

An Opportunity That Should Not Be Missed: Applying Chinese Policy That Promotes Efficient Air Conditioning to Countries That Need It

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AN OPPORTUNITY THAT SHOULD NOT BE MISSED: APPLYING CHINESE POLICY THAT PROMOTES EFFICIENT AIR CONDITIONING TO COUNTRIES THAT NEED IT

by Xiaopu SUN, Houfu YAN, Shekun WANG, Tad FERRIS*

Do not impose on others what you yourself do not desire.(己所不欲，勿施于人)
— Confucius

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I. INTRODUCTION

As the world warms, the growing use of air conditioners (“ACs”) and other cooling equipment becomes essential for human comfort and public health. In addition, cooling-equipment energy and refrigerant consumption also presents tremendous climate mitigation opportunities. The most efficient ways to capture much of the climate benefit lie in the hands of a small number of AC manufacturing and exporting countries, including China, which manufactures over 80% of global room ACs with a large amount of this cooling equipment destined for export.¹ This article highlights one of China’s policies, the “Same Line, Same Standard and Same Quality” policy (“Same-Line Policy” or “Policy”), intended to support economic recovery from the COVID-19 pandemic and address the export challenges that have negatively affected Chinese industries and products on the global market.² Through the Policy, the Chinese government encourages manufacturers of consumer and industrial products to sell products within China that were produced for markets outside China according to standards exceeding those for products produced for the Chinese market. The Policy, and the associated information and business-platforms that the government established to ensure policy success, aim to improve the domestic economic situation through consumption of products previously destined for export markets but which are not being sold because of the economic downturn during the pandemic. Policies like these, representing a course of action that China’s leadership endorses, can drive changes in Chinese law, including changes that address loopholes in the law that allow environmentally harmful activities to continue. The Same-Line Policy provides an opportunity for global climate-mitigation, public health, and other benefits that should not be missed.

In this article, Section II provides background on how China’s cooling industry situation presents a unique opportunity for climate change mitigation. Section III details a new climate strategy which applies the Same-Line Policy to cooling equipment, such as ACs (including energy-consuming AC components) exported by Chinese companies. In particular, the strategy will raise the efficiency of exported ACs to at least meet China’s minimum energy efficiency standards, particularly the products destined for importing countries that either lack any minimum energy performance standards for such products or have minimum energy performance standards which are lower than those applied to such products in China. Section IV explains how this strategy fits into China’s broader policy priorities such as development of a green “Belt and Road Initiative” (BRI) and promotion of “Made in China 2025.” The adoption of this strategy would eventually aid the AC industry in overcoming global trade barriers and advance its technical innovation. Section V identifies legal and policy options that would enable China’s application of its Same-Line Policy to AC exports. Section VI concludes with a set of key takeaways for policymakers and stakeholders.

II. COOLING INDUSTRY, CLIMATE CHANGE, AND CHINA’S UNIQUE ROLE

1. THE COOLING INDUSTRY PRESENTS AN OPPORTUNITY FOR CLIMATE CHANGE MITIGATION

Cooling equipment contributes to climate change both directly from high global-warming-potential (GWP) refrigerants and indirectly from the emissions associated with generating electricity to power ACs and refrigerators in buildings and transport.³ Coordinated international action on energy-efficient and climate-friendly cooling could avoid as much as 460 billion tonnes of greenhouse gas emissions – roughly equal to eight years of global emissions at 2018 levels – over the next four decades.⁴ Worldwide, doubling the energy efficiency of ACs could save up to 2.9 trillion USD by 2050 in reduced electricity generation, transmission, and distribution costs alone.⁵ Action on AC energy efficiency would bring many other benefits, such as increased access to life-saving cooling, improved air quality, and reduced food loss and waste.⁶

Product energy efficiency programs, including minimum energy performance standards and labeling requirements, are the primary national policies governing energy efficiency levels for ACs sold on a country’s market. Over ninety countries and regions around the world have implemented such energy efficiency policies, including China.⁷ However, a significant number of countries in Africa, Asia, Latin America, and the Caribbean still lack any form of energy efficiency requirements.⁸ These countries are significant Chinese export markets.⁹ Efforts to raise the minimum energy performance standards for ACs can reduce CO₂ emissions by forty-nine billion tonnes over 2020-2050 globally.¹⁰ China’s latest room AC minimum energy performance standards went into effect as of July 1, 2020.¹¹ China’s Green and High-Efficiency Cooling Action Plan provides the target of thirty percent improvement that calls for action to further raise these standards.¹² China accepted the Kigali Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer on June 17, 2021.¹³ The hydrofluorocarbon phasedown required under the Kigali Amendment also provides the opportunity for simultaneous refrigerant transition and cooling efficiency improvement.

2. CHINA’S UNIQUE ROLE IN THE COOLING INDUSTRY AND ITS RESPONSE TO MARKET CHALLENGES FROM THE PANDEMIC

China has a unique role to play in the cooling sector as the world’s largest producer, consumer, and exporter of room ACs.¹⁴ In 2019, China’s room AC production reached 218.662 million units.¹⁵ China exported more than fifty million room ACs per year during 2017-2019.¹⁶ In 2019, room ACs exported by China’s Midea Group alone exceeded twenty million units.¹⁷ Gree, another major Chinese cooling equipment manufacturer, exported over ten million AC units in 2019.¹⁸

However, the overseas popularity of Chinese AC brands does not match its huge export volume. Sixty-eight percent of ACs exported by Chinese manufacturers are not labeled

as Chinese brands.¹⁹ This has been a long-lasting model for Chinese manufacturers to quickly expand profits from exported products. However, this approach inevitably sacrificed opportunities to build positive awareness of Chinese brands on the global market.²⁰ With this backdrop in mind, China's cooling industry has gradually realized that it is critical for its global competitiveness to focus on the strength of the brand and quality of the products.²¹

The global pandemic in 2020 has presented additional challenges to Chinese manufacturers in both their home and export markets. In response, these manufacturers are resorting to various policy strategies, including promoting sales of products *within China* that were produced for markets *outside China* with standards exceeding those of products produced for the Chinese market, consistent with China's Same-Line Policy.²²

III. CHINA'S SAME-LINE POLICY CAN ASSIST THE GLOBAL PROMOTION OF EFFICIENT AND CLIMATE-FRIENDLY ACs

The Same-Line Policy refers to a Chinese government-endorsed course of action whereby exporting companies produce products for the export and domestic markets on the same production line in accordance with the same standards, so that the products supplied to the domestic market and the products exported to the markets overseas are of the same quality level.²³

Companies that want to provide "Same-Line Policy" products on the domestic market have to meet three requirements:

1. the company must obtain qualification for export registration and actually export products;
2. the company must self-declare that the products sold on the domestic market are in compliance with the Same-Line Policy; and
3. the company producing the products must obtain, if food safety is relevant to the exported goods, hazard analysis and critical control point (HACCP) certification.²⁴

The Same-Line Policy initially focused on goods deemed essential for daily consumption, such as food and agricultural products.²⁵ The Policy was gradually expanded to include a much broader scope of general consumer goods and industrial products, in order to minimize the impact of the pandemic on Chinese exporting companies.²⁶

The Same-Line Policy follows a long history of product standard development in China. Because China's product quality standards for domestic products were for the most part lower than the standards of many developed countries, the quality of exported products is often better than those products marketed and sold for domestic consumption.²⁷ As a result, more and more Chinese consumers prefer to purchase from the foreign markets, believing that they are obtaining higher-quality products.²⁸ In an effort to meet this preference, the Same-Line Policy was proposed to apply in situations where the Chinese standards for particular products are lower than foreign standards for such products. The Chinese government promoted the Policy to boost purchases by Chinese consumers of Chinese-manufactured products that were produced according to higher export-market standards.

Implementation of the Policy by government and companies is intended to improve the product quality for Chinese consumers, and meet and improve China's domestic mid-to-high-end market demand. Additionally, the Policy aims to motivate Chinese enterprises to improve their product and service quality, fully endorse international standards, and unify domestic- and export-market management models to improve industrial innovation and competitiveness.

In circumstances where standards applicable to particular Chinese products exceed requirements imposed under export-market standards for similar products, application of the Same-Line Policy implies that the exported products must comply with the Chinese standards.²⁹ The AC sector provides an example of such a situation. In July 2020, China began to formally implement its newly amended room AC minimum energy performance standards as part of China's response to climate change.³⁰ China has raised or will further raise the minimum performance standards to internationally leading levels in the following situations:

1. The minimum energy performance for *variable-speed* room ACs is now comparable to the minimum energy performance standards in the EU and the US.³¹
2. The top level of energy performance for *fixed-speed* and *variable-speed* room ACs is among the highest in the world, with requirements higher than those of Energy Efficiency Top Runner in Japan and ENERGY STAR in the US.³²
3. China is also in the process of updating its minimum energy performance standards for *multi-connected* ACs.³³

Even before the 2020 amendment of China's minimum energy performance standards for variable- and fixed-speed room ACs, the standards were already higher than those in many other developing countries such as India, Brazil, Thailand, Viet Nam, and Argentina.³⁴ Moreover, approximately 23% of all Chinese AC exports go to countries with no minimum energy performance standards.³⁵ Yet, through official interpretations of China's Standardization Law as the Law currently applies to exports, China's minimum energy performance standards mandatorily apply only to ACs produced, sold, imported, or supplied in China, *not to AC exports*.³⁶ Exported ACs are only required to be in line with the laws and regulations (including, for instance, the minimum energy performance standards) of the importing country and the terms of the contract for the sale or export of the goods.³⁷

This situation has enabled Chinese companies to export ACs with energy efficiency and other specifications that do not conform to standards in effect for the same ACs in China. For example, a recent market analysis of ten African countries showed that room ACs with energy efficiency ratios less than 3.0 W/W³⁸ make up 35% of the overall room AC sales in the report's ten focus countries, which represent 96% of Africa's room AC market.³⁹ At least 50% of these units are imported in whole or in part from China, followed by Korea (3.9%), the US (3.2%) and Japan (1.7%).⁴⁰ These exported room ACs and components fall

below minimum product energy efficiency or other requirements and are therefore prohibited from import and/or sale in many of the major AC manufacturing and exporting countries, including China, Korea, Japan, and the US.⁴¹

Low-efficiency ACs undoubtedly undermine efforts by China and the countries importing Chinese products to combat climate change.⁴² Such products are “energy vampires” that needlessly draw energy resources better applied to other critical activities during the pandemic and indirectly contribute to air pollution by increasing demand on power facilities.⁴³ In addition, the “race to the bottom,” wherein export strategy is focused on capturing and retaining market share by selling the lowest cost and least efficient, most polluting and climate-harming products, is a short-sighted approach for longer-term economic development, innovation, and employment, including for recovery from the COVID-19 pandemic. This is also inconsistent with China’s green development strategy, even during this time of continued economic recovery.⁴⁴ It is particularly important that China seizes the opportunity to prevent such exports, elevating the Chinese AC industry to contribute to the vision of “a community with a shared future for mankind,” as described by Chinese President Xi Jinping.⁴⁵

To seize this opportunity, China should consider expanding the application of the Same-Line Policy to ACs that are sold into export markets with minimum energy performance standards that are lower than China’s or that have not promulgated such standards. In other words, China should export ACs that meet Chinese minimum energy performance standards in situations where the export market has lower or no such standards.

IV. APPLYING THE SAME-LINE POLICY TO EXPORTED ACs IS IN CHINA’S AND THE WORLD’S INTERESTS

There are clear benefits to China and the world in applying the Same-Line Policy to exported ACs. This section describes three key advantages.

1. THE SAME-LINE POLICY MAKES CHINA’S GREEN DEVELOPMENT AND DEVELOPING-COUNTRY POLICY PRIORITIES MORE EFFECTIVE

Exporting low-efficiency products transfers climate-damaging emissions,⁴⁶ including air pollution linked to higher COVID-19 death rates, to other countries.⁴⁷ Chinese government policy priorities, such as promoting the green BRI and South-South cooperation on climate change, reflect the country’s willingness to work with other countries, especially developing countries, to achieve the goals of sustainable development and climate safety. The application of the Same-Line Policy to these initiatives would help make these initiatives more effective, as described below. It would also be a timely move to help realize a post-pandemic green recovery in BRI countries that minimizes climate-damaging emissions.

A. GREEN BRI AND BRI GREEN COOLING POLICIES

The BRI is a China-initiated platform to promote international collaboration in the key areas of “policy coordination, connectivity of infrastructure and facilities, unimpeded trade,

financial integration, and closer people-to-people ties.”⁴⁸ The BRI Green Development International Alliance was proposed by President Xi Jinping during the first BRI Forum for International Cooperation in 2017.⁴⁹ He emphasized in his keynote speech at this BRI Forum that “[w]e must practice the new concept of green development, advocate green, low-carbon, circular, and sustainable production and lifestyles, strengthen cooperation in ecological and environmental protection, build ecological civilization, and jointly achieve the 2030 Sustainable Development Goals.”⁵⁰

In 2019, China’s National Development and Reform Commission launched the BRI Green Cooling Initiative during the Second BRI Forum for International Cooperation, together with United Nations Industrial Development Organization, the United Nations Economic and Social Commission for Asia and the Pacific, and Energy Foundation China.⁵¹ The Initiative calls for countries, industries and international organizations to join together to “promote collaboration among BRI countries on policy, technology and market transformation, and improve energy efficiency for the sustained development of the cooling industry.”⁵² Initiative activities include: construction of platforms for policy dialogue and information exchange; capacity building, exchange, and cooperation on energy efficiency policies and standards; innovation in green cooling business models; and technology innovation and exchange.⁵³ Cooling industry associations from China, the US, Japan, Brazil, and Europe, as well as the China National Institute of Standardization, Chinese AC manufacturers Gree, Haier, Midea, Aux, TCL, and the Chinese e-commerce platform JD.com joined the Initiative.⁵⁴

The BRI Green Cooling Initiative establishes a ready-for-deployment platform to support the export of efficient and climate-friendly ACs to BRI countries. This is in line with the Initiative’s vision of promoting collaboration among BRI countries to improve cooling efficiency as the world warms from climate change.⁵⁵ Particularly, as discussed earlier in this article, many countries in Africa, Asia, Latin America, and the Caribbean still have not implemented any form of energy performance standard and therefore enable import of inefficient products that would be prohibited in their countries of manufacture.⁵⁶ Many of the countries in these regions participate in the BRI.⁵⁷ Further, many of these countries constitute significant AC product export markets for China.⁵⁸ The BRI Green Cooling Initiative presents the Chinese government with a clear opportunity for such transformative leadership if it were to apply Same-Line Policy to ACs that are exported to the BRI countries. This could be the next ground-breaking step to help realize post-pandemic green recovery of these countries.

B. SOUTH-SOUTH CLIMATE-CHANGE COOPERATION POLICIES

The export of efficient and climate-friendly ACs to developing countries that have lower or no minimum energy performance standards is also consistent with China’s broader support for cooperation in resources, technology, and knowledge

on climate-change solutions among developing countries (i.e., “South-South climate-change cooperation”).

During the period spanning 2011 to 2019, the Chinese government allocated about one billion yuan (around one hundred and fifty-five million USD) for South-South climate-change cooperation activities.⁵⁹ In 2015, China provided a grant of six million USD to the UN Secretary-General’s Office for work on South-South climate-change cooperation.⁶⁰ The same year, President Xi Jinping announced the establishment of the China South-South Climate Cooperation Fund of twenty billion yuan (around three billion USD).⁶¹

China’s South-South climate cooperation activities include: donating climate adaptation and mitigation goods, such as efficient products, to small island countries, least developed countries, and African countries, many of which are also BRI countries; and organizing climate change training seminars for officials and technicians from other developing countries.⁶² Many efficient and environment-friendly products, including energy-efficient ACs, LED lamps, solar photovoltaic power generation systems, solar street lamps, and electric vehicles, were donated to developing countries.⁶³ During his speech at the opening ceremony of the Paris climate summit in 2015, President Xi Jinping also announced the launch of South-South cooperation projects to “set up 10 pilot low-carbon industrial parks and start 100 mitigation and adaptation programs in other developing countries, as well as to provide 1,000 training opportunities on climate change.”⁶⁴

Going beyond donations, an official policy mandating the export of efficient ACs to other developing countries would be consistent with China’s broader support for South-South climate-change cooperation. Evidence that Chinese manufacturers are exporting inefficient ACs to developing countries contradicts China’s promotion of the green BRI and Green Cooling Initiatives and also undermines the benefits of the Chinese government’s donation of efficient ACs to countries as part of its South-South climate-change cooperation.⁶⁵ It also further underscores the need for consistent and climate-friendly policies in China’s international relations.

To address these contradictions, the Chinese government should incorporate the Same-Line Policy into its South-South climate-change cooperation projects, including the construction of pilot low-carbon industrial parks and the implementation of climate mitigation and adaption programs. Such actions will also strengthen the climate integrity of such projects.

2. THE SAME-LINE POLICY REFLECTS A STRATEGIC MOVE TO ACCELERATE INDUSTRY TRANSITION AND ACHIEVE MADE-IN-CHINA 2025 TARGETS

“Made-in-China” products have long been stereotyped for various reasons as inexpensive but low-quality goods enabled through low labor-cost and supply-chain advantages.⁶⁶ Made in China 2025 is a strategic plan issued by the Chinese government in 2015, aiming to comprehensively upgrade Chinese industry, and transition Chinese manufacturing to become innovation-driven, emphasize quality over quantity, achieve

green development, optimize the structure of Chinese industry, and nurture human talent.⁶⁷

Made in China 2025 highlights, among other things, the concept of green development and green manufacturing. To realize this policy, the Chinese government should engage Chinese companies with the understanding that the following corporate actions are critical in helping the government realize Made-in-China 2025’s goals:

- a. Develop efficient and environment-friendly products to build a green supply chain through incorporation of energy-saving and environmental protection factors into product design, procurement, production, packaging, logistics, sales, service, recycling and reuse processes;
- b. Take enterprise social responsibility seriously, including environmental protection, energy conservation, and emissions reduction; and
- c. Implement enterprise green strategies, green standards, green management, and green production.⁶⁸

Export of inefficient products, including ACs, represents a fundamental deviation from the Made-in-China 2025 targets. These targets include transitioning companies to innovators of quality products and brands. To put this transformation in Chinese terms, the targets aim at transforming industry members “from made in China to invented in China, from Chinese speed to Chinese quality, [and] from Chinese products to Chinese brands.”⁶⁹ In order to fulfill the task of evolving Chinese manufacturing from its current focus on large output to a focus on high product quality,⁷⁰ one important strategic move is to stop producing and selling products—including those destined for export—that do not conform to China’s minimum product standards, including energy performance standards. This would demonstrate that the Chinese government is determined to achieve Made-in-China 2025 targets and would motivate Chinese industry to more quickly become a global market leader on technology innovation and high-quality products.

3. THE SAME-LINE POLICY HELPS CONTROL BUSINESS RISKS ASSOCIATED WITH AC EXPORTS

Applying the Same-Line Policy to exported ACs would also reduce risks associated with regulatory changes among global trade partners. Such risks include when the country importing ACs from China adopts or raises its minimum energy performance standards making import of low-efficiency ACs illegal and subject to rejection, seizure, destruction, and/or the focus of local, national, or international criticism. A growing number of export-market governments purchasing goods from China, as well as leading Chinese manufacturers, are learning and understanding the environmental and climate significance of cooling efficiency. These export-market governments are also increasingly demanding efficient ACs for their markets, in many cases with technical and policy assistance from multilateral treaty secretariats and multilateral initiatives, including the *Montreal Protocol on Substances that Deplete the Ozone Layer*,⁷¹ the

United Nations Environment Programme's Cool Coalition,⁷² and United for Efficiency (U4E) Model Regulation initiatives.⁷³

Therefore, the business risks associated with the export of ACs the performance of which falls below China's minimum energy efficiency standards are significant and are expected to grow swiftly. For AC exports that fall below China's minimum energy performance standards, these ACs would be prohibited from being sold within China or being diverted (if they are returned) to other countries or regions with higher standards. The cost and expenses may have to be fully born by the Chinese manufacturers or companies across their value chain⁷⁴ under these circumstances. Producing ACs that do not conform to Chinese minimum product performance standards limits options for Chinese companies pursuing such production as a response to the economic crisis arising from the pandemic. Avoidance of such global trade risks is a key reason why the Chinese government issued the *Implementation Opinions on Supporting the Sale of Export Products on Domestic Market*.⁷⁵ This policy document encourages Chinese enterprises to produce products consistent with the Same-Line Policy, so that the enterprises can flexibly transfer these products between domestic sales and foreign exports in response to crises in China's domestic or international markets.

Considering the Chinese AC industry's dominant role in the global cooling equipment trade, implementation of the Same-Line Policy is a necessary measure for controlling the business risk they may encounter sooner or later, in their export markets.

V. LEGAL AND POLICY RECOMMENDATIONS TO REALIZE THE BENEFITS OF APPLYING THE SAME-LINE POLICY TO EXPORTED COOLING EQUIPMENT

There are, in general, two categories of strategies to promote law and policy implementation of the Same-Line Policy with respect to exported ACs: (1) Chinese government and corporate commitments to stop producing and exporting ACs with energy efficiency performance that does not meet China's own minimum energy performance standards; and (2) importing-country adoption or strengthening of policy tools such as minimum energy performance standards, where none or lower standards exist, and associated import restrictions aimed at prohibiting imports of inefficient ACs.⁷⁶

Considering the two categories of strategies listed above, it is more straightforward for China to stop producing and exporting ACs that do not conform to China's own energy efficiency standards. Such a policy would also prevent companies from the "race to the bottom" for market share, where companies might flood the markets with low cost and inefficient products that create a "market for lemons" and undercut the ability to sell higher-efficiency and better-quality products.⁷⁷

The following law and policy actions would help realize the benefits of China applying the Same-Line Policy to exported ACs.

1. INCORPORATE THE SAME-LINE POLICY INTO THE GREEN DEVELOPMENT OF BRI AND SOUTH-SOUTH CLIMATE-CHANGE COOPERATION

In the near-term, an effective policy tool that can be rapidly deployed is to incorporate the Same-Line Policy into the green development of the BRI (including the BRI Green Cooling Initiative) and the South-South climate-change cooperation. The Chinese government can promote the export of ACs above Chinese minimum energy performance standards to countries with minimum energy performance standards lower than China's or no existing minimum energy performance standards through mechanisms such as green procurement for the BRI projects.⁷⁸ Implementation of this strategy can be demonstrated through the following actions:

- a. Prohibit the procurement and installation of ACs that do not conform to the Same-Line Policy in BRI projects and South-South climate-change cooperation projects;
- b. Prioritize the procurement and installation of efficient ACs according to China's energy efficiency standards in BRI projects and South-South climate-change cooperation projects;
- c. Incorporate the Same-Line Policy into funding allocation processes and decisions under the Silk Road Fund⁷⁹ and China South-South Climate Cooperation Fund;⁸⁰
- d. Utilize the BRI Green Cooling Initiative to facilitate and encourage Chinese AC company participation in BRI countries' government green procurement programs and private buyers clubs⁸¹ for efficient ACs; and
- e. Deploy the BRI and South-South climate-change cooperation platforms to assist with capacity building and information sharing on policies and mechanisms for government/public⁸² and company/private⁸³ green procurement with AC importing countries, including support for adoption of U4E Model Regulations.⁸⁴

2. AMEND CHINESE STATUTES TO PROHIBIT PRODUCTION AND EXPORT OF ACs THAT DO NOT CONFORM TO CHINA MINIMUM ENERGY PERFORMANCE STANDARDS

In the longer term, we propose that the Chinese government amend the relevant Chinese statutes to prohibit producing and exporting ACs that do not conform to China minimum energy performance standards. This will provide the legal foundation for a mandatory regulation of the energy efficiency performance of exported products, such as ACs. A good and relevant example of export controls can be found in China's rules governing ozone-depleting substances. Article 3 of the Regulation on Administration of Ozone Depleting Substances regulates activities including the production, sales, consumption, import and export of ozone-depleting substances in China.⁸⁵

We have identified three primary options for amendment of Chinese law governing the energy efficiency performance of exported products:

Option 1: revise Article 26 of the Standardization Law, which provides that "[t]echnical requirements for exported

products and services shall be implemented in accordance with the contract provisions [therefor].”⁸⁶ We propose to add one paragraph to Article 26 providing that “in cases where the uses of the exported products may cause significant environmental impacts, the technical requirements agreed in the export contracts shall not be lower than China’s minimum environmental and energy performance standards. The list of products that may cause significant environmental impacts shall be formulated and published by the Ministry of Ecology and Environment, together with other relevant ministries under the State Council.”

Option 2: revise Article 17 of the Energy Conservation Law, which currently provides that “[i]t is prohibited to produce, import, or sell energy-consuming products and equipment that are explicitly phased out by the government or do not meet [China’s] minimum energy performance standards.”⁸⁷ We propose to revise this Article to add “export” as follows: [i]t is prohibited to produce, sell, import, or export energy-consuming products that are explicitly phased out by the government or do not meet [China’s] minimum energy performance standards.

Option 3: In the near term, while the longer-term statutory amendment process proceeds, we propose that the Chinese government expand the interpretation of Article 17 of the Energy Conservation Law.⁸⁸ The current, prevailing interpretation of Article 17, described in Option 2 above, is that production of energy-consuming products and equipment means production for the domestic market only, not production of products that are destined for export. We propose to interpret the meaning of “prohibited production” as prohibited production for products that are destined for both the domestic and export markets. The legal basis for such expanded interpretation can be found in Article 9 of the Civil Code, which provides that “[c]ivil entities that are engaged in civil activities shall be conducive to resource conservation and protection of the ecological environment,” also known as the “green principle” of the Civil Code.⁸⁹

3. ACCELERATE INDUSTRY TRANSITION THROUGH GOVERNMENT POLICY AND FINANCIAL SUPPORT

The Chinese government should also explore channels for government policy and financial support, in addition to the mechanisms under the BRI and South-South climate-change cooperation, that would provide greater confidence to industry and overcome potential short-term cost increases involved in applying the Same-Line Policy to exported ACs.

In support of this recommendation, we note that the Chinese government has implemented various incentive mechanisms to promote the sale of efficient and environment-friendly products or services in its domestic market. Article 21 of China’s *Environmental Protection Law* stipulates that “[t]he state adopts various fiscal, taxation, pricing, and government procurement policies and measures to encourage and support the development of environmental protection industries to [promote] environmental protection technology and equipment, [advance] comprehensive utilization of resources, and [provide] environmental services.”⁹⁰

China has a history of promoting sales of energy efficient products, including through subsidies. From June 2009 to May 2011, the national government of China spent 14.6 billion RMB (2.25 billion USD) in subsidies for energy efficient ACs.⁹¹ Data from the Chinese Ministry of Finance showed that the market share of energy efficient ACs increased from 5% to more than 70% during this time period.⁹² The subsidy policy successfully promoted the sale of fifty million AC units, which contributed to annual electricity saving of about ten billion kWh.⁹³ In 2012, another round of subsidies was launched with a larger budget of 26.5 billion RMB (4.2 billion USD) for a number of electronic appliances including ACs.⁹⁴ In 2014, China announced subsidies for ACs using propane (“R290”)⁹⁵ as a refrigerant including those exported to developing countries.⁹⁶

There is a key lesson to be learned from the 2012 subsidy program. The program supported an energy-efficiency level that already represented a large share of the market. Therefore, it encouraged inefficient technologies and failed to maximize the energy efficiency improvement potential from the provided subsidies.⁹⁷ Further, while a well-designed subsidy program remains a key government tool for incentivizing consumer spending and improving energy efficiency in China, the application of such support to exported products is subject to limitations, including requirements imposed on China as a member of the World Trade Organization.⁹⁸

The Chinese government would nonetheless be remiss in its efforts to promote industry export of ACs meeting at least China’s minimum energy efficiency standards if it did not also consider a wide range of financial tools to support these activities.⁹⁹ Hence, we propose that the Chinese government also consider tax incentives or subsidies for companies that export efficient ACs to countries with lower minimum energy efficiency standards than China’s or countries with no existing energy efficiency standards for such products. Of course, to help ensure that the incentives are consistent with international trade rules and that any incentive programs support higher-efficiency products that do not currently have a large share of the market, China would need to require a minimum set of eligibility criteria for such tax incentives or subsidies, including: the claim for tax incentive or subsidy is in compliance with the World Trade Organization (WTO) rules;¹⁰⁰ and the claim is for energy efficient ACs, according to China’s AC energy efficiency standards.

VI. CONCLUSION AND TAKEAWAYS FOR POLICYMAKERS AND STAKEHOLDERS

There are five key takeaways for policymakers and stakeholders seeking to respond to the global market challenges against the backdrop of the pandemic and the climate emergencies that are threatening future generations.

1. The increase of global cooling demand comes with a new climate mitigation opportunity to promote efficient and climate-friendly cooling.
2. China is well positioned, through its dominant position in the AC industry, to lead on realization of this opportunity through applying China’s Same-Line Policy

to ACs exported to countries with lower or no existing minimum energy performance standards for such products.

3. The development of green BRI and South-South climate-change cooperation can be improved by applying China's Same-Line Policy to ACs exported to BRI countries with lower or no minimum energy performance standards, and by incorporating the Same-Line Policy into China's South-South climate-change cooperation projects.
4. China can reinforce the goals of the Made-in-China 2025 strategy by amending and/or interpreting its statutes to stop exports of ACs that do not conform to minimum Chinese energy performance standards for such products.

5. Chinese companies can demonstrate their leadership through participation in public or private procurement of energy efficient ACs that are destined for countries with no minimum energy performance standards or minimum energy performance standards lower than China for such products.

Given these takeaways, it is recommended that the Chinese government act quickly to seize this opportunity that should not be missed to capture the climate mitigation, public health, and industry upgrade benefits of its AC exports.



ENDNOTES

¹ Press Conference, National Development and Reform Commission Held a Press Conference in June 2019 to Introduce Economic Development Situation and Respond to Hot Issues [发展改革委举行2019年6月份定时定主题新闻发布会 介绍宏观经济运行情况并回应热点问题](Jun. 17, 2019), http://www.gov.cn/xinwen/2019-06/17/content_5401036.htm.

² Implementation Opinions on Supporting the Sale of Export Products on Domestic Market [关于支持出口产品转内销的实施意见] (promulgated by China General Office of the State Council, June 17, 2020), http://www.gov.cn/zhengce/content/2020-06/22/content_5521078.htm ("支持企业发展“同线同标同质”产品, 即在同一生产线上按照相同标准、相同质量要求生产既能出口又可内销的产品, 帮助企业降低成本、实现内外销转型。" ["Support the development of “same line, same standard and same quality” products, that is, produce products that can be exported and sold domestically on the same production line in accordance with the same standards and quality requirements, helping enterprises reduce costs and realize the transformation of domestic and foreign sales"]).

³ See generally INTERNATIONAL ENERGY AGENCY (IEA) & UN ENVIRONMENT PROGRAMME, COOLING EMISSIONS AND POLICY SYNTHESIS REPORT: BENEFITS OF COOLING EFFICIENCY AND THE KIGALI AMENDMENT 1, 15 (2020), <https://wedocs.unep.org/bitstream/handle/20.500.11822/33094/CoolRep.pdf?sequence=1&isAllowed=y> (repeatedly noting the climate impacts of cooling equipment).

⁴ See *id.* at 27.

⁵ IEA, THE FUTURE OF COOLING: OPPORTUNITIES FOR ENERGY-EFFICIENT AIR CONDITIONING, 1, 12 (May 2018), https://www.k-cep.org/wp-content/uploads/2020/03/The_Future_of_Cooling.pdf ("Worldwide, the cumulative savings in the Efficient Cooling Scenario amount to 2.9 USD trillion over 2017-2050 compared to the Baseline Scenario").

⁶ See IEA & UN ENVIRONMENT PROGRAMME, *supra* note 3, at 28.

⁷ See Amanda McCrum, et al., CLASP Policy Database – an Appliance Energy Efficiency Tool for Collaboration and Innovation, Center for Law and Social Policy (CLASP), 1723, 1725 (Jan. 2019), <https://www.clasp.ngo/wp-content/uploads/2021/01/2019-eceee-Summer-Study-CLASP-policy-database---an-appliance-energy-efficiency-tool-for-collaboration.pdf> (listing countries with appliance and equipment energy efficiency policies around the world).

⁸ CLASP, THE ROLE OF TRADE POLICY AND ENERGY EFFICIENCY POLICY TO PROMOTE HIGHLY EFFICIENT AIR CONDITIONER MARKETS, 1,2 (Feb. 11, 2019), <https://clasp.ngo/publications/the-role-of-trade-policy-and-energy-efficiency-policy-to-promote-highly-efficient-air-conditioner-markets>.

⁹ See *id.* at 6 (referencing Figure 2: Major Export Regions for Chinese AC Units (sourcing data from United Nations Commodity Trade Statistics Database (UN Comtrade)).

¹⁰ Amol Phadke, et al., Chinese Policy Leadership Would Cool Global Air Conditioning Impacts: Looking East, 66 ENERGY RSCH. & SOC. SCI. 1, 9 (2020).

¹¹ Minimum Allowable Values of the Energy Efficiency and Energy Efficiency Grades for Room Air Conditioners, GB 21455-2019 [房间空气调节器能效限定值及能效等级], NAT'L STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA, (Dec. 31, 2019), <http://openstd.samr.gov.cn/bzgk/gb/newGbInfo?hcno=BC04CDC71AD8C36B62C0FF4AE58F633C> (issuing this rule is the State Administration for Market Regulation and the National Standardization Administration).

¹² China Green and High-Efficiency Cooling Action Plan [绿色高效制冷行动方案], (promulgated by China National Development and Reform Commission, Ministry of Industry and Information Technology, Ministry of Finance, Ministry of Ecology and Environment, Ministry of Housing and Urban-Rural Development, State Administration for Market Regulation and National Government Offices Administration, June 13, 2019), <http://www.gov.cn/xinwen/2019-06/15/5400474/files/3daad33b125443abbd88855b69c61d3c.pdf>. Reference English translation of China Green and High-Efficiency Cooling Action Plan is available at: <https://www.igsd.org/chinas-green-and-high-efficiency-cooling-action-plan-a-model-for-cooling-efficiency-ambition/>.

¹³ United Nations Treaty Collection, 2. f Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer, https://treaties.un.org/Pages/ViewDetails.aspx?src=IND&mtsg_no=XXVII-2-f&chapter=27&clang=en#EndDec (status as at June 21, 2021).

¹⁴ See Press Conference, *supra* note 1.

¹⁵ Luo Lin, Market Analysis of China's Air-Conditioning Industry in 2019: Output is Close to Two Hundred and Twenty Million Units and Export Value Exceeds Tens of Billions of Dollars [2019年中国空调行业市场分析: 产量接近2.2亿台 出口金额突破百亿美元], QIANZHAN DATABASE (March 23, 2020), <https://d.qianzhan.com/xnews/detail/541/200323-cabb150a.html>.

¹⁶ Wen Si, Overview of China's Air Conditioning Market in 2019 [2019年度中国空调市场综述], AIKEN HOUSEHOLD APPLIANCE WEB (Jan. 20, 2020), http://m.cheaa.com/n_detail/w_568364.html.

¹⁷ In 2019, Midea's Air-Conditioning Export Volume Exceeded Twenty Million Sets, China's No. 1 [2019年美的空调出口量破2000万套, 中国NO.1], TENCENT NEWS (Dec. 16 2019), <https://new.qq.com/omn/20191216/20191216A0SBN000.html>.

¹⁸ Wen, *supra* note 16.

¹⁹ The World Recognizes Chinese Air Conditioner Brands from Haier [世界认识中国空调品牌从海尔开始], CANKAOXIAOXI WEB (Apr. 16, 2019), <http://www.cankaoxiaoxi.com/pinpai/20190416/2377460.shtml>.

²⁰ See *id.* ("对于全球用户来说, 认识中国企业很容易, 认识中国空调品牌却很难.....真正认识中国企业海外发展现状, 必须改变一个观点: 出口产品不等于出口品牌。在海外市场, 中国空调分为两种: “有品牌的”和“没品牌的”, 分别代表了“创牌”和“贴牌”两条截然不同的中国企业全球化道路。" ["For the global consumers, it is easy to recognize Chinese companies, but it is difficult to recognize Chinese AC brands... In order to fully understand

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