



Green Finance Progress in CEEX

China Emissions Exchange (CEEX)
CHINA EMISSIONS EXCHANGE (CEEX)





Outline

- 01 Background of CEEX
- 02 Carbon Finance
- 03 Green Finance
- 04 New Energy Assets Investment, Financing and Trade
- 05 Green Industry Investment Fund

1. Background of CEEEX



In 2011, the NDRC launched carbon emission trading pilots in seven provinces and cities, including **Guangdong**, Hubei, Shanghai, Tianjin, Shenzhen, Beijing and Chongqing.

Emissions Trading Platform

- In 2012, Guangdong Provincial Government designated CEEEX as **the only trading platform of carbon emission trading pilot in Guangdong**.
- In 2013, CEEEX became the first batch of China Certified Emission Reduction (CCER) trading institution certified by the NDRC.

Joint Construction by Guangdong Province and Guangzhou City

- Founded on September 11, 2012.
- 100% owned by China Canton Exchange Group Ltd.

❑ Service for Ecological Civilization Construction

❑ Service for Green Finance System Construction

❑ Environment and Energy Trading Institution

❑ Green Finance Service Institution

广东省人民政府

中华人民共和国国家发展和改革委员会

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国家发展改革委办公厅关于同意广州碳排放权交易所有限公司为自愿减排交易机构备案的函

广东省发展改革委：
你委《广东省发展改革委关于广州碳排放权交易所申请温室气体自愿减排交易机构备案申请的请示》（粤发改资环〔2012〕880号）收悉。

经审核，广州碳排放权交易所有限公司符合《温室气体自愿减排交易管理暂行办法》第二十五条规定的交易机构备案条件，现予以备案。

特此函告。



CCER Trading Platform

Guangdong Emission Allowances Trading Platform

Guangdong Provincial Pu Hui Certified Emission Reduction (PHCER) Trading Platform

CEEX Green Finance Service Platform

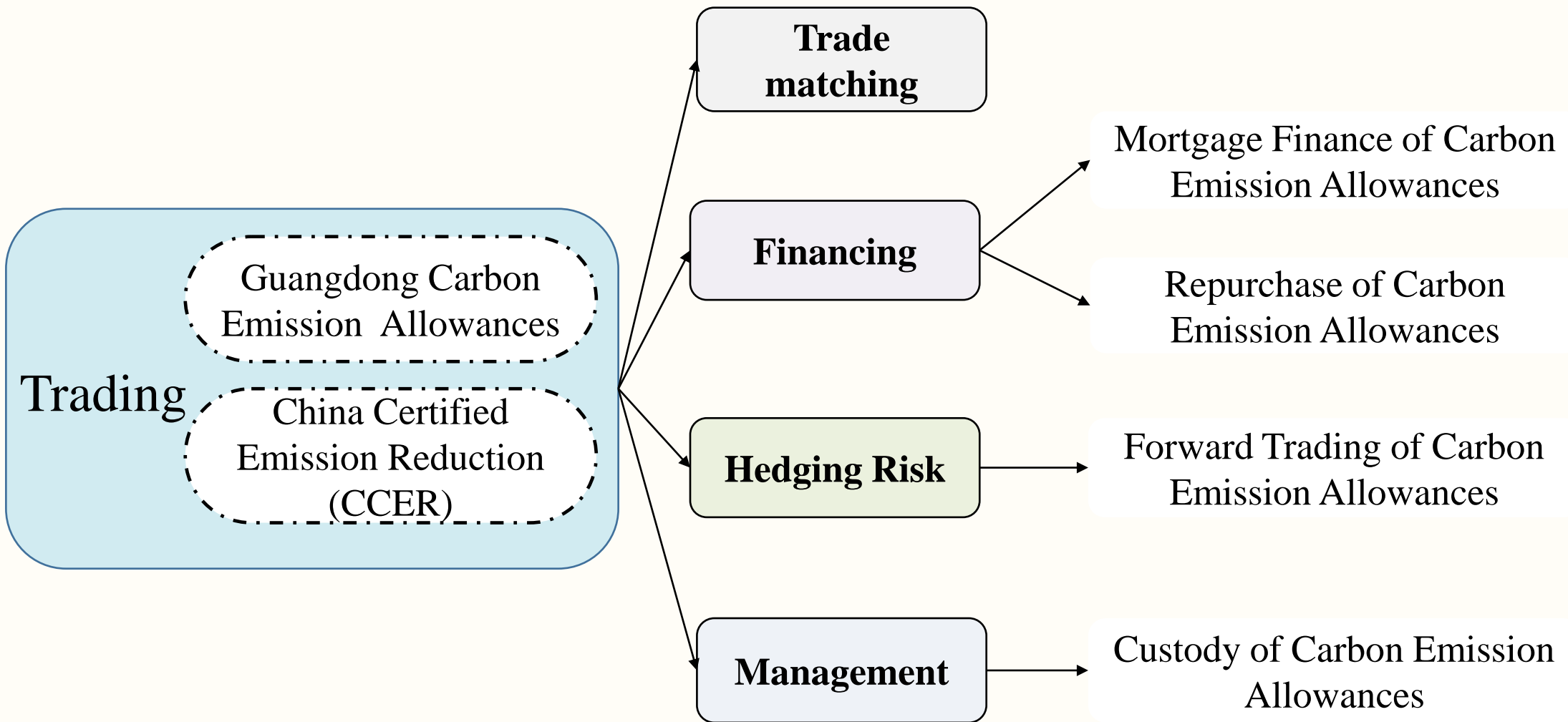
China New Energy Assets Investment and Financing Platform

National Carbon Market Capacity Building (Guangdong) Center

Guangzhou Green Industry Investment Fund Management Co., Ltd.



2. Carbon Finance





Spot

Non-standardized Derivatives

Primary Market

Spot auctions

- ❑ Guangdong Allowances (GDEA)
- ❑ Guangdong Provincial Pu Hui Certified Emission Reduction (PHCER)

Secondary Market

Spot

- ❑ Guangdong Allowances (GDEA)
- ❑ China Certified Emission Reduction (CCER)
- ❑ Guangdong Provincial Pu Hui Certified Emission Reduction (PHCER)

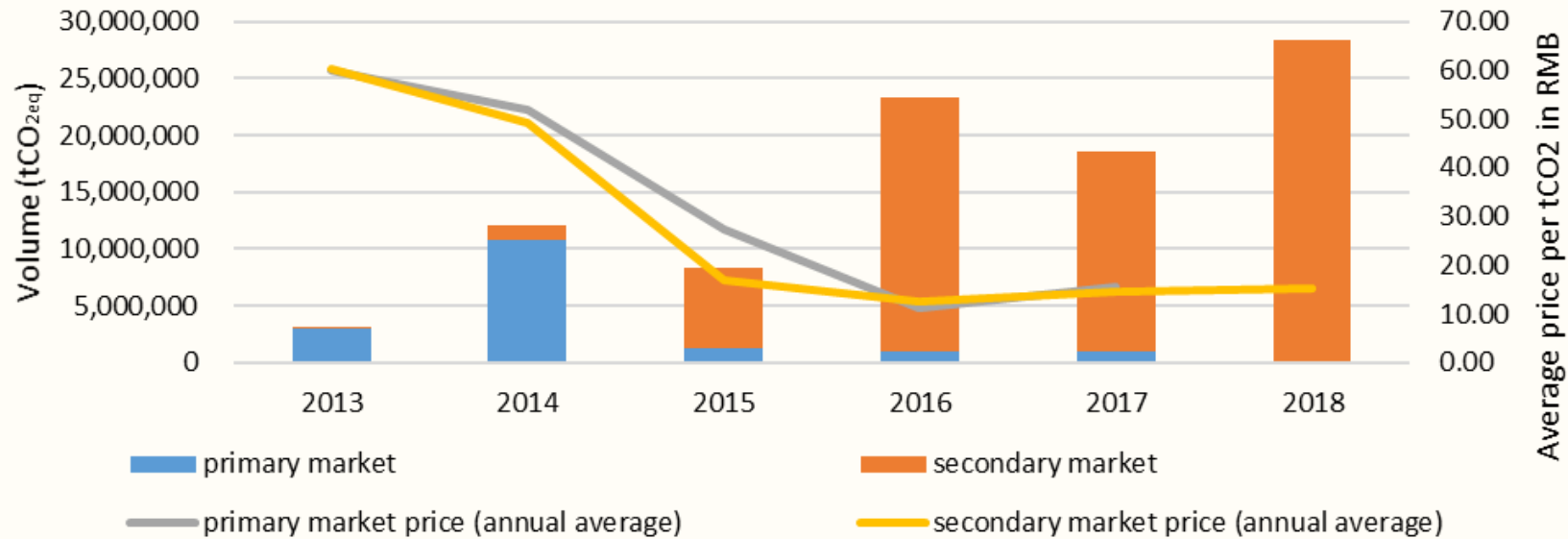
Forwards

- ❑ Guangdong Allowances (GDEA) forwards
- ❑ China Certified Emission Reduction (CCER) forwards

- Primary auctions take place quarterly, according to CEEEX's auction calendar.
- Continuous trading between 9:30 a.m.-11:30 a.m. and 1:30- 3:30 p.m. CST from Monday to Friday
- Clearing and settlement of trades are completed by CEEEX.



Trading volume & carbon price 2013-2018



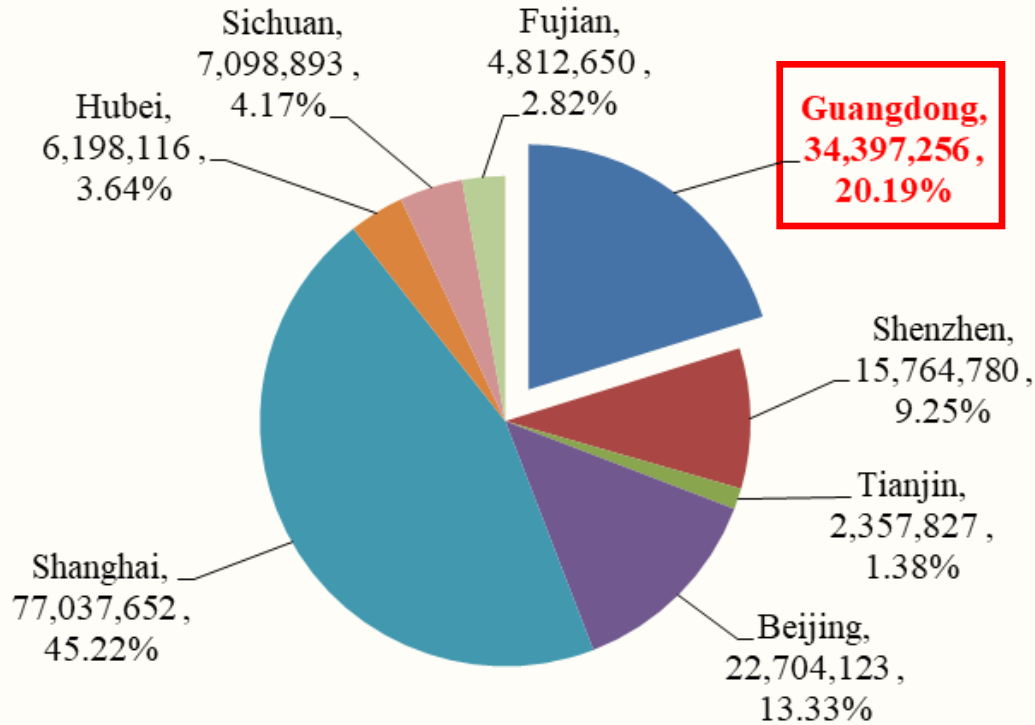
- The Guangdong pilot ETS has given rise to one of the most liquid emissions trading markets in China today, with an average daily volume of ~70 thousand tCO₂eq being traded.
- The first 124 enterprises of power generation and captive power plant in Guangdong will be involved in national ETS, and the Guangdong pilot ETS will continue exist.
- China national ETS launched in Dec. 19th 2017, political reform path:
 - Three phases (2017-2020) to expand the scope of market coverage, CCER and other products would be included at the right time.
 - CEEX will become potential agent for Chinese ETS and take share of the national exchange and registry.

Guangdong Pilot ETS Market

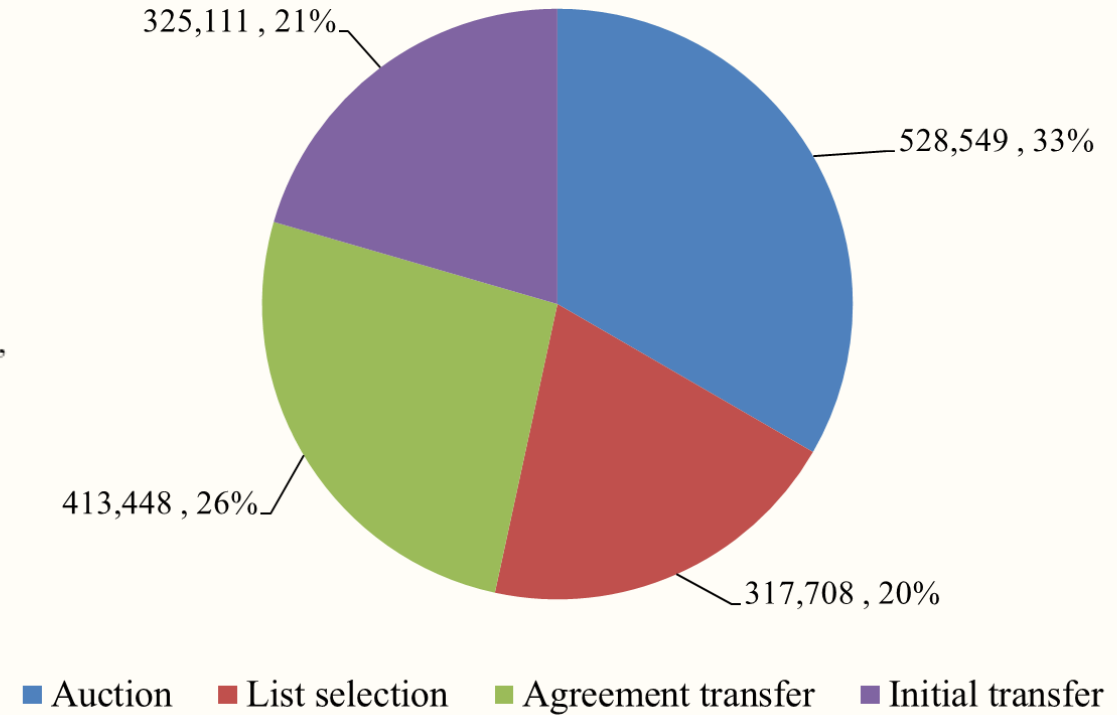
CCER and PHCER Trading



CCER trading volumes and percentage in polots



Trading volumes of PHCER



- The Guangdong pilot ETS is the second largest CCER market in China, with about 34.40 million tons being traded.
- PHCER (voluntarily certified emission reduction generated by low-carbon behaviors in Guangdong) is Guangdong's distinctive trading products, has recorded a total transaction volume of PHCER equivalent to 1.58 million tons.



- The CEEX supports foreign investors participating in Guangdong carbon emission allowances trading in RMB.
- In January 2018, **the first cross-border carbon emission allowances transaction** in the Green Finance Reform and Innovation Pilot zone was settled (¥1.32 million).
- After that, Foreign institutional investors transacted **carbon emission allowances for 200 thousands tons** (¥2.74 million).



Forest Carbon Sequestration

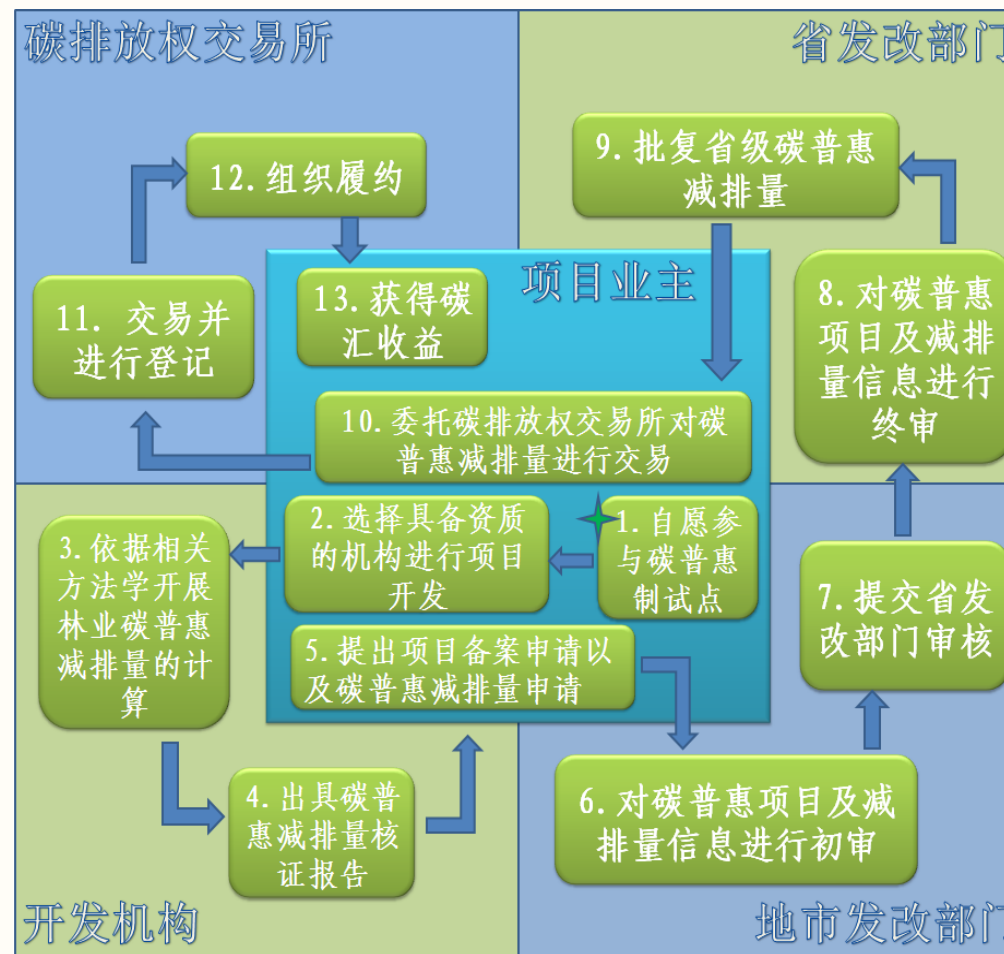
Introduction

The project of afforestation and reforestation can generate the carbon sequestration, which can be sold to the companies who want to offset their carbon emissions, and the obtained income can be used to repay the loans that was used to develop this project.

Advantages

- Enlarge the forest area and increase the carbon sink reserve.
- Make a better use of forest resource asset.
- Motivate the society to participate the afforestation.
- In accordance with the concept “the lucid waters and lush mountains are invaluable assets”

The CEEEX has successfully conducted the research and trading of projects about the forest carbon sequestration. The forest carbon sequestration project in the pilot zone (Huadu District, Guangzhou) totally **produced 13,319 tons PHCER, which generated 220,000 yuan benefits.**



Mortgage Finance of Carbon Emission Allowances



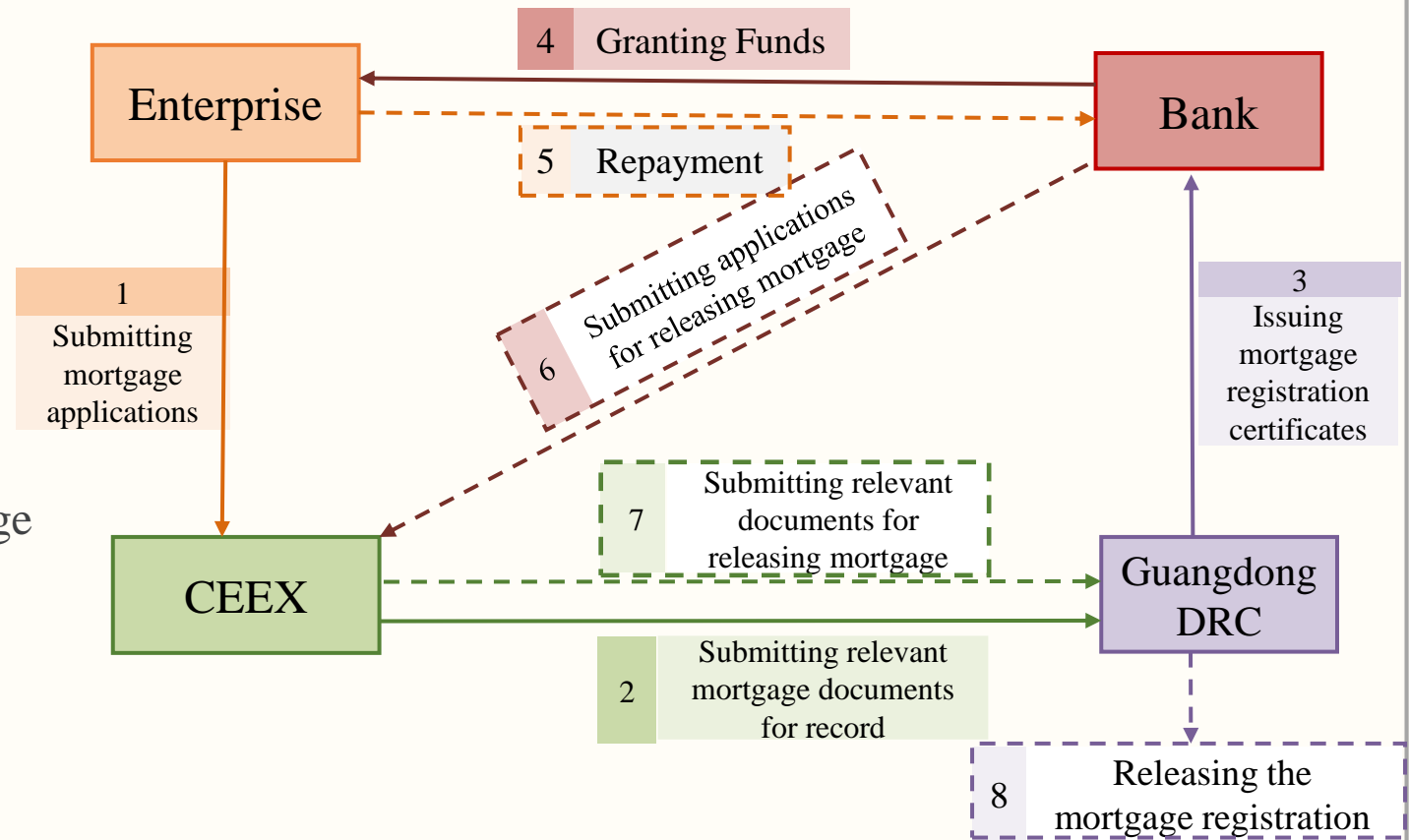
Product Introduction

- Carbon emission allowances are used as collaterals for financing.
- Use of loan funds: Carbon Emission Allowances Trading

Energy Conservation and Emission Reduction for the Enterprise

Advantages:

- Flexible use of funds:
 - Buying allowances or carbon credits
 - Energy Conservation and Emission Reduction for the Enterprise
- Simplification of the process of mortgage financing and repayment



Mortgage Finance of Carbon Emission Allowances

Cases



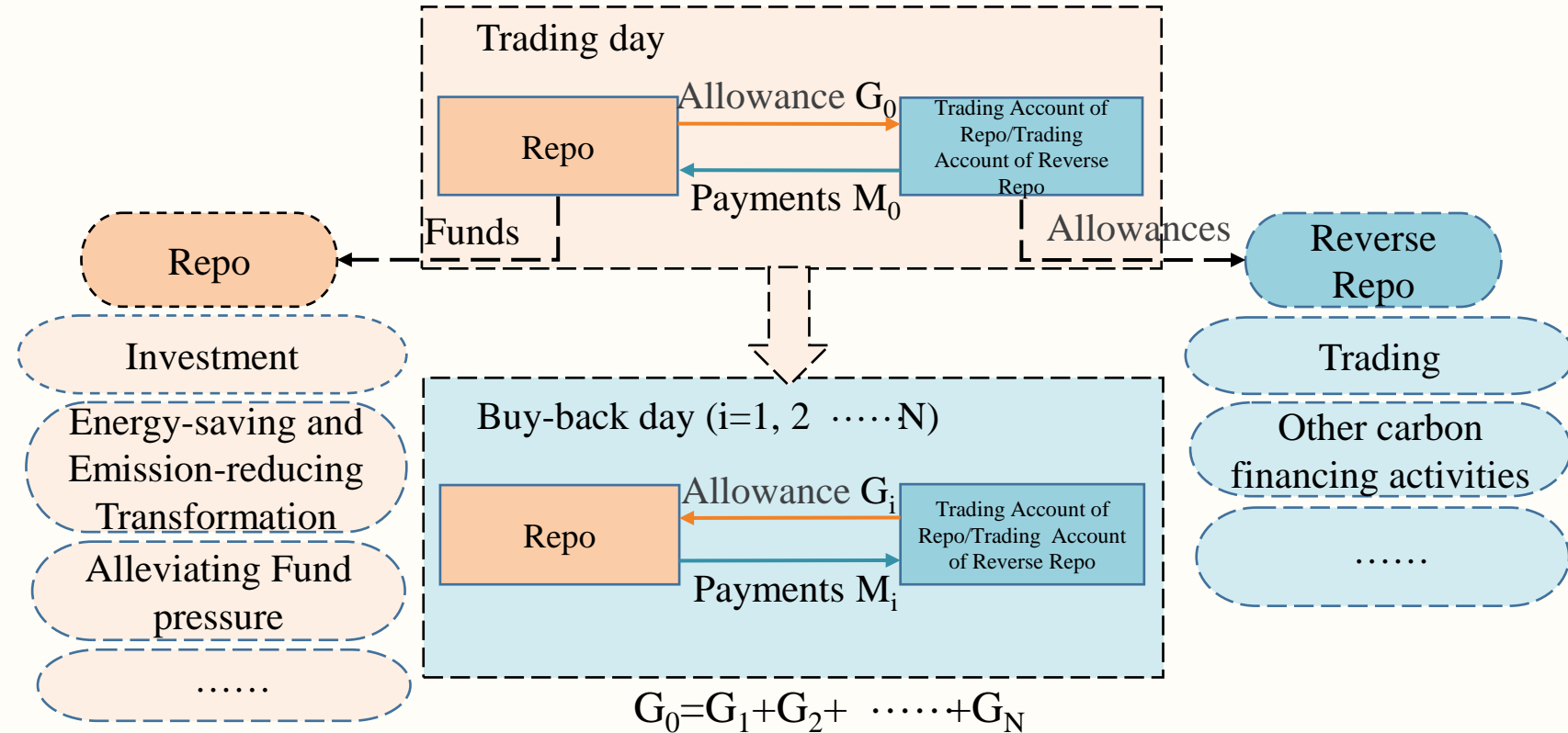
-	Financiers	Collaterals	Other guarantees	Amount Financed (million yuan)	Comments
1	China Huadian New energy Co., Ltd (Guangzhou University City)	Carbon allowance	-	3	the first Carbon allowances mortgage finance online business in China
2	Junma (Sihui) Cement Co., Ltd	Carbon allowance	-	26.15	the first Carbon allowances mortgage finance business for private-enterprise in China
3	Paper Corporation Located in Huadu District, Guangzhou	Carbon allowances + Fixed assets	Insurance of carbon allowances mortgage loans	2	The first insurance business about the carbon allowances mortgage finance in China
4	China Southern Airlines	Carbon allowance	-	0.6	The first business about the carbon allowances mortgage finance in airlines industry in China

Product Introduction

Buy-back of Carbon Emission Allowances: When the allowance holder in Guangdong Province (repo) sells the allowances to the buyer (reverse repo), they agree that the repo will buy back the same quantity of allowances from the reverse repo at an agreed price on a future date.

Requirements

- 1. Member of the CEEEX, except for individual ;
- 2. No any illegal activities specified by Guangdong NDRC and CEEEX within 3 years ;
- 3. Single pending order \geq 100,000 tons.



Up to February 2019 : 14.691 million tons carbon allowances (Cumulative Volume) ;
0.142 billion yuan (Cumulative Turnover)

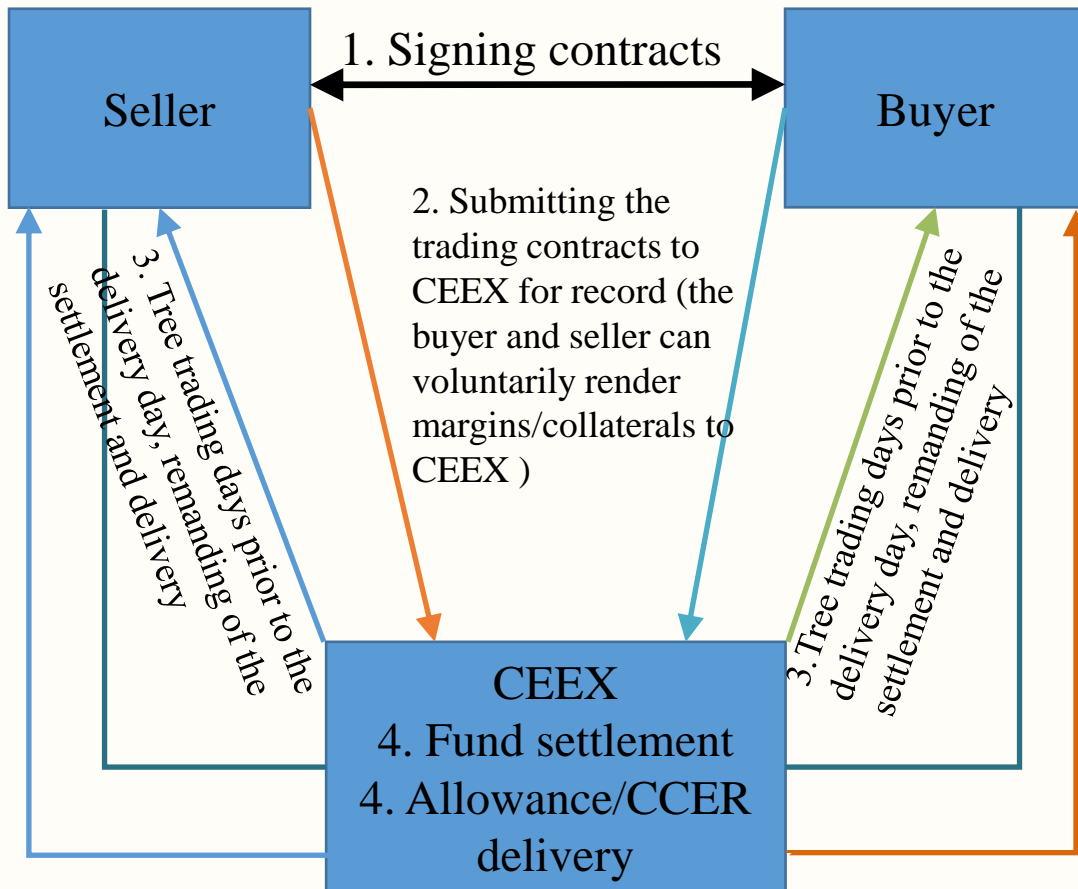


Spot Forwards of Carbon Emission Permits



Product Introduction

Spot forwards trading refers to the trading mode in which trading participants sign forward contracts and agree to conduct transactions on certain allowances or CCER at a certain time point in the future.



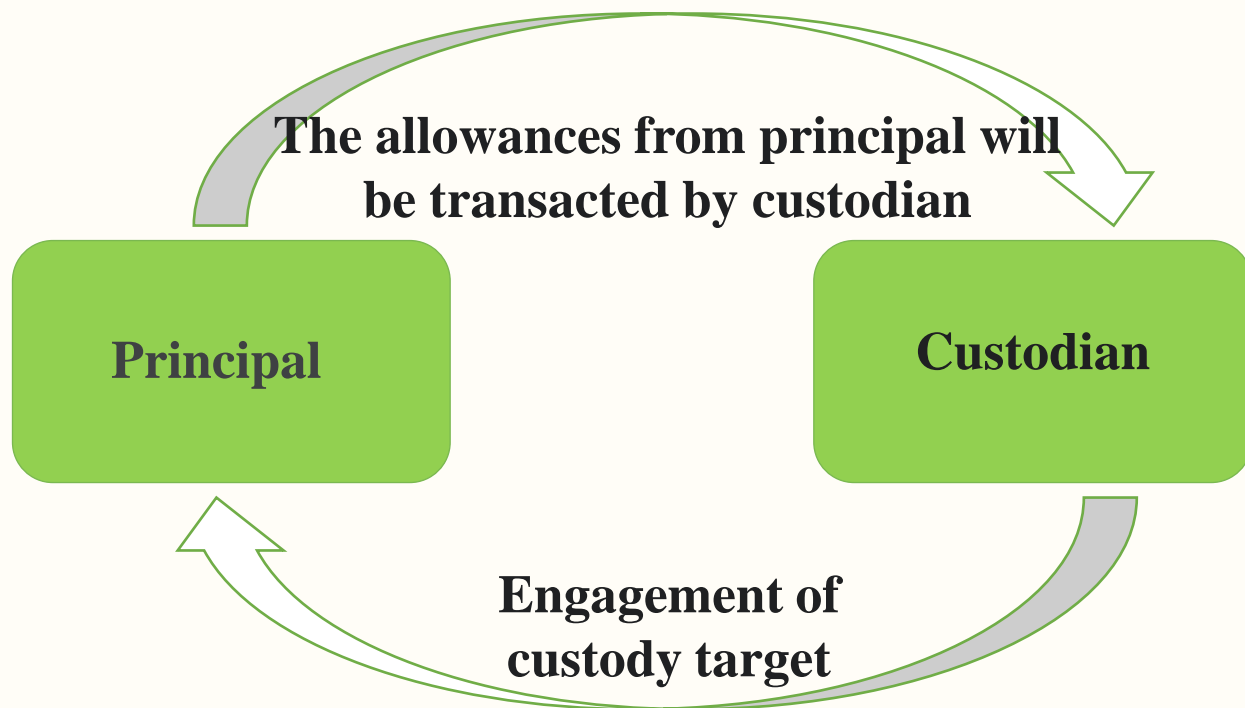
Avoid the risk of future price fluctuations



Provide fixed income product and also be benefit for the derivatization of carbon financing product

Future Trading (up to 13 st February 2019)		
Cumulative Volume ($\times 10^4$ tons)	Carbon emission quota	356.79
	CCER	27.78
	Total	384.57
A total of 63 transactions		
The involved industries include: Power, Cement, Steel, Paper, and Airline.		

Product Introduction

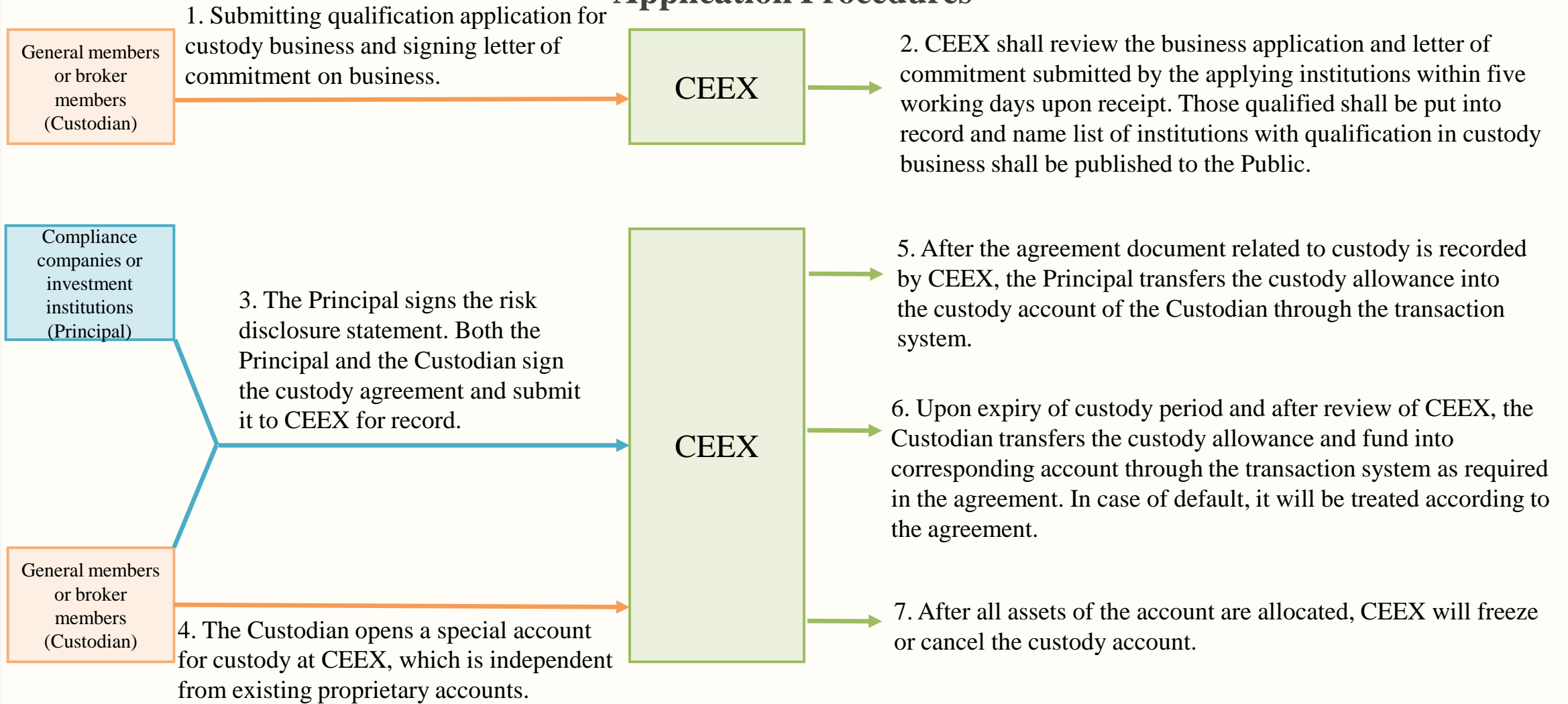
Custody of Carbon Emission Allowances refers to the carbon asset management business in which Guangdong compliance companies and CEEEX investment institutions (Principal) entrusts the self-owned allowance to CCER general members or broker members that are qualified for allowance custody as reviewed and recorded by CEEEX (Custodian) for the latter's holding or transaction and agree on the custody aim.



Advantages 	
Principal	<ul style="list-style-type: none"> ● activate carbon assets; ● Improve the management level of carbon allowances ● Gain extra revenue
	
Custodian	<ul style="list-style-type: none"> ● Gain the carbon emission allowances with low cost ● Gain profits from allowance trading



Application Procedures



Up to February 2019, 39 contracts were completed in the CEEEX (a total of 15.88 million tons carbon emission allowances).



3. CEEEX's Role in Green Finance





Participate in Green Finance Standards top-level design

**Standards of
Carbon Finance
Products**

**Standards of
Environmental
Rights Financing
Products**

**Standards of
Green Funds**

**Standards of
Environmental
Information
Disclosure**

Pilot Zones

Pilot Zone (Guangdong) for Carbon Emission Allowances Mortgage

Pilot Zone for Marketization Ecological Compensation Based On Forestry Carbon Sink.

Pilot Zone for Environment information disclosure of the Great Bay area (In Progress)

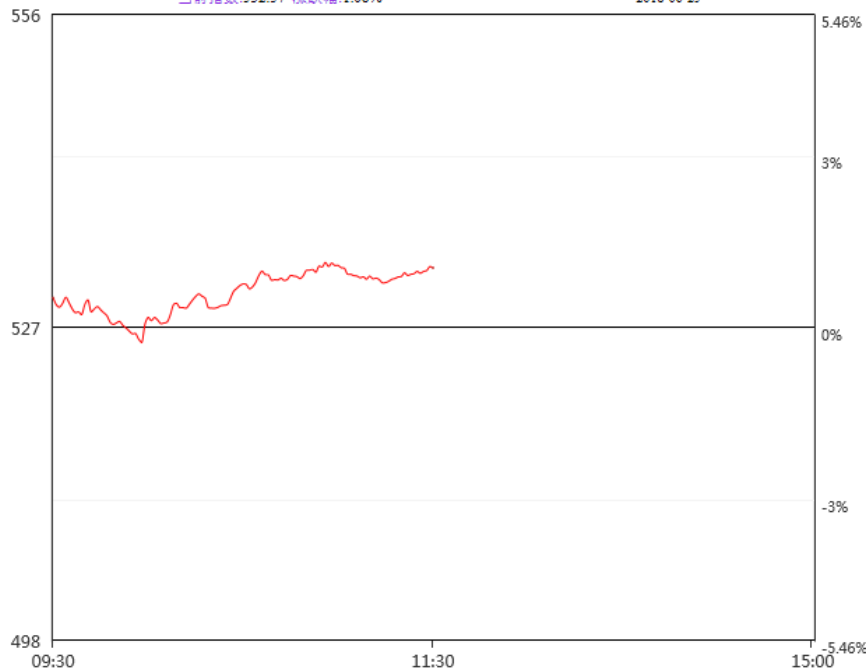


当前位置: 首页 > 中国碳市场100指数

中国碳指数100

当前指数: 532.57 涨跌幅: 1.08%

2018-06-29



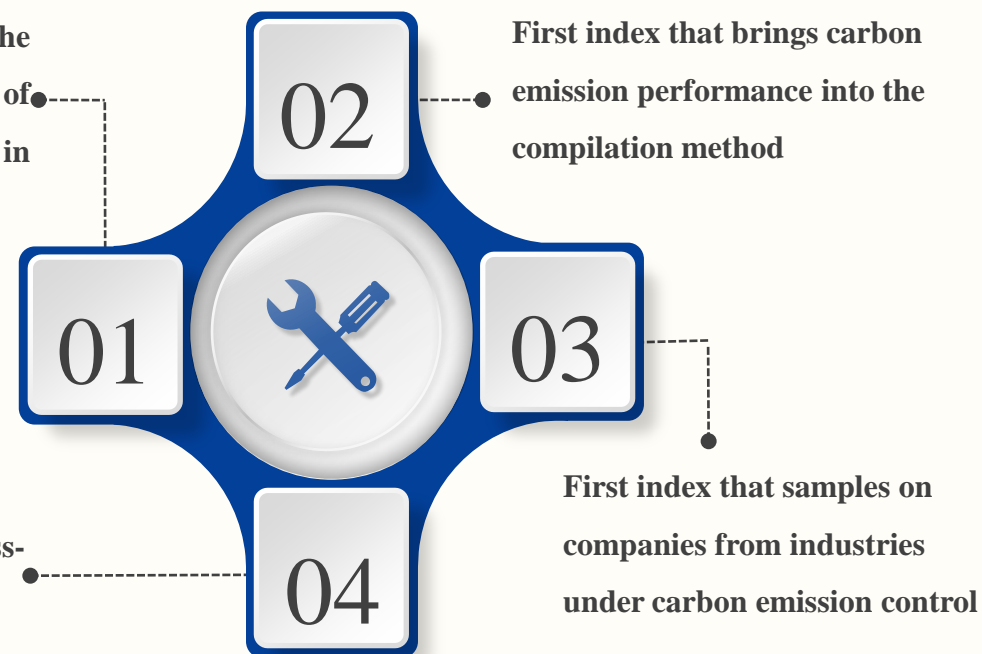
Meaning :

1. Enrich the carbon market index system
2. Promote the joint movement of carbon market and capital market;
3. Promote the direct financing and motivate the companies to disclosure environmental information

Features :

First index that considers the green development capacity of the main emission companies in carbon market

First index that reflects cross-market joint movements





Responsibility of CEEX

- Selection and recognition of green projects in Guangdong province (Guangzhou);
- Formulates the administration regulations on green companies and green projects;
- Encourages the green companies and projects to carry out the recognition;
- Issues and manages the list of identified green companies and projects.

The projects in the list will be treated as the long-term capital of green bond issuance and also be recommended to the foreign investors; **Import of foreign technologies and financial resources will be supported.**

Construction of Green Project Library in CEEX

Establish green projects registry

1. Information acquisition section
2. Information decision section
3. Information display section

Set up the management department of green project library

1. **Group I:** the green projects supported by special financial funds and government investment funds;
2. **Group II:** the green projects related to government procurement service;
3. **Group III:** the green projects related to the equity investment or entrepreneurship ;
4. **Group IV:** projects information collection, verification of materials, and management of the project library

Establish the green projects management procedures

1. Identification of projects fields;
2. Projects classification and related standards formulation
3. Project application
4. Project management (statistics, promotion, motivation, delivery from library)

Platform for Ecological Compensation Based On Green Finance System



General idea

- **Establish** trading system of ecological compensation
- **Upgrade** the Guangdong green elements exchange;
- **Carry out** the resource and environment (mainly composed by ecological products) trading;
- **Trial** of cross-region green elements trading and helping precision poverty alleviation.



Operation mode

1. **Launch** qualified ecological products;
2. **Upgrade** green projects library, select green projects about ecological compensation, and support the development of ecological compensation in Guangdong with support of green finance
3. **Establish** ecological compensation green funds through combining financial fund and social capital;
Support the development of green technologies through investment funds;
Create a market-based mode for ecological compensation



Goals

- Trial of environmental information mandatory disclosure in provincial listed companies (listed companies involved in the carbon allowance trading and the new third board listed companies);
- Promotion the environmental information disclosure of financial institution and companies;
- Establishment of environmental information disclosure platform

Requirements
analysis

Disclosure
forms

Disclosure
content

- Conduct the research of green finance project from the UK Department of Business, Energy & Industrial Strategy (BEIS);
- Explore the environmental information disclosure together with CDP and China institute of finance and capital market of CSRC
- Support national environmental information disclosure work in the perspective of Guangdong pilot zone



Obligation and advantage of Partner

- Keep relationships with various industry resource, and integrate power state assets
- Establish the white list of the corresponding industry service
- Issue the standards of power station assets assessment
- Establish a team of experts to serve all parties

- **Policy and Industry Analysis :**
 - (1) Long-term forecast and judgment of renewable energy industry
 - (2) Analysis of long term power generation value in a power station
- **Big data**
 - (1) Operation state analysis of a renewable energy power station
 - (2) Output and subsidies of a renewable energy power station
 - (3) Comparison of efficiency with same type of power station



- Advanced environment and energy comprehensive service platform in China ;
The biggest carbon quota trading platform;
The first one green finance service platform in China “CHINA EMISSION EXCHANE GREEN FINANCE SERVICE”
- Supported by the biggest equity trading platform in south china (China Canton Exchange Group) whose annual trading volume has exceeded 100 billion yuan
- Located in the Pilot Zone (Huadu)for Green Finance Reform and Innovations, and enjoying the preferential policies from central bank and pilot zone.

- **Power station service:**
 - 1. Real time monitoring of power station
 - 2. Overall assessment of power station, including reasonable supervision of due diligence
 - 3. Evaluation of future power limitation and absorption capacity in a power station
- **Power grid service :**
power generation verification and overall efficiency evaluation



4. New Energy Assets Investment, Financing and Trade



Platform for New Energy Assets Investment, Financing and Trade



Investment & Financing

- Selection of projects and construction ratio of project library
- Direct financing for companies
- Establish a platform for cooperation between government, banking, enterprises and society
- Comprehensive financial services, including credit, guarantee, insurance, and international settlement

Trading

- Formulate the guidelines of new energy assets trading
- List the new energy assets
- Married deal of new energy assets trading
- Settlement and supervision service for assets transaction

Value-added logistics service

- Valuation and risk Assessment
- Credit rating
- Legal adviser and accounting services
- Data acquisition for industry technical index, quality and absorption capacity of power grid

Platform Performance

- ❑ 136 new energy assets projects included (2.5GW total capacity);
- ❑ More than 0.8 billion yuan in renewable energy financing needs;
- ❑ Cooperation with 95 well-known new energy investors;
- ❑ Strategic cooperation with 18 industry research institutes.

5. Green Industry Investment Fund



Guangzhou Green Industry Investment Fund Management Co., Ltd

- Found by the CEEX in April 2018;
- Serving for the Guangdong's green finance and the green projects;
- Building effective channels between green projects and green funds.
- Focusing on nearly 80 projects involved in environmental protection, new energy, new materials, smart manufacturing, energy conservation services.

**Practices and applications of the topic on G20 (2018) Green/Sustainable Finance Study Group
—The Application of Green PE/VC, Green asset securitization and FinTech in Green Finance.**



6. Outlook for Green Finance



1. Comprehensive platform for Ecological Environment Elements Trading

- Pilot zone construction of (national) carbon market;
- Business exploration in green certificates, new energy vehicle, and green building ;
- Pollution rights trading in Pan-Pearl River Delta;
- Exchange for city mineral trading and others rights, including energy-use rights, ecological compensation market, et al.

3. Greater Bay Area Green Finance Cooperation Center

- Innovative recognition method of green company and project, and construction of green project library
- Promoting the project of environmental rights mortgage loan together with Hong Kong and Macao institutions;
- Signing the initiative on the Environmental information disclosure of Greater Bay Area and promoting the environmental information disclosure;
- Promoting green investment and financing with green funds, and channeling the social capital to green funds

2. Promoting RMB Internationalization with Carbon Products

- Low-carbon project development and carbon finance system construction for countries under OBOR
- Regional carbon trading system for countries under OBOR
- Facilitation of foreign exchange in and out of carbon trading system depending on the advantages of the Greater Bay Area;
- Promoting RMB to become the main currency of international carbon finance market in the process of International capital settlement and offshore capital transfer

4. Institution for International Environmental Governance under OBOR

- Improvement of ability on combating climate change, Promoting the mutual recognition of green credentials, and recognition of green projects in Greater Bay Area;
- International exchanges and cooperation with overseas environmental energy trading institutions and trading member in green finance ;
- Improvement of ability on the green finance of government, pilot companies and other companies.