

# China Coal-fired Power Monthly

## Awaiting on-grid tariff hikes

	Ticker	Rec	Mkt cap		Price	PT	Up/ dn (%)	P/E (x)		P/B (x)		ROE (%)	
			(US\$m)	Ccy				2017E	2018E	2017E	2018E	2017E	2018E
<b>China Resources Power</b>	836 HK	Buy	8,648	HKD	14.04	16.00	14.0	13.6	8.2	1.0	0.9	7.0	11.4
<b>Huaneng Power</b>	902 HK	Buy	13,426	HKD	4.92	6.00	22.0	28.1	8.8	0.8	0.7	2.9	8.3
<b>Datang Power</b>	991 HK	Buy	7,258	HKD	2.25	3.30	46.7	10.5	5.9	0.6	0.6	6.5	9.8
<b>Huadian Power</b>	1071 HK	Hold	5,380	HKD	2.84	3.35	18.0	48.1	7.4	0.5	0.5	1.5	7.7
<b>China Power</b>	2380 HK	Hold	2,511	HKD	2.00	2.80	40.0	11.8	6.1	0.5	0.5	4.3	8.4
<b>China Shenhua</b>	1088 HK	NR	64,586	HKD	19.58	NR	NR	7.4	8.1	1.1	1.0	13.6	12.5
<b>China Coal</b>	1898 HK	NR	9,760	HKD	3.40	NR	NR	8.8	9.9	0.4	0.4	4.9	4.3
<b>Yanzhou Coal</b>	1171 HK	NR	8,433	HKD	8.36	NR	NR	5.6	6.4	0.8	0.7	14.3	12.4

Source: Bloomberg, Company data, CSCI estimates (prices as of 18 December 2017)

- Last month, the coal-fired power sector largely retreated by 7-16%, on fear of the lower-than-expected 2018 on-grid tariff hike. According to the market news, the NDRC is likely to raise the tariff by RMB0.005/kWh, lower than the market expectation of RMB0.01-0.02/kWh.
- Entering December, QHD5,500k coal price has mildly climbed out of the bottom and now trades at RMB620/t, up by RMB5/t, as the weather is getting cold and the coal inventory comes down at the IPPs' storage.
- We think the market has oversold the coal-fired power sector, and reiterate our POSITIVE view on the sector, in light of a further profitability improvement driven by the expected second round of tariff hike to be announced in late Dec and to become effective on 1 Jan 2018.

**Power consumption growth picks up in line with our forecast.** In Nov, China's social power consumption reportedly has increased by 4.7% YoY and 3.5% MoM (vs. +4.9% YoY and -3.5% MoM in Oct). For 11M17, power consumption growth has slightly slowed down to 6.6% YoY (vs. 6.8% of the 10M17). Power consumption in the secondary industry continued growing mildly (3.6% YoY and 6.9% MoM) in Nov, while the declining pace of all other industries narrowed down to 3%-7% MoM in Nov (vs. a drop of 15%-28% MoM in Oct).

**Coal-fired power up and hydro power down.** In line with our expectation, coal-fired power increased by 8.3% MoM while hydro power dropped by 19.1% MoM in Nov, due to a declining water inflow entering winter. We anticipate this trend will continue in the last month of 2017 and the coal-fired power generation volume is likely to record even faster growth in Dec-17 after the suspension of the coal-to-gas project plagued by the natural gas shortages in North China.

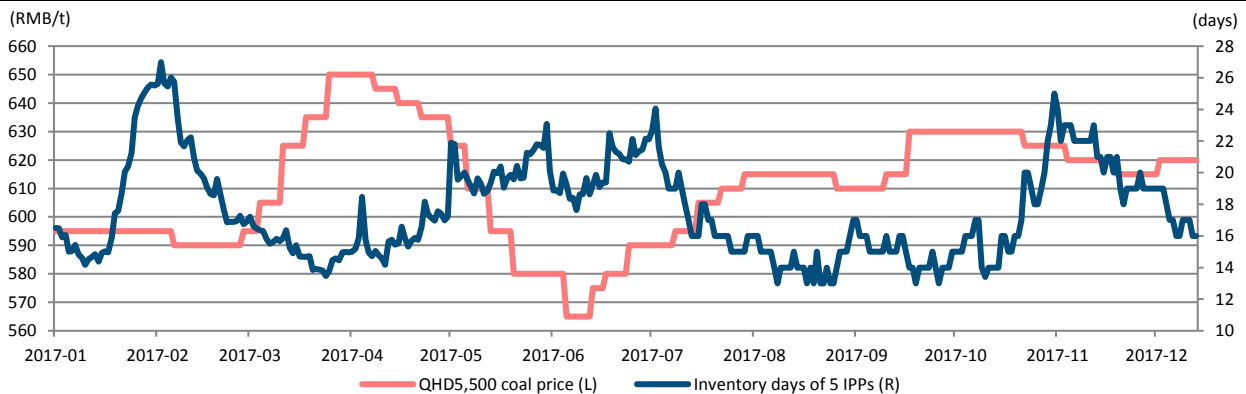
**Coal price mildly rebounds in light of cold weather, tight coal supply and natural gas shortage.** We think the coal supply was tight in Nov, given the month has seen coal output up by 5.8% MoM but down by 2.7% YoY (vs. coal-fired power: 8.3% MoM and 4.7% YoY). Even though natural gas has replaced coal as heating fuel in some areas of North China, we expect the downstream demand for coal to remain strong, citing the resumption of the coal-fired power plants after the shortage of natural gas as well as the competitive price of coal compared to natural gas. On the other hand, the NDRC issued a notice to the local governments to set up permitted days of coal inventories for coal suppliers and downstream consumers, in a bid to mitigate the substantial movement of coal prices. Against the backdrop of which, we expect the coal price might gradually pick up and be capped at RMB630/t in the remainder of 2017.

**Sector picks.** The power sector has declined by as much as 7-16% since our last report published on 20 Nov. We think the market has been overacted, given that the coal-fired IPPs' profitability actually improved in 2H17 after the coal price stabilised and the first round of on-grid tariff hike becoming effective. Looking forward to 1H18, we think the sector's profitability will see a substantial YoY increase, given the low comparable base of 1H17. In stock picks, we will maintain our Buy rating on Huaneng Power (902.HK, TP: HKD6.00), China Resources Power (836.HK, TP: HKD16.00), and Datang Power (991.HK, TP: HKD3.30) given their relatively higher utilisation of coal-fired power assets than peers.

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## Key policies driven coal price movement

**Figure 1: QHD5,500 coal price vs. inventory days of IPP**


Source: Wind, CSCI Research

- On 28 November 2017, the NDRC issued a notice to the local governments to set up respective permitted reasonable days of coal inventory for coal suppliers and downstream consumers, as well as the related monitoring methods.

**Figure 2: NDRC's permitted days of coal inventories**

Role	BHB Coal price (RMB/t)	Days of inventory	Equivalent volume
Coal miner	> 570	<= 3 days	Designed daily production capacity
	500 - 570	>= 5 days	
	< 500	>= 7 days	
Coal refiner	> 570	>= 3 days of daily trading volume of previous year	
	< 570	<= monthly average trading volume of previous year	
Coal consumer	> 570	<= max. inventory (equivalent to twice of min. inventory)	
	< 570	>= average of the most recent 3 years of inventory	

Source: NDRC, CSCI Research

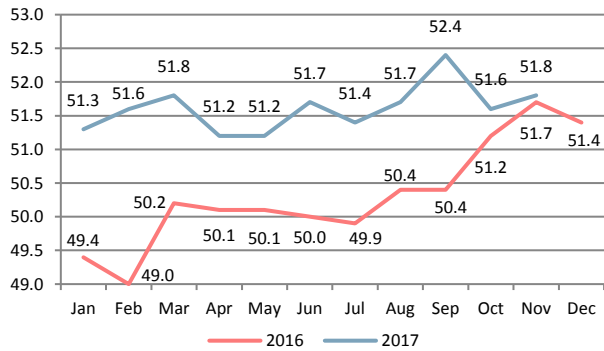
- At the coal trading conference held in Qinhuangdao on 21-23 November 2017, a total of c.130mnt/70mnt of thermal/coking coal contracts were reached, up by 27.2% and 28.4% YoY, from 102.2mnt and 54.5mnt in 2016, respectively. The benchmark price for contracted thermal coal remained flat YoY at RMB535/t. Even though, a majority of coal suppliers and power producers have signed off contracted volumes without stipulating prices, which indicates that a discrepancy of the 2018 coal price exists between the sellers and buyers.
- During a monthly press conference on 15 November 2017, the NDRC outlined four measures to be adopted to ensure stable coal supplies and prices to meet heating demand over the winter, including: 1) To enhance the daily monitoring of the balance of coal supply and demand, 2) To raise the effective coal supply, 3) To meet the coal transportation demand in the key ports, and 4) To increase the utilisation of clean energy and to lower the consumption of coal-fired power.

- On 14 November 2017, the NDRC handed out a circular of “urging the signing and fulfilment of mid-/long-term coal supply contracts for 2018”, in order to ensure coal price and supply stability at the coal trading conference held in Qinhuangdao on 21-23 November 2017, where major coal producers signed mid-/long-term contracts with power and steel companies for 2018.
- On 27 October 2017, the NDRC issued a notice to local authorities to conduct regular inspections to monitor activities related to coal trading and at coal ports, and to watch stock levels and price changes for signs of irregularities, such as price manipulation, and also to warn coal producers not to abuse their dominant position in the market to sell coal at unfair prices, and to refrain from speculation, hoarding and bidding up prices as power producers stock up to meet heating demand over the winter.
- On 21 September 2017, the NDRC issued a circular to urge the release of advanced coal mine production, in order to guarantee safe supply of power and energy during the 19th Party Congress in October.
- On 19 July 2017, the State Administration of Coal Mine Safety (SACMS) issued the notice of “Implementation Plan of Coal Mine Safety Inspection”, which stipulated that inspection of coal mines is to be conducted from July to October.
- On 14 April 2017, in an internal meeting hosted by the NDRC with IPPs and coal producers, coal producers expressed their willingness to lower the coal price. As a result, the thermal coal price started to drop post the meeting.
- On 23 March 2017, the Ministry of Environmental Protection (MEP) announced the “Action Plan against Air Pollution in Beijing-Tianjin-Hebei region and surrounding areas” (“the Action Plan”). According to the MEP, 5,600 environmental inspectors were sent to Beijing, Tianjin, and 26 cities (the “2+26 cities”) in the Beijing-Tianjin-Hebei region and nearby areas to check on implementation of pollution control targets and emission standards.
- On 13 January 2017, NDRC, China Coal Industry Association (CCIA), China Electricity Association (CEC), and China Steel Association (CSA) jointly issued a notice to regulate the coal price by stipulating three different price ranges and their respective responsive action.

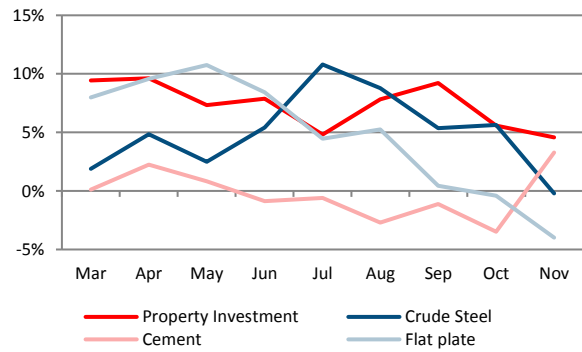
**Figure 3: Coal price ranges and responsive actions**

Area	Price range (RMB/t)	Responsive action
Red	> 600	Regulate
Blue	570 – 600	Monitor and guide
Green	500 – 570	No action
Blue	470 – 500	Monitor and guide
Red	< 470	Regulate

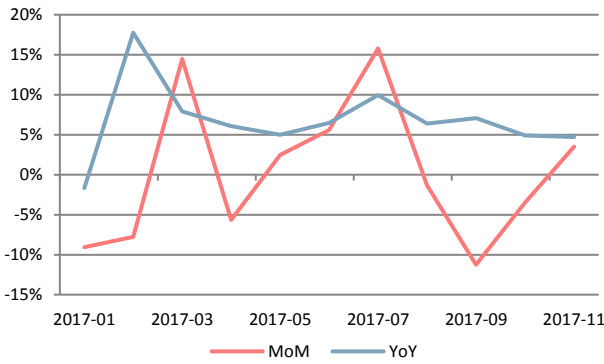
Source: CEC, CSCI Research

**Figure 4: PMI**


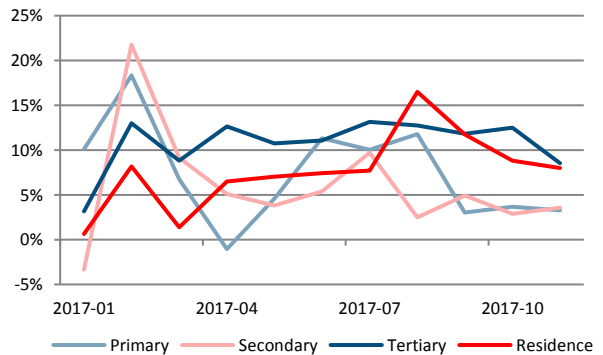
Source: NBS, CSCI Research

**Figure 5: Major industry production/investment (YoY %)**


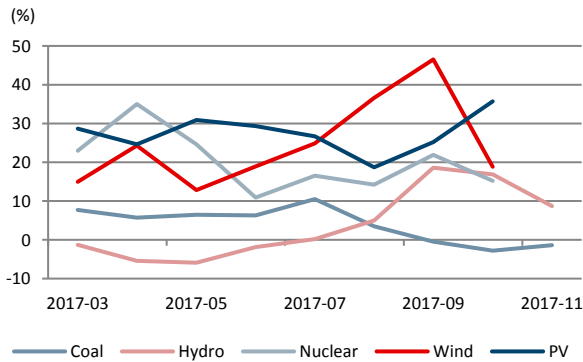
Source: NBS, CSCI Research

**Figure 6: Social power consumption growth**


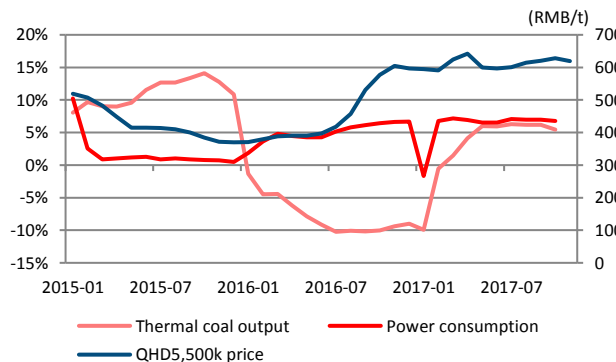
Source: NBS, CSCI Research

**Figure 7: Power consumption by industry (YoY %)**


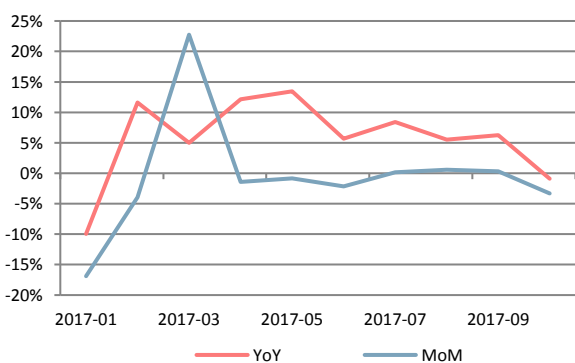
Source: NBS, CSCI Research

**Figure 8: Power generation growth (YoY %)**


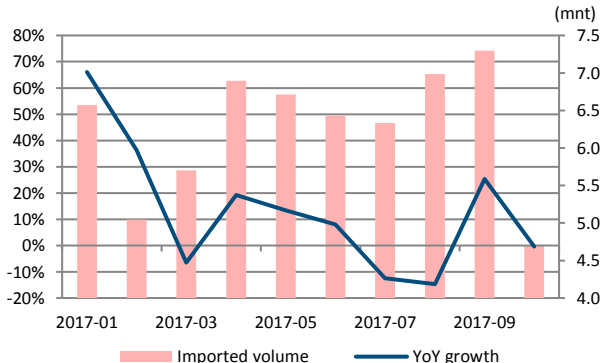
Source: NBS, CSCI Research

**Figure 9: Coal output, spot price vs. power consumption**


Source: NBS, CSCI Research

**Figure 10: China's domestic thermal coal output**


Source: Wind, CSCI Research

**Figure 11: China's imported thermal coal**


Source: Wind, CSCI Research

**Figure 12: Power supply and demand model, 2014-2020E**

	2014	2015	2016	2017F	2018F	2019F	2020F
<b>Total power consumption ('00 mn KWh)</b>	<b>55,223</b>	<b>55,485</b>	<b>59,180</b>	<b>62,566</b>	<b>63,875</b>	<b>65,027</b>	<b>66,108</b>
YoY growth %	3.8%	0.5%	6.7%	5.7%	2.1%	1.8%	1.7%
<b>Power generation ('00 mn KWh)</b>	<b>56,045</b>	<b>56,938</b>	<b>59,897</b>	<b>63,323</b>	<b>64,649</b>	<b>65,814</b>	<b>66,908</b>
Coal	39,510	38,539	39,058	41,040	40,606	40,022	39,349
Hydro	10,601	11,117	11,807	11,624	11,867	12,081	12,282
Gas	1,333	1,669	1,881	2,059	2,748	3,456	4,182
Nuclear	1,332	1,714	2,132	2,533	2,851	3,172	3,499
Wind	1,598	1,853	2,410	2,862	3,306	3,625	4,015
Solar	235	385	662	1,021	1,172	1,325	1,480
Others	1,436	1,661	1,947	2,184	2,099	2,133	2,101
<b>Power generation YoY growth %</b>							
Coal	-0.7%	-2.5%	1.3%	5.1%	-1.1%	-1.4%	-1.7%
Hydro	18.8%	4.9%	6.2%	-1.6%	2.1%	1.8%	1.7%
Gas	14.5%	25.2%	12.7%	9.4%	33.5%	25.8%	21.0%
Nuclear	19.5%	28.7%	24.4%	18.8%	12.6%	11.3%	10.3%
Wind	15.5%	16.0%	30.1%	18.8%	15.5%	9.7%	10.7%
Solar	180.8%	63.7%	71.9%	54.3%	14.8%	13.0%	11.8%
Others	15.0%	15.6%	17.2%	12.2%	-3.9%	1.6%	-1.5%
<b>% of total generation</b>							
Coal	70.5%	67.7%	65.2%	64.8%	62.8%	60.8%	58.8%
Hydro	18.9%	19.5%	19.7%	18.4%	18.4%	18.4%	18.4%
Gas	2.4%	2.9%	3.1%	3.3%	4.3%	5.3%	6.3%
Nuclear	2.4%	3.0%	3.6%	4.0%	4.4%	4.8%	5.2%
Wind	2.9%	3.3%	4.0%	4.5%	5.1%	5.5%	6.0%
Solar	0.4%	0.7%	1.1%	1.6%	1.8%	2.0%	2.2%
Others	2.6%	2.9%	3.3%	3.4%	3.2%	3.2%	3.1%
<b>Installation capacity ('0000 KW)</b>	<b>137,018</b>	<b>152,121</b>	<b>164,575</b>	<b>175,575</b>	<b>185,121</b>	<b>193,213</b>	<b>200,000</b>
Coal	83,233	89,506	94,259	99,561	103,922	107,366	110,000
Hydro	30,486	31,953	33,211	33,407	33,603	33,801	34,000
Gas	5,697	6,603	7,008	8,154	9,311	10,464	11,603
Nuclear	2,008	2,717	3,364	4,027	4,786	4,894	5,227
Wind	9,657	13,130	14,864	16,502	18,079	19,578	21,000
Solar	2,486	4,263	7,742	8,609	9,445	10,242	11,000
Others	3,452	3,949	4,127	5,316	5,975	6,868	7,170

Source: CEC, NBS, CSCI estimate

**Figure 13: Thermal coal supply & demand**

	2010	2011	2012	2013	2014	2015	2016	2017	2018F	2019F	2020F
<b>Capacity</b>						5,700	5,410	5,460	5,440	5,420	5,400
- cut							-290	-150	-120	-120	-120
+ add								200	100	100	100
<b>Utilisation rate %</b>						65%	62%	63%	63%	63%	64%
<b>Supply</b>											
Output	2,552	2,766	2,918	2,823	2,776	3,027	2,754	2,837	2,837	2,837	2,837
Import	119	137	181	192	166	108	124	124	124	124	124
<b>Total</b>	<b>2,671</b>	<b>2,903</b>	<b>3,099</b>	<b>3,015</b>	<b>2,941</b>	<b>3,135</b>	<b>2,878</b>	<b>2,961</b>	<b>2,961</b>	<b>2,961</b>	<b>2,961</b>
<b>Demand</b>											
China	2,543	2,839	2,978	2,985	2,913	3,126	3,101	3,192	3,206	3,210	3,208
Export	18	11	8	6	5	4	8	7	7	7	7
<b>Total</b>	<b>2,561</b>	<b>2,850</b>	<b>2,986</b>	<b>2,992</b>	<b>2,918</b>	<b>3,130</b>	<b>3,109</b>	<b>3,199</b>	<b>3,213</b>	<b>3,217</b>	<b>3,215</b>
<b>Bal (S-D)</b>	<b>110</b>	<b>54</b>	<b>113</b>	<b>23</b>	<b>23</b>	<b>5</b>	<b>-230</b>	<b>-238</b>	<b>-252</b>	<b>-256</b>	<b>-254</b>
<b>YoY Growth %</b>											
<b>Supply</b>											
Output		8%	5%	-3%	-2%	9%	-9%	3%	0%	0%	0%
Import		15%	32%	6%	-14%	-35%	15%	0%	0%	0%	0%
<b>Total</b>		<b>9%</b>	<b>7%</b>	<b>-3%</b>	<b>-2%</b>	<b>7%</b>	<b>-8%</b>	<b>3%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>
<b>Demand</b>											
China		12%	5%	0%	-2%	7%	-1%	3%	0%	0%	0%
Export		-38%	-28%	-20%	-22%	-12%	74%	-10%	0%	0%	0%
<b>Total</b>		<b>11%</b>	<b>5%</b>	<b>0%</b>	<b>-2%</b>	<b>7%</b>	<b>-1%</b>	<b>3%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>

Source: NBS, Wind, CSCI Estimate



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## Company Rating Definition

The Benchmark: Hong Kong Hang Seng Index; Time Horizon: 12 months

<b>Buy</b>	12-month absolute total return: $\geq 10\%$
<b>Hold</b>	12-month absolute total return: $> -10\%$ but $< 10\%$
<b>Sell</b>	12-month absolute total return: $\leq -10\%$

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