

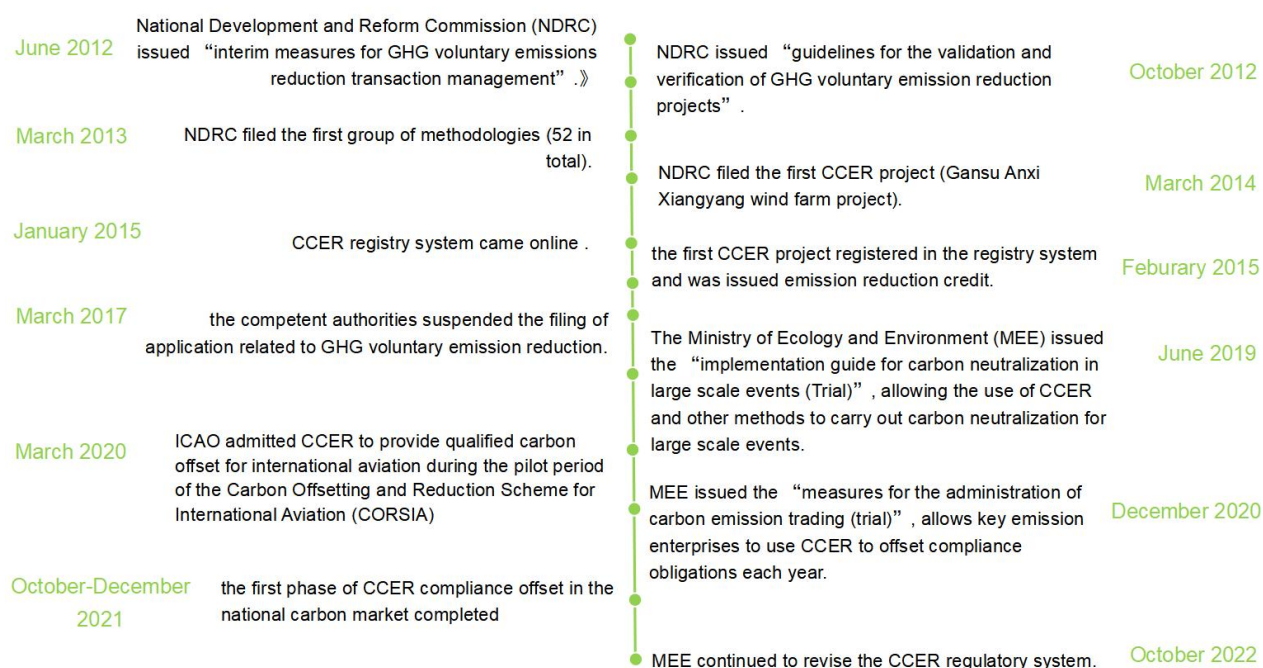
# **Supporting the National Carbon Market Offset and Analysis on Improving the Functions of CCER Registry**

**National Center for Climate Change Strategy and International Cooperation  
Environmental Defense Fund  
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## Introduction

- The National GHG Voluntary Emission Reduction Program is a program for filing, certification and trading of voluntary greenhouse gas emission reduction projects in China, drawing on the experience of international Clean Development Mechanism (CDM) project management. Since 2012, China has issued a series of documents including the “Interim Measures for the Administration of Voluntary Greenhouse Gas Emission Reduction Trading”, implemented filing management for voluntary emission reduction trading, and established a **registry system of the GHG voluntary emissions reduction program**, realizing the national trading of Chinese Certified Emission Reductions (CCERs) generated by voluntary emission reduction projects.
- Based on the review of the operation and management processes of the CCER life cycle, this study puts forward the concept of phased construction of the CCER registration system under the new situation such as the "dual carbon" goal and the launch of the national carbon market, so as to meet the comprehensive management of the entire life cycle operation such as project application, project registration, emission reduction monitoring and issuance, emission reduction trading and use/retire after the restart of CCER business. At the same time, the research group supported the competent authorities to complete the tasks related to the use of CCER by key emitters under the national carbon market to offset the implementation of the 2019-2020 year.

## Major Events



# China GHG voluntary emission reduction program

## management framework

- Since 2012, China has gradually built a national greenhouse gas voluntary emission reduction management and trading system framework, and realized the unified project management, filing and issuance and ownership registration of CCER at the national level; The registry of the GHG voluntary emissions reduction program is connected with nine local carbon market trading systems, forming nine local CCER secondary trading markets whose functions include national and pilot carbon market compliance offsets, financial investment, and carbon offset for public welfare . It has established an information platform for China's voluntary emission reduction trading, which discloses information on technical documents, filed methodologies, filed validation and verification bodies for emission reduction projects, and accepts public supervision.

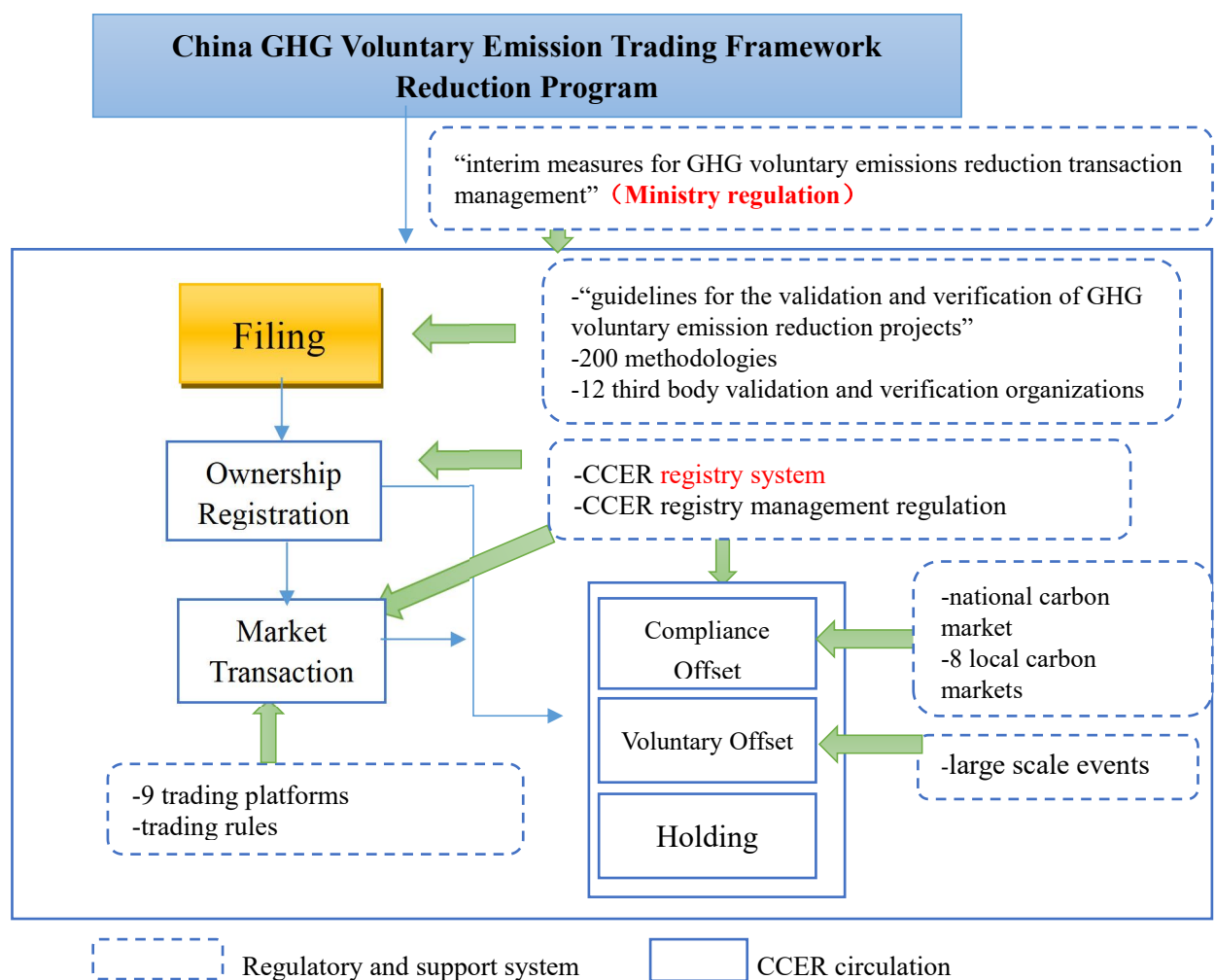


Fig.1 China GHG voluntary emission reduction program management framework

## CCER projects and transaction

- More than 1,300 projects have been filed, covering energy industry, waste disposal, agriculture, afforestation and other fields, and the annual emission reduction is expected to exceed 100 million tons. Approximately 77 million tons of emission reductions were issued. As of the end of September 2022, CCER has a cumulative trading volume of about 450 million tons and a cumulative turnover of about 6 billion yuan.

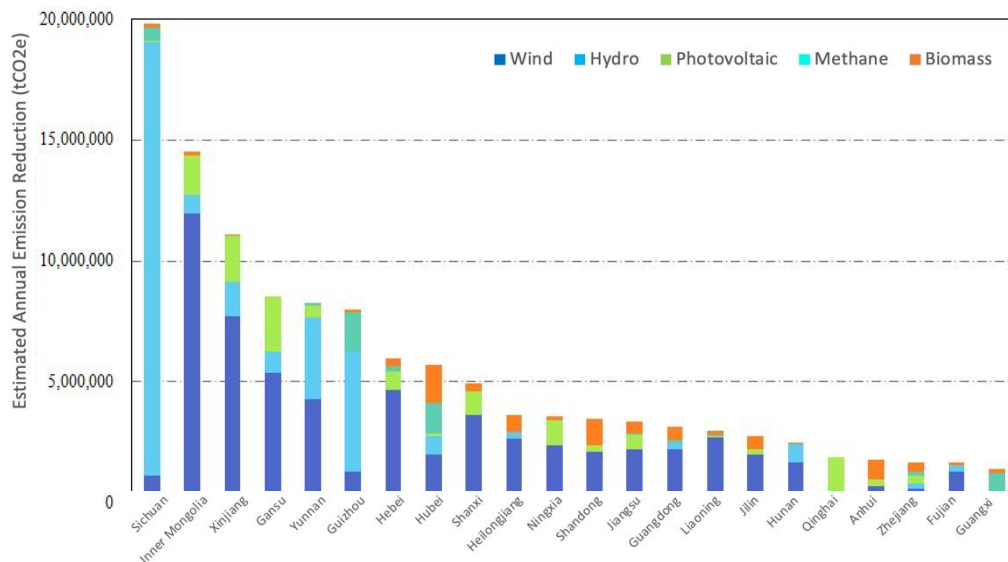


Fig.2 filed of projects in various provinces and cities

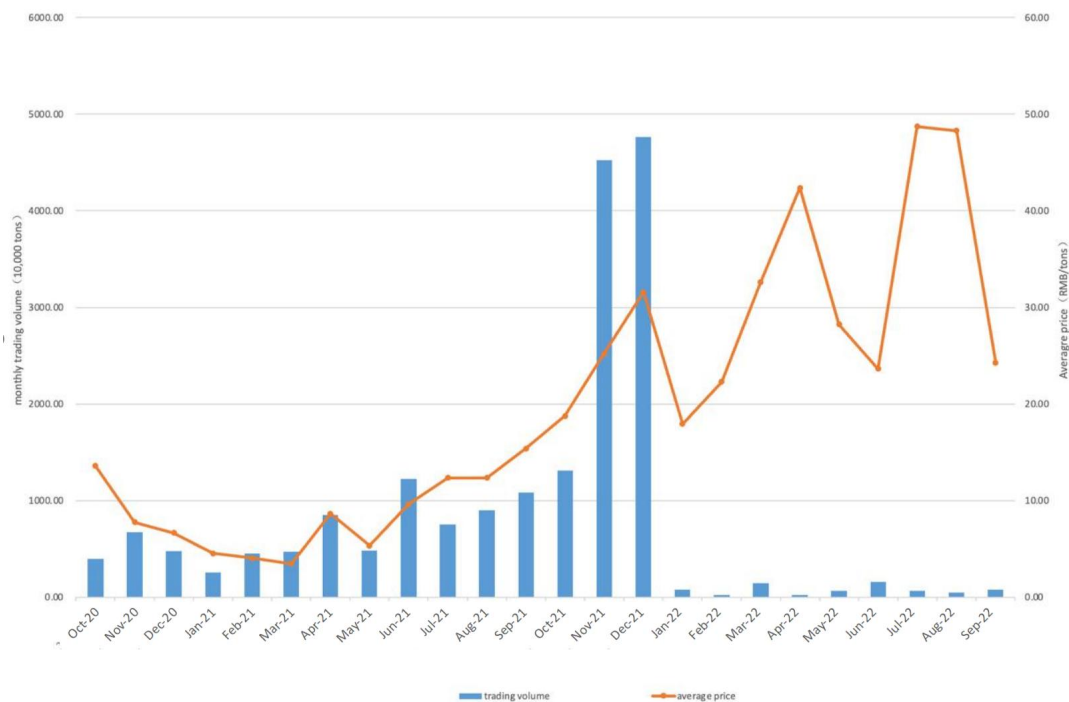
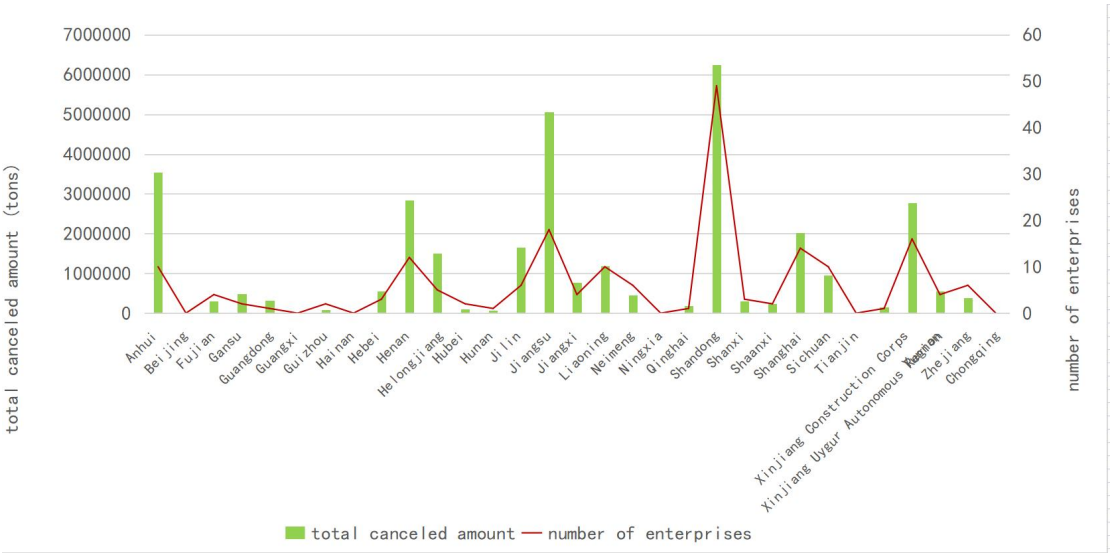


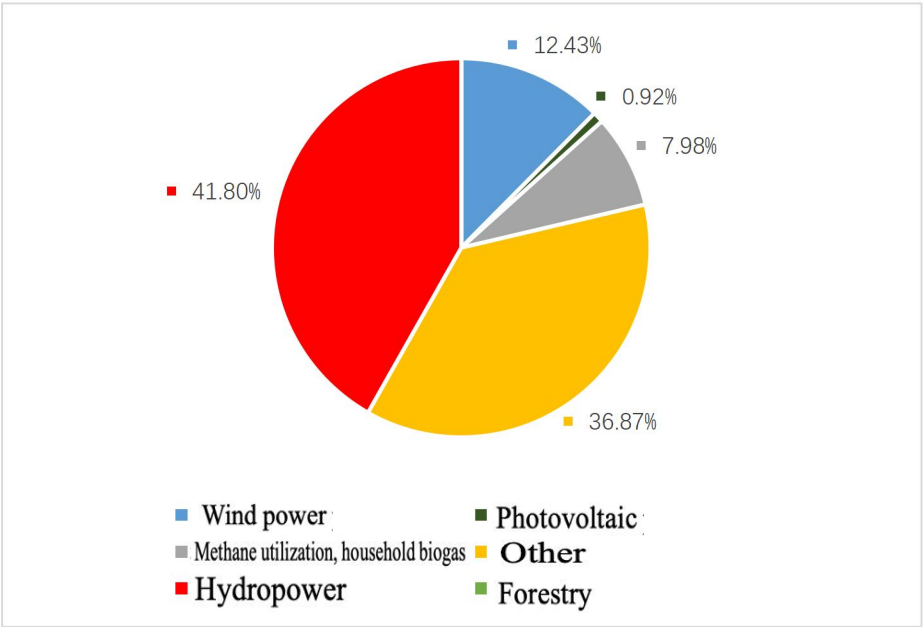
Fig.3 monthly CCER trading in the past 2 years

# CCER offset in the first compliance period of the national carbon market

- From October to December 2021, more than 190 key emitting enterprises under the national carbon market used about 30 million tons of CCER for compliance offset. Offsetting projects include a variety of types such as renewable energy, of which hydropower and wind power projects together account for more than 50%.



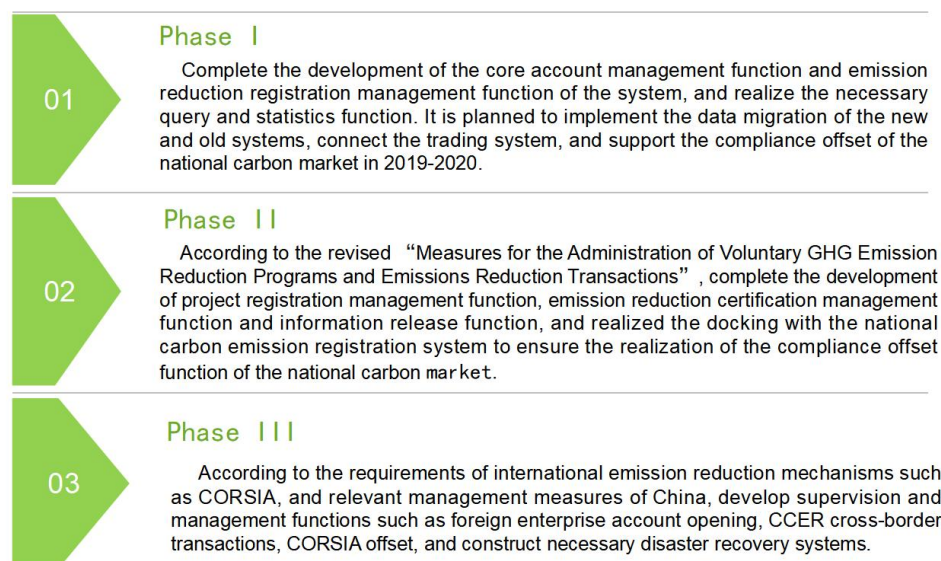
**Fig.4 compliance offset using CCER by key emission enterprises in various provinces and cities**



**Fig.5 composition of different types of CCER projects in the first phase of the national carbon market offsets**

# CCER registration system development and operation demand planning

## ■ Phased development ideas suggested



## ■ Comparison and identification of core business function requirements of old and new systems

Core operation	Old system	New system (to be developed)
User management	<ul style="list-style-type: none"> <li>- User type: national administrator, provincial administrator, project owner, enterprise, etc</li> <li>- No user registration review function (offline)</li> </ul>	<ul style="list-style-type: none"> <li>- Need to add user types such as local authorities, review experts, and overseas enterprises</li> <li>-User account register review (online + offline)</li> <li>- User profile management</li> </ul>
project management	No project review function (offline)	<ul style="list-style-type: none"> <li>- Project PDD listing</li> <li>-Online audit by local authorities</li> <li>-Expert database management and random assignment of tasks</li> <li>- Expert review (online + offline), public opinion</li> </ul>
Emission reduction management	<ul style="list-style-type: none"> <li>-No emission reduction verification function (offline)</li> <li>-The issuance of emission reductions must be entered manually</li> <li>-Emission reduction coding function</li> </ul>	<ul style="list-style-type: none"> <li>-emission reduction verification report and monitoring plan listing</li> <li>-Expert database management and random assignment of tasks</li> <li>- Expert review (online + offline), public opinion</li> <li>- Automatic acquisition and manual verification of emission reduction issuance information</li> <li>- Emission reduction code to increase the identification function</li> </ul>
Compliance offset	<ul style="list-style-type: none"> <li>-Serve 8 local carbon market compliance offsets (online + offline)</li> <li>-No external system connection</li> </ul>	<ul style="list-style-type: none"> <li>- The national carbon market compliance offset function is linked to the national carbon market registration system</li> <li>-Meets the function requirement of connecting with external systems such as international offset</li> </ul>
Voluntary offset	<ul style="list-style-type: none"> <li>- The competent authority of the place where the cancellation is located can inquire about the cancellation record</li> <li>- The country administrator has limited access to information</li> </ul>	<ul style="list-style-type: none"> <li>- Interested parties can inquire about detailed cancellation records</li> <li>- Automatic offset certificate function</li> </ul>
Regulation and Disclosure	<ul style="list-style-type: none"> <li>- State and local administrators supervise and manage</li> <li>-No information disclosure function</li> </ul>	<ul style="list-style-type: none"> <li>-National, local and other relevant parties all kinds of data supervision</li> <li>-Disclosure of relevant information</li> </ul>