

China Low-Sulfur Fuel Oil Futures

The China Securities Regulatory Commission (“CSRC”) has recently approved the Shanghai International Energy Exchange (“INE”), a subsidiary of the Shanghai Futures Exchange (“SHFE”), to launch low-sulfur fuel oil futures on **June 22, 2020**. This is **the 5th internationalized futures** after INE crude oil, DCE iron ore, ZCE PTA and INE TSR20 rubber futures.

Low-sulfur fuel oil futures will adopt the similar model of crude oil - "international platform, net price trading, bonded delivery, and RMB pricing" - to introduce international investors to participate in the China futures market. It is also the 2nd internationalized energy futures after crude oil.

Low-Sulfur Fuel Oil Futures Contract Specs (For Public Consultation)

Product	Low-Sulfur Fuel Oil
Contract Size	10 metric tons/lot
Price Quotation	(RMB) Yuan/metric ton (no tax or duty included in the quotation)
Minimum Price Fluctuation	1 Yuan/metric ton
Daily Price Limits	±5% from the settlement price of the previous trading day
Delivery Months	January, February, March, April, May, June, July, August, September, October, November, and December Starting from LU2101 (January 2021) and LU2112 (February 2021)
Trading Hours	9:00-11:30 a.m., 1:30-3:00 p.m. and 21:00-23:00 p.m. (Beijing Time)
Last Trading Day	The last trading day of the month prior to the delivery month
Delivery Period	Five (5) consecutive trading days after the last trading day
Grades and Quality Specifications	Low-sulfur marine fuel oil
Delivery Venues	Delivery Storage Facilities designated by INE
Minimum Trading Margin	8% of contract value
Settlement Type	Physical delivery
Product Symbol	LU
Listing Exchange	Shanghai International Energy Exchange



Enhancing China's pricing power on international marine oil market

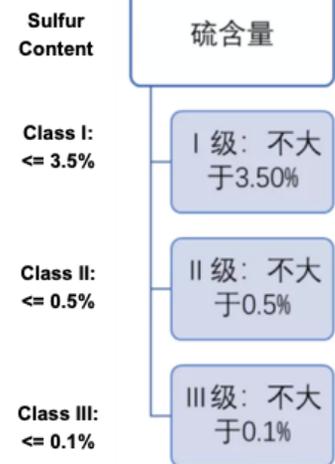
In 2004, SHFE has launched a fuel oil futures product - RMG380 marine fuel oil (sulfur content is class I, II), which is commonly known as “high-sulfur fuel oil” in the industry. The RMG380 marine fuel oil futures was the only energy futures in China at that time, and it has gained wide market participation and become an important price reference for China domestic and international fuel oil spot markets. Data shows that in 2009, the trading volume of RMG380 marine fuel oil futures on the SHFE was 45.754 million lots, ranking the 5th among global energy products.

However, the consumption structure of the spot market has undergone tremendous changes due to the impact of fuel oil consumption tax since 2009. The Bonded 380 marine fuel oil has gradually become the industry's main consuming choice, while the RMG380 marine fuel oil futures market entered a downturn. The RMG380 marine fuel oil futures had zero transactions for the first time on May 24, 2012.

In order to fill the gap in the lack of domestic bonded fuel oil pricing mechanism, SHFE revised the high-sulfur fuel oil futures contract specs in 2018 to convert the underlying delivery product to RMG380 bonded marine fuel oil. After the contract revision, the volume of the RMG380 bonded marine fuel oil futures ranked the 15th among global energy futures in 2018 and ranked the 4th in 2019. The volume in the first four months of 2020 has jumped to the 2nd.

A new policy change came to the fuel oil spot market. On January 1, 2020, the International Maritime Organization (“IMO”) Global Marine Fuel Sulphur Restriction officially came into effect. This will fundamentally improve the port, ocean and global environment, and bring tremendous changes to the global marine oil market, prompting the further expansion of the spot market of low-sulfur fuel oil. At the same time, the introduction of the China domestic low-sulfur fuel oil export tax rebate policy has successfully opened a new page in the domestic supply of China bonded low-sulfur marine fuel oil.

Professor Kang Wenjin, Director of the Securities Research Center of the School of Finance at Shanghai University of Finance and Economics, said that the upcoming internationalized low-sulfur fuel oil futures prices can reflect the supply and demand of the global spot market in a more timely and direct manner, and it is conducive to promoting the further development of China low-sulfur fuel oil industry with a market mechanism. At the same time, it will gradually lead Shanghai to an influential international low-sulfur fuel oil pricing center, further strengthen the global influence and competitiveness of China commodity futures market, and enhance China's pricing power on international marine oil market.



Industry's reaction - actively preparing

The upcoming low-sulfur fuel oil futures has a broad market basis. Recently, the global annual consumption of marine fuel oil is around 300 million tons, mainly concentrated in major ports of Asia, Europe, the Middle East and North America. Among them, the Asia-Pacific market has grown rapidly, with a market share of over 45%, and has become the world's largest marine fuel oil consumption market.

Currently, all parties in relevant industries are actively preparing. Many interviewed professionals said that they are very optimistic about the prospects of low-sulfur fuel oil futures trading.

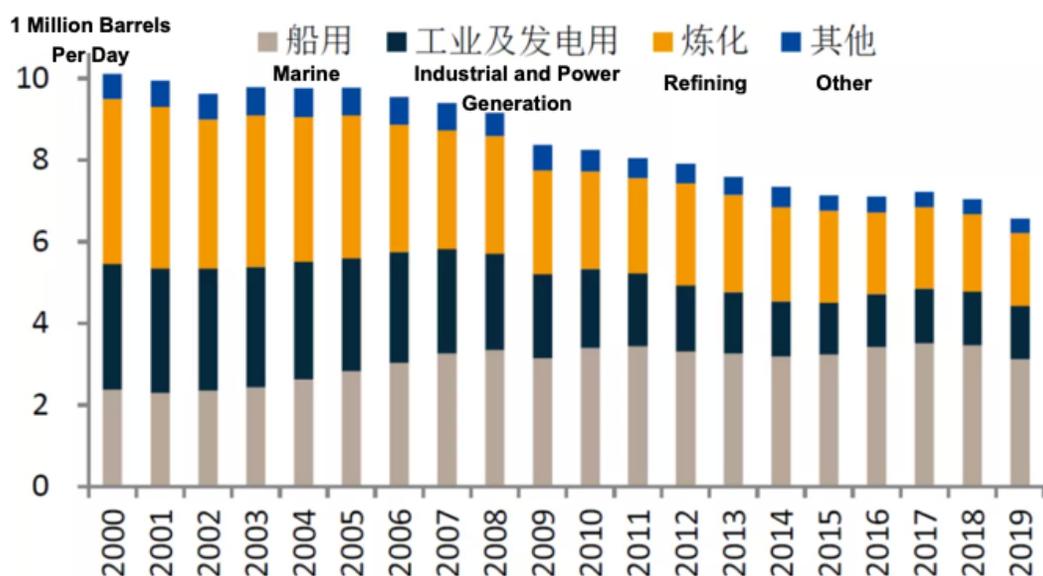
"The listing of low-sulfur fuel oil futures will be a good price risk management tool, allowing the companies to focus more on production and operation." Qiao Yongxin, deputy general manager of East China Petroleum International Business Co., Ltd. said, *"The company plans to actively participate in the low-sulfur fuel oil futures trading."*

More information about Spot market

1) Global fuel oil market

The traditional high-sulfur fuel oil is also called heavy oil and residual oil. It is mainly made of cracked residual oil and straight-run residual oil of crude oil. It has good fuel performance, large calorific value, good atomization, complete fuel, less carbon deposit and ash, small corrosion, high flash point, safe storage and usage, and is widely used as power fuel for international ocean-going ships, and power generation fuel in some countries and regions.

Chart 1: Global fuel oil consumption structure and changes





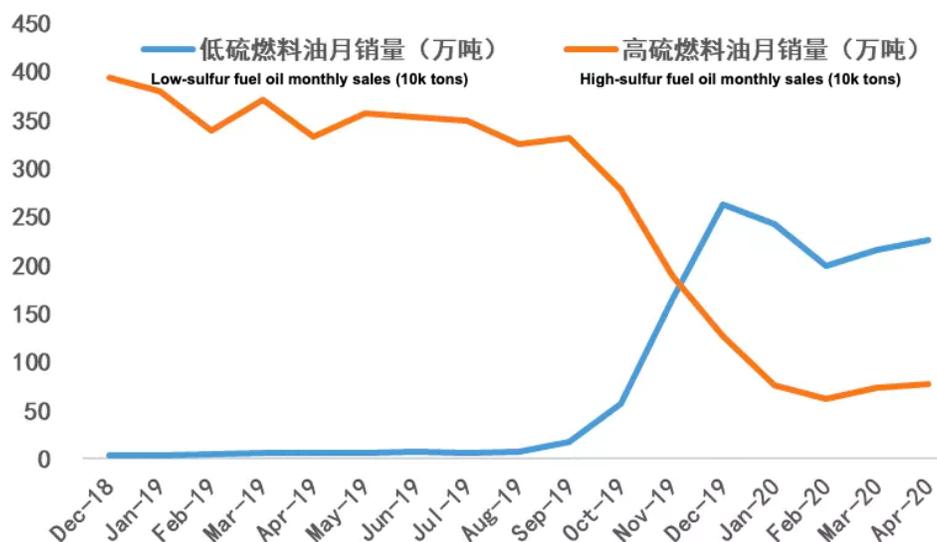
Supply: OPEC predicted that global fuel oil production will be about 400 million tons in 2020, of which the demand for marine bunkering is about 300 -320 million tons (accounting for the majority of downstream consumption of fuel oil). Russia, the Middle East, South America and other places are the main producers of fuel oil, while China, South Korea, Vietnam and some countries in the Middle East plan to expand production capacity. China plans to release more than 18 million tons of fuel oil capacity in 2020.

Demand: there are currently four major marine oil markets in the world, namely Asia (Singapore, Japan, Korea, Hong Kong, China), Europe ARA (Amsterdam, Rotterdam, Antwerp), Mediterranean (Fujairah) and Americas (East Coast of the Americas). The marine trade and ocean shipping in the above areas is booming, and the marine oil market is very developed. Currently, Europe, Russia, the Americas, and the Middle East are in a state of oversupply, while the Asia-Pacific region has a large demand gap. In the Asia-Pacific region, a lot of fuel will be sent to Singapore, and exported to other regions after modulation. China is an export destination of Singapore. However, with the gradual release of China low-sulfur fuel oil production capacity, the volume of fuel oil imported from Singapore has shrunk year by year (currently dominated by a small amount of high-sulfur fuel oil), and the import dependence of low-sulfur fuel oil is lower.

2) Low-Sulfur Fuel oil

On January 1, 2020, the International Maritime Organization (“IMO”) Global Marine Fuel Sulphur Restriction officially came into effect - the global marine fuel sulfur content should not exceed 0.5% m/m. This is proposed in the context of the increasingly serious global air pollution problem. Sulfur compounds from the burning of large offshore vessels are released into the atmosphere to form acid rain, which further aggravates environmental pollution. Therefore, the requirements for reducing the sulfur content in fuel oil are becoming more urgent.

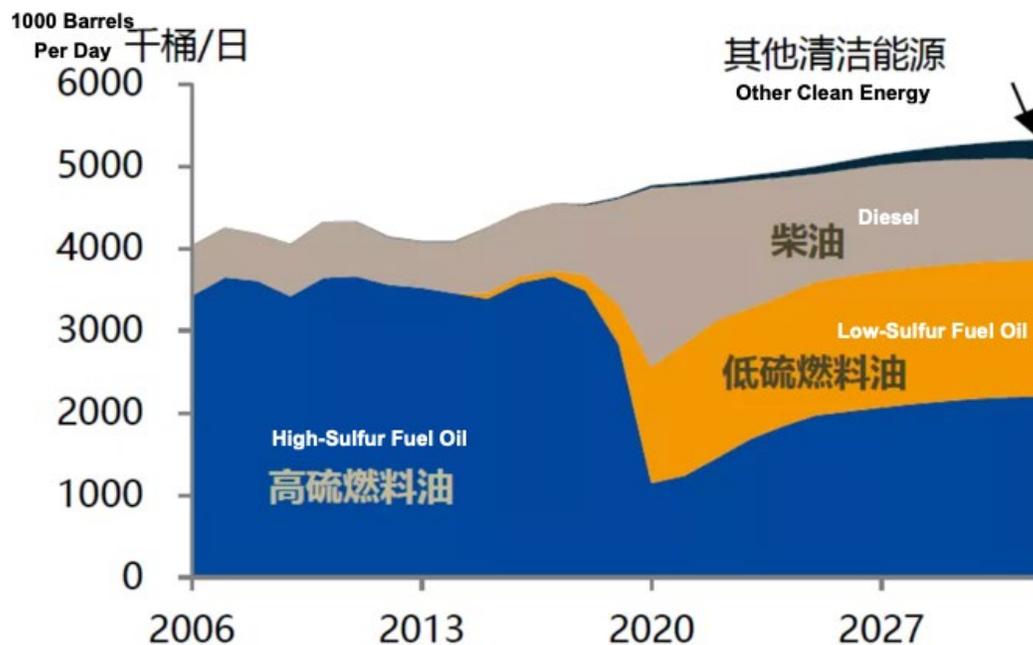
Chart 2: Singapore high-sulfur and low-sulfur fuel oil sales comparison





The switching of high-sulfur and low-sulfur in the marine fuel oil industry began on a large scale in the fourth quarter of 2019, and the monthly sales of high-sulfur fuel oil in Singapore, the world's largest marine fuel refueling center, fell from over 3 million tons to less than 800,000 tons. The monthly sales of low-sulfur fuel oil have reached about 2 million tons since 2020.

Chart 3: The composition and trend of marine fuel oil demand under the influence of Sulphur Restriction Policy



The switching of Singapore's marine fuel oil sales is a reflection of the global marine fuel oil transition from high-sulfur to low-sulfur. The low-sulfur fuel oil has become the main variety of China bonded fuel oil market. Due to the relatively tight supply of low-sulfur marine fuel in the early stage of transition, some ship owners also use diesel as a transition, thus the market share of low-sulfur fuel oil is expected to further increase after the supply is gradually released.

3) China low-sulfur bonded fuel oil market

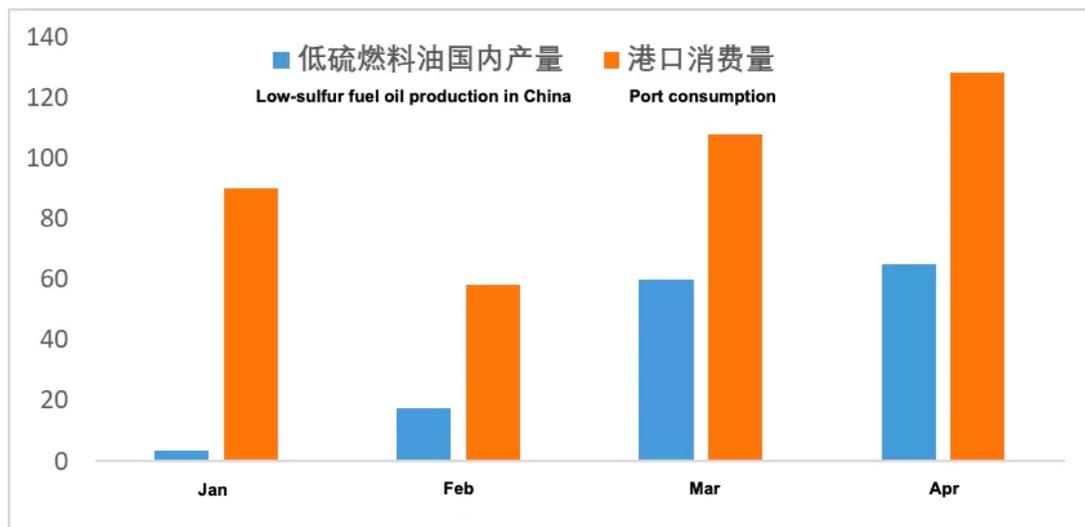
China bonded fuel oil market has experienced rapid growth in the past three years.

Previously, China bonded fuel oil relied on imports (annual import volume is about 14 million tons), mainly through Singapore, Malaysia, UAE, Japan, South Korea and other countries, of which Singapore and Malaysia accounted for about 60% of the imports. The imported oil are mainly mixed 380 high-sulfur fuel oil, and MGO (marine diesel) which is mostly from South Korea and Japan. Last year, the overall supply of China bonded oil increased significantly. The amount of low-sulfur marine fuel produced by domestic refineries and obtained through blending

were 0.2 million and 1.59 million tons respectively, while the amount of imported bonded oil was 14.27 million tons.

Since the beginning of 2020, with the implementation of the fuel oil export tax rebate policy, China domestic refineries have begun to produce large-scale low-sulfur marine fuel. According to Jinlianchuang's incomplete statistics, the total production of China bonded low-sulfur marine heavy fuel oil from January to May 2020 is about 2.16 million tons. Due to the current impact of the epidemic, shipping demand is weak, and the low sulfur marine fuel prices is low, the refinery production efficiency is not high, i.e., the China refinery capacity has not been fully released. If the epidemic improves in the second half of the year, and the shipping industry gradually recovers, the monthly production of China refineries will continue to grow. It is conservatively expected that the production of low-sulfur fuel oil from refineries will reach to 8-10 million tons this year.

Chart 4: China low-sulfur fuel oil production and port consumption (10,000 tons) in 2020



According to customs data, China imported 4.674 million tons of bonded marine fuel oil from January to April in 2020, down 19.65% YoY.

At the end of April, the Ministry of Commerce and the General Administration of Customs announced that low-sulfur marine fuel oil will be included in the export license management cargo catalog (2020). At the same time, the Ministry of Commerce issued the first batch of low-sulfur marine fuel oil export quota notice in 2020 (10 million tons in total).

The following links will direct you to the original source of the information provided in this report:

- 1) Shanghai Futures Exchange – <https://mp.weixin.qq.com/s/eAFUn1DCxqIqyjDGjaz8UA>
- 2) CTA Fund Net – https://mp.weixin.qq.com/s/yBk6iG_hkvvmx4A0NEn87g