity generation by fuel (1990-2040)**

- **billion kilowatthours**

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Policy intervention to improve air quality in urban areas and manage carbon dioxide emissions is driving gas demand in power generation:

- Coal-fired generation down 3% in 2014-2015.
- Gas-fired generation increased 40% 2014-2015.
- Gas' share in power generation mix increased from 2.1% to 3.0% in 2015 driven mostly from gas-fired combined heat and power plants to replace inefficient coal-fired units (90% of capacity additions).

Policy measures driving gas demand:
- Gas price reform;
- Feed-in-tariffs for gas-fired power;
- Policy support for CHPs/CCHPs;
- Stricter emission controls;
- A cap on new coal generation in coastal regions.

Source: IHS Energy, China Electricity Council.