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**Topic: “CHINA COKING COAL MARKET, SUPPLY,  
DEMAND, PRICE AND COMPETITION”**

# From a Tight Supply-demand Balance to Kind of Looseness —2018 China Coking Coal Market Study and Outlook

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# 2018 China Coking Coal Market Study and Outlook

## Policies

- De-capacity going forward and capacity replacement ratio lifting
- Accelerating the release of high-quality capacity while coking coal capacity low
- Safety supervision and environmental inspection normalizing and stepping up, affecting coal supply, consumption and logistics
- Price regulation measures intensifying yet mainly targeting at thermal coal
- Import and export policies to be flexible based on domestic coal supply and demand situation

## Supply

- Coal supply weaker than expected, and coking coal output declining YoY

## Demand

- Coke supply continuously suppressed by environmental inspection, and coking coal demand falling

## Import & Export

- Supply-demand gap narrowing and imports reducing
- Export aggregate maintaining low amid insufficient impetus

## Supply-demand Landscape

- Shifting from a tight balance to slightly looseness

## Price

- Volatile at high within a narrow range and 2018's average price obviously higher than 2017

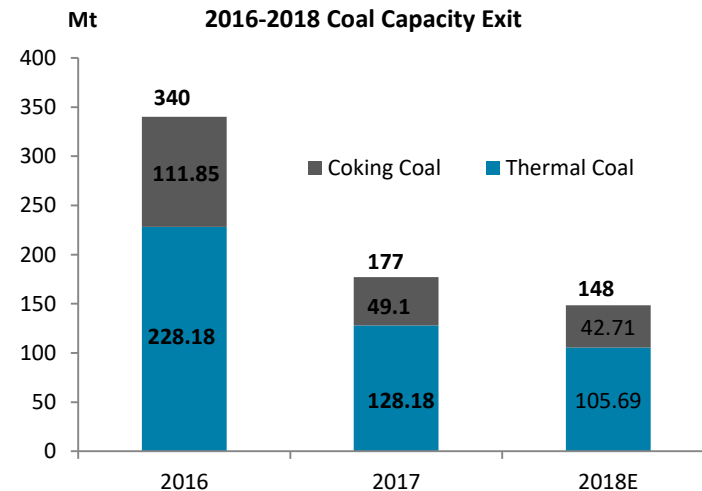
Policies: de-capacity moving forward and capacity replacement ratio lifting; the release of high-quality capacity remaining slow and coking coal capacity is less

### De-capacity:

- To cut **150Mt** of coal capacity in 2018. Around **80Mt** has been eliminated during Jan and Jul, completing over 50% of annual de-capacity target.

### Capacity replacement and the release of high-quality capacity:

- High-quality capacity to add orderly while backward capacity to exit as soon as possible, facilitating restructuring of coal industry.
- Conversion ratio of capacity replacement index can lift to **130%-300%** at some mines – overlapping with natural reserves, scenic spots, drinking water source protection zones, with serious disasters, as well as with first-class safety production standard, optimized production system, coal and electricity joint venture.
- Optimizing the allocation of existing resources and expanding high-quality increment supply to strike a dynamic balance between supply and demand.



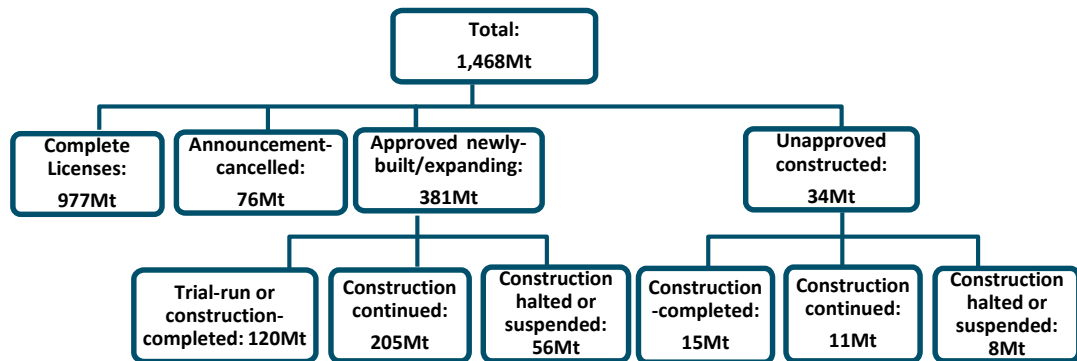
Source: Fenwei Energy

Policies: de-capacity moving forward and capacity replacement ratio lifting; the release of high-quality capacity remaining slow and coking coal capacity is less

### Capacity Upward Verification of Some Coking Coal Mines in 2018

Mine	Announced Capacity (Mt)	After Upward Verification (Mt)	Newly-added Capacity (Mt)	Coking Coal Type
Lu'an Luning Mengjiayao Mine	1.20	3.0	1.80	Gas Coal (QM)
Yineng Mine	0.45	0.60	0.15	1/3 Coking Coal (1/3JM)
Huaibei Mining Yuandian 2# Mine	0.90	1.50	0.60	Primary Coking Coal (JM)
Henan Dayou Energy Shihao Mine	0.90	1.20	0.30	Primary Coking Coal (JM)
Sichuan Zhichang Nanmugou Mine	0.06	0.15	0.09	1/3 Coking Coal (1/3JM)
<b>Total</b>	3.51	6.45	2.94	-

### Coking Coal Capacity Structure as of 1H 2018



Source: Fenwei Energy

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### Execution effects:

- Capacity utilization rate in coal industry has boosted obviously; the supply and demand relationship has improved; and coal companies' profits have been enhancing.
- As operating mines are already producing in heavy load and also restricted by environmental and safety inspections, it is difficult for them to further raise the output.
- The release of high-quality capacity is rather slow. Most trial-run mines are already under operation, their contribution to supply growth is little. Moreover, the coking coal capacity is low.

## Policies: safety supervision and environmental inspection normalizing and stepping up, affecting coal supply, consumption and logistics

### Safety: normalized and frequent safety inspections disrupt mine production, and the impact on small mines is greater than that on medium and large-sized mines

- To crack down on illegal and incompliant production activities, e.g. cross-seam & cross-boundary mining and over-capacity production;
- Comprehensive safety examinations and random checks on eligible mines in safety production standardization.

### Environmental protection: the frequently-issued and stricter new policies, environmental inspection/supervision and “reviewed inspection” of different levels restrict production and transportation of coal mines and washing plants

- According to the “Three-Year Action Plan to Protect the Blue Sky”, the coal proportion in primary energy consumption mix shall fall to below **58%** by 2020; In addition to Beijing, Tianjin, Hebei and the surrounding “2+26” cities, another **11** cities on Fenwei Plains (Lvliang, Jinzhong and Yuncheng in Shanxi Province, Luoyang and Sanmenxia in Henan Province, Xi’an, Xianyang, Baoji, Tongchuan, Weinan and Yangling Demonstration Zone in Shaanxi Province) and **four** provinces & city in the Yangtze Rive Delta Area (Shanghai, Jiangsu, Zhejiang, Anhui) are also incorporated into the Action Plan.
- Coal mines, washing plants and railway coal-loading stations with substandard environmental measures shall cease or cut production during specific period.

### Restricted truck transport : special operations to combat pollution caused by diesel trucks

- Coal inflows to main coastal ports, Tangshan Port and Huanghua Port shall be transported by **railways or waterways** before the end of 2018;
- The bulk material like iron ore and coke shall be mainly delivered by **railways or waterways** to main coastal ports, Tangshan Port and Huanghua Port before the heating season of 2020.

### Execution effects

- Miners’ awareness of safety production and environmental protection has promoted and the related input has increased. However, the safety situation is still challenging. As of July 8, 130 coal mine accidents occurred throughout China, up 24 or 22.6% YoY.
- The escalating environmental policies in 2018 deliver a significant impact on markets and supply & demand of steel, coke and coal.

### Summary of Environmental Policies during 1H 2018

Date	Duration	Department of Issuance	Policy Name/Main Contents
Aug, 2017	Nov, 2017-Mar, 2018	MEE, etc.	Action Plans to Comprehensively Control Air Pollution in Beijing, Tianjin, Hebei and the Surrounding Areas during Autumn and Winter of 2017-2018
Jan, 2018	2018-2019	MEE	Notice on Executing Air Pollutant Special Emission Limit in Air Pollution Transmission Channels of Beijing, Tianjin and Hebei
Mar, 2018	Throughout 2018	Local MEE	Shanxi and Shaanxi held provincial environmental working conference to deploy environmental inspection work in 2018
Apr, 2018	Apr-Jun, 2018	Local MEE	Shanxi Provincial Environmental Groups to carry out “reviewed inspections” in some cities and counties.
May, 2018	Jun-Jul, 2018	Local MEE	Central Environmental Inspector Groups to conduct “reviewed inspections” and will station in ten provinces including Hebei, Henan, Inner Mongolia and Ningxia for one month.
Jun, 2018	Throughout 2018	State Council	Opinions on Enhancing Ecological Environmental Protection and Executing Pollution Prevention and Control
Jun, 2018	Jun-Jul, 2018	Administration Office of Caofeidian Port Logistics Park	Conducting environmental renovation
2018	2017-2018	General Administration Office of Jiangsu	Rectifying illegal docks and regulating lightering operations; by the end of 2020, all waterborne lightering operation on the Yangtze River Jiangsu Section will be banned.
Jun, 2018	2018-2020	State Council	Three-year Action Plan to Protect the Blue Sky

## Policies: price regulation measures intensifying yet mainly targeting at thermal coal

### Stabilizing coal prices: “nine measures” to restrain coal prices from soaring

- The Development and Reform Commission (NDRC) introduced **nine measures** in May including raising output, lifting capacity, adding transport capacity, advocating long-term contracts, increasing clean energy, adjusting inventories, reducing coal consumption, enhancing supervision and promoting joint operation of coal and power, with an aim to stabilize coal market and push coal price to return to a reasonable range.
- Clearing high stocks at ports, combating illegal and incompliant activities like manipulating price and hoarding coal; the contact details for reporting such activities are published.

### Import and export policies: to be flexibly adjusted based on the domestic coal supply and demand situation

- Prolonging customs clearance, strictly controlling coal quality test standard and banning coal imports at tier-2 ports
- Import restriction measures are usually introduced in off-peak season and ease in peak season for thermal coal consumption.

### Execution effects

- NDRC’s “nine measures” mainly targeted on thermal coal, while frequent environmental and safety inspections crippled the effects of supply-assurance policy. Coal prices reduced only marginally due to lack of coordinated regulation measures.
- Thermal coal imports saw a strong growth in 1H 2018, so much import quota has been used. As coal imports are still constrained by import quota in 2018, which is no higher than that in 2017, that left to winter peak season in 4Q is less. Coking coal imports will also be affected.

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## Supply: effective capacity maintaining stable while output reducing

### Capacity

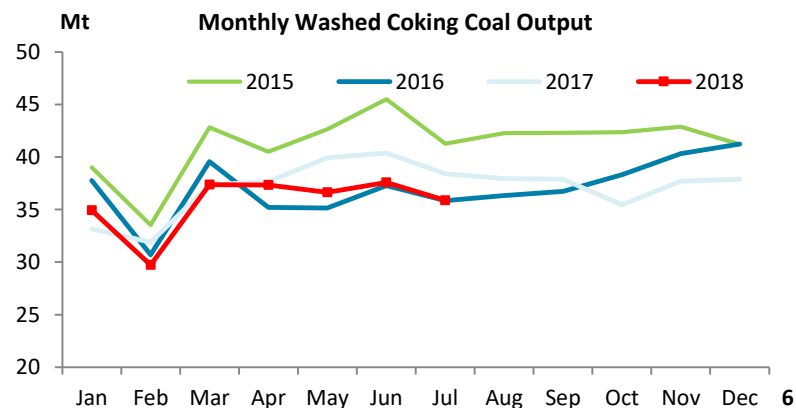
- Coking coal capacity projected **to be closed** in 2018: **42.71Mt**
- **Effective capacity** able to contribute output at 2018-end: around **1,100Mt**

### Output

- With environmental and safety inspections restricting normal production at coal mines, supply growth is less than expected.
- China's washed coking coal supply during January and July amounted to **250Mt**, down **3.6%** YoY.
- China's domestic washed coking coal output is estimated to reach **452Mt** in 2018, up **1.3%** YoY.

Coking Coal Effective Supply Capacity

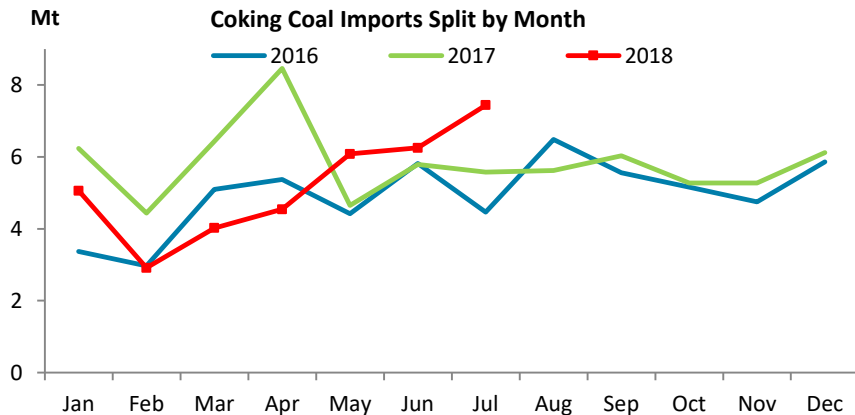
Capacity Composition/Mt	2017	1H 2018
<b>Effective supply capacity</b>	<b>1,098</b>	<b>1,078</b>
Including: operating mines	995	977
Trial-run mines	55	56
Construction-completed mines	26	24
Construction basically-completed mines	22	22
Proportion in total capacity	73%	73.4%



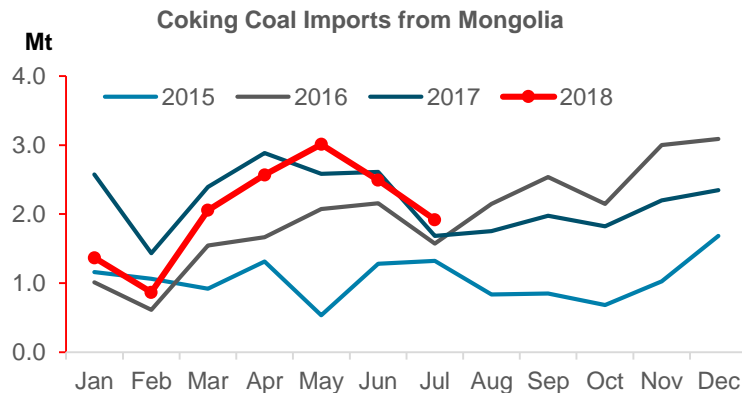
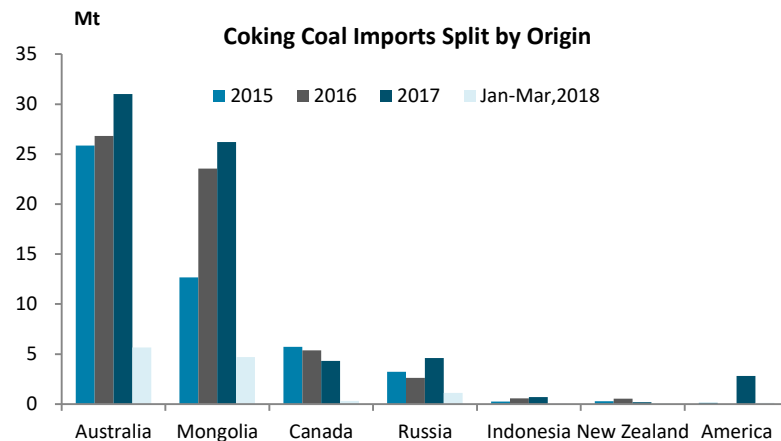


## Import: supply-demand gap narrowing and imports reducing

- Coking coal imports from January to July added up to **36.62Mt**, down **11.5%** YoY; of which from Mongolia 14.3Mt, -9% YoY.
- Coking coal imports reduced dramatically in 1Q 2018 as productions of main international miners were constrained at early 2018 and the domestic consumers were less keen to purchase amid high seaborne prices.
- As China domestic coking coal supply maintains a slight growth while demand is expected to reduce, coking coal supply-demand gap will contract and imported coal demand tends to fall accordingly in 2018.
- Coking coal imports are estimated to stand at **63.7Mt** in 2018, down **8%** YoY.

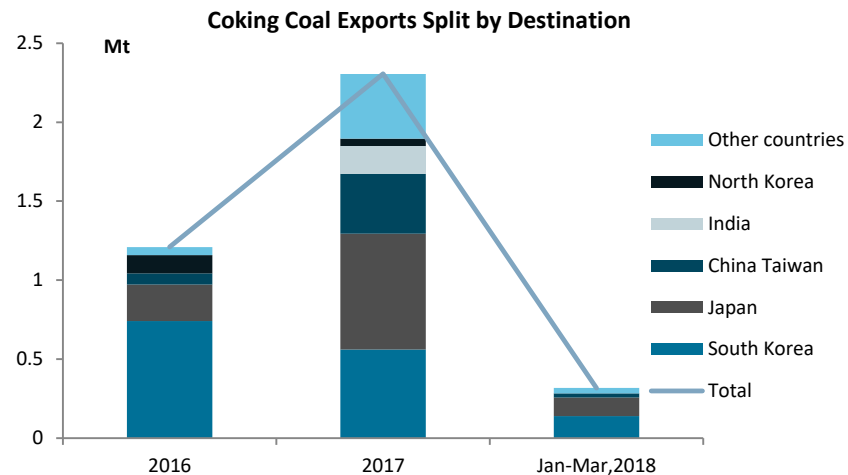
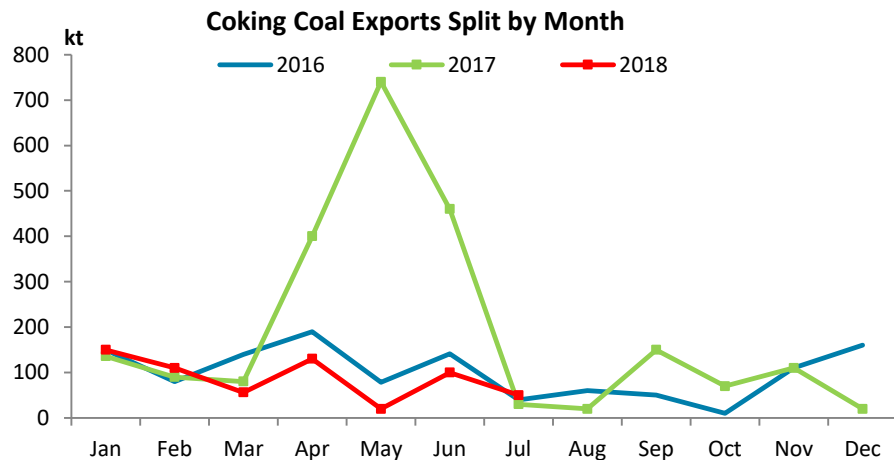


Source: GAC



## Export: export aggregate maintaining low amid insufficient impetus

- Coking coal exports during January and July realized **0.62Mt**, diving by **67.9%** YoY.
- As domestic coking coal was not cost effective, the impetus for coking coal exports was insufficient in 1H 2018 and export size remained small.
- Coking coal exports are projected to maintain low at **2Mt** in 2018, down **13%** YoY.



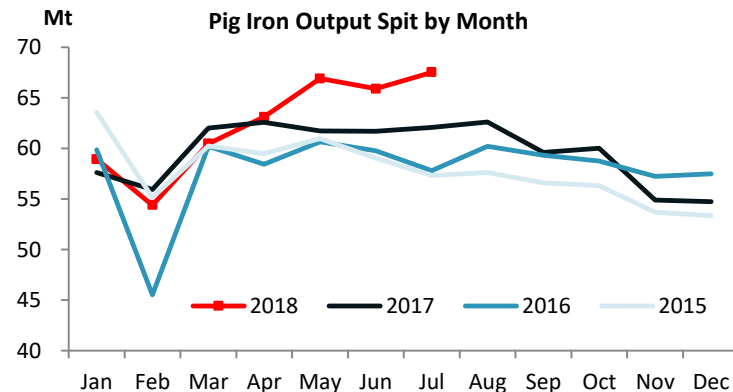
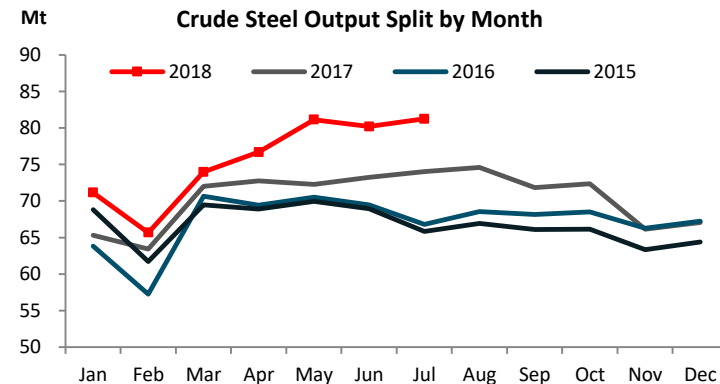
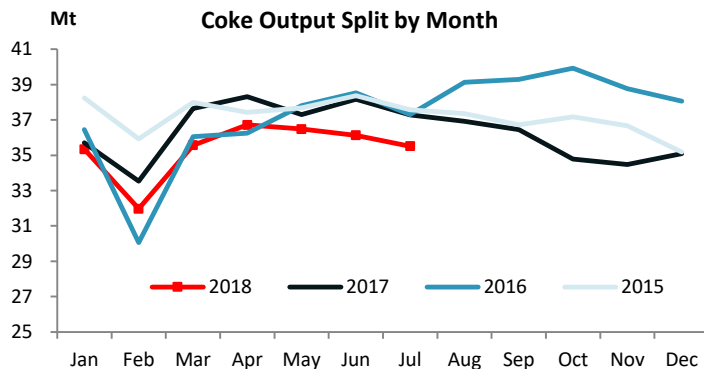
## Supply-demand Situation: from a tight balance to somewhat looseness

### Demand:

- Output growth of crude steel and pig iron slowed down, and coke output showed a negative growth.
- Output projection in 2018: crude steel: 856Mt, +2.9% YoY; pig iron: 710Mt, -0.14% YoY; coke: **428Mt, -0.7% YoY**
- Coking coal demand is projected to hit **512Mt** in 2018, ticking down **0.7% YoY**.

### Supply:

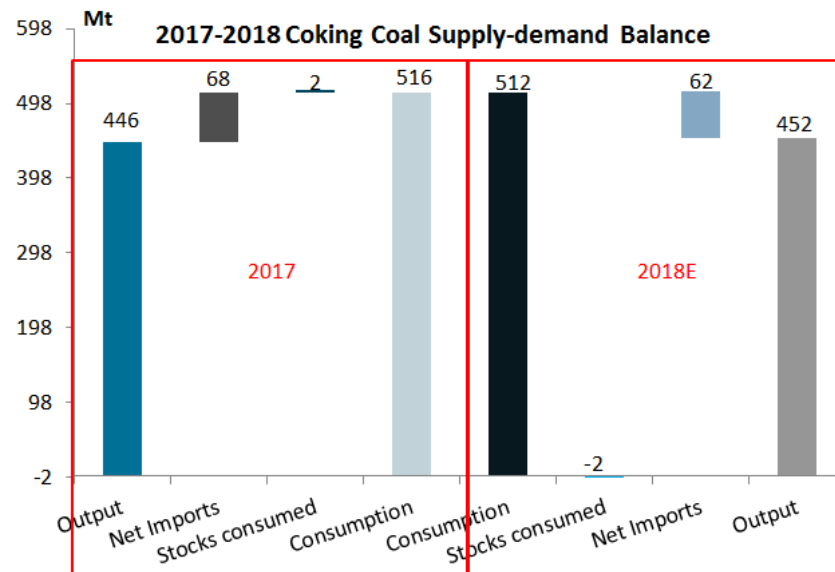
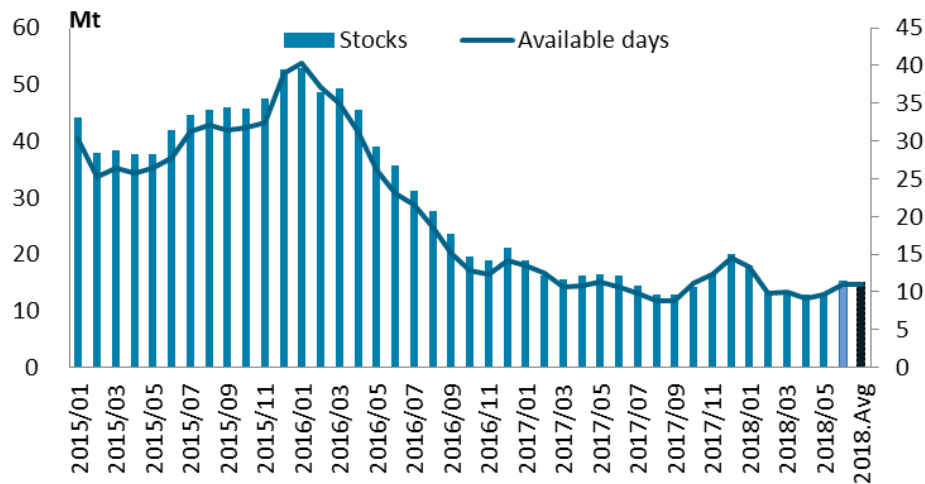
- As environmental and safety inspections continue affecting production at coal mines, supply growth is less than expected.
- Domestic washed coking coal output is projected to hit **452Mt** in 2018, up **1.3% YoY**.
- Net imports are projected to reach **62Mt** in 2018, down **0.9% YoY**.



## Supply-demand Situation: from a tight balance to somewhat looseness

### Supply-demand gap:

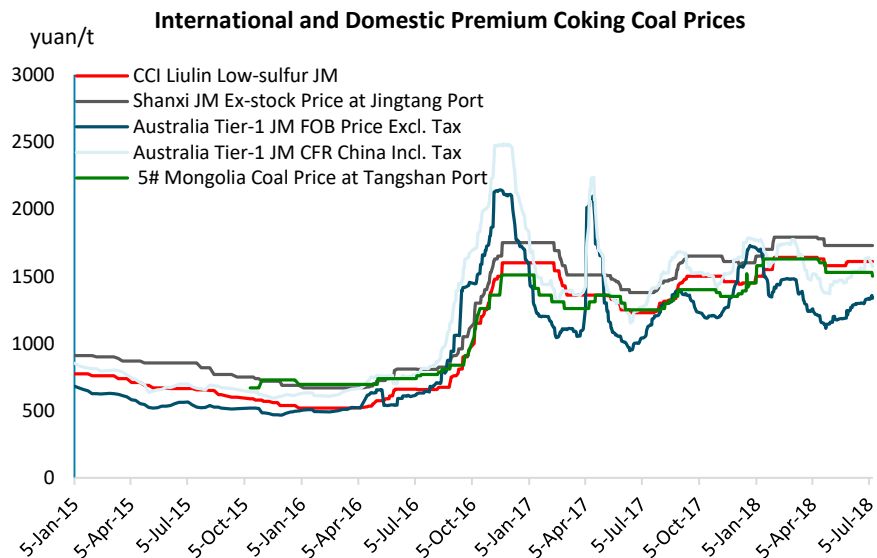
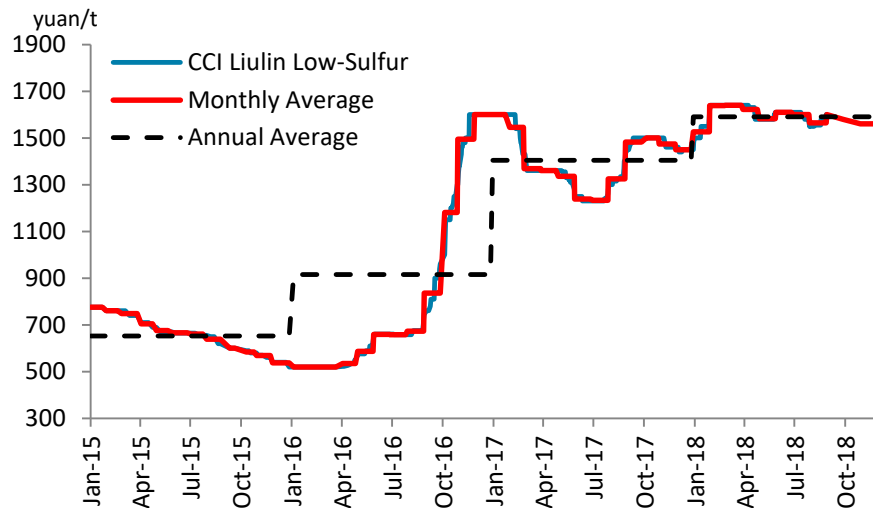
- As supply is stable yet demand is reducing in 2018, coking coal market is probable to shift from a tight balance to a little looseness.
- Coking coal stocks may build up by **2Mt** in 2018.
- Coking coal market is expected to show an overall balance, and may experience a tight supply during some specific period.



Mt	Washed Coking Coal Output	Net Imports	Total Supply	Demand	Supply-demand Gap
2016	444	58	502	534	-32
2017	446	68	514	516	-2
2018E	452	62	514	512	2

## Price: volatile at high within a narrow range, and 2018's average price obviously higher than 2017.

- Coking coal demand tends to fall amid stability and output tends to grow slightly, so coking coal market will shift from a tight balance to somewhat looseness instead of an apparent surplus. Under the context, high-quality coking coal price is expected to maintain strong, while low-quality high-sulfur coking coal prices may fall.
- CCI Liulin low-sulfur price index averaged at **1,602** yuan/t during January and July, up **16.3%** YoY.
- The annual price is projected to average at **1,590** yuan/t in 2018, hiking by **185** yuan/t or **13%** YoY.
- As domestic and international coal markets are closely interacted, domestic and international coal price trends are consistent while international coal prices may experience a greater volatility.



# 2019 Coking Coal Market Outlook

## Policy

- Various policies will sustain: de-capacity will basically complete; safety and environmental inspections will maintain the strength or even stricter.

## Domestic Supply

- Domestic supply is expected to maintain stable overall and some uncertainties will restrain normal extractions of some coking coal mines. (e.g.: mining rights withdrawal within nature reserve areas and water resource protection areas in Shanxi Province.)

## Import & Export

- A falling domestic demand and import restriction policies will affect coking coal imports.

## Demand

- As economic growth and investments slow down, outputs of pig iron and coke will decline accordingly. With coke production being restricted by environmental inspections, coking coal demand may continue falling.

## Price

- With coking coal market maintaining a balance or somewhat looseness, average coking coal prices will move down moderately. CCI Liulin low-sulfur coking coal price is projected to fall by **40 yuan/t** YoY in 2019.

Coking Coal Supply-demand Balance Forecast

Year	Washed Coking Coal Output	Net Imports	Total Supply	Demand	Supply-demand Gap
2017	446	68	514	516	-2
2018E	452	62	514	512	2
2019E	453	60	513	510	3

Coking Coal Price Forecast

Year	2015	2016	2017	2018E	2019E
CCI Liulin low-sulfur coking coal (yuan/t)	652	916	1,405	1,590	1,550

## ▪ 行业研究预测 Industry Study

- 煤炭及下游行业研究与预测 Coal and downstream industries study & forecast

政策	• Policies
供需	• Supply & demand
进出口	• Imports & exports
物流	• Logistics
价格	• Prices...

- 煤炭及下游行业与重点企业研究 Study on coal & downstream industries and major suppliers

- 煤炭（炼焦煤、动力煤）、焦化成本研究与预测 Coal and coke costs study & forecast

- 煤炭、焦化物流研究（铁路、公路、水路） Coal & coke logistics study

- 区域煤炭供需与物流 Regional coal supply-demand & logistics

## ▪ 煤炭定价与价格预测预警 Coal Pricing & Price Forecast

- 国内外煤炭品牌价值对比 Value comparison between domestic & foreign coal brands

- 煤炭产品（炼焦煤、动力煤）价格预测预警 Coal products Price forecast & warning

- 煤炭市场与竞争对手调查 Coal market & competitors survey

## ▪ 资源与市场调查研究 Resource & Market Study

- 国内外煤炭竞争力对比 Competitiveness comparison between Chinese & imported coal

- 煤矿资源调查及价值评估 Mine resource investigation & value assessment

- 煤焦企业尽职调查 Due diligence investigation of coal/coke producers

- 煤炭上市公司行业、市场研究报告 Industry & market research report for listed coal companies

- 煤炭产运销调查 Study of coal production, distribution & transportation

- 煤焦企业调研 Field trips to coal/coke producers

## ▪ 原料与产品优化

### Raw Materials & Products Optimization

- 大数据配煤与焦化企业降成本

Big data-based coal blending & cost-cut services for coke making companies

- 用煤企业的原料调查及优化

Raw materials evaluation & optimization for coal consumption companies

- 焦炭冷热强度预测与优化

Coke CRI and CSR prediction & optimization

- 煤炭产品价值挖掘与产品设计

Coal product value exploration & product design

- 特殊资源推荐

Recommendation for special resources

## ▪ 投资与市场中介服务

### Investment & Market Intermediary Services

- 资源项目投资服务，帮助寻找和提供项目投资信息

Resource project investment services to help find and provide investment information

- 项目合作服务，为项目业主寻找潜在投资者

Project cooperation services to seek potential investors for project owners

- 产品销售服务，为产品买卖双方交易撮合

Product sales services to match sellers with buyers

## 周度报告 Weekly Report

### – 汾渭能源煤炭行业周报

汇集一周中国及全球煤市要闻、热点关注，政策解读，数据分析，中国和世界主要市场分煤种分析、CCI指数、汾渭分煤种产销数据，主要港口和下游行业数据，为您全面把握国内外市场提供决策参考。

### – Fenwei Coal Weekly Update

These reports incorporate China and the world's weekly coal market news, policy interpretations, market analysis, price index series, Fenwei survey coal data, coal inventories, data of main ports and downstream industries.

## 月度报告 Monthly Reports

- 中国炼焦煤市场月度分析及预测
- 中国动力煤市场月度分析及预测
- 中国焦炭市场月度分析及预测
- 中国炼焦煤进口月度分析

月度报告每月末发布，将观点提炼为标题，结合图表对月度市场进行分析预测，内容包括：宏观经济表现、下游行业生产及市场情况、煤炭供需情况分析；煤炭进出口、库存、价格、运费数据及分析；最新政策及重要行业信息解读，并对下月煤炭市场价格做出预测。

- China Coking Coal Market Monthly
- China Thermal Coal Market Monthly
- China Coke Market Monthly
- China Coking Coal Import Monthly

These reports review monthly economic performance, production and market dynamics of downstream industries, supply & demand, imports and exports, stocks, prices, and interpretations of latest policies and significant events, and market price forecast for the coming month.

## 半年度报告 Semi-annual Report

- 2018年上半年中国动力煤市场分析及预测
- 2018年上半年中国炼焦煤市场分析及预测
- 2018年上半年中国焦炭市场分析及预测

汾渭推出分煤种“2018年上半年中国煤炭市场分析及下半年预测”报告，从政策、需求、供给、运输、价格、进出口、成本等方面对影响煤炭市场的主要因素进行了分析预测，及时高效地为关注煤炭行业和市场的广大读者提供有价值的深度分析。

- Semi-annual China Thermal Coal Market Analysis & Forecast
- Semi-annual China Coking Coal Market Analysis & Forecast
- Semi-annual China Coke Market Analysis & Forecast

These reports conducts analysis and forecast in terms of such main factors as policies, demand, supply, transport, prices, imports & exports and costs, to provide valuable in-depth analysis and reference for market players and interested readers.



## 年度报告 Annual Reports

- 2017年中国动力煤市场分析及2018年预测
- 2017年中国炼焦煤市场分析及2018年预测
- 2017年中国焦炭市场分析及2018年预测

2017年中国煤炭行业继续化解过剩产能，宏观经济稳中向好，煤炭需求小幅增加，而煤炭供应受到政策、安全环保检查、进口煤调控及重大活动的影响不及预期，煤炭价格高位运行。年度报告对2018年影响煤炭、焦炭市场的主要因素从政策、需求、供给、运输、价格、进出口等方面进行分析预测。

## 中长期市场分析与预测 Mid-to-long Term Market Study

- 2018-2022年中国动力煤市场分析预测
- 2018-2022年中国炼焦煤市场分析预测
- 2018-2022年中国焦炭市场分析预测
- 2018-2022年中国西南地区煤炭供需格局及发展变化趋势

中长期市场分析与预测报告，研判2018-2022年的走势，结合宏观经济策略、煤炭行业政策、产能结构、下游行业消费特点，全面剖析产能、供需、进出口、价格，逻辑清晰地展示相关数据和结论，为客户准确把握行业发展脉络提供支持。

- 2017-2018 China Thermal Coal Market Analysis & Outlook
- 2017-2018 China Coking Coal Market Analysis & Outlook
- 2017-2018 China Coke Market Analysis & Outlook

In 2017, China's coal industry continued to resolve excess capacity. While the coal supply was less than expected due to the impacts of policies, safety and environmental inspections. Coal prices showed highly volatility. The reports provide analysis and forecast of coal & coke market in terms of policies, demand, supply, transport, prices, imports and exports in 2018.

- 2018-2022 China Thermal Coal Market Analysis & Forecast
- 2018-2022 China Coking Coal Market Analysis & Forecast
- 2018-2022 China Coke Market Analysis & Forecast
- 2018-2022 Southwest China Coal Supply-demand Pattern & Development Trend

These reports study China coal market development trend over 2018-2022 from the perspectives of coal supply & demand, prices and integrating with macro-economic strategies, coal industry policies, changes on capacity structure, and features of downstream consumptions.

## 专题研究 Monographic Study

- 2017年中国煤炭供给侧改革及2018-2020年产能预测
- 中国煤炭成本的影响因素及2018-2020年成本预测
- “三西”地区煤炭运输格局未来变化趋势研究
- 环保政策对煤炭供需、价格及采购成本的影响分析
- 2017 China Coal Industry Supply-side Reform & 2018-2020 Capacity Forecast
- Influencing Factors of China Coal Production Costs & 2018-2022 Cost Forecast
- Study on Changing Trend of Coal Transport Landscape in Shanxi, Shaanxi and Inner Mongolia
- Influences Analysis from Environmental Protection Policies on Coal Supply & Demand , Price and Purchase Cost

针对煤炭市场普遍关注的热点问题及对行业及下游产生重大影响的政策执行，汾渭结合自有煤矿产能数据库、成本数据库，分别推出专题研究报告，用数据、图表和文字对中国煤炭供给侧改革及去产能、煤炭成本、环保政策实施对煤炭行业的影响做分析预测。

Concerning the hot topics and critical policies for coal industry and downstream companies, Fenwei compiles the monographic study on supply-side reform, de-capacity, coal cost, the impact analysis of environmental policies on coal and downstream industries, based on our exclusive Mine Capacity Database and Mine Cost Database.

## 资源与煤质 Resource & Coal Quality Study

- 中国硬焦煤资源分布、煤质及供应前景展望
- 中国主要炼焦煤矿区煤质应用评价
- 国内外炼焦煤对比评价与CSR预测
- 中国炼焦煤资源应用价值评估
- China HCC Resource Distribution, Quality & Supply Outlook
- Coal Quality Application Evaluation for Chinese Major Coking Coal Mining Areas
- Chinese and Foreign Coking Coal Comparison, Evaluation & CSR Forecast
- China Coking Coal Resource Application Evaluation

# 数据库 Database

## — 中国煤矿基本情况及产能数据库 China Coalmine Basic Info & Capacity Database

中国煤矿基本情况及产能数据库由全国25个产煤省（市、区）所有在籍的7629座煤矿数据组成，合计生产能力56.5亿吨，对数据库中每座煤矿的状态和煤种都做了甄别。其中生产矿井4018座（边建边产矿井101座），生产能力34.5亿吨；试运转矿井246座，生产能力3.8亿吨；建设矿井649座（含核准和未核准），生产能力10.6亿吨；停建缓建矿井1324座，生产能力5.3亿吨；取消公告矿井1392座，生产能力2.3亿吨。

This database involves 7,629-plus registered coalmines in 25 coal-production provinces, municipalities and regions, incorporating 5,650 Mt/a of production capacity. Among that, there are 4,018-plus operating mines with capacity of 3,450 Mt/a (including 101 producing mines while still being constructed), 246-plus trial run mines with capacity of 380 Mt/a, 649-plus under-construction mines (both approved and unapproved), covering capacity of 1,060 Mt/a, 1,324-plus construction halted and suspending mines with a combined capacity of 530 Mt/a and 1,392 announcement-canceled mines, involving capacity of 230 Mt/a .

矿井名称	Mine name	瓦斯等级	Gas level	矿井状态	Mine state
所属集团	Group	剩余可采储量	Remaining reserve	投产时间	Operation time
所属分公司	Branch office	井田面积	Mine field area	开拓方式	Development method
矿井性质	Mine ownership	开采深度	Mining depth	采煤工艺	Coal mining technology
矿井地址	Mine address	设计能力	Designed capacity	可采煤层	Minable coal seam
所属矿区	Mining area	核定能力	Verified capacity	煤层厚度	Coal seam thickness
成煤期	Coal-forming period	产量	Output	煤种	Coal type

# 数据库 Database

## – 中国煤矿煤质数据库 China Coal Quality Database

汾渭能源十余年来坚持对各地区各矿区煤田勘探地质报告数据进行收集整理，并对不同地区、不同品种、不同体制的煤矿煤质信息通过各种方式采集、加工和整理，我们对每一个矿区、煤矿的煤层灰分、硫分及其它煤质指标都做了分析研究，建成了中国煤矿煤质数据库并在持续更新完善中。目前完成生产及建设煤矿共计4800座，产能合计45亿吨。

During the past decade and more, we have been collecting coalfield exploration reports about nationwide mining areas, then screening and categorizing the massive coal quality data by mining area, coal type and mine ownership. We analyzed coal quality indicators (ash, sulfur, etc.) by coal seam in each mining area, and incorporated our study outcome into a coal quality database. Currently, this database covers quality statistics about 4,800 coalmines (operating and under-construction) with combined capacity of 4,500 Mt/a.

工业分析 Proximate analysis					元素分析 Ultimate analysis				煤岩显微组分 Maceral analysis			
内水 Mad	灰分 Ad	挥发分 Vdaf	硫分 St,d	发热量 Qnet.ar	碳 C <sub>daf</sub>	氢 H <sub>daf</sub>	氮 N <sub>daf</sub>	氧 O <sub>daf</sub>	镜质组 V	惰质组 I	壳质组 E	反射率 R°max
煤灰成分 Ash composition					结焦性能 Coking property							
SiO <sub>2</sub> , Al <sub>2</sub> O <sub>3</sub> , Fe <sub>2</sub> O <sub>3</sub> , CaO, MgO, K <sub>2</sub> O, Na <sub>2</sub> O, Mn <sub>3</sub> O <sub>4</sub> , TiO <sub>2</sub> , P <sub>2</sub> O <sub>5</sub> , SO <sub>3</sub>					粘结指数 G	胶质层厚度 Y	坩埚膨胀序数 CSN	反应后强度 CSR	吉氏流动度 DDPM			

## — 中国煤矿成本数据库 China Coalmine Cost Database

汾渭能源基于十多年成本数据的积累，经过全国范围内实地调研和煤矿样本数据资料整理，建成了涵盖中国25个产煤省市的3000座生产煤矿的成本数据库，包括煤炭生产成本、洗选成本、运输成本，并对未来成本进行了分析预测。3000座生产煤矿生产能力32.44亿吨，占全国生产矿井生产能力的85%。

By relying on more than a decade of coal industry experiences, and massive data that are gathered through numerous trips to nationwide coalmines, we have built a coal cost database that involves 3,000 operating coalmines in China's 25 coal-production provinces. This database not only unfolds current costs on coal production, washing and logistics, but shows our forecast for the foreseeable future. The combined capacity of these 3,000 mines amounts to 3,244 Mt/a, holding 85% of China total operating capacity.

原煤制造成本 Raw coal production cost	材料费	Materials	三项费用 Three charges	销售费用	Marketing
	工资及福利	Labor		管理费用	Administration
	动力费	Fuel & power		财务费用	Financial
	安全费	Safety	精煤出厂成本 Washed coal EXW cost	洗选费	Washing
	维简及井巷费	Simple reproduction & roadway engineering		精煤回收率	Washed coal yield
	折旧费	Depreciation		中煤价格	Middling price
	维修费	Reparation	铁路运费 Rail cost	精煤出厂成本	EXW cost
	可持续发展基金	Sustainable development fund		发站地	Departure
	转产基金	Industry transferring fund		到站地	Destination
	环境治理基金	Environment recovery fund		是否有专用线	Coal-dedicated railway (Y / N)
	价格调节基金	Price adjustment fund		短倒运费	Short-distance trucking
	资源税	Resource tax		铁路运费	Rail freight
	其他费用	Others	站台费及杂费	Platform & others	
	原煤制造成本	Raw coal production cost	公路运费	Road freight	
		中转港杂	Port charges		
		中转港离岸成本	FOB cost		

## — 中国焦化厂数据库 China Coking Plant Database

2018年1月版中国焦化厂数据库收录在产焦化厂426家（不含兰炭），产能5.52亿吨，占全国在产焦炭产能（不含兰炭）的92%。焦化厂数据库包括两类指标：一是基本指标（企业及焦炉基本情况）；二是专业指标（配煤煤质、炼焦煤配比、焦炭质量指标）。

This database involves 426 operating coking plants in China (excluding semi-coke). Their combined capacity of 552 Mt/a holds about 92% of China's total (excluding semi-coke). In this database, there are general indicators (basic information of coking plants and their ovens), and specialized indicators (feed coal quality, coal blending ratio and coke quality).

企业及焦炉基本情况 Basic information																		
企业名称	所属集团	地址	生产能力	产量	是否钢厂配套	焦炉类型	焦炉型号	炭化室高度	孔数	熄焦方式								
Coking plant	Group	Add.	Capacity	Output	Affiliated or not	Oven type	Oven model	Carbonization chamber height	Hole number	Quenching								
配煤煤质 Feed coal quality						配比及成焦率 Blending ratio & coke rate						焦炭指标 Coke quality						
灰分 Aad	水分 Mt	硫分 St,ad	挥发分 Vdaf	胶质层 Y	粘结指数 G	焦煤 JM	肥煤 FM	瘦煤 SM	气肥煤 QF	1/3焦煤 1/3JM	其他煤 Other coals	成焦率 Coke rate	M40	M10	CSR	灰分 A	硫分 S	

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