

# SUBSIDISING GLOBAL DECARBONISATION CHINA-UK RELATIONS

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# Contents

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|                          |          |
|--------------------------|----------|
| <b>Executive Summary</b> | <b>3</b> |
|--------------------------|----------|

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|                              |          |
|------------------------------|----------|
| <b>Key policy insights</b>   | <b>4</b> |
| • International implications | 4        |
| • China-UK suggestions       | 4        |

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|                                                                                    |            |
|------------------------------------------------------------------------------------|------------|
| <b>Introduction</b>                                                                | <b>4-9</b> |
| • The green transition in China                                                    | 6          |
| • Does China's dominance of green technology incur retrenchment of climate policy? | 7          |
| • International climate politics                                                   | 7          |
| • China-UK                                                                         | 7          |

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|                               |          |
|-------------------------------|----------|
| <b>Policy Recommendations</b> | <b>9</b> |
|-------------------------------|----------|

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|                     |           |
|---------------------|-----------|
| <b>Get in touch</b> | <b>10</b> |
|---------------------|-----------|

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# Executive Summary

China's dominance of the 'new three' green technologies (batteries, electric vehicles, solar) is subsidising global decarbonisation and, as a result, is a cause of growing trade disputes. In this report, we show that as China continues to be the most important determinant of a green transition, there are two broad implications for international climate politics.

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First, by subsidising green technologies, China is, in effect, enabling a global transition. While climate observers are coming to acknowledge the prominence of China's state support, we suggest the true ramifications of their dominance remain ill-considered. Second, we suggest that greater progress on a global transition could be made if countries abandoned the idea of competition with China, which we argue is unlikely to succeed, and instead focus on cooperating with China.

Before outlining what we see as key policy implications of China's dominance for international

competitors, this report aims to suggest that, whilst this is a positive for climate mitigation efforts, it is, in part, the cause of retrenchment on climate policy for the European Union (EU) and the United States of America (USA). We therefore argue that the EU and the USA are indicative of a dilemma facing all countries in the face of China's ascendant position in the green transition. The implications we set out in this report are, however, applicable to economies in the Global North and the Global South.

We focus specific attention on the UK in this report. After the decline of the perceived 'Golden Age' of

China-UK relations (2015-2018), green technologies provide a significant opportunity to reestablish better relations. The China Audit has appeared to have resulted in an overly hawkish position on trading with China, however. Following the election of Andy Burnham as Prime Minister, we suggest that amidst an increasingly fractured geopolitical landscape, the UK would benefit from forging closer ties with China. In doing so, we suggest that China offers the UK an important opportunity to situate the UK within China's developed value chain, access a greater supply of green technologies and establish better diplomatic relations.

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# Key policy insights

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## International implications

- China is ostensibly subsidising the global green transition through large-scale state support for green technologies domestically.
  - There is decreasing competition *with* China in the 'new three' green technologies; there is presently only competition *in* China, as support for domestic sectors translates into uncompetitive prices for potential competitors in other countries.
  - China's dominance of green sectors presents several possible avenues for the European Union, the United States, and other countries: compete, cooperate, surrender, or abandon the green transition.
  - As these trends are reshaping global climate politics, scholarship needs to address issues around whether China's dominance has caused retrenchment in other countries' climate ambitions, whether it is possible to compete with China, and what the domestic ramifications of such competition might be.
  - All countries are not presented with four choices in the face of China's dominance of green technology: (i) compete, (ii) cooperate, (iii) surrender and (iv) abandon.
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## China-UK suggestions

- Amidst wider geopolitical tension, China and the UK should forge a closer trading relationship on the 'new three' green technologies.
  - UK should continue to forgo imposing import tariffs on green technologies from China, particularly following tariffs from the USA and ongoing alignment issues with the EU.
  - Through greater collaboration, the UK should look to situate itself within China's supply chain of green technology, both downstream and upstream.
  - To help develop domestic green industries, the Bank of England should look to replicate policy interventions implemented by the People's Bank of China (PBoC).
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# Introduction

China is an increasingly anomalous subject for international climate politics. On the one hand, it remains the world's largest emitter, even if emissions may have **peaked**. On the other hand, China has emerged as the global leader in many of the technologies deemed imperative for the green transition.

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Whether it be solar, wind, lithium-ion batteries, green hydrogen, electric vehicles (EVs), or even nuclear, China occupies an unassailable position in the global transition at present. Whilst domestic emissions need to decline rapidly in the coming years, the development of green technologies essentially makes the global transition possible. As a result, China is ostensibly subsidising the global green transition. China's dominance renders would-be competitors, particularly the European Union (EU) and the United States of America (USA), fundamentally uncompetitive, the implications stand to have an even greater impact in the years to come.

This issue is made more urgent by the prospect of China simultaneously expanding its green technology exports and its global trade surplus,

which reached a record \$1.2 trillion in 2025. The green transition, therefore, raises the prospect of countries further increasing their relative trade deficits with China in the name of decarbonisation. There is perhaps no better distillation of this issue than the [International Energy Agency](#) (IEA) noting that simply installing the current solar supply would reduce global emissions 15% by 2030. And yet, because this would require importing more green technologies from China, what appears to be a positive for climate mitigation is actually producing a tension at the heart of international climate politics.

If the EU or the US are to meet their climate targets, they are faced with the choice between either relying on European companies to manufacture the clean technologies

or inviting Chinese investors to be part of manufacturing these inside the union. Recent data suggests the EU is moving towards the latter. This is most clearly shown by the almost USD 40 billion worth of manufacturing investments by Chinese clean tech companies (Xue and Larsen, 2025). This option might ultimately present the best short-term option with the most adverse long-term implications. The fear is that European clean tech companies will be outcompeted by their Chinese competitors. Such an option comes with its own political dilemmas, however, in that it might ultimately spell the end of domestic manufacturers, raise security concerns over Chinese influence, and embolden anti-climate sentiment.

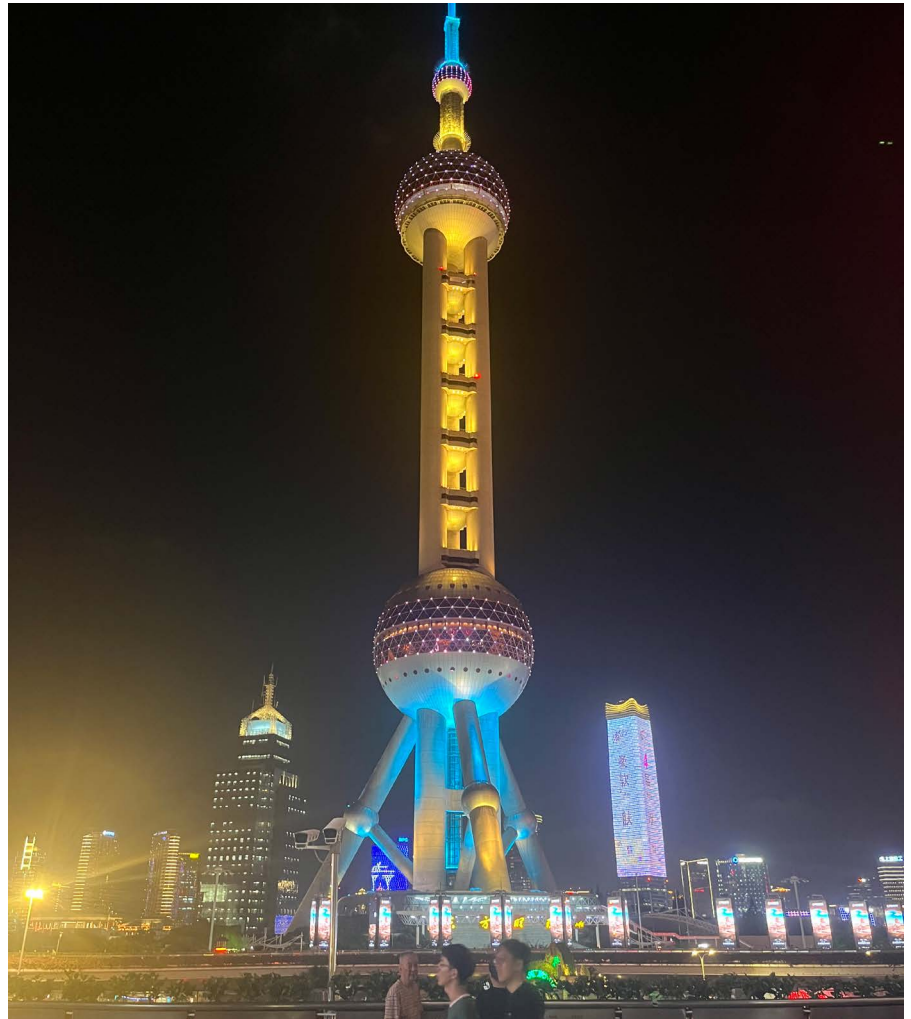
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## The green transition in China

The degree to which the Communist Party of China (CPC) is willing to subsidise domestic industries is a unique feature of the Chinese political economy. Green industries perform two functions for China. First, by leading in the production of green technologies, the Chinese state and private industries develop new competitive advantages as part of China's broader export growth. By having significant control over the supply of green technology, China is therefore able to leverage green technologies as a geopolitical tool. Of these investments, those made in the processing and refining of critical materials have provided the most benefits, as this is the element of the supply chain that China exerts greater control over. The second is that greater domestic production gives China energy independence from volatile imports. This, in turn, gives the CPC political security.

How the CPC subsidises these industries is nonetheless often a subject of contestation, with many reducing it only to subsidies from the government (national, provincial and local) to green industries. Since the turn of the century, the CCP has provided incentives to prospective organisations to become producers of green technology through both fiscal and monetary stimuli. Equally, it has sought to stimulate demand amongst domestic consumers through demand-side grants, tax exceptions and rebates, providing a customer for emergent industries whilst familiarising Chinese citizens with many of the emergent technologies. Some extend consider the devaluing of the yuan/ Renminbi to be a broader indirect subsidy. The provision of subsidies distracts from a wider coordinated and planned strategy, however.



This includes the State Council and National Development and Reform Commission (NDRC), overseeing and facilitating land transfers, energy purchase requirements, the relocation of labour for emergent green companies, and producing competitive tension between provincial governments.

So dominant has China become in green industries that we need to ask whether there is presently any competition *with* China, but rather only competition *in* China. As the case of the EV market demonstrates, Chinese automobile companies are almost exclusively competing rather than international competitors, save a few references to Tesla.

Even European auto manufacturers rely to a high degree on Chinese companies for components for their EVs. International competition within China is presently viewed as inducing a 'price war' between domestic firms in the process of continuously bidding down prices already beyond what non-domestic firms could match. In a process called 'involution' (内卷, nèijǔǎn), the low production costs that have occurred as a result of intense internal competition in China, between domestic firms to bid down the relative costs of production, have, in some instances, resulted in higher indebtedness to offset the reduced revenue.

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## Does China's dominance of green technology incur retrenchment of climate policy?

Of the various inputs required to make contemporary green technology, China's dominant position in the refining of aluminium, copper, nickel, rare-earth elements (REEs) and steel has come to be a great source of geopolitical tension. In addition, they have a virtual monopoly over graphite, manganese, polysilicon, and perhaps most notably, rare earths, a group of 17 chemical elements. This monopolisation of inputs allows China to suppress the marginal cost of the final good, which has resulted in cheap green technologies. Of equal, if not greater, utility is the power it gives to China to control the global supply of minerals for competitors, as was seen in the recent episode with reciprocal tariffs implemented against the USA. In which neither had a marginal impact on Chinese output, with [China](#) still accounting for 70% of EVs and 80% of solar in 2024. Both, nonetheless, illustrate the political implications of when this option fails. To act as a basis for dialogue within the literature, we propose the following three potential research avenues to explore the question of what China's subsidising of the global green transition means for the EU and the USA.

China's subsidisation of the global green transition is an important feature of climate policy that is rarely acknowledged. No sooner does China's subsidies for a global green transition become a potentially positive direction for global climate politics than it becomes a site of contestation when considered from the perspectives of the EU

and the USA. In Europe, Chinese EV manufacturers Build Your Dream (BYD), Gelly, and SAIC are currently under investigation for being 'anti-competitive' with European counterparts due to the subsidies provided to them in China. In the USA, investments under the Inflation Reduction Act (IRA) were contingent upon sourcing non-Chinese parts under 'Foreign Entity of Concern' (FEOC) requirements, deeming it a threat to national energy and economic security. These trends suggest that the green transition, at least as far as it unfolds to the benefit of China, might yet become opposite to the political and economic designs of the EU and the USA.

The issues subsidies pose within China, amongst many of those to have benefited from green technologies, are magnified for those seeking to know at whose expense it is felt. Illustrative of this issue is the 'Draghi report' to the European Commission in which he states 'increasing reliance on China may offer the cheaper and most efficient route to meeting our decarbonisation targets' before suggesting this route would be a threat to the European economy. [Draghi's report](#) accordingly speaks initially to the fact that a green transition is possible because of China's 'oversupply' of required technology. The implication within this observation, and of greater importance, appears to be that this is *not* the type of green transition desired by those in power in Europe. If European companies are fundamentally uncompetitive with China, this provides reason not to transition. The contrast is even starker regarding the USA, where the abandonment of the Inflation Reduction Act is considered in part due to USA industries preferring to double down on producing fossil fuels

and the cars that consume them, since these are activities where the USA is competitive. This raises the question of how much slower a green transition will have to take place if the EU does not directly import equipment from China.

## International climate politics

We propose that so dominant has China become in the global green transition of the 'new three' that the EU and the USA, and feasibly all other countries, are essentially presented with four options. Although this are presently most vivid in the case of the EU and the USA, these options will need to be negotiated by all countries in the Global North and the Global South. Each of these brings its own political implications that will shape the green transition in the coming decades ([see Table 1, page 8](#)).

These four options need not necessarily be understood as exclusive of each other. Due to the nature of global trade and financial flows, China, the EU, the US, and other countries will remain interrelated in many important ways. In the context of the green transition, however, any desire to manufacture green technologies in the EU, the US, and elsewhere can only come at the expense of China. It is at this point that the literature must be attuned to the deeply contested politics of the green transition that is already at play but will undoubtedly intensify over the coming years.

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**Table 1: Implications of China's dominance on the 'new three'**

| Option           | Implication                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Compete</b>   | By manufacturing green technologies only by national companies, diversifying the supply of inputs, particularly critical minerals, or shaping the new iteration of green technology. This option comes with potentially great economic opportunities to develop or bolster industries around emergent green technologies. Equally, it comes with potentially great(er) political cost due to the capital required to scale industries able to compete with Chinese alternatives. Whether governments therefore opt to borrow to invest, undertake expansive fiscal policy and/or de-risk private capital with little to no certainty of returns, they risk their electoral credibility in attempting to compete with China. To compete with China, would be competitors have available to them a variety of policy tools, including domestic subsidies, export controls, local content requirements, tariffs and standards/regulations requirements, to name a few.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Cooperate</b> | In practice, this entails limiting imports of Chinese green technologies through trade barriers and then inviting investments by Chinese companies to produce these technologies within national borders. This option has obvious benefits as countries not only receive greater FDI from Chinese manufacturers, but also benefit from the cost-competitive supplies from the engineering, procurement, construction (EPC) contractors down the supply chains. Host countries can then force the establishment of Joint Ventures (JVs) between domestic and Chinese companies, similar to those developed in China from the 1980s to learn from established expertise. Beyond short-term benefits, cooperation does not insulate domestic firms from competition with Chinese manufacturers. On the contrary, once Chinese enter these national boundaries, with greater access to the domestic market, the relative uncompetitiveness of American or European firms might instead threaten their solvency and viability.                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Surrender</b> | This entails abdicating ambitions on having national entities manufacture green technologies in competition or cooperation with China, recognising that national companies simply cannot compete. Insofar as climate performance, be that measured in industrial decarbonisation, emission reductions or green job creation, to name a few, or remains a priority, this option presently offers immediate benefits by opening up markets for significant imports of green technologies manufactured in China. Surrendering differs from cooperation in that it relinquishes ambitions for having green technologies made by national firms but accepts that green technologies will be made by Chinese firms in China. What might be surrendered is inevitably a nationally specific question, with greater implications for the automobile manufacturers in America, France or Germany, for example. Surrendering to China nonetheless comes with profound political implications given the consequences for established national firms, industrial output and even a country's economic model as we know it.                                                                                                                                                                                                                                                                                                                                                     |
| <b>Abandon</b>   | Given the emerging economic reality of the green transition and reflecting on the three preceding options we have outlined here, inevitably, the starkest, and indeed most regressive outcome, is that governments decide to abandon the green transition. That is to say that rather than exposing national firms to Chinese competitors to encourage these national firms to develop greener technologies, governments instead opt to consolidate around incumbent fossil fuel industries. In many sectors, these technologies will still be brought into opposition, such as the automobile and renewable energy sectors. However, in harder to abate sectors, including aviation, cement, chemical, plastics or steel, some sectors offer possible benefits in abandoning the need to invest in alternative technologies and/or deploy the capital to overhaul established carbon intensive processes. Rather than an abstract proposition, abandoning the green transition is presently underway in the US following the (re)election of President Trump in 2025. Whether other governments look to situate fossil fuel sectors in opposition or as a solution to China's dominance of green technologies will undoubtedly raise difficult political questions and may determine the green transition. This itself raises its own political and economic risk as fossil sectors face ongoing competitiveness issues and remain subject to electoral fortunes. |

## China-UK

Although diplomatic ties between China and the UK have soured over the last decade, this came only soon after the perceived 'Golden Age' of Sino-UK relations (2015-2018). As the global economy enters the period we set out above, this is an important opportunity to reestablish China-UK relations around shared environmental objectives. The renewed intention to develop 'pragmatic cooperation' and a Climate Dialogue through a renewed [Clean Energy Partnership](#) is therefore welcome but should only be the beginning. Former Prime Minister Kier Starmer's visit to China, the first such visit of a UK Prime Minister since 2018, appears therefore a positive attempt to establish a more conducive relationship. We suggest this should not be an isolated visit but part of a renewed effort to develop China-UK relations.

Following the so called 'China Audit' in the UK, where findings were presented in the '[Trade Strategy](#)' and '[Security Strategy](#)' the UK has arrived at a 'Cooperate, Challenge and Cooperate' approach. First and foremost, we suggest the UK should abandon any suggestion it can compete with China on these technologies but seek to cooperate with them. The UK government should indeed challenge China on certain areas of their diplomatic relations, be that human rights or security, but should continue to seek closer trading relations with China for green technology. This alone would be a prudent measure given China's dominance as set out in this report but made all the more important following the tariffs implemented by the USA and the ongoing misalignment on trade with the EU following Brexit.

Following the election of Andy Burnham as Prime Minister, we suggest that any fears of security regarding China should not foreclose greater collaboration. Rather than embracing the opportunities for greater collaboration with China to attract foreign direct investment into Britain it is being inhibited by an overly hawkish position on the part of UK politicians. We would suggest, at the very least, the UK should be looking to establish a better trading relationship with China based on providing assistance on financial services in exchange for production facilities in the country. If the UK is to '[reindustrialise](#)', as the Prime Minister wants, then the manufacturing expertise of China would be a useful starting point. We propose four policy recommendations for the new Prime Minister for a renewed partnership.

## WITHIN THESE BROADER SUGGESTIONS, WE PROPOSE THE FOLLOWING POLICY RECOMMENDATIONS

1

### **Continue to forego imposing tariffs on Chinese green technology**

We would encourage the UK not to follow the examples of the European Union and the United States in imposing import tariffs on Chinese technology.

2

### **The UK government should look to situate Britain upstream in China's EV supply chain**

The government should look to capitalise on Britain's expertise in Just-in-Time (JiT) automobile manufacturing and encourage EV manufacturers from China to establish manufacturing facilities in the UK.

3

### **The UK government should equally aim downstream of China's supply chains by providing its expertise in financial services for green technologies**

Combining China's expertise in manufacturing with the UK's in financial services facilitates both China's ambition to achieve 'Dual Circulation' and the UK's desire to develop as a 'Clean Energy Superpower'.

4

### **Central bank assistance for the development of green industries**

Following initial research by the Bank of England, the bank should consider implementing measures adopted by the People's Bank of China (PBoC) to develop green industries, including the Standing Lending Facility and the Carbon Emissions Reduction Facility.

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# Get in touch

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The University of Manchester is the lead institution of the Report.  
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