

The 420th Forum on Research Work July 10, 2015

# Outlook for International Coal Market

The Institute of Energy Economics, Japan

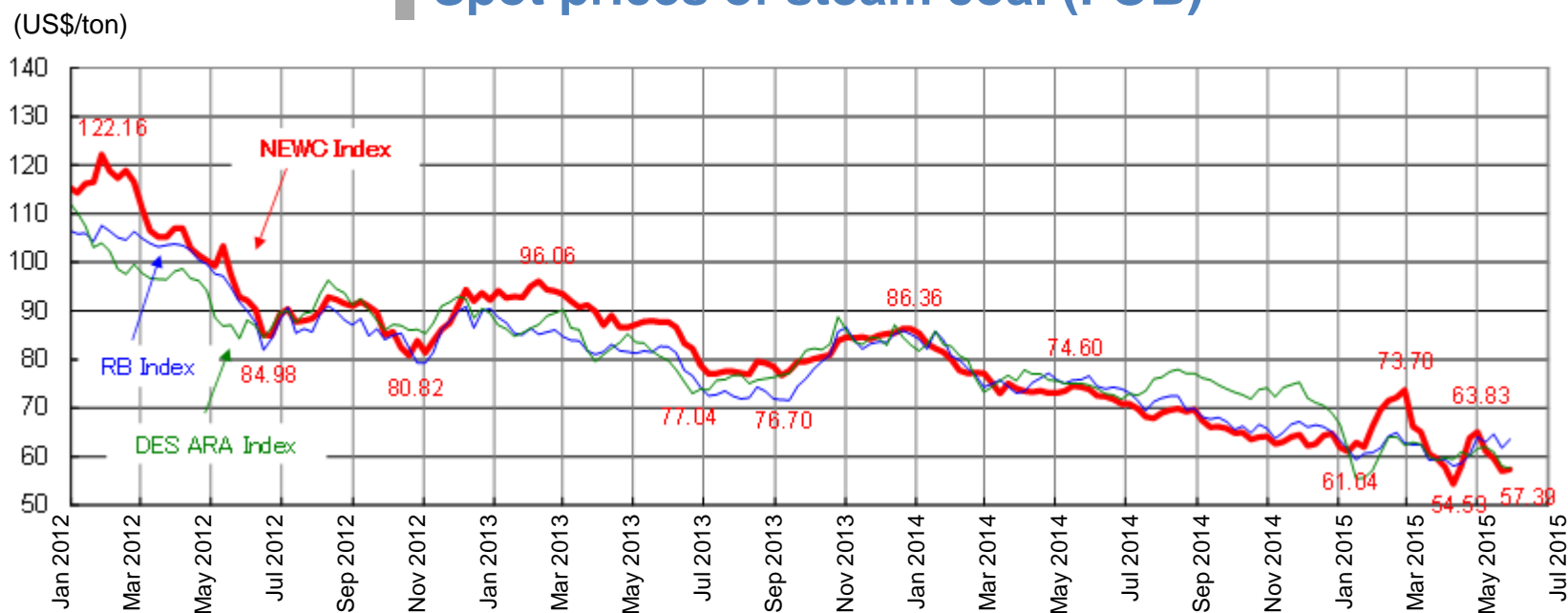
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# Coal Prices (steam coal FOB)

- 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

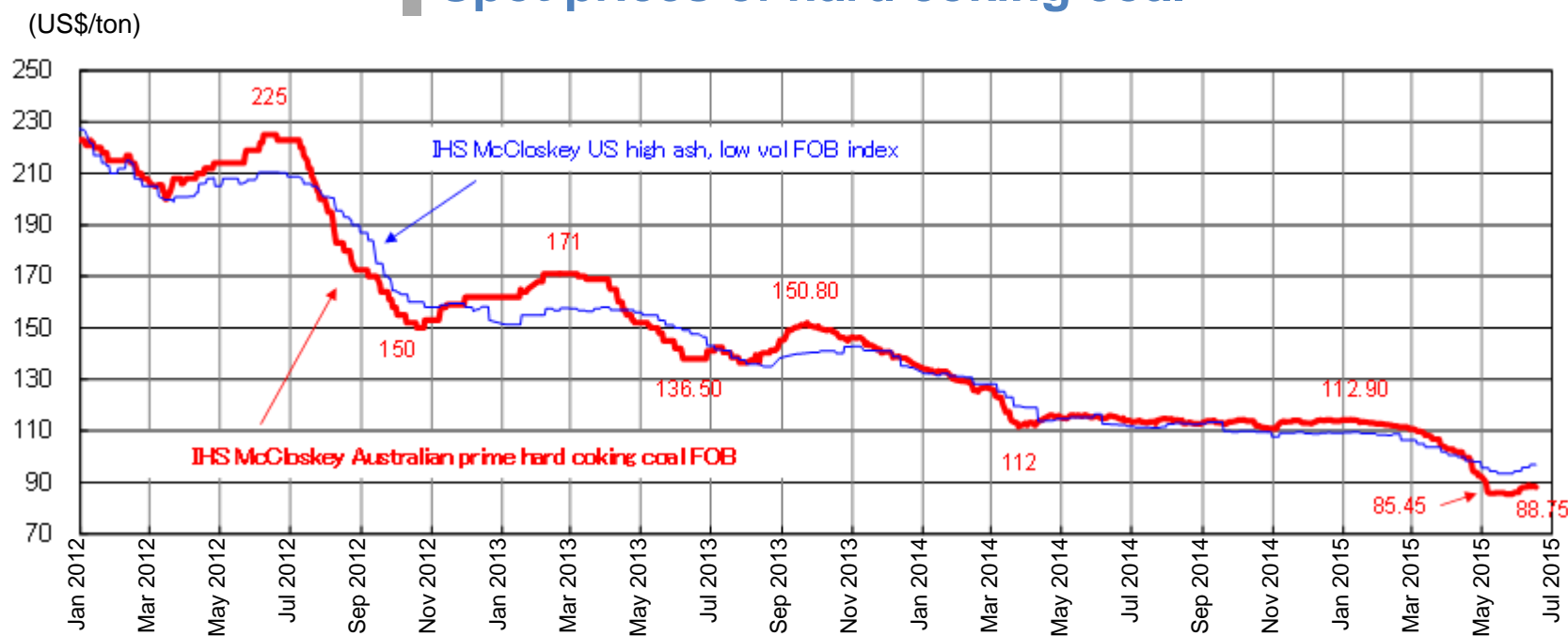
DES ARA Index: Spot steam coal price at Amsterdam/Rotterdam/Antwerp ports in Europe

Source: globalCOAL website

# Coal Prices (hard coking coal FOB)

- Coking coal market: A fall in Chinese imports under oversupply  $\Rightarrow$  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.

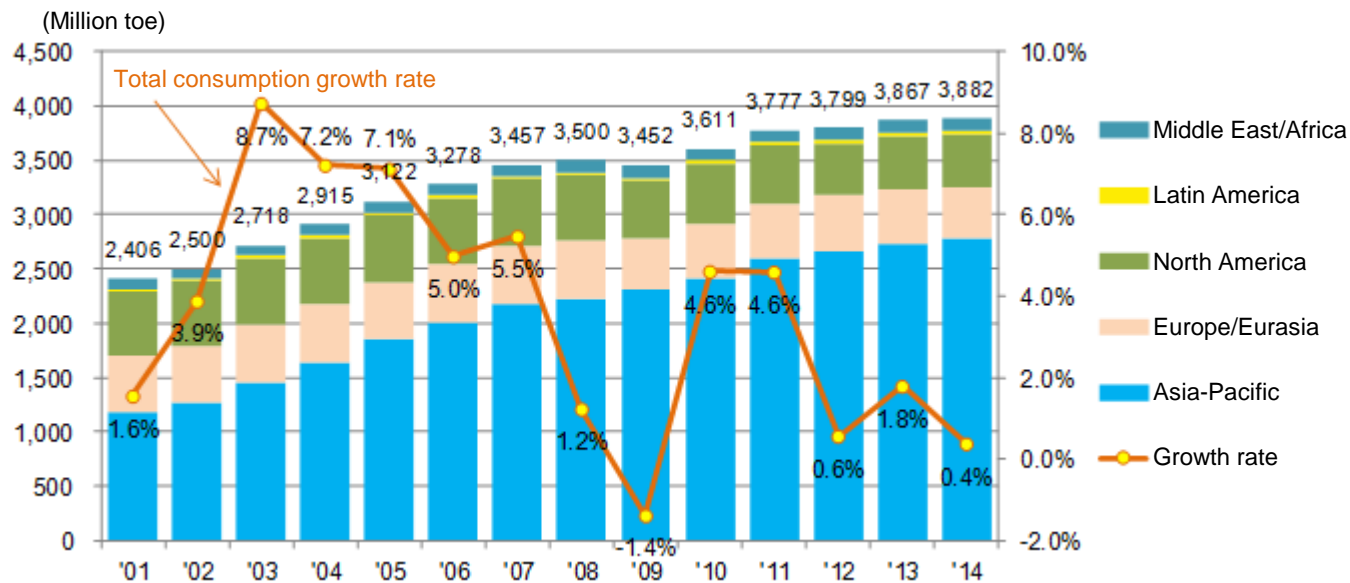
## Spot prices of hard coking coal



Source: Energy Publishing, "Coalportal"

# Global Coal Consumption Trends

- 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.



	Consumption (million toe)						Growth rate (%)				
	2010	2011	2012	2013	2014	Year-on-year changes	10/09	11/10	12/11	13/12	14/13
Asia-Pacific	2,416.3	2,590.8	2,659.3	2,729.5	<b>2,776.6</b>	<b>(47.0)</b>	4.6	7.2	2.6	2.6	<b>1.7</b>
Europe/Eurasia	490.2	511.5	529.9	508.2	<b>476.5</b>	<b>(-31.7)</b>	3.0	4.3	3.6	-4.1	<b>-6.2</b>
North America	567.5	536.5	472.4	488.8	<b>488.9</b>	<b>(0.1)</b>	6.5	-5.4	-12.0	3.5	<b>0.0</b>
Latin America	27.3	39.9	30.1	33.6	<b>31.6</b>	<b>(-2.0)</b>	18.8	9.6	0.5	11.8	<b>-6.0</b>
Middle East/Africa	110.0	108.6	107.2	106.9	<b>108.3</b>	<b>(1.4)</b>	-0.2	-1.2	-1.4	-0.3	<b>1.3</b>

# Coal Import Trends of Major Coal Importing Countries

## Steam coal imports

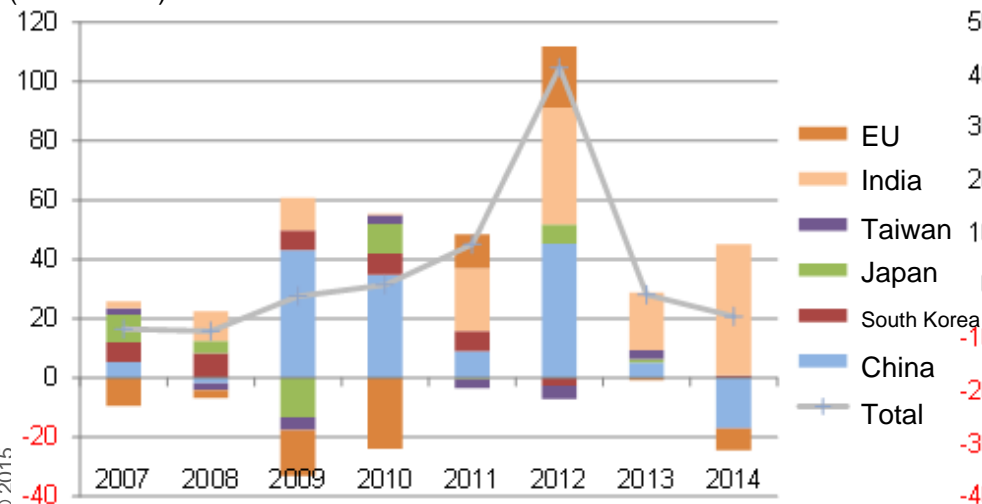
- Steam coal imports in the world have increased by 20-40 million tons per year. China and India had driven the increase before Chinese imports declined by 17 million tons in 2014.
- Steam coal imports in the European Union increased in 2011 and 2012.

## Coking coal imports

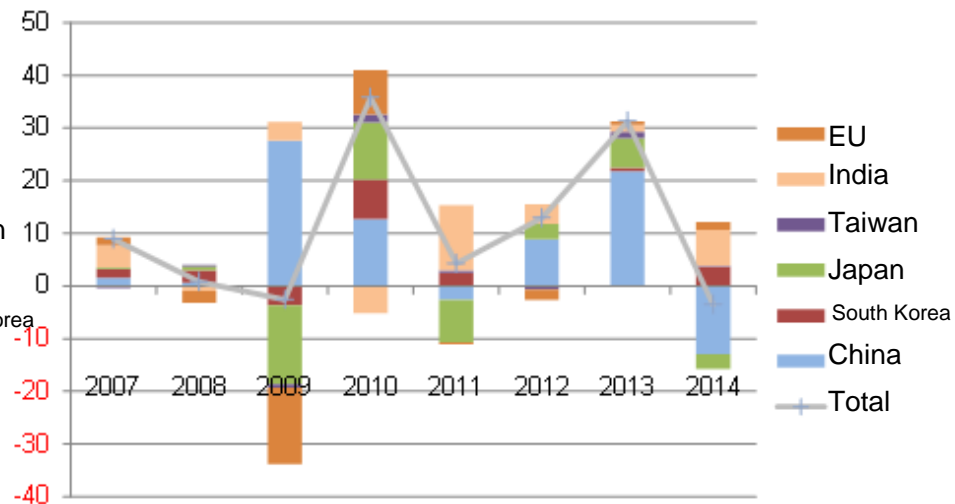
- Coking coal imports in the world have increased by up to 30 million tons per year. China and India had driven the increase before Chinese imports declined by 13 million tons in 2014.

■ Year-on-year import changes  
(steam coal)

(Million tons)



■ Year-on-year import changes  
(coking coal)



Note: The EU covers 15 countries.

Source: Trade Statistics in each country

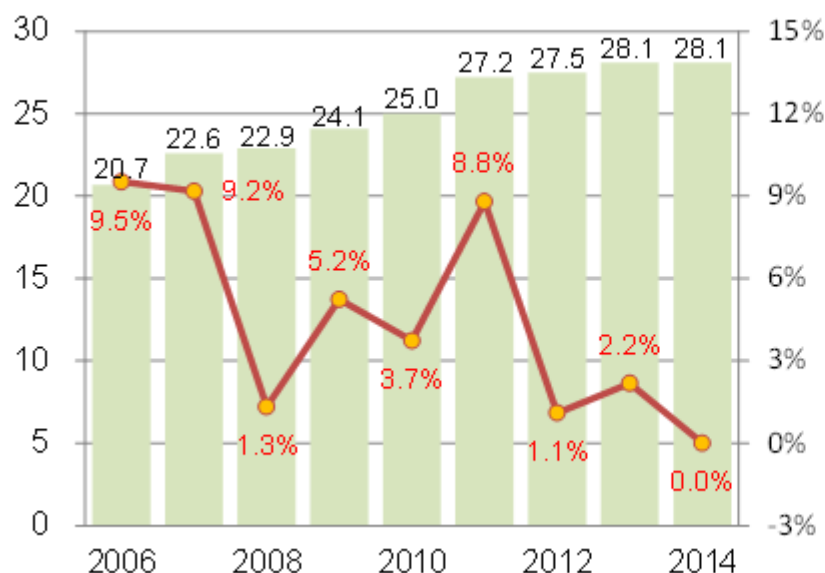
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# Coal Supply/Demand Trends in China (consumption and production)

- 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.

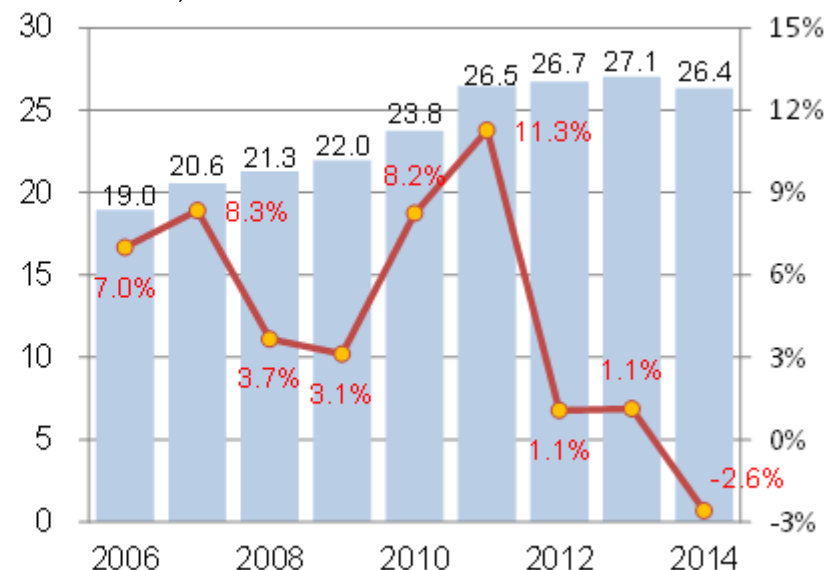
## Coal consumption trends

(100 million tce)



## Raw coal production trends

(100 million tce)

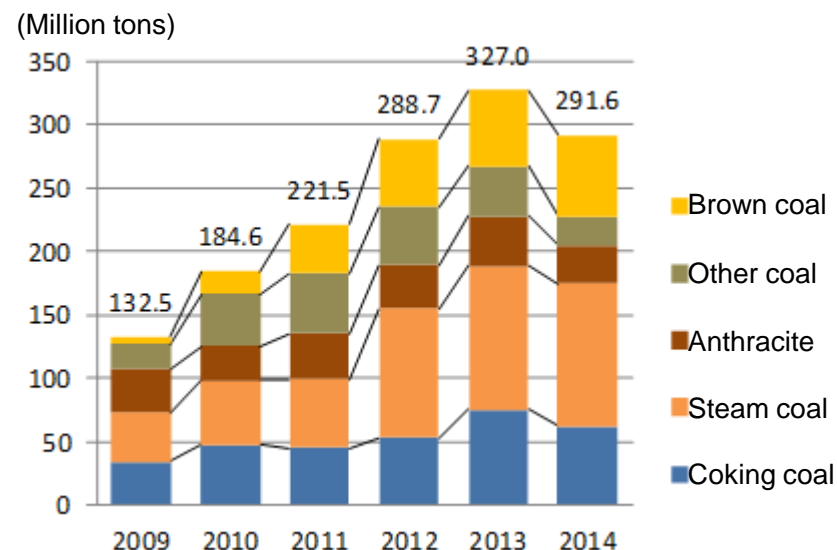


Source: National Statistics Bureau of China, "China Statistics Summary" 5

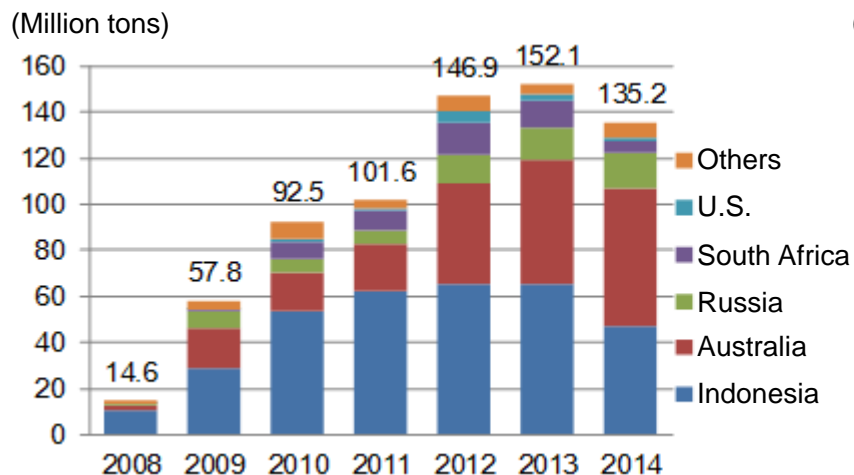
# Coal Supply/Demand Trends in China (imports)

- 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

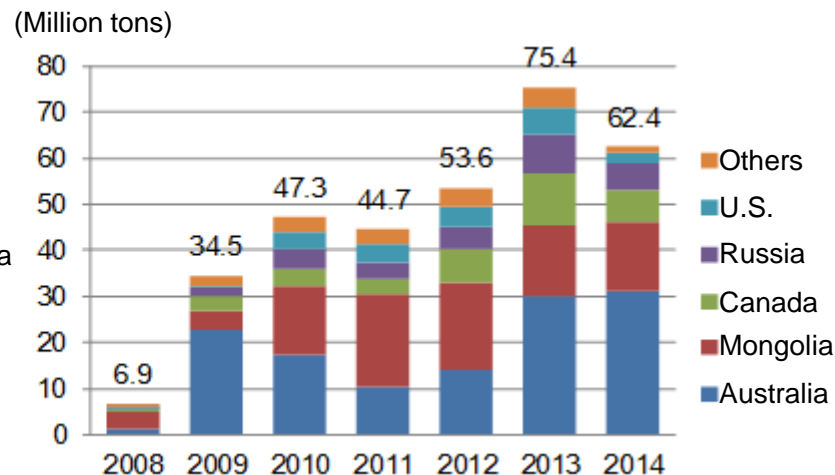


## Steam coal import trends



Note: Steam coal covers steam and other coal.

## Coking coal import trends



Source: TEX Report (based on China customs statistics)

# Coal Supply/Demand Trends in China (January-May 2015)

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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.

## Coal import comparison

Source: TEX Report (based on China customs statistics)

(1,000 tons)

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

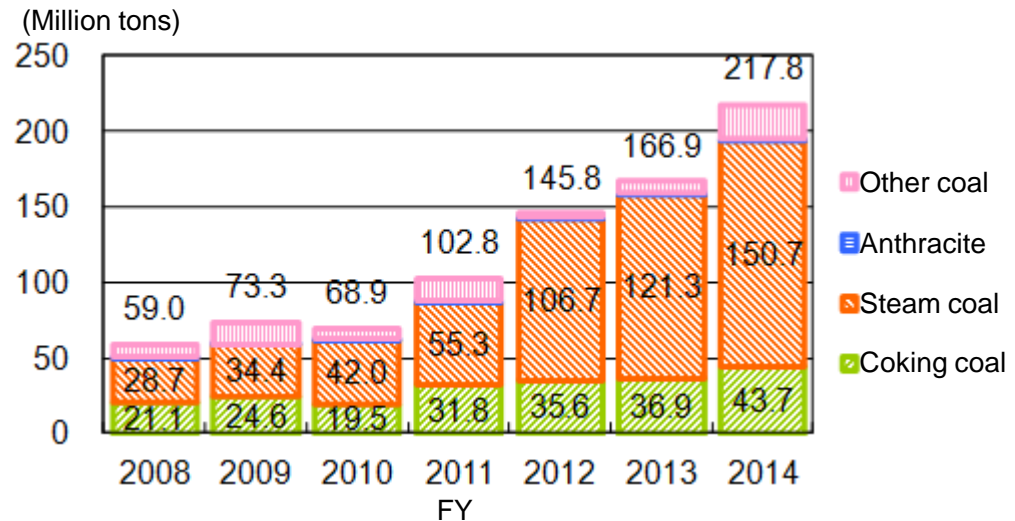
Note) Steam coal covers steam and other coal.



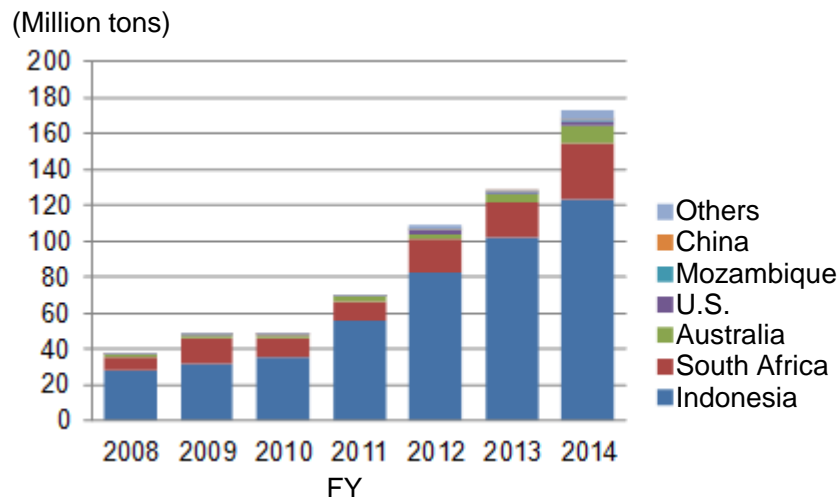
# India's Coal Imports

- 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.

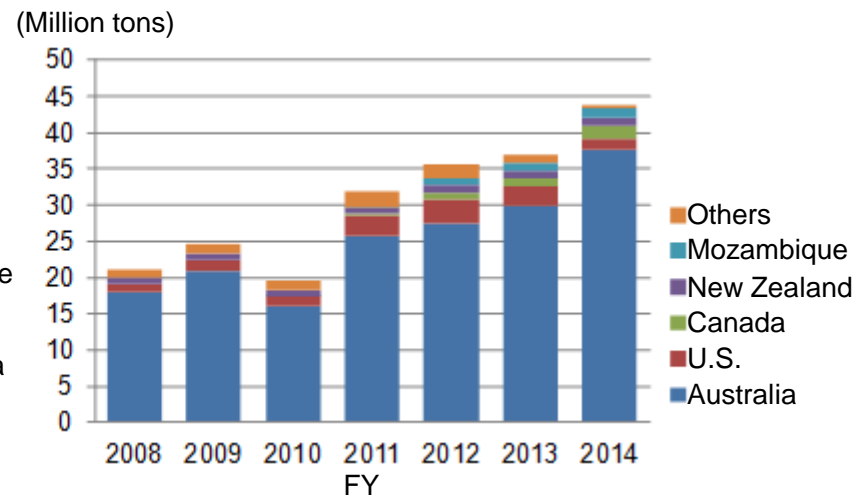
## Coal import trends



## Steam coal import trends



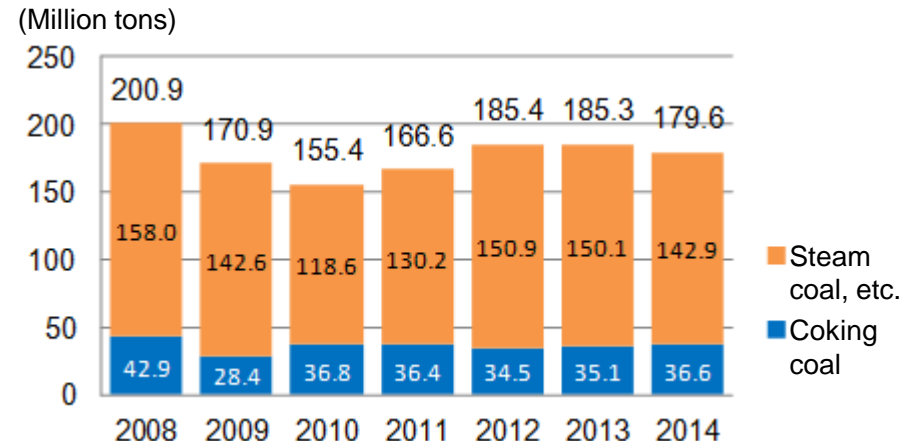
## Coking coal import trends



# Europe's Coal Imports

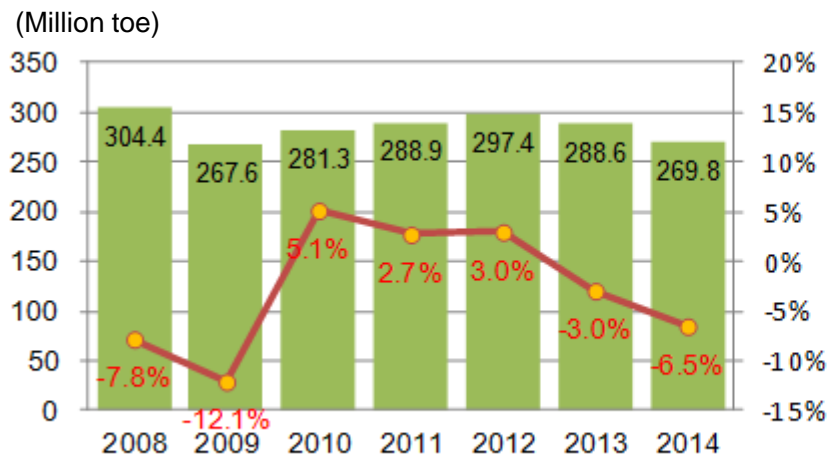
- Coal imports in volume have fallen since 2013, totaling 180 million tons in 2014.
- Steam coal imports in volume declined.
- Coking coal imports in volume almost leveled off.
- Steam coal consumption declined in 2013 and 2014 and will continue to fall in the future due to a coal-fired power generation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

## Coal import trends



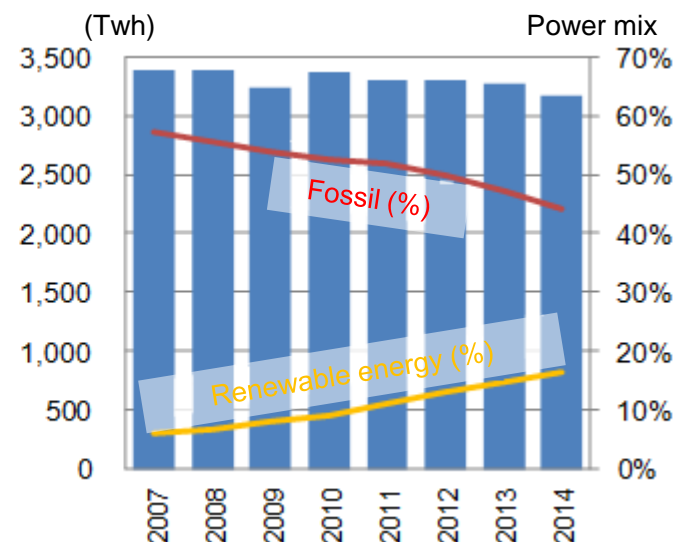
Source: TEX Report (based on Eurostat)

## Coal consumption trends



Source: BP Statistical Review of World Energy June 2015

## Power generation trends



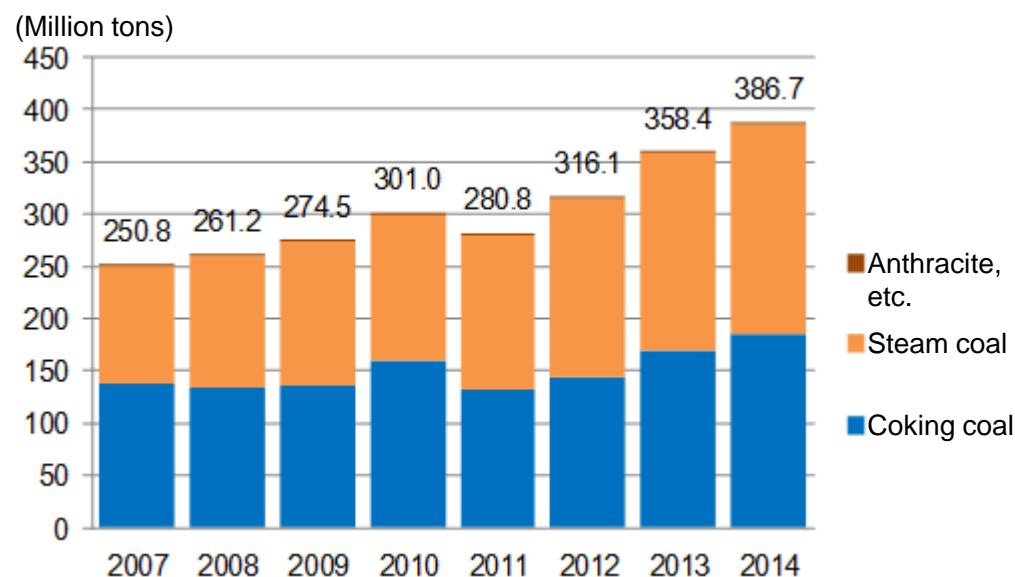
# Australia's Coal Exports

- 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 exports 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



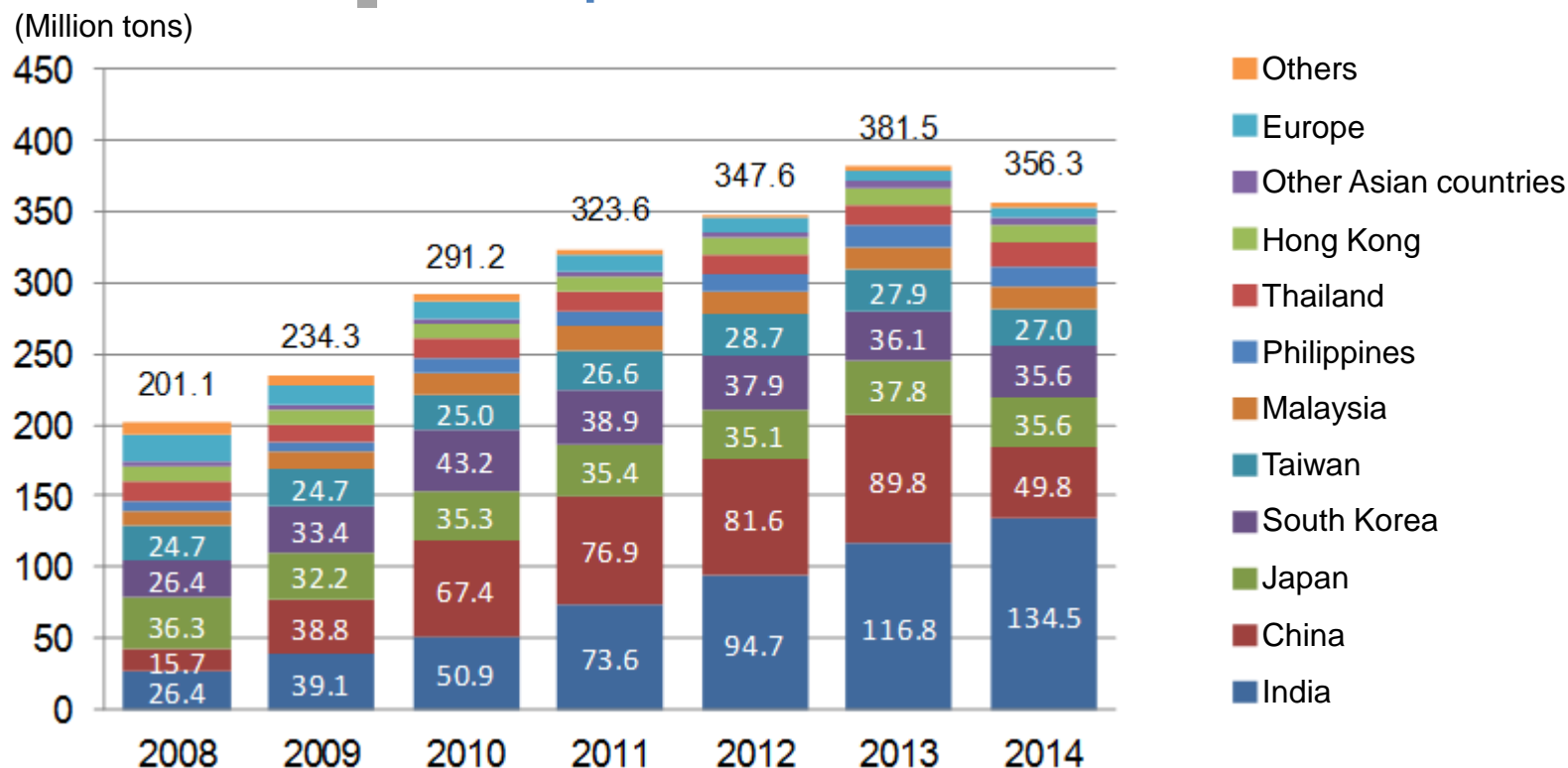
(Million tons)

	2008	2009	2010	2011	2012	2013	2014
Coking coal	134.7	135.3	159.0	132.7	144.5	170.0	185.9
Hard coking coal	83.8	84.9	101.9	87.1	90.3	105.5	120.9
Semi-soft coking coal/PCI coal	50.8	50.2	56.9	45.0	53.4	63.8	64.2
Other coking coal	-	0.2	0.2	0.6	0.9	0.6	0.8
Steam coal	126.4	139.2	141.3	147.5	171.1	188.2	200.7
Anthracite, etc.	0.2	0.1	0.8	0.6	0.5	0.2	0.2
Total	261.2	274.5	301.0	280.8	316.1	358.4	386.7

# Indonesia's Coal Exports

- 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.

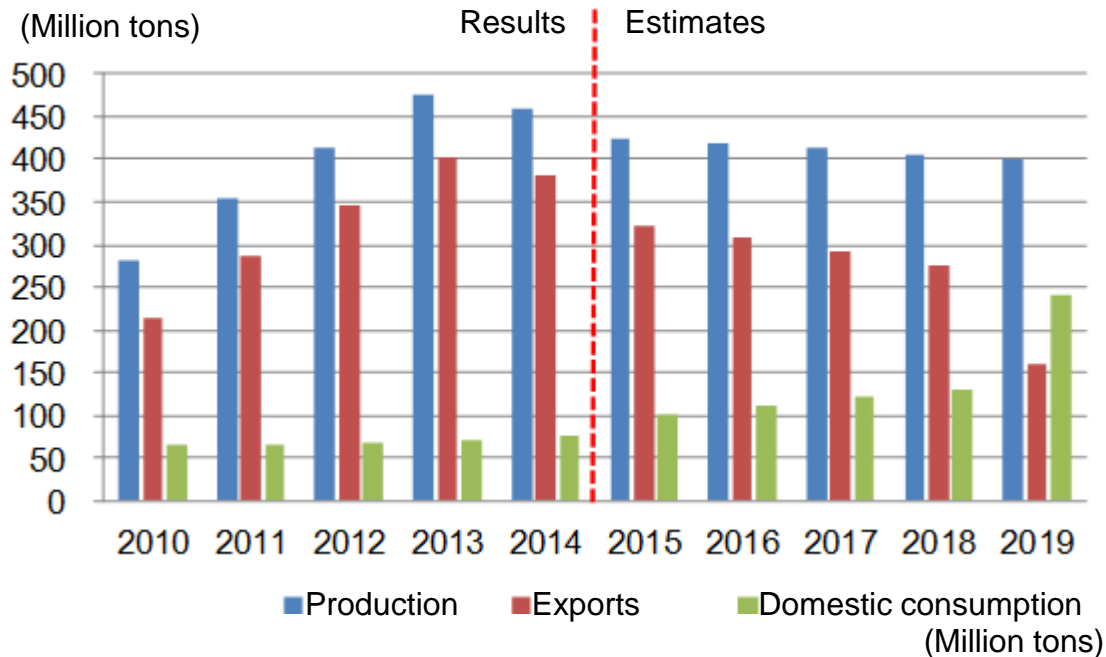
## Restricting coal production

Promoting protection and effective utilization of domestic coal resources

Domestic coal demand expansion through power demand growth

Falling exports

## Coal export trend



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

Source: Presentation at APERC Workshop (March 20, 2014) (Directorate General of Mineral and Coal, Ministry of Energy and Mineral Resources, "Coal Policy in Indonesia")

# 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