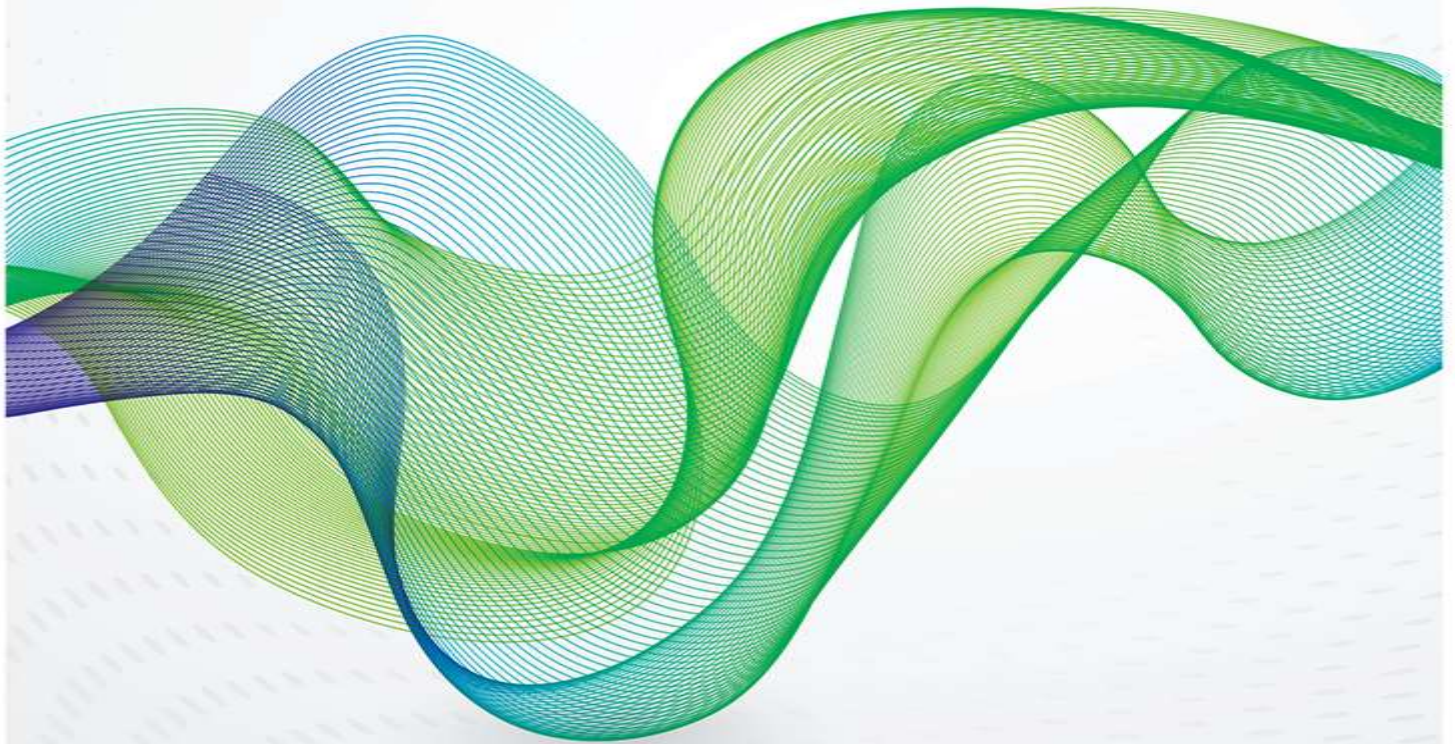


February 2024

# China's policy pendulum shifts back toward environmental protection, but will bureaucracy get in the way?



## In summary:

- New policy releases suggest that the Chinese central government is placing more regulatory emphasis on environmental policies and clean energy in 2024.
- But implementation could be challenging given local government priorities and turf wars between key ministries.
- One example is new policies on carbon offsets and renewable energy certificates (green electricity certificates) which highlight long-running disputes about how the two markets can be coordinated or integrated.
- These market-oriented schemes are still small, but the lack of clarity impacts companies that will soon need to comply with mandates for both carbon emissions and renewables.
- Chinese policy makers and major industries also hope that carbon accounting mechanisms in China could mitigate the impact of carbon prices under the EU's Carbon Border Adjustment Mechanism (CBAM). They appear unlikely to do so in the near-term.

## Introduction

Since the end of 2023, policy documents in China have increasingly highlighted environmental protection. While such policies tend to contain boilerplate references to central government policy on environmental protection and the Dual Carbon goals (peaking carbon emissions by 2030 and reaching carbon neutrality by 2060), since mid-2023 a number of important environmental and energy policies have either set tighter and more specific targets or called out the need for faster progress towards existing goals. Further, recent policy documents have highlighted language from the 20<sup>th</sup> Party Congress around the need to 'promote concerted efforts to cut carbon emissions, reduce pollution, expand green development, and pursue economic growth'<sup>1</sup>, suggesting these priorities have risen in recent months, coinciding with higher coal production and deteriorating air quality.

This year brings three important catalysts for accelerated environmental policy. First, the 14<sup>th</sup> Five Year Plan (FYP) interim report, published in late 2023, highlighted that China is not on track to meeting its CO<sub>2</sub> and energy intensity targets. Second, as planning gets underway for the 15<sup>th</sup> Five-Year Plan, this year China will need to revisit its Nationally Determined Contribution (NDC) climate pledges. Third and related to these, China is expanding its emissions trading scheme (ETS) and is increasing penalties for non-compliance in energy-intensive industries.

But even as policy documents emphasize environmental protection, local officials are keen to boost investment in large infrastructure projects to support economic activity and maintain tax revenues, which can work against environmental goals. Moreover, implementing climate goals remains a challenge due to bureaucratic fragmentation and policy inertia around coal. Disagreement between the Ministry of Environment and Ecology (MEE) on one hand and the National Energy Administration (NEA) on the other on carbon accounting guidelines is one case in point.

This Comment discusses these dynamics and argues that even though the central government is now emphasising environmental protection more consistently than in the first two years of the 14<sup>th</sup> FYP, implementation will remain a challenge. While policy centralisation has increased dramatically under Xi Jinping, there is still considerable fragmentation that impacts China's road to net zero. As China looks to balance economic growth—in large part from energy intensive industries—with increased renewable penetration, carbon accounting is an important part of the toolbox. But with the NEA and MEE disagreeing on guidelines and fighting for policy making power, the lack of clarity raises uncertainty for companies, particularly those in the aluminium and cement sectors that will soon need to comply with mandates for both carbon and renewables. At the diplomatic level, the incompatibility of the two measures also complicates China's response to the EU's Carbon Border Adjustment Mechanism (CBAM).

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<sup>1</sup> "Full text of the report to the 20th National Congress of the Communist Party of China", 16 October 2022, [http://my.china-embassy.gov.cn/eng/zgxw/202210/t20221026\\_10792358.htm](http://my.china-embassy.gov.cn/eng/zgxw/202210/t20221026_10792358.htm)



## 1. New policy documents emphasise action toward the 2030-2060 targets

On 27 December 2023, the National Development and Reform Commission (NDRC) published its 'Mid Term Evaluation Report on the implementation of the 14<sup>th</sup> Five Year Plan (FYP) for National Economic and Social Development and the PRC's Outline of Long Term Goals for 2035'<sup>2</sup> in which it reviews implementation of China's 14<sup>th</sup> FYP roughly at its mid-point. These interim assessments are routine parts of the FYP cycle as they allow policy makers to take stock of achievements to date in an effort to meet targets for the current FYP cycle and prepare for the next Plan.

### a. A mixed bag halfway through the 14th FYP

Of the many achievements, the interim assessment discusses the rise in new energy vehicle sales, the progress of installed non-fossil fuels in power generation, improvements in energy supply and storage, and biodiversity gains.

At the same time, it highlights some of the incomplete reform tasks, including an uneven playing field for the private sector, local protectionism and, significantly, the shortfall in meeting national CO<sub>2</sub> intensity and energy intensity targets. The interim report then goes on to highlight that for binding targets that are lagging, China must do its best "to promote the completion of the planning goals. Among them, for binding indicators such as the reduction of energy consumption per unit of GDP, the reduction of carbon dioxide emissions per unit of GDP, and the ratio of days with excellent air quality in cities at prefecture level and above, China "must further improve energy consumption and carbon emission intensity management and control policies". It also "must resolutely curb the blind start-up of high energy-use and high emissions projects, strictly and reasonably control total coal consumption, vigorously promote energy-saving and carbon-reducing transformation in key areas, accelerate the implementation of key emission reduction projects for major pollutants, and improve the scientific accuracy of pollution control."<sup>3</sup>

These are binding targets and must be met. This can happen through gradual change over the next two years, including by phasing out inefficient industrial capacity. But if local officials fail to consolidate capacity, or continue to add new capacity, abrupt actions would be needed in 2025 such as industrial shutdowns and power cuts to reach the targets. Such drastic measures have been seen as recently as in 2021, when at least 10 provinces experienced major power outages as officials sought to meet energy targets.<sup>4</sup>

At the same time, a number of other policy documents have highlighted the need to step up environmental protection. These policy documents are not guided solely by the fact that China is falling behind on the 14<sup>th</sup> FYP targets. Rather, they constitute initiatives long in the pipeline, consistent with the 1+N policy framework that China has put in place in order to meet its dual carbon targets but seem to have received less bureaucratic attention given the need to deal with the post COVID recovery and economic growth. The interim assessment, the seeming stabilisation of the Chinese economy and rising air pollution levels in China have all added momentum and urgency to environmental policy action.

The rebound in China's air pollution in 2023 has been closely linked to the post COVID bounce-back, especially in high energy and carbon intensive industrial production, in addition to unfavourable weather

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<sup>2</sup> '中华人民共和国国民经济和社会发展第十四个五年规划和 2035 年远景目标纲要' 实施中期评估报告, [Mid Term Evaluation Report on the implementation of the 14th Five Year Plan for National Economic and Social Development and the PRC's Outline of Long Term Goals for 2035], National Development and Reform Commission, 12 December 2023, [https://www.ndrc.gov.cn/fzggw/wld/zsj/zyhd/202312/t20231227\\_1362958\\_ext.html](https://www.ndrc.gov.cn/fzggw/wld/zsj/zyhd/202312/t20231227_1362958_ext.html).

<sup>3</sup> '中华人民共和国国民经济和社会发展第十四个五年规划和 2035 年远景目标纲要' 实施中期评估报告, [Mid Term Evaluation Report on the implementation of the 14th Five Year Plan for National Economic and Social Development and the PRC's Outline of Long Term Goals for 2035], National Development and Reform Commission, 12 December 2023, [https://www.ndrc.gov.cn/fzggw/wld/zsj/zyhd/202312/t20231227\\_1362958\\_ext.html](https://www.ndrc.gov.cn/fzggw/wld/zsj/zyhd/202312/t20231227_1362958_ext.html).

<sup>4</sup> Martina Li, 'Power cuts hit China factories and give container shipping another shock', The Loadstar, 27 September 2021, at <https://theloadstar.com/power-cuts-hit-china-factories-and-give-container-shipping-another-shock/>; William Barns-Graham, 'China imposes power cuts to meet energy targets leaving factories without power and output dented,' Institute for Exports and International Trade, 28 September 2021, at <https://www.export.org.uk/insights/trade-news/china-imposes-power-cuts-to-meet-energy-targets-leaving-factories-without-power-and-output-dented/>.



conditions. Production of new energy has supported China's economy in 2023, offsetting some of the decline in the real estate sector. But this manufacturing activity is also intensive in steel, non-ferrous metals as well as crude oil output, which are some of the key contributors to China's air pollution

## **b. A compressed timeframe for tackling air quality**

And as noted in the interim assessment of the 14<sup>th</sup> FYP, China is also falling behind on its targets for air quality. As noted by the Ministry of Ecology and Environment (MEE), the worst offenders for air quality are heavy industry and chemicals, coal use (mainly loose coal-low-quality coal sold locally, and burned in basic stoves in homes or businesses, resulting in high emissions) and road transport<sup>5</sup>. As a reflection of this, the State Council published on 30 November an 'Action Plan for Sustained Improvement of Air Quality'<sup>6</sup>. This is the third air pollution control plan issued by the Chinese government, following on from the first national air pollution control plan<sup>7</sup> which was released in 2013 (running till 2017), and the 2018 'Three-Year Action Plan for Winning the War to Defend Blue Skies'<sup>8</sup> which ended in 2020. Logically, the new Plan should have picked up where the previous one left off in 2021, but likely due to COVID and other events, it is only now being published. The urgency to tackle local air pollution has also increased: China's annual average fine particulate matter pollution (PM<sub>2.5</sub>) ambient concentration fell from 72µg/m<sup>3</sup> in 2013 to 29µg/m<sup>3</sup> in 2022, thanks to the air pollution plans. But by the end of November 2023, 13 of China's 31 provincial capitals were not on track to meet their PM<sub>2.5</sub> targets and the 12-month moving average of PM<sub>2.5</sub> in Beijing reached 32.6µg/m<sup>3</sup>.<sup>9</sup>

This third Plan, which spans 229 cities, therefore aims to reduce emissions of nitrogen oxides (NO<sub>x</sub>) and volatile organic compounds (VOCs) and sets emission caps for both pollutants. It states that by 2025, cities at the prefecture level and above should reduce their PM<sub>2.5</sub> levels by 10% compared to 2020, and heavily polluted days should account for less than 1% of the year, with more stringent targets for Beijing.

The Plan re-introduces targets to reduce coal use and output from steel and other high-emitting sectors. It also includes a host of other action points, such as accelerating the phase out of inefficient industrial capacity with a focus on steel. Like previous air pollution plans, the Plan highlights phasing out "dispersed" or "loose" coal suggesting some potential upside for gas. However, volatile prices and concerns around supply security have made government support for coal-to-gas switching more cautious, and contingent on the availability of competitively priced gas supplies. Also, not all cities will have this option. Other options for reducing dispersed coal include switching industrial production to either thermal or renewable electricity, installing heat pumps for residential and commercial heating, and importing electricity or finished goods from other provinces.

The Plan also introduces targets for the transport sector and calls for the share of new energy vehicles in public vehicle fleets to reach 80 per cent by 2025 and for the coverage of charging stations to also reach 80 per cent along highways and 60 per cent in other areas. Similarly, it calls for more freight to move to rail and water, thereby limiting diesel consumption, and for fuel quality standards to be monitored, suggesting additional inspections and crackdowns on small refiners and distributors.

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<sup>5</sup> '国新办举行空气质量持续改善行动计划国务院政策例行吹风会 [Action Plan for Continuous Improvement of Air Quality briefing]', State Council Information Office, 12 December 2023, [https://www.mee.gov.cn/zcwj/zclcfh/202312/t20231212\\_1058873.shtml](https://www.mee.gov.cn/zcwj/zclcfh/202312/t20231212_1058873.shtml).

<sup>6</sup> '国务院关于印发空气质量持续改善行动计划的通知 [Notice on the Publication by the State Council of the Action Plan for Continuous Improvement of Air Quality]', China State Council, 30 November 2023, [https://www.gov.cn/zhengce/content/202312/content\\_6919000.htm](https://www.gov.cn/zhengce/content/202312/content_6919000.htm).

<sup>7</sup> '国务院关于印发大气污染防治行动计划的通知 [Action Plan for Air Pollution Control and Prevention]', China State Council, 10 September 2013, [https://www.gov.cn/zwggk/2013-09/12/content\\_2486773.htm](https://www.gov.cn/zwggk/2013-09/12/content_2486773.htm).

<sup>8</sup> '国务院关于印发打赢蓝天保卫战三年行动计划的通知 [Three-Year Action Plan for Winning the War to Defend Blue Skies]', [国务院关于印发打赢蓝天保卫战三年行动计划的通知], China State Council, 27 June 2018, [https://www.gov.cn/zhengce/content/2018-07/03/content\\_5303158.htm](https://www.gov.cn/zhengce/content/2018-07/03/content_5303158.htm).

<sup>9</sup> Chengcheng Qiu, 'PM<sub>2.5</sub> rebounds in China in 2023, after falling for 10 years straight', CREA, 22 December 2023, <https://energyandcleanair.org/pm2-5-rebounds-in-china-in-2023-after-falling-for-10-years-straight/>.

While the high-level commitment to advancing China's environmental targets remains strong, the devil still lies in implementation. The need to generate economic growth and energy security have weakened environmental mandates in the 14<sup>th</sup> FYP. This latest Air Pollution Plan states that coal use should be cut and no new coal fired power plants should be built, but it also adds caveats that local authorities will use. In a similar vein, the 14<sup>th</sup> FYP called for 'strictly limiting' new coal capacity, but China has added record amounts of coal power for energy security and economic growth during the first three years of the FYP. This does not mean the Plan is toothless. But it does suggest that the need to generate economic growth this year could see an increase in heavy industry, only to then be followed by a rush to shutter other plants closer to 2025, as has happened near deadlines imposed by past air quality plans.

### c. Making China beautiful again

The most comprehensive (and arguably vague) document came on 27 December 2023, titled "State Council Opinions on Comprehensively Promoting the Construction of a Beautiful China"<sup>10</sup> (the Opinions). The "Beautiful China" concept was introduced in 2012 and further fleshed out in 2017<sup>11</sup>, and has essentially become part of Xi Jinping's vision. It is an initiative aimed at creating a sustainable and environmentally friendly nation, focusing on reducing pollution, achieving carbon neutrality, promoting green development, and conserving the ecosystem. The December Opinions reinforce the "Beautiful China" concept and introduce a number of goals, building on the abovementioned plans, and focusing on 2027 as a milestone year. Some of the goals related to energy include:

- Reiteration of the 2030-2060 carbon goals, while stating that between 2025-2035, China will accelerate its low carbon transformation in energy, industry, transportation, construction and other fields.
- Focusing on controlling the consumption of fossil energy such as coal and speeding the construction of a new-type power system—policy lingo for a system with high levels of flexibility and clean, low-carbon energy.
- Gradually shifting the "dual control" targets from energy to emissions, meaning that the dual control targets will no longer focus on reducing energy intensity and limiting total energy consumption but will instead focus on total CO<sub>2</sub> emissions and emission intensity. This target was already highlighted in 2021.
- Building a "more effective, dynamic and internationally influential carbon market" by 2035.
- Reducing national average concentration of PM<sub>2.5</sub> to below 28ug/m<sup>3</sup> [vs 30 in 2023], and 25ug/m<sup>3</sup> by 2035.
- Promoting the shift of road freight to rail and water, as discussed in the Air Pollution Plan. By 2035, railway freight will account for 25% of total freight while also promoting the green transformation and electrification of rail, air travel, ports and logistics parks.
- By 2027, NEVs will account for 45% of new cars. In addition, China will continue to improve fuel quality standards.
- The Opinions also discuss systemic changes, such as improving the legal frameworks, promoting market mechanisms, and improving technological innovation and accelerating digital empowerment.

The objectives contained in the Opinions either lack quantitative targets or include relatively unambitious goals, such as the NEV target. That said, as a bureaucratic and policy signal, the number of policy documents often matters as much as their individual content. The publication of a slew of

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<sup>10</sup> '国务院关于全面推进美丽中国建设的意见 [Opinions of the State Council on Comprehensively Promoting the Construction of a Beautiful China]', Xinhua, 27 December 2023, <http://www.news.cn/politics/20240111/b1e10e998f644683b7e64d8bf8ff589b/c.html>.

<sup>11</sup> '持之以恒推进美丽中国建设 [Persistently promoting the construction of a beautiful China]', China State Council, 27 December 2012, [https://www.gov.cn/zhengce/2017-12/27/content\\_5250693.htm](https://www.gov.cn/zhengce/2017-12/27/content_5250693.htm).



documents all highlighting the importance of environmental protection and targets across multiple major sectors is significant. It sends an important signal to local officials and industries and reiterates the general direction of travel, especially as drafting of the 15<sup>th</sup> FYP is now set to begin. Many of these medium-term goals (namely the 2027 targets) will inform priorities for the next planning cycle.

In this context, it is also noteworthy that the State Council discussed the Energy Law in its January meeting and will now pass it on to the legislature for consideration. The extent to which it can advance in the legislature will be a significant signpost given that the Energy Law has been on and off the agenda since 2007, with limited progress to date. Indeed, there have been two publicly disclosed drafts as well as countless internal versions but all have been shelved due to internal disagreements. Implementation amid bureaucratic and sectoral infighting persists, and continues to challenge China's energy transition.

New regulations on carbon trading are another recent policy that highlights the priority of climate this year.<sup>12</sup> The rules, which go into effect from 1 May, raise the penalties for non-compliance to a minimum of RMB 500,000, up from RMB 30,000 (around US\$ 4,000) previously, and even though this is still a relatively small penalty<sup>13</sup>, the rules indicate violators will be forced to cough up any illegal profits and adding specific penalties for those responsible. The new rules are officially issued by the State Council whereas previously they were departmental penalties which made them harder for MEE to enforce. Adding teeth to penalties could both help reduce data fraud and improve pricing for emissions allowances.

## 2. Implementation remains complicated amid bureaucratic fragmentation

Even though the policy focus seems to be shifting more toward environmental protection, implementation could be complicated by bureaucratic fragmentation, both within the central government, and between the central and local governments. Such 'software' issues have been a major barrier to the country's clean energy transition and environmental policy implementation over the years.<sup>14</sup>

The implementation of several novel market-based instruments to promote decarbonization might be challenging considering that China's energy market is still in the early stage of being liberalized and institutions are finding their place in the new set-up. Similarly, the national carbon market was first announced in 2017, but didn't begin trading for several years as the Ministry of Environment and Ecology (MEE) took time to adjust to the transfer of responsibility for climate policy from the National Development and Reform Commission (NDRC).<sup>15</sup> Infighting among ministries is common, and a case in point is the challenge to harmonize responsibilities between energy and environmental policy bodies.

For the past several months, a sharp policy dispute between the National Energy Administration (NEA), China's de-facto energy regulator, and the MEE has led to uncertainty about how the government can achieve its plan to shift away from the Dual Control policy on energy – which sets targets for energy intensity and total energy consumption – and towards a new Dual Control on carbon that would essentially allow businesses to increase energy consumption provided they used renewable energy or other zero-carbon sources to do so. This shift was announced more than two years ago, but has yet to be implemented.<sup>16</sup> While the government will use administrative measures to guide this shift, a key market mechanism is carbon accounting. But the development of carbon emission statistical accounting

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<sup>12</sup> '碳排放权交易管理暂行条例 [Interim Measures on Regulating Carbon Emissions Trading]', Ministry of Environment and Ecology, 4 February 2024, at [https://www.gov.cn/zhengce/content/202402/content\\_6930137.htm](https://www.gov.cn/zhengce/content/202402/content_6930137.htm).

<sup>13</sup> For more background on the ETS see David Sandalow et al., *Guide to Chinese Climate Policy 2022*, <https://chineseclimatepolicy.oxfordenergy.org/book-content/domestic-policies/emissions-trading/>

<sup>14</sup> Anders Hove, Michal Meidan and Philip Andrews-Speed, 'Software versus hardware: how China's institutional setting helps and hinders the clean energy transition', Oxford Institute for Energy Studies, December 2021, at <https://www.oxfordenergy.org/publications/software-versus-hardware-how-chinas-institutional-setting-helps-and-hinders-the-clean-energy-transition-2/>.

<sup>15</sup> Hongqiao Liu, 'In-depth Q&A: Will China's emissions trading scheme help tackle climate change?', Carbon Brief, 24 June 2021, at <https://www.carbonbrief.org/in-depth-qa-will-chinas-emissions-trading-scheme-help-tackle-climate-change/>.

<sup>16</sup> '促进绿色消费实施方案 [Implementation plan for promoting green consumption]', National Development and Reform Commission, 21 January 2022, at [www.ndrc.gov.cn/xwdt/tzgg/202201/t20220121\\_1312525.html](http://www.ndrc.gov.cn/xwdt/tzgg/202201/t20220121_1312525.html).



mechanisms and a carbon management system is critical given that both China's carbon market and the voluntary carbon markets have been plagued with data fraud. Moreover, as China expands its Emissions Trading System (ETS) and looks to demonstrate compliance with EU's Carbon Border Adjustment Mechanism (CBAM), the issue of voluntary compliance mechanisms is gaining importance.

The NEA is prioritising the use of China's Green Electricity Certificate (GEC), even though the timeline for doing so is unclear.<sup>17</sup> China's GEC, which represents consumption of 1 MWh of electricity from renewable sources, can be purchased by companies seeking to claim their energy consumption is from green energy, or by grid companies seeking to comply with government mandates for provincial renewable uptake.<sup>18</sup> From September 2022 to December 2023, the Beijing Energy Trading Center reported purchases of 24 million green certificates, the number of green certificates issued was estimated at 20.6 million, corresponding to 23 billion kWh or around 2 per cent of the wind and solar output in China in 2022.<sup>19</sup>

Connecting green certificates to carbon markets has been envisaged by a number of policy documents. Most recently, in the new green certificate policy issued in 2023, the NEA stated that the GEC should be employed to help companies meet their Dual Control targets, as these shift from energy to carbon accounting. In addition, the policy stated that green certificates should be integrated with carbon markets, including markets for voluntary carbon emissions reductions. The NEA stated, "Green certificates and carbon emissions trading are both major institutional innovations that promote green development through market-based means, and it is of great significance to properly connect the two."<sup>20</sup> Indeed, since the green certificate policy was issued by NEA together with the National Development and Reform Commission and the Ministry of Finance, it would appear there is high-level support for such integration. Further, the integration of green certificates and carbon markets was mentioned as a goal of the 14<sup>th</sup> Five-Year Plan for a Modern Energy System, issued in March 2022.<sup>21</sup>

Complicating this path, however, MEE has stated that GECs do not qualify as carbon reductions under the national carbon market, the tradeable China Certified Emission Reduction (CCER) scheme that allows companies to offset up to 5% of their compliance obligations. MEE views allowing GECs to participate in the carbon market as double-counting of emissions reductions. It has also expressed the view that GECs lack international recognition. In a 2023 policy guidance on ETS data, the MEE stated that the "GEC is not recognized in the national ETS as a means to deduct emissions obligations". The debate has heated up since the announcement in late 2023 that CCER trading would resume in early 2024,<sup>22</sup> after being suspended for several years over concerns about the quality of CCERs. Given the

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<sup>17</sup> For background and discussion of China's green certificate market, see Anders Hove and Gary Sipeng Xie, 'Green certificates with Chinese characteristics: Will green certificates help China's clean energy transition?', Oxford Institute for Energy Studies, July 2023, at <https://www.oxfordenergy.org/publications/green-certificates-with-chinese-characteristics-will-green-certificates-help-chinas-clean-energy-transition/>.

<sup>18</sup> These provincial mandates differ from Renewable Obligations or Renewable Portfolio Standards in Europe or North America, in that they are set by the government for the present year, or at most a year in advance, based on the estimated supply from present renewable output. Unlike the RO and RPS policies outside China, the Chinese provincial mandates are not intended to guide future renewable investment.

<sup>19</sup> Bai Wenhao, '能耗双控迎来重要调整, 绿证机制正在不断完善', Sino Carbon, 4 February 2024, at <https://mp.weixin.qq.com/s/MfOoc0QDaSKGryPN8aKDAQ>; full-year 2023 wind and solar output is not yet available; 2022 data from '我国非化石能源发电量占比达 36.2% [China Non-Fossil Electricity Reaches 36.2% share]', Xinhua, 31 August 2023, at [https://www.gov.cn/yaowen/liebiao/202308/content\\_6901312.htm](https://www.gov.cn/yaowen/liebiao/202308/content_6901312.htm).

<sup>20</sup> '关于做好可再生能源绿色电力证书全覆盖工作促进可再生能源电力消费的通知 [Notice on Completing Work to Enable Green Certificates to Fully Cover Renewable Energy and Promote Renewable Energy Consumption]', China National Development and Reform Commission, 3 August 2023, at <https://zfxxgk.ndrc.gov.cn/web/iteminfo.jsp?id=20256>; '国家发展改革委、国家能源局有关负责人就《关于做好可再生能源绿色电力证书全覆盖工作 促进可再生能源电力消费的通知》答记者问', National Development and Reform Commission, 3 August 2023, at [https://www.ndrc.gov.cn/xxgk/jd/jd/202308/t20230803\\_1359098\\_ext.html](https://www.ndrc.gov.cn/xxgk/jd/jd/202308/t20230803_1359098_ext.html).

<sup>21</sup> '十四五现代能源体系规划 [14th Five-Year Plan for a Modern Energy System]', National Development and Reform Commission, March 2022, at [www.ndrc.gov.cn/xxgk/zcfb/ghwb/202203/P020220322582066837126.pdf](http://www.ndrc.gov.cn/xxgk/zcfb/ghwb/202203/P020220322582066837126.pdf).

<sup>22</sup> Yujie Xue, 'Climate change: China's voluntary carbon-credit market reboots in 'milestone' for emissions goals', South China Morning Post, 22 January 2024, at <https://www.scmp.com/business/article/3249349/climate-change-chinas-voluntary-carbon-credit-market-reboots-milestone-emissions-goals>.



importance of carbon policy, and the desire of both MEE and NEA to play a major role in developing policy in this field, neither appears willing to cede ground to the other.

Prior to the suspension of CCER scheme in 2017, renewables projects could be developed as CCER projects and earn revenues from this scheme. The revamped CCER scheme narrowed the scope of renewables projects that are allowed to participate in CCERs, including only offshore wind and solar thermal, leaving the choice up to the project owner to decide which scheme they use – GECs or CCERs, since it is not permitted to issue both. Buyers could opt to purchase CCERs, which companies can use to cover up to 5 per cent of their annual emissions allocation, while potentially also being forced to purchase GECs under provincial mandates for green power for energy-intensive industries. Currently, prices for GECs and CCERs are largely disconnected, with GECs trading at around RMB 20/MWh in 2023, equivalent to roughly RMB 25 per tonne of CO<sub>2</sub>, while CCERs in January 2024 went for an estimated RMB 63 per tonne, though this may fall back to RMB 30-40 per tonne as trading resumes.<sup>23</sup>

The complexity around the lack of compatibility between CCERs and GECs also is exacerbated by conflict around oversight since two different ministries are responsible for their respective verification. Given MEE's concern about double-counting, it is notable that the CCER policy does not contain any explicit limit on projects receiving feed-in tariffs or supplying power under the renewable obligation policy. Whereas the GEC policy is designed to net out revenues from feed-in tariff subsidies and to exclude output already counted under provincial renewable obligation volumes from earning additional revenue from green certificates. Such incompatibilities could raise further concerns about the likelihood of harmonizing the two schemes.

The debate about how green certificates and carbon markets are to be connected is not only a technical matter. For carbon markets in China to evolve beyond a benchmark-based quota trading system within the coal power sector, they need to expand to incorporate new sectors. Currently, it is anticipated that the cement and aluminium sectors will begin simulated trading in 2024, followed by other sectors. In theory, an ETS—compared to benchmarks and quota trading within a single sector—would allow market forces to determine the most efficient places for reduced emissions and investment in efficiency or cleaner technologies. Incorporating CCERs and green certificates could help accomplish this, provided double counting is avoided and the instruments are trusted by both policy makers and the market. But for now, there seems to be limited political appetite to coordinate both.

The dispute about how GECs and CCERs will interact is important for companies with operations in China that need to comply with long-term carbon and energy policies, especially in the most energy-intensive sectors such as aluminium and cement targeted by both policies. Although both the CCER and GEC schemes are currently small, the questions of CCER and GEC prices and ease of trading are paramount for companies with potential exposure to carbon prices. Secondary trading of CCERs is permitted, while GECs cannot be traded. For some Chinese manufacturers that export to European markets, renewable energy is potentially an attractive way to comply with international carbon markets, given the low prices of green certificates relative to international carbon prices and the possibility that renewables could become a lower-cost way of complying with the carbon border adjustment mechanism (CBAM).<sup>24</sup> However, EU policy makers have long expressed concern that linking CBAM to international markets would open the way for carbon leakage, and are hence reluctant to permit any offsets, particularly Chinese CCERs, from demonstrating compliance with CBAM. If the Chinese ETS

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<sup>23</sup> CO<sub>2</sub> equivalence is based on an emissions factor of 0.8 tonne per MWh. CCER prices are based on '完善我国碳市场体系 CCER 时隔七年正式重启 [Improving China's carbon trading: CCER market restarts after seven years]', People's Daily, 29 January 2024, at [https://paper.people.com.cn/zgnybwap/html/2024-01/29/content\\_26041024.htm](https://paper.people.com.cn/zgnybwap/html/2024-01/29/content_26041024.htm).

<sup>24</sup> Indeed, the price for green certificates has been in free fall for several years, declining from around RMB 50/MWh in the first batch issued in 2021, to RMB 28/MWh in 2022, and RMB 19/MWh in 2023, when the new policy was introduced expanding the green certificate to all renewables. Recently, certificates have traded as low as RMB 0.3/MWh. The main purchasers of green certificates have been the provinces of Xinjiang and Qinghai, which have used them to cover a portion of their provincial renewable obligation. The low pricing of green certificates has likely increased the urgency around expanding their use and attractiveness, as a strong voluntary demand has yet to emerge. See Bai Wenhao, '能耗双控迎来重要调整, 绿证机制正在不断完善', Sino Carbon, 4 February 2024, at <https://mp.weixin.qq.com/s/MfOoc0QDaSKGryPN8aKDAQ>.





does not recognize the green certificate as a way to comply with China's own requirements, it will be hard for companies to argue it should fulfil the requirements of CBAM.

In early 2024, it appears top policy makers have taken a decision to accelerate the integration of carbon markets and green certificates, though it is still unclear how this will be accomplished. In January 2024, the NDRC issued a Notice on Strengthening the Connection between Green Electricity Certificates and Energy Conservation and Carbon Reduction Policies.<sup>25</sup> The policy will “encourage all regions to implement a renewable energy consumption commitment system for new projects, accelerate the establishment of a mandatory renewable energy consumption mechanism for high-energy-consuming enterprises, and reasonably increase the consumption proportion requirements.” The policy states that China will “improve the connection mechanism between green certificates, carbon accounting and carbon market management ... and clarify effective ways for various entities to participate in green certificates and carbon market transactions.”

While this text doesn't clearly articulate that green certificates will participate in carbon markets or count towards meeting obligations under the ETS, it is difficult to understand how the markets can be “connected” by maintaining the two systems as two separate entities, managed by two different ministries and with different accounting systems.

In February 2024, the China Electricity Council – China's main industry group representing the power sector – published a report analysing the main barriers to effective market reform and low-carbon energy transition in the sector.<sup>26</sup> In its list of four main barriers to such reforms, the CEC listed the disconnect between the ETS and green electricity trading at the very top. The CEC and the report's co-authors also indicated an openness to allowing carbon prices to influence the wholesale electricity price, to influence dispatch decisions and power prices for end users, thereby allowing carbon prices to transmit price signals and encourage investment outside the boundaries of covered entities currently participating in the ETS. This would represent a major step forward for China's carbon and electricity markets, both in terms of overall efficiency and effectiveness, as well as for international perception – especially since end-user electricity prices had been a political third rail for policy makers until recently.

### 3. A regulated, and contested, carbon market

There are increasing indications that environmental policy has become more prominent within Chinese policy documents, even as economic development and energy security remain as important as ever. New air quality targets and increased attention to lagging implementation of existing targets imply local governments will need to work harder to clamp down on high-emissions industry or face the prospect of production cuts as the deadline of the Five-Year Plan approaches. Expansion of the country's carbon ETS to new sectors, and consideration of improving the integration of green power markets and carbon markets, also suggest the country may be moving forward on carbon policy after several years of focusing on mostly technical aspects of ETS implementation.

As always, there are multiple questions to resolve. First, the issue of bureaucratic fragmentation remains a source of uncertainty regarding implementation. Within the power sector, local governments have been leading the build-out of coal capacity, even in regions with more capacity than needed, in apparent contravention of national plans and ‘strict control’ of coal capacity.<sup>27</sup> In addition, within the central government, the turf war between NEA and MEE over their respective market instruments has yet to reach a clear resolution.

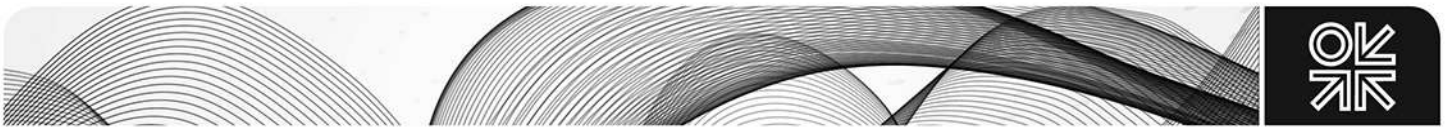
Second, there remains the major question of how much of a role markets can play, given the pre-eminence of planning and suspicion of markets at both local and central levels. Often, officials seek to

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<sup>25</sup> ‘加强绿色电力证书与节能降碳政策衔接大力促进非化石能源消费的通,’ National Development and Reform Commission, 27 January 2024, at [https://www.ndrc.gov.cn/xxgk/zcfb/tz/202402/t20240202\\_1363856.html](https://www.ndrc.gov.cn/xxgk/zcfb/tz/202402/t20240202_1363856.html).

<sup>26</sup> ‘推动碳-电力市场协同发展 促进新型电力系统加快构建,’ China Electricity Council, 4 February 2024, at <https://mp.weixin.qq.com/s/jjmeFzlwkyGOdLivkqk2Q>.

<sup>27</sup> Anders Hove, ‘New Moves in China's Power Market Reform Chess Game,’ Oxford Institute for Energy Studies, November 2023, at <https://www.oxfordenergy.org/publications/new-moves-in-chinas-power-market-reform-chess-game/>.



maintain a tight leash on prices, efficiency, emissions and anything else that might affect the economy or financial performance of state-owned firms, banks and institutions. This has played out for years in both the power sector and carbon market, where prices are strictly controlled, official intervention in markets frequent and unbounded, and trading volumes in various highly-segmented markets are guided with a heavy hand to prevent any volatility and also maintain the positions of incumbent players.

As the pendulum swings toward tighter environmental management and the central government looks to reinvigorate policy planning in support of the 2030-2060 targets, the turf wars between ministries and questions around carbon accounting continue to complicate the trajectory. Carbon prices could gradually impact electricity prices, but China's path toward its Dual Carbon goals will be a constantly changing mix of administrative measures, bargaining among powerful industries and different state actors, sprinkled with a small dose of markets.