

The influence of the Russia-Ukraine conflict on international energy trade and its enlightenment on China

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Abstract. The conflict between Russia and Ukraine has caused continuous turmoil in the international energy market, the global energy supply map is facing reconstruction, and the energy transformation and substitution process is also facing challenges. Europe's energy woes make securing energy independence a priority for more and more countries. As a significant energy consumer, China urgently needs to comprehensively assess the impact of the Russian-Ukrainian conflict on global energy trade, strengthen energy independence and ensure national energy security by focusing on energy import diversification, RMB internationalization, and low-carbon energy structure.

Keywords: Russia-Ukraine conflict; International energy trade; Energy transition; China's response.

1. Introduction

Since the outbreak of the Russian-Ukrainian conflict in February 2022, Russia has experienced multiple rounds of sanctions from the Western countries led by the United States, involving about 10,000 sanctions. As one of the world's primary energy exporters, Russia's output and export volume of crude oil, natural gas, and coal ranks worldwide. Implementing many economic sanctions has increased the global energy market's concern for a possible "new round of energy crisis." Worries and pessimistic expectations generally increased. In this context, since February, international energy trade prices have continued to fluctuate at high levels. On June 6, the price of New York light sweet crude oil futures for July delivery and the price of London Brent crude oil futures for August delivery both broke through the \$120 per barrel mark in intraday trading [1]. As the world's largest energy consumer, China has a high degree of dependence on foreign energy. The "turbulence" in the international energy trade market is related to the price of China's energy imports and further affects the operating costs of domestic enterprises, inflationary pressure, and China's energy and economic security. Pose a potential threat. Comprehensively assessing the impact of the Russian-Ukrainian conflict on global energy trade, grasping the changing trend of the international energy pattern, and making timely Chinese responses from a long-term strategic perspective are essential issues that China needs to address urgently.

2. The short-term impact of the Russian-Ukrainian conflict on global energy trade

According to a World Bank report, the Russian-Ukrainian conflict has caused a "major shock" to commodity markets, changing global trade, production, and consumption patterns that could keep prices at "historic highs" until the end of 2024. If the Russian-Ukrainian conflict lasts longer, or if Russia is subject to more sanctions, commodity prices could be higher than currently projected [2]. With the further implementation of economic sanctions by relevant countries in Europe and the United States, capital will inevitably withdraw from the Russian market in the short term. Especially in the energy sector, large international oil companies such as Shell and BP have successfully withdrawn from the Russian oil and gas business, especially in the energy sector. Russia has a significant impact. As a major energy trading country, the economic sanctions imposed on Russia will cause a substantial potential crisis in the global energy supply, triggering the market's anxiety about the energy supply shortage, which will further feedback on international energy prices, especially international oil prices. It is estimated that the risk premium caused by the Russian-Ukrainian conflict has reached at least \$20/barrel in the recent oil price rise [3].

In response to market changes, the members of the International Energy Agency (IEA) will release 120 million barrels of oil reserves, but the long investment cycle and low total amount are nothing but a drop in the bucket for the global energy market, and even oil prices did not drop for a time. An embarrassing situation. In addition, as the epidemic has severely impacted the market's consumer confidence, OPEC+ has always been cautious about increasing crude oil production. Iran, one of the essential oil producers, has also been unable to make a breakthrough in the negotiations on the Iranian nuclear issue, and its production capacity has entered the international market. The timing of the market is even more challenging to predict. Therefore, it is not difficult to predict that the tight balance between international oil supply and demand in the second half of 2022 will hardly change, and the oil price will likely fluctuate at a high level.

In recent years, Europe has been actively promoting energy transformation, and low-cost, green, and environmentally friendly pipeline natural gas is undoubtedly a priority for Europe. Statistics show Europe's dependence on Russian natural gas has exceeded 40%. Against this background, resistance to Russian oil and gas will inevitably exacerbate the pain of energy transition. According to Citibank data, European energy expenditure is expected to increase 300% in 2022 compared to 2021, reaching US\$1.2 trillion [4]. If the energy shortage problem cannot be effectively solved before the cold winter, Europe will increase the consumption of traditional fossil energy such as coal and slow the pace of energy transformation.

3. Changes in the international energy pattern caused by the conflict between Russia and Ukraine

3.1 Redistribution of global energy supply

Under the influence of the Western countries' oil embargo measures against Russia, it is a general trend that Russia's share in the international oil trade market has declined. According to data released by the International Energy Agency in May, Russia's supply reduction due to economic sanctions has reached 900,000 barrels per day, and this amount is expected to increase to 1.6-3 million barrels in the next few months. Russia's 2022 oil output is forecast at 9.6 million BPD, which would be the lowest since 2004. In addition, the monthly supply of natural gas from Russia to Europe has plummeted from 12.1 billion cubic meters to 4.1 billion cubic meters. Europe is actively seeking natural gas from different sources to fill the vacancy caused by the Russian natural gas supply reduction, but new natural gas is currently available. The source only accounts for one-third of the supply shortage in Russia, which has not entirely solved the problem.

Up to now, the international crude oil market is still in a situation where supply is slightly less than demand. The Western countries have called on OPEC members to increase crude oil production, but OPEC members are still insisting on moderately increasing production according to the original plan due to their production capacity and practical interests. Stimulated by high oil prices, the capital flow pressure of U.S. shale oil producers is decreasing, and the number of drilling rigs is gradually increasing. According to the U.S. Energy Information Administration, U.S. crude oil production in 2022 is expected to be 11.93 million barrels per day, close to the production before the new crown epidemic, but the overall increase is negligible. Compared with OPEC and the United States, Iran's crude oil production capacity can effectively compensate for Russia's supply gap. However, since the Trump administration announced that the United States has unilaterally withdrawn from the Iran nuclear negotiations, there has been little progress on the Iranian nuclear issue, and Iran's return to the international crude oil market is even more distant. There is no period, so the international crude oil supply pattern is difficult to change in the short term. In the long run, Russia's crude oil supply market will inevitably be partially eroded.

In the natural gas market, Europe actively seeks to import U.S. liquefied natural gas (LNG) as an alternative to Russian pipeline gas. In June this year, the United States exported 4.2 billion cubic meters of LNG to Europe. Although it cannot wholly make up for the vacancy caused by the reduction of natural gas supply in Russia, the "de-Russification" of European energy and the realization of

"energy independence" has become a priority for Europe. Options. The breakdown of Russia-EU energy cooperation, long sought by the United States, may become a reality.

3.2 The global energy transition and substitution process is lagging behind

Europe has always believed that green energy transformation will become a new growth point for the European economy. Therefore, in order to reduce carbon emissions and achieve the goal of green transformation as soon as possible, Europe has successively released the "Energy Roadmap 2050", "European Green Deal," and "European Green Deal" since 2011. A series of programmatic documents, such as the Joint Action on Cheap, Safe and Sustainable Energy, to increase the proportion of renewable energy in energy consumption and take this as a fulcrum to improve the overall competitiveness of Europe.

The Russian-Ukrainian conflict has disrupted the pace of Europe's energy transition. Although Europe is trying to find diversified energy sources to fill the gap in Russia's energy supply, it is challenging to meet Europe's needs in the cold winter based on the current progress. In 2021, the EU's dependence on Russian coal, oil, and natural gas will be 46%, 27%, and 45%, respectively. It is easier to find alternative sources for coal and oil, but it is highly dependent on Russian natural gas, which cannot be replaced in the short term, and the substitution cost is high. Higher. The two sides have repeatedly engaged in sanctions and counter-sanctions around energy. Judging from the current progress, the energy supply issue in Europe has not been resolved through sanctions.

Citibank predicts that European energy spending will soar to \$1.2 trillion in 2022, four times as much as in 2021. The primary status of energy and the current situation of shortage force European countries to delay the process of coal withdrawal and nuclear abandonment in order to cope with the short-term energy shortage. At present, Germany has announced the establishment of a national strategic coal reserve plan. Western European countries such as Italy and Spain have also indicated that they will delay the withdrawal of coal power plants. France and the United Kingdom are already considering restarting or building new coal-fired power plants. Nuclear power is the EU's largest source of low-carbon electricity, and delays in closing nuclear power plants due to close in 2023 will reduce the EU's monthly gas demand by about 1 billion cubic meters, according to the International Energy Agency. Germany is considering extending the operating cycle of nuclear power units in operation. Belgium announced that it will postpone the plan to abolish nuclear energy by ten years in 2025. France has proposed to reshape nuclear power and plans to submit a new nuclear power plant construction project in 2023. In the absence of a complete solution to the problem of energy shortages in Europe, it is a foregone conclusion that the development of new energy sources will be blocked, and the energy transition will be delayed.

3.3 Strengthen Europe's determination to accelerate the deployment of new energy and achieve "energy independence."

Since the Russian-Ukrainian conflict, the energy dilemma faced by Europe has made the major energy-consuming countries pay more and more attention to the stability of energy security. Among them, accelerating the deployment of new energy is one of the most feasible ways. Therefore, although the energy transition and substitution will face challenges in the short term, countries' pursuit of the goal of "energy independence" will further promote the green energy transition process in the long run.

Europe is the first region to put forward the concept of "carbon neutrality," It has always been an active explorer in pursuing green energy transformation. Carbon neutrality is not only an environmental issue but achieving European energy independence is its essential pursuit. Since the 1970s, Europe has gained rich experience and political and economic dividends from the practice of energy transition, setting a benchmark for the global energy green transition. Substantial support for moral superiority. From January to May 2022, photovoltaics and wind power alone will save Europe at least US\$50 billion in fossil fuel import costs, with significant economic advantages. Timmermans,

head of the European Green Deal, also said: "Countries must accelerate the transition to renewable energy, and governments need to do it faster than expected."

4. Implications for China

4.1 Accelerating the Diversification of Energy Imports

Energy is the "blood" of modern economic development. Failure to achieve energy independence means that the lifeblood of development cannot be controlled by itself. The embarrassing situation of Europe in this Russia-Ukraine conflict stems from its high dependence on Russian energy. According to 2021 data, China imports 513 million tons of crude oil and 122 million tons of natural gas, with external dependence reaching 72% and 44.9%, respectively. The situation of energy security is grim. In addition to strengthening domestic oil exploration and development, "energy security + diplomacy" and "energy security + overseas investment" can be strengthened to ensure the diversification of energy imports. Deepen the "Belt and Road" energy cooperation, actively participate in and promote the construction and upgrading of energy infrastructure in the countries along the "Belt and Road," promote the interconnection of energy transmission networks, and promote the short-distance energy production and consumption [5]. Promote the continuous deepening of cooperative relations with countries in the Gulf region, take the free trade area negotiation opportunity to strengthen cooperation with companies in the Gulf region, and strengthen the energy supply from the Gulf region. The Gulf countries cannot expand energy exports to Europe on a large scale after the Russian-Ukrainian conflict because most of their output is locked in long-term contracts with major countries. Therefore, active participation in overseas energy development investment will help strengthen the stability of overseas oil and gas resources supply. Continue to promote global energy governance and cooperation under the framework of the Shanghai Cooperation Organization and the BRICS countries, participate in the formulation of energy governance rules, and establish and consolidate the status of a significant energy country.

4.2 Accelerate the creation of an RMB-denominated energy trading system

After the Russia-Ukraine conflict, the international payment method SWIFT "blocked" Russia, causing the latter to suffer considerable losses in international trade. China is a major energy importer, and any changes in the international energy market may have a butterfly effect on China's energy imports. Precautionary measures and accelerating the pace of RMB internationalization are issues that need to be implemented urgently. At present, China's crude oil futures have developed into the world's third largest crude oil futures after WTI and Brent crude oil futures. On this basis, it is necessary to improve the derivatives market system further, improve the Shanghai crude oil futures trading system, and continue to promote the RMB-denominated and "petroleum-renminbi" international energy trade system with settlement as the core will be constructed to increase the share and status of the renminbi in international energy trade, and to strengthen the right to speak and respond to risks in international energy trade.

4.3 Steadily promote the green energy transition

According to the International Energy Agency, global energy investment will grow by 8% in 2022, mainly from the energy sector's investment in clean energy and power grids and global investment in energy efficiency. China can fully use its leadership in the new energy manufacturing industry, actively participate in international exchanges and cooperation in new energy, and promote green energy transformation and substitution. Natural gas is recognized as good transitional energy for green transformation. It is necessary to increase the exploration and development of natural gas (wildly unconventional natural gas such as shale gas and tight gas) and to unblock natural gas import channels. According to local conditions, explore the development potential of new energy in various places, optimize the industrial layout, and continuously promote the technological upgrading and broad application of new energy such as hydrogen energy, nuclear power, photovoltaic power, and

wind energy. Continue to cultivate in the field of new energy vehicles, enrich the technical patent reserves in core areas, accelerate the formation of a complete industrial chain of new energy vehicles, and reduce dependence on oil.

It should be noted that green energy transformation is a long-term task, and if it is too radical, it may affect energy security. We must face up to the vital role of coal in ensuring energy supply at this stage and the role of natural gas as a "stabilizer" in energy transformation. Their research on clean utilization has steadily promoted energy transformation and substitution based on ensuring energy security.

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