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QUARTERLY COMMODITY INSIGHTS
BULLETIN

Thermal Coal Aluminum Copper Diamond Gold Iron Ore Metallurgical Coal Nickel Platinum Potash/Phosphates Rare Earth Elements Uranium

KPMG
cutting through complexity

Q3 – 2012

Thermal Coal

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Strong demand, but a changing supply profile

Despite concerns across the mining sector regarding a slowdown in demand for commodities, the short- to medium-term outlook for thermal coal remains promising, thanks largely to a strong demand profile.

Demand for energy coal across Asia and the emerging economies in Africa is expected to continue. It is currently the supply side of the equation that is impacting both the immediate short term pricing and longer term sentiment for thermal coal.

With the emergence of shale gas in North America, coal producers in that market have been challenged by low gas prices. As a result, they have sought new markets in Europe and Asia. The speed at which this North American coal has been diverted from domestic to international markets and its effect on global pricing has surprised many.

With concern around short-term pricing, there will be deferral of new energy coal projects and slowing of already committed capital projects as producers seek more clarity on the medium- to long-term fundamentals. This slowing of supply will underpin prices in the medium term subject to strong and continuing demand.

It is no surprise — considering the current environment — that market participants are focussing on cost structures, operational efficiency and the future of the mines at the higher end of the cost curve. We expect to see those assets be placed on reduced shifts or mothballed in the current market.

In the longer term (post 2016/17), the emergence of coal seam and shale gas presents significant headwinds for thermal coal and will shape the role and markets in which energy coal is supplied and used. This will largely depend on the scale of the North American production, the infrastructure required to export gas as LNG from North America and the US government's policy approach from a domestic perspective. A large portion of the Australian CSG has already been contracted into Asia.

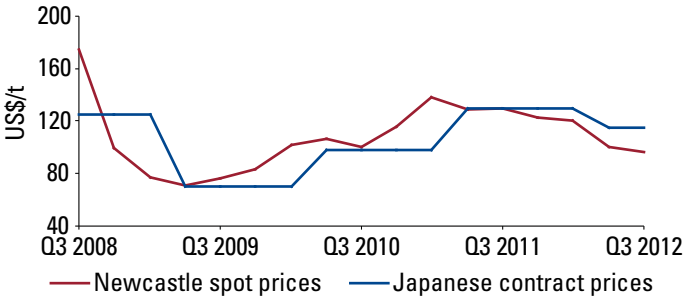
Coal will remain competitive from a cost perspective; however, prices may be dampened as the 'new' energy supply meets the international market.

Commodity outlook

Macroeconomic slowdown (leading to soft demand) and increased supplies from key exporters exerted downward pressure on Thermal coal prices during third quarter of 2012. The average coal price during 3Q12 of US$96.16/t was 26 percent lower on y-o-y basis and 4 percent lower on q-o-q basis.

While the current price slump is not expected to recover significantly in the short term, it is also not expected to fall further. With fall in coal stocks held by China's major power generators and ports, rise in global consumption and increased supply cutbacks by some major producers, the prices are expected to pick up in 2013-14.

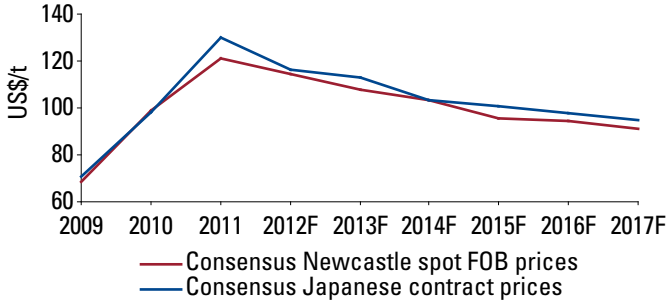
Figure 1: Historical prices of thermal coal



Source: IMF, Bureau of Resources & Energy Economics (BREE)

In 2012, according to BREE September 2012 estimates, spot prices of thermal coal are expected to remain in line with the Japanese contract price of US$115/t. Export tax on Indonesian coal, higher cost, producers' reduced output and better overall economic outlook are expected to provide upward support to the prices. However, over the next few years, prices are expected to gradually decline, although still remaining high in historical terms. The decline in prices reflects strong supply growth from Australia, Indonesia, Colombia and emerging exporters such as Mongolia and Mozambique. According to the average consensus estimates (at the end of 13 November 2012), the price of thermal coal is expected to touch US$100/t by 2015 and stabilize at US$90/t over the long term. The increasing supply of unconventional (coal seam/shale) gas and adequate growth in the supply of thermal coal weigh on the longer-term outlook.

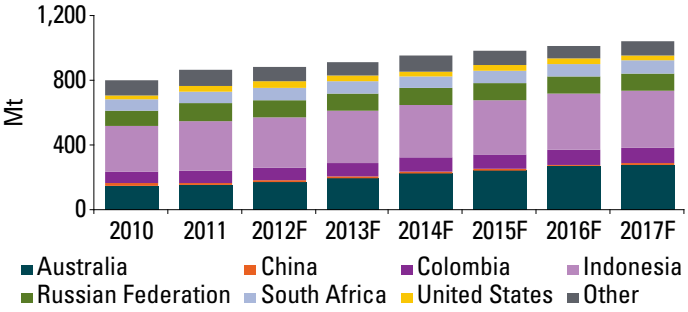
Figure 2: Price forecast for thermal coal



Source: BREE (Resources and Energy Quarterly, September quarter 2012), Goldman Sachs (12 November 2012), RBC Capital Markets (3 October 2012), Societe General (10 September 2012), Morgan Stanley (13 November 2012), EIU (accessed 10 November 2012), KPMG analysis

Supply and demand

Figure 3: Global exports for thermal coal

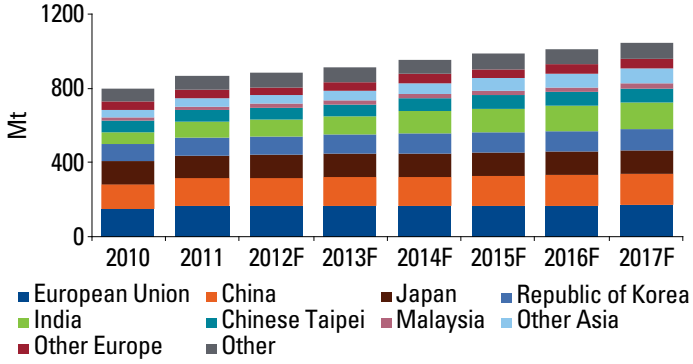


Source: BREE (Resources and Energy Quarterly, September quarter 2012 and March quarter 2012), KPMG analysis

According to the BREE report, (Resources and Energy Quarterly, September quarter 2012), thermal coal exports are forecast to remain low during 2012, registering a two percent y-o-y growth compared with the nine percent growth in 2011. Further the report discusses, of the total 882Mt thermal coal exports, a majority will be supplied by higher exports from Australia, Indonesia and Colombia.

- In 2012, Australia is expected to register 12 percent growth in exports to reach 165Mt volume, which will be primarily supported by higher production rates at existing mines and new production at recently commissioned operations. Increased volumes are forecast to come from Xstrata's Mangoola mine (annual capacity of 13.5Mt), stage 1 of Yancoal's Moolarben mine (13.5Mt) and Peabody Energy's expansion of its Wilpinjong operation (additional annual capacity of 2-3Mt, according to BREE). In 2013, Australia is expected to export at a higher rate of 17 percent, as production from projects such as Hunter Valley Operations Expansion (6Mt) and Narrabri Coal Project stage 2 expansion (4.5Mt) support exports.
- Exports by Indonesia are expected to increase one percent to reach 311Mt in 2012 and further three percent to reach 320Mt in 2013. The growth of exports would be primarily supported by mines such as those of PT Bumi, PT Adaro Energy and PT Indika Energy and output expansion from mines located in the East Kalimantan region.
- Colombia's exports are expected to grow five percent to reach 79Mt in 2012, supported by capacity expansions at mines in La Guajira and César regions.
- Exports from the US are expected to grow significantly in 2012, as excess supplies of thermal coal are exported from the country due to abundant supply of cheap natural gas.

Figure 4: Global imports of thermal coal



Source: BREE (Resources and Energy Quarterly, September quarter 2012 and March quarter 2012), KPMG analysis

Growth of thermal coal imports is expected to soften in 2012 due to macroeconomic slowdown in Europe and lower demand from China. According to the BREE report, (Resources and Energy Quarterly, September quarter 2012), the global imports are expected to grow by two percent to reach 879Mt in 2012, compared to a nine percent y-o-y growth rate achieved in 2011. The imports are, however, expected to grow at a faster rate in 2013 and beyond.

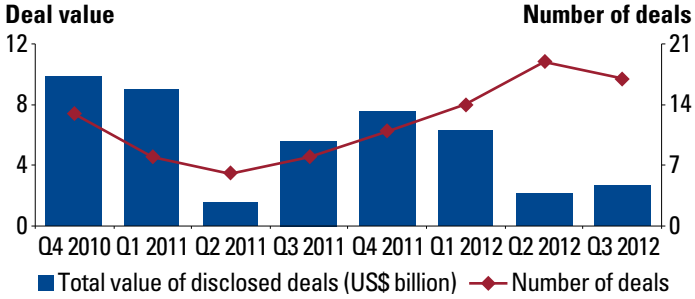
- China, which uses coal for 80 percent of its power generation, is expected to witness only two percent y-o-y growth in imports, in 2012, compared with a robust 13 percent growth in 2011. Growing focus on hydroelectric production and overall economic slowdown can be held accountable for the expected demand slump. In 2013, China is expected to witness better thermal coal demand as the government authorities have been taking steps to support economic activity in the country, although the thermal coal demand is not likely to match the growth witnessed in the last few years. Further, with increasing environmental awareness and climate change commitment, cleaner fuels for power generation would be preferred over coal, resulting in declining share of coal in the overall energy mix for power generation.
- Imports into the European Union (EU) are expected to decline by one million ton to reach 163Mt in 2012 due to lower electricity demand, a result of the Eurozone crisis. Weak economic growth, coupled with climate-change-related and energy-security policies that switch electricity-generation fuel mix away from thermal coal, is expected to constrain growth of thermal coal imports in the EU.
- Thermal coal is expected to remain an important contributor to Japan's energy mix in the short run as the country has decided against nuclear power generation, in the short term at least. In 2012, Japan's imports of thermal coal are expected to increase four percent to reach 127Mt million tonnes. The future growth of imports in Japan will primarily depend on the decision that the Japanese government will take for its future power generation.
- In India, continued growth in coal demand (driven by efforts to increase access to electricity in rural areas and provide back-up for hydroelectric power generation) and constrained domestic production are expected to increase imports in the country. Although, the magnitude of growth in imports would primarily depend on the macroeconomic situation as a slowdown can hamper the consumption growth, thereby the growth of imports.

Key developments

Ownership changes

In 3Q12, the total value of major deals announced in the coal industry was US$2.68 billion, up from US$2.17 billion in the 2Q12, representing a q-o-q increase of 24 percent (refer to Figure 5). The number of deals announced in the 3Q12 fell to 17, against 19 announced in the 2Q12. Out of the 17 deals announced in the quarter, three have been successfully completed.

Figure 5: Value of major deals announced in coal industry



Source: Mergermarket Factiva, KPMG analysis

Table 1: Top thermal coal deals announced in 3Q12

Date announced	Target	Nation of target	Acquirer	Nation of acquirer	Status	Value of transaction (US$ million)	Stake (%)
01-Oct-12	Xstrata plc	Switzerland	Glencore International	Switzerland	Announced	50,800.0*	-
06-Sep-12	CIC Energy Corp	Canada	Jindal (BVI) Ltd	India	Completed	116.0	100.00
24-Jul-12	Minas de Revuboe	Mozambique	Anglo American Plc	UK	Announced	555.0	58.90

Source: Mergermarket (accessed 30 September 2012), Intierra (accessed 30 September 2012), KPMG analysis
Note: Value of transactions are hyperlinked to source links
* According to company press release, dated 25 October 2012, the deal value stands at GBP31.9 billion or US$50.8 billion.

Regulatory updates

The regulations introduced in the third quarter of 2012 were mostly intended to promote development of the domestic coal mining sector and to more strictly control the mining activities and their environmental impact. The controls are being implemented to retain and provide the benefits of non-renewable resources, such as coal, to the future generations and to increase the welfare of the local community.

Table 2: List of recent regulations in coal industry

Country/ Region	Regulation/topic	Description
US	Federal mine safety rule for correcting specific hazards identified during inspection	The US Mine Safety and Health Administration implemented a new rule that requires mine operators to identify and correct hazardous conditions and violations of nine health and safety standards that pose the greatest risk to miners.
US	Withdrew two rules aimed at improving rock dusting practices in coal mining	West Virginia mine safety regulators have announced withdrawal of two emergency rules that were earlier issued to improve rock-dusting practices in the coal mines.

Project updates

Table 3: Major greenfield projects

Project	Country	Operators	Type	Potential start year	Thermal coal production (Mtpa)	Progress and updates
Carmichael Coal Project	Australia	Adani	Thermal coal	2015	60.0[i]	Environmental Impact Statement (EIS) study under progress
China First Coal project (Waratah Galilee)	Australia	Waratah Coal	Thermal coal	2014	40.0	Government approval awaited (source: BREE)
South Galilee Coal Deposit	Australia	American Metals and Coal International	Thermal coal	2015	17.0[ii]	Approval received from the the Queensland government for the release for public review of the environmental impact statement
Wandoan coal project	Australia	Xstrata	Thermal coal / Coking coal	N.A.	30.0	As of July 2012, Xstrata was undergoing the final Queensland Government approval process.

Source: Company data, BREE.
Note: Project names are hyperlinked to source links.

i. Production of 60 MTPA expected to be achieved starting 2022.
ii. Peak production per annum inclusive of open-cut and underground coal-mining operations.

Table 4: Major brownfield projects

Project	Country	Operators	Commodity	Potential start year	Thermal coal expansion (Mtpa)	Progress and updates
Grootegeluk Medupi Expansion Project	South Africa	Exxaro Resources	Thermal coal	2012	14.6	According to company's latest press release in 2012, the project was progressing as planned and within budget. Update on the progress is expected to come in 2013.
P40 – Cerrejon thermal coalmine expansion	Colombia	Anglo American, BHP Billiton and Xstrata*	Thermal coal	2013	8.0	The Cerrejon P40 project, to increase saleable thermal coal production by 8Mtpa to 40Mtpa is on schedule and budget. As on 17 October 2012, the project is 47 percent complete.
Ravensworth North project	Australia	Xstrata	Thermal coal	2013	8.0	Project continues to progress on time and on budget.
Ulan West Expansion	Australia	Xstrata	Thermal coal	2014	6.7	Construction is progressing on time and on budget, with longwall mining set to begin in 2014.
Hunter Valley Operations	Australia	Rio Tinto	Thermal coal	2012	6.0	Construction completed in 2012.
Narrabri Coal Project (stage 2)	Australia	Whitehaven	Thermal coal/ Coking coal	2012	4.5	Construction completed in 2012.
RX1 Project – expansion at Mt Arthur Coal	Australia	BHP Billiton	Thermal coal	2012	4.0	Project completed in June 2012 quarter, ahead of schedule.
Moatize II	Mozambique	Vale	Thermal coal/ Coking coal	2014	3.3	About 21 percent of the physical process has been completed (according to October 2012 release).

Source: Company data, BREE
Note: Project names are hyperlinked to source links.
* The project is jointly held by these companies in equal proportions of 33.3% each.

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