

Analysis of the Future Trend of the Sino-US Trade War on the Energy Cooperation and Game Between the Two Countries

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Abstract. Since the Biden administration took office, it has inherited the Trump administration's perception that China is a major strategic competitor, so China and the United States have entered a competition-oriented dynamic. Political and economic changes around energy will add new instability factors to Sino-US relations and open new areas for China and the US. Under the background of the Sino-US trade war, this paper discusses that America and China, as the most influential representatives of developed and developing countries to achieve global energy goals, the game between the two sides around the economy and other fields will affect the development of Sino-US climate change cooperation status quo. At the same time, the paper studies the existing cooperation foundation under the current context of the intensified energy game between China and the United States, such as new energy vehicle technology. The energy transition is the general trend for the world's largest energy consumer, and carbon emitter. Both countries may achieve a win-win situation by joining hands in energy transition and cooperation to tackle the climate crisis. All possible cooperation will also provide new opportunities for Sino-US relations, but the changes they trigger may exacerbate the existing fierce game, and even create new conflicts. Therefore, accurately grasping the two-way interaction between China and the United States in the energy field is of great benefit to the global energy transformation and the development of green technology.

Keywords: Sino-US Trade war; Energy trade; Energy policy; Clean energy; Carbon emissions.

1. Introduction

With the outbreak of the Sino-US trade war, economic and political changes have made Sino-US Climate diplomacy develop dynamically. Since the Biden administration came to power, it has changed the negative attitude of the Trump administration towards the major reversal of global climate governance, rejoined the Paris Agreement, actively responded to the climate crisis, and proposed a carbon neutrality goal by 2050, making China-US climate diplomacy once again effective [1]. But the continued increase in the risk of a trade conflict has left the fundamental dilemma in Sino-US relations unresolved [2]. This article interprets key points of Biden's clean energy revolution and economic propositions around climate policy, combined with a retrospective analysis of the development of US energy policies, and deeply explores the future trends of the Sino-US energy game and cooperation.

2. The Evolution and Dynamic Trend of Sino-US Energy Policy

Climate change governance is closely related to economic development and the financial environment. Therefore, Sino-US climate diplomacy is bound to go through different stages with the development of Sino-US trade relations. That is to say, the Sino-US trade war will have a long-term impact on the energy policies and actions of the two countries under interactive gaming situations. As major powers compete for the right to speak in global governance, they must pay attention to the increasingly prominent climate issue. Therefore, China and the United States have also begun to realize the importance of climate diplomacy and put more concern into the fields of energy development and trade.

2.1 “Honeymoon Period” under the Obama administration

The continuous dialogue between China and the United States in the climate field during the Obama administration enabled China and the United States to spend a honeymoon period of cooperation. After Obama took office, he expected to turn the new energy industry into a new driving force for US economic growth. Therefore, the US government has made a major effort to combat climate change at this time. In June 2009, the "American Clean Energy and Security Act" was passed, requiring the reduction of fossil energy and the vigorously develop of clean energy. In August 2015, Obama proposed the Clean Power Plan, which sets carbon emission standards [3]. His new regulations also include reducing greenhouse gas emissions from cars and trucks and encouraging clean energy innovation and development. In addition to reducing carbon emissions from U.S. power plants, Obama stated that the Clean Power Plan would lower Americans' electricity bills and improve the health status of people. The Obama administration also completed consultations with China, which played a positive role in promoting the Paris Agreement [4]. At the time, China and the United States had conflicting interests in the business opportunities of the world's growing demand for clean energy, but leaders emphasized the opportunities for cooperation between the two countries. In fact, China and the United States have already benefited from numerous mutual investments and partnerships in clean energy. During then US Secretary of State John Kerry's visit to China, the two countries established the US-China Climate Change Working Group to propose new joint actions to reduce carbon emissions. Xi and Obama also met in Beijing before the 2014 Paris agreement to reach a consensus [5].

2.2 “Stagnation period” in US-China climate cooperation under the Trump administration

The Trump administration's primary goal is to boost the economy through policies such as tax reform. Steven Mnuchin, Trump's nominee for the Treasury, has said that the government's goal is to increase GDP growth to 3.3% to 4%, doubling the growth rate over the past 10 years [6]. Therefore, the bilateral relations between China and the United States deteriorated during the Trump administration. To gain advantages in the trade war, Trump withdrew from the Paris Agreement and hoped to revitalize the economy and expand employment by developing traditional energy industries such as coal. Trump's economic policies have made the U.S. economy rise steadily, so his leading energy policy propositions related to anti-climate governance can be consolidated and strengthened. The Trump administration repealed Obama's fuel efficiency standards and opted for looser rules. The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule [7] not only created more opportunities for automakers but also provided an important boost to the U.S. oil industry force. Under the Trump administration, the United States has stopped helping poor countries adapt to the damage of climate change. Trump claimed that the Paris Agreement harmed the interests of American workers and businesses, and affected the growth of the US economy, so he withdrew from the Paris Agreement. But China has expressed its determination to reform climate, so China and the United States stand on opposite sides of the climate issue.

2.3 The Biden administration's confrontation and cooperation with China in the energy sector

Biden has actively responded to the climate crisis and salvaged the damage to the US international reputation caused by Trump's presidency by rejoining the Paris climate agreement. The frequent interactions between China and the United States in the climate field have also laid a conceptual foundation for China-US climate cooperation. But Nancy Pelosi's visit to Taiwan in early August 2022 led to a series of countermeasures by China, including the suspension of Sino-US climate change talks [8]. That means the cooperation between the US-China Climate Working Group is on hold. However, the new globalization process in the post-pandemic era has begun, and all countries urgently need to develop technological innovations to deal with climate change. Therefore, the cessation of climate talks should be temporary, and other global stakeholders will also try their best to promote bilateral cooperation.

In general, the energy pattern of China and the United States is affected by changes in global energy supply, geopolitics, and different political parties. However, in essence, they both seek to reduce energy dependence and maximize benefits in the field of energy trade.

3. Analysis of the Development and Interaction of the Energy Game between China and the United States

The trade friction between China and the United States has begun to make both countries realize that the relationship between them has almost entered an era of full competition and confrontation. Although the two sides have encountered difficulties in energy cooperation and trade, climate change is considered to be one of the few areas where the two sides can still cooperate. But disagreements over some key issues are holding back cooperation.

3.1 The energy and economic relations between the two countries are highly complementary

Coal power generation is an important part of China's energy structure, so in the race to start a new round of technologies and new industries around carbon neutrality, China needs to change the energy landscape and has advantages in terms of capital, labor, and production chain. The United States is in a leading position in the world in the development of new energy and has strength in technological innovation and energy development. China has a huge population and needs to make coal power generation much more efficient, but the US has access to cheap and abundant shale gas [9]. The two countries can actively promote technological innovation and industrial cooperation in the field of new energy because China and the United States share extensive common interests in energy. They not only rely heavily on fossil fuels for energy production but also share the common goal of ameliorating the climate crisis and environmental pollution. Moreover, China is developing rapidly in the fields of solar energy and hydrogen energy, and is the world's largest equipment producer, while the United States is planning to increase investment in new energy fields such as wind power and photovoltaics. In the field of new energy vehicles, China's new energy vehicles are growing rapidly in the face of the shortage of chips, rising raw material prices, and the covid 19 pandemic. The United States is committed to the top-level design of carbon neutrality, and China is also actively promoting it and has the conditions to further deepen cooperation. In short, both sides can learn from each other in terms of carbon reduction technology, and related policy design, and can further carry cooperation.

3.2 The two countries' energy economies face a chasm amid the trade war

EIA pointed out in the December 31st, 2018 report that in 2017, China surpassed the United States to become the world's largest crude oil importer [10]. Before the trade war, China was a major crude importer of the US. But the trade war has caused a huge drop in U.S. energy exports to China, and both China and the US have imposed retaliatory tariffs. The solar trade war between China and the United States began in 2012 after the United States imposed tariffs on Chinese-made solar cells [11]. But the trade war could slow China's transition from an economy highly reliant on fossil fuels. On the other hand, the energy crisis aggravated by the conflict between Russia and Ukraine has had a huge impact. While U.S. exports of natural gas, oil, and coal to China have experienced rapid growth, in response to the Russian-Ukrainian conflict, the U.S. has largely and deliberately reduced energy exports to China. China has also turned to buying more energy from Russia for political reasons. In the atmosphere of the trade war, it is difficult to eliminate the high tariff barriers between the United States and China, and China's policy on COVID 19 has also caused an economic downturn, thereby suppressing import demand. In the US, inflation due to COVID 19 has also made U.S. exports less competitive. This makes the Sino-US energy trade likely to be deadlocked for a long time.

3.3 The cooperative space and interaction influence under the current situation of the Sino-US energy game

Although the imposition of tariffs on China during the Sino-US trade war is an eternal theme, under the influence of the pandemic and the conflict between Russia and Ukraine, China and the United States are expected to use energy cooperation as a breakthrough to reduce tariffs and the impact of US inflation. If the United States reduces additional taxes on Chinese products of the energy industry such as lithium batteries, it can not only vigorously develop clean energy vehicles and free the auto industry from its dependence on fossil fuels, but also reduce the crisis of insufficient vehicle production capacity and ease the pressure of U.S. companies that use Chinese raw materials. China and the United States can use their current competitive advantages to address these issues. China has a strong ability to manufacture cheap renewable energy infrastructure and products, while the United States has abundant shale gas and oil reserves and advanced pollution control technologies. Looking back at history, China and the United States have carried out substantial cooperation in clean energy development and climate change mitigation. A successful example is that Tesla is benefiting from China's strong infrastructure capabilities and policy subsidies for new energy vehicles. Tesla's factory located in China has reduced costs by 60% compared to the US factory, providing a positive competitive environment for local new energy vehicles.

4. Sino-US energy landscape from a global perspective

The climate game and cooperation will not only have a profound impact on China and the United States but also bring profound changes to the entire world. From a global perspective, the global impact of the Sino-US energy game mainly includes the following aspects.

4.1 The new energy revolution is increasingly shaping international relations

The new energy revolution further strengthens the influence of new energy development and technological innovation around energy on the global political economy and is a key factor affecting geopolitics and international discourse power in the next few decades. Energy development standards have national attributes, such as carbon emission standards, so the countries that set standards will gain a competitive advantage and protect their own interests.

4.2 Different communities of interests will emerge around the identities of countries in climate issues

The issue of global climate change has increasingly attracted widespread attention from the international community and has far-reaching impacts on countries' struggle for the right to speak and their choice of economic development paths, and even involves the determination of the political and economic interests of each country. From the perspective of the economic development of various countries in the world, the carbon emission freeride problem caused by the staged differences between developed and developing countries makes carbon emission control always face the game between global public interests and national interests, forming different internal and external interests of many countries. Therefore, to realize energy equity and a win-win situation and develop reasonable carbon reduction, it is necessary to comprehensively consider the different development stages and historical responsibilities of various countries.

4.3 The energy technology gap is further widened, and "technological colonialism" is highlighted

Humanity still has a long way to go to achieve energy equity. There are still many people in the world who lack the most basic energy supply, and the technical barriers that countries have built to profit from trade are becoming more and more prominent. The advantages of technologically advanced countries in the field of new energy have been expanded again, and technologically developed countries can continue to improve their economic competitiveness even when human

resources are insufficient, and those who are chasing after them, will have more difficulty. The original "demographic dividend" of developing countries is no longer a dividend in the face of the new technology wave, but more likely a burden. Therefore, countries should reflect on their own positioning and constantly adapt to the ever-changing international energy landscape.

5. The Future Pattern of Energy Relations between China and the United States and Attitudes toward Global Climate Governance

The future pattern of energy between China and the United States is based on the competition of checks and balances, combined with industrial cooperation to protect their own interests, and jointly lead the development of human energy technology.

5.1 The global climate issue becoming a prisoner's dilemma

Disputes of climate issues continue to escalate, developing countries bear the consequences of climate damage after industrial improvement in developed countries, while developed countries think that developing countries are lagging in the development of new energy and blame them for excessive emissions. Both parties are unwilling to give up their own interests and will eventually fall into the "prisoner's dilemma". Completely protecting the interests of one party is not the best choice for both parties, because human beings are a community with a shared future, and the increasingly severe climate problem is a common problem faced by all parties. All countries need to make concessions and compromises to jointly solve the climate problem, otherwise, no one will benefit. But the fact is that it seems impossible to achieve mutual trust in all countries, so checks and balances against each other now seem to be the best option.

6. Summary

Today's world energy development is facing a series of new changes and challenges, and the energy race has become an important part of the Sino-US trade war. The climate goals of the Paris Agreement cannot be achieved without the concerted efforts of all countries in the world, especially China and the United States. However, due to the strategic competition between the two countries, the Sino-US energy conflict will continue in the foreseeable future, and there is a risk of further intensification. However, since the irreplaceable leading roles of China and the United States in energy will affect the interests of different camps of developed and developing countries around the world and the climate future of all mankind, China and the United States need to seize the advantages of both parties and look for new economic growth points that can be cooperated in new energy vehicles, photovoltaic power generation, etc. China continues to develop into a major energy importer and resource exporter and it hedges the effect of high global oil prices on the indirect energy output of low-cost products, while the United States has become the main force in new energy development with advanced technology. Therefore, China and the United States should work with countries around the world to formulate new cooperation methods to promote the reduction of global per capita oil energy consumption and new energy technology. The two countries must try their best to manage and control conflicts at the economic and trade level, avoid escalating to the level of ideology, geopolitics, and human climate security, and avoid the "zero-sum game" caused by both sides. The world still expects predictable energy cooperation and vigorous competition between China and the United States.

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