

NEW INDUSTRIAL POLICIES: LESSONS FOR THE EU AND THE CLEAN INDUSTRIAL DEAL

Case study: New industrial policy in China

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NOTE

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China represents about 30% of global manufacturing value added (about 4.6\$ billion value added excluding construction in 2023 on a global output of 16.18\$ trillion in 2023, according to World Bank data). It is the world's largest manufacturer with a clear leadership in clean technologies manufacturing. In 2024, China accounted for more than 70% of global electric car production with nearly 80% of global EV battery cell production¹ and 80% in all manufacturing stages of solar panels in 2022.² The clear direction of Chinese industrial policy, defined in strategies like "Made in China 2025", willing to move up the value chain and develop clean technologies while reducing its emission, has enabled the emergence of a very strong value chains and global dominance. Support provided to industrial companies (particularly through public companies) is perceived as significant and takes different forms, from direct subsidies, support to private demand, to financial support via below-market lending.³ A strong focus on fostering R&D exists in China, illustrated by the 200% pre-tax super deduction of R&D expenses. Nonetheless, competitive dynamics and the depth of the manufacturing sector and market size also seem to play an important role in this industrial success, along with the internal competition between Chinese manufacturers, often supported by provincial governors, and a form of specialization of different provinces.

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¹ IEA (2025): [Global EV Outlook 2025](#)

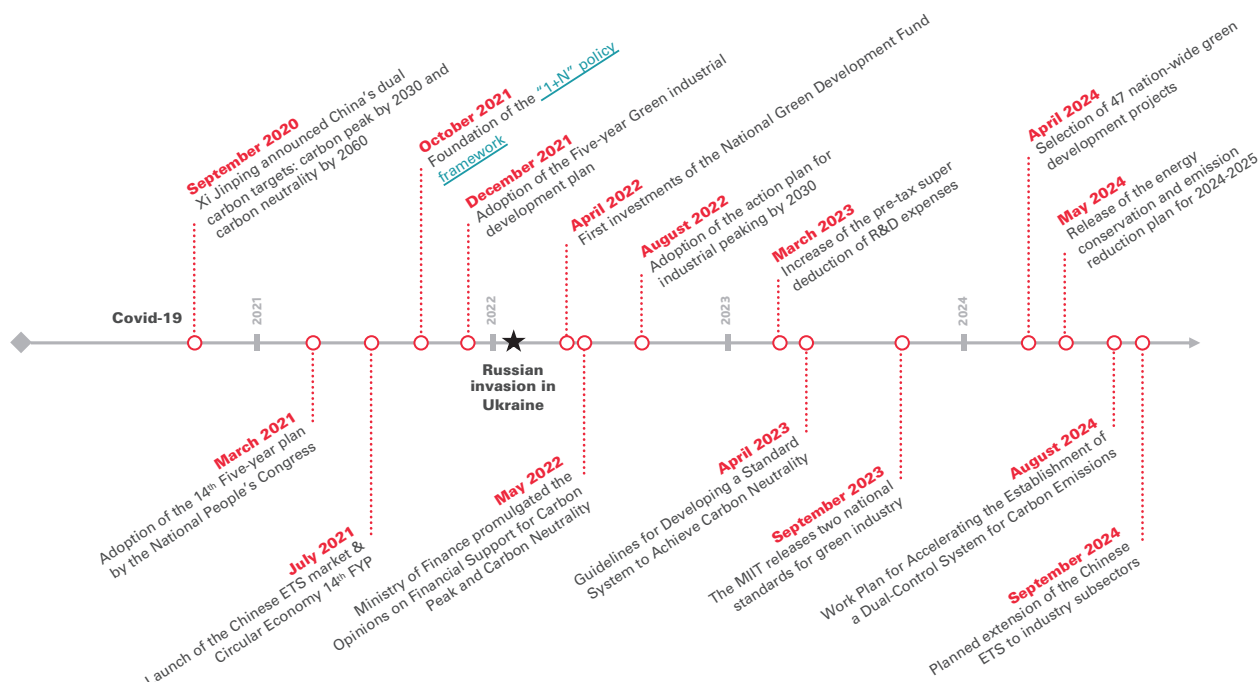
² IEA (2022): [Solar PV Global Supply Chains](#)

³ Garcia-Herrero, Alicia and Krystyanczuk, Michal, (Apr. 2024). "How Does China Conduct Industrial Policy: Analyzing Words Versus Deeds", *Journal of Industry, Competition and Trade*, Volume 24, article number 10 (2024).



This case study is related to the *Study New industrial policies: Lessons for the EU and the Clean industrial Deal*

Figure A.1 China timeline



1. INDUSTRIAL STRATEGY – DIRECTION, PLANNING & GOVERNANCE

1.1. Political directionality of the national industrial strategy

The Chinese industrial strategy mixes long-term strategy for technological directionality and medium-term five year plans, declined at the sectoral and provincial levels. As a sectoral example, the development of the electric vehicle value chain in China can be traced back as early as 2009 with China's New Energy Vehicle Program. More recently, the Made in China 2025 strategy, complemented by the Plan for the Development of SMEs in 2016 and the 10,000 Little Giants in 2018 had defined an overall objective to increase the value added of Chinese manufacturing, especially in selected industries, including the clean technologies.

In 2021, the latest 14th five-year plan (FYP) sets the overall target of reducing CO₂ emissions per unit of GDP by 18% (cumulative target) by 2025 and has a stronger emphasis on green development with a new development concept that combines "sustained and healthy economic development" with "obvious improvements in quality and efficiency".⁴ The 14th FYP was also

⁴ Carbon Brief (12 March, 2021): "Q&A: What does China's 14th 'five year plan' mean for climate change?"

further detailed with sectoral guidelines with the Five-Year Green Development Plan for industrial sector on December 2021. All five-year plans are further detailed at the regional level too and interact with the political incentives of provinces' governors. Additionally, the Action Plan for CO₂ Peaking before 2030⁵ provides industry specific actions in order to reduce emissions within specific industry sectors (mostly the energy intensive). The Action Plan for Industrial Carbon Peaking by 2030 released in August 2022 combines these two strategies in a consistent policy paper setting the main objectives for the industrial sector. This plan relies mostly on 6 main transversal tasks: industrial restructuring in order to eliminate excess capacity particularly in industries such as steel, cement, glass and aluminum, energy conservation measures, the development of green manufacturing, the development of circular economy, technology transformation with deep decarbonization in the production process, and finally digitalization.

1.2. Technological and environmental objectives of industrial policy

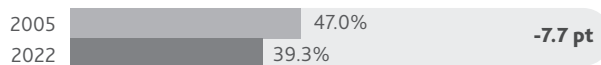
The Five-Year Green Development Plan for Industrial sector set targets on carbon emissions along with sector specific targets.⁶ The climate mitigation target is to reduce by 18% carbon

⁵ Department of Resource Conservation and Environmental Protection (27 Oct, 2021), Action Plan for Carbon Dioxide Peaking before 2030 ([eng. translation](#)).

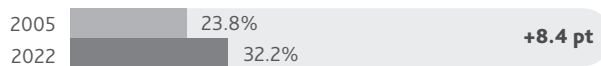
⁶ See the [communication \(6 December, 2021\)](#) of the Climate Cooperation China on behalf of the International Climate Initiative (IKI).

Figure A.2 China indicators

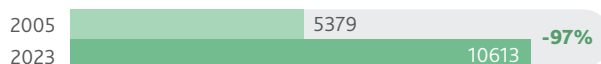
Industry as % of GDP



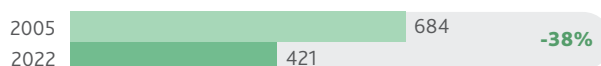
Industry as % of employment



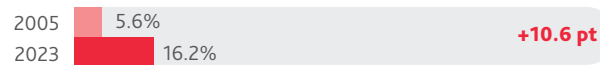
CO2 emissions from fuel combustion (Mt CO2)



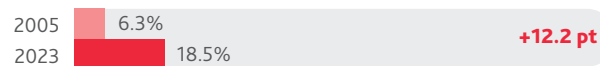
Carbon intensity (gCO2/intl\$)



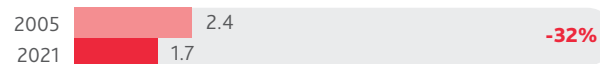
Renewables in primary energy consumption (%)



Low-carbon in primary energy consumption (%)



Energy intensity (MJ/USD)



*

Renewables include hydropower, solar, wind, geothermal, bioenergy, wave, and tidal, but not traditional biofuels.

Low-carbon energy is the sum of nuclear and renewable sources.

emissions by 2025 for China's main industrial firms and lower energy intensity by 13.5% per unit of value-added industrial output (consistent with the 14th FYP). Overall, the strategy aims at supporting green growth in emerging industries while being consistent with the "dual carbon" pledge by Xi Jinping in September 2020 that China should peak its carbon emissions by 2030 and achieve carbon neutrality by 2060. It also sets additional targets such as reducing by 10% the amount of waste from key industries and reaching a 57% utilization rate of the commodity industry's solid waste. Finally, the FYP sets the objective of creating 10,000 new kinds of green products and the output of green industry must reach 11 trillion yuan.

The Action Plan for industrial carbon peaking also formulated industry specific targets: objectives of recycling for steel and nonferrous metals, reduction in consumption for cement and petrochemical, large recycling for textiles, electrification of electronics manufacturing.

1.3. Institutional setup supporting the implementation of the industrial policy

At the national level, the National Development and Reform Commission (NDRC), the Ministry of Industry and Information Technology (MIIT), and the Ministry of Ecology and Environment (MEE) play the main role in the definition of the national ecological planning (for example, the Plan for Carbon Peaking in Industry was defined by these three actors).

Nonetheless, the implementation of Chinese industrial policy is mostly operated through local authorities who have their own regional declinations of the FYP. Therefore, the implementation of the general industrial guidelines is not necessarily followed

by the local authorities who may be motivated by other objectives. For example, García-Herrero & Krystianczuk (2024) show that the selection of the "Little Giants", a spin off strategy of the Made in China 2025, were not necessarily consistent with national guidelines.⁷ Hence, although the national FYP, and subsequent planning and targets directed by the national institution (and especially the NDRC), guide the overall direction of the Chinese industrial policy, the local dynamics at the provincial level are likely to be at least as important for the implementation of this policy.

Our interviews largely highlighted the importance of these local dynamics. For example, it was highlighted that the success of BYD cannot be separated from the fact that this company was initially based in Shenzhen, in the Guangdong province, a richer and more private initiative-oriented province. In the same way, the province of Mongolia has a strategy to support the production of renewable hydrogen and investments in green hydrogen facilities. There is in this way a form of provincial specialization that is based on provincial choices and internal competition, directed by national objectives.⁸ For instance, policy decisions from provincial and municipal governments allowed to develop charging networks in cities for EVs through financial incentives and local policy.

⁷ More precisely, they show that these companies were significantly less likely to be specialized in a specific sector than the control group of companies, although one criterion for selection of these "little giants" was that the enterprise should make at least 70% of its revenue in the main business activity.

⁸ García-Herrero & Schindowski (2024) refer to a "regional protectionism" in which provinces and city governments erected inter-regional trade barriers to shield local champions from domestic competitors.

2. DEVELOPMENT OF A CARBON PRICING MECHANISM

China's national ETS began operating in 2021 and is central in the Chinese pivot from energy consumption to carbon emissions controls. This shift was confirmed in August 2024 with the establishment of a work plan for Accelerating the Establishment of a Dual-Control System for Carbon Emissions.

The Chinese ETS market currently only covers the power market (which represents 40% of Chinese emissions). In September 2024, the Ministry of Ecology and Environment (MEE) published a draft policy stating that by the end of the year, China's ETS will be expanded from covering only the power sector to also cover steel, aluminum and cement (60% of Chinese emissions). In March 2025, China released a work plan to extend ETS coverage to include cement, steel and aluminum industries, and in August 2025, published a high-level opinion paper setting the pathway for total cap and allowance auction. Between 2024 and 2026, companies from the three new sectors will receive free allowances for their CO₂ emissions, with no cap on total allowances. Allowances will then be tightened from 2027.

However, the Chinese ETS is flawed with multiple shortcomings that leads to a low price of carbon (although carbon prices have steadily increased, it has breached the 100 yuan [\$14.05] per ton mark for the first time only in 2024).⁹ The provision of generous allowances has led to an oversupply (in 2021, TransitionZero estimates that China's ETS is oversupplied by 1.56 billion tons from 2019 to 2020)¹⁰ in the market. Moreover, data collection (one of the principal reasons that the original launch initially planned during the 12th FYP of the ETS was delayed) has continued to pose challenges with "negligence and fraud". The Work Plan for Accelerating the Establishment of a Dual-Control System for Carbon Emissions partly aims at addressing these limitations by the end of 2025.

3. SUPPLY-SIDE SUPPORT TO INDUSTRIES

3.1. Support mechanisms for R&D&I focused on new green technologies

R&D is strongly supported in China through a pre-tax super deduction of R&D expenses implemented since 2008. This pre-tax super deduction is applicable to resident enterprises for any sector activity except a few sectors (such as tobacco manufacturing, wholesale and retail or real estate). The rate of income tax deduction has been steadily increased from 75% to 100%

⁹ Carbon Brief (23 September, 2024): [Explainer: China's carbon market to cover steel, aluminium and cement in 2024](#)

¹⁰ TransitionZero (Apr. 2021): [Turning the Supertanker Powering China's coal to clean transition with actionable analytics](#)

for manufacturing in 2021, all sectors in 2022 and up to 200% of eligible expenses in March 2023.¹¹

Specific to green technologies, the IEA estimates that China is the 2nd largest country with R&D in energy in 2020 with \$8.3 bn in 2020, right after the USA. A National Green Development Fund (NGDF) was launched in 2020 and manages 88 billion yuan (US\$14 billion) and started investing in Chinese companies in 2022. For fundamental research, the government has established the so-called "Bounty system" in May 2021 for tech innovation: the government unveils a list of (large) research obstacles, and research teams can apply to clear those obstacles and receive funding and policy support for this.

The government also funds "development projects" for different technologies (including sustainable manufacturing, intelligent manufacturing and big data)¹² within specific provinces selected by the National Development and Reform Commission.

3.2. Support mechanisms for the development of new green technologies production units

The National Green Development Fund (USD\$12.8 billion) established in 2020 was meant to play an important guiding role in the fields of green industry and green economy such as pollution reduction, ecological restoration, and the development of green transport networks and clean energy along the Yangtze River Economic belt.

For the deployment of green technologies, the Chinese government has developed a comprehensive framework for green finance leading to the use of below market interest rates on bonds to green sectors. In May 2022, the Ministry of Finance promulgated the Opinions on Financial Support for Carbon Peak and Carbon Neutrality, which proposed to establish a national Low-carbon Transition Fund that would support the green transformation of traditional industries and resource-dependent areas (information to verify whether the transition fund was indeed implemented was not available). These opinions also introduced the Chinese Low-carbon transition bonds framework, debt financing instruments to support environmental improvements.

At the central bank level, the People's Bank of China launched two monetary policy tools in November 2021. One is the Carbon Emission Reduction Support Tool. The policy provides financial support for national banks at 60% of the loan principal at an interest rate of 1.75%, encouraging national banks to issue eligible carbon emission reduction loans to relevant enterprises in areas such as clean energy, energy conservation, environmental protection, and carbon emission reduction technology. The scheme was extended in August 2024 until 2027.

¹¹ For a detailed explanation of the pre-tax super deduction of R&D expenses, see: <https://www.china-briefing.com/news/china-rd-expenses-pre-tax-super-deduction-explainer/> [accessed on 10 April, 2025].

¹² See the article of Sino-German Cooperation on Industrie 4.0 on the Demonstration Project Initiatives in China: <https://www.plattform-i40.de/IP/Redaktion/EN/Downloads/Publikation/China/policy-demonstrator.pdf?blob=publicationFile&v=1> [Accessed on 10 April, 2025].

These findings showing the importance of below-market borrowing are consistent with publications of experts regarding industrial subsidies in China. Chimits (2023) comparing different estimates of total industrial subsidies in China writes "The OECD estimates that, on average, Chinese public support for production amounts to 4.5% of the revenues of the Chinese firms covered, from 2005 to 2019, with 0.63% from direct subsidies, 0.75% through preferential taxation, 2.35% *via* credits and around 0.75% through equity injections".¹³ Multiple papers have shown the absolute & relative (with respect to revenues) importance of Chinese subsidies relative to other competing companies in green industries (BEV, wind turbines, railway) through a statistical approach, although the specific policy mechanisms are not specified by the authors. In an article of the Kiel Institute, Bickenbach *et al.* (2024) show that direct subsidies for the electric car manufacturer BYD amounted to approximately €220 million in 2020 (1.1% of revenues), rising to €2.1 billion in 2022 (3.5% of revenues).¹⁴

Our interviews also highlight different dynamics depending on the specific sector. Work by the OECD show that tools like below-market interest rates are not used in the same manner across industrial sectors (for example below market borrowings is more common in heavy industry and the production of renewable-energy equipment while sectors like semiconductors and telecommunication network rather attract tax concessions).¹⁵ Competition policies aiming at creating national champions supported by the government might have played a role in the case of electric vehicles after the development of many different manufacturers during the 2010s (similar concentration policies were for example operated in the steel industry to reduce over-capacity and close low performance plants). This concentration associated with a cluster policy aiming at achieving economies of scale drove production costs down. In the case of solar PV, technology transfer and international subsidies via clean development mechanisms initially fostered the internal market. Then, the development of a large internal demand and feed-in tariffs created a fierce competition within China, pushing the industry to innovate, and driving costs down.

3.3. Support mechanisms for the decarbonization of existing industrial production units

The Chinese government has invested in priority in energy efficiency and energy consumption reduction projects for supporting the decarbonization of its industry. A 2020 report by

Carbon Trust¹⁶ reports 3 main financial incentives for the energy conservation and emission reduction (ECER) plans since the 11th FYP:

- **Tax breaks:** qualified energy service companies can be exempt from business tax for the taxable income from the EPC projects, transfer the VAT taxable goods in the project to energy-using enterprises and, be exempt from income tax from the 1st-3rd year, and halved from the 4th-6th year on a legal tax rate of 25%.
- **Subsidies:** ECER funds and the corresponding administration measures were implemented in May 2015. The funds are financial subsidies managed by local government, implemented through direct financial aid (full amount, quota or proportional subsidy is granted), special fund awards or discount interest for loans.
- **Green credits/loans:** Guidelines on Energy Efficiency Credits (GEEC) are issued by China banking regulatory commission (CBRC) and NDRC providing guidance for banks and energy users to issue or apply for energy efficiency credit (EEC). EEC is the credit financing provided by financial institutions to support energy-using organizations to improve energy efficiency and reduce energy consumption

The latest version of the ECER 2024-2025 released in May 2024 details new targets for the Chinese industry (2.5% year on year reduction in energy consumption and 3.9% year on year reduction in CO₂ emissions). It provides sub-industry level (power sector, metals, refining and petrochemical, construction and transport) specific targets.¹⁷ The main instruments seem to rely on the strengthening of energy & carbon reporting information and increased control by the administration. The NDRC also announced to offer funding for projects (large-scale carbon capture, energy efficiency, or carbon intensity reduction projects) up to 100 million yuan (\$13.8 million) to accelerate progress in new emissions reduction technologies targeting various sectors.¹⁸

¹³ François Chimits (2023). "What Do We Know About Chinese Industrial Subsidies?" *CEPII Policy Brief* 2023-42, CEPII.

¹⁴ Bickenbach F. Dohse D. Langhammer R.J. Liu W-H. (2024). "Foul Play? On the Scale and Scope of Industrial Subsidies in China" *Kiel Policy Brief* 173.

¹⁵ Note that the data for the different instruments used in industrial policy are not provided at a country-sector level but only across different sectors. OECD (2023). Government support in industrial sectors: A synthesis report. OECD Trade Policy Papers, No. 270, OECD Publishing, Paris.

¹⁶ Carbon Trust (2020). "China Energy Saving and Low-Carbon Technologies Catalogue and Financial Incentives to Promote Energy Efficiency Technologies Report for Industrial Energy Accelerator project in China" report for the Industrial Decarbonization Accelerator.

¹⁷ See the communication of the Sino German Cooperation on Climate Change – NDC Implementation "China Issues Action Plan for Energy Saving and Carbon Reduction (2024-2025)" (5 July, 2024).

¹⁸ Bloomberg News (9 April, 2024). "China Funding Aims to Spur Climate Technology Breakthroughs".

4. DEMAND-SIDE SUPPORT TO INDUSTRIES

4.1. Support mechanisms incentivizing private demand in green markets

China has developed multiple funds for supporting the thermal renovation of buildings. In 2014, several funds were consolidated and a new Subsidy Fund for Affordable Housing Projects in Urban Areas was established that supports, among other things, energy conservation renovations of existing old residential buildings. In 2022, the central government allocated approximately CNY30 billion to support renovations of old residential buildings, including improving their energy efficiency. The NRDC, the MIIT, the MEE and the Ministry of Housing and Urban-Rural Development, Ministry of Transport, and National Energy Administration have released in April 2025 an Action Plan for Promoting High-Quality Development of the Heat Pump Industry,¹⁹ which aims to increase energy efficiency of key heat pump products by at least 20%. Local authorities have also developed local funds: in January 2021, Shenzhen created a Special Fund for Green Innovative Development in the Field of Engineering and Construction supporting green renovation and energy conservation renovation of existing buildings. In June 2023, Beijing established the Incentive Fund for Green Building Development. Incentives can go up to CNY20 per square meter, and should not exceed 30% of the total renovation cost.

Since 2011, China has adopted economic incentives for private vehicle purchase offering subsidies for individual consumers based on the energy capacity of the power battery pack at 3,000 yuan/kWh, with the maximum subsidy for battery electric vehicles (BEVs) being 60,000 yuan per vehicle. Since 2014, the subsidy for purchasing BEVs has gradually been decreased. The maximum subsidy standard for BEVs was 60,000 yuan in 2011, reduced to 54,000 yuan in 2015, 50,000 yuan in 2018, 25,000 yuan in 2019 and 22,500 yuan in 2020, 18,000 yuan in 2021, and finally 12,600 yuan in 2022.²⁰ The specificity of this rebate was that it was directly attributed to the car manufacturer (and not to the purchaser of the vehicle). The rebate was phased out in 2023 but BEV are still exempt of the 10% sales tax.²¹

4.2. Public procurement strategy favoring green products and local content requirements

There is no official policy that sets clear local content requirements for public procurement in China. However, the Chinese

government has recently released in December 2024 a new public procurement reform that favors industrial products produced in China which will be evaluated as if their price is 20% lower as compared to goods not produced in China during the bidding process. The Global Trade Alert also reports the development of local content requirements in May 2021 of 25%, 50%, 75% and 100% for the public procurement of state-owned companies for 315 items, according to a Reuters article.²² The European Commission's first investigation under EU International Procurement Instrument in April 2024 for the market for medical devices also illustrates the signs of Chinese public procurement being used as a tool for supporting industrial policy.

5. REGULATION AND NORMS FAVORING GREEN INDUSTRIES

The 14th FYP was accompanied by a 14th Plan for Promoting the High-Quality Development of the National Standards System. This plan aimed at "Focusing on building a national standards system to promote high-quality development", through using "standards to promote the conversion of scientific and technological (S&T) innovation achievements into practical applications"; to "help promote industrial upgrading, green development (...)".²³ Two national standards were released in September 2023 and applicable starting January 2024.²⁴ This regulation covered carbon peak and carbon neutrality standards (article 32), especially promoting setting key standards for carbon emission management systems and carbon footprints. The State Council has released in March 2024 an action plan to promote large-scale equipment renewals and trade-ins of consumer goods, to achieve "energy saving and carbon emission reduction, ultra-low emission, safe production, digital transformation and smart upgrades in key sectors" mostly through regulation that was further reinforced in July 2024. The Ministry of Industry and Information Technology (MIIT) also releases yearly lists of "green manufacturing companies" since 2016 that meet certain criteria of production and energy efficiency.

6. LABOR AND SOCIAL POLICIES FOR A JUST INDUSTRIAL TRANSITION

Our interviews highlight that China historically has not put a strong emphasis on just transition policies, hedging workers against structural change and rather letting the job market adjust itself, as reconversion was easy to absorb in the Chinese

¹⁹ NRDC (April 2025), Notice on Issuing the Action Plan for Promoting High-Quality Development of the Heat Pump Industry.

²⁰ Xiaolei Zhao, Xuemei Li, Dehan Jiao, Yumeng Mao, Jingxiao Sun, Guanyi Liu (2024). *Policy incentives and electric vehicle adoption in China: From a perspective of policy mixes*, Transportation Research Part A: Policy and Practice, Volume 190, 2024.

²¹ See Scott Kennedy (28 June, 2024) "The Chinese EV Dilemma: Subsidized Yet Striking", CSIS blog post.

²² Reuters (2 August, 2021). "China quietly sets new 'buy Chinese' targets for state companies – U.S. sources".

²³ A translation (Jan. 2022) is available on the site of the Center for Security and Emerging Technology.

²⁴ <http://www.lawinfochina.com/Search/DisplayInfo.aspx?id=37260&lib=news&keyTitle=>

economy. For instance, the restructuring of steel production at the end of the 2010s with the closing of many low productive firms and the concentration of the market around Baosteel was not accompanied by social policies, even though it led to massive layoffs.

In a first report on the just transition in 2023, the UNDP estimated that based on China's current policy trajectory, 52% of jobs in the coal sector are projected to disappear by 2030, representing 1.3 million jobs.²⁵ A subsequent 2024 report highlighted some just transition pathways in selected Chinese regions.²⁶ Dealing with oversupply in coal and in heavy-industry, China has set up in 2016 an industrial restructuring fund, worth CNY100 billion over 2 years, to help firms tackle worker resettlement and employment issues. It has been continued in 2019 and defines yearly catalogues for guiding industry restructuring. The Ministry of Human Resources and Social Security (MOHRSS) issued "Guidelines on Resettling Workers During Capacity Reduction in the Steel and Coal Industries" with 4 resettling options: alternative employment within the firm, reemployment in new positions or their own business, early retirement, and public welfare job placements. The MOHRSS also launched a special training plan for workers from enterprises with excess capacity.

7. TRADE AND INTERNATIONAL POLICIES SUPPORTING INDUSTRIAL POLICIES

7.1. Policies aiming at improving resilience and de-risking global supply chains

China has increased its dominance in several industrial markets. It has used this economic dominance to serve political objectives and exert economic coercion.²⁷ As early as 2013, Japan complained that China organized a raw material ban in response

to the geopolitical conflict around the Senkaku/Diaoyu islands.²⁸ However, the intensity of economic coercion was raised after the trade war with the USA and the COVID-19 crisis. Some examples of this strategy of influence through economic dependencies include tariffs imposed on multiple Australian goods after Australia started an inquiry about Chinese responsibility in the COVID-19 crisis,²⁹ different means of economic coercion against Lithuania (on Lithuanian by-products mostly) after it opened a Taiwan Representative Office,³⁰ along with the recent export ban on specific raw materials required in the semiconductor industry, or the tariff on brandy in response to EU tariffs against Chinese BEVs. In the context of the escalating trade war with China, China's Ministry of Commerce has imposed trade restrictions on rare earth minerals and magnets in April 2025, imposing any company wishing to export these resources to special export licenses. This policy has impacted the European economy, especially the automotive industry. In October 2025, China imposed new restrictions requiring authorization to export technologies used in the extraction and smelting of rare earths, which were then put on hold in November 2025. Such economic coercion is the main motive for most of current occidental de-risking and diversification strategies.

7.2. Policies supporting internationalization of national industries

The Chinese Belt & Road Initiative (BRI) is a central piece in Chinese diplomacy, along with its "South-South" cooperation positioning. The BRI is a strategy that mostly aims to secure the Chinese trade route and to avoid passing by sea through the Malacca strait off the coast of Singapore, a major US ally. The BRI unlocks the financing of massive transport infrastructures in foreign countries in Central Asia, through Pakistan (the China-Pakistan corridor), in Africa (such as the high-speed railway in Kenya running between Mombasa and Nairobi) and up to Europe.

In April 2022, the BRI Green Development Coalition released "Opinions on Jointly Promoting Green Development of the Belt and Road", announcing that China will no longer finance coal-fired power plants, and that it will foster green energy, transportation and industry. Projects should leverage international financial institutions and specifically encourage financial institutions to adopt the Green Investment Principles (GIP) for the Belt and Road Initiative for promoting green finance. Many BRI projects also incorporate green technologies (construction of hydropower plants, solar farms and wind power installations) and often involve the transfer of technology and expertise from China to the host countries. As of November 2023,

²⁵ UNDP (2023). Navigating the Path to a Just Transition: Employment implications of China's Green Transition, Institute of Energy, Peking University. <https://www.undp.org/china/publications/navigating-path-just-transition-employment-implications-chinas-green-transition>

²⁶ UNDP (2024). Towards a Just Transition: How greening China's economy will impact its regions, Institute Of Energy Peking University. https://www.undp.org/sites/g/files/zskgke326/files/2024-12/paiban3gao1205_en_towards_a_just_transition-how_greening_chinas_economy_will_impact_its_regions.pdf

²⁷ As early as 2013, Japan complained that China organized a raw material ban in response to the geopolitical conflict around the Senkaku/Diaoyu islands. However, the intensity of economic coercion was raised after the trade war with the USA and the COVID-19 crisis. The main examples of this strategy of influence through economic dependencies are tariffs imposed on multiple Australian goods after Australia started an inquiry about Chinese responsibility in the COVID-19 crisis, or different means of economic coercion against Lithuania (on Lithuanian by-products mostly) after it opened a Taiwan Representative Office.

²⁸ East Asia Forum, (2013), Did China really ban rare earth metals exports to Japan?, August 18th, 2013

²⁹ Lowy Institute, (2022), Chinese coercion, Australian resilience, October 20th 2022

³⁰ CSIS, (2022), China's Economic Coercion : Lessons from Lithuania, May 6th, 2022

China has signed 48 memorandums of understanding with 40 developing countries in the Global South to provide support in tackling climate change. Green Technology Demonstration Centers in Thailand and Kenya focus on demonstrating China's capabilities in green building, transport, agriculture and other technologies.

It is interesting to note that the BRI also adapts to the new international competition on critical minerals. In a 2018 publication, the Strategic Dialogue on Sustainable Raw Materials for Europe (STRADE) suggested that the BRI is not really focused on raw materials but rather on oil & gas and other industries. Oil &

gas investment from 2005 to 2016 should be around \$38.6bn while investment in mining and metals is about \$6.6 bn.³¹ Nonetheless, it looks like China is changing its behavior and starting to invest more heavily in mining through the BRI. A study shows that compared to 2022, the investments in metal and mining jumped in 2023 by 158% to reach almost \$20 bn, especially in Africa where China has realized substantive investment.³² These investments might be triggered by the political reactions of Western countries (the USA with the Minerals Security Partnership, the EU with its "raw material diplomacy") trying to reduce their dependency over Chinese-refined minerals.

³¹ Masuma Farooki & SNL Financial (2018). "China's Mineral Sector and the Belt & Road Initiative". Strategic Dialogue on Sustainable Raw Materials for Europe (STRADE) No. 2/ 2018.

³² Nedopil, Christoph (2024). China Belt and Road Initiative (BRI) Investment Report 2023. Griffith Asia Institute, Griffith University (Brisbane) and Green Finance & Development Center, FISF Fudan University (Shanghai).

Monteiro de Macedo, P., Berghmans, N., Kauffmann, C., Lévy, P. (2025). New industrial policies: lessons for the EU and the Clean Industrial Deal – Case study: New industrial policy in China. IDDRI, *Note*.

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