

The Impact and Challenges of the Russia-Ukraine War on Energy Strategy Transformation

Zhuocheng Liu

School of International Relations, Renmin University of China, Beijing, China

2020200612@ruc.edu.cn

Abstract. The outbreak of the Russian-Ukrainian conflict has profoundly changed the pattern of strategic competition among major powers and the international security environment, and has had a significant impact on geopolitics and international food and energy security. Meanwhile, the policy of “de-Chinaization” of the U.S. new energy industry chain directly involves China’s core interests in energy security and energy governance. Under such circumstances, China should make the corresponding energy strategy layout adjustment In Latin America, South Asian subcontinent and Africa. Based on the realization of these visions, if China’s clean energy standards can reach the international level, this will help promote China’s independent innovation in energy science and technology and break the market monopoly of Western standards. In this way, while the new energy industry chain of the United States is de-Chinaized, China can to a certain extent safeguard its own new energy security and create its own circle of energy partners to avoid being caught in a passive situation in energy politics.

Keywords: The Russian-Ukrainian conflict, de-Chinaization, China’s energy strategy layout, regional energy strategy transformation.

1. Introduction

Under the background of the increasingly fierce competition for international energy resources, the situation that China’s energy security and development facing is very serious. The policy of “de-Chinaization” of the U.S. new energy industry chain directly involves China’s core interests in energy security and energy governance. China should also make the corresponding energy strategy layout adjustment, which, the energy diplomacy carrying out around the new energy should be given more importance.

Nowadays, energy issues have begun to combine with environmental issues. Thus, how to promote energy technology progress, improve energy efficiency and strengthen ecological construction through international cooperation has become a new challenge for China’s energy diplomacy. While ensuring the security of new energy sources, China also needs to enhance its voice in energy governance by promoting the transformation towards new energy sources. This way, in the face of the U.S. industrial chain blockade and the deliberate smearing on the pretext of climate justice [1], China will be able to grasp a certain degree of initiative.

It is worth noting that the outbreak of the Russian-Ukrainian conflict and Latin America’s lithium resource-rich countries embracing the group, for China’s energy strategy layout provides a place to fall. China needs to pay full attention to, one hand grasps the domestic clean energy technology innovation, the other hand grasps the international clean energy partnership expansion, the two go hand in hand.

2. The Impact of the Russia-Ukraine War on Energy

The outbreak of the Russian-Ukrainian conflict has profoundly changed the pattern of strategic competition among major powers and the international security environment, and has had a significant impact on geopolitics and international food and energy security. The Middle East region has been deeply affected by the spillover effects of the Russia-Ukraine conflict due to historical, geographic, economic and energy factors.

The United States urgently need to fight for the support of the Gulf countries in the suppression of international oil prices, suppressing Russia's foreign energy cooperation space, and maintaining European energy security [2]. Among them, to promote Saudi Arabia to take the lead in the realization of the Organization of Petroleum Exporting Countries to increase oil production, in order to suppress international oil prices, reduce the U.S. domestic inflationary pressure is a top priority. China should also seize the opportunity, based on bilateral strategy, planning, mechanism docking, continue to consolidate the oil and gas cooperation with Saudi Arabia, the United Arab Emirates, Iran and other Middle Eastern countries, and actively promote the whole industry chain cooperation, and constantly enrich the connotation of energy cooperation. On the one hand, China needs to improve its fossil energy supply system; on the other hand, it should continue to promote the development of new energy sources and increase the proportion of renewable energy sources in the implementation of energy supply diversity. Recently, China brokered a diplomatic settlement between Saudi Arabia and Iran, paving the way for China to expand its energy cooperation with the Middle East.

Outside the Middle East, the energy policies of European countries have also been greatly impacted by the Russia-Ukraine conflict. After the Russian-Ukrainian conflict, the EU and the United Kingdom issued a new energy security strategy and energy transition planning to emphasize the need to reduce dependence on traditional fossil energy, and pay attention to the application of new energy technologies [3]. In terms of energy supply transition, the EU actively promotes the decommissioning of coal power, and significantly increases the installed capacity of sea and land wind power, photovoltaic and electrolytic hydrogen production targets. In terms of energy security, the EU has slowed down the exit process of coal and nuclear power in the short term, but still emphasizes that it will achieve the substitution of traditional fossil energy sources through the large-scale deployment of renewable energy, and increase the scale of hydrogen imports and production capacity for the original natural gas hydrogen substitution as well as used as a long-time energy storage.

It can be said that the mismatch between the radical emission reduction policies of European countries and higher traditional energy consumption, as well as their high dependence on Russian hydrocarbons, has led to their eventual exposure of the vulnerability of their energy supply in terms of soaring fossil energy prices, restarting the preservation of supply from high-carbon energy sources, and seeking gap substitution at high prices.

In the face of profound changes in the international situation and intensified regional conflicts, the homogenization of national energy supply will inevitably lead to the endangerment of their own energy security and economic security. For China, the only way to minimize the impact of regional conflicts and changes in the international landscape on its economy and energy security is to enrich energy supply channels, avoid deep interest bundling, expand cooperation with OPEC, Central Asia, the Middle East, Latin America and other major energy supply regions, and find common interests with other countries in guaranteeing free trade in energy.

3. Regional Energy Strategy Transformation

3.1. China-Latin America Cooperation

In the face of growing demand for lithium consumption, China is also accelerating the pace of exploration and development of lithium brine resources. Although China's lithium reserves also ranked among the world's top, but because of its high magnesium-lithium ratio, from Argentina, such as South America's lithium resource-rich countries to obtain more convenient to utilize the lithium mine for China is still a hard demand. Latin American political system is relatively sound, the political situation is relatively stable, political risk is not big. But policy, environmental and social risks and geopolitical risks cannot be ignored. China wants to increase investment in Argentina's lithium industry, inevitably face a series of obstacles.

Although Argentina in recent years for foreign investment in lithium resources restrictions have been greatly reduced, but some of the lithium resources provinces are still implementing a more stringent monitoring mechanism - which Jujuy province requires the provincial mining company to

occupy 8.5% of the lithium mining rights, and Salta province has given up the previous preferential policies, but through the form of public bidding The province of Salta has abandoned its preferential policy and replaced it with a public bidding system to control and monitor the use of these resources [4]. This shows that although Argentina has not yet implemented the policy of lithium nationalization, allowing foreign investment in lithium mines independently, it does have this tendency. In fact, both local and central authorities in Argentina have stated that “lithium must be regarded as a strategic resource” [5].

In addition, Latin American lithium resource countries through raising royalties, lithium export pricing, export taxes and other measures, hoping to share the benefits of rising lithium prices, although understandable and respectable, but will also increase the operating costs of enterprises. At the same time, Latin American countries are promoting the establishment of the Organization of the Petroleum Exporting Countries similar to the organization of lithium-exporting countries, outsiders call it “lithium OPEC” [6]. Its main goal is to strengthen policy coordination, increase the negotiating power of the region, jointly resist external risks, and enhance geopolitical influence. This decision is technically feasible. Although the position of Latin American lithium resource countries in terms of world lithium reserves and production may not be so important as to determine the future direction of the world’s energy resources, this regional organization could indeed have a significant impact on lithium production and prices.

The pressures of social responsibility that accompany the development of the lithium mining industry must also be taken into account. Lithium is a key mineral for combating climate change and promoting the energy transition, but its mining is still based on the old model, which is in conflict with climate justice. The environmental impact of the existing lithium mining model has not only been criticized, but has also triggered social conflicts in countries such as Chile, which in turn has affected foreign investment in lithium mining, including China.

Visible, foreign lithium-related enterprises want to become a player in Latin America lithium resource countries is not easy. Fortunately, Argentina is the relevant countries in the less restrictive. Meanwhile, Argentina’s lithium mine development is still in the early stages, the environmental impact has not yet appeared. Moreover, most of the lithium mines are located in sparsely populated areas and currently face less environmental and social pressure than other lithium triangle countries. However, it should be noted that some scholars have begun to accuse the environmental impacts of lithium development have not been adequately discussed and assessed [7]. This underscores the urgency of deepening cooperation between China and Argentina on lithium resources during this window.

With the growth of global lithium mining investment, especially the United States to increase the domestic lithium mining technology and capital investment, lithium supply increase may make lithium price fluctuations, thus affecting lithium mining investment income, and thus generate corresponding business risks. China should strengthen the investment management of lithium mine in Latin America, and to effectively control the pace and scale of investment. Chinese enterprises should be more cautious in choosing investment projects, rather than just focusing on the scale of investment.

In the face of the environmental problems brought about by the development of lithium mine, China needs to pursue technological innovation. For example, direct lithium extraction (DLE) technology can significantly reduce water consumption, and is also more friendly to the economy and the environment. The development of such technologies will help Chinese companies to enhance their social image in lithium-resource countries, which in turn will lead to higher returns. China’s energy investments have a significant impact on the environment of host countries, so Chinese energy companies should build up a good reputation for green development and actively seek all-round, in-depth cooperation with environmental organizations and non-profit organizations.

As for the lithium triangle countries on their own lithium resources industrialization route concept, China may seek to strengthen the lithium industry chain with Latin American countries in the integration of cooperation. A possible approach is that Chinese enterprises in Latin America while

expanding lithium mining, will expand the scope of cooperation to lithium processing, battery manufacturing and new energy vehicle production and a series of business to meet the other side of the industrialization of lithium resources to meet the demand for development. Such practices also help to solve the problem of de-industrialization of Latin America, and feedback to the benign enhancement of Sino-Latin American relations.

In conclusion, as a leading developing country, it is quite possible for China, through comprehensive and rational lithium resource development, to break down obstacles and enhance diplomatic discourse at three levels: Argentina, Latin America, and the world, step by step. At the same time, China's future strategic reserves of new energy can also be greatly supplemented in one fell swoop.

3.2. Energy Cooperation Among BRICS Countries

3.2.1 China-India: Oil and Gas Pipelines and Energy Efficiency

In recent years, China, India, and Pakistan have all experienced rapid economic growth, which has led to a surge in energy demand, while their respective domestic oil and gas resources have been unable to meet the needs of their rapid economic development. Therefore, China, India and Pakistan need diversified sources of oil and gas imports and safe and reliable transportation channels.

Pakistan, neighboring the Middle East in the west, Central Asia in the north, and India and China in the east, is at the crossroads of the world's two major oil and gas sources, and its strategic energy position is very important to both China and India. In the geopolitical map of China's oil security, Pakistan is an important role, through the Middle East and other places in the Middle East oil resources can be exported to China by land, to realize the diversification of transportation channels. Two of the three pipelines that India intends to build will pass through Pakistan, namely the IPI project and the TAPI project [8]. The projected benefits of these two pipelines are very promising, but both have suffered huge obstacles in putting them into practice.

The problem of the pipeline itself is the price of natural gas delivered by Iran, gas transit fees and the financing of the \$7.5 billion construction funds, while the obstacles outside the pipeline are mainly the security issues in Pakistan and Iran-US relations. TAPI's pipeline construction faces insurmountable difficulties as it passes through troubled areas in southern Afghanistan and Balochistan, Pakistan.

In addition, Turkmenistan's gas supply is also in doubt. Its gas reserves are relatively rich, but its ability to deliver gas to South Asia has been greatly reduced by supplying gas to multiple parties. On balance, as China actively advocates strengthening policy communication among countries along the Belt and Road, leaving ample room for exchanges and matching on economic development strategies and countermeasures, and jointly formulating plans and measures to promote regional cooperation, overcoming the above obstacles through the introduction of the Belt and Road is not a bad idea to get out of the deadlock of oil and gas transportation.

Another energy problem parallel to oil and gas transportation is that South Asian countries generally have low energy efficiency, which is manifested by high energy intensity and serious energy loss. For example, as a large energy user in South Asia, India and Pakistan, Pakistan's power transmission losses reached more than 20%, India's commercial power losses in 2006-2007 amounted to 33.07% [9]. These two countries also face serious environmental problems associated with energy consumption. In India, it is reported that about 500,000 people die prematurely and 500 million people contract diseases every year due to prolonged exposure to smoke released from the burning of dry wood, while in Pakistan, about 22,000 people die every year due to air quality, resulting in an economic loss of more than one billion dollars [10].

It can be seen that China, India and Pakistan also have ample common discourse on energy security. So, China has a reason to put forward a program to improve the energy status quo of India and Pakistan through the Belt and Road Initiative. In terms of oil and gas pipeline transportation, China can take technical services as a breakthrough and participate in projects such as exploration and pipeline construction of oil and gas in India and Pakistan. Due to the competitiveness of Chinese oil

companies in terms of technology and cost, technical services can be the main way to deepen China-India-Pakistan oil and gas cooperation. This will also help China to gain a deeper understanding of the South Asian oil and gas industry environment and low-risk cooperation grind.

In addition, China also needs to facilitate India and Pakistan to reach a mechanism construction on energy emergency cooperation. In terms of energy cleanliness, China itself is the world's largest clean energy market and equipment manufacturer with a wealth of experience. China should encourage first-class energy companies to integrate technological innovation and standards creation, actively promote the docking of Chinese standards with countries along the Belt and Road, and promote the development of cutting-edge technologies and business models associated with new power and energy systems, so as to prevent the possible emergence of external power dependence in South Asian countries.

3.3.2 China-Africa: Cobalt Mining Resources

The Democratic Republic of the Congo (DRC) is rich in copper - cobalt resources, mainly in the form of oxidized ore, sulfide ore and a mixture of the two exist, and has attracted a large number of Chinese and foreign enterprises to invest in production in their territories. The products are mainly copper and cobalt concentrates, copper cathodes, copper and cobalt hydroxide, and so on. From the perspective of Chinese and foreign investment development, Chinese enterprises in the mining field in the Democratic Republic of the Congo (DRC) investment in the higher degree of enthusiasm, resource possession and production are an increasing trend. Great opportunities will be brought to the DRC for the development of its mining industry with the gradual improvement of Chinese enterprises in the mining industry, equipment level and technology level, as well as the domestic listed companies and foreign-funded enterprises in a high degree of market-oriented cooperation.

However, it should be noted that the DRC's political environment is complex, the government's credit and compliance awareness is not strong. Meanwhile, certain areas are still full of illegal armed activities, and vicious cases occur from time to time. All these factors may affect the development of Chinese-funded enterprises in the Democratic Republic of the Congo (DRC).

In order to build an evergreen business in Africa, Chinese enterprises must realize the integration and development of Chinese, international and local teams with a more open and inclusive mindset. This requires enterprises to adapt to the local situation and reform their management systems, thereby promoting the comprehensive improvement of their own capabilities and sustainable development. With the in-depth promotion of the Belt and Road Initiative and international production capacity cooperation, there will be great prospects for resource development in the future through project-for-resource exchange, leasing and other new cooperation modes.

4. Conclusion

In view of the era of strategic competition between the United States and China, it is difficult to change the trend of the strategy of de-Chinaization of the U.S. new energy industry chain in the short term. Therefore, China should actively take measures to not only strengthen its own clean energy technology innovation, but also actively expand international clean energy cooperation, in order to achieve a win-win situation. In Latin America, Chinese lithium enterprises should actively participate in the Argentinean market and utilize the latest technology to promote the development of the local lithium mining industry, so as to improve China's influence and leadership in global clean energy governance. In the South Asian subcontinent, China should encourage first-class energy companies to integrate technological innovation and standard creation, and promote the development of cutting-edge technologies and business models associated with new power and energy systems, so as to prevent the possible emergence of external power dependence in South Asian countries.

As for Africa, future China-Africa cooperation still needs to strengthen confidence in cooperation, strengthen risk prevention and control, diversify investment risks, and create a community of interests, destiny and responsibility with political mutual trust, economic integration and cultural inclusion through energy cooperation. Based on the realization of these visions, if China's clean energy

standards can reach the international level, this will help promote China's independent innovation in energy science and technology and break the market monopoly of Western standards. In addition, this will also promote the production capacity cooperation process of the "Belt and Road" initiative, and gain a leading position for China in the international industrial chain division of labor. In this way, while the new energy industry chain of the United States is de-Chinaized, China can to a certain extent safeguard its own new energy security and create its own circle of energy partners to avoid being caught in a passive situation in energy politics.

References

- [1] Joe Biden. Executive Order on Tackling the Climate Crisis at Home and Abroad. (2021-01-27) [2021-09-20]. <https://www.whitehouse.gov/briefing-room/presi-dential-actions/2021/01/27/executive-order-on-tackling-the-climate-crisis-at-home-and-abroad/>.
- [2] Edward Fishman, "How the Price Cap on Russian Oil Will Work in Practice", November 30, 2022, <https://www.energypolicy.columbia.edu/research/qa/how-price-cap-russian-oil-will-work-practice>.
- [3] European Commission, "Joint Statement between the European Commission and the United States on European Energy Security", https://ec.europa.eu/commission/presscorner/detail/en/STATEMENT_22_2041, 2022-03-25.
- [4] Chen Xifeng, Chen Yuming, Zhao Hongjun. Current Status and Countermeasures of Lithium Resource Industry Development in South American "Lithium Triangle." *Land and Resources Science and Technology Management*, 2020, 37 (5): 13-21. DOI: 10.3969/j.issn.1009-4210.2020.05.002.
- [5] He Shuangrong. Research on the Risks of Chinese Enterprises Investing in Lithium Mines in Latin America. *China Energy*, 2022, 44 (10): 48-55. DOI: 10.3969/j.issn.1003-2355.2022.10.007.
- [6] CELAG. Hacia una Organizaci6n Latinoamericana de Pa i ses Exportadores de Litio (OLPEL), 2022.
- [7] James J. A. Blair, Ram6n M. Balcazar, Javiera Barandiaran. Exhausted: How We Can Stop Lithium Mining from Depletion Water Resources, Draining Wetlands, and Harming Communities in South America, 2022.
- [8] Ariel Cohen, Lisa Curtis, and Owen Graham, The Proposed Iran-Pakistan-India Gas Pipeline: An Unacceptable Risk to Regional Security, Background, May 30, 2008.
- [9] World Bank Report, Potential and Prosepects for Regional Energy Trade in the South Asia Region, March 2008, p16-18.
- [10] Toufiq A. Siddiqi, Developing Integrated Energy Policies in South Asia, SAARC Energy Centre Report No.1, March 2008.