Coal 2017
Analysis and Forecast to 2022

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Coal markets update

- **2014-2016 marks the largest 2-year drop in global coal demand**
  - The drop occurred in spite of economic growth

- **2016 was the 3rd consecutive year of decline in China and in US**
  - Coal to gas switch in power generation in US and Europe, and in industrial/residential sector in China together with renewables were the drivers

- **India and ASEAN region remained centres of growth**
  - Increasing power demand to support economic/social development underpins coal use

- **A coal demand rebound is expected in 2017 led by China, India and US**
  - Prices have remained strong throughout the year.

- **Is this rebound a blip or a new trend?**
Whereas power dynamics are country-specific, sluggish power demand, cheaper gas and renewables expansion are squeezing coal in many countries across the globe.
Some populated countries with low per capita power consumption will ramp up power generation. Coal will provide a good share of the additional electricity.
Increasing China coal demand and imports in 2017 have been pushing prices up.

Will (when) prices start correction?

Weekly thermal coal prices in Europe

USD/t

- Spot prices
- Forward curve in January 2016
A new force to drive prices

Prices in Europe and China vs targets

Chinese policies targeting the green range gives a strong support international prices to stay within an equivalent margin

Correlation 92%
Coking coal prices: two spikes in half a year

The volatility of spot coking coal prices shows the fragility of its supply chain
Global coal demand stagnates

After the staggering growth in 2000-2013 and the decline thereafter, coal demand will stabilize at the current level
Whereas further development of UHV lines will move demand from coastal areas to the West and North, coal boilers will be replaced by gas and electrical solutions.
Looking ahead, performance of Coal India is key
After closure of high-cost mines and inefficient coal power units, the decline of the coal generation will slow down. Gas prices are key.
Traditional uncertainty about China’s imports has spread to many other countries.
CCUS is making real progress

Illinois Industrial CCS
(Source: NRG)

Quest - Scotford Upgrader
(Source: Shell)

Petra Nova
(Source: NRG)

Al Reyadah
(Source: CSLF)
CCUS is making real progress

- CCUS installed on existing assets which have sustainable business model
- Low technology risk ("keep it simple" approach)
- Attractive, well understood storage geology or enhanced oil recovery opportunity
- Coalition of public and private stakeholders
- Clear source of revenue to cover CCUS costs over asset lifetime
Despite recent progress, CCUS needs a boost

The IEA, key countries and the world’s largest energy companies have shared a commitment to advance CCUS
Where are coal markets going?

- **Global coal demand is set to stagnate through 2022**
  - Forecast remains fundamentally the same as the last year’s forecast

- **Coal demand in China will decline slowly, with annual fluctuations determined by market needs**
  - In 2017, economic rebounding and low hydro output are driving coal demand growth in China after three years of decline

- **Growth will be concentrated in India, Southeast Asia and a few other Asian countries**
  - Despite renewable push and lower gas prices, additional power demand will be partially met by coal

- **Global trade could contract, but uncertainty is at highest**
  - Imports increase in China and Korea in 2017 are not sustainable; India’s success to rein in imports will be key

- **Coal use will be constrained in the longer term without Carbon Capture, Utilisation and Storage**
  - CCUS is needed to meet our climate ambitions. The IEA is working to engage industry and policymakers to build new momentum.