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Outlook for Coal Market in 2019

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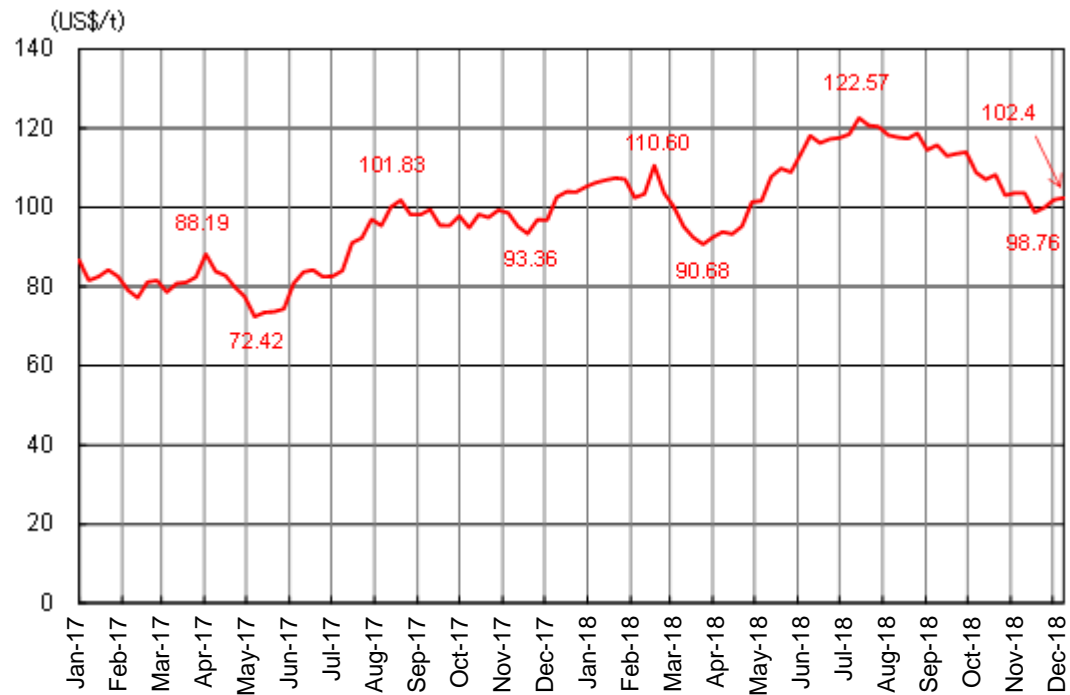
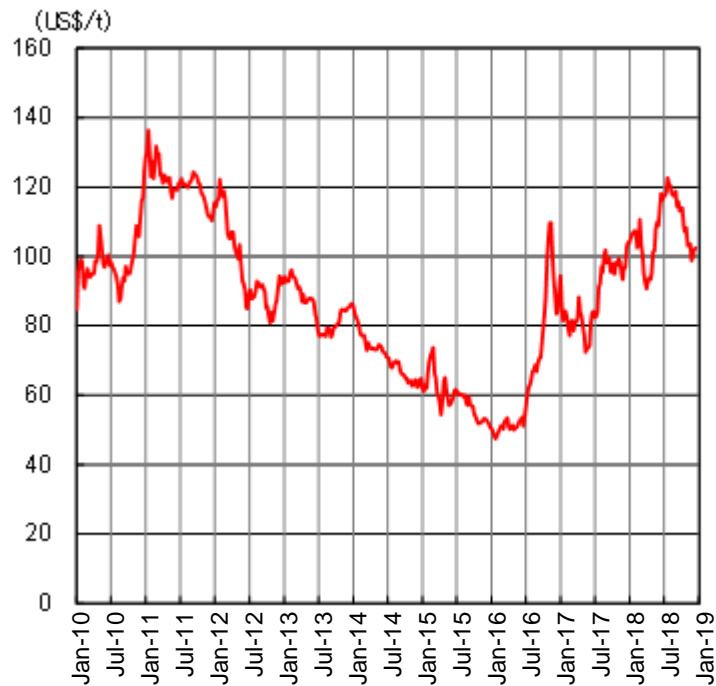
Points of the report

- ✓ Coal demand had followed a downtrend before turning up in 2017 and will continue increasing mainly in Asia (including India and ASEAN) in 2019, with coal imports expanding.
- ✓ On the supply side, plans exist to resume production at idled coal mines and expand operating coalmines. Colombia and Russia are planning to expand supply to Asian markets expected to further grow in the future.
- ✓ Coal prices, though remaining elevated, will trend downward in 2019 as supply capacity basically continues to exceed demand in the coal market.
- ✓ Coal phase-out initiatives, though continuing to be seen, may exert limited effects on coal supply and demand and prices over a short term as coal demand expands mainly in emerging countries.

Coal prices (steam coal FOB)

- Spot steam coal prices have fluctuated between \$70/ton and \$120/ton due primarily to Chinese factors since early 2016 when they ended a downtrend that had continued since 2011.
- In 2018, steam coal prices rose to \$120/ton on procurement in the summer demand season before slipping below \$100/ton. At present, they slightly exceed \$100/ton.

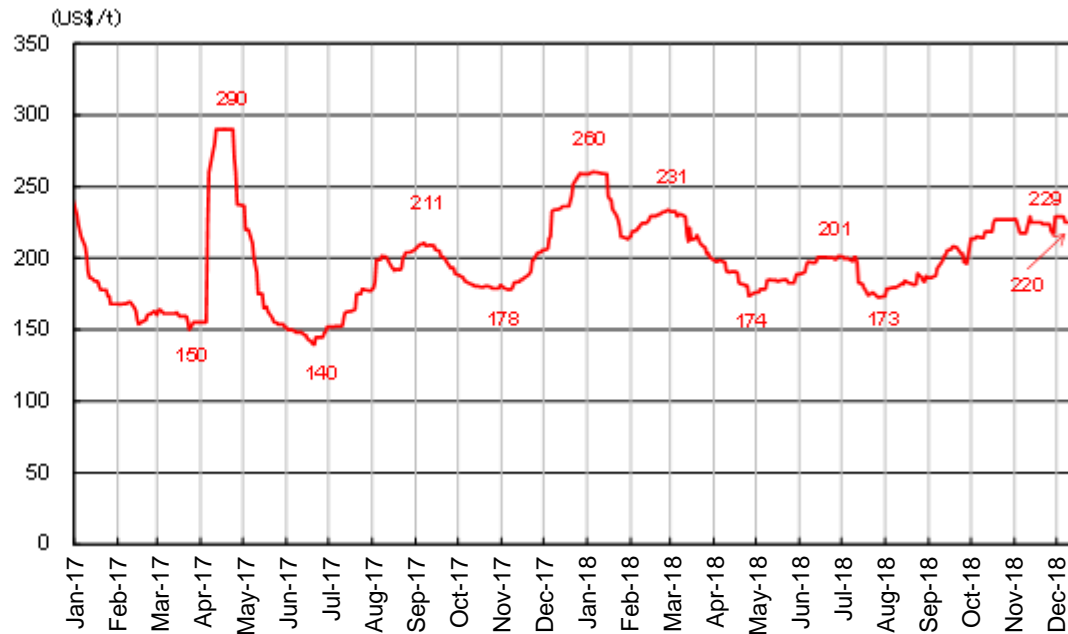
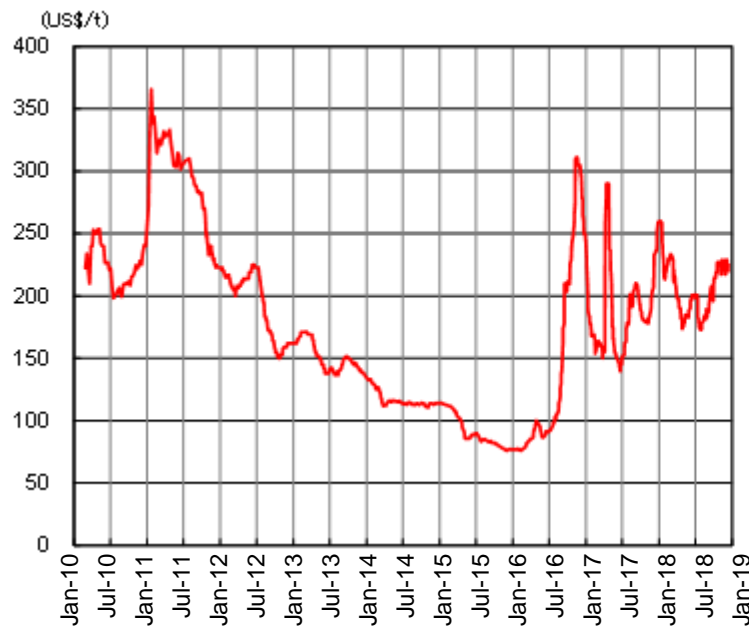
Spot steam coal price (FOB price at Newcastle Port in Australia)



Coal prices (coking coal FOB)

- Spot coking coal prices have wildly fluctuated due to a tight supply-demand balance in China, natural disasters and coalmine accidents since December 2015 when they ended a downtrend that had continued since 2011.
- Spot coking coal prices rose to \$260/ton on growing imports into China and India in January 2018 and fell back later close to \$170/ton. Due to growing coking coal demand in China and coalmine accidents in Australia since September, however, they have risen to \$220/ton.

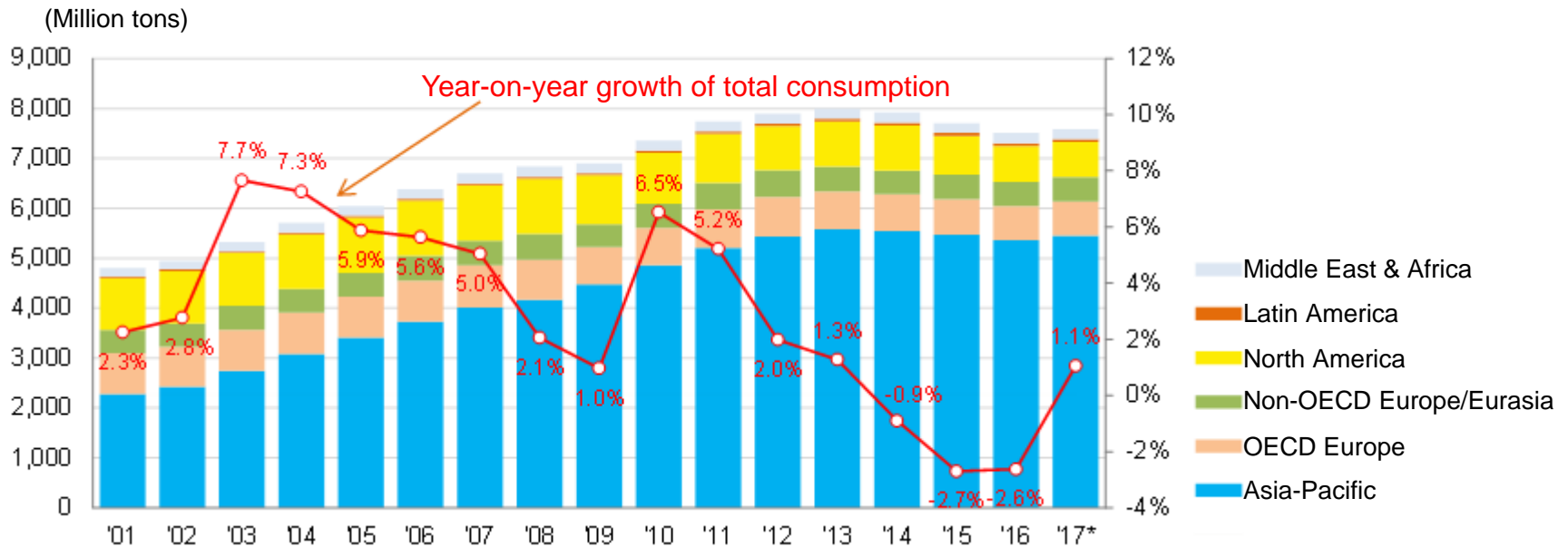
Spot coking coal price (Australian premium hard coking coal FOB)



Source : IHS

Global coal consumption trends

- After increasing mainly in Asia, global coal consumption peaked in 2013 and declined until 2016 before rising slightly in 2017.

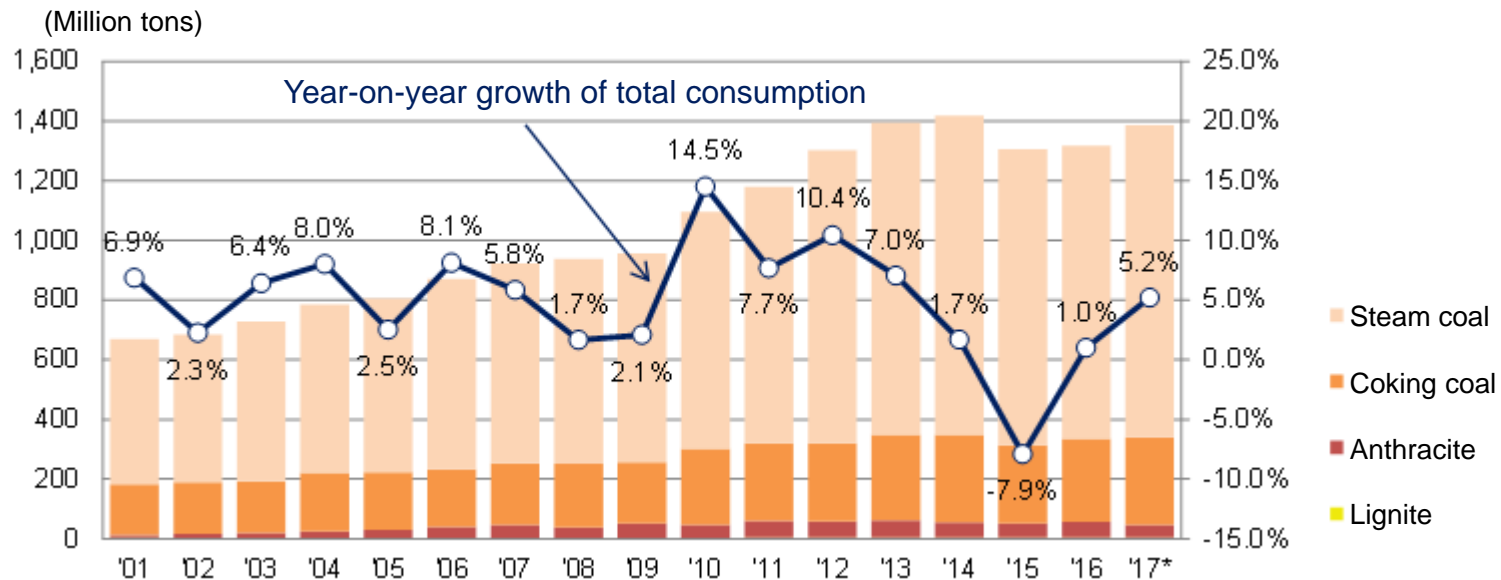


	Consumption (million tons)						Yr/yr change	Year-on-year growth (%)				
	2012	2013	2014	2015	2016	2017*		13/12	14/13	15/14	16/15	17/16
Asia-Pacific	5,430.2	5,575.1	5,542.5	5,466.0	5,358.7	5,453.2	(94.4)	2.7	-0.6	-1.4	-2.0	1.8
OECD Europe	798.2	763.8	736.9	716.5	684.1	679.0	(-5.1)	-4.3	-3.5	-2.8	-4.5	-0.8
Non-OECD Europe/Eurasia	534.5	502.1	474.3	491.9	487.1	495.7	(8.6)	-6.1	-5.5	3.7	-1.0	1.8
North America	883.8	902.2	902.2	777.4	715.2	697.7	(-17.5)	2.1	0.0	-13.8	-8.0	-2.4
Latin America	45.7	52.1	53.8	55.1	54.0	52.8	(-1.2)	13.9	3.3	2.4	-2.0	-2.3
Middle East & Africa	201.1	199.3	212.7	201.7	206.8	206.9	(0.1)	-0.9	6.8	-5.2	2.5	0.0
Global total	7,893.5	7,994.6	7,922.5	7,708.6	7,505.9	7,585.2	(79.3)	1.3	-0.9	-2.7	-2.6	1.1

Note: Data for 2017 are preliminary.
 Source: IEA World Energy Balance 2018

Global coal trade

- Global steam and coking coal trade increased on growing demand before falling by more than 10 million tons in 2015.
- However, coal trade increased again in 2016 and 2017.



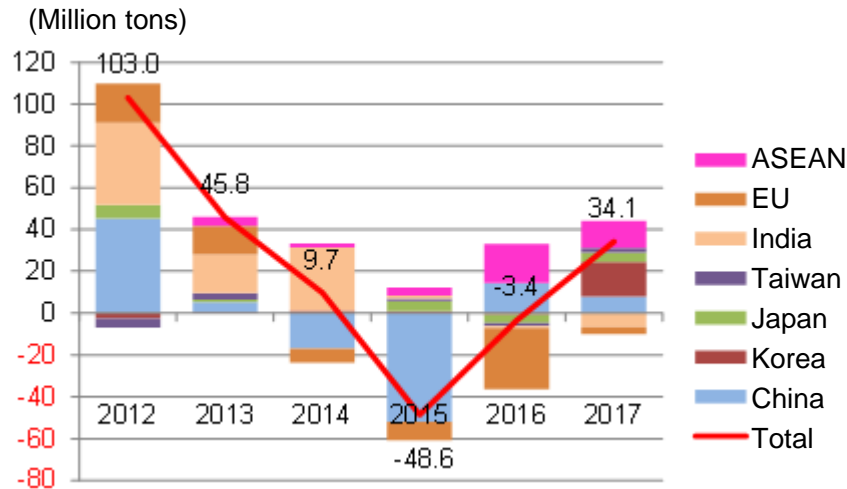
	Trade volume (Million tons)						Year-on-year growth (%)					
	2012	2013	2014	2015	2016	2017*	Yr/yr change	13/12	14/13	15/14	16/15	17/16
Lignite	4.4	3.9	5.2	5.2	5.2	5.1	(-0.1)	-10.2	32.9	-0.7	-0.4	-0.9
Anthracite	53.9	58.0	50.0	46.7	52.0	41.8	(-4.9)	7.6	-13.8	-6.5	11.2	-19.5
Coking coal	262.3	288.0	293.4	261.3	278.7	294.0	(32.7)	9.8	1.9	-11.0	6.7	5.5
Steam coal	981.7	1,044.2	1,069.0	992.2	982.4	1,045.9	(53.8)	6.4	2.4	-7.2	-1.0	6.5
Total	1,302.3	1,394.1	1,417.6	1,305.4	1,318.3	1,386.9	(81.5)	7.0	1.7	-7.9	1.0	5.2

Note: Trade represents imports. Data for 2017 are preliminary.
 Source: IEA World Energy Balance 2018

Major countries' steam coal imports

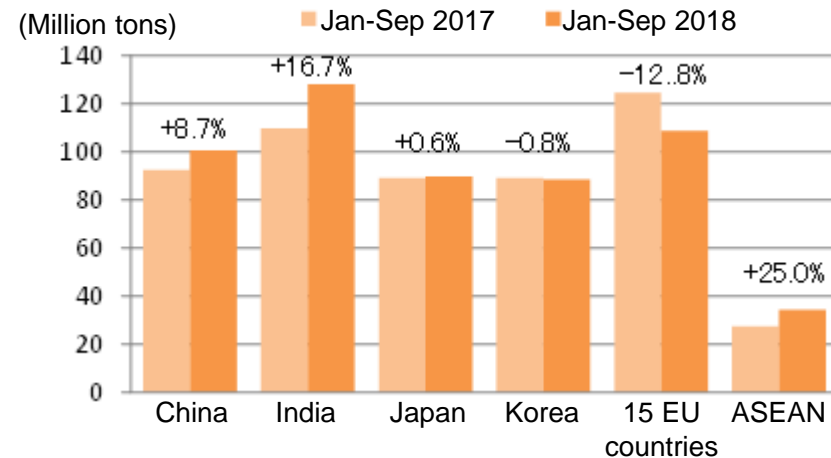
- Steam coal imports had been driven by China and India. However, China reduced imports in 2014 and 2015 before expanding them again. Import growth in India has stopped since 2015.
- ASEAN substantially expanded steam coal imports in 2016 and 2017. The EU has reduced imports since 2014.
- In the first three quarters of 2018, steam coal imports increased in India, China and ASEAN while continuing to decrease in the EU.

Year-on-year import changes



Note: ASEAN represents Thailand, Malaysia, Vietnam and the Philippines. EU data for 2017 are estimated by the IEEJ.
Sources: Trade statistics of each country, TEX Report, etc.

Year-in-year import changes in 2018



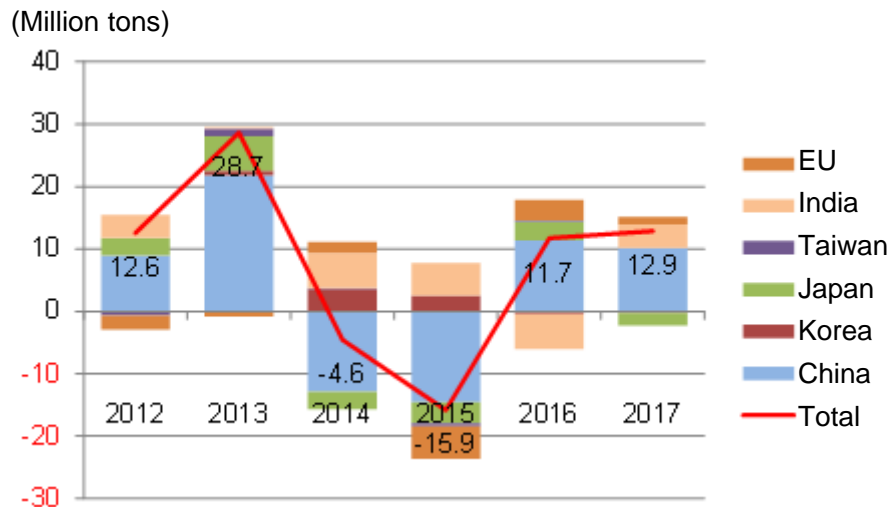
Note: ASEAN represents Thailand and Vietnam. Data for 15 EU countries are for January-June.

Sources: Trade statistics of each country, TEX Report, etc.

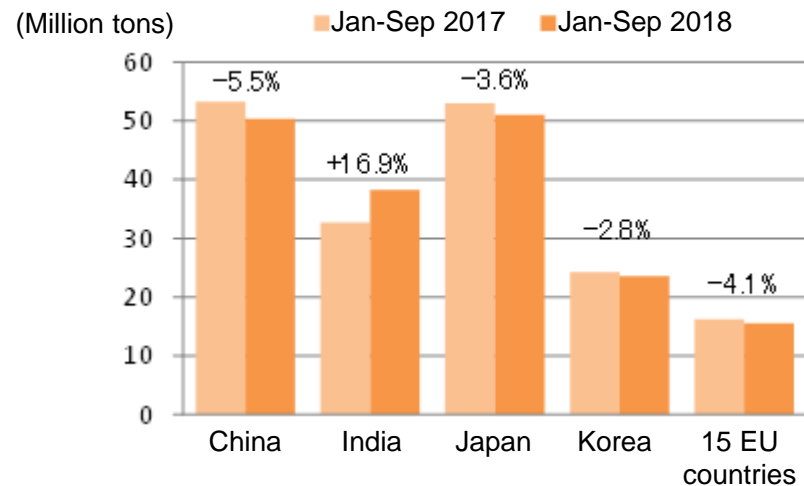
Major countries' coking coal imports

- Coking coal imports have increased mainly in China and India.
- China reduced coking coal imports in 2014 and 2015 and increased them in 2016 and 2017, exerting great influence on the coking coal market.
- In the first three quarters of 2018, coal imports increased by as much as 16.9% year on year in India while decreasing in other major countries.

Year-on-year import changes



Year-on-year import changes in 2018



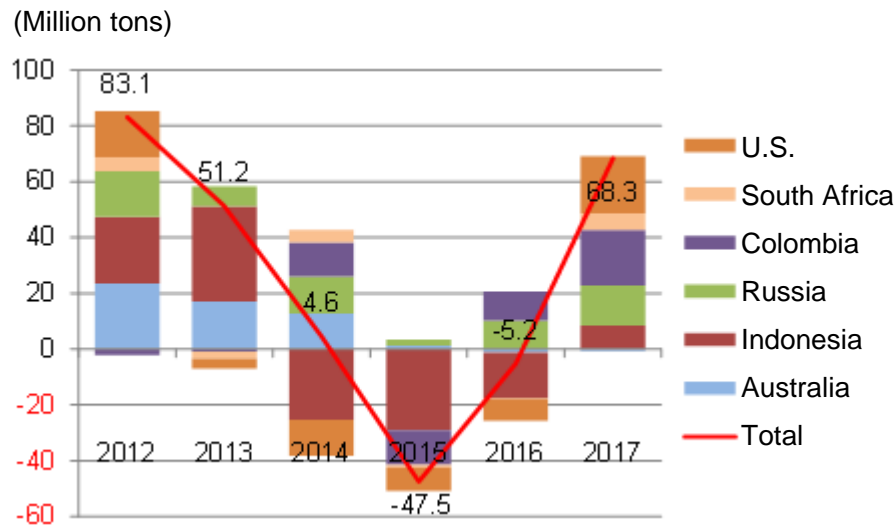
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Major countries' steam coal exports

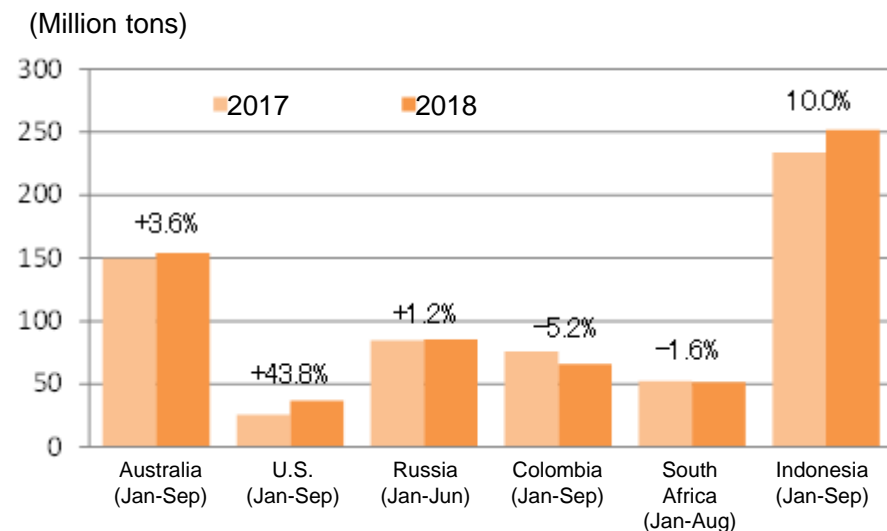
- Mainly Australia and Indonesia had expanded steam coal exports. From 2014, however, Indonesia reduced exports due to sharp drops in those to China and India. Australian exports levelled off from 2015. In 2017, mainly the United States, Colombia and Russia expanded exports.
- In the first three quarters of 2018, Indonesia, Australia, the United States and Russia expanded exports. Particularly, Indonesia's export growth was remarkable.
- In contrast, Colombia and South Africa reduced exports after expanding them sharply in 2017.

Year-on-year export changes



Sources: Trade statistics of each country, TEX Report, etc.

Year-on-year export changes in 2018



Sources: Trade statistics of each country, TEX Report, IHS

Major countries' coking coal exports

- Australia, which accounts for about 60% of coking coal exports, substantially reduced coking coal exports due to natural disasters in 2017.

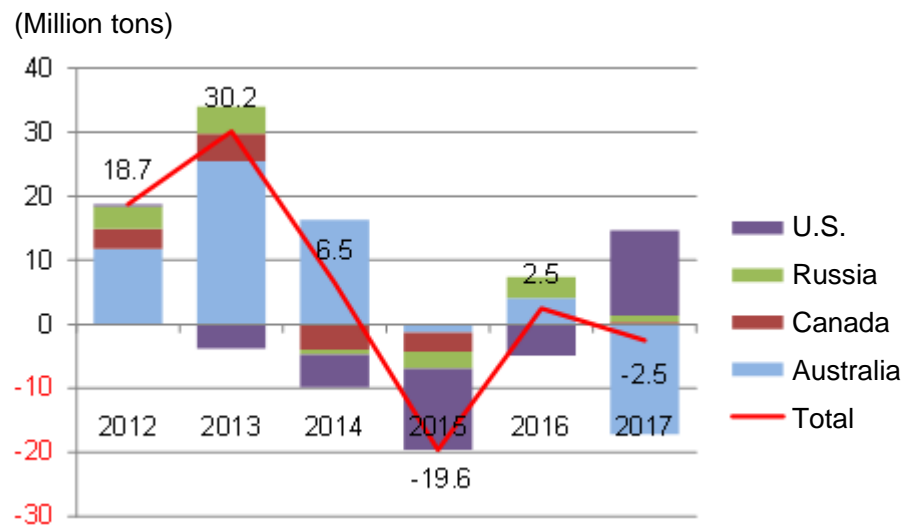
The United States (featuring high FOB costs) has tended to expand exports at high prices.

- The four major coking coal exporters (Australia, the United States, Canada and Russia) all increased exports in 2018.

The United States continued an uptrend from 2017.

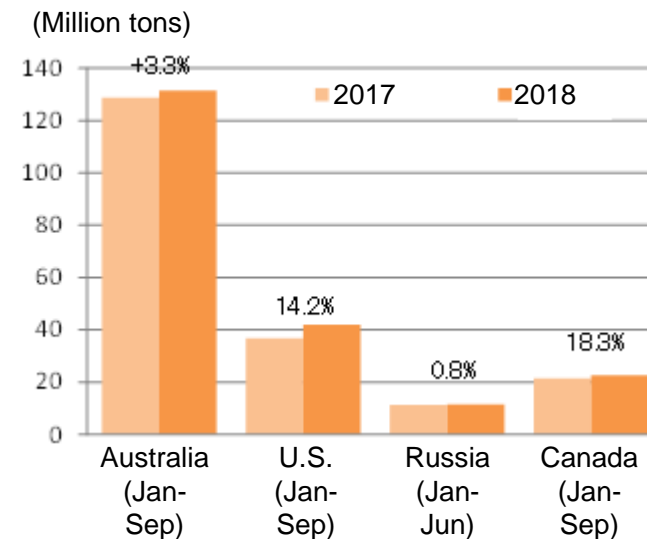
Australia covered a decline attributed to hurricanes in 2017.

Year-on-year export changes



Sources: Trade statistics of each country, TEX Report, etc.

Year-on-year export changes in 2018

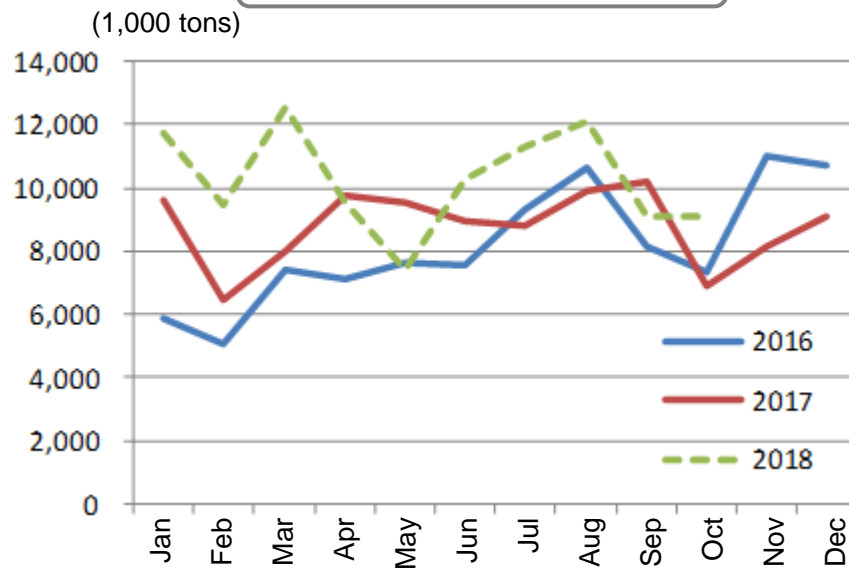


Sources: Trade statistics of each country, TEX Report, IHS

China's coal imports

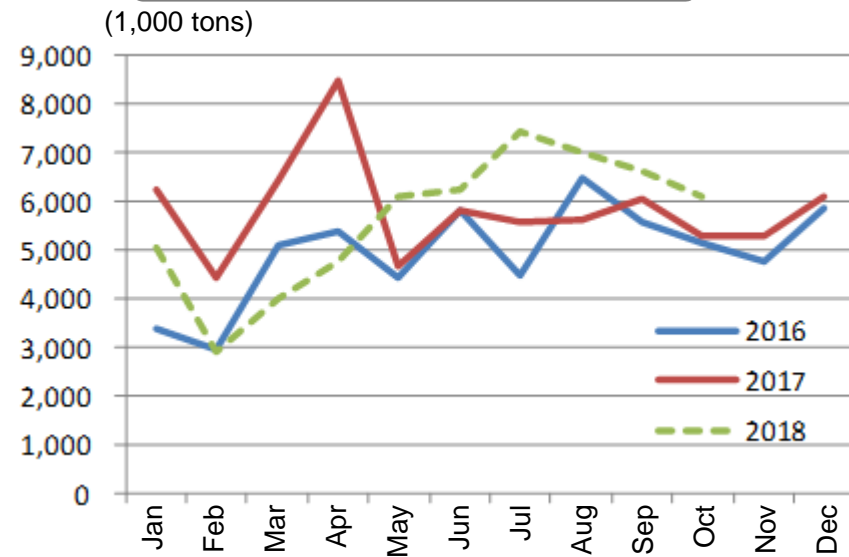
- Raw coal production in the first 10 months of 2018 totaled 2,899 million tons, up 8.0% year on year.
- Coal imports (excluding lignite) in the first 10 months of 2018 totaled 166.5 million tons, up 5.2% year on year.
- Steam coal imports in the first 10 months of 2018 increased year on year.
- Coking coal imports in the first 10 months of 2018 decreased year on year. From June, however, they increased year on year.
- Coal imports are likely to level off from the previous year as coal demand is stabilized on economic growth deceleration.

Steam coal imports



Sources: Trade statistics of each country, TEX Report, etc.

Coking coal imports

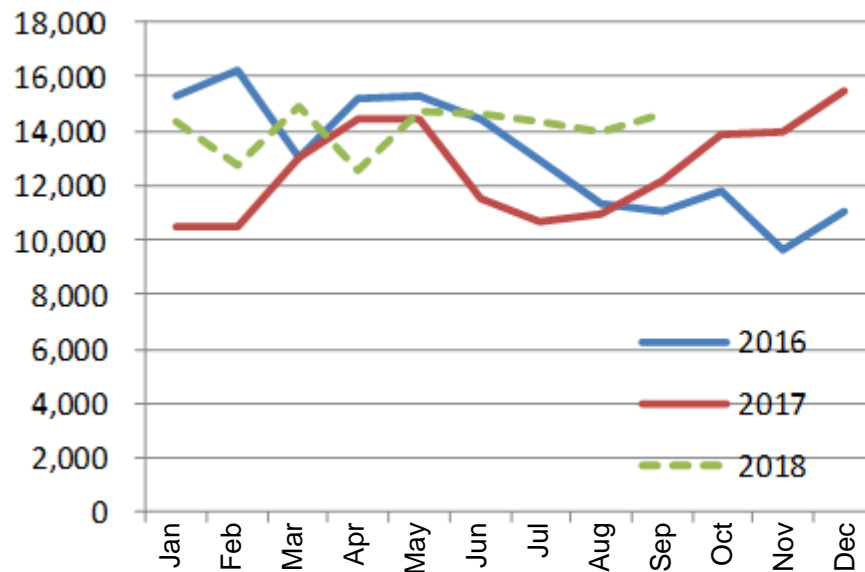


Source: TEX Report (based on China customs statistics)

India's coal imports

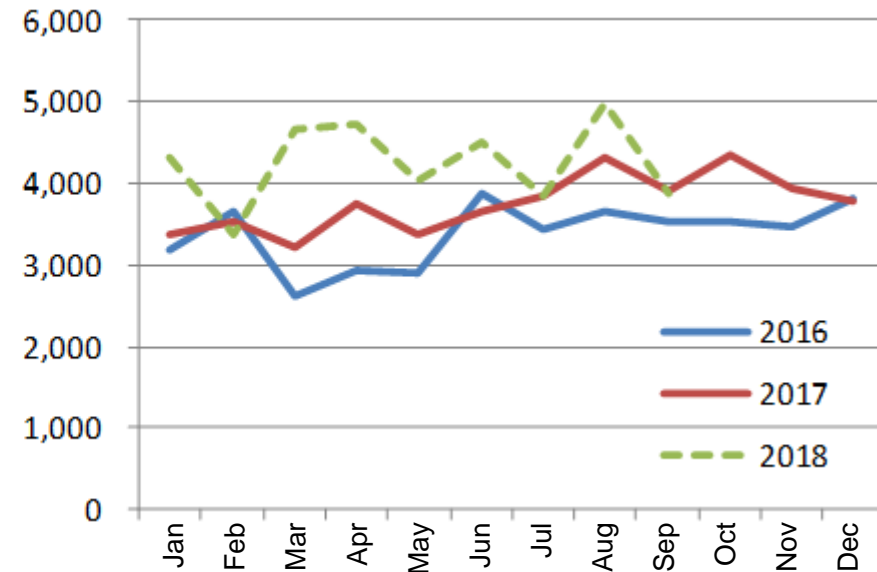
- Coal imports (excluding lignite) in the first three quarters of 2018 totaled 166.3 million tons, up 16.7% year on year.
- In 2018, both steam and coking coal imports increased year on year almost every month.
- Steam coal imports increased due to domestic coal quality and cost problems and the launch of imported coal-fired power generation.
- Coking coal imports increased due to slack domestic resources.

Steam coal imports



Source: Ministry of Commerce and Trade

Coking coal imports



Source: Ministry of Commerce and Trade

How to view coal phase-out

- Coal-fired power generation conditions in Western countries:
 - Coal-fired power generation will considerably decline due to political and economic factors.
- Withdrawing from investment and loans from coalmine and coal-fired power generation projects and halting insurance for such projects (divestment):
 - Following foreign financial institutions and funds, Japanese banks, insurance firms and trading companies are increasingly announcing coal-related statements.
 - Businesses tend to refrain from new coalmine or coal-fired power plant development and focus on high-quality coal development or highly efficient coal-fired power generation.
- Coal-mining companies:
 - Business conditions are robust under high coal prices (from 2017), with industry realignment moves subsiding.
 - Strategies have been adopted to focus on high-quality coal in anticipation of highly efficient coal-fired power generation in Asia.
- Future outlook:
 - Western countries: International coal phase-out movements will continue.
 - Germany: Considering a target year for phasing out coal-fired power generation
 - OECD: Revising official export credit arrangements (2015)
 - Emerging countries: These countries are interested in expanding production and procurement capacity against the backdrop of growing energy demand and in developing coalmines and coal-fired power generation without depending on financing from developed countries.
- Conclusion:
 - Coal phase-out will have limited effects on coal supply/demand, and prices over a short term.
 - Over a medium to long term, coal supply and demand may structurally change.

Summary (2019 coal market)

- Steam coal demand will expand in Asian and other emerging countries. Particularly, it will increase in India and ASEAN, while continuing decreasing in Europe and North America.
 - ➡ As an Asian demand increase more than offsets a demand fall in other regions, global steam coal demand will rise slightly.
- On the supply side, resources majors have almost completed coal sector realignment (disposal of and transactions in coal assets). Coal supply capacity has been maintained and will increase on the resumption of production at idled coalmines and the expansion of operating coalmines. Colombia and Russia plan to raise their supply capacity after expanding exports in 2017.
 - ➡ Supply is thus expected to exceed demand.
- Coking coal demand and imports will increase in India. China increased coking coal demand and imports in 2016 and 2017 and began to expand them from the second half of 2018. In other regions, coking coal demand and imports will level off.
 - ➡ Global coking coal demand is thus likely to slightly increase.
- On the supply side, coal sector realignment has been almost completed, as is the case with steam coal. Supply capacity has been maintained and can be increased through the resumption of production at idled coalmines and the expansion of operating coalmines.
 - ➡ Supply is thus expected to exceed demand.
- Given the abovementioned conditions, the coal market in 2019 is basically unlikely to see any tighter supply-demand balance where prices would remain elevated for both steam and coking coal.

Summary (2019 coal prices)

- Both steam and coking coal prices now remain at higher levels than indicated by supply and demand conditions and may decline in 2019.
 - The spot steam coal price (the FOB price at Newcastle Port in Australia) will fluctuate on seasonal factors and falls to a \$80-85/ton range in non-demand seasons.
 - The spot coking coal price (the Australian premium hard coking coal FOB price) will follow a downtrend, falling below \$180/ton.

Annual average spot prices of steam and coking coal

(\$/ton)

	2017 average	Jan-Oct 2018 average	2018 average	2019 average
Spot steam coal price	89.03	108.13	107	88
Spot coking coal price	188.36	206.00	207	185