

# Annual Review of China's ETS 2020

There is no doubt that 2020 is an unprecedented year in human history. Starting in late 2019, COVID-19 has lasted more than one year and struck every aspect of human activities, and the carbon trading industry is no exception.

The first half of 2020 saw a considerable fluctuation in carbon pricing, and less than 5% of the global carbon pricing met the pertinent goal set forth in the Paris Convention.<sup>1</sup>

For China, the overall lockdown in the first few months of the pandemic and social distancing undoubtedly interrupted the timetable for the Greenhouse Gas (GHG) reduction and the founding of the national Emissions Trading System (ETS). In spite of the fact that the GDP growth experienced a considerable slowdown during the first half of 2020, the carbon emission intensity increased.

Moreover, the end of performance year 2019 was postponed from June to November 2020. Despite of all the adversity, Beijing had made ambitious moves in carbon trading in the past unusual year.

The following recalls the important footprints of China carbon trading market in 2020, ranging from the national ETS, carbon financing, to carbon neutrality and green certificate.

## 1. The national ETS

### 1.1 The national ETS is expected to start running from mid-2021

Based on the disclosure by the Ministry of Ecological Environment (MEE), the development of two key infrastructure systems (namely the national ETS registry system and trading system) of the national ETS made a great progress in 2020. The former is planned to be located in Wuhan while the latter in Shanghai.

The construction plan of the national ETS was discussed at the MEE level in May 2020. Three months later, the registry system was tested internally at the Hubei Emissions Exchange (湖北碳排放交易中心 in Chinese) by inviting 17 electricity companies to experience the functions of the account opening, quota allocation, and performance review, etc. It is widely expected that the national ETS may start operating from mid-2021.

<sup>1</sup> The People's Bank of China: Promoting the Development of China's Carbon Financial Market 中国人民银行: 推动我国碳金融市场加快发展 <http://www.pbc.gov.cn/redianzhuanti/118742/4122386/4122510/4160609/index.html>

## 1.2 New institutional legal framework implemented

When MEE published “*The Administrative Measures for the Trading of Carbon Emission Rights (for Trial Implementation)*” (《碳排放权交易管理办法(试行)》 in Chinese) (Administrative Measures) on December 31, 2020, it has been six years since the promulgation of the last legal framework for carbon trading (“*the Interim Administrative Measures for the Trading of Carbon Emission Rights*”, 《碳排放权交易管理暂行办法》). After continuous exploration in nine local carbon trading markets, the Administrative Measures echoes the latest market conditions and regulators’ intention.

Same as its predecessor, the Administrative Measures designate the provincial environment departments as the competent authority to determine the list of emission entities that are regulated by the national ETS (For a vertical comparison of institutional legal documents for China ETS please click [here](#)). Meanwhile, it strengthens the market regulation by introducing joint regulation mechanism with various departments other than MEE.

The Administrative Measures also prescribes a removal mechanism. If an emission entity’s emission is below the threshold of the key emission entities for two consecutive years, or if its emission ends because it no longer engages in production or business operation, it will be removed from the list. This mechanism further improves the list management by solving the previous “only-in-no-out” issue.

Overall, the Administrative Measures inherit the regulation pattern of its predecessor and adopts a relatively consistent interpretation to the carbon emission right. In addition, it enhances the regulators’ enforcement capacity and refines the details of the national ETS framework.

## 1.3 Current industry coverage and future expansion

At this stage, the national ETS is limited to the electricity generation industry. This industry was selected as the first participant to the national ETS, not only because it is the primary carbon emitter (taking up 40% of the annual national volume) but also because the emission measurement is more straightforward since electricity is the only product.

In December, MEE published a quota allocation plan, together with a list of 2,225 electricity generation companies to be involved in the national ETS. The allocation plan is fundamental for the operation of the national ETS since it determines the annual volume of permitted carbon emission and the amount of tradable carbon emission quotas.

To facilitate the operation of the quota allocation and carbon trading in the electricity generation industry, MEE held 15 training sessions, involving over 1,500 electricity generation companies and 6,000 individuals.<sup>2</sup>

As the first comers to the national ETS, the electricity generation companies are to face the restriction as well as new opportunities. The carbon trading mechanism, in conjunction with the gradual overall emission level control, is bound to help the electricity generation industry evolve.

So, what’s next? Earlier in September, MEE announced that the national ETS will embrace more industries, meaning that the iron, concrete, chemistry, aluminum and paper industries are on their way to the national ETS.<sup>3</sup>

2 MEE: Minutes of October Regular Press Conference 生态环境部: 10月例行新闻发布会实录 [http://www.mee.gov.cn/xxgk2018/xxgk15/202010/t20201028\\_805298.html](http://www.mee.gov.cn/xxgk2018/xxgk15/202010/t20201028_805298.html)

3 MEE: Policy Briefing (September 27, 2020): The electricity generation industry has got ready...other important industries will be involved as soon as possible, including iron, concrete, chemistry, electrolytic aluminium and paper industries. We have made a long preparation for these industries, and it’s time to consider involving them as soon as possible. 《9月27日生态环境部政策吹风会》: 发电行业已经做好了相关准备, “十四五”期间要进一步加快碳市场的建设, 把其他重点行业加快纳入进来, 包括钢铁、水泥、化工、电解铝、造纸等行业前期已做了很长时间的准备工作, 下一步要考虑加快纳入。

## 2. The local ETS

The first seven local ETS since 2013 are pioneers and probes for the national ETS. They have so far attracted up to 2,837 emission entities, 1,082 non-emission entities and approximately 10,000 individuals as the local ETS participants. As of August 2020, the accumulated carbon trading in the local ETS reached 406 million tons and RMB 9.28 billion.<sup>4</sup>

In 2020, the Guangzhou Emissions Exchange stood out with the highest transaction volume amongst the eight local ETS. With an average daily transaction amount of 100,000 tons of carbon emission quotas, it achieved nearly 40 million tons in the last performance year, covering 34% of all carbon transactions nationwide. The Hubei Exchange, as the runner-up, achieved 26 million tons.<sup>5</sup>

## 3. Legal treatment of carbon emission right

### 3.1 Efforts to recognise carbon emission right as an asset

As a new-born product, carbon emission right's legal nature has been highly disputed among the legislators, not to mention the public.

Before the Administrative Measures, MEE published a draft regulation but with higher legislative level for the national carbon trading.<sup>6</sup> It expressly recognised the carbon emission right as an asset and further allowed setting mortgages thereon.<sup>7</sup> Nonetheless, this regulation has not yet been promulgated.

### 3.2 The legal nature of carbon emission right remains uncertain

Comparing to its 2014 predecessor and the draft regulation mentioned above, the 2020 Administrative Measures “downgrade” the carbon emission right as a kind of administrative quota, instead of an “asset”. This implies that the stakeholders’ interest in carbon emission right is not completely placed under the guard of PRC civil code.

As a financial product, the insufficient legal position of the carbon emission right casts an uncertainty in investor protection for the carbon related financing products, which is likely to further hinder the financing innovation and the ETS promotion.

### 3.3 Inconsistency between accounting and tax treatment

The uncertainty in legal nature of carbon emission right leads to an inconsistency in terms of the accounting and tax treatment.

碳排放权在法律性质上的不确定性导致其在会计与税务上的处理存在不一致。

### Other equity intangible assets

A prevailing view believes carbon emission credits or allowances are a kind of intangible assets and the legal basis is the Notice of the Ministry of Finance and the State Administration of Taxation on Full Launch of the Pilot Scheme on Levying Value-added Tax in Place of Business Tax (Cai Shui [2016] No. 36)

In the appendix to Circular 36, it provides that “other equity intangible assets shall include infrastructure asset operation rights, public utilities concessions, quota, operation rights (including franchise operation rights, franchise management rights and other operation rights), dealership, distribution rights, agency rights, membership rights, seat rights, online game virtual props, domain names, name rights, portrait rights, naming rights, transfer fees, etc”. Carbon emission allowances and credits shall be regarded as one of the quota and therefore fall within “other equity intangible assets” subject to VAT even though Circular 36 does not explicitly point this out.

4 MEE: September Regular Press Conference 生态环境部: 9月例行新闻发布会。  
<http://www.scio.gov.cn/xwfbh/gbwxwfbh/xwfbh/hjbhb/Document/1688630/1688630.htm>

5 Report of Guangdong Carbon Market Trading Statistics of 2019 Performance Year 广东碳市场 2019 履约年度交易数据报告  
<http://www.cnemission.com/article/jydt/scyj/202012/20201200002056.shtml>

6 Interim Administrative Regulation for the Trading of Carbon Emission Rights (Draft Version) 《碳排放权交易管理暂行条例(征求意见稿)》

7 Interim Administrative Regulation for the Trading of Carbon Emission Rights (Draft Version) Article 10: The carbon emission quota is an asset of the owner, and its entitlement is confirmed by the national carbon emission right registry, and the change thereof will come into effect upon registration; Article 13: The key emission entities and other permitted voluntary entities and individuals can purchase, sell and set mortgage on their carbon emission rights. 《碳排放权交易管理暂行条例(征求意见稿)》第十条: 碳排放配额是所有权人的资产, 其权属通过国家碳排放权注册登记系统登记确认, 权属变更自登记时起发生法律效力; 第十三条(交易方式) 重点排放单位和其他符合规定的自愿参与的单位和个人可以购买碳排放权, 也可以出售、抵押其依法取得的碳排放权。

## 1489 carbon emission right assets

While The Interim Provisions on Accounting Treatment relating to ETS (Cai Kuai [2019] No.22) (Circular 22) issued by the Ministry of Finance on December 23, 2019 has an explicit provision but adopts another treatment method. Circular 22 provides that the carbon quota shall be recorded into “1489 carbon emission right assets” as a standard accounting item in the asset category. Its appendix further provides that Certified Emission Reduction (CCER) transactions shall be accounted by reference to Circular 22 and be recorded into “1489 Carbon Emission Right Assets” as well for accounting purposes. We understand that, due to the controversy over the asset attributes of carbon emission quotas, Circular 22 requests to book carbon quotas as a separate item, i.e., “1489 Carbon Emission Right Assets” under “other movable assets” to avoid the controversy.

However, in absence of a clear legal determination of the carbon asset nature under a higher level law or regulation, Circular 22 issued by the Ministry of Finance solely (not jointly with the State Administration of Taxation) seems to imply the different views (or at least no agreement) between the accounting and tax administrations. Such inconsistency between the provisions/interpretations creates uncertainty over this issue. In practice, the local tax authority may have their own discretion to deal with the tax levy.

## 4. Carbon financing

ETS is a combination of environment policy and financing market, so it is not surprising that legislators and regulators are struggling in finding a balance between its financing function and administrative control thereon. Even though the Administrative Measures adopt a more prudent attitude toward the financing nature of carbon emission right as previously discussed, we still see the national government expressly encourage the marketisation of carbon trading in its advice on the 14th Five-Year Development Plan.<sup>8</sup>

## 4.1 Financial innovation

Even though financial innovation and creative financial use of the carbon credits and allowances have been widely explored in the past years in the market, there remains a lack of clear provisions and guidance in laws and regulations in this regard.

The development we have seen is, in May 2020, NDRC and MEE, jointly with other authorities, issued a circular to explore the possibility of allowing setting pledge on carbon emission right.<sup>9</sup> We believe this is a signal exemplifying the legislators’ proactive attitude toward the financial innovation of carbon emission right.

## 4.2 Green bond

In July, the People’s Bank of China published the draft version of the List of Green Bond Support Project (2020) (《绿色债券支持项目目录(2020年版)》 in Chinese). Companies are encouraged to issue Green Bonds (绿色债券 in Chinese) for funds to invest in the listed carbon-friendly projects.

In this draft version, support is given to carbon capture, carbon sink and carbon trading related environmentally friendly projects. Subject to local policies, the issuers can enjoy preferential treatments in terms of tax, government subsidies and others. It was reported that, in February 2021, six companies issued “carbon neutral green bonds” valued RMB 6.4 billion in total.<sup>10</sup> The funds will be invested in projects such as wind and photovoltaic power generation projects.

## 4.3 Foreign investment

We also see the continued trend of welcoming financial investments into this field. A good example is that Guangdong provincial finance authorities expressly welcomed the innovation in carbon financing and encouraged foreign investors to participate in carbon trading in ETS within the GBA (Guangdong-Hong Kong-Macao Greater Bay Area).<sup>11</sup>

8 CCP: Advice on Formulating the 14th Five-Year Development Plan and the Long-term Goal for 2035 Concerning the National Development of Economy and Society: “Promoting...the marketisation of the trading of carbon emission rights”《中共中央关于制定国民经济和社会发展第十四个五年规划和二〇三五年远景目标的建议》: 推进...碳排放权市场化交易。

9 Implementing Opinions on Creating a Better Environment to Support the Healthy Development of Private Energy-efficient and Environment-protection Enterprises《关于营造更好发展环境支持民营节能环保企业健康发展的实施意见》

10 The issuers include China Southern Power Grid, China Three Gorges Corporation, Huaneng Power International, State Power Investment Corporation Ltd., Sichuan Airport Group and Yalong Hydro. 发行人包括南方电网、三峡集团、华能国际、国家电投集团、四川机场集团、雅砻江水电。

11 Implementing Plan Concerning the Implementation of the Construction Advice on Financial Support to the GBA《关于贯彻落实金融支持粤港澳大湾区建设意见的实施方案》

## 4.4 Carbon trust

In addition to the above, we have also seen other forms of financial innovation. In October, AVIC Trust (中航信托) published a report exploring the potential of carbon trust.<sup>12</sup>

For the emission entities, carbon trust companies can help them manage and utilise their carbon assets (mainly, carbon emission quotas) to the greatest extent. For example, JIC Trust (中建投信托) set up a trust product which traded carbon emission rights for emission entities and gained profit from the price difference between carbon emission quotas and CCER verified units; at the investors' end, carbon trust serves as a financing product for investors.

## 5. Carbon neutrality

### 5.1 China's ambitious international pledge on carbon neutrality

At the United Nations General Assembly on September 22, 2020, President Xi Jinping announced a historic pledge in terms of CO<sub>2</sub> emission peak and carbon neutrality. Accordingly, China undertakes to reach CO<sub>2</sub> emission peak by 2030 and achieve carbon neutrality by 2060.

Carbon neutrality refers to an approach to achieve environmentally friendly economy by a combination of GHG reduction and GHG offset. GHG reduction includes the promotion of renewable energy, electric vehicles, as well as new agricultural technology that generates less GHG, while GHG offset refers to the equivalent amount of GHG generated in the process of production to be absorbed by planting trees or through other carbon-absorbing projects.

As the world's largest single GHG emitter, such a goal is both ambitious and challenging. It involves a comprehensive revolution of the economic structure as well as the support of a mature national ETS<sup>13</sup> which serves as a mechanism of the overall emission control and encouragement of technology innovation.

## 5.2 China's practice in carbon neutrality

Following the announcement, numerous companies have declared their commitments to the carbon neutrality goal, including CHN Energy (国家能源集团), CNPC (中国石油), Sinopec Group (中国石化) and Tencent (腾讯), etc.

Some companies have already started their attempts even before China's commitment announced by Present Xi. In June 2020, CNOOC (中国海油) imported two cargoes of "net-zero" LNG from Shell.<sup>14</sup> As the by-word of carbon neutrality, the "net-zero" nature of the purchased LNG indicated that the equivalent amount of GHG generated from the production, delivery and use thereof had been off-set (neutralised) by Shell through afforestation or deforestation prevention.

The purchased "net-zero" LNG would be eventually used by hundreds and thousands of Chinese consumers, without releasing additional GHG from their use. The concept of "net-zero" products is getting more familiar and popular among Chinese retailers and consumers which in turn will help forge a joint force for the achievement of Beijing's net-zero promise.

12 2019 AVICTC Research Report: 2019 Carbon Financing Product Innovation 《2019中航信托碳金融产品创新研究报告》  
<http://www.tanjiaoyi.com/article-32097-1.html>

13 LSE: China's Historic Announcement on Net-zero Emissions" 伦敦政经学院: 中国的碳中和历史性承诺  
<https://www.lse.ac.uk/granthaminstitute/news/chinas-historic-announcement-on-net-zero-emissions/>

14 Shell: CNOOC to Receive Chinese Mainland's First Carbon Neutral LNG Cargoes from Shell 中国海油将从壳牌公司接收中国内地第一批碳中和 LNG  
<https://www.shell.com/business-customers/trading-and-supply/trading/news-and-media-releases/cnooc-to-receive-chinese-mainlands-first-carbon-neutral-lng-cargoes-from-shell.html>



## 6. Green certificate

Green certificate is a legal instrument proving the electricity produced or purchased is generated from renewable energy sources. By issuing and purchasing green certificates in the green certificate market, an electricity generator/distributor/consumer can quantify its commitment in renewable electricity.

In January 2020, NDRC and NEA (National Energy Administration) published the Several Opinions on Promotion of the Sound Development of Electricity Generation with Non-hydropower Renewable Energy Resources (《关于促进非水可再生能源发电健康发展的若干意见》 in Chinese). It stipulates that, starting from 2021, the green certificate trading will operate under a quota mechanism. This mechanism requires the electricity distributor and consumer to distribute and use renewable electricity to a certain portion in their respective annual distributed and used volume. More importantly, they can purchase green certificates as a supplementary alternative to fulfil the aforementioned duty. We understand that this will promote the green certificate trading volume and the use of renewable electricity.

### 6.1 Green certificate trading promotes the renewable energy generation

Starting in 2017, the green certificate trading is accessible to the public through the online Green Certificate Purchase Portal.<sup>15</sup> The NEA verifies and issues green certificates to the renewable energy generation companies in the amount pertinent to their respective generated electricity which are then entitled to trade the issued green certificates with other companies, government authorities and individuals.

The energy generation companies that receive income from the sale of green certificates will not be subsidized by the government for renewable energies. Furthermore, green certificate would serve as a showcase of enterprises' social responsibilities.

### 6.2 Green certificate trading is still at an early stage

At the present time, green certificate trading is still at an early stage and limited to a small community. The accumulated green certificates issued to the power generation companies have so far reached 27 million units<sup>16</sup>, each representing 1,000 kWh of renewable electricity. Among these, only 72,000 were traded in the green certificate market, covering just 0.26% of the issued amount.

We hope the next few years can witness a breakthrough in green certificate trading, including allowing trading on the secondary market.<sup>17</sup>

15 Green Certificate Purchase Portal 绿证认购平台, [www.greenenergy.org.cn](http://www.greenenergy.org.cn)

16 Green Certificate Purchase Portal 绿证认购平台, [www.greenenergy.org.cn](http://www.greenenergy.org.cn)

17 Currently, green certificate can only be sold and purchased for once and cannot be resold. 绿证在有效期内可以且仅可以出售一次, 不得再次转手出售。

## 7. Summary

IETA anticipated in its annual international carbon trading report that, in 2050, China will become the largest carbon trading market in the globe with estimated USD500 billion market value.

To some extent, such an ambitious anticipation is based on Beijing's high-profile carbon reduction scheme. China made its first footprint on this long and winding road about a decade ago and eventually made the major strike in 2020, including the ambitious carbon neutrality goal, the new institutional legal framework for the national ETS and the gradual exploration in carbon financing and green certificate.

However, there are still challenges and barriers along the way. For instance, the ambiguity and inconsistency in terms of the legal nature of carbon emission right leaves uncertainty in the legal protection for carbon trading, the authorities and emission entities may not be so willing to commit to carbon reduction for fear of curbing the economy and business performance, the administrative control over carbon trading hinders its marketisation, and last but not least, as COVID-19's impact on the production continues to exist around the globe, the overall demand for carbon emission quotas remains at a lower level.

We await that the legal protection of carbon emission right would become more rigorous and the carbon financing can gain more support from the highest authorities. With the trinity of the national ETS, quota mechanism and green certificate trading, it is enthusiastically expected that the diversity and vitality of China carbon trading market can make a big step forward in the coming years.