China-Japan-Korea free trade agreement and legal issues regarding the construction of the Northeast Asia energy interconnection

Cite as: J. Renewable Sustainable Energy 12, 045901 (2020); https://doi.org/10.1063/5.0003919 Submitted: 06 February 2020 . Accepted: 15 July 2020 . Published Online: 14 August 2020

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ABSTRACT

The China-Japan-Korea Free Trade Area and the Northeast Asia energy interconnection have great potential for further development but have some common obstacles. The negotiations for the China-Japan-Korea Free Trade Agreement (FTA) and the construction of the Northeast Asia energy interconnection can complement each other: the former provides a legal framework for the latter and the latter facilitates the former. This paper analyses the legal issues in constructing the Northeast Asia energy interconnection, in the context of the China-Japan-Korea FTA negotiations, and then proposes that based on the characteristics of energy, the legal issues can be resolved by referring to the existing provisions of international law and relevant rules, within the China-Japan-Korea FTA.

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I. INTRODUCTION

The global energy interconnection is "a globally interconnected, intelligent power grid built with ultra-high voltage grids (channels) for the transmission of clean energy." The building of the global energy interconnection requires the construction of major energy sites in the equatorial and the arctic areas, as well as the erection of ultra-high voltage (UHV) grids to transmit electricity worldwide. The establishment of a global energy interconnection is part of the early implementation of the "Belt and Road Initiative" proposed by China. The global energy interconnection represents a solution to the unbalanced distribution of renewable energy worldwide and has three tiers of sub-networks: the continental network, intercontinental network, and global network.

In essence, the global energy interconnection is a globally connected, smart, and strong power grid, with a UHV grid for power delivery. It provides a basic platform for large-scale development, transmission, and the usage of clean energy worldwide.² The system requires a clean alternative on the energy-development side and an electric energy alternative on the energy-consumption side. The development should play a significant role in ensuring energy security and improving the ecological environment.³ Because of its complexity and long-term nature, the construction of the global energy interconnection cannot be accomplished in one step; instead, it should be performed in phases, including promoting the interconnection of domestic grids, transnational grids, and intercontinental grids.⁴ China's grid covers over 88% of its territorial area,⁵ and it has gradually focused on promoting the energy interconnection among Asian states, of which, Northeast Asia offers the greatest potential.³

Mainly comprising China, Mongolia, the Far East, and the Siberian Area of Russia, South Korea, North Korea, and Japan, Northeast Asia includes many of the major energy resource producers and consumers in the world.⁶ Compared with Europe and North America, however, the intercontinental and transnational interconnection of grids in Asia seems relatively modest, with only limited interconnection in Southeast Asia. Transnational grid interconnection in Northeast Asia is uncertain because of different national policies on energy security and volatile political and diplomatic relations.⁸ The transnational grid interconnection projects have been relatively small in the overall transmission scale and have mainly comprised those between Russia and Mongolia, Russia, and China, as well as China and Mongolia. Although Japan and South Korea have urgent demand, they have not joined the grid interconnection system.

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The economic development of Northeast Asia increased the demand for electricity in Japan, South Korea, and East China. Northeast Asia has become one of the world's larger energy consumer markets, 10 and much of the renewable resources in Russia, Mongolia, and Northeast China have not been exploited. States in Northeast Asia are vigorously promoting the exploitation of renewable energy on a large scale. This promotion is particularly true of Japan, which after its earthquake and nuclear leakage disaster¹¹ has devised strategic policies for, for example, increasing energy efficiency, using clean energy, and reducing reliance on nuclear power and fossil fuels. 12 Energy policies in South Korea also focus on increasing the proportion of natural gas, nuclear energy, and other types of clean energy while heeding energy conservation and environmental protection requirements.¹² In China, the State Council has proposed to combine the construction of the surrounding free trade zones and the promotion of international production capacity co-operation. It is also suggested to actively build free trade zones with countries along the Belt and Road Initiative. The purpose of these actions is to create an open and mega "Belt and Road Market."13

Northeast Asian governments have become increasingly aware of the necessity of strengthening energy interconnection, as well as economic and financial policy communication. Regional energy and electricity interconnection is gradually advancing under multilateral frameworks for Northeast Asia energy cooperation, such as the Northeast Asia Intergovernmental Energy Cooperation Mechanism (2005-2015), the Greater Tumen Initiative, and the Belt and Road Initiative. 14 Related organizations and transmission operators are actively expanding the cross-border electricity trade in Northeast Asia and have signed memorandums of cooperation, such as the Northeast Asia Power Grid Cooperation Memorandum, signed by the State Grid Corporation of China, the Korea Electric Power Corporation, the Softbank Group of Japan, and Russian Grids, in Beijing, on March 30, 2016.¹⁴ Additionally, at the chief-representative meeting during the tenth-round of the China-Japan-Korea Free Trade Area negotiation on June 28, 2016, these three states agreed to establish a working group to promote negotiations in government procurement, forest products, finance, electrical communications, and human resources movement, 15 among which the electrical engineering field of electrical communications is closely related to the interconnection of energy and the construction of the Northeast Asia Energy Interconnection. On April 13, 2017, the chief-representative meeting during the twelfth round of the China-Japan-Korea Free Trade Agreement (FTA) negotiations was held in Tokyo, Japan. 16 On the basis of the previous rounds of negotiation, these three states exchanged in-depth views on how to achieve greater progress in promoting trade in goods, services, and investment. At the time of writing, China, Japan, and South Korea had unanimously agreed to build on the consensus of the Regional Comprehensive Economic Partnership Agreement (RCEP), in which the three parties are cooperating to further increase the level of trade and investment liberalization, incorporate high-standard rules, and create an "RCEP + FTA."1

Although good opportunities for development are available, the geopolitical environment in Northeast Asia is an important factor that restricts energy cooperation in the region, among which, Sino-Japanese relations in Northeast Asia is the variable that matters most for stability. Sino-Japanese cooperation is often inhibited by political distrust. The "China Threat Theory" is ever-present in Japanese

political circles and among its citizens.²⁰ In addition, territorial disputes, North Korea's nuclear weapons capability and testing, and intervention from the United States adversely affect the construction of the energy interconnection and economic and trade cooperation in this region. The main challenge in constructing the Northeast Asia energy interconnection is to involve Japan and South Korea.

This paper holds that the construction of the Northeast Asia energy interconnection should have priority, during the current China–Japan–Korea FTA negotiations. The construction of a China–Japan–Korea FTA could provide a legal system and foundation for specific energy cooperation agreements and organizations. Therefore, the energy chapter should be included as a model during the course of China–Japan–Korea FTA negotiations. The construction of the Northeast Asia energy interconnection can be considered a building block for the construction of a global energy interconnection. The methods involved in managing, for example, laws and regulations, energy and economic policies, grid investment, and transnational power transmission, ²¹ can also provide a reference for other states, promoting the construction of a global energy interconnection.

This paper aims to analyze the legal issues in the construction of the Northeast Asia energy interconnection, in the context of the China-Japan-Korea FTA negotiations. First, by analyzing the relationship between the China-Japan-Korea FTA and the Northeast Asia energy interconnection, it is established that the aforementioned two concepts have similar backgrounds and challenges and can complement and encourage each other. The norms of the China-Japan-Korea FTA can provide legal support for the construction of the Northeast Asia energy interconnection. Second, this paper focuses on legal issues in the construction of the Northeast Asia energy interconnection, including the lack of cooperation agreements and cooperation frameworks, energy security issues, means of energy cooperation and the problems thereof, and dispute settlement mechanisms. Finally, it concludes that the states of Northeast Asia, especially China, Japan, and South Korea, should strengthen cooperation within the framework of law. The following suggestions are made: advance the field of energy cooperation and provide legal support for the construction of the Northeast Asia energy interconnection in the context of the China-Japan-South Korea FTA negotiations.

II. RELATIONSHIP BETWEEN THE NORTHEAST ASIA ENERGY INTERCONNECTION AND THE CHINA-JAPAN-KOREA FTA

A. The Northeast Asia energy interconnection and China-Japan-Korea FTA have a high development potential

According to the developments' maturity and potential evaluation system of the global energy interconnection proposed by the Global Energy Interconnection Development and Cooperation Organization, ²² East Asia, headed by such emerging economies as China, Japan, and South Korea, is in a leading position with its global energy interconnection potential. The rapid growth of renewable energy and infrastructure construction in East Asia has made it the leader in the Asia-Pacific region and a frontrunner in global energy interconnection development. ²³

First, China as the world's largest energy producer and consumer has made fruitful efforts in energy transformation²⁴ and is a leader,²⁵ from the perspective of development maturity (i.e., providing the basis

for various types of related facilities and R&D) and development effectiveness in energy, the power industry and related technologies, and the economy thereof. The Russian power grid has a solid foundation in terms of scale and interoperability but is slow in intelligence and green development. ²⁶ Japan and South Korea have made technological advances in new energy, environmental protection, and power generation, as well as in information and communication. ²⁷ In addition, to fulfill future power demand and for environmental considerations, South Korea plans to actively develop renewable energies such as wind and solar power. Japan's solar power capacity leads the world in solar installed capacity, accounting for nearly 10% of the world's total. In addition, Japan is rapidly advancing in terms of hydro, wind, and photoelectric power, among other clean energies. ²⁸

Second, China, Russia, and Mongolia have substantial advantages regarding their development and development potential (i.e., resource characteristics, willingness to develop, and the goal of development), as well as political, economic, and social factors. The Russian Far East and Siberian regions are very rich in renewable resources and because of their low load demand, they are expected, by 2022, to have 4×10^6 kilowatts and 5×10^6 kilowatts of surplus power, respectively. Mongolia's wind and solar energy surplus power is 110×10^9 and 150 × 10⁹ kilowatts, respectively. China's northern region is also rich in renewable energy and the cross-regional transmission in the northwest and southwest of China's energy resources is also achieved through China's many UHV transmission lines.²⁹ Japan and South Korea, although disadvantaged in terms of national reserves of resources, can be complemented by China, Russia, and Mongolia, with a high commitment of their domestic government executives, related organizations, and transmission operators, to develop an energy interconnection.

The concept of the China-Japan-Korea FTA was under consideration for 10 years before negotiations started in 2012, which resulted in the agreement among the Government of Japan, the Government of the Republic of Korea, and the Government of the People's Republic of China for the Promotion, Facilitation and Protection of Investment (China-Japan-Korea Agreement for the Promotion, Facilitation and Protection of Investment).³⁰ On one hand, there are frequent economic and trade exchanges among these three states. Japan is China's third-largest trading partner, and China is Japan's largest export market and source of imports.³¹ China is the largest trading partner, source of imports, and export market for South In addition, South Korea is Japan's third-largest import and export trading partner, and exports to and imports from Japan are approximately one-quarter of South Korea's foreign trade. Additionally, Japan is South Korea's third-largest exporter and second-largest source of imports.³¹ The result is that the trade among these three states is complementary, and speeding up the China-Japan-Korea FTA negotiations has a solid realistic basis and the potential to fulfill practical needs.³² Furthermore, a positive attitude was apparent in the national policies of these three states, toward the construction of the free trade area.

The Seventeenth National Congress of the Communist Party of China has incorporated the construction of FTA into a national strategy and is planning to form a high-standard FTA network for all countries. Guided by an "export first" policy, South Korea is strengthening the implementation of its export first strategy, 33 hoping to prevent uncertainties in foreign trade, through the active establishment of

FTA. In 2002, the Japanese Ministry of Foreign Affairs issued "Japan's FTA strategy," which serves as Japan's trade policy in promoting regional cooperation strategy.³³ In addition, the "State-building by trade" strategy of Japan makes it a major participant in the construction of FTA. Based on the aforementioned two reasons, the China–Japan–Korea FTA seems to have a great potential.

Based on the aforementioned discussion, the Northeast Asia energy interconnection and the China–Japan–Korea FTA have potential for further development. At the sixth China–Japan–South Korea leaders meeting on November 1, 2015, environmental protection, innovation, and international production cooperation (focusing on international production cooperation in infrastructure construction, engineering machinery, building materials, electric power, and other fields) were expected to become new growth ambitions for the tripartite cooperation.³³ Their individual development needs and national policy supports have continually encouraged energy, economic, and trade cooperation among these three states, which provides good prospects for the construction of the Northeast Asia energy interconnection and the China–Japan–Korea FTA.

B. The Northeast Asia energy interconnection and the China-Japan-Korea FTA have similar challenges

The construction of the energy interconnection in Northeast Asia and the negotiations of China–Japan–Korea FTA have similar economic and political barriers.

First, there are economic barriers. The sharp economic divergence among China, Japan, and South Korea is mainly attributable to their different trade structures, caused by the differences in development levels and status in the division of labor. Such differences in trade structure lead to diverse demands of the FTA model, as well as different concerns and sensitive issues during the negotiations, resulting in distinct opinions and requirements.³⁰ All three states intend to open the foreign market to their competitive industries while providing adequate protection for their weaker industries and preventing what is deemed an unacceptable incursion of foreign industries. Japan and South Korea are states with a high degree of innovation, significant export knowledge, and technology-based products.³⁰ Because of the foregoing, during the negotiations, they have attempted to negotiate a substantial reduction in tariffs on industrial products, liberalization of service trade, and investment and increased transparency, as well as enhanced protection of knowledge products.³⁰ China's prudent attitude in this area has also led to difficulties in negotiations. Similarly, economic barriers also exist in the construction of the Northeast Asia energy interconnection, due to the differences in the level of energy development, incentives for clean energy, attitudes toward energy cooperation, and discrepancy in the power market.³

Second, the common challenges to the construction of the Northeast Asia energy interconnection and the China–Japan–Korea FTA are economic barriers and politics.³⁵ The China–Japan–Korea FTA was proposed as early as 1998 by South Korean President Kim Dae-jung at the Manila meeting, but no substantial progress was observed until the trilateral leaders meeting in 2012, when they announced the launch of the FTA negotiations. Later, due to territorial disputes and the US Asia-Pacific rebalancing strategy, it once again stalled until 2015. Proposals for the Northeast Asia electricity interconnection were discussed as early as 2001 at the expert meeting on energy cooperation among the States in Northeast Asia.³⁶ The

geopolitical environment in Northeast Asia is, however, complex, sensitive, abrupt, and urgent. These characteristics pose a significant challenge to the development of bilateral and multilateral relations in Northeast Asian states, which directly affects the stability and security of the energy interconnection operation in Northeast Asia. ¹⁸

C. The China-Japan-Korea FTA agreement provides the legal rules and a legal cooperation framework for the construction of the energy interconnection in Northeast Asia

China has participated in many international energy organizations, most of which have been coordinative or conversational in nature and not legally binding. Most of the energy cooperation in East Asia has neither a legal framework for cooperation nor an international energy cooperation organization within the region.³⁷ The issues relating to trade, investment, and dispute settlement in the China–Japan–Korea FTA negotiations are also legal issues that must be addressed in the context of Northeast Asia energy cooperation. The legal rules under the China–Japan–Korea FTA framework can be applied to the energy sector, in the absence of specific provisions thereof. The result is that the rules under the China–Japan–Korea FTA framework provide legal support for Northeast Asia energy cooperation, which is a prerequisite for establishing a unified regional energy cooperation organization.

D. Construction of the Northeast Asia energy interconnection deepens the negotiations of the China-Japan-Korea FTA

In the negotiation process of the China–Japan–Korea FTA, although all three states want to employ economic and trade relations to compensate for political differences, no consensus on acceptable balance has been reached.³⁸ New energy and environmental protection can be the first area to promote cooperation in this area, which could serve not only as the fulcrum for the China–Japan–Korea community of interest³⁹ but also as the engine to support economic growth in China, Japan, South Korea, or all of Northeast Asia. It is thus perceived to play an important role in enhancing the region's global competitiveness.⁴⁰ Energy interconnection would allow the States to recognize the role of energy cooperation in safeguarding energy security and the significant economic and social benefits it produces, promoting cooperation in other fields among China, Japan, and South Korea and facilitating the establishment of a China–Japan–Korea FTA.

This paper holds that the establishment of the energy interconnection could boost China's confidence in independent innovation. China has made a breakthrough in UHV development, necessitated by the construction of energy interconnection. China has also made a great breakthrough in the systematic construction of its smart power grid, including power generation, transmission, substation, distribution, as well as electricity use and dispatch. Rapid progress has also been made in the area of wind and solar power and all these technologies have been applied in practical programs. Such technological innovations could moderate China's conservative approach during negotiations in many areas, especially in the fields of intellectual property protection and investment liberalization. The FTA also forms a technological thrust for Chinese enterprises to improve their capability in independent innovation, as well as speeds up finding solutions to

technical problems in the construction of an energy interconnection. In addition, the construction of the energy interconnection in Northeast Asia to fulfill the demand for electricity is conducive to energy transformation in this region. This phenomenon also accords with these three states' commitment to environmental protection in the Kyoto protocol and the environmental protection requirements in the China–Japan–Korea FTA negotiations.

When the global energy interconnection is proposed, the China–Japan–Korea FTA negotiations can expand the scope of the negotiation, improve the FTA, and deepen tripartite energy cooperation. For example, to replace the North American FTA, the new United States–Mexico–Canada Agreement (USMCA) was signed to introduce energy regulatory measures and ensure transparency. ⁴⁶ The purpose of the USMCA was to address that the United States was one of the world's largest energy consumers and that Mexico was one of the world's most oil-rich states in the 1990s. ⁴⁷ Out of the tangible benefits of trade, energy-related issues are regulated. In this context, a China–Japan–Korea FTA can also establish an energy chapter to strengthen cooperation in the field of energy and achieve benefits for all stakeholders.

III. ISSUES AND SOLUTIONS IN THE CONSTRUCTION OF AN ENERGY INTERCONNECTION IN NORTHEAST ASIA

The construction of a global energy interconnection should mean international energy cooperation based on clean energy. The energy interconnection in Northeast Asia is an intercontinental energy cooperation mechanism that aims to boost the global energy interconnection. The issues in the construction of an energy interconnection in Northeast Asia include technology and related infrastructure construction, cooperation mechanisms, the global environment, and the direction of Northeast Asian states and the related policies. It is also related to technical, legal, and foreign policy issues, as they relate to the power grid. This paper mainly discusses the legal issues in the energy interconnection of Northeast Asia. Most of these legal issues can be solved by using the platform of the China–Japan–Korea FTA negotiations.

A. Lack of multilateral energy cooperation agreements and agencies in Northeast Asia

Northeast Asian states have a mutual distrust because of historical reasons, and currently, there is more competition than cooperation in the energy field, ¹⁸ leading to the absence of multilateral energy cooperation agreements and a lack of mature regional energy cooperation organizations or government-level energy cooperation agencies in this region. ⁴⁹ The absence of multilateral cooperation agreements results in the lack of a unified, effective multilateral legal mechanism in areas such as energy exploration, mining, transportation, and ecological protection. ⁵⁰ The lack of multilateral energy cooperation agencies has led to difficulties in comprehensively and rapidly coordinating the needs of the energy-consuming and energy-producing States, making it difficult to maintain the common strategic interest of all states.

The China–Japan–Korea FTA provides, in advance, the rules and guidelines, as well as the framework for cooperation, in terms of approaches to cooperation and problems that may occur during cooperation. At present, China and South Korea have signed the agreement on free trade between the Government of the People's Republic of

China and the Government of the Republic of Korea. Japan and South Korea have signed economic partnership agreements but no such agreement has been signed between China and Japan. The construction of the China–Japan–Korea FTA is a process that integrates the respective FTA strategies of these three states, which can be included in the strategic framework of the tripartite FTA. ⁵¹ The construction of the China–Japan–Korea FTA is the core of regional economic integration in Northeast Asia. ⁵¹

Similarly, the establishment of the China–Japan–Korea energy interconnection is the core of energy interconnection in Northeast Asia and offers a basis for the construction of a global energy interconnection. The construction of energy interconnection in Northeast Asia can be promoted by improving the rules in international legal instruments and establishing international cooperation organizations. The rules of China–Japan–Korea FTA and the energy cooperation under such framework can also be a foundation for the establishment of special energy cooperation agreements and energy cooperation organizations.

B. Energy security

There have been three views on energy security in the international community: the one-sided view, the cooperative view, and the new view. The switch among different views is reflected in the changes in the means of seeking energy security, that is, from only considering the State's energy security, to ensuring both regional and own energy security through cooperation and finally seeking multifield, all-round and multi-regional, as well as flexible and diverse, cooperation from the aspiration of sustainable development for the society. The society of the society of the society of the society of the society.

Different views on energy security can also be manifested in different national policies. For a State, the three views are not one-way, progressive development, but any of them may be adopted based on a state's requirements and national policy. What is generally recognized is the following: the importance of a new energy security perspective and that more extensive international energy cooperation will probably produce more energy security concerns.⁵³ Additionally, international energy cooperation is not only an important means for states to address the energy security situation but also a viable choice to maintain energy security.⁵⁴ Related to a state's sovereignty over its natural resources, energy and resource issues are always sensitive and controversial, ⁵⁵ energy issues are often politicized, and energy security issues are also of great concern.

Some energy trade treaties contain provisions on "respect for national energy sovereignty." In global governance, energy represents a powerful geopolitical and strategic tool.⁵⁶ Increasing international energy cooperation, especially by trade and investment, makes the contact between the energy-producing states and energy-consuming states closer and more frequent. In the field of energy trade and investment, the energy-producing states and energy-consuming States have different interests and different demands regarding international rules to ensure energy security.

The concerns of energy-producing states are, for example, border measures by the energy-importing states, which mainly comprise import tariffs and quantitative restrictions; domestic measures of importing states, such as those supporting oil substitutes; and a domestic tax, which mainly refers to high fuel taxes and environmental taxes levied by importing states.⁵⁷ Energy-producing states are

generally the recipients of international energy investment, and they usually ensure national energy security and protect the interest of energy-related domestic industries by banning foreign investment. By contrast, energy-consuming states want to ensure the stability of the energy supply, the diversification of energy sources, and the safety of energy transportation. The latter are more concerned with trade restrictions imposed by energy-exporting states, such as an energy production quota system, dual pricing, input subsidies, domestic taxes, and export tariffs.⁵⁸ Because the energy-consuming states are mostly developed countries, they are no longer satisfied with obtaining energy merely through trade but hope for cooperation in the production, transportation, conversion, storage, and distribution of energy. Developed countries thus want to cooperate with energy-producing states, through international investment and international agreements. Generally, in the context of international energy cooperation, energy security means energy sovereignty security for energy-producing states and energy supply security for energy-consuming states.⁵

At present, most energy-consuming states in the world are developed countries that have rulemaking powers or greater influence in international energy cooperation. The result of this phenomenon is that energy-producing states should not only adhere to their national energy sovereignty but achieve national energy sovereignty from the perspective of development. A state's energy sovereign rights can be divided into core and alienable energy sovereign rights. Although core energy sovereign rights should be strictly adhered to, alienable energy sovereign rights should be treated from the perspective of development and appropriately opened up, as long as this serves the national interest. Additionally, energy-producing states should be united, to make their voices heard in the development of international rules.

The energy interconnection of Northeast Asia is designed to establish a unified electricity market, through multilateral cooperation. It aims to reduce national intervention and enhance inter-state and inter-enterprise mobility of advanced energy technology, capital, and personnel by using the market mechanism and thus becoming more competitive. It requires energy-producing states and energy-consuming states to adopt the "new energy security view" and accept the need for a balance of interest between energy-producing states and energy-consuming states in the rulemaking of energy trade and investment, so that "sustainable international energy security" can be achieved. ⁵⁴

C. Lack of effective legal means for international energy cooperation

In addition to direct investment in energy-related projects, China's participation in multilateral energy cooperation can seem overly focused on infrastructure and manufacturing, with its single means of capital utilization and a lack of effective action in other areas of economic cooperation. To benefit from the energy interconnection of Northeast Asia, China should rely on infrastructure construction and endorse the advantages in energy trade and technology cooperation.

Currently, the legal means of international energy cooperation primarily consists of agreements between parties, international treaties, and international customs. ⁶³ In theory, there are three modes of international energy cooperation: so-called trade-based cooperation, through the import or export of products; contractual cooperation by the transfer of intangible assets, such as new energy-development and

energy-saving technologies, energy and environmental technologies, and management methods and experience;⁵⁴ and investment-based cooperation through foreign direct investment, including the transfer of resources.⁵⁴

The China–Japan–Korea FTA, as the preliminary legal framework for the energy interconnection in Northeast Asia, should contain specific provisions for each mode of energy cooperation and encourage the three parties to strive for energy cooperation by utilizing their respective advantages and other mutually beneficial means of ensuring effective cooperation in energy trade and investment. The following part of this paper addresses possible problems in different modes of energy cooperation and aims to provide a reference for the China–Japan–Korea FTA by analyzing the existing energy-related agreements and the latest progress in energy-related negotiations.

D. Issues regarding the modes of energy cooperation

1. Trade-based cooperation

There are two major issues in trade-based energy cooperation: the lack of special provisions characterizing the energy trade, and the trade barriers due to domestic renewable energy measures and related policies.

International trade-based energy cooperation is part of international trade. In the context of uneven energy resources in different states, international energy trade has become a critical part of international trade, but surprisingly, in the field of international trade, special provisions on energy trade are relatively rare. WTO agreements and other bilateral and multilateral agreements have some provisions on energy trade but many problems remain in the application of the rules.

Although there is no special provision on energy trade in the WTO agreements, their application is not specifically excluded. The question is how to determine appropriate, specific rules that can be applied to specific energy problems. Energy trade has obvious mixed characteristics. On the one hand, the energy industry does not distinguish between energy goods and energy services, according to traditional practices. The energy sector does, however, include trade in goods and services, by it is more difficult to determine to which category the electricity trade belongs. As a result, under the WTO framework, energy trade may be stipulated in both the General Agreement on Trade in Services (GATS) and General Agreement on Tariffs and Trade (GATT). 65 Because GATS and GATT were signed at different times, their focus and application of the same principle differ. Thus, it follows that there has been a heated debate in academia over which rules should apply in the energy trade.⁶⁶ Contracting parties usually choose the rules according to their needs at different stages, resulting in confusion in the application of the rules.

The Energy Charter Treaty (ECT) is a legally binding multilateral treaty that focuses on energy cooperation. ⁶⁷ It provides principled provision for political commitment in the field of energy, ⁶⁸ mainly managing investment protection, trade issues, and energy transport issues. ⁶⁷ Having now entered the 21st century, however, the ECT does not reflect the reality of today's energy demand, and its provisions are too vague. Nevertheless, the ECT continues to play a role that cannot be ignored in establishing a multilateral dialog mechanism.

Based on the aforementioned discussion, the construction of Northeast Asia energy interconnection requires an informed, proven legal mechanism for energy cooperation that emphasizes energy trade. Such a legal mechanism should reflect the current legal requirements of the energy trade and encompass the basic trade rules of the WTO. In addition, a regional legal mechanism should be constructed in accordance with appropriate specific conditions to encourage the fulfillment of the great potential of energy trade. Furthermore, long-term, frequent contact and consultation should be maintained, with timely responses to current trends in energy trade and particular attention to regulations on renewable energy and clean energy trade.

During the Uruguay Round of trade negotiations under the GATT framework, energy-related matters were high on the agenda of the multilateral trading system, with a focus on the restrictive practice of energy-exporting states. No substantive progress was made in the proposed discussions, for example, on the energy policy of exporting states, dual pricing practices, subsidies, reverse dumping, export restrictions and taxes, and substitutes for natural resource products. Those issues in regard to traditional energy trade remained unaltered in the Doha Round negotiations. 69

In the context of global energy interconnection, the rules on renewable energy trade have received much attention, and the relevant disputes are increasing. States have also introduced policies on renewable energy trade. The renewable energy law of the People's Republic of China (2009 amendment) prescribes incentive mechanisms, such as a fixed pricing system, tender system, and quota system. The provisions, while promoting the development of domestic renewable energy, will also discriminate against foreign enterprises and create trade friction. The existing legal rules under WTO lag in the field of renewable energy and thus require strengthened legal provisions. Hence, the China–Japan–Korea FTA should consider the uniqueness of renewable energy and make corresponding regulations while providing rules for the energy interconnection of Northeast Asia.

2. Investment-based cooperation

International energy cooperation, based on global energy interconnection, includes investment-based energy cooperation, of which investment in renewable energy is a part. Currently, worldwide investment in renewable energy is increasing, and the International Renewable Energy Agency (IRENA) is an intergovernmental cooperative organization, that aims to support the conversion of member states to using renewable energy. The investment in renewable energy is to ensure the sustainable supply of energy and strengthen the protection of the environment, and IRENA has clarified the economic interest. The development of renewable energy is not only an aspect of the responsibility to protect the environment but also has potential economic benefits that should not be underestimated. In addition to the economic benefits for investors, the approach can also generate economic and social benefits for states. For example, the construction of renewable energy projects can provide more jobs.

Problems in renewable energy investment may include the limitation of investment due to information asymmetry. In response, IRENA aims to provide comprehensive information to ensure that investors are as well informed as possible when making decisions. An information disclosure mechanism should therefore be established in the area of investment. Problems may also exist regarding the risks to foreign investors, including those of nationalization, expropriation, and discriminatory treatment by the host government, as well as

capital exchange issues.⁷³ Any unpredictable change in environmental regulations of the host State, which aims to protect the environment and domestic competitors, constitutes the major political risk that investors may face in energy investment.⁷⁴

The Chinese government signed the China–Japan–Korea Agreement for the Promotion, Facilitation and Protection of Investment in 2012, which provides legal support for investment-based cooperation in the Northeast Asia energy interconnection. Additionally, the China–Japan–Korea FTA negotiations stress that negotiations concerning investment areas should emphasize energy investment, regarding the construction of a global energy interconnection.

3. Contractual cooperation

Contractual energy cooperation usually refers to the cooperative contracts signed by energy resource States regarding energy exploration, development, production, and marketing to cooperate with foreign enterprises in developing their energy.⁷⁵ They cover areas, for example, energy technology trade, energy services trade, energy exploration, mining, new energy development, energy, and environmental cooperation. The problem of contractual cooperation is the accountability for non-performance of a contract.⁴⁸ This cooperation model, as in investment-based cooperation, also risks, for example, national expropriation and domestic policy changes. When a state changes or repeals part or all of an agreement on the basis of energy security, public policy, or environmental protection, this is not considered a violation of international law;⁷⁶ thus, no liability is created. In contractual energy cooperation, states should ensure their national energy sovereignty and disclose such domestic policy and legal information as necessary to actively attract foreign technology and capital.

E. Establishment of a dispute settlement mechanism

Different dispute settlement mechanisms can be applied to different modes of energy cooperation. Generally, in trade-based energy cooperation, the WTO dispute settlement mechanism is relevant. For instance, it is applied by the China-ASEAN FTA. The basic stages covered in the WTO dispute settlement mechanism include consultation, good offices, conciliation and mediation, a panel phase, Appellate Body review, supervision of the enforcement of recommendations and rulings, and arbitration.

In investment-based cooperation, dispute settlement can be determined through the relevant provisions of investment agreements. For example, Article 15 of the China–Japan–Korea Agreement for the Promotion, Facilitation and Protection of Investment provides for five means of dispute settlement. Article 26 of the ECT provides that an investor party to the dispute may choose to submit its case for resolution: (a) to the courts or administrative tribunals of the contracting party to the dispute; (b) in accordance with any applicable, previously agreed dispute settlement procedure; or (c) by submission of the dispute to international arbitration in the United Nations Commission on International Trade Law (UNCITRAL), Arsenal of the International Chamber of Commerce in Stockholm, or the International Center for Settlement of Investment Disputes (ICSID).

In the settlement of disputes, the existing dispute settlement mechanisms play an effective role, but their limitations can be observed in the cases that were managed by using such mechanisms. For example, the application of the WTO mechanism may take too long, and the ICSID mechanism may lead to injustice because "all arbitration awards are final." Thus, regarding dispute settlement, the China–Japan–Korea FTA negotiations can adopt the mechanisms of the WTO and related bilateral investment agreements and can establish a more efficient dispute settlement mechanism for energy trade, in line with its characteristics.

In addition, the relevant provisions in the China–Japan–Korea FTA can be used as a practical guide for the establishment of an energy dispute settlement body. A good practice is in Chapter 31 of the USMCA, "Dispute Settlement." If a dispute regarding a matter occurs under the USMCA and under another international trade agreement with which the disputing parties are party, the complaining party may select the forum in which to settle the dispute. Once a complaining party has requested the establishment of a panel under Chapter 31 of the USMCA or a panel or tribunal under another international trade agreement, the forum selected shall be used to the exclusion of another. ⁷⁸

IV. CONCLUSION

The global energy interconnection is an attempt to replace fossil fuels with clean energy, which should be less harmful to the environment and ecosystems. A direct impact of rapid economic development has been the substantial growth of global energy demand and consumption. This situation could cause an energy crisis and an environmental crisis. Seeking renewable and clean energy has become the new energy policy advocated by countries that have suffered from energy shortages.

The China-Japan-Korea FTA negotiations and the construction of an energy interconnection in Northeast Asia are important steps in realizing the integration of economy, trade, and investment in Northeast Asia. In this construction, the most important step is the grid interconnection between China, Japan, and South Korea. The negotiations between China, Japan, and South Korea can provide a legal framework of cooperation for promoting an energy interconnection between these three states. Based on the aforementioned discussion, the perception is that the China-Japan-Korea FTA and the Northeast Asia energy interconnection have substantial potential for further development, with the biggest obstacle being in the political domain and with social ideology, including territorial disputes, intervention by nations as the United States, and the so-called "China Threat Theory." The paper puts forward the following proposals to encourage cooperation between China, Japan, and South Korea and the realization of an energy interconnection in Northeast Asia.

- (a) Establish sound legal rules to ensure cooperation on economic growth, trade, and investment and to guard against instability caused by national, political turmoil. In the development of rules on energy, draw lessons from relevant provisions in the ECT and USMCA and strive to promote China-Japan-Korea cooperation in other fields through their cooperation in energy.
- (b) Promote China–Japan–Korea cooperation in less sensitive areas, such as the development of renewable energy, and based on this, facilitate mutual political trust and make a better impression on the people of these three states, boosting cooperation in energy and other fields.

(c) Emphasize the necessity of China-Japan-Korea cooperation on the basis of the obligations under international treaties signed by these three states, such as the obligation to protect the environment, to motivate their cooperation through a shared, common objective.

ACKNOWLEDGMENTS

The field work was supported by the following project: The National Social Science Fundamental Project, China, "Research on China's Maritime Rights Protection under the Perspective of Ocean Community with a Shared Future" (Grant No. 19VHQ009).

DATA AVAILABILITY

The current table has been prepared as a requirement of the journal. However, the current study does not use any specific scientific data sets; instead, it is based on the qualitative means of analytical studies. Nonetheless, any information or fact adopted in the paper is duly cited and appropriately added in the reference part of the paper.

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