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**QUARTERLY COMMODITY INSIGHTS**  
**BULLETIN**



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## Metallurgical Coal

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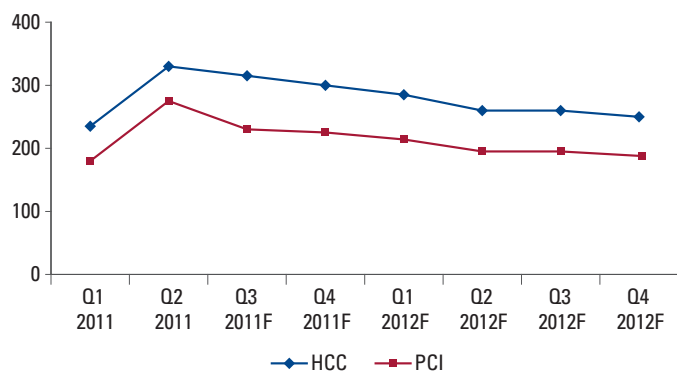
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### Commodity outlook

In the second of quarter of 2011, free on board (FOB) prices at the Port of Rizhao, China, started at a low of US\$281.33/metric ton (mt) on April 1, 2011, and rose to a high of US\$294.24/mt on June 30, 2011. Before the beginning of the second quarter, the benchmark price for April–June trade was estimated at US\$330/mt, based on the contract price set by Anglo American with Japanese steelmakers. For the rest of the year, however, metallurgical coal (met coal) prices are expected to remain higher than US\$300/mt, due to the high growth in demand from BRICSA (Brazil, Russia, India, China and South Africa) economies and because of severe flooding in the Bowen Basin of Queensland, Australia, which resulted in a drop in coal production and supply.

According to the June 2011 JP Morgan report on global coal, the pricing level is expected to be between US\$150 and US\$300 by the end of this decade. The actual prices, however, is dependent on the ability of the new production capacity coming up in Mongolia, Mozambique and Siberia to satisfy the demand.

**Figure 1: International coking coal prices (US\$/metric ton)**

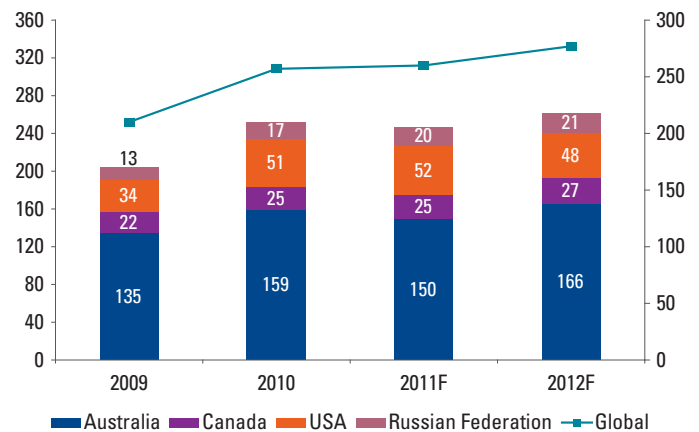


Source: JP Morgan



### Supply and demand

**Figure 2: Global metallurgical coal exports (million tons), 2009–12F**



Source: ABARES, June Quarter 2011

- In early 2011, Queensland was hit by heavy rains and severe floods, which affected its coal production. Nevertheless, due to the new capacities at the Curragh, Oaky Creek and Newlands mines, the state expected to increase its production marginally in the second half of 2011. Nevertheless, union strikes at BHP Billiton (Australia) could marginalize any increase in the supplies. Therefore, the year-end met coal exports are expected to decrease overall by six percent from 2010 levels, to 150 million tons. Given good climatic conditions, the exports are expected to rise 11 percent year-on-year (y-o-y), to 166 million tons in 2012. Despite the lower production in the first half of 2011, Australia continues to be the top exporter of met coal and enjoys nearly 60 percent of market share in the global seaborne market.
- In 2012, Canada's exports are forecast to increase by eight percent y-o-y, to 27 million tons, as a result of small capacity expansions at a number of mines. In 2011, its exports are projected to remain flat, at 25 million tons, mainly due to weather-related supply disruptions and strikes at Teck.
- In 2011, US met coal exports are expected to increase two percent from 2010 levels, to 52 million tons, on account of rapid global steel production as well as the supply constraints in Australia, Canada, Indonesia and South Africa. However, in 2012, with Australian and Canadian mines returning to normal operation, the demand for coal could ease by eight percent.

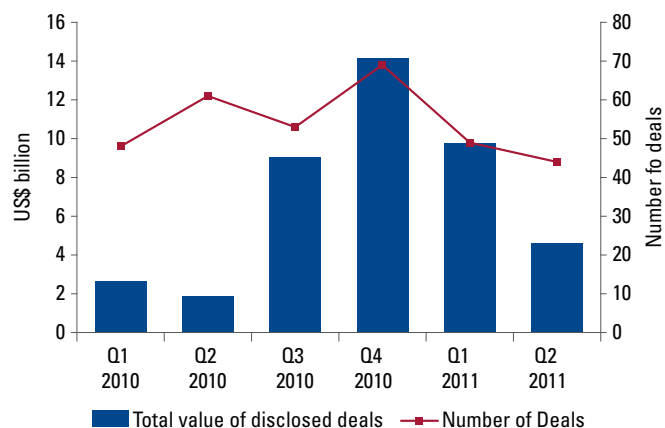
- Steel consumption, particularly in Asia, is forecast to grow by about 60 percent over the next decade, which could drive the demand for met coal.
- In 2011, China's met coal imports are expected to increase six percent, to 50 million tons, as a result of the restocking of steel mills. In 2012, its imports are forecasted to increase to 52 million tons, up four percent from 2011 levels, on account of a rise in demand from the steel industry.
- By 2015, coal consumption in Asia (led by China and India) is expected to rise to 750 million tons. Over the next five years, Indian imports of hard coking coal are expected to rise 112 percent, due to facility upgrades in the steel industry.
- In 2012, Japanese imports are expected to increase 13 percent, to 59 million tons, as post-tsunami development progresses.
- Imports are also on the rise in the EU. In 2012, imports are expected to grow four percent over 2011 levels, to 50 million tons, mainly as a result of a recovery in the steel industry.

## Key developments

### Ownership changes

The total value of completed deals in Q2 2011 was US\$4.62 billion, up from US\$1.87 billion in Q2 2010, as shown in Figure 4. The industry's overall deal values decreased by 53 percent in Q2 over Q1 2011. In total, 44 deals were completed, 8 are pending and another 37 are intended.

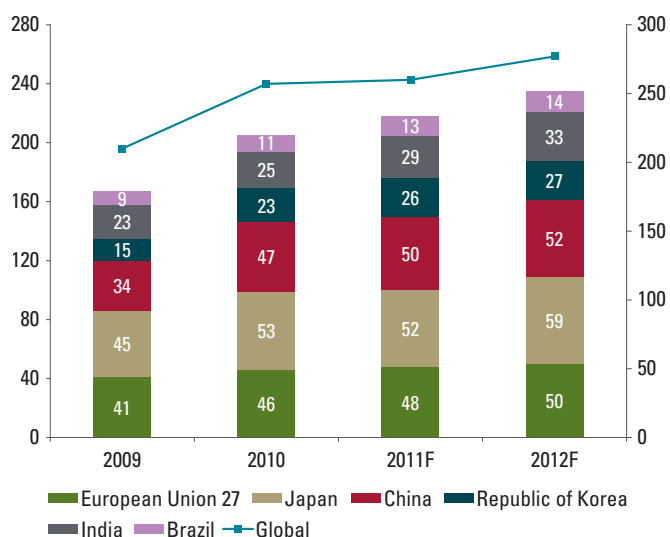
Figure 4: Value of completed deals in coal industry



Source: Thomson One Banker

- In the US, Atlas Acquisition Corp, a wholly-owned unit of Arch Coal, acquired the entire share capital of International Coal Group, a Scott Depot-based coal mining company, for US\$3.47 billion. With this, Arch became the second largest metallurgical coal producer in the US.
- Hunnu Investments of Singapore, a wholly-owned unit of Hunnu Coal, acquired 70 percent of the Altai Nuurs Coking Coal Project from Rio Tinto Minerals for US\$42.02 million.
- US-based Rhino Resources Partners acquired undisclosed metallurgical coal resources located in Randolph and Upshur counties in West Virginia, for US\$7.5 million.
- Zhao Ming (Chairman of Puda Coal China) planned to launch a tender offer to acquire the remaining 74.71 percent interest in Puda Coal, a wholesaler of coking coal products, for US\$269.14 million.
- Mongolian Mining Corp agreed to acquire the Baruun Naran Coking Coal Mine of QGX, a British Columbia-based mineral mining and exploration company, from Mongolia Holdings, a unit of Kerry Holdings of Hong Kong, for an estimated US\$950 million. The deal is pending.

Figure 3: Global metallurgical coal imports (million tons), 2009–12F



Source: ABARES, June Quarter 2011

Table 1: Top coal deals (completed) in Q2 2011

Date announced	Target	Target nation	Acquirer	Acquirer nation	Status	Value of transaction (US\$ million)
January 1, 2011	Massey Energy	US	Alpha Natural Resources	US	Completed	7,165.24
May 2, 2011	International Coal Group Inc	US	Atlas Acquisition Corp	United States	Completed	3,472.61
May 12, 2011	Mongolia Energy Corp Ltd	Hong Kong	Chow Tai Fook Nominee Ltd	Hong Kong	Completed	257.34
April 19, 2011	Ember Resources Inc	Canada	Investor Group	Canada	Completed	130.75
June 10, 2011	Elk Horn Coal Co LLC	United States	Rhino Resource Partners LP	United States	Completed	120.00
June 30, 2011	MRI Trading AG	Switzerland	Capsolon Pte Ltd	Singapore	Completed	94.00

Date announced	Target	Target nation	Acquirer	Acquirer nation	Status	Value of transaction (US\$ million)
June 3, 2011	Alden Resources LLC	United States	Globe Specialty Metals Inc	United States	Completed	80.00
May 20, 2011	Inner Mongolia Yakeshi	China	Shanghai Sundiro Invest Co Ltd	China	Completed	76.88
April 21, 2011	Dian Anugrah-Coal Asts	Indonesia	PHI Energy Corp	US	Completed	50.00
May 23, 2011	Rio Tinto-Altai Nuurs Coking	Mongolia	Hunnu Investments Pte Ltd	Singapore	Completed	42.02
May 16, 2011	Ellembly Holdings Pty Ltd	Australia	Gloucester Coal Ltd	Australia	Completed	31.70

## Regulatory Updates

Governments across the world are considering regulations that can influence the pricing of met coal in the near future. Australia is introducing a two-stage carbon pricing

mechanism, Indonesia has passed a regulation to set up a benchmark price for all export and domestic sale of coal and other minerals, and India is considering liberalization of its coal industry for better private sector participation.

### List of recent regulations regarding metallurgical coal industry

Country	Regulation	Description
Australia	Carbon emissions scheme	<ul style="list-style-type: none"> <li>The government plans to introduce a two-stage system to put in place a domestic carbon price mechanism. Stage one will start as a permit system, to ensure fixed carbon pricing, while stage two will require emitters to purchase caps from the government. This cap-and-trade scheme is expected to be implemented by 2015.</li> </ul>
India	Government mulls privatizing of coal industry	<ul style="list-style-type: none"> <li>The Coal Ministry plans to liberalize the industry, allowing private companies to enter it, and thereby improve production.</li> </ul>
India	'Green rule' proposed by government	<ul style="list-style-type: none"> <li>To clear the air over no-go zones, India has proposed a new regulation that requires mining companies to use a certain percentage of their profits for reforestation activities. Firms now need to reforest about thrice the area mined.</li> </ul>
India	Import duty on coking coal may be slashed	<ul style="list-style-type: none"> <li>On suggestions from the steel industry, a wider variety of coking coals may be exempted from the current five percent import duty.</li> </ul>
Indonesia	Benchmark pricing obligation	<ul style="list-style-type: none"> <li>To protect production royalties, Indonesia passed a regulation to set up a benchmark price for all export and domestic sale of coal and other minerals. This benchmark price for coal will be determined by the Director General of Minerals and Coal. The benchmark price for metallurgical coal will factor in the average prices in local and international markets.</li> </ul>
US	MSHA publishes final rule for rock dust	<ul style="list-style-type: none"> <li>The federal Mine Safety and Health Administration (MSHA) has extended the timelines to the coal industry to comment on the proposed rule to cut miners exposure to dust by half. Working in the dusty areas exposes the miners to black lung disease. MSHA estimates that this would have an impact of US\$93 million in the first year and about US\$44.5 million annually on the coal industry.</li> </ul>
US	MSHA issues final rock dust rule	<ul style="list-style-type: none"> <li>MSHA is tightening the requirements for incombustible content in coal, rock and other dust in underground mines. Under this rule operators now need to raise the content from 65 percent to 80 percent. Inadequate composition in the rock dust can potentially increase unplanned explosions.</li> </ul>
US	EPA regulations	<ul style="list-style-type: none"> <li>Environmental Protection Agency (EPA) is panning to impose a few regulations the coal industry. These include the 'Cross-State Air Pollution Rule' which mandates maintenance of certain clean air standards and the Utility Maximum Achievable Control Technology (MACT) rule which aims to control toxic air emissions from power plants. It is also working to bring coal ash, smog, mercury, water intake and green house gasses under the regulatory purview.</li> </ul>
South Africa	Nationalization	<ul style="list-style-type: none"> <li>Due to pressure from the African National Congress Youth League; the African National Congress, as the ruling party in South Africa, decided to add the topic of nationalization of the country's mining industry to its agenda for discussion at its upcoming party conference in 2012. The known mineral resources in South Africa is currently valued at a conservative US\$2.5 trillion, still the highest of any country.</li> </ul>

## Global market volatility

### European debt crisis

European coal prices fell US\$1–US\$1.75 per ton, as the euro weakened amid fears of the debt crisis spreading from Greece and Portugal to other European economies.

## Future projects

Table 2: Major greenfield projects

Project	Country	Operators	Commodity	Potential start year	Metal production (mt/annum)
Moatize	Mozambique	Vale	Met coal	Q3 2011	8.5
Caval Ridge	Australia	BMA – BHP Billiton (50%) and Mitsubishi (50%)	Met coal	2013	5.5
Ellensfield Coal Mine*	Australia	Vale (100%)	Met coal	H1 2015	4.5 (52% HCC)
Eagle Downs Coal Mine	Australia	Vale (50%) and Aquila Coal Pvt. Ltd. (50%)	Met coal	2016	4.5
Grosvenor*	Australia	Anglo American	Met coal	2016	4.3
Daunia	Australia	BMA – BHP Billiton (50%) and Mitsubishi (50%)	Met coal	2013	4.5
Morenbah South*	Australia	Anglo American (50%) Exxaro (50%)	Met coal	2019	-
Belvedere	Australia	Vale (75.5%) and Aquila Resources Ltd. (24.5%)	Met coal	-	8
Elga	Russia	Michel	Met coal	August 2011	9 (2015)
Benga	Mozambique	Rio Tinto (65% RIV)	Met coal	Q4 2011	Stage 1: 5.3, Stage 2: 4.7
Zambeze	Mozambique	Rio Tinto (100%)	Met coal	2014	43

Source: Company data

\*Projects yet to be approved

Table 3: Major brownfield projects

Project	Country	Operators	Commodity	Potential start year	Metal production (kt/annum)
Newlands Northern Underground	Australia	Xstrata (55%), Itochu Coal Resources (35%) and Sumitomo (10%)	Met coal	H2 2011	3
Broadmeadow Life Extension	Australia	BMA – BHP Billiton (50%) and Mitsubishi (50%)	Met coal	2013	0.4
Hay Point Stage 3 Expansion	Australia	BMA – BHP Billiton (50%) and Mitsubishi (50%)	Met coal	2014	Increase in port capacity by 11 mtpa
Oaky Creek Expansion	Australia	Xstrata (55%), Sumisho Coal Australia Pty Ltd (25%), Itochu Coal Resources Australia Pty Ltd (15%) and ICRA OY Pty Ltd (10%)	Met coal	2015	6
Kestrel	Australia	Rio Tinto (80%)	Met coal	Late 2012 or Early 2013	-
Bengalla	Australia	Rio Tinto (40%)	Coal	-	9.3

Source: Company data

Note: Analysis covers major coal mining companies such as BHP Billiton, Teck, Xstrata, Anglo American, Rio Tinto and Vale

- BHP Billiton, through BMA (its 50:50 joint venture with Mitsubishi Development), is carrying out extensive greenfield and brownfield explorations at the Bowen Basin in Queensland, adding 4.9 million tons of mine capacity and 11 million tons of annual port capacity. The investment in the three projects — Daunia, BroadMeadow and Hay Point — stands at US\$2.5 billion.
- BHP Billiton owns 75 percent in the Indomet Coal Project (IMC), in Kalimantan, Indonesia. The remaining is with Adora Energy and the project approval is expected in Q3 2011.
- Xstrata is conducting prefeasibility stage checks in the Sarum and Collinsville Open Cut Expansion projects in Australia.
- An expansion of Vale's Moatize project in Mozambique is underway and is expected to double the existing capacity to 22 million tons. This is scheduled for 2014, subject to approval.
- Teck is planning to restart Quintette, a coal mine. Feasibility studies are on and the startup is expected in 2013. It is forecast to deliver 3 million tons of met coal per year.
- Rio Tinto is currently exploring Tete East project (100 percent owned by the company) and has planned to commence concept studies at the end of 2011.