Outlook for International Coal Market

The Institute of Energy Economics, Japan

Atsuo Sagawa
Manager, Coal Group, Fossil Fuels & Electric Power Industry Unit
Steam coal market: While oversupply has continued, China’s imports have decreased. ⇒ Price decline

The spot steam coal price (an FOB price at Newcastle port in Australia) fell from $86/ton at the beginning of 2014 to $61/ton at the beginning of 2015.

The price exceeded $70/ton temporarily on a supply decline caused by heavy rain and other factors after the beginning of 2015 and fell to $55/ton later before standing at around $60/ton at present.

**Spot prices of steam coal (FOB)**

Note: NEWC Index: Spot steam coal price at Newcastle port in Australia
RB Index: Spot steam coal price at Richards port in South Africa
DES ARA Index: Spot steam coal price at Amsterdam/Rotterdam/Antwerp ports in Europe
Source: globalCOAL website
Coking coal market: A fall in Chinese imports under oversupply ⇒ A price decline

The spot coking coal price (an FOB price for Australian hard coking coal) dropped from $134/ton at the beginning of 2014 to $112/ton in April 2014 and remained in a $110-115/ton range until March 2015.

The price fell to $85/ton later and stands below $90/ton at present.

Spot prices of hard coking coal

Global coal consumption has increased, led by Asian demand.

But Asian consumption growth decelerated in 2014.

⇒ The largest factor behind the deceleration was the leveling of Chinese consumption.

European/Eurasian consumption has decreased since 2013. Consumption in other regions has almost leveled off.

### Global Coal Consumption Trends

Source: BP Statistical Review of World Energy June 2015

<table>
<thead>
<tr>
<th>Region</th>
<th>Consumption (million toe)</th>
<th>Growth rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asia-Pacific</td>
<td>2,416.3</td>
<td>2,590.8</td>
</tr>
<tr>
<td>Europe/Eurasia</td>
<td>490.2</td>
<td>511.5</td>
</tr>
<tr>
<td>North America</td>
<td>567.5</td>
<td>536.5</td>
</tr>
<tr>
<td>Latin America</td>
<td>27.3</td>
<td>39.9</td>
</tr>
<tr>
<td>Middle East/Africa</td>
<td>110.0</td>
<td>108.6</td>
</tr>
</tbody>
</table>

Source: BP Statistical Review of World Energy June 2015
Steam coal imports

- Steam coal imports in the world have increased by 20-40 million tons per year. China and India had driven the increase before Chinese imports declined by 17 million tons in 2014.
- Steam coal imports in the European Union increased in 2011 and 2012.

Coking coal imports

- Coking coal imports in the world have increased by up to 30 million tons per year. China and India had driven the increase before Chinese imports declined by 13 million tons in 2014.

Note: The EU covers 15 countries.
Source: Trade Statistics in each country
Coal consumption has decelerated its growth since 2012 due to an economic growth slowdown and environmental measures under air pollution.

Consumption in tons of coal equivalent leveled off in 2014.

Raw coal production growth slowed to 1.1% in 2012 and 2013 and became negative in 2014.

As production has started at coalmines whose development was launched when demand was expanding, total coal production capacity has become excessive. Coalmines that fail to meet regulations or have safety problems are being shut down.

Coal Supply/Demand Trends in China (consumption and production)

Coal consumption trends

Raw coal production trends

Imports in 2014 decreased by 36 million tons from the previous year. The decline included:

- Steam coal (steam and other coal): ▼17.2 million tons
- Coking coal: ▼13.0 million tons
- Steam coal imports from Indonesia posted a large decline of 18.3 million tons.
- Coking coal imports from Canada, Russia and the United States declined each by 3-4 million tons.

**Coal Import Trends in China (imports)**

**Steam Coal Import Trends**

**Coking Coal Import Trends**

Note: Steam coal covers steam and other coal.

Source: TEX Report (based on China customs statistics)
Since early 2015, coal supply and demand have declined year on year.
- Raw coal output: 1.46 billion tons (down by 6% or 93.21 million tons yr/yr)
- Coal sales: 1.32 billion tons (down 8.8% or 127 million tons yr/yr)
- Coal consumption: 1.57 billion tons (down 5% yr/yr)
- Coal imports: 83.2 million tons (down 38.4% or 51.9 million tons yr/yr)

Factors behind China's falling coal demand include:
① Stagnation of electricity, steel and cement demand accompanying economic growth slowdown
② Coal consumption curbs and environmental regulations in major urban and coastal regions exposed to air pollution
③ Brisk hydro power generation, etc.

The import decline is reportedly attributed to demand adjustments and falling domestic coal prices.

<table>
<thead>
<tr>
<th>Type</th>
<th>January-May 2014</th>
<th>January-May 2015</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coking coal</td>
<td>25,321</td>
<td>16,555</td>
<td>-8,766</td>
</tr>
<tr>
<td>Steam coal</td>
<td>64,514</td>
<td>36,143</td>
<td>-28,371</td>
</tr>
<tr>
<td>Anthracite</td>
<td>14,622</td>
<td>9,698</td>
<td>-4,924</td>
</tr>
<tr>
<td>Subtotal</td>
<td>104,457</td>
<td>62,396</td>
<td>-42,061</td>
</tr>
<tr>
<td>Lignite</td>
<td>30,672</td>
<td>20,849</td>
<td>-9,823</td>
</tr>
<tr>
<td>Grand total</td>
<td>135,129</td>
<td>83,245</td>
<td>-51,884</td>
</tr>
</tbody>
</table>

Note) Steam coal covers steam and other coal.

Source: TEX Report (based on China customs statistics)
India’s Coal Imports

- Imports in volume have steadily increased since FY2011, centering on steam coal.
- Imports in volume in FY2014 increased by 50 million tons to more than 200 million tons.
- Steam coal imports are mainly from Indonesia and South Africa and coking coal imports are primarily from Australia.
- Both steam and coking coal imports are expected to steadily increase in the future.

Coal import trends

Steam coal import trends

Coking coal import trends

Source: Ministry of Commerce and Trade
Coal imports in volume have fallen since 2013, totaling 180 million tons in 2014.
Steam coal imports in volume declined.
Coking coal imports in volume almost leveled off.
Steam coal consumption declined in 2013 and 2014 and will continue to fall in the future due to a coal-fired power generation drop accompanying growing renewable energy generation, and air pollution and global warming prevention measures.

Source: BP Statistical Review of World Energy June 2015
Australian coal exports in volume in 2011 declined due to heavy rain in Queensland.

They have recovered and increased steadily since 2012.

In 2014, Australian coal imports increased to 387 million tons, making Australia the world’s largest coal exporter again.

While price drops have forced coalmines to growingly be shut down or suspend production, Australian coal export capacity is set to meet demand growth until 2016.

But coal development project delays or postponements resulting from weak coal prices are feared to affect the supply-demand balance in several years.

### Coal export trends

<table>
<thead>
<tr>
<th>Year</th>
<th>Anthracite, etc.</th>
<th>Coking coal</th>
<th>Steam coal</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>250.8</td>
<td>261.2</td>
<td>274.5</td>
<td>586.5</td>
</tr>
<tr>
<td>2008</td>
<td>261.1</td>
<td>278.6</td>
<td>301.0</td>
<td>840.7</td>
</tr>
<tr>
<td>2009</td>
<td>274.5</td>
<td>301.0</td>
<td>321.5</td>
<td>896.0</td>
</tr>
<tr>
<td>2010</td>
<td>280.8</td>
<td>316.1</td>
<td>347.9</td>
<td>944.8</td>
</tr>
<tr>
<td>2011</td>
<td>280.8</td>
<td>316.1</td>
<td>347.9</td>
<td>944.8</td>
</tr>
<tr>
<td>2012</td>
<td>316.1</td>
<td>358.4</td>
<td>386.7</td>
<td>1060.2</td>
</tr>
<tr>
<td>2013</td>
<td>358.4</td>
<td>386.7</td>
<td>386.7</td>
<td>1131.9</td>
</tr>
<tr>
<td>2014</td>
<td>386.7</td>
<td>386.7</td>
<td>386.7</td>
<td>1159.1</td>
</tr>
</tbody>
</table>

Source: TEX Report (based on Australian trade statistics)
Indonesian coal exports in volume had expanded rapidly in line with an Asian market expansion before declining in 2014 by 25 million tons from the previous year. Exports to China (imports by China) declined substantially, while those to India increased steadily.

Coal export trends

Source: TEX Report (based on Indonesian trade statistics)
Indonesia’s Coal Exports

Indonesia’s coal exports will decline in the future.

Coal export trend

<table>
<thead>
<tr>
<th>Year</th>
<th>Production</th>
<th>Exports</th>
<th>Domestic consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>280</td>
<td>215</td>
<td>65</td>
</tr>
<tr>
<td>2011</td>
<td>353</td>
<td>287</td>
<td>66</td>
</tr>
<tr>
<td>2012</td>
<td>412</td>
<td>345</td>
<td>67</td>
</tr>
<tr>
<td>2013</td>
<td>474</td>
<td>402</td>
<td>72</td>
</tr>
<tr>
<td>2014</td>
<td>458</td>
<td>382</td>
<td>76</td>
</tr>
<tr>
<td>2015</td>
<td>425</td>
<td>323</td>
<td>102</td>
</tr>
<tr>
<td>2016</td>
<td>419</td>
<td>308</td>
<td>111</td>
</tr>
<tr>
<td>2017</td>
<td>413</td>
<td>292</td>
<td>121</td>
</tr>
<tr>
<td>2018</td>
<td>406</td>
<td>275</td>
<td>131</td>
</tr>
<tr>
<td>2019</td>
<td>400</td>
<td>160</td>
<td>240</td>
</tr>
</tbody>
</table>

Summary (International Coal Market in 2015-2016)

Coal demand

- Asian steam coal demand will increase, with growth centering on India and Southeast Asia.  
  ⇒ Steam coal imports in these regions are expected to increase.
- Asian coking coal demand will increase, with growth centering on India.  
  ⇒ Imports are expected to increase in line with demand growth.
- China’s steam and coking coal imports both are expected to decrease.
- European coal demand will decline due to a fossil power generation drop and enhanced air pollution prevention measures.  ⇒ In line with the demand fall, imports are expected to fall.
- European coking coal demand, though depending on economic conditions (including steel demand), will level off or slightly decrease.  ⇒ In line with the demand trend, imports are expected to level off or slightly decrease.

Coal supply

- As coalmine shutdown and production suspension amid weak coal prices are coupled with production adjustments responding to a demand fall, overproduction will diminish in 2016.
- Matters of concern after 2016 are as follows:
  - Supply capacity could decline due to coal exporting countries’ coalmine shutdown and delay in coalmine development.
  - Indonesian coal exports could decrease due to production restrictions and domestic demand growth in Indonesia.
Summary (Coal Prices in 2015-2016)

Spot steam coal price
(FOB price for shipments from Newcastle, Australia)
- 2015’s 2nd half: Hovering around the present level of $60/ton
- 2016: Ranging from $60/ton to $70/ton

Spot coking coal price
(FOB price for Australian hard coking coal)
- 2015’s 2nd half: Hovering around the present $85-90/ton range
- 2016: Ranging from $90/ton to $100/ton