

## Box A

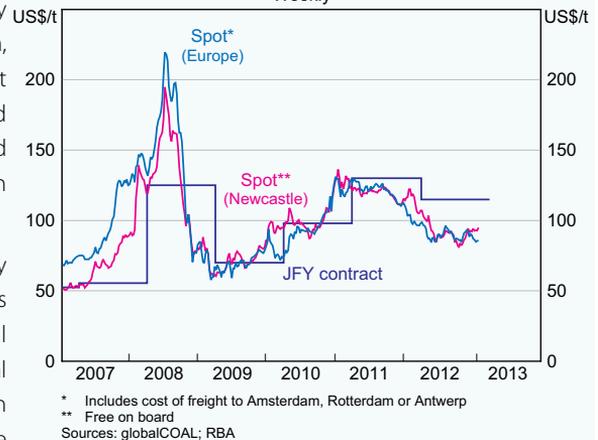
# Thermal Coal Prices

Thermal coal is Australia's third largest commodity export by value, accounting for around 6 per cent of total export income in 2011/12. The majority of Australia's thermal coal exports go to Japan, while Korea and China are also important export destinations. China's importance has increased significantly since 2009, accounting for around one-fifth of thermal coal exports in 2011/12 up from only 2 per cent at the end of 2008.

The pricing arrangements for thermal coal vary between different source and destination countries due to heterogeneity in the quality of thermal coal and variation in historical practices. Australia's coal exports to Japan and Korea are largely based on long-term contracts with annual pricing (an example is the Japanese financial year (JFY) contract price). For exports to other destinations, including China, transactions tend to occur on spot markets. The Newcastle thermal coal spot price is the benchmark price for most Australian thermal coal sold on shorter-term contracts.

The Newcastle spot price for thermal coal has declined over the past two years, with a particularly sharp fall in the first half of 2012, broadly in line with falls in other global benchmark prices for traded thermal coal (Graph A1). Falls in global thermal coal prices reflected both subdued demand for thermal coal from importing countries and an increase in the volume of traded coal. The Newcastle spot price for thermal coal is now noticeably below the 2012 JFY annual contract price, which is likely to lead to lower JFY contract prices in 2013.

**Graph A1**  
**Thermal Coal Prices**  
Weekly



## Markets for Thermal Coal

Thermal coal is used to generate around 40 per cent of the world's electricity, with this share having remained relatively stable over the past three decades. Coal's share in global electricity generation is nearly double that of the second most important source, natural gas. The use of coal in electricity generation varies significantly across countries. For example, the share of electricity generated by coal is relatively high in China and India and relatively low in France, Japan and Russia.

Globally, most thermal coal is used in the country where it is produced, with traded thermal coal accounting for a small share of global consumption. Indonesia and Australia are the largest exporters, reflecting the small size of their domestic energy requirements relative to production, while China and the European Union are the biggest importers of thermal coal (Table A1). The market for traded

**Table A1: The Global Thermal Coal Market – 2011**  
Top five exporters and importers; share of global market

Exporters	Per cent	Importers	Per cent
Indonesia	36	European Union	19
Australia	17	China	17
Russia	13	Japan	14
Colombia	9	South Korea	11
South Africa	8	India	10

Source: Bureau of Resource and Energy Economics

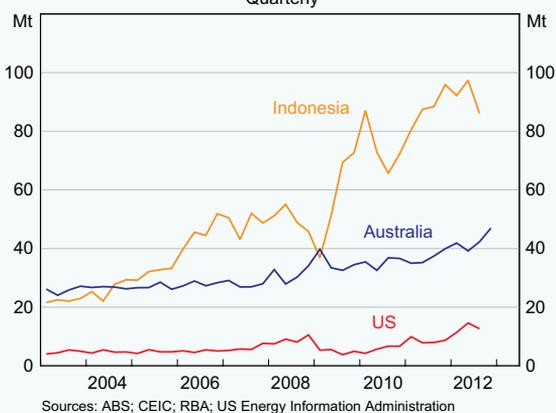
thermal coal can be viewed as consisting of two broad geographical markets, which have been somewhat separate because of the effect of transport costs. The Atlantic market consists of exports from the Americas and Russia to countries in Europe, while the Pacific market largely consists of coal trade from Australia and Indonesia to China, Japan and Korea. These two large markets used to be quite separate, with only Russia and South Africa tending to supply both depending on price differentials across the markets. More recently, lower costs of freight, subdued demand from importers and an increase in the volume of traded coal from both traditional and non-traditional suppliers have all worked to increase the links between these two markets.

### Increased Volume of Traded Coal

A key driver of the fall in thermal coal prices over 2011 and 2012 was an increase in the volume of exports from the Americas. Exports from the United States rose by over 50 per cent in the first half of 2012, after almost doubling over the previous two years from low levels (Graph A2). US coal exports increased as domestic energy demand shifted to gas. This followed a decline in US natural gas prices over 2011 and into 2012 as production of unconventional gas from shale rock increased. While some US coal producers responded by reducing production, others took advantage of low global freight rates to

increase their exports of coal to Asia and Europe. The reduction in demand for coal in the United States also meant that US imports of coal declined. In response, countries that exported to the United States, such as Colombia (which had supplied around 80 per cent of US thermal coal imports in 2011), have increased their exports to other countries.

**Graph A2**  
**Thermal Coal Exports**  
Quarterly



Increased production of thermal coal by the large exporters of coal has also weighed on prices. The rapid expansion in Indonesian coal exports over the past few years has been driven by high rates of investment in resource extraction. In Australia, large-scale expansions to infrastructure, predominantly at the Port of Newcastle, have supported the growth of exports. Further, shipments from major exporters

such as Russia and South Africa, which supply both the Atlantic and the Pacific markets, have also increased over the past couple of years.

## Subdued Global Demand

Demand for thermal coal outside of the United States has also been subdued, especially in Asia and Europe. Coal imports to Europe were flat in the first half of 2012, remaining below their level prior to the global financial crisis, consistent with weakness in industrial production. Growth in industrial production and electricity generation have also been weak in Japan and Korea, with flow-on effects to thermal coal imports. Despite the loss of nuclear energy from the shutdown of Japan's nuclear reactors after the earthquake in March 2011, imports of thermal coal by Japan did not pick up noticeably in 2011–2012. This is because electricity generated from liquefied natural gas rather than coal has largely offset the reduction in nuclear electricity generation in Japan.

Conditions in China have also had noticeable effects on coal prices. After moving from being a net exporter to a net importer of thermal coal in 2009, China's demand has largely supported growth in the

internationally traded market. However, growth in imports of thermal coal into China eased in the first half of 2012, in line with a fall in thermal electricity production. This reflected a slowing in growth in industrial production, particularly in electricity-intensive heavy industries. Thermal electricity production was further dampened by an increase in hydro-electricity.

In contrast, increases in Indian demand for thermal coal are likely to have provided some support to the traded market in recent years. This reflects the fact that growth in thermal electricity generating capacity has been stronger than the growth of domestic Indian coal production. Growth in demand from India has largely been met by exports from Indonesia and South Africa.

Demand conditions are expected to improve gradually in line with the forecast of a pick-up in global economic activity. Supply is also expected to increase as a result of investment in coal production in a range of countries. Uncertainty about the balance between these forces means that there is a wide range of plausible paths for thermal coal prices over the medium term. ▼

