



Developed Countries Face Tough Road Ahead on China Overproduction Problem

—Difficulties in balancing decarbonization and de-risking from China over supply-chain restructuring in the clean-energy sector—

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〈Summary〉

- ◆ The industrialized countries of the West (hereinafter, "developed countries") are ramping up criticism of China for overproducing clean-energy products. The U.S. has not only admonished China for dumping, but has also gone as far as imposing punitive tariffs, and Europe may soon follow suit in taking tough measures to deal with the issue. These developments demonstrate the commitment of developed countries to nurture their own industries, and strengthen and restructure their supply chains to achieve the twin goals of decarbonization and de-risking from China. Looking at the situation from another angle, it can be said that, like China, developed countries are placing much more emphasis on policies oriented toward protectionism rather than free trade doctrine.

- ◆ However, these policies of developed countries lack economic rationality, and it will prove challenging for them to successfully reorganize supply chains in the clean-energy space. Above all, attention needs to be paid to the following facts: 1) China's overproduction is unlikely to be halted as a result of these measures, and 2) China is highly cost-competitive in the field of clean-energy. Even if developed countries slap hefty tariffs on Chinese goods, the proliferation of Chinese products outside the developed countries will continue, and the influx of Chinese wares into developed countries will be impossible to stop completely as, for example, Chinese manufacturers move to boost roundabout exports. In addition, although developed countries are employing subsidies to develop their industries in a manner similar to China, they still lag substantially behind China in competitiveness in the

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clean-energy field. It will not be easy for developed countries to replace supply from China with their own products.

- ◆ Developed countries must be prepared to face economic risks such as inflation if they proceed with supply-chain restructuring in the clean-energy sector through forceful policies and stop buying cheap Chinese products.
- ◆ To reduce such risks, developed countries could employ such policies as 1) cooperating with emerging countries and 2) building supply chains for clean-energy products that meet high standards. Specifically, developed countries can promote the "China Plus One" strategy in private business for diversifying investments to encompass countries/territories other than China, and are collaborating with ASEAN and India, which are the main investment destinations in this strategy, to enhance their cost competitiveness. Furthermore, EVs manufactured in China are seen as causing significant environmental harm during the production process. If, through cooperation between developed countries and leading emerging countries, clean-energy products are manufactured within supply chains that adhere to tough environmental standards and also to ESG standards, including labor standards, this will go a long way to establishing a fair global market in this field.

- This is an English version of “中国過剰生産への先進国対応に落とし穴—新エネ分野の供給網再編、脱炭素と脱中国依存の両立は困難—”

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1. Introduction

China is rapidly expanding exports of clean-energy products. Developed countries have slammed this as market-distorting "dumping," and are taking countermeasures. However, a solution to the issue appears a long way off, as China denies that it is overproducing clean-energy products. Given China's dominance in the supply chains of the clean-energy sector, if developed countries were to pursue economically irrational policies aimed at achieving self-sufficiency, it would be difficult for them to satisfy their own needs, which could lead to inflation and economic deterioration. This paper examines 1) the countermeasures taken by developed countries to tackle the influx of Chinese products in the field of clean-energy, and 2) the limitations of an aggressive policy approach by them, such as imposing punitive tariffs. The paper also considers 3) the direction for countermeasures that developed countries should aim in.

2. Dumping criticism and protectionist policies in response to China's clean-energy industry

(1) U.S. tariff hikes on Chinese products and their impacts

On May 14, U.S. President Joe Biden announced massive increases in duties on imports from China, especially in the so-called clean-energy sector, which includes goods such as electric vehicles (EVs) and solar cells (Table 1). The U.S. had already been repeatedly condemning China for dumping¹, so this move constituted

Table 1. US Tariff Increases on Chinese Products Announced on 14 May 2024

Products	Current	New	Effective Time	
Steel and Aluminum	0~7.5%	25%	2024	
Semiconductors	25%	50%	2025	
Electric Vehicles (EVs)	25%	100%	2024	Clean Energy Related Products
Lithium-ion EV Batteries	7.5%	25%	2024	
Lithium-ion non EV Batteries	7.5%	25%	2026	
Battery Components	7.5%	25%	2024	
Natural Graphite and Permanent Magnets	0%	25%	2026	
Critical Minerals	0%	25%	2024	
Solar Cell	25%	50%	2024	
STS Cranes	0%	25%	2024	
Syringes and Needles	0%	25%	2024	
Respirators and Face Masks	0~7.5%	25%	2024	
Rubber Medical Glove	7.5%	25%	2026	

Source: JRI based on White House

¹ Prior to the announcement of the new tariff hikes on May 14, U.S. Treasury Secretary Janet Yellen made several statements:
• (Asked by reporters whether China's EVs need to be subject to new tariffs) "I don't want to get ahead of where we are, but it is a commitment that President Biden has made ... that we're going to want our domestic industry to be successful" (in Kentucky on March 13).
• "China's overcapacity distorts global prices and production patterns and hurts American firms and workers, as well as firms and workers around the world" (in Georgia on March 27).
• "We're concerned about massive investment in China and a set of industries that's resulting in overcapacity, and we're concerned about the spillovers that Chinese subsidies to these industries are having on the United States and other countries as well." (in Alaska on April 3).

a concrete response to the issue. President Biden said, "The fact is that American workers can outwork and outcompete anyone, as long as the competition is fair. But for too long, it hasn't been fair". The supply capacity of China's clean-energy industry has become bloated due to subsidies and other forms of government support, while at the same time the dearth of demand resulting from the country's economic slump has led to overproduction and huge global market distortions (see Appendix 1).

Note that the impact of the tariff hikes will not be significant for either the U.S. or China (Table 2). The total value of U.S. imports of the products affected is \$18 billion, so they only account for about 4% of U.S. imports from China (as of 2023) and 0.5% of U.S. imports from all countries. Similarly, they make up just 0.5% of China's exports to all countries. Notably, although duties on EVs have been quadrupled to 100%, the U.S. has so far hardly imported any EVs from China (in 2023, 6,738 EVs were imported from China out of a total of 140,000 U.S. BEV imports), so the impact on the real economy is negligible. Rather than correcting market distortions, this increase in EV tariffs is aimed at fending off the threat of China expanding its share of the U.S. EV market in the future.

Table 2. New Tariff Related Export/Import Goods

(%)

	China Exports to US China's Exports to US by Product / China's Total Exports to US	China's Dependency on US China's Exports to US / China's Exports by Product	US's Dependency on China US's Imports from China / US's Imports by Product
Steel	0.2	1.1	1.8
Aluminum	0.8	10.9	9.7
Semiconductor	0.5	1.7	5.1
Electric vehicles (EV)	0.1	1.0	2.0
Lithium-ion Batteries	2.7	20.9	70.5
Natural Graphite	0.0	18.8	69.5
Permanent Magnets	0.1	13.2	48.7
Solar Cells	0.0	0.2	0.1
Cranes	0.1	8.7	4.4
Syringes	0.0	23.6	14.3
Respirators	0.0	11.4	4.1
Masks	0.5	38.1	68.0
Rubber Gloves	0.0	20.9	9.3
Total USD18bn	3.6		

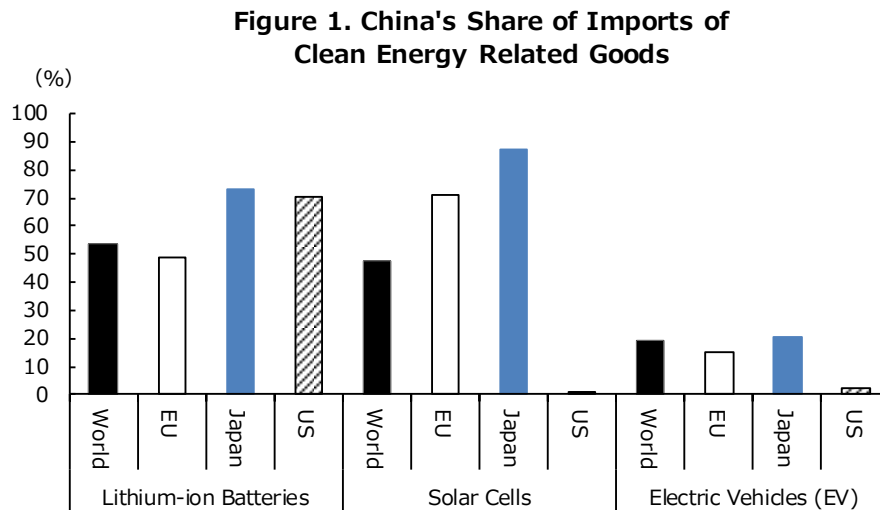
Source: JRI based on WITS

Meanwhile, the U.S. is highly dependent on China for imports of lithium-ion batteries and natural graphite, even though these products only account for a small percentage of U.S.-China trade. If the supply of these products decreases and they are only available at higher prices, the prices of related products may also rise, which in turn could lead to higher inflation in the U.S.

(2) Potential for protectionism in the field of clean-energy to continue gaining traction in developed countries

In Europe and Japan, risk from China in the clean-energy sector is high, and the impact of shutting out Chinese products would be greater than in the U.S. (Figure 1). In Europe, protectionism in the field of clean-energy is gaining ground. In October 2023, the European Commission launched a probe into Chinese-made EVs to see if Chinese government subsidies were undermining fair competition. And in April 2024, it initiated a similar investigation of Chinese-made solar panels and wind turbines. The European Commission claims that there is sufficient evidence that the Chinese government is providing unfair subsidies to its EV industry, raising the possibility of additional tariffs on Chinese-made EVs imported into the EU. If China-based manufacturers are deemed to be benefiting from subsidies in ways that harm EU-based manufacturers, the tariffs are expected to be finalized by November, though interim duties could be imposed as early as July.

In Canada, on May 20, Trade Minister Mary Ng revealed that Canada was looking at whether it needs to raise tariffs on Chinese-made EVs.



Source: JRI based on WITS

3. China's overproduction and China-dominated supply chains will continue

With developed countries becoming more protectionist, criticizing China for dumping and sanctioning it with tariffs, it is evident that developed countries are committed to nurturing their own industries and to strengthening and restructuring their supply chains to achieve the twin goals of decarbonization and de-risking from China. However, these responses lack economic rationality, and it will prove challenging to reorganize supply chains in the clean-energy space in the way envisioned. Above all, attention must be paid to the following facts: 1) China's overproduction will not be halted as a result of these measures, and 2) China is highly cost-competitive in the field of clean-energy.

(1) China's refusal to acknowledge overproduction and future expansion in the share of Chinese products sold outside developed countries

Even if developed countries slap hefty tariffs on Chinese goods, the market share of Chinese products will continue to expand outside the developed countries, and the influx of Chinese wares into developed countries will be impossible to stop completely if, for example, Chinese manufacturers move to boost roundabout exports (i.e., circumvent the barriers to their exports).

This is not the first time that developed countries have criticized dumping by China². Around 2015-16, a similar issue arose, centered on the steel industry³. Back then, too, China was facing the same problems as now, such as 1) bloated supply capacity due to subsidies and other forms of state support (specifically, a rapid expansion of production in the 2000s thanks to low-interest loans and other measures) and 2) inadequate demand due to an economic slump (specifically, an economic downturn accompanied by financial market turmoil stemming from events such as the shock with RMB devaluation). At that time, overproduction of materials, including steel, became a major problem even in China, and moves to shed excess supply capacity accelerated spontaneously.

However, it is difficult to see the current issue of overproduction in the clean-energy field being resolved in the same way. This is because, in contrast to its response to the steel issue, the Chinese government has not acknowledged that clean-energy goods are being overproduced. On May 6, President Xi Jinping met with European Commission President Ursula von der Leyen in France, and during their meeting he countered that there is no such thing as "China's overcapacity problem" in EVs and other products⁴. In the clean-energy industry, where the market is expected to expand significantly in the future, the Chinese government is likely to tolerate overproduction to some extent in order to secure market dominance.

While it will be difficult to expand market share of clean-energy products made in China in developed countries that are taking protectionist measures, many emerging countries are expected to welcome low-cost Chinese goods as a means of achieving decarbonization through the widespread use of clean-energy products. Overall, therefore, China's worldwide share of the market for clean-energy products looks set to continue to grow. Furthermore, if developed countries that become more protectionist are unable to cultivate domestic clean-energy industries that are sufficiently price-competitive, there is a possibility that Chinese products will flow into them via countries that accept Chinese products. In fact, in 2012 the U.S. imposed anti-dumping duties and countervailing duties on Chinese-made photovoltaic products, but subsequently, an increase in roundabout exports arriving from Cambodia, Malaysia, Thailand, and Vietnam became a problem. If developed countries are to achieve significant results through protectionist measures such as tariffs on China, they will also need to

² In April 2024 the European Commission released a report on market distortions caused by China (European Commission [2024]), covering nine industries such as renewable energy, new-energy vehicles, and semiconductors). This report was an updated version of the one issued in December 2017 (European Commission [2017], which dealt with steel, aluminum, chemicals, and ceramics).

³ The U.S. government has also intensified its criticism of China for dumping steel and aluminum, announcing not only higher tariffs on these products but also other countermeasures on April 17. These include steps to deal with inflows of products from Mexico aimed at circumventing the additional tariffs.

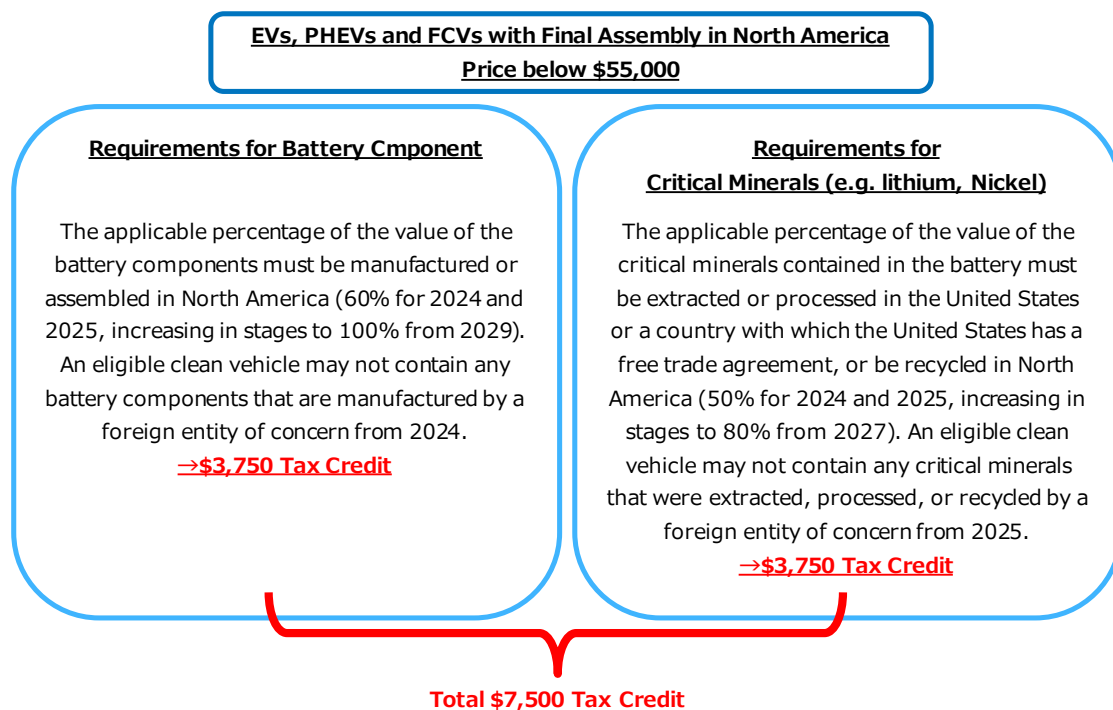
⁴ In an article dated April 27, China's Xinhua News Agency contended that if global demand for new-energy products is very large, then even production capacity that exceeds domestic demand cannot be determined to be overproduction. The article went on to say that the practice of lavishing subsidies on industries to support them is no longer confined to China, as it is now also occurring across developed countries, and argued that EV purchase subsidies are now larger in the West than in China.

hike duties on exports coming from countries other than China. But this poses the risk of them having to play a cat-and-mouse game, constantly finding and closing loopholes.

(2) China's competitiveness in the field of clean-energy about more than just subsidies, making it difficult for developed countries to catch up

The main purpose of the recent U.S. tariff hikes is to protect U.S. companies from unfair competition from Chinese companies. However, it should not be forgotten that the U.S. is already providing subsidies in the clean-energy sector under the Inflation Reduction Act (IRA, enacted in August 2022) and has embarked on a policy of excluding Chinese products from its EV supply chain, which comprises companies that are the recipients of these subsidies. This strategy could alter the structure of supply chains in the clean-energy sector, as it offers, for example, the budget (tax credits, etc) worth \$369 billion in the clean-energy space. Notably, the EV-related subsidies are large-scale, and at the final-demand stage, tax breaks are given when EVs are purchased. These perks are only available if the EV batteries and the critical minerals used in them are not made by "foreign entities of concern." (Figure 2)

Figure 2. Inflation Reduction Act (IRA): Tax Credit for EV in the U.S.

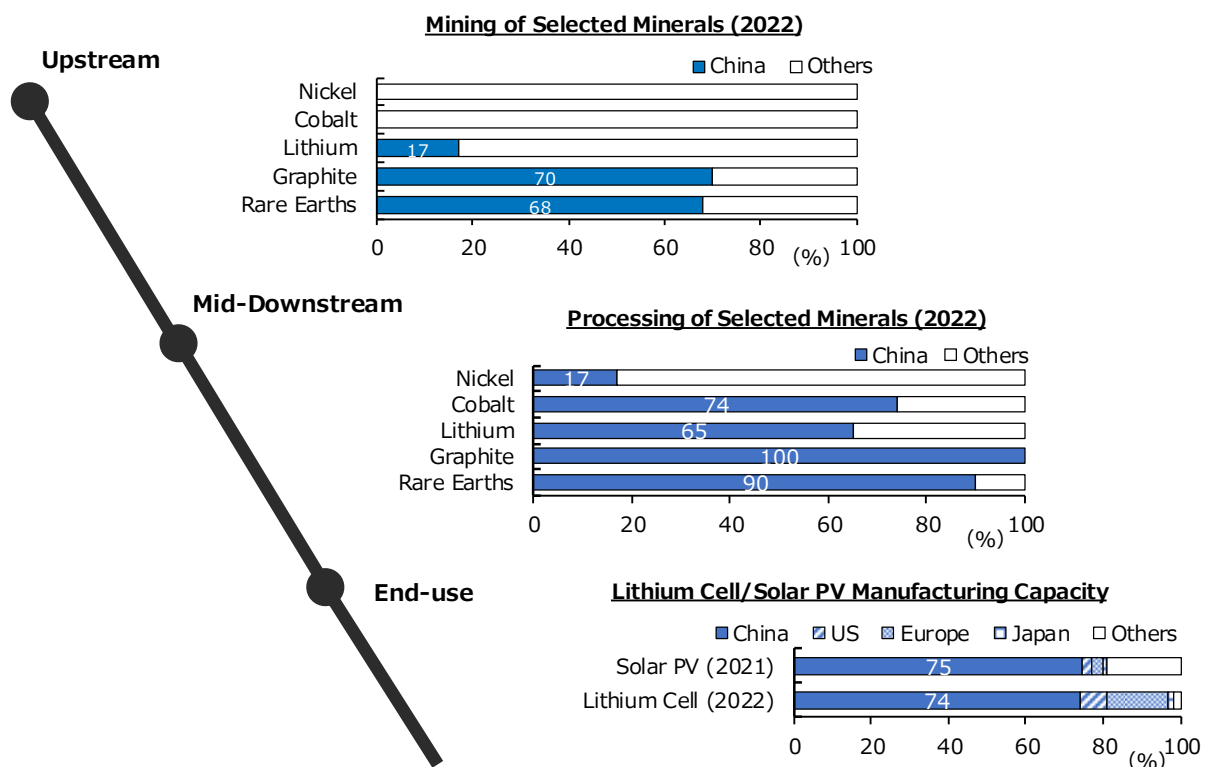


Source: JRI based on various media reports

U.S. policies like this are similar in nature to China's industrial subsidy policies. They are unusual, as nothing like them has been seen in the U.S. It is possible that the U.S. will not see the same rapid development of the targeted industries that China has, so it can be said that tariffs have been raised in order to further exclude China. Although other developed countries are also employing subsidies to develop their industries in a manner similar to China, in the clean-energy field these schemes are still not working as well as they have done in China. China's dominance in clean-energy products cannot be explained by subsidies alone.

In the field of clean-energy, China has an overwhelming share of production capacity not only in final goods, but also in the intermediate goods and critical minerals that are used as raw materials (Figure 3). It will not be easy for developed countries to restructure their supply chains because China enjoys advantages such as 1) provision of large subsidies to Chinese companies, 2) low domestic labor costs compared to developed countries, 3) companies with expertise in the fields of refining and processing critical minerals and possession of more advanced technology than developed countries⁵, and 4) lax environmental regulations (Nogimori [2023c]).

Figure 3. Critical Mineral Supply Chain: Up-Mid-Downstream and End-use



Source: JRI based on IEA, BloombergNEF, Agency for Natural Resources and Energy in Japan

Of these, 4) lax environmental regulations constitute a particularly big advantage for China. When impurities are removed from the ores containing critical minerals, the release of harmful substances results in water and soil pollution, and such environmental damage is regarded as a problem⁶. Since the government and companies in China have been becoming more conscious of the importance of environmental protection in recent years, it is not the case that no environmental measures have been taken whatsoever. However, compared to developed

⁵ Australia aims to build supply chains that exclude Chinese companies from the refining and processing of critical minerals, but U.S. firm Albemarle struggled to operate a lithium hydroxide (refining and processing) plant in Western Australia and has responded by calling in engineers from China in February 2024. Ohio-based Illuminate USA (a joint venture by Invenery of the U.S. and LONGi Green Energy Technology of China), the largest U.S. manufacturer of solar cells, sent nearly 20 employees to a factory in Jiangsu Province for vocational training in November 2023.

⁶ See "Leading rare-metals researcher condemns 'preaching and whitewashing' about EVs," Nikkei newspaper (in Japanese), February 1, 2024 (<https://www.nikkei.com/article/DGXZQOUC308CU0Q3A131C2000000/>).

countries, it is considered possible for companies in China to operate without incurring significant environmental costs.

As the world strives to transition to clean energy, China is reducing the burden on other countries by in effect doing the dirty work. Efforts to achieve the ambitious decarbonization targets that so many countries have declared must inevitably involve discussions on negative aspects such as green inflation. Eliminating relatively low-priced Chinese products in favor of dearer domestic ones requires governments to be prepared for adverse effects such as inflation, and to face these negative aspects of decarbonization head-on.

4. What should developed countries do in the field of clean-energy to counter China's might?

As the above has shown, the possibility that China will not correct its oversupply in the clean-energy sector and will expand its market share in emerging countries, and the fact that Chinese manufacturers enjoy overwhelming cost-competitiveness in addition to benefiting from subsidies, will be obstacles to the development of clean-energy industries in developed countries. To avoid or mitigate such obstacles and achieve their objectives, developed countries could take steps such as 1) cooperating with emerging countries and 2) establishing regulatory frameworks for supply chains.

In recent years, developed countries have emphasized reshoring as an industrial policy. However, reshoring normally means higher costs. Since the 2000s, soaring labor costs and frequent labor disputes have increased business risks in China, resulting in ongoing moves to reduce risk from China. In particular, a business strategy called "China Plus One" (see Matsumoto and Nogimori [2022], etc.), which involves diversifying investments into countries/territories other than China, has since become mainstream, with the leading investment destinations being ASEAN and India, which offer cost advantages⁷. Going forward, it will be necessary for developed countries to redouble their cooperation with these countries and territories. "Friendshoring" based on frameworks such as the IPEF may also be an option (Nogimori [2021], Nogimori [2023a]).

And as mentioned above, one of China's strengths in clean-energy products is that its environmental standards for the refining and processing of critical minerals are lax. Even if EVs are an environmentally friendly good, if there is an adverse environmental impact during the production process, they cannot necessarily be said to be contributing to environmental protection efforts. Progress is also being made in calculating "carbon footprints," an approach that visualizes greenhouse gas emissions throughout the life cycle of products and services, and it will be important to expand such initiatives if market penetration of clean-energy products that meet high standards is to be achieved. Australia has indicated that it intends to promote "green nickel" that satisfies strict environmental standards in the production process (see Appendix 2). In addition, if standards are established that deem products that meet ESG criteria, which cover not only environmental factors but also factors such as

⁷ Another view is that emerging countries such as ASEAN states are strengthening their economic ties with China, making cooperation difficult. Certainly, the huge influence of Chinese companies in mining and refining in nickel-rich Indonesia is a cause for concern, and there is a tendency to view dependence on China as more of a problem than cost structures, with Indonesian nickel excluded from qualifying for IRA tax credits. Even with the increasing tendency to see China as a problem, it is necessary to fully consider whether Chinese companies operating outside China also pose major risks. If supply chains for new-energy products were built in a way that eliminates emerging countries en masse as a reflection of such risks, these emerging economies could also become competitors, and advanced countries could suffer (see Appendix 2).

treatment of workers, to be high value-added products, China will need to withdraw low-standard products from the market and switch to high-standard production processes. This should lead to the formation of a fair market that includes both developed countries and China. From a long-term perspective, this will be unavoidable as the decarbonization of societies is contingent on the establishment of fair and efficient markets for clean-energy products.

5. Conclusion

As mentioned above, developed countries are expected to step up measures to protect their domestic industries, such as imposing anti-dumping duties, but such policies are not likely to work. Policies like that could lead to inflation and economic deterioration. In addition, the pressure to provide large-scale support, as exemplified by the IRA, could worsen public finances. Nogimori [2023c] focused on the supply chains for critical minerals, and argued that "de-risking from China" and "decarbonization" are incompatible, and that pursuing them simultaneously would increase economic losses. The fact that China still retains a competitive advantage despite the expansion of large-scale subsidy programs, such as the IRA, in developed countries serves as a reminder that it is difficult to balance "de-risking from China" and "decarbonization."

Japan will need to develop its clean-energy sector by throwing its support behind the corporate-led "China Plus One" movement and avoiding excessive protectionism. In Japan, the proliferation of EVs has been sluggish, making it especially hard for the country to build supply chains to meet domestic demand. For this reason, it will be important to provide policy support for clean-energy industries and supply-chain restructuring, with a view to capturing untapped demand in ASEAN countries and India. In addition, while government industrial policy has been growing in importance, it will also be vital to aim for the optimal allocation of economic resources, and attracting industries that are not high value-added to Japan would lead to a decline in productivity. It is recommended that support for reshoring to Japan be limited to high value-added fields, and that, with low value-added products, the emphasis be on collaboration with emerging countries.

Furthermore, it should be recognized that clean-energy products are currently making inroads in Japan at low prices, and these low prices are partly the consequence of lower costs thanks to China's lax environmental regulations. To transform global supply chains for clean-energy products such that the products become high value-added products that comply with ESG standards, which include not only environmental standards but also labor standards, the Japanese government will need to work with the governments of other countries to create a framework for ensuring adherence to high standards. The experience of Japan, which has played a leading role in the creation of frameworks for regional economic partnership agreements such as the Trans-Pacific Partnership (TPP), should prove very useful in this regard.

Appendix 1. Rapid deterioration of supply-demand balance and overproduction in the clean-energy sector in China

In recent years, China has been rapidly expanding its share of the global market for clean-energy goods. Exports of EVs and solar cells have been growing especially quickly, with EV exports increasing by 64% y-y to 1.55 million units and exports of solar cells rising by 38% y-y to 5.64 billion units in 2023 (Figure 4). The prices of China's clean-energy products have been falling, forcing companies in the sector from many countries to face fierce price competition (Figure 5).

The reasons for this overproduction include 1) Chinese government subsidies and other measures to support the industry and 2) insufficient domestic demand in China.

In China, industrial support measures such as subsidies are being aggressively implemented, and lithium-ion batteries, EVs, and solar cells, known as the "new three," have become the main targets for development in recent years. Although the rapid expansion of exports is a recent phenomenon, the Chinese government's generous support for these industries has been accelerating since around 2010 (Table 3). After the implementation of the massive RMB4-trillion economic stimulus package at the time of the global financial crisis in 2008, China began providing supports for the clean-energy industry with the intention of further stimulating the economy. In October 2010, the government announced the "Decision to Accelerate the Development of Strategic Emerging Industries," which identified seven industries, including clean-energy vehicles, as strategic emerging industries, and presented promotion measures, policies, and targets. Furthermore, the "Made in China 2025" plan unveiled in May 2015 declared that promotion of industry, including the clean-energy industry, would be strengthened through subsidies, tax incentives, and financing from sovereign wealth funds.

Figure 4. Export Volumes of Clean Energy Related Goods

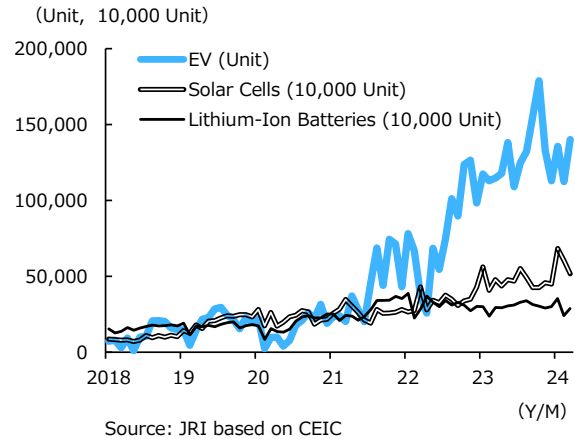


Figure 5. Export Unit Values of Clean Energy Related Goods

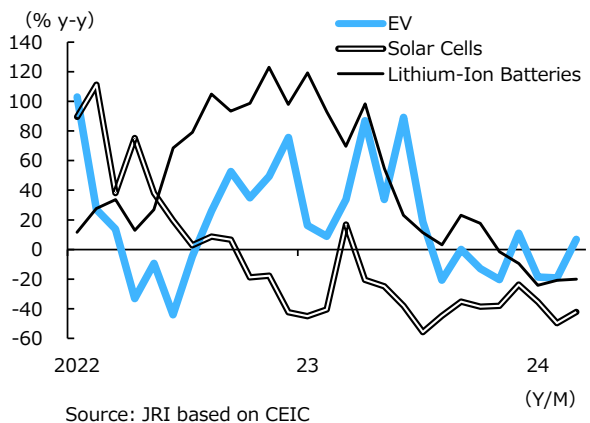


Table 3. Main Clean Energy-related Industry Support Measures by the Chinese Government

November 2008	RMB 4 trillion stimulus package aiming to minimize the impact of the global financial crisis
Jan-Mar 2009	Designated 10 major industries including the automobile industry, and announced a three-year "Automotive Industry Readjustment and Revitalization Plan" for 2009-2011. →Announced the target of "production capacity of 500,000 and 5% of passenger car sales for new energy vehicles in 2011" in the plan. →With this notification, the new energy vehicle (NEV) policy was launched in earnest.
October 2010	Announced "the Decision to Accelerate the Development of Strategic Emerging Industries" →The decision included 7 strategic emerging industries such as new energy vehicles, and measures, policies and targets for their promotion.
May 2015	Launched the "Made in China 2025" →The target to become a world-leading manufacturing powerhouse by 2049 by promoting manufacturing in 10 priority industries, including energy-saving and new energy vehicles, was stated.
October 2020	Released "the New Energy Vehicle Industrial Development Plan for 2021 to 2035" →The scope of promotion no longer covers energy-saving vehicles, and covers new energy vehicles, including securing critical minerals.
June 2022	Released "the 14th Five-Year Plan on Renewable Energy Development" →Increase wind and solar energy production and aim to increase the share of renewable energy in consumption.

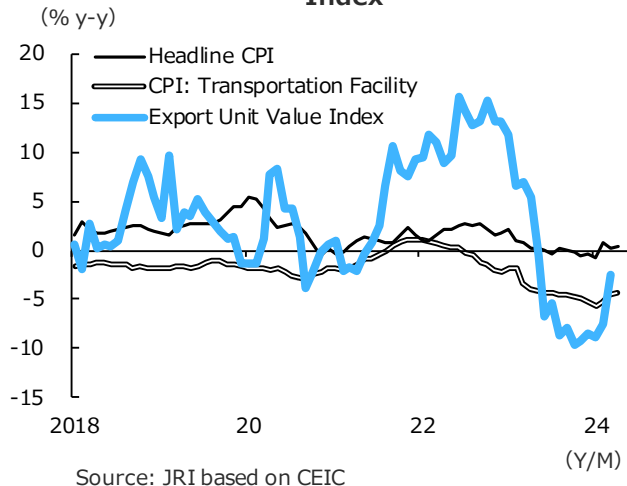
Source: JRI based on various media reports

The timing of the major shift in EV policy is said to have been 2020, when the "New Energy Vehicle Industry Development Plan (2021-2035)" was announced. This plan followed the "Energy Saving and New Energy Vehicle Industry Development Plan (2012-2020)" which had been announced in June 2012. With the new plan, the words "energy-saving" were removed from the name, and the plan called for the targeted development of "new energy vehicles." Specific targets were also included, such as increasing the share of new-energy vehicles (NEVs) sold to about 20% of the total by 2025. In 2022, the 14th Five-Year Plan on Renewable Energy Development called for relevant industries to be boosted further, and targeted a doubling of wind power and solar power.

As a result of such policies, the EV industry has stood out for a level of business expansion that could even be described as reckless. In 2019, real-estate firm Evergrande Group entered the EV business as it moved to diversify its operations, while smartphone giant Xiaomi, which announced its entry into the EV sector in 2021, started selling new cars in China in 2024, though it is currently selling them at a loss. These companies are believed to be seeking to take advantage of China's cost-superior supply chain to capture demand not only in China but, ultimately, all around the world.

Furthermore, even though the zero-COVID policy was lifted at the end of 2022, the Chinese economy has been unable to break free from stagnation (Nogimori [2023b]). Demand for clean-energy products has also declined significantly, leading to severe deterioration in the supply-demand balance. The deflationary trend is intensifying in China due to tepid consumption of durable consumer goods, including automobiles, and the country is now seen as "exporting deflation," which is impacting other countries (Figure 6).

Figure 6. China's CPI and Export Price Index



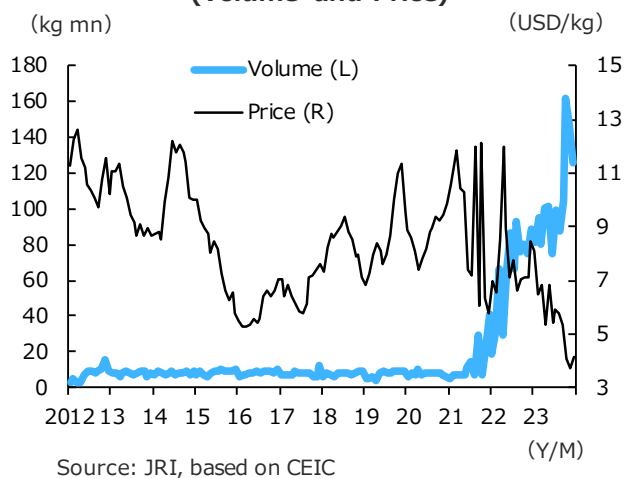
Appendix 2. Another overproduction problem: Conflict between Indonesia and Australia in the nickel industry

China is not the only country where overproduction is occurring. Indonesia has rapidly expanded its nickel production, resulting in overproduction, and this has led to problems such as the closure of nickel mines in Australia and other countries.

Indonesia is the world's largest producer of nickel ore, the metal extracted from which is used in EV batteries, but it has stopped exporting nickel ore in favor of becoming a high value-added producer by nurturing its own refining and processing industries. Although a previous attempt at this failed, it reimposed an export ban in 2022, and its plan to develop its nickel industry is on track thanks to the support of Chinese companies with strong technology in mineral refining and processing (Matsumoto [2022], Matsumoto [2023]). In Indonesia's nickel industry, serious environmental damage has become a problem. Factors such as low costs incurred for environmental-protection measures may be enhancing the industry's competitiveness.

Since the end of 2023, Indonesia's nickel production has increased rapidly, leading to an oversupply. As nickel exports from the country soared, international prices fell steeply, putting many Australian companies in a difficult position (Figure 7). According to reports, some Australian firms are ditching their original plans to strengthen their nickel processing operations and instead turning their attention to businesses such as gas extraction (Nikkei Asia, April 24).

Figure 7. Exports of Nickel in Indonesia (Volume and Price)



The Australian government also plans to provide subsidies to support companies engaged in nickel mining and processing, but is not positioning this as a fundamental solution. "Australian nickel resources are produced to high environmental, social and governance (ESG) standards, meaning Australia offers more sustainable and ethical critical minerals than many of our competitors," the Australian government explains. It has set out a policy of having its trading partners acknowledge that prices of the country's nickel include a "green premium," i.e., the product is high value-added⁸. It is currently asking its trading partners to support this premium, but is still waiting for responses. Adoption of a system like this that emphasizes high standards will likely take some time, as there will need to be discussions about who will bear the costs.

Eliminating minerals that are offered at low prices because environmental damage is being ignored, and implementing a system where minerals that meet high standards are traded at appropriate prices, will lead to the construction of supply chains that enable developed countries such as Australia to remain competitive. In addition, if China and Indonesia, whose regulation of production processes is regarded as insufficient, are also required to comply with high standards, it will be possible to establish fair and efficient markets in the new-energy field.

References

- European Commission [2017]"Commission staff working document on significant distortions in the economy of the people's republic of China for the purposes of trade defence investigations"
[https://ec.europa.eu/transparency/documents-register/detail?ref=SWD\(2017\)483&lang=en](https://ec.europa.eu/transparency/documents-register/detail?ref=SWD(2017)483&lang=en)
- European Commission [2024]"Commission updates report on state-induced distortions in China's economy"
https://policy.trade.ec.europa.eu/news/commission-updates-report-state-induced-distortions-chinas-economy-2024-04-10_en
- Matsumoto, Mitsuhiro [2022] "Indonesia aims at industrial advancement through EVs", ASIA MONTHLY February 2022,
<https://www.jri.co.jp/en/MediaLibrary/file/english/periodical/asia/2022/02/contents.pdf>
- Matsumoto, Mitsuhiro and Minoru Nogimori [2022] "Asia: Stable growth of ASEAN and India and decoupling from China," ASIA MONTHLY December 2022
<https://www.jri.co.jp/en/MediaLibrary/file/english/periodical/asia/2022/12/contents.pdf>
- Matsumoto, Mitsuhiro [2023] "Indonesia expands ore export ban," ASIA MONTHLY February 2023,
https://www.jri.co.jp/en/MediaLibrary/file/english/periodical/asia/2023/02/contents_1.pdf
- Nogimori, Minoru [2021] "Rebuilding U.S. Supply Chain and its impacts on Emerging Asia," ASIA MONTHLY January 2021,
<https://www.jri.co.jp/en/MediaLibrary/file/english/periodical/asia/2022/01/contents.pdf>
- Nogimori, Minoru [2023a] "ASEAN is reluctant to join the U.S.-led decoupling/de-risking strategy for China," JRI Research Journal; Vol.6 No.5, April 11, 2023,

⁸ Nickel placed on critical minerals list," Ministers for the Department of Industry, Science and Resources, 16 February 2024
<https://www.minister.industry.gov.au/ministers/king/media-releases/nickel-placed-critical-minerals-list>

<https://www.jri.co.jp/en/MediaLibrary/file/english/periodical/jrirj/2023/04/nogimori.pdf>

- Nogimori, Minoru [2023b] “The "Japanization" of Chinese Economy and Fears of Prolonged Stagnation,” JRI Research Journal; Vol.6 No.8, September 11, 2023

<https://www.jri.co.jp/en/MediaLibrary/file/english/periodical/jrirj/2023/09/nogimori.pdf>

- Nogimori, Minoru [2023c] “Restructuring of Critical Mineral Supply Chain Faces “Trilemma” — Economic risks to surge by pursuing de-risking from China and decarbonization —”, JRI Research Journal; Vol.7 No.2, January 23, 2024

<https://www.jri.co.jp/en/MediaLibrary/file/english/periodical/jrirj/2024/01/nogimori.pdf>