Welcome to EDF China Carbon Pricing Newsletter

Dear friends and colleagues,

At the end of 2022, several provinces and municipalities have issued regional Carbon Peaking action programs to ensure peaking carbon emissions by 2030 through priority area actions. The Ministry of Ecology and Environment published a report to systematically summarize the construction experiences and operation of the first compliance cycle of the national ETS.

EDF is continuing to explore diversified solutions to improve the national ETS and facilitate the robust low carbon transition in China. This newsletter summarizes the updates on policies and latest news of national ETS and pilot carbon markets, as well as the major progress of our work.

As the Chinese New Year is approaching, we wish you and Earth all the best, and may all climate ambitions be fulfilled this coming year and years after.

Climate Change

- **Carbon Peaking Action Plans at provincial and municipal levels have been Released.** From December 2022 to mid-January 2023, several provinces and municipalities have issued regional action plans to support carbon peaking, includes pilot regions like Beijing, Tianjin, Shanghai, Sichuan, and non-pilot regions like Hunan, Guizhou, Shandong, Yunnan, and Qinghai. These moves echoed the *Action Plan for Carbon Dioxide Peaking Before 2030* issued by the State Council in Oct. 2021, and set guidelines and routes for regional Carbon Peaking by 2030. Energy conservation and carbon mitigation actions in the industrial sector, especially in segmented areas of metallurgy, building materials and chemicals, are the focus of regional carbon peaking supporting action plans.
- **Carbon Emission Impact and Carbon Mitigation Methods should be Assessed during both Public and Private Project Investment.** On November 29th, 2022, the National Development and Reform Commission (NDRC) issued an official announcement on public consultation for the *General Outline for the*

Feasibility Study Reports for Governmental Investment Projects（Draft for Comments） and *Reference Outline for the Feasibility Study Reports for Enterprise Investment Projects （Draft for Comments）* as well as the detailed instructions (Hereinafter as The *Announcement*). The *Announcement* mentioned that analyses on carbon emissions impacts should be included in the thematic analysis of project impacts, the accounting basis for carbon emissions of proposed projects should be explained, the total amount and intensity of carbon emissions throughout the life cycle of the project should be estimated, carbon reduction measures such as CCUS and carbon sinks should be proposed, and finding out the possibilities and pathways of the implementation and application of market based tools such as carbon allowance trading and green certification trading.

- **Connect Green Electricity to Grid as soon as possible.** On November 28th, 2022, the National Energy Administration (NEA) issued *the Notification on Accelerating the Grid-connection of New Energy Power Generation Projects*. It stated that all power grid enterprises should ensure timely and effectively grid connection of qualified wind power and photovoltaic power generation projects. Ensuring the timely grid-connection of new energy power generation projects would not only be beneficial to increase the supply of clean power, but also to promote the low carbon transformation of power sector and facilitate Carbon Peaking and Carbon Neutrality in China.

Green and Low Carbon Development

- **Green Industrial Development in the Yellow River Basin.** On December 12th, 2022, four departments including the NDRC jointly released the *Guiding Opinions on Promoting Green Industrial Development in the Yellow River Basin* (Hereinafter as The *Opinions*). The *Opinions* mentioned that the efficiency of energy and resources utilization and the level of cleaner production should be improved, and a new pattern of efficient and sustainable green industrial development in the Yellow River Basin should be established. By the year of 2025, the green industrial development in the Yellow River Basin is expected to be improved significantly, industrial structure and distribution should be more rational, hazardous chemical production enterprises in densely populated urban areas should be fully relocated and reformed, energy consumption, water consumption and carbon emission intensity of traditional manufacturing industries should be significantly reduced, and the recycling of industrial wastewater, comprehensive utilization of solid waste, cleaner production and industrial digitalization level should be further improved, green and low carbon

technology and equipment should be widely applied, and the level of green manufacturing should be improving.

- **Green technology Innovation**. On December 28th, 2022, NDRC and the Ministry of Science and Technology jointly released the *Implementation Plan for Further Improving Market-oriented Innovation System of Green Technology (2023-2025)* (Hereinafter as The *Implementation Plan*). According to the *Implementation Plan*, by the year of 2025, the market-oriented innovation system of green technology will be further improved, and green technology innovation should be better positioned to support green and low carbon development. The number of green technology innovation enterprises should be expanded, and the country would support the growth of leading green technology enterprises, green and low carbon technology enterprises, and state-level start-ups in green technology innovation. Meanwhile, the supply capacity of green technology should be significantly improved, and China would have several fundamental, original and revolutionary green technology innovation achievements. During this period, China would standardize and orderly develop the green technology trading market, and the advanced and applicable green technology innovation achievements should be fully applied in practice. Besides, green technology evaluation, financial supports, talent cultivation and property rights protection should be comprehensively optimized, and the country would deepen the international cooperation in green technology innovation.

National ETS

- **Guidelines for GHG emission MRV of the national ETS.** On December 19th, 2022, The Ministry of Ecology and Environment (MEE) released the *Guidelines for GHG Emission Monitoring and Reporting of Enterprises-Power Generation Facilities* and *Guidelines for GHG Emission Verification of Enterprises- Power Generation Facilities*, these two documents aim to provide guidelines for monitoring, reporting and verification of (MRV) of GHG emission of entities covered by the national ETS, and will be implemented since January 1st, 2023. By implementing these Guidelines, the data quality of carbon emission and the whole market mechanism will be improved, while enhancing the scientificity, rationality and operability of related technical specifications.
- **The national ETS has achieved its expected targets**. On January 1st, 2023, MEE published the *Report on the First Compliance Cycle of China's National Emission Trading System* (Hereinafter as The *Report*). According to the *Report*, the first compliance cycle ended with a 99.5% compliance rate of 2,162 power generation entities, and 847 covered entities had allowance shortages, which is totally 188 million tonnes. And the market operated well with a trading volume of

179 million tonnes which basically matched the allowance shortages. CNY 7.66 billion of cumulative turnover has been reached with an average transaction price of 42.85 CNY/tonne, and the daily closing price fluctuated between 40 to 60 CNY/tonne by the end of the first compliance cycle. The operation framework of National ETS has been basically established, its price discovery mechanism has become apparent, and the awareness and ability of enterprises to reduce emissions have been effectively improved.

Pilots

- Beijing.
    - On November 30th, 2022, The People's Government of Beijing Municipality released the *Implementation Comments on Deepening the Reform of the Compensation System for Ecological Protection of Beijing Municipality*, which aims to deepen the construction of Beijing ETS, optimize the carbon allowance allocation and offset mechanism, and promoting the construction of a nationwide Voluntary Emissions Reductions (VER) market. It also states that market-based investment and financing channels should be expanded, and financial services for green and low carbon industrial chains should be promoted.
    - On December 27th, 2022, the State-owned Assets Supervision and Administration Commission of People's Government of Beijing Municipality issued the *Action Plan for Carbon Peaking of Enterprises Managed by Beijing Municipality* (Hereinafter as The *Plan*), which proposed 25 measures from 7 aspects, including promoting the construction of green industrial system, building low carbon energy system and strengthening scientific and technological innovation. The *Plan* mentioned that, by the year of 2025, renewable energy would account for over 15% in total energy consumption, energy consumption per 10,000 CNY's revenue should decrease by 14% compared with 2020, carbon dioxide emission per 10,000 CNY's revenue should meet the target of People's Government of Beijing Municipality, and the high-end industries should contribute 1/3 of the overall revenue of enterprises managed by Beijing Municipality. By the year of 2030, renewable energy would account for over 15% in total energy consumption, carbon dioxide emission should reach the peak and decrease steadily.
- Tianjin.
    - On November 30th, 2022, Tianjin Ecology and Environment Bureau released the *Circular of 2022 Carbon Emission Allowance Allocation Plan for Tianjin Municipality*, which covers 145 entities from 13 industries including steel, chemical, and petrochemicals. The cap of allowances in

this compliance period is 75 million tonnes, allowances would be freely allocated.

- On December 26th, 2022, Tianjin Finance Bureau released *Implementing Opinions on Fiscal Support of the Carbon Peaking and Carbon Neutrality of Tianjin Municipality* (Hereinafter as The *Opinions*), the *Opinions* states that by the year of 2025, Tianjin would preliminarily establish a fiscal policy framework that is conductive to green and low carbon development to support industrial green and low carbon transformation. And by the year of 2030, Tianjin would form a fiscal policy system which is conductive to green and low carbon development to promote the establishment of a long-term mechanism for green and low carbon development and to peak carbon emission. By the year of 2060, the fiscal policy system that support the green and low carbon development should be mature and completed to promote the realization of carbon neutrality.
- On December 29th, 2022, three departments including Tianjin Industrial and Information Technology Bureau issued the *Implementing Program for Carbon Peaking on Industrial Sector of Tianjin Municipality* (Hereinafter as The *Program*). According to the *Program*, priorities of Carbon Peaking in industrial sectors during the 14th and 15th Five-Year Plan are: establishing low carbon industrial system, improving industrial energy efficiency, establishing green manufacturing system, promoting low carbon technology innovation, and deepening industrial digital transformation. Key sectors of interest include steel, building materials, petrochemicals, consumer goods, equipment manufacturing and electronics.
- On January 3rd, 2023, six departments including Tianjin Ecology and Environment Bureau issued the *Implementing Program for Synergistically Reduce Carbon and Pollutants in Tianjin Municipality* (Hereinafter as The *Program*), which focuses on energy, industry, transportation, urban and rural construction, and agriculture sectors. The *Program* mentioned that, by the year of 2025, non-fossil energy will contribute for over 11.7% of energy consumption, the number of green manufacturing enterprises should reach 300, the proportion of electric furnace steel should be about 25%, energy consumption per unit output of industrial enterprises above state designed scale should decrease greater than the energy consumption per unit regional GDP of Tianjin Municipality, the sales of new energy vehicles should achieve 25% of the total sales of new vehicles, and that proportion should be 50% by 2030.

- Fujian.

- On December 1st, 2023, Fujian Province Department of Ecology and Environment released *Implementation Plan for 2021 Carbon Emission Allowance Allocation in Fujian Province*, which covers 296 entities from 9 industries including power, steel, and chemical. The covered entities should complete the surrendering of allowances by January 10th, 2023.

- Hubei.
  - On December 2nd, 2022, China Hubei Emission Exchange announced that the government reserved allowance would be auctioned on December 9th and 12th, with a cap of 2 million tonnes. The base price of the auctioned allowance was the weighted average of negotiated prices of spot market of Hubei ETS from Nov. 1st, 2021 to Oct. 31st, 2022, which was nearly CNY 38.88 /tonne.
  - On December 23rd, 2022, seven departments including the Department of Ecology and Environment of Hubei Province issued the *Implementing Plan for Synergistically Reduce Carbon and Pollutants in Hubei Province* (Hereinafter as The *Plan*), which focus on the efficient and high-quality development of industry, transportation, urban and rural construction, agriculture and ecological construction sectors. The main targets of the *Plan* are, by the year of 2025, Hubei should basically form the pattern of synergistically reduce carbon and pollutants, Wuhan and other major cities should make notable progress in green and low carbon development and industry transformation, and total emissions of major pollutants should decrease constantly. By the year of 2030, the ability of synergistically reduce carbon and pollutants should be improved significantly to peak carbon emission. Hubei will also encourage the development of carbon inclusive financial products such as carbon credit cards.

- Shanghai.
  - On December 5th, 2022, eight departments including Shanghai Municipal Bureau of Ecology and Environment issued *Plan of Constructing Carbon Inclusion System of Shanghai Municipality* (Hereinafter as The *Plan*). The *Plan* aimed to make Shanghai Carbon Inclusion System (SCIS) as a significant brand for the city's green and low carbon development, and main objectives of the *Plan* include: establishing the top-level designs of SCIS, building relevant standard and methodology system, constructing SCIS, carrying out pilot demonstrations, and synergizing SCIS with Shanghai ETS by 2025. The SCIS will establish an offset mechanism to encourage enterprises covered by Shanghai ETS to surrender their allowance by using the offset mechanism, it will also create carbon accounts for the public. Furthermore, the SCIS aims to be a fundamental

platform to support the establishment of carbon inclusion mechanism in Yangtze River Delta. Another task of SCIS is to develop green investing and financing services of carbon inclusive to provide differential services for enterprises and individuals based on their carbon credits.

- On December 9th, 2022, Shanghai Municipal Commission of Economy and Informatization and Shanghai Municipal Development and Reform Commission jointly released *Implementing Program for Carbon Peaking on New Infrastructure Sector of Shanghai Municipality* (Hereinafter as The *Program*). According to the *Program*, during the 14th Five Year Plan, power usage effectiveness (PUE) of new data centers will be less than 1.3, and that of the existing data centers should be improved constantly, the PUE of large data center of Yangtze River Delta hub node should be decreased to 1.25 or below. Over 5000 data center racks would be replaced, and Shanghai will launch net zero (or near net zero) data center pilots. During the 15th Five Year Plan, the PUE of new data centers shall be less than 1.25, and the PUE of reformed existing data centers should below 1.4.
- On December 9th, 2022, four departments including Shanghai Municipal Development and Reform Commission jointly released the *Implementing Program for Carbon Peaking on Industrial Sector of Shanghai Municipality* (Hereinafter as The *Program*). The *Program* mentioned that, by the year of 2025, energy consumption per unit output of industrial enterprises above state designed scale should decrease by 14% compared with 2020, and Shanghai will implement energy-saving and carbon-decreasing actions to save 1% overall energy consumption per year, while 500 enterprises would be restructured each year. By the year of 2030, steel industry should decrease 15% carbon emission intensity per tonne of steel compared with 2020, total carbon emission of petrochemical and chemical industry shall not increase, and energy consumption intensity should decrease constantly, making sure to peak carbon emission of industrial sector before 2030.
- On December 22nd, 2022, Shanghai Municipal Bureau of Ecology and Environment released the *Circular of the Second Auction of Shanghai Emission Allowances*, the auction began on December 30th, with a cap of 3 million tonnes, the floor price of the auctioned allowance was 1.2 times of the weighted average prices of Shanghai Emission Allowance (SHEA) from Oct. 1st, 2021 to Dec. 20th, 2022, which was nearly CNY 60.38/tonne.

- Guangdong.
  - On December 5th, 2022, Guangdong Provincial Development and Reform Commission released *Implementing Program for Constructing Modern*

Circulation System of Guangdong Province During Fourteenth Five-Year Plan (Hereinafter as the *Program*). The *Program* mentioned to support Guangzhou Future Exchange to conduct research and to launch carbon emission rights futures, and support China Emission Exchange of Shenzhen to launch a pilot program for marine carbon sinks trading. The *Program* also mentioned to promote the low carbon transformation of transportation sector, by utilizing green energy alternatives, using new energy trucks for short-distance freight distribution, promoting the utilization of electric vehicles in ports and airports, and promoting the application of new energy ships like LNG powered ships, electric ships, hydrogen powered ships etc.

  - On December 5th, 2022, Department of Ecology and Environment of Guangdong Province released *2022 Carbon Emission Allowance Allocation Plan for Guangdong Province*, which covers 217 entities from 5 industries including cement, steel, and chemical. The total amount of allowances in this compliance period is 266 million tonnes, including 13 million tonnes of government reserved allowances.

- Shenzhen.
  - On December 21st, 2022, the People's Government of Shenzhen Municipality issued the *Circular of Several Measures to promote the High-Quality Development of Green and Low carbon Industries in Shenzhen Municipality* (Hereinafter as the *Circular*), the *Circular* focused on supporting six areas including clean energy, energy saving and environmental protection, new energy vehicles, ecological environment, green upgrading of infrastructures, and green and low carbon services. The *Circular* also proposed 31 specific measures including improving technological innovation ability, innovative development of new business models, application and promotion of technological products, using digital technology to empower green transformation, enhancing industrial competitiveness.
- Chongqing.
  - On December 15th, 2022, Chongqing Ecology and Environment Bureau released *Draft for Comments on Implementing Program for 2021 Carbon Emission Allowance Allocation for Chongqing Municipality* (Hereinafter as the *Program*). According to the *Program*, enterprises to be covered by the Chongqing ETS should be industrial enterprises whose GHG emissions were over 13,000 tonnes of carbon dioxide equivalent in any year from 2018 to 2020, except for power grid, water supply, natural gas supply, sewage treatment, aviation enterprises, and power generation enterprises that have been covered by the national ETS. The cap of

allowances is composed by allowances for covered entities (95%) and government reserved allowances (5%).

- Sichuan
    - On January 5th, 2023 the People's Government of Sichuan Province issued the *Implementing Program for Carbon Peaking of Sichuan Province* (Hereinafter as the *Program*), which focuses on promoting actions in the fields of energy, industry, urban and rural construction, transportation, scientific research and education, and ecological construction. The *Program* mentioned that, by the year of 2025, non-fossil energy will contribute for about 41.5% of energy consumption, the total installed capacity of hydropower, wind power and solar power should be more than 138 GW, energy consumption per unit regional GDP should decrease more than 14%, carbon dioxide emission per unit regional GDP should meet the national target. By the year of 2030, non-fossil energy will contribute for about 43.5% of energy consumption, the total installed capacity of hydropower, wind power and solar power should be more than 168 GW, carbon dioxide emission per unit regional GDP should decrease by over 70% compared with 2005.

EDF Efforts

- On December 10th, 2022, EDF and the Climate Investment and Finance Association co-hold the "Review on the COP27: 2022 International Seminar on Innovative Development of Climate Investment and Financing". Experts from climate change authorities, financial regulators, industries and academia were invited to discuss the current situation and future trends of climate investment and financing in China. The Director General of Department of Climate Change Li Gao from MEE delivered a keynote speech, he pointed out that strong financial supports and efficient financing mechanisms are key to the implementation of relevant resolutions of COP27 and the accomplishment of Carbon Neutrality in China. The Director of Global Climate Change Zhao Xiaolu from EDF Beijing Office shared our research on low carbon transformation of maritime transportation and discussed how to use climate investment and financing tools to accelerate this process.
- To promote the application of China Certified Emission Reduction (CCER) and support the restart of related market, EDF partnered with the National Center for Climate Change Strategy and International Cooperation to research the functional requirements of the registration system of VER. On October 28th, 2022, the National Center for Climate Change Strategy and International Cooperation organized a webinar to introduce the above-mentioned research

achievements, this research has been essential in optimizing the information platform and registration system of the VER by proposing the business requirements of CCER registration system, analyzing risks in connecting the old and new systems, and supporting the completion of offset priorities in the first compliance cycle of the national ETS.

- To better provide necessary support to market participants, EDF partnered with the National Center for Climate Change Strategy and International Cooperation to establish the Help Platform of national ETS. On December 28th, 2022, the National Center for Climate Change Strategy and International Cooperation organized a webinar to briefing the design and performance of the platform. Since the establishment of the Help Platform and experts pool, over 860 questions from nearly 1,000 registered users were solved, and FAQ on China ETS was published, all of which has effectively supported the smooth construction and operation of the national ETS.

As always, please do not hesitate to let us know if you would like to follow up on the above topic on China's ETS and anything else you may wish to know. We would love to hear from you.

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2021 is the first year of the "14th Five-Year Plan". China's MEE stated that a Nationwide ETS with complete institutions, active trading, strict supervision, and high transparency will be built during the 14th Five-Year Plan period. EDF will continue to follow up on the construction of China Nationwide ETS, bringing you first-hand news and insightful analysis. For more information or to get in touch with an EDF spokesperson, please contact EDF China at China@edf.org.

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