

## Climate Policy Brief: China<sup>1</sup>

### Abbreviations

|                         |   |
|-------------------------|---|
| <b>CCER</b>             | China Certified Emission Reduction                        |
| <b>CEA</b>              | Chinese Emission Allowance                                |
| <b>ETS</b>              | Emissions Trading System                                  |
| <b>GHG</b>              | Greenhouse gas <sup>2</sup>                               |
| <b>LULUCF</b>           | Land use, land-use change and forestry                    |
| <b>MEE</b>              | The Ministry of Ecology and Environment                   |
| <b>NDC</b>              | Nationally Determined Contribution                        |
| <b>NDRC</b>             | National Development and Reform Commission                |
| <b>The program CCER</b> | China Voluntary Greenhouse Gas Reduction Program          |
| <b>RE</b>               | Regulated entities  |
| <b>RES</b>              | Renewable energy sources                                  |
| <b>SAMR</b>             | State Administration for Market Regulation                |
| <b>UNFCCC</b>           | The United Nations Framework Convention on Climate Change |

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<sup>1</sup> This dataset is intended solely for general informational purposes. Its content is collected from open sources and shall not be considered exhaustive.

<sup>2</sup> Atmospheric gaseous constituents of natural or anthropogenic origin, absorbing and re-emerging infrared radiation, including carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrogen oxide (N<sub>2</sub>O), hydrofluorocarbons (HFC), perfluorocarbons (PFC), sulphur hexafluoride (SF<sub>6</sub>) and nitrogen trifluoride (NF<sub>3</sub>).

| Level    | Block           | Description   |
|----------|-----------------|---|
| <b>1</b> | <b>Overview</b> |   |
| 1.1      | Key facts       | <p>China ratified the Kyoto Protocol in 2002 and the Paris Agreement in 2016.<sup>3</sup></p> <p>In September 2020, Chinese President Xi Jinping announced that China “will strive to peak CO<sub>2</sub> emissions before 2030 and achieve carbon neutrality by 2060”. Since 1990, China has contributed the largest share of global GHG among all countries. According to 2022 statistics, China is the world’s largest consumer of energy and the largest source of CO<sub>2</sub> emissions, accounting for a third of global emissions.<sup>4</sup> In the second quarter of 2023, China’s CO<sub>2</sub> emissions increased by approximately 10% annually, and by about 1% compared to the record level in 2021.<sup>5</sup></p> <p>During the 14th Five-Year Plan (2021-2025), CO<sub>2</sub> emissions are planned to be reduced by 18%, and the carbon intensity of GDP by 13.5% compared to 2020 levels.<sup>6</sup></p> <p>As of 2021, the largest share of emissions comes from the energy and industrial sectors, accounting for 51% and 25% respectively.<sup>7</sup> Additionally, forecasts for energy and electricity demand continue to grow. Over the last three decades, China’s energy needs have surged, mainly due to energy-intensive industrialization and urbanization.<sup>8</sup> Despite significant development in renewable energy in China since 2000,<sup>9</sup> the country still heavily relies on</p> |

<sup>3</sup> China. The United Nations Framework Convention on Climate Change. URL: <https://unfccc.int/node/180417> (accessed: February 5, 2024).

<sup>4</sup> Lawrence Berkeley National Laboratory. China Energy Outlook 2022. URL: <https://international.lbl.gov/sites/default/files/2022-04/China%20Energy%20Outlook%202022-full%20report%2004.22.22.pdf#:~:text=China%20is%20not%20only%20the,2100%20compared%20to%20pre%20industrial%20levels> (accessed: February 5, 2024).

<sup>5</sup> Lauri Myllyvirta. Analysis: China’s CO<sub>2</sub> emissions in Q2 2023 rebound to 2021’s record levels. Carbonbrief. URL: <https://www.carbonbrief.org/analysis-chinas-co2-emissions-in-q2-2023-rebound-to-2021s-record-levels/> (accessed: February 5, 2024).

<sup>6</sup> 2030 年前碳达峰行动方案 [Action plan for carbon dioxide peaking before 2030] / The State Council 2021. URL: [http://www.gov.cn/zhengce/content/2021-10/26/content\\_5644984.htm](http://www.gov.cn/zhengce/content/2021-10/26/content_5644984.htm) (accessed: February 5, 2024).

<sup>7</sup> Daniel Slotta. Distribution of carbon dioxide emissions from energy use in China in 2021, by sector. Statista. URL: <https://www.statista.com/statistics/1088662/china-share-of-energy-related-carbon-dioxide-emissions-by-sector/#:~:text=The%20power%20sector%20is%20the,for%2051%20percent%20in%202021> (accessed: February 5, 2024).

<sup>8</sup> Demand for electricity in China in 2020 was more than five times its level two decades earlier; and electricity consumption rose by 10% in 2021 over the previous year. URL: <https://www.enerdata.net/estore/energy-market/china/> (accessed: February 5, 2024).

<sup>9</sup> In 2020, China’s cumulative installed wind and solar capacity accounted for a 38.5% and 35.9%, respectively, of the world total. Hannah Ritchie and Max Rosen, “Renewable Energy,” Our World in Data. URL: <https://ourworldindata.org/renewable-energy> (accessed: February 5, 2024).

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|  | <p>fossil fuels.<sup>10</sup> In 2020, fossil fuels accounted for 85% of China’s total energy consumption: coal about 60%, and oil around 20%.<sup>11</sup> In 2021, coal and gas made up 71% of electricity generation.<sup>12</sup></p> <p>In the report of the 20th National Congress of the Communist Party of China in 2022, the topic of energy transition was addressed, noting the necessity to halt the growth of emissions causing global warming.<sup>13</sup> According to Xi Jinping, the burning of fossil fuels will not be ceased until reliable methods of replacement with clean energy are found (meaning that China, in its decarbonization process, will not hastily abandon hydrocarbons until it is assured that renewable energy can fully replace them).<sup>14</sup></p> <p>At the same time, over the last decade, China has become a clear leader in the climate agenda, primarily due to the rapid development and scaling up of low-carbon technologies. China is a leader in the production of equipment for solar and wind energy, in renewable energy capacity, and in the production and use of electric vehicles.</p> <p><b>Renewable Energy and Energy Efficiency</b></p> <p>RES play a crucial role in national energy security, despite the ongoing use of fossil fuels. In 2022, the total capacity of RES reached over 1150 GW.<sup>15</sup> According to the International Renewable Energy Agency (IRENA), by the end of 2022, the global capacity of RES amounted to 3372 GW.<sup>16</sup></p> |
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<sup>10</sup> International Energy Agency (IEA), “An Energy Sector Roadmap to Carbon Neutrality in China,” September 29, 2021. URL: <https://iea.blob.core.windows.net/assets/6689062e-43fc-40c8-9659-01cf96150318/AnenergysectorroadmaptocarbonneutralityinChina.p> (accessed: February 5, 2024).

<sup>11</sup> John Calabrese, China Prioritizes Short-Term Energy Security: Implications for Sino-Middle East Relations. URL: <https://www.mei.edu/publications/china-prioritizes-short-term-energy-security-implications-sino-middle-east-relations> (accessed: February 5, 2024).

<sup>12</sup> “China Remains as Reliant as Ever on Fossil Fuels,” Bloomberg News, January 18, 2022. URL: <https://www.bloomberg.com/news/articles/2022-01-19/two-charts-that-show-china-is-as-reliant-as-ever-on-fossil-fuels#xj4y7vzkg>; and BP Statistical Review of World Energy – 2021, “China’s Energy Market in 2020”. URL: <https://www.bp.com/content/dam/bp/business-sites/en/global/corporate/pdfs/energy-economics/statistical-review/bp-stats-review-2021-china-insights.pdf> (accessed: February 5, 2024).

<sup>13</sup> 人民日报, 积极稳妥推进碳达峰碳中和. URL: [https://www.gov.cn/yaowen/2023-04/06/content\\_5750183.htm](https://www.gov.cn/yaowen/2023-04/06/content_5750183.htm) (accessed: February 5, 2024).

<sup>14</sup> China Won’t Rush Its Clean Energy Transformation, Xi Says. URL: <https://www.bloomberg.com/news/articles/2022-10-17/china-won-t-rush-its-clean-energy-transformation-xi-says?srd=green&leadSource=verify%20wall> (accessed: February 5, 2024).

<sup>15</sup> China. Climate Action Tracker. URL: <https://climateactiontracker.org/countries/china/#> (accessed: February 5, 2024).

<sup>16</sup> The International Renewable Energy Agency. Renewable Capacity Statistics 2022. URL: [https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2022/Apr/IRENA\\_RE\\_Capacity\\_Statistics\\_2022.pdf?rev=460f190dea15442eba8373d9625341ae](https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2022/Apr/IRENA_RE_Capacity_Statistics_2022.pdf?rev=460f190dea15442eba8373d9625341ae) (accessed: February 5, 2024).

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|  |  | <p>According to the 14th Five-Year Plan on Modern Energy System Planning (2021-2025),<sup>17</sup> the share of non-fossil fuels in primary energy consumption should reach 20% by 2025, and the share of non-fossil fuels in the structure of electricity production should reach 39% (33% from RES). The plan also mentions eliminating barriers for market trading of distributed energy, creating spot markets between several provinces, and encouraging private sector trade in green energy.</p> <p>Within the framework of the 14th Five-Year Plan for renewable energy (2021-2025), the development of onshore and offshore wind energy, local consumption of RES, and interprovincial energy transmission are planned.<sup>18</sup></p> <p>By 2030, the installed capacity of wind and solar energy is planned to be increased to 1200 GW, and the share of non-fossil resources in primary energy consumption is to be raised to 25%. In 2021, China's Mid-Century Long-Term Low Greenhouse Gas Emission Development Strategy was adopted,<sup>19</sup> whose main goal is to peak emissions by 2030 and achieve carbon neutrality by 2060. Additionally, it includes several sectoral goals, such as ensuring a 25% share of non-fossil energy in energy consumption and a total installed wind and solar energy capacity of over 1.2 bln kilowatts by 2030.<sup>20</sup></p> <p>Currently, China is already the world's largest producer and consumer of hydrogen.<sup>21</sup> The Chinese government has developed a medium and long-term hydrogen development plan for the period 2021-2035. The main goal is to ensure the production of green hydrogen using RES in the amount of 100-200 thou. tons per year by 2025. It is planned by 2025 to produce 50,000 hydrogen fuel cell vehicles and build a number of (the exact number is not</p> |
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<sup>17</sup> 14th Five-Year Plan: Modern Energy System Planning (2021-2025). Grantham Research Institute. URL: [https://climate-laws.org/document/14th-five-year-plan-on-modern-energy-system-planning\\_79df](https://climate-laws.org/document/14th-five-year-plan-on-modern-energy-system-planning_79df) (accessed: February 5, 2024).

<sup>18</sup> 14th Five-Year Plan for Renewable Energy // NDRC. 06.2022. URL: <https://www.ndrc.gov.cn/xwdt/tzgg/202206/P020220602315650388122.pdf> (accessed: February 5, 2024).

<sup>19</sup> China's Mid-Century Long-Term Low Greenhouse Gas Emission Development Strategy. The UNFCCC. URL: <https://unfccc.int/sites/default/files/resource/China's%20Mid-Century%20Long-Term%20Low%20Greenhouse%20Gas%20Emission%20Development%20Strategy.pdf> (accessed: February 5, 2024).

<sup>20</sup> Mid-Century Long-Term Low Greenhouse Gas Emission Development Strategy China (2021). Climate policy. URL: <https://www.climatepolicydatabase.org/policies/mid-century-long-term-low-greenhouse-gas-emission-development-strategy> (accessed: February 5, 2024).

<sup>21</sup> International Energy Agency. Hydrogen Industry Development Plan (2021-2035). URL: <https://www.iea.org/policies/16977-hydrogen-industry-development-plan-2021-2035> (accessed: February 5, 2024).

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|  | <p>specified in the document) hydrogen refueling stations.<sup>22</sup> The plan also includes the use of clean hydrogen in other sectors: energy storage, electricity generation, and industry.</p> <p>China's national policy on carbon regulation primarily includes administrative measures, in particular, the mandatory closure of outdated production capacities, requirements for production modernization, and increased energy efficiency.<sup>23</sup></p> <p>The market instruments of carbon regulation include the national ETS and the CCER offset market.<sup>24</sup></p> <p>Over the last ten years, China has been developing its national ETS, which is currently the largest in the world in terms of the volume of covered emissions (estimated at over 4 bln tons of CO<sub>2</sub>, accounting for more than 40% of CO<sub>2</sub> emissions in the country).<sup>25</sup></p> <p>In October 2023, the MEE published a new report on China's policies and actions to address climate change.<sup>26</sup> According to the document, in 2022, China's carbon emissions intensity decreased more than 51% from its 2005 level, and the share of non-fossil energy in China's total energy consumption reached 17.5%. It also notes that as of September 2023, China has signed 48 memorandums of understanding on climate change with dozens of developing countries, particularly through South-South cooperation. China gives equal importance to adapting to climate change and mitigating its consequences, for which it has developed comprehensive plans and measures for climate adaptation up to 2035.</p> <p>The implementation of a large-scale program to expand forested areas continues: in recent decades, the country has demonstrated record rates of forest cover expansion, and in 2022, a goal was announced to plant 70 bln trees by 2030.</p> |
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<sup>22</sup> 氢能产业发展中长期规划（2021-2035年）. 高技术司. URL: <https://www.ndrc.gov.cn/xxgk/zcfb/ghwb/202203/P020220323314396580505.pdf> (accessed: February 5, 2024).

<sup>23</sup> “十四五”工业绿色发展规划 [14th Five-Year Plan for Green Development of Industry] / The Ministry of Industry and Information Technology. 2021. URL: <http://www.gov.cn/zhengce/zhengceku/2021-12/03/5655701/files/4c8e11241e1046ee9159ab7dcad9ed44.pdf> (accessed: February 5, 2024).

<sup>24</sup> International Carbon Action Partnership. URL: <https://icapcarbonaction.com/en> (accessed: February 5, 2024).

<sup>25</sup> International Carbon Action Partnership. China National ETS. URL: <https://icapcarbonaction.com/en/ets/china-national-ets#:~:text=Covered%20entities%20can%20use%20China,in%20the%20first%20compliance%20period> (accessed: February 5, 2024).

<sup>26</sup> China sees positive progress in climate change response: MEE. The State Council. URL: [https://english.www.gov.cn/news/202310/29/content\\_WS653d9800c6d0868f4e8e0c2d.html](https://english.www.gov.cn/news/202310/29/content_WS653d9800c6d0868f4e8e0c2d.html) (accessed: February 5, 2024).

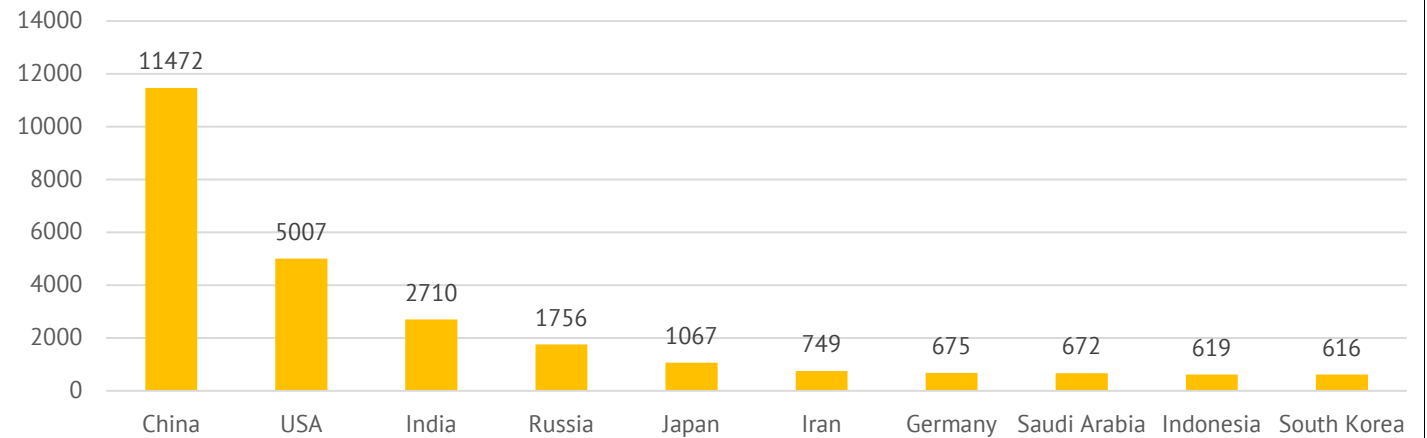
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|     |   | <p><b>Decarbonization of the Most Carbon-Intensive Economic Sectors</b></p> <p>The “Made in China 2025” strategy, released in 2015, aims to reduce the carbon intensity of added value in the industry by 40% by 2025 compared to the 2015 level.<sup>27</sup></p> <p>The implementation plan for carbon peaking in the industrial sector (2022) includes goals to peak industrial emissions by 2030 and to reduce the energy intensity of added value in it by 13.5% by 2025 compared to 2020.<sup>28</sup></p> <p>There are also specific targets for the most carbon-intensive sectors: by 2025, a reduction in energy intensity is planned in the production of cement by 2% and steel by 3.7%. Additionally, a reduction in CO<sub>2</sub> emissions from the production of electrolytic aluminum by 5% is envisaged, along with an increase in the use of recycled steel in iron production from 260 to 320 mln tons for 2020-2025.<sup>29</sup> In non-ferrous metallurgy, special attention is paid to recycling – by 2025, the share of recycled non-ferrous metals should reach 24% of their total use in the economy.</p> |
| 1.2 | Annual emissions, world rank, with and without LULUCF | China is the world’s leading emitter of CO <sub>2</sub> . The primary source of CO <sub>2</sub> emissions is the burning of fossil fuels.  |

<sup>27</sup> «国务院关于印发《中国制造 2025》的通知 [Notification from the State Council on the Publication of “Made in China 2025”] // State Council. 08.05.2015. The People’s Republic of China, “China’s Achievements, New Goals and New Measures for Nationally Determined Contributions”. URL: [https://www.gov.cn/zhengce/content/2015-05/19/content\\_9784.htm](https://www.gov.cn/zhengce/content/2015-05/19/content_9784.htm) (accessed: February 5, 2024).

<sup>28</sup> «三部委关于印发工业领域碳达峰实施方案的通知 (Notification from Three Ministries Regarding Publication of Implementation Plan for Carbon Peaking in Industry) // Ministry of Industry and Information Technology, National Development and Reform Commission, and Ministry of Ecology and Environment. URL: [https://www.miit.gov.cn/zwgk/zcwj/wjfb/tz/art/2022/art\\_df5995ad834740f5b29fd31c98534eea.html](https://www.miit.gov.cn/zwgk/zcwj/wjfb/tz/art/2022/art_df5995ad834740f5b29fd31c98534eea.html) (accessed: February 5, 2024).

<sup>29</sup> Guide to Chinese Climate Policy // The Oxford Institute for Energy Studies. URL: <https://chineseclimatepolicy.oxfordenergy.org/wp-content/uploads/2022/11/Guide-to-Chinese-Climate-Policy-2022.pdf> (accessed: February 5, 2024).

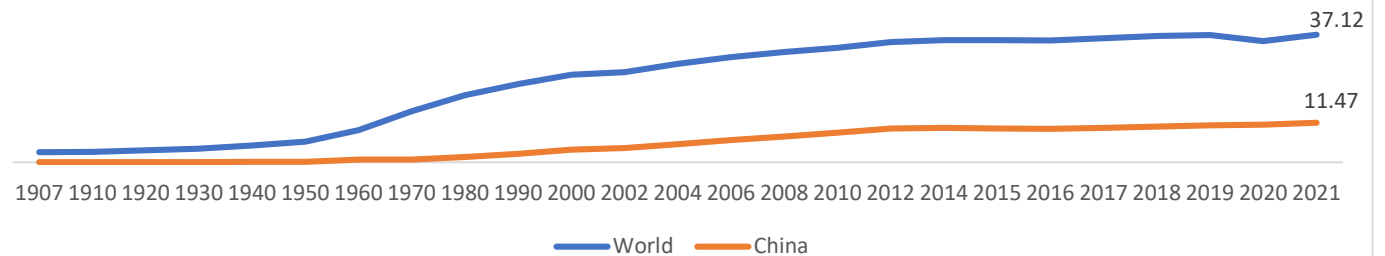
**Top 10 CO<sub>2</sub> emitting countries (as of 2021, metric tons of carbon dioxide)**



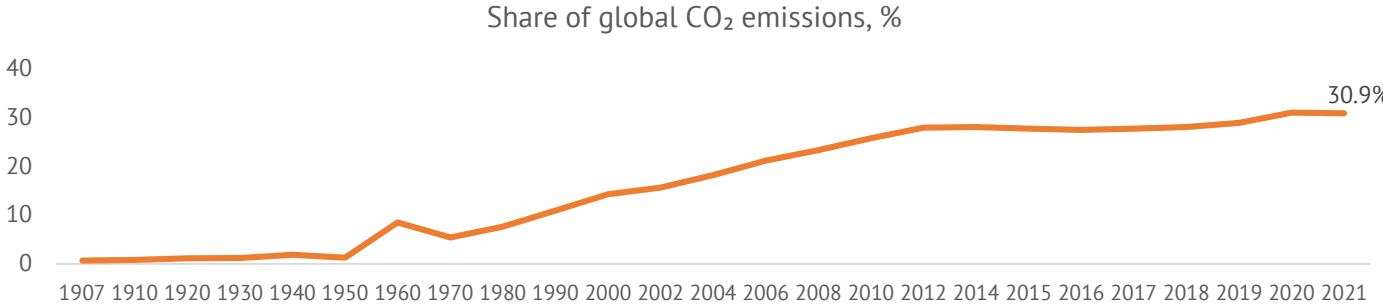
Source: Global Carbon Atlas. URL: <https://globalcarbonatlas.org/emissions/carbon-emissions/> (accessed: February 8, 2024).

**Annual CO<sub>2</sub> emissions, billion t**

Carbon dioxide (CO<sub>2</sub>) emissions from fossil fuels and industry. Land use change is not included.



Source: China: CO<sub>2</sub> Country Profile. Hannah Ritchie. Our World in Data CO<sub>2</sub> and Greenhouse Gas Emissions database. URL: <https://ourworldindata.org/co2/country/china?country=~CHN> (accessed: February 8, 2024).

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|     |                                   | <p>In 2021, the share of global CO<sub>2</sub> emissions was 30.9% (CO<sub>2</sub> emissions from fossil fuels and industry, excluding LULUCF).<sup>30</sup></p>  <p style="text-align: center;">Share of global CO<sub>2</sub> emissions, %</p> <p>Source: China: CO<sub>2</sub> Country Profile. Hannah Ritchie. Our World in Data CO<sub>2</sub> and Greenhouse Gas Emissions database. URL: <a href="https://ourworldindata.org/co2/country/china?country=~CHN">https://ourworldindata.org/co2/country/china?country=~CHN</a> (accessed: February 8, 2024).</p> <p>The share of global cumulative CO<sub>2</sub> emissions in 2021 was 14.36% (calculated as the sum of annual emissions since 1750).<sup>31</sup></p> |
| 1.3 | Annual emissions in 1990 and 2005 | Annual CO <sub>2</sub> emissions from fossil fuels and industry, excluding LULUCF: <sup>32</sup><br>1990 – 2.48 bln tons;<br>2005 – 5.88 bln tons.   |
| 1.4 | Emissions per capita, world rank  | CO <sub>2</sub> emissions per capita from fossil fuels and the industrial sector, excluding LULUCF: <ul style="list-style-type: none"> <li>• China (2021)<sup>33</sup> – 8 tons per capita;</li> </ul>   |

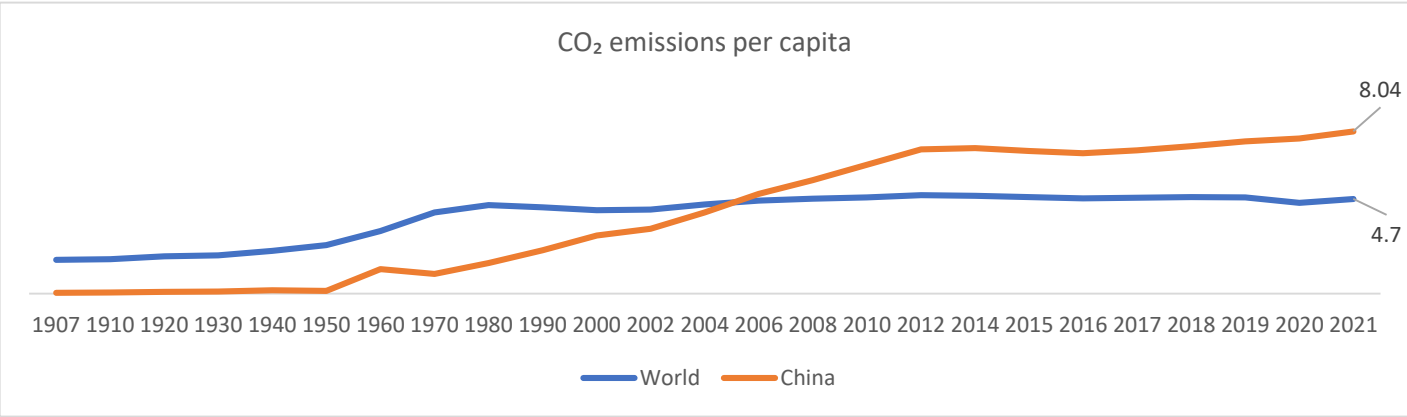
<sup>30</sup> China: CO<sub>2</sub> Country Profile. Hannah Ritchie. Our World in Data CO<sub>2</sub> and Greenhouse Gas Emissions database. URL: <https://ourworldindata.org/co2/country/china?country=~CHN> (accessed: February 5, 2024).

<sup>31</sup> Ibid.

<sup>32</sup> Ibid.

<sup>33</sup> Global Carbon Project, UN World Population Prospects. URL: <https://ourworldindata.org/co2/country/china?country=~CHN> (accessed: February 8, 2024).



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|   |     | <ul style="list-style-type: none"> <li>World (2021)<sup>34</sup> – 4.69 tons per capita.</li> </ul>  <p>Source: China: CO2 Country Profile. Hannah Ritchie. Our World in Data CO2 and Greenhouse Gas Emissions database. URL: <a href="https://ourworldindata.org/co2/country/china?country=~CHN">https://ourworldindata.org/co2/country/china?country=~CHN</a> (accessed: February 8, 2024).</p> |
| <b>2 NDC and national climate goals</b> |     |   |
| 2.1                                     | NDC | <p>China’s NDC was updated<sup>35</sup> on October 28, 2021.<sup>36</sup> Main objectives:<sup>37</sup></p> <ol style="list-style-type: none"> <li>1. Peaking carbon dioxide emissions “before 2030” (up from the previous “around 2030 and making efforts to peak earlier”) and achieve carbon neutrality before 2060;</li> <li>2. Lower carbon intensity by “over 65%” in 2030 from the 2005 level, (up from the previous “by 60–65%”);</li> </ol>                                |

<sup>34</sup> Ibid.

<sup>35</sup> United Nations Framework Convention on Climate Change. Nationally Determined Contributions Registry. URL: [https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/China First/China%E2%80%99s Achievements, New Goals and New Measures for Nationally Determined Contributions.pdf](https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/China%20First/China%E2%80%99s%20Achievements,%20New%20Goals%20and%20New%20Measures%20for%20Nationally%20Determined%20Contributions.pdf) (accessed: February 5, 2024).

<sup>36</sup> China’s climate change policies. International progress on climate action. European Parliamentary Research Service. URL: [https://www.europarl.europa.eu/RegData/etudes/BRIE/2022/738186/EPRS\\_BRI\(2022\)738186\\_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2022/738186/EPRS_BRI(2022)738186_EN.pdf) (accessed: February 5, 2024).

<sup>37</sup> Climate Action Tracker. China. URL: <https://climateactiontracker.org/countries/china/targets/> (accessed: February 5, 2024).

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|     |                        | <ol style="list-style-type: none"> <li>3. Share of non-fossil fuels in primary energy consumption to “around 25%” in 2030, (up from “around 20%”);</li> <li>4. Increase forest stock volume by around 6 bln cubic metres in 2030 from the 2005 level, (previously 4.5 bln cubic metres);</li> <li>5. Increase the installed capacity of wind and solar power to over 1,200 GW by 2030 (new target).</li> </ol> <p>The above goals were first announced on September 22, 2020, by Chinese President Xi Jinping during his speech at the 75th session of the UN General Assembly.</p>  |
| 2.2 | National climate goals | <p>On October 28, 2021, China submitted to the UNFCCC Secretariat the China’s Mid-Century Long-Term Low Greenhouse Gas Emission Development Strategy, outlining the guiding principles, strategic vision, priorities, and political orientation of China regarding the country’s long-term low GHG emission development, particularly containing the commitment to achieve carbon neutrality.<sup>38</sup> This commitment is also mentioned in a number of high-level policy documents and guiding documents.<sup>39</sup></p> <p>Other national climate goals:<sup>40</sup></p> <ul style="list-style-type: none"> <li>• About 40 GW of installed hydropower capacity is to be introduced during 2021-2030, creating a renewable energy system based on hydropower;</li> <li>• By 2025, all newly constructed buildings in cities must meet green building standards;</li> <li>• By 2030, about 40% of new vehicles should be powered by clean energy;</li> <li>• By 2030, in cities with a permanent population of one mln or more, no less than 70% of trips should be made by clean modes of transportation;</li> </ul> |

<sup>38</sup> China’s Mid-Century Long-Term Low Greenhouse Gas Emission Development Strategy. URL: <https://unfccc.int/sites/default/files/resource/China’s%20Mid-Century%20Long-Term%20Low%20Greenhouse%20Gas%20Emission%20Development%20Strategy.pdf> (accessed: February 5, 2024).

<sup>39</sup> Climate Action Tracker. China. URL: <https://climateactiontracker.org/countries/china/net-zero-targets/> (accessed: February 5, 2024).

<sup>40</sup> China’s Climate Policy Documents - 1+N and Updated NDC. United Nations Development Programme. URL: <https://www.undp.org/china/publications/issue-brief-chinas-climate-policy-documents-1n-and-updated-ndc> (accessed: February 5, 2024).

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|          |                                       | <ul style="list-style-type: none"> <li>• By 2025, the volume of annually processed solid household waste should be about 4 bln metric tons, and by 2030, this should increase to approximately 4.5 bln tons;</li> <li>• By 2025, a basic system for household waste sorting should be established in cities, with a utilization rate of around 60%, and by 2030, this should reach 65%.</li> </ul>  |
| <b>3</b> | <b>National regulation</b>            |   |
| 3.1      | Key climate-related laws and policies | <p>China’s climate policy is largely governed by the “Working Guidance for Carbon Dioxide Peaking and Carbon Neutrality in Full and Faithful Implementation of the New Development Philosophy”,<sup>41</sup> the “Action plan for carbon dioxide peaking before 2030”,<sup>42</sup> as well as the 14th Five-Year Plan, which includes targets for reducing carbon intensity, particularly in the energy and end-use sectors.</p> <p>Other important policies include:</p> <ul style="list-style-type: none"> <li>• Forest Law of the People’s Republic of China (1984);<sup>43</sup></li> <li>• Law of the People’s Republic of China on the prevention and control of atmospheric pollution (1987);<sup>44</sup></li> <li>• Renewable Energy Law of the People’s Republic of China (2005);<sup>45</sup></li> <li>• Electric Power Law of the People’s Republic of China (2015);<sup>46</sup></li> </ul> |

<sup>41</sup> Working Guidance for Carbon Dioxide Peaking and Carbon Neutrality in Full and Faithful Implementation of the New Development Philosophy. National Development and Reform Commission. Department of Resource Conservation and Environmental Protection. 24.10.2021. URL: [https://en.ndrc.gov.cn/policies/202110/t20211024\\_1300725.html](https://en.ndrc.gov.cn/policies/202110/t20211024_1300725.html) (accessed: February 5, 2024).

<sup>42</sup> Action plan for carbon dioxide peaking before 2030. National Development and Reform Commission. Department of Resource Conservation and Environmental Protection. 27.10.2021. URL: [https://en.ndrc.gov.cn/policies/202110/t20211027\\_1301020.html#:~:text=By%202030%2C%20the%20share%20of,carbon%20dioxide%20peaking%20before%202030](https://en.ndrc.gov.cn/policies/202110/t20211027_1301020.html#:~:text=By%202030%2C%20the%20share%20of,carbon%20dioxide%20peaking%20before%202030) (accessed: February 5, 2024).

<sup>43</sup> Forest Law of the People’s Republic of China. MEE. URL: [https://english.mee.gov.cn/Resources/Laws/envir\\_elatedlaws/202102/t20210207\\_820735.shtml#:~:text=The%20people’s%20governments%20at%20all%20levels%20shall%20implement%20forest%20ecological,in%20light%20of%20local%20conditions](https://english.mee.gov.cn/Resources/Laws/envir_elatedlaws/202102/t20210207_820735.shtml#:~:text=The%20people’s%20governments%20at%20all%20levels%20shall%20implement%20forest%20ecological,in%20light%20of%20local%20conditions) (accessed: February 5, 2024).

<sup>44</sup> Law of the People’s Republic of China on the prevention and control of atmospheric pollution. International Labour Organization. URL: <https://www.ilo.org/dyn/natlex/docs/ELECTRONIC/92654/108041/F599420703/CHN92654%20Eng.pdf> (accessed: February 5, 2024).

<sup>45</sup> Renewable Energy Law of the People’s Republic of China. MOFCOM. URL: <http://english.mofcom.gov.cn/article/policyrelease/Businessregulations/201312/20131200432160.shtml> (accessed: February 5, 2024).

<sup>46</sup> Electric Power Law of the People’s Republic of China. Food and Agriculture Organization of the United Nations. URL: <https://faolex.fao.org/docs/pdf/chn137813.pdf> (accessed: February 5, 2024).

|  |   |
|--|---|
|  | <ul style="list-style-type: none"> <li>• Law of the People’s Republic of China on Prevention and Control of Soil Contamination (2019);<sup>47</sup></li> <li>• Climate Investment and Financing Pilot Work Plan (2021);<sup>48</sup></li> <li>• National Climate Change Adaptation Strategy 2035 (2022);<sup>49</sup></li> <li>• Medium- and long-term plan for the development of the hydrogen energy industry (2021-2035) (2022).<sup>50</sup></li> </ul> <p>Carbon regulation in China is structured on a “1+N” principle, where “1” represents the fundamental documents for achieving climate goals, and “N” represents detailed action plans for industries and regions. The main document is the “Working Guidance for Carbon Dioxide Peaking and Carbon Neutrality in Full and Faithful Implementation of the New Development Philosophy” dated October 24, 2021.<sup>51</sup> “N” signifies a collection of new plans, the first of which is the “Action Plan for Carbon Dioxide Peaking Before 2030” dated October 26, 2021.<sup>52</sup> The Action Plan contains detailed and specific goals for the energy sector and other key industrial sectors, as well as individual key areas of climate policy, such as the circular economy, CO<sub>2</sub> emissions trading, etc. Additional examples include the “Rules for the Management of CO<sub>2</sub> Emission Rights Registration (Draft)”, “Rules for the Management of CO<sub>2</sub> Emission Rights Trading (Draft)”, and “Rules for the Management of CO<sub>2</sub> Emission Rights Settlement (Draft)”.<sup>53</sup></p> |
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<sup>47</sup> Law of the People’s Republic of China on Prevention and Control of Soil Contamination. MEE. URL: [https://english.mee.gov.cn/Resources/laws/environmental\\_laws/202011/t20201113\\_807786.shtml](https://english.mee.gov.cn/Resources/laws/environmental_laws/202011/t20201113_807786.shtml) (accessed: February 5, 2024).

<sup>48</sup> Climate Investment and Financing Pilot Work Plan. Grantham Research Institute. URL: [https://climate-laws.org/document/climate-investment-and-financing-pilot-work-plan\\_71d7?l=china&o=10](https://climate-laws.org/document/climate-investment-and-financing-pilot-work-plan_71d7?l=china&o=10) (accessed: February 5, 2024).

<sup>49</sup> 国家适应气候变化战略 2035. CSET. URL: <https://cset.georgetown.edu/publication/national-climate-change-adaptation-strategy-2035/> (accessed: February 5, 2024).

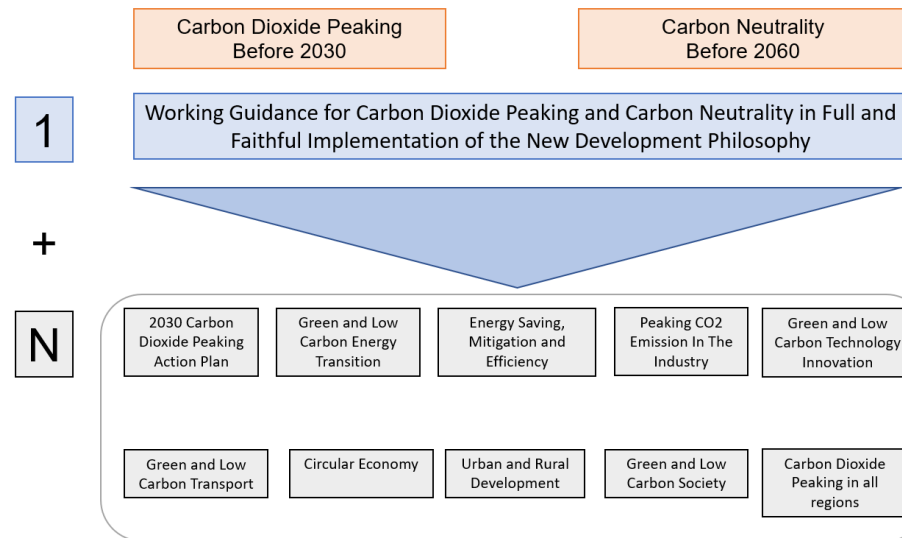
<sup>50</sup> Medium- and long-term plan for the development of the hydrogen energy industry (2021-2035). Grantham Research Institute. URL: [https://climate-laws.org/document/medium-and-long-term-plan-for-the-development-of-the-hydrogen-energy-industry-2021-2035\\_37a6?l=china](https://climate-laws.org/document/medium-and-long-term-plan-for-the-development-of-the-hydrogen-energy-industry-2021-2035_37a6?l=china) (accessed: February 5, 2024).

<sup>51</sup> Working Guidance for Carbon Dioxide Peaking and Carbon Neutrality in Full and Faithful Implementation of the New Development Philosophy. URL: [https://en.ndrc.gov.cn/policies/202110/t20211024\\_1300725.html](https://en.ndrc.gov.cn/policies/202110/t20211024_1300725.html) (accessed: February 5, 2024).

<sup>52</sup> Action Plan for Carbon Dioxide Peaking Before 2030. URL: [http://www.news.cn/english/2021-10/27/c\\_1310270985.htm](http://www.news.cn/english/2021-10/27/c_1310270985.htm) (accessed: February 5, 2024).

<sup>53</sup> 关于发布《碳排放权登记管理规则（试行）》《碳排放权交易管理规则（试行）》和《碳排放权结算管理规则（试行）》的公告. 生态环境部. URL: [https://www.mee.gov.cn/xxgk/xxgk/xxgk01/202105/t20210519\\_833574.html](https://www.mee.gov.cn/xxgk/xxgk/xxgk01/202105/t20210519_833574.html) (accessed: February 5, 2024).

Picture 1. 1+N policy system to achieve peak CO<sub>2</sub> and carbon neutrality



Source: China's updated nationally determined contributions (NDCs). GIZ. URL: <https://transition-china.org/mobilityposts/chinas-updated-nationally-determined-contributions-ndcs/> (accessed: February 5, 2024).

In order to improve carbon regulation, develop CEA trading, strengthen control over CO<sub>2</sub> emissions, and achieve carbon neutrality, in February 2024, a high-level document “Temporary Provisions on the Management of CO<sub>2</sub> Emission Trading” was published.<sup>54</sup>

This document regulates the operational rules of the national ETS, its supervision, and control. Compared to its predecessor, the “Rules for the Management of the National CEA”, this document has a higher legal status and significance as it was adopted by the Order of the State Council of the PRC, not by ministerial departments. The Temporary Provisions on the Management of CO<sub>2</sub> Emission Trading will come into effect on May 1, 2024.<sup>55</sup>

<sup>54</sup> 国务院.《碳排放权交易管理暂行条例》. URL: [https://www.gov.cn/zhengce/content/202402/content\\_6930137.htm](https://www.gov.cn/zhengce/content/202402/content_6930137.htm) (accessed: February 5, 2024).

<sup>55</sup> Article 33 Temporary Provisions on the Management of CO<sub>2</sub> Emission Trading.

|                     |                                     |   |
|---------------------|-------------------------------------|---|
|                     |                                     | <p>In addition, the following policies have been adopted:</p> <ul style="list-style-type: none"> <li>• Notice on Financial Support for Carbon Neutralisation;<sup>56</sup></li> <li>• 14th Five-Year Plan for a Modern Energy System;<sup>57</sup></li> <li>• 14th Five Year Plan: Energy Conservation Emissions Reduction Work Plan (2021-2025);<sup>58</sup></li> <li>• 14th Five-Year Plan for the development of green industry;<sup>59</sup></li> <li>• Plan to achieve peak CO<sub>2</sub> emissions by 2030 in polluting industries<sup>60</sup> et al.</li> </ul> |
| 3.2                 | Carbon tax                          | Not available <sup>61</sup>   |
| 3.3                 | Carbon levies and fees              | Not available   |
| 3.4                 | <b>Emissions trading</b>            |   |
| <b>National ETS</b> |                                     |   |
| 3.4.1 (a)           | Description and key operating rules | In October 2011, the NDRC issued a notice on piloting CO <sub>2</sub> emissions trading in two provinces and five cities. <sup>62</sup> This document initiated pilot projects in Beijing, Tianjin, Shanghai, Chongqing, Shenzhen, Guangdong, and Hubei.  |

<sup>56</sup> Notice on Financial Support for Carbon Neutralisation. Climate Change Laws of the World. URL: [https://climate-laws.org/document/notice-on-financial-support-for-carbon-neutralisation\\_994b?q=China+14th+Five-Year+Plan](https://climate-laws.org/document/notice-on-financial-support-for-carbon-neutralisation_994b?q=China+14th+Five-Year+Plan) (accessed: February 5, 2024).

<sup>57</sup> 14th Five-Year Plan for a Modern Energy System // NDRC and NEA. 03.2022. URL: <https://www.ndrc.gov.cn/xxgk/zcfb/ghwb/202203/P020220322582066837126.pdf> (accessed: February 5, 2024).

<sup>58</sup> 14th Five Year Plan: Energy Conservation Emissions Reduction Work Plan (2021-2025). Climate Change Laws of the World. URL: [https://climate-laws.org/document/14th-five-year-comprehensive-work-plan-for-energy-saving-and-emission-reduction-2021-2025-notice-33\\_b020](https://climate-laws.org/document/14th-five-year-comprehensive-work-plan-for-energy-saving-and-emission-reduction-2021-2025-notice-33_b020) (accessed: February 5, 2024).

<sup>59</sup> “十四五”工业绿色发展规划》提出全面提升绿色制造水平. 人民日报. URL: [https://www.gov.cn/xinwen/2021-12/05/content\\_5655915.htm](https://www.gov.cn/xinwen/2021-12/05/content_5655915.htm) (accessed: February 5, 2024).

<sup>60</sup> Climate Change Laws of the World. China. URL: <https://climate-laws.org/geographies/china> (accessed: February 5, 2024).

<sup>61</sup> 邵帅 徐乐. 构建碳税与碳交易协同互补机制. 中国社会科学网-中国社会科学报. URL: <http://chinawto.mofcom.gov.cn/article/br/bs/202205/20220503312833.shtml> (accessed: February 5, 2024).

<sup>62</sup> 国家发展改革委办公厅. 国家发展改革委办公厅关于开展碳排放权交易试点工作的通知. URL: [https://www.ndrc.gov.cn/xxgk/zcfb/tz/201201/t20120113\\_964370.html](https://www.ndrc.gov.cn/xxgk/zcfb/tz/201201/t20120113_964370.html) (accessed: February 5, 2024).

Fujian province launched its pilot later, in September 2016.<sup>63</sup> In total, eight regional ETS pilots were launched during 2013-2016.<sup>64</sup>

As soon as the Temporary Measures for Voluntary Participation in CO<sub>2</sub> Emissions Trading, issued by the NDRC in 2012, are approved in a pilot region, REs become participants in the regional ETS pilot. In each pilot region, rules for the issuance, trading, and allocation of emissions allowances (CEAs) are developed,<sup>65</sup> reflecting local regulatory practices and considering regional climatic and technological characteristics. These measures are developed by municipal or provincial authorities, then coordinated with national regulators and impose obligations directly on the REs.

Regional ETS pilot systems are similar in architecture but differ in certain parameters. The table below lists the names of trading platforms, as well as the types of carbon assets traded on each exchange.

| Jurisdiction | Trading platforms                                 | Carbon assets  |
|--------------|---|--|
| Beijing      | China Beijing Environmental Exchange (CBEEEX)     | Beijing Emissions Allowances (BEA), voluntary reductions (forest and energy) and CCER            |
| Tianjin      | Tianjin Climate Exchange (TCE)                    | Tianjin Emissions Allowances (TJEA), voluntary reductions and CCER                               |
| Shanghai     | Shanghai Environment and Energy Exchange (SHEEEX) | Shanghai Emissions Allowances (SHEA) and CCER  |
| Guangdong    | China Emissions Exchange Guangzhou (CEEX)         | Guangdong Carbon Emission Allowance (GDEA), Puhui Certified Emissions Reduction (PHCER) and CCER |

<sup>63</sup> International Carbon Action Partnership. China - Fujian pilot ETS. URL: <https://icapcarbonaction.com/en/ets/china-fujian-pilot-ets> (accessed: February 5, 2024).

<sup>64</sup> 温室气体自愿减排交易管理暂行办法 [Interim measures for voluntary participation in China's emissions trading] / National Emissions Trading Platform on a voluntary basis. 2012. URL: <https://www.ccer.com.cn/article/zcfb/201410/20141000000333.shtml>; 温室气体自愿减排项目审定与核证指南 [Guidelines for verification and certification of voluntary GHG emission reduction transactions] / National Emissions Trading Platform on a voluntary basis. 2012. URL: <https://www.ccer.com.cn/article/zcfb/201410/20141000000333.shtml> (accessed: February 5, 2024).

<sup>65</sup> 朱奕奕, 中国碳排放权交易市场体系及制度建设的观察与思考, 国浩律师事务所. URL: <https://www.grandall.com.cn/ghsd/info.aspx?itemid=25470> (accessed: February 5, 2024).

|  |           |   |   |
|--|-----------|---|---|
|  | Shenzhen  | China Emissions Exchange (Shenzhen)       | Shenzhen Allowance (SZA) and CCER   |
|  | Hubei     | China Hubei Emissions Exchange            | Hubei Emissions Allowances (HBEA) and CCER  |
|  | Chongqing | Chongqing Carbon Emissions Trading Center | Chongqing Emissions Allowances (CQEA), CCER and CQCER   |
|  | Fujian    | Haixia Equity Exchange                    | Fujian Emissions Allowances (FJEA), Fujian Forestry Certified Emission Reduction (FFCER) and CCER |

The national ETS was launched on July 16, 2021.<sup>66</sup> Despite a limited number of participants (only the power sector was included in the system), the Chinese national carbon market immediately became the largest in the world in terms of regulated emissions volume. The total volume of emissions from the covered installations amounted to 4.5 bln tons of CO<sub>2</sub> per year, or about 40% of all CO<sub>2</sub> emissions produced by China.<sup>67</sup>

The launch of the national ETS was preceded by a series of regional ETS pilot, mentioned above.

In accordance with the legislation, the carbon markets in Chinese provinces and municipalities are expected to eventually become part of the national ETS. All entities included in the scope of the national ETS will cease to be participants in local carbon markets. At the same time, after the launch of the national ETS, new pilot projects in provinces and municipalities should not be created<sup>68</sup> (in practice, difficulties arose with systems that started development before the launch of the national market, leading to the continued creation of platforms similar to carbon exchanges<sup>69</sup>).

<sup>66</sup> China's national carbon market starts online trading. Xinhua. URL: [http://www.xinhuanet.com/english/2021-07/16/c\\_1310064614.htm](http://www.xinhuanet.com/english/2021-07/16/c_1310064614.htm) (accessed: February 5, 2024).

<sup>67</sup> International Carbon Action Partnership. China ETS under New Ministry of Ecology and Environment. URL: <https://icapcarbonaction.com/en/news/china-ets-under-new-ministry-ecology-and-environment> (accessed: February 5, 2024).

<sup>68</sup> Provisional Rules for Carbon Emissions Trading (revised draft), art. 32.

<sup>69</sup> China's Shenyang prepares to launch a local ETS. International Carbon Action Partnership. URL: <https://icapcarbonaction.com/en/news/chinas-shenyang-prepares-launch-local-ets> (accessed: February 5, 2024).; New platform encourages low-carbon lifestyle in China's Liaoning. Xinhua. URL: <https://english.news.cn/20221118/d88c6a95ba2746b3b41720938bbb5a74/c.html> (accessed: February 5, 2024).



|  |   |
|--|---|
|  | <p>REs must annually calculate and report CO<sub>2</sub> emissions data for the previous year and participate in data verification organized by the government. The results of the verification will be the basis for the allocation and issuance of CEAs.<sup>70</sup></p> <p>Currently, China employs a “bottom-up” approach, according to which provincial MEE’s Departments first calculate the necessary volume of CEAs for the installation based on adopted methodologies. Then, these provincial MEE’s Departments send the information to the MEE, which determines the total amount of CEAs needed for issuance for the compliance period.<sup>71</sup> Later, the MEE instructs the provincial MEE’s Departments to allocate CEAs to Regulated entities (REs)<sup>72</sup> based on the consideration of REs’ production needs for emissions and their technical level. Local authorities are responsible for submitting all necessary documentation to the national emission rights registration authority,<sup>73</sup> which, in turn, verifies the information jointly with local bodies and allocates free CEAs to REs’ accounts.<sup>74</sup></p> <p>As of now, within the national ETS, the first reporting period (2019-2020) has been completed,<sup>75</sup> and the CEAs allocation order for the 2021-2022 reporting period has been published<sup>76</sup>. The CEAs allocation order for 2023-2024 has not been published yet.</p> |
|--|---|

<sup>70</sup> 生态环境部. 碳排放权交易管理办法（试行）. URL: [https://www.mee.gov.cn/xxgk2018/xxgk/xxgk02/202101/t20210105\\_816131.html](https://www.mee.gov.cn/xxgk2018/xxgk/xxgk02/202101/t20210105_816131.html) (accessed: February 5, 2024).

<sup>71</sup> National Quota Allocation Plan 2021, 2022, art. 4.

<sup>72</sup> 一文看懂关于中国碳达峰、碳中和实现路径的顶层设计. URL: <https://www.lsisd.org.cn/express/express434.html> (accessed: February 5, 2024).

<sup>73</sup> Interim Regulations on the Administration of Carbon Emissions trading (revised draft). URL: [https://www.cet.net.cn/uploads/soft/202104/1\\_15100052.pdf](https://www.cet.net.cn/uploads/soft/202104/1_15100052.pdf) (accessed: February 5, 2024).

<sup>74</sup> National Quota Allocation Plan 2021, 2022, art. 5.

<sup>75</sup> 2019-2020 年全国碳排放权交易配额总量设定与分配实施方案(发电行业) [National carbon trading quota plan and distribution plan for 2019-2020. (for energy industry)]. URL: <https://www.mee.gov.cn/xxgk2018/xxgk/xxgk03/202012/W020201230736907121045.pdf> (accessed: February 5, 2024).

<sup>76</sup> 2021、2022 年度全国碳排放权交易配额总量设定与分配实施方案 [The National Carbon Trading Scheme and the Distribution Implementation Plan 2021 and 2022.]. URL: <https://www.mee.gov.cn/xxgk2018/xxgk/xxgk06/202211/W020221103336161991455.pdf> (accessed: February 5, 2024).

|           |           |   |
|-----------|-----------|---|
|           |           | <p>At the end of the reporting period, REs are obligated to surrender CEAs<sup>77</sup> in an amount corresponding to their actual GHG emissions within the specified deadline.<sup>78</sup> If an RE fails to fulfill its obligations for the previous period timely and in full, the provincial MEE's Departments are obliged to reduce the amount of CEAs that the RE failed to submit.<sup>79</sup> Additionally, a penalty of 5-10 times the average CEA price of the preceding month before the obligation deadline will be imposed. Previously, the fine was around 100-500 thou. yuan (~13,845 – 69,229 USD),<sup>80</sup> and even before that, regulatory documents stipulated even smaller fines – in the range of 20 to 30 thou. yuan (~2,769 – 4,153 USD).</p> <p>During the first compliance period under the national ETS, about 2,225 coal and gas installations,<sup>81</sup> emitting more than 26,000 tons of CO<sub>2</sub>-equivalent per year were included.<sup>82</sup> Ultimately, the regulation is planned to be extended to other sectors: petrochemicals, chemicals, building materials, ferrous metallurgy, non-ferrous metallurgy, paper, and domestic aviation.<sup>83</sup></p> <p>The Chinese ETS differs from the European ETS because, in China, the goal is to reduce not the absolute amount of emissions but their intensity. This means that REs can maintain their previous levels of emissions and even increase them if the carbon emissions per unit of energy produced are reduced.<sup>84</sup></p> |
| 3.4.2 (a) | Geography | China <sup>85</sup>   |

<sup>77</sup> For the first reporting period - 31.12.2021 (completed), for the second reporting period - until 31.12.2023.

<sup>78</sup> Janet Gu Jieyu. China's Carbon Markets - A Key Tool for Achieving Net Zero. Law Business Research. URL: <https://www.lexology.com/library/detail.aspx?g=5055d566-ce07-4d67-a06a-87b4960b40f2> (accessed: January 29, 2024).

<sup>79</sup> National Quota Allocation Plan 2021, 2022, art. 6.

<sup>80</sup> At the rate of the Bank of Russia on February 09, 2024.

<sup>81</sup> 纳入 2019-2020 年全国碳排放权交易配额管理的重点排放单位名单. URL: <https://www.mee.gov.cn/xxgk/xxgk/xxgk03/202012/W020201230736907682380.pdf> (accessed: February 5, 2024).

<sup>82</sup> Emission trading worldwide / International Carbon Action Partnership. 2022. URL: [https://icapcarbonaction.com/system/files/document/220408\\_icap\\_report\\_rz\\_web.pdf](https://icapcarbonaction.com/system/files/document/220408_icap_report_rz_web.pdf) (accessed: February 5, 2024).

<sup>83</sup> Zaman Peter, China's national emissions trading scheme: the world's largest carbon market has finally arrived. URL: <https://www.hfw.com/Chinas-National-Emissions-Trading-Scheme-The-worlds-largest-carbon-market-has-finally-arrived-March-2021> (accessed: February 5, 2024).

<sup>84</sup> Renato Roldao. Carbon trading the Chinese way. Energy monitor. URL: <https://www.energymonitor.ai/carbon-markets/carbon-trading-the-chinese-way?cf-view> (accessed: February 5, 2024).

<sup>85</sup> 《碳排放权交易管理暂行办法》解读. URL: <https://www.eu-chinaets.org/storage/upload/file/20210329/1617002903699293.pdf> (accessed: February 5, 2024).

|           |                          |   |
|-----------|--------------------------|---|
| 3.4.3 (a) | Covered entities         | <p>REs are companies that own installations emitting a total<sup>86</sup> of 26,000 tons of CO<sub>2</sub>-equivalent<sup>87</sup> annually or more in any year from 2013 to 2019,<sup>88</sup> and operate in sectors covered by the CEA. At the legislative level, REs are referred to as “Key GHG Emitting Units”.<sup>89</sup></p> <p>An RE is excluded from the list of regulated entities under any of the following circumstances:</p> <ul style="list-style-type: none"> <li>• Emissions did not reach 26,000 tons of CO<sub>2</sub>-equivalent in the last two years;</li> <li>• There is no production and commercial activity due to the closure of production or for other reasons, as a result of which there are no GHG emissions.</li> </ul> |
| 3.4.4 (a) | Covered greenhouse gases | CO <sub>2</sub>   |
| 3.4.5 (a) | Covered industries       | <p>Initially, 2,225 coal and gas power plants were included in the ETS. In the first compliance period, most of the Relevant Entities (REs) were state-owned enterprises. Over 90% of them were included in the national ETS for the first time. Only 186 of them were previously regulated under regional ETS pilots.</p> <p>It was expected that cement and aluminum producers would enter the national ETS in 2022.<sup>90</sup> By 2025, it is planned to expand the national ETS coverage to all 8 carbon-intensive sectors: power generation, oil refining, chemical production, steel, construction materials manufacturing, non-ferrous metals, pulp and</p>  |

<sup>86</sup> China National Carbon Market. Environmental Defense Fund. URL: [https://www.edf.org/sites/default/files/documents/china\\_national\\_carbon\\_market\\_fact\\_sheet.pdf](https://www.edf.org/sites/default/files/documents/china_national_carbon_market_fact_sheet.pdf) (accessed: February 5, 2024).

<sup>87</sup> An organization that owns one or more installations.

<sup>88</sup> Implementation Plan for the 2019-2020 national carbon emission trading quota setting and allocation (power generation industry). China energy portal. URL: <https://chinaenergyportal.org/en/implementation-plan-for-the-2019-2020-national-carbon-emission-trading-quota-setting-and-allocation-power-generation-industry/> (accessed: February 5, 2024).

<sup>89</sup> Administrative measures for emissions trading CO<sub>2</sub> (trial version), art. 8. URL: [https://www.mee.gov.cn/xxgk/2018/xxgk/xxgk02/202101/t20210105\\_816131.html](https://www.mee.gov.cn/xxgk/2018/xxgk/xxgk02/202101/t20210105_816131.html) (accessed: February 5, 2024).

<sup>90</sup> Valerie J. Karplus. China’s CO<sub>2</sub> Emissions Trading System: History, Status, and Outlook. Harvard Global Institute. 01.06.2021. URL: <https://www.belfercenter.org/sites/default/files/files/publication/karplus-china-national-ets-june-2021-english.pdf> accessed: January 29, 2024).

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|  | <p>paper industry, and aviation.<sup>91,92</sup> Specific timelines for such expansion were not mentioned. Another reason for the delay in the expansion of the national ETS could be the low quality of data provided during the first reporting period. Experts believe that further decisions on reforming the system may be made based on the results of the closing of the 2nd reporting period, which is scheduled for December 31, 2023.<sup>93</sup></p> <p>According to the published “Temporary Rules for the Management of CO<sub>2</sub> Emission Trading”, the MEE, in collaboration with the competent civil aviation department under the State Council, also plans to include the civil aviation sector in the scope of the national ETS.<sup>94</sup></p> <p>The regional distribution of REs participating in the first reporting period was uneven and depended on differences in the industrial structure of the provinces. In Shandong and Jiangsu provinces, which heavily rely on heavy industry, over 200 REs fell under the national ETS, accounting for 1/4 of the total number of REs in the country, while only seven REs were covered in Hainan Province.</p> |
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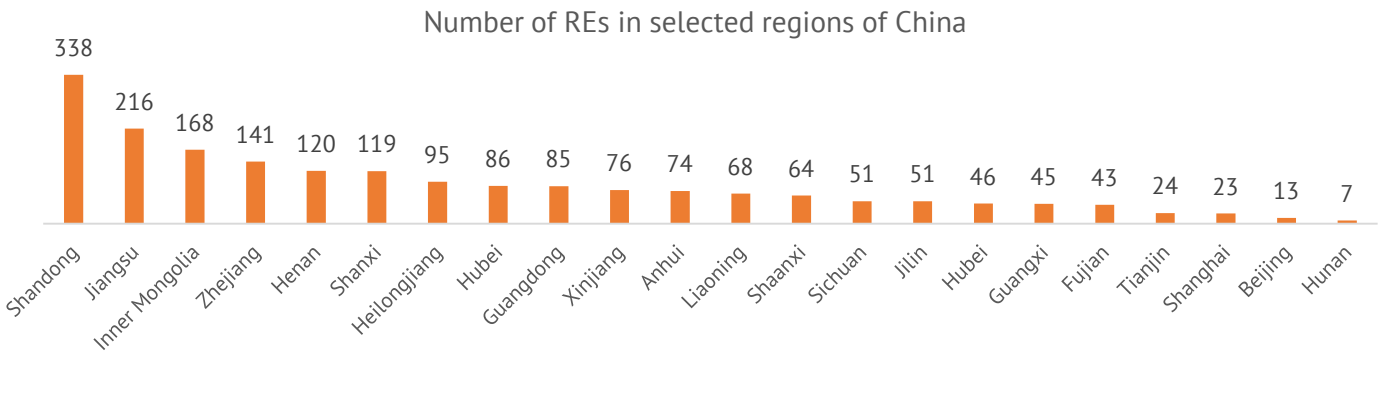
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<sup>91</sup> China's emissions trading scheme crosses 10 bln yuan mark, but carbon prices and trading volumes are below expectations. South China Morning Post. URL: <https://www.scmp.com/business/china-business/article/3204305/chinas-emissions-trading-scheme-crosses-10-bln-yuan-mark-carbon-prices-and-trading-volumes-are> (accessed: February 5, 2024).

<sup>92</sup> Ivy Yin, Eric Yep. Commodities 2022: China's carbon market to expand, build capabilities. S&P Global Commodity Insights. URL: <https://www.spglobal.com/commodityinsights/en/market-insights/latest-news/energy-transition/010622-commodities-2022-chinas-carbon-market-to-expand-build-capabilities#> (accessed: February 5, 2024).

<sup>93</sup> National carbon market expansion may be delayed to 2023. China Dialogue. URL: <https://chinadialogue.net/en/digest/national-carbon-market-expansion-may-be-delayed-to-2023/> (accessed: February 5, 2024).

<sup>94</sup> Temporary Rules for the Management of CO<sub>2</sub> Emission Trading. art. 32.

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|           |                | <p style="text-align: center;">Number of REs in selected regions of China</p>  <p>Source: Li, J., Yao, Y. &amp; Wang, X. <i>The first compliance cycle of China's National Emissions Trading Scheme: insights and implications</i>. <i>Carb Neutrality</i> 1, 34 (2022). URL: <a href="https://doi.org/10.1007/s43979-022-00035-3">https://doi.org/10.1007/s43979-022-00035-3</a> (accessed: February 5, 2024).</p> <p>By the end of the first compliance period (December 31, 2021),<sup>95</sup> 99.5% of REs had met the requirements.<sup>96</sup></p> |
| 3.4.6 (a) | Key regulators | <p><b>The Ministry of Ecology and Environment (Department of Climate Change)</b> is vested with all competencies related to,<sup>97</sup> the formation of the national carbon market, including the authority to propose GHGs and sectors for inclusion in the national ETS scope.<sup>98</sup> It is responsible for establishing the national emissions registration authority and system, the national emissions trading authority and system, and leads the development of regulations.<sup>99</sup></p>  |

<sup>95</sup> In accordance with the national regulation, the results of compliance with the obligations for 2019 and 2020 were to be provided by the end of 2021. The results of compliance with the obligations for the end of 2021.

<sup>96</sup> ETS Status: China. Asia society. URL: <https://asiasociety.org/policy-institute/ets-status-china> (accessed: February 5, 2024).

<sup>97</sup> Temporary Rules for the Management of CO<sub>2</sub> Emission Trading. art. 4.

<sup>98</sup> Administrative measures for trading CEAs (for trial sale), art. 4.

<sup>99</sup> Ibid, art. 5.

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|           |   | <p><b>Provincial competent environmental departments (Provincial MEE's Departments)</b> carry out activities aimed at implementing CEAs trading: they ensure the allocation of CEAs among REs, facilitate their submission by REs for the fulfillment of commitments, and verify Res' GHG reports.<sup>100</sup></p> <p><b>The National Emission Rights Registration Authority</b> registers ownership, changes, submissions (credits), cancellations, and other information about CEAs through the national CO<sub>2</sub> emission rights registration system, and provides services for CEAs calculation. Information registered in the national CO<sub>2</sub> emission rights registration system is the final basis for CEAs allocation.<sup>101</sup> This body serves as the national ETS registry. It is located at the China CO<sub>2</sub> Emissions Exchange in Hubei Province (established as part of a pilot project and operates until an official national ETS registry is determined).<sup>102</sup> It regularly reports its activities to the MEE.</p> <p><b>The National Emissions Trading Authority</b> is responsible for organizing markets and conducting centralized and standardized CEAs trading within the national ETS. It regularly reports its activities to the MEE. The functions of the national emissions trading authority are performed by the Shanghai Environment and Energy Exchange (established as part of a regional ETS pilot).<sup>103</sup> The National Emissions Trading Authority is connected to the operating system of the National Emission Rights Registration Authority to exchange data, ensuring timely reflection of trading information in the registry system.</p> <p><b>Verifying bodies (verifiers)</b> are organizations operating in the field of ecology and climate at the provincial or sub-provincial level, government-affiliated institutes, and other government-selected organizations that provide services for verifying GHG emission reports.<sup>104</sup></p> |
| 3.4.7 (a) | Eligible carbon credits, issuance and circulation | Within the national ETS, the admitted carbon assets include:   |

<sup>100</sup> Provisional Rules for Carbon Emissions Trading (revised draft), art. 6.

<sup>101</sup> Ibid, art. 5.

<sup>102</sup> Shanghai Environment and Energy Exchange Carbon Emission Trading Rules, 上海环境能源交易所碳排放交易规则. URL: [https://www.mee.gov.cn/xxgk/xxgk/xxgk02/202101/t20210105\\_816131.html](https://www.mee.gov.cn/xxgk/xxgk/xxgk02/202101/t20210105_816131.html) (accessed: February 5, 2024).

<sup>103</sup> Chris Busch. China's Emissions Trading System Will Be The World's Biggest Climate Policy. Here's What Comes Next. URL: <https://www.forbes.com/sites/energyinnovation/2022/04/18/chinas-emissions-trading-system-will-be-the-worlds-biggest-climate-policy-heres-what-comes-next/?sh=522033212d59> (accessed: February 5, 2024).

<sup>104</sup> China National ETS. International Carbon Action Partnership. URL: [https://icapcarbonaction.com/system/files/ets\\_pdfs/icap-etsmap-factsheet-55.pdf](https://icapcarbonaction.com/system/files/ets_pdfs/icap-etsmap-factsheet-55.pdf) (accessed: February 5, 2024).

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|  | <ul style="list-style-type: none"> <li>• China Emission Allowances, CEAs.<sup>105</sup> One CEA equals 1 ton of CO<sub>2</sub>-equivalent,<sup>106</sup></li> <li>• Certified Emission Reduction Units of China (CCER).</li> </ul> <p>In the framework of regional ETS pilots, trading in other types of carbon assets may occur, typically a regional variant of emission allowance and regional variant of offset unit.<sup>107</sup></p> <p><b>CEAs Allocation</b></p> <p>The MEE, in accordance with national requirements for GHG emission control, develops a plan for the allocation of the total quantity of CEAs. During the first compliance period in the national carbon market, CEAs for 2019-2020 were allocated. In December 2020, the MEE published the Implementation Plan for the Establishment and Allocation of CEAs for 2019-2020 (power generation sector). During the first compliance period, benchmarking based on the target CO<sub>2</sub> emission intensity control indicator was used to calculate CEAs for each type of installation owned by REs, and the total volume of CEAs was determined by summing them up; all CEAs were allocated free of charge in two stages: preliminary and approved allocation.</p> <p>In accordance with legislation, mechanisms will gradually be introduced to combine free and charge CEAs allocation.<sup>108</sup></p> <p>The CO<sub>2</sub> emission cap is formed for different types of installations and is called the CO<sub>2</sub> emission control value. Within the power sector, four categories are defined: conventional coal plants with less than 300 MW, conventional coal plants with more than 300 MW, non-traditional coal plants, and natural gas.<sup>109</sup> Gas power plants are not obligated to meet requirements, so they do not need to purchase CEAs when they have a deficit of CEAs.</p> |
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<sup>105</sup> Temporary Rules for the Management of CO<sub>2</sub> Emission Trading. art. 33.

<sup>106</sup> Tan Luyue. The first year of China's national carbon market, reviewed. China dialogue. URL: <https://chinadialogue.net/en/climate/the-first-year-of-chinas-national-carbon-market-reviewed/> (accessed: February 5, 2024).

<sup>107</sup> See table in para. 3.4.1 for details.

<sup>108</sup> Temporary Rules for the Management of CO<sub>2</sub> Emission Trading. art. 9.

<sup>109</sup> China National ETS. International Carbon Action Partnership. URL: <https://icapcarbonaction.com/en/ets/china-national-ets> (accessed: February 5, 2024).

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|  | <p>Such an approach can be seen as an indirect subsidy to gas power plants to encourage the transition from coal to gas.<sup>110</sup></p> <p>If RE consumes electricity from alternative energy sources,<sup>111</sup> its CEAs should be accordingly adjusted following national norms.<sup>112</sup></p> <p>In March 2023, the MEE published the Implementation Plan for the Establishment and Allocation of CEAs for 2021 and 2022 in the power generation sector.<sup>113</sup> The document introduces flexible compliance rules:<sup>114</sup></p> <ul style="list-style-type: none"> <li>• Control indicators are set according to the actual emissions of the previous year. The allocation and surrender of CEAs are separated by years: 2021 and 2022;<sup>115</sup></li> <li>• For the first time, a “balance value” is introduced, where the number of allocated CEAs corresponds to the verified GHG emissions.<sup>116</sup> It serves as a key benchmark for setting control indicators for REs in the power and heating supply sector;</li> <li>• The method for calculating the 70% preliminary allocation of CEAs has been simplified, i.e., the base year for determining the preliminary allocation has been updated. The allocation of CEAs in the national ETS is calculated based on actual production volumes, and, as in the first compliance period, REs receive an initial preliminary allocation of 70% CEAs based on verified data for 2021, which will subsequently be adjusted after receiving information about the actual production volumes for that period. In the latest</li> </ul> |
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<sup>110</sup> 10: Emissions Trading. Chinese climate policy. The Oxford Institute for Energy Studies. URL: <https://chineseclimatepolicy.oxfordenergy.org/book-content/domestic-policies/emissions-trading/> (accessed: February 5, 2024).

<sup>111</sup> 非化石能源. Baidu. URL: <https://baike.baidu.com/item/%E9%9D%9E%E5%8C%96%E7%9F%B3%E8%83%BD%E6%BA%90/6130435> (accessed: February 5, 2024).

<sup>112</sup> Interim Regulations on the Administration of Carbon Emissions trading (revised draft). Art.31.

<sup>113</sup> 关于做好 2021、2022 年度全国碳排放权交易配额分配相关工作的通知. 生态环境部 Notification of the 2021 and 2022 national carbon trading CEAs. MEE. URL: [https://www.mee.gov.cn/xxgk/xxgk03/202303/t20230315\\_1019707.html](https://www.mee.gov.cn/xxgk/xxgk03/202303/t20230315_1019707.html) (accessed: February 5, 2024).

<sup>114</sup> China releases allocation plan and compliance arrangements for 2021 and 2022. International Carbon Action Partnership. URL: <https://icapcarbonaction.com/en/news/china-releases-allocation-plan-and-compliance-arrangements-2021-and-2022> (accessed: February 5, 2024).

<sup>115</sup> Benchmark values for the 2021-22 compliance period. International Carbon Action Partnership. URL: <https://icapcarbonaction.com/en/media/451> (accessed: February 5, 2024).

<sup>116</sup> MEE released the notice on the allowance allocation tasks and issued the allocation plan for the year 2021 and 2022. Climate Cooperation China. URL: <https://climatecooperation.cn/climate/mee-released-the-notice-on-the-allowance-allocation-tasks-and-issued-the-allocation-plan-for-the-year-2021-and-2022/> (accessed: February 5, 2024).



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|  | <p>allocation plan, the volumes of preliminary allocation for 2019 and 2020 were calculated as 70% of the verified emissions of 2018. Now, REs will have to apply for preliminary allocation based on 2021 emissions data, which will give market participants more confidence in the accuracy of the preliminary allocation;<sup>117</sup></p> <ul style="list-style-type: none"> <li>• A new advance mechanism has been added. REs with deficit of CEAs of more than 10%, if unable to fulfill their obligations within the national ETS in time by purchasing CEAs due to operational difficulties, may advance a portion of their preliminarily allocated CEAs for 2023 to meet their commitments, with the advance amount not exceeding 50% of the CEAs' deficit;<sup>118</sup></li> <li>• In the case of untimely and incomplete surrender of CEAs, provincial MEE's Departments may impose a fine ranging from 20 to 30 thou. yuan (~2,769 – 4,153 USD).</li> </ul> <p><b>Surrender CEAs</b></p> <p>REs must surrender CEAs for the current compliance period within the compliance deadline and notify the provincial MEE's Departments that allocated these CEAs. The amount of CEAs to be surrendered must not be less than the actual GHG emissions of the RE for the reporting year, as verified by the provincial MEE's Departments.</p> <p>Within the national ETS, only CEAs are traded; however, REs can also use CCERs to offset 5% of all their obligations.<sup>119</sup> Within the national ETS, there are no restrictions on the types of projects that can be compensated with CCERs.<sup>120</sup></p> <p><b>Monitoring, Verification, and Reporting</b></p> <p>China's ETS employs a different approach to monitoring, reporting, and verification of emissions compared to other countries. For instance, in Europe, emissions verification is entrusted to external auditors, while in China,</p> |
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<sup>117</sup> China releases draft allocation plan for 2021 and 2022. International Carbon Action Partnership. URL: <https://icapcarbonaction.com/en/news/china-releases-draft-allocation-plan-2021-and-2022> (accessed: February 5, 2024).

<sup>118</sup> 生态环境部应对气候变化司相关负责人就《2021、2022 年度全国碳排放权交易配额总量设定与分配实施方案（发电行业）》答记者问, 生态环境部网站. URL: [https://www.gov.cn/zhengce/2023-03/16/content\\_5747108.htm](https://www.gov.cn/zhengce/2023-03/16/content_5747108.htm) (accessed: February 5, 2024).

<sup>119</sup> 1 CCER is equivalent to 1 quota, which can offset 1 ton of CO<sub>2</sub> equivalent. URL: <http://www.tanjiaoyi.com/article-50442-1.html> (accessed: February 5, 2024).

<sup>120</sup> 晓数碳中和研究院. 晓数谈碳|一文读懂 CCER 开发. 晓数碳中和研究院. URL: <https://www.h2o-china.com/news/344029.html> (accessed: February 5, 2024).

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|           |   | <p>the MEE delegates this task to the provincial MEE's Departments. These provincial departments may also require REs, whose data appears doubtful, to undergo third-party verification.</p> <p>In March 2022, the MEE published the Work Plan for Managing GHG Emissions Reporting and Verification and the updated Guide for Measurement and Reporting of GHG Emissions in the Energy Sector. The documents specify deadlines for submitting emissions reports and verifying 2021 emissions and describe the verification process. More detailed requirements for reporting and verification were introduced to address the issue of low-quality data and fraudulent schemes identified in 2021.<sup>121</sup></p>   |
| 3.4.8 (a) | Accounting for carbon assets and operations | <p>To participate in allocation of CEAs, trading operations, and surrender of CEAs, REs must open an account (registry account) in the national ETS registration authority.<sup>122</sup> All information regarding the allocation, surrender, and transaction of CEAs is recorded by the registration system. REs can request information about the quantity and status of CEAs through the registration system.<sup>123</sup></p> <p>At this stage, only REs covered by the national ETS can apply to open an account (registry account). Foreign and individual entities are not eligible to open accounts in the national ETS system.</p> <p>Entities also need to choose a commercial bank as their settlement bank and open a special account for depositing transaction funds and paying respective fees for each trading subject. To participate in trading, REs must open a trading account under their own name.<sup>124</sup></p> <p>Currently, transactions are primarily conducted either through a listing agreement (if the volume is less than 100,000 tons) or in a wholesale trading format (if the volume is equal to or exceeds 100,000 tons).</p> |

<sup>121</sup> International Carbon Action Partnership. China National ETS. URL: <https://icapcarbonaction.com/en/ets/china-national-ets#:~:text=Covered%20entities%20can%20use%20China,in%20the%20first%20compliance%20period> (accessed: February 5, 2024).

<sup>122</sup> Copy of activity license; copy of organization code assignment certificate (if any); copy of tax registration certificate (if any); copy of legal representative identity document; power of attorney to representative, authorized to work with customers; copy of the document confirming the identity of the account representative (account); copy of the document confirming the identity of the contact person.

<sup>123</sup> Carbon Emissions Registration Management Regulations (for trial use, arts. 2, 3); 全国碳排放权交易系统开户申请表 (重点排放单位 [Application form for the National Carbon Emissions Trading Scheme (for major emitting enterprises)]).

<sup>124</sup> International Carbon Action Partnership. China publishes rules for national ETS registry and trading. 25.05.2021. URL: <https://icapcarbonaction.com/en/news/china-publishes-rules-national-ets-registry-and-trading> (accessed: February 5, 2024).

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|           |                                     | Each RE may choose the trading method that best suits its needs.   |
| 3.5 (a)   | <b>Carbon reporting</b>             |  |
| 3.5.1 (a) | Covered entities                    | REs that meet the criteria set within the national ETS. <sup>125</sup>   |
| 3.5.2 (a) | Description and reporting procedure | <p>REs annually prepare a report on GHG emissions for the previous year and, after verification by verifiers and issuance of a verification report, submit it to the provincial MEE's Department by March 31 each year.<sup>126</sup> The reports will be regularly published and subject to control by the MEE.<sup>127</sup></p> <p>For the preparation of GHG emission reports, a specific guide has been developed based on an extensive list of technical standards (included in the document as reference norms).<sup>128</sup> In the process of preparing the reports, installation boundaries are defined, consumption of fuel and purchased electricity is accounted for, and CO<sub>2</sub> emissions are calculated. Meanwhile, the Government continuously works to improve the legal framework and raise the quality requirements for the reports provided by Res.<sup>129</sup> In March 2022, the MEE published the Work Plan for Managing GHG Emissions Reporting and Verification. The document specifies deadlines for submitting reports for 2021 and describes the verification process. New requirements were introduced to address the issue of low-quality data and fraudulent schemes detected in 2021.<sup>130</sup></p> |

<sup>125</sup> Administrative measures for carbon trading (for trial sale), art. 8. URL: [https://www.gov.cn/xxgk2018/xxgk/xxgk02/202101/t20210105\\_816131.html](https://www.gov.cn/xxgk2018/xxgk/xxgk02/202101/t20210105_816131.html) (accessed: February 5, 2024).

<sup>126</sup> Administrative measures for carbon trading (for trial sale), art. 26. URL: [https://www.gov.cn/xxgk2018/xxgk/xxgk02/202101/t20210105\\_816131.html](https://www.gov.cn/xxgk2018/xxgk/xxgk02/202101/t20210105_816131.html) (accessed: February 5, 2024).

<sup>127</sup> Article 26 of the Rules. URL: [https://www.mee.gov.cn/xxgk2018/xxgk/xxgk02/202101/t20210105\\_816131.html](https://www.mee.gov.cn/xxgk2018/xxgk/xxgk02/202101/t20210105_816131.html) (accessed: February 5, 2024).

<sup>128</sup> 企业温室气体排放核算方法与报告指南发电设施(2021年修订版) [Manual on Accounting and Reporting Methods for Greenhouse Gas Emissions by Electricity Producers (revised 2021)].

<sup>129</sup> 企业温室气体排放核算方法与报告指南发电设施(2021年修订版) [Manual on Accounting and Reporting Methods for Greenhouse Gas Emissions by Electricity Producers (revised 2021)].

<sup>130</sup> International Carbon Action Partnership. China National ETS. URL: <https://icapcarbonaction.com/en/ets/china-national-ets#:~:text=Covered%20entities%20can%20use%20China,in%20the%20first%20compliance%20period> (accessed: February 5, 2024).

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|  | <p>If GHG emission reports<sup>131</sup> are not submitted, a fine of no less than 10 thou. yuan but not more than 30 thou. yuan (~4,153 USD) is imposed.<sup>132</sup></p> <p>On February 7, 2023, the MEE published a Notification on the Management of GHG Emissions Reporting in the Power Sector for the period 2023-2025. According to the document, provincial MEE's Departments are responsible for organizing the collection and verification of emission data. All information must be provided through the new online platform for the national ETS management (<a href="http://www.ets.org.cn">www.ets.org.cn</a>) within the established deadlines.</p> <p>The main tasks of the provincial MEE's Departments include:<sup>133</sup></p> <ul style="list-style-type: none"> <li>• Compiling a list of REs for the following year and submitting it to the MEE by December 31 each year;<sup>134</sup></li> <li>• Formulating a plan for quality control of emissions data by December 31 each year;<sup>135</sup></li> <li>• Organizing monthly storage of information on the platform within 40 days after the end of each month;</li> <li>• Organizing the verification of Res' reports and providing a report on the results by June 30 each year, etc.</li> </ul> <p>Provincial MEE's Departments notify REs of the verification results as a basis for their CEAs surrender. Provincial MEE's Departments may entrust technical service agencies to provide verification services through public procurement. Such bodies are responsible for the authenticity, completeness, and accuracy of the presented verification results.<sup>136</sup></p> |
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<sup>131</sup> 生态环境部. 碳排放权交易管理办法（试行）. Art. 39. URL: [https://www.mee.gov.cn/xxgk2018/xxgk/xxgk02/202101/t20210105\\_816131.html](https://www.mee.gov.cn/xxgk2018/xxgk/xxgk02/202101/t20210105_816131.html) (accessed: February 5, 2024).

<sup>132</sup> Valerie J. Karplus. China's co2 emissions trading system: history, status, and outlook. Carnegie Mellon University. 2021. URL: <https://www.belfercenter.org/sites/default/files/files/publication/karplus-china-national-ets-june-2021-english.pdf> (accessed: February 5, 2024).

<sup>133</sup> MEE released notice on the management of GHG emissions reporting for power generation sector from 2023 to 2025. Climate Cooperation China. URL: <https://climatecooperation.cn/climate/mee-released-notice-on-the-management-of-ghg-emissions-reporting-for-power-generation-sector-from-2023-to-2025/> (accessed: February 5, 2024).

<sup>134</sup> 北京市生态环境局关于做好 2023 年全国碳排放权交易相关工作的通告. 北京市生态环境局. URL: <https://sthjj.beijing.gov.cn/bjhrb/index/xxgk69/zfxxgk43/fdzdgknr2/zcfb/hbjfw/326071951/326075463/index.html> (accessed: February 5, 2024).

<sup>135</sup> 关于做好 2023—2025 年发电行业企业温室气体排放报告管理有关工作的通知. 广东省生态环境厅. URL: [https://gdee.gd.gov.cn/gkmlpt/content/4/4128/post\\_4128609.html#3216](https://gdee.gd.gov.cn/gkmlpt/content/4/4128/post_4128609.html#3216) (accessed: February 5, 2024).

<sup>136</sup> China National Carbon Market. Environmental Defense Fund. URL: [https://www.edf.org/sites/default/files/documents/china\\_national\\_carbon\\_market\\_fact\\_sheet.pdf](https://www.edf.org/sites/default/files/documents/china_national_carbon_market_fact_sheet.pdf) (accessed: February 5, 2024).

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|                                      |  | <p>In regional ETS pilots, the measures taken for conducting verifications and submitting reports varied significantly. The most developed system is in Beijing. The Beijing Government required additional random checks of emission reports prepared by official third-party verifiers. Studies show that in the early years of the system's operation, REs' emission reports significantly differed from the actual emissions.</p>   |
| <p><b>The CCER offset market</b></p> |  |   |
| <p>3.4.1 (b)</p>                     | <p>Description and key operating rules</p> | <p>The program CCER was launched in a format similar to the Clean Development Mechanism created under the Kyoto Protocol to the UNFCCC and is designed for the registration, certification, and trading of voluntary GHG emission reductions in China. Since 2012, China has issued a series of documents, including the Interim Measures for the Management of the CCER Program, and measures for trading CCERs.<sup>137</sup></p> <p>The program CCER had gradually being formed since 2012, with the creation of a platform for hosting technical documentation related to emission reduction projects, registered methodologies, the process of submission and approval of applications, as well as validation and verification bodies. This platform also allows for public oversight of the program CCER. In 2017, the program CCER was suspended due to low trading volumes and the absence of market standards.</p> <p>On September 15, 2023, the MEE and SAMR adopted and approved the Measures for the Management of Voluntary GHG Emission Reduction Trading (trial version).<sup>138</sup> This measure is aimed at relaunching the CCER market.<sup>139</sup></p> <p>According to the published document,<sup>140</sup> the project owner (a legal entity or other organization applying for the registration of a voluntary GHG emission reduction project) prepares project documentation in accordance with approved methodologies for voluntary GHG emission reduction projects. The MEE is responsible for developing such methodologies, as well as for accounting and verification of emission reductions. The project methodology should be timely revised considering factors such as economic and social development, adjustment of production</p> |

<sup>137</sup> CCERs (China's Certified Emission Reduction) – Carbon assets issued under the programme CCER - China Certified Emission Reductions.

<sup>138</sup> 温室气体自愿减排交易管理办法（试行）. URL: [https://www.mee.gov.cn/xxgk/xxgk02/202310/t20231020\\_1043694.html](https://www.mee.gov.cn/xxgk/xxgk02/202310/t20231020_1043694.html) (accessed: February 5, 2024).

<sup>139</sup> On March 14, 2017 the SAMR announced the suspension of CCERs trading and organised the revision of the "Interim Measures for CCERs Trading Management" to further improve and standardize the system and promote the development of green and low-carbon technologies.

<sup>140</sup> 温室气体自愿减排交易管理办法（试行）. 生态环境部 市场监管总局. URL: [https://www.gov.cn/zhengce/zhengceku/202310/content\\_6910691.htm](https://www.gov.cn/zhengce/zhengceku/202310/content_6910691.htm) (accessed: February 5, 2024).

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|  | <p>structure, and the development stage of the industry. The methodology should include information on applicable requirements for projects, methods of accounting for emission reductions, methods of monitoring and verification of emission reductions, etc.</p> <p>Project documentation must be stored for no less than 10 years in the registration system.</p> <p>CCER projects must be authentic, unique,<sup>141</sup> and additional,<sup>142</sup> initiated after November 8, 2012. The GHG emission reductions achieved as a result of implementing such projects must be measurable, traceable, and verifiable, and obtained after September 22, 2020, and within the period of submitting an application for the registration of the emission reduction project. CCER projects should be carried out in the renewable energy sector, carbon absorption in forestry, methane emission reduction, energy saving and efficiency enhancement, and other areas that contribute to carbon emission reduction and increase absorption, and can also facilitate the avoidance or reduction of GHG emissions or achieve their removal. Broadly speaking, any project that contributes to the reduction of GHG emissions, as well as their capture or absorption, can be considered a CCER project.</p> <p>Project owners may apply for registration in several stages, with emission reductions within five years preceding the date of application for registration being accounted for at each stage.</p> <p>Furthermore, a project will qualify for CCERs if it ensures transparent disclosure of project information and compliance with registration rules.<sup>143</sup> The question of how to ensure that CCERs are not double-counted in the national ETS remains open.<sup>144</sup></p> <ol style="list-style-type: none"> <li>1) Validation and verification bodies conduct a review of the project and issue a report, after which the project owner may apply for project registration with the registration authority.</li> </ol> |
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<sup>141</sup> The project is not involved in other emission reduction trading mechanisms, there is no duplication of project identification and dual calculation of emission reductions.

<sup>142</sup> Additionality means that during the implementation of the project the barriers related to financing, key technologies, etc. have been overcome, and the additional effect of reducing emissions has been obtained compared to the baseline scenario defined in the appropriate method, etc. The project's GHG emissions are below baseline emissions or GHG sinks above baseline sinks.

<sup>143</sup> Jennifer L. New Rules to Jumpstart China's Voluntary Carbon Credit Market. URL: <https://carboncredits.com/new-rules-to-jumpstart-chinas-voluntary-carbon-credit-market/> (accessed: February 5, 2024).

<sup>144</sup> Valerie J. Karplus. China's CO<sub>2</sub> emissions trading system: history, status, and outlook. Carnegie Mellon University. 2021. URL: <https://www.belfercenter.org/sites/default/files/files/publication/karplus-china-national-ets-june-2021-english.pdf> (accessed: February 5, 2024).

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|  |  | <ol style="list-style-type: none"> <li>2) The project owner publishes project documents through the registration system for 20 working days. During the public disclosure period, any interested party may express their opinions.</li> <li>3) The registration authority checks the completeness and compliance with regulatory norms of all materials submitted by the project owner, registers the approved project within 10 working days, and discloses to the public the project registration status and all materials submitted by the project owner. Projects that fail the review will not be registered, and the project owner will be notified of this.</li> <li>4) The project owner applying for registration of emission reductions for the project must prepare an emission reduction accounting report<sup>145</sup> in accordance with the requirements of methodologies and entrust the emission reduction verification to a validation and verification body.</li> <li>5) Before applying for the registration of emission reductions, the project owner must publish the emission reduction report through the registration system and is responsible for the authenticity of the disclosed materials. The publication period is 20 working days. During this period, the public may provide their comments through the registration system.</li> <li>6) After public discussions, the validation and verification body must verify the project's emission reductions according to the relevant regulatory requirements. Emission reductions are verified if the following conditions are met: (1) the emission reduction project has been registered in the registration system; (2) the emission reduction accounting complies with the methodology; (3) a conservative approach is applied in accounting for emission reductions.<sup>146</sup> The emission reduction verification report should include responses to public comments received during the disclosure period and how they were addressed.</li> <li>7) The aforementioned documents are published, and the project owner applies to the registration authority for the registration of GHG emission reductions. In addition to making the report publicly available (the disclosure period should be 20 working days), it is necessary to specify the names of the verification and</li> </ol> |
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<sup>145</sup> The accounting report for emission reductions should include the results of the project and the reduction of GHG emissions.

<sup>146</sup> In the process of accounting for or verifying emission reductions in the absence of effective technical means or with a certain degree of uncertainty in methodologies, as well as the difficulty of making accurate judgements about the relevant parameters, a conservative approach to estimation should be applied, to prevent recalculation of project emissions reductions.

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|           |                          | <p>validation bodies. Registered emission reductions are called CCERs and are measured in tons of CO<sub>2</sub> – equivalent.</p> <p>8) CCERs can be bought and sold by market participants. Regulation does not impose restrictions on participation. Enterprises operating in the carbon market, project owners, and other trading organizations can trade CCERs. However, currently, there are no clear guidelines on how a foreign investor can participate in China’s domestic carbon market.</p> <p><b>Fines</b></p> <p>If a project owner provides false materials when submitting a registration application (both for the project and for CCERs), a fine of no less than 10 thou. yuan but no more than 100 thou. yuan (~1,384 – 13,845 USD) will be imposed; in cases of intentional fraud, such as data forgery or falsification, the application will be annulled, and a new one will not be accepted for 3 years.</p> <p>Fines are also set for the national CCER trading authority – in cases of fraudulent acts or acts contrary to established measures, a fine of no less than 10 thou. yuan but no more than 100 thou. yuan (~1,384 – 13,845 USD) will be imposed.</p> <p>Validation and verification bodies conducting activities beyond the scope of their approved field of activity must pay a fine of no less than 50 thou. yuan but no more than 200 thou. yuan (~6,922 – 27,691 USD). If illegal revenues are obtained, they will be confiscated. In cases with aggravating circumstances, the activities of the validation and verification bodies will be suspended until they receive a permit to resume operations.</p> |
| 3.4.2 (b) | Geography                | China   |
| 3.4.3 (b) | Covered entities         | Legal entities and other organizations registered in China.   |
| 3.4.4 (b) | Covered greenhouse gases | Carbon dioxide (CO <sub>2</sub> ), methane (CH <sub>4</sub> ), nitrous oxide (N <sub>2</sub> O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF <sub>6</sub> ), and nitrogen trifluoride (NF <sub>3</sub> ).  |
| 3.4.5 (b) | Covered industries       | Compared to the draft Measures for the Management of Voluntary GHG Emission Reduction Trading (trial version) published for public discussion in the summer of 2023, the final version does not list specific sectors for project implementation and CCERs issuance. The words "must originate from renewable energy, CO <sub>2</sub> absorbers in forestry,  |



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|           |                | methane emission reduction..."were removed; they are replaced with "pertains to the sector defined by the methodology, which, in turn, is approved by the MEE". <sup>147</sup>   |
| 3.4.6 (b) | Key regulators | <p><b>The MEE</b> is responsible for the creation and development of technical conditions for CCERs trading and related activities, as well as for the supervision, monitoring, and management of the CCER market. The MEE also oversees the formation of a unified national CCER registration authority and national CCER trading authority, the creation of a national CCER registration system, and a national CCER trading system.</p> <p><b>The national CCER registration authority</b> is in charge of operating and managing the registration system, through which it accepts applications for registration and cancellation of CCERs, aggregates information related to voluntary GHG emission reduction projects, and accordingly registers, stores, and makes changes related to CCERs. Information entered into the registry is final for evaluating projects and assigning GHG emission reductions the status of CCERs.</p> <p><b>The national CCER trading authority</b> is responsible for the operation and management of the trading system, provides centralized and unified trading and settlement services, and implements effective measures in accordance with state regulations to prevent excessive speculative behavior in trading, as well as to protect against financial and other risks. The market has not yet been launched, but it has been established that the trading authority will be designated as the China Beijing Green Exchange (CBGEX).<sup>148</sup></p> <p><b>Provincial environmental and conservation authorities</b> are responsible for overseeing and managing CCER transactions and related activities in their respective administrative regions.</p> <p><b>The Market Supervision and Management Department and the competent environmental department</b>, according to their division of responsibilities, oversee and manage organizations involved in the validation and verification of voluntary GHG emission reduction projects.</p> <p><b>Validation and verification bodies</b> review applications from project owners, conduct checks of voluntary GHG emission reduction projects and GHG emission reductions, issue corresponding reports, and upload</p> |

<sup>147</sup> 公益时报. CCER 正式重启 新版管理办法释放了哪些信号? URL: <http://www.gongyishibao.com/html/ESG/2023/10/25401.html> (accessed: February 5, 2024).

<sup>148</sup> Zhouchen Mao, China's voluntary carbon market set to relaunch as registration begins. URL: [https://asiahouse.org/research\\_posts/chinas-voluntary-carbon-market-set-to-relaunch-as-registration-begins/](https://asiahouse.org/research_posts/chinas-voluntary-carbon-market-set-to-relaunch-as-registration-begins/) (accessed: February 5, 2024).

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|           |   | <p>documentation through the national CCER registration system. These bodies are responsible for the authenticity and accuracy of the project approval report and assume the commitments contained in such a report.</p> <p>Validation and verification bodies must be established in accordance with the law and meet the following requirements: (1) have office premises and necessary means to carry out validation and verification activities; (2) have more than 10 full-time staff with verification experience, of which 5 have two years or more of experience in verifying GHG emission reduction projects; (3) establish a reliable verification management system; (4) have a stable financial position sufficient for conducting verification and create a risk fund; (5) have the technical capability to perform verification; (6) not have committed serious violations in the last 5 years.</p> <p>The MEE issues the license to operate for these bodies (after reviewing the application jointly with the SAMR).</p> <p>Validation and verification bodies must comply with laws and regulations, as well as relevant provisions issued by the SAMR and the MEE. They should carry out activities within their approved scope of work, ensuring completeness, objectivity, and authenticity in the validation and verification process, and maintain comprehensive records of the process to ensure traceability and transparency. Bodies conducting validation and verification are recommended to undergo accreditation.<sup>149</sup></p> <p>The MEE and the SAMR jointly establish a Technical Committee for Validation and Verification to coordinate and resolve technical issues related to validation and verification, as well as to enhance the consistency, scientific basis, and rationale of validation and verification activities; to provide technical support for the supervision and management of validation and verification activities; and to study and develop working recommendations.</p> |
| 3.4.7 (b) | Eligible carbon credits, issuance and circulation | CCER <sup>150</sup>  |

<sup>149</sup> China National Accreditation Service for conformity assessment (CNAS). URL: <https://iaf.news/2024/01/14/china-issues-new-regulation-to-encourage-accreditation-of-validation-and-verification-bodies/> (accessed: February 5, 2024).

<sup>150</sup> Financial Associated press. Restart CCER. URL: <http://www.tanjiaoyi.com/article-49105-1.html> (accessed: February 5, 2024).

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| 3.4.8 (b) | Accounting for carbon assets and operations | <p>CCER trading is conducted through the national CCER trading system.</p> <p>Organizations participating in CCER transactions must open accounts in both the registration and trading systems. CCER transactions can be executed through direct transfer, one-sided trades, listing, and other trading methods.<sup>151</sup> The registration authority, based on the transaction results provided by the trading authority, timely modifies the quantity, owners of CCERs, and other relevant information for the transaction subject through the registration system. The registration authority and the trading authority must implement timely, accurate, and secure data exchange between systems.</p> <p>If a transaction subject violates the relevant provisions regarding registration, settlements, or CCER transactions, the registration authority and the trading authority may take restrictive trade measures against them in accordance with national regulations.</p> <p>Specific rules for cross-border transactions and the use of CCERs should be developed separately by the MEE in conjunction with the relevant departments.</p> |
| 3.5 (b)   | <b>Carbon reporting</b>                     |   |
| 3.5.1 (b) | Covered entities                            | Not yet been resolved   |
| 3.5.2 (b) | Description and reporting procedure         | Not yet been resolved   |

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<sup>151</sup> Ivy Yin. China releases supporting policies to facilitate domestic voluntary carbon market's restart. S&P Global Commodity Insights. URL: <https://www.spglobal.com/commodityinsights/en/market-insights/latest-news/energy-transition/111723-china-releases-supporting-policies-to-facilitate-domestic-voluntary-carbon-markets-restart> (accessed: February 5, 2024).