

The Impact of Green Deal Project Development on China-Europe Relations

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Abstract: Climate change has increasingly become an important international issue in today's world, and global warming, the green economy, and renewable energy have gradually become topics of global concern. To overcome these challenges, the European Green Deal has been established to make the EU's climate, energy, transport and taxation policies fit for reducing net greenhouse gas emissions by at least 55% by 2030, compared to 1990 levels. China, as the largest developing country and one of the countries experiencing the fastest growth in renewable energy, has the necessary responsibility to usher in the development opportunities of green and low-carbon economic transformation together with European countries with more developed environmental protection development. This paper is going to analyze how carbon-neutral and new energy development improve and influence China in the face of tense relations with major Western countries in recent years, in terms of environmental protection, technology, finance and political relations. Besides, this study will also investigate that ecological sustainability will increase friction between China and Europe or deepen mutual cooperation in the future.

Keywords: EU, Green Industry, China-EU Economic and Trade Relations, Industry policy framework.

1. Introduction

Over the past decade, Europe has had major differences with communist China on many values, such as religion, democracy, and human rights. Therefore, it is difficult for communism to truly win the favor of European countries. However, since China joined the WTO, China-EU relations have entered a golden period of development, with trade volume increasing nearly nine times in 20 years. From an economic point of view, out of common needs and demands, China and Europe have obtained their own development and advantages from trade cooperation, such as when Europe's Airbus has employment opportunities for Chinese workers, thus improving their competitiveness in the global market and jointly promoting the upgrading of global industries.

There is also a strong financial motivation behind this, in 2021, becoming the most valuable automaker, while Exxon, once the most valuable energy company, has plummeted, falling out of the Dow Jones Industrial Average. Business communities around the world are starting to change their attitude amid rising renewable energy prices and public pressure.

On the other hand, the EU's China policy has undergone significant changes in recent years. In order to address global climate and environmental challenges and focus on sustainable approaches to

economic development, Europe has always sought to achieve strategic autonomy and pursue more mutually beneficial international relations. The EU and China are more or less aligned on their climate objectives, but there is a need to do more to develop a more specific roadmap and strategy approach. Following in the footsteps of the EU policies, the EU green deal continued to more or less overhaul all elements of EU–China policy to adjust to the realities of energy and economic transitions. The crucial role that cooperations in bilateral trade markets have played in accelerating the shift to renewable sources of energy and EU-China relations are examined in this paper. The following will list the scope, level and extent of new energy development in China and Europe in chronological order to analyze their supply and demand and cooperation opportunities.

2. Demand and Needs of one country development

China's increasing demand for economic transformation and industrial chains provide opportunities for the development of green technology and green energy. Heavy investment in the development of low-carbon technologies has been included in the national development strategy, including transportation electrification, electric vehicle battery technology, renewable energy and nuclear power plans, and carbon capture technology. However, according to Figure 1, from S&P Global, coal still accounted for nearly 60% of China's electricity supply in 2023, indicating that record-high solar and wind capacity growths were yet to lead to a ramp up in power production. It is estimated that China's electricity consumption will reach 9.8 trillion kWh in 2024, a 6% year-on-year rise and the decline of the energy self-sufficiency rate is still a concern.

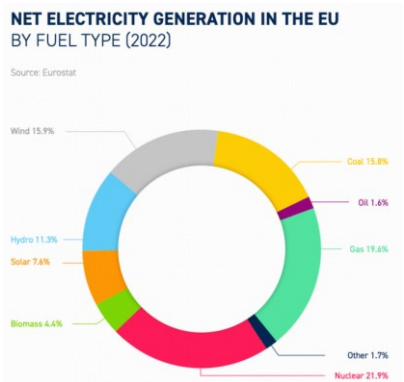


Figure 1: Net electricity generation in the EU

Table 1: China's future energy consumption

Fuel Types	Installed capacity as of 2023 (GW)	Forecast installed capacity as of 2024 (GW)	Capacity Addition in 2024 (GW)
Coal	1,160	1,200	40
Other Thermal	230	260	30
Solar PV	610	780	170
Wind	440	530	90
Other non-fossil	477	550	73

Compared to the EU, coal still relied on fossil fuel for the actual electricity supplies, making it the world’s largest emitter, according to S&P Global’s newly published report. In response to the issue of global warming, China has actively promoted different green policies such as carbon capture and storage (CCS), carbon capture utilization (CCUS), afforestation, and utilizing the mechanism of the

market economy to strengthen the development of green finance. Besides, the amount of green bonds issued by the established carbon emissions trading system is now the second largest in the world, which is expected to attract more overseas funds to invest in the Chinese market.

Referring to Table 1, China's future energy consumption will be amplified by renewable energy sources such as wind power, solar power, hydropower, and nuclear energy to supplement the energy shortage of coal. China's current energy strategy might kill two birds with one stone. Since the proportion of renewable energy increases, it means that the import of oil and natural gas decreases. This strategy can not only help China reduce the risk of bottlenecks but also stabilize the supply of energy and reduce European energy security concerns.

3. Opportunities and Threats

In 2019, the European Union announced a set of growth strategies for achieving a sustainable economy, called *the European Green Deal*. There are three main goals. The first is to achieve virtual zero greenhouse gas emissions before 2050, which is climate neutrality. The second is to decouple economic growth from resource use, that is, even if we promote decarbonization, it will not hinder economic growth. Last but not least, no person and no place left behind.

Many European countries are actively developing renewable energy. Due to the limited context, this paper analyzes the energy strategies of European countries, which are relatively representative. For example, Germany and Spain are both countries with rapid growth in solar or wind power generation. From the perspective of electricity and energy supply, European countries are still different from being advanced in environmental protection. As the scale of cross-border electricity trade continues to expand, if all countries' power generation cannot be consumed domestically, they will choose to export it, thus reducing the consumption of renewable energy. However, the source of power supply for domestic manufacturing must be fuel-fired power generation, which will lead to continued growth in carbon dioxide emissions [1].

On the other hand, China has gained control over oil in Africa, importing natural gas from Central Asia, Myanmar and Russia through pipelines, and has also signed a strategic partnership agreement with Saudi Arabia. The development of liquefied natural gas, nuclear power generation and renewable energy has gradually matured, which shows that they will play an increasingly important role in future environmental development [2]. When faced with some factors that can be changed and some factors that cannot be changed, human resources, which imply cooperation, become the factor that can be changed.

4. Case studies

The EU's additional tariffs on Chinese electric vehicles are going to take effect. China's electric vehicle exports are evolving from an economic issue to a political topic. At a time when there is an urgent need to accelerate the promotion of electric vehicles, imposing tariffs is undoubtedly a policy retrogression.

In recent years, Chinese vehicle manufacturers have developed rapidly. Chinese brands currently account for 3% of new registrations in the German passenger car market currently. According to data, it is estimated that in 2035, the global market for the electric vehicle industry will grow 11 times compared with 2020, to 2,418 vehicles [3]. The European Union has formulated sharing plans for fuel vehicles, including gasoline-electric hybrid vehicles, and plans to effectively ban the sale of new cars in 2035. This means that Germany, with automobiles as its backbone industry, will be severely affected, and downstream companies will be forced to adjust their industrial structure.

One of the significant examples of Europe's growing reliance on Chinese expertise is Audi and its partner SAIC. Audi had signed a technical cooperation agreement with FAW in 1988 to establish

FAW-Volkswagen. As of now, China has 5 million Audi owners, making it the largest single market in the world for Audi. But today is different from the past, new energy vehicles such as Tesla, Jikrypton, and NIO also took away part of Audi's fuel vehicle sales, and the performance of new energy vehicles was mediocre. Audi has lagged far behind Tesla and other Chinese rivals in EV sales amid a protracted EV price war. Tesla ranks number one in global electric vehicle sales. Although it is an American company, with production plants in China and Germany, its cooperation with China is inseparable. And the second to fourth places are all Chinese car companies, bases on statistic compiled by TrendForce [4]. Among the top ten, there are four Chinese companies. It illustrated that Chinese companies have a fierce development in the electric vehicle market, and the follow-up development cannot be underestimated.

In order to enhance Audi's competitiveness in the Chinese market, it is reported that the Audi will become the first car model equipped with Huawei's ADAS advanced driving assistance system. Besides using the Chinese company's intelligent driving system, another report states Audi's signing of a supply agreement with Chinese battery manufacturer CATL. Moreover, Audi will start making the first EV built based on the Premium Platform Electric (PPE) architecture developed by its headquarters in 2025 at the earliest in China at its joint venture with FAW. Meanwhile, Audi is working with Chinese self-driving car startup Momenta on automated driving for a separate new series, which has been under development with SAIC, the German firms other local manufacturing partner.

FAW-Audi JV is also building a massive EV-only plant in northeast China in Changchun, Jilin Province, which cost 20 billion yuan. It will have an annual capacity of 150,000 cars, or 2.46 million square meters, and the production will be jointly developed with Porsche, based on Premium Platform Electric (PPE). Besides, the parent company of Audi, VW. announced in July when it said it would buy 4.99% of Xpeng (9868.HK), opening a new tab for around \$700 million along with plans to jointly launch two Volkswagen-branded EV models by 2026 [5].

On the other hand, Germany goal of having 15 million electric cars on roads by 2030 could be missed by up to 6 million cars without cooperation with China, said transport policy think tank Agora Verkehrswende [6]. A joint effort of domestic policy changes and the inclusion of Chinese carmakers is needed to achieve the target. Relations brought by the cooperation between China and Germany are beginning to yield results. Germany, the EU's largest economy, expressed strong opposition to the EU's imposition of anti-subsidy tariffs on Chinese EVs, so did the German auto giant Mercedes-Benz. Owing to its economic interests, Germany tend to avoid a wider escalation of the trade war, since Germany's economy relies on exports to a large extent.

China is one of the largest automobile markets in the world, and its demand for electric vehicles, in particular, has increased significantly. In 2022, China's electric vehicle sales have already accounted for 60% of the world's sales. Germany, as a major automobile manufacturing country, especially in the field of high-end automobiles, famous brands such as Mercedes-Benz, BMW, and Audi definitely want to take a share of the profits of the Chinese market. Increasing tariffs would only affect the price of German electric vehicles in the Chinese market and lead to the degeneration of trade volume, but also affect the benefits for multiple industries such as the luxury goods, furniture or food.

In 2023, Germany's automobile exports accounted for 80% of total production while China's new energy vehicle exports account for only 12.5%. China's proactive promotion of industrial transformation and market opening will not lead to over capacity, but rather create greater space for industrial cooperation and drive technological progress and collaboration among countries. From the perspective of economics, adopting protectionist trade measures, not only affects the relationship between Germany and China, but also impedes the development of global emerging industries. The cooperation between Chinese and German car companies will not only allow German car companies

to use our energy and labor force but also sell the cars directly on the ground. In addition, the hardware of German automobiles may not just combine with the electrification software applications of Chinese companies, close cooperation can be sought in the development of the industrial Internet and new energy, including some artificial intelligence.

From the perspective of political and cultural exchanges, Germany and China regard the ongoing industrial upgrading of their respective industries as their own opportunities. Since the first half of 2024, German investment in China has reached a record high of 7.3 billion euros, and many large German companies have successfully expanded investment in China and deepened cooperation. Promoting the governance of global issues and the development of carbon neutrality will not only enable enterprises to enhance their position in the global market. In the long term, can also bridge and resolve political conflicts between the two parties in a more constructive way.

5. Discussion

According to current conditions, the 1.5 degrees Celsius warming range will be exceeded in at most 12 years, and the temperature will rise by 3 degrees Celsius by the end of this century. If the two sides maintain a confrontational attitude and a hostile relationship on the issue of climate change, then everyone will lose. Therefore, there is only one way for Europe and China to maintain engagement on climate issues while avoiding a more confrontational situation which is seeking cooperation in various ways in some areas such as carbon emissions trading systems, smart cities and transportation decarbonization.

Among cooperation at this stage, the establishment and supervision of the global carbon emission pricing system, carbon emission quotas and carbon trading markets is an area where the positions of China and the West differ greatly. For example, the European Union mainly uses carbon markets for carbon emission reduction, while China has just started piloting a national carbon market. In addition, the EU and China still hold differences in opinion on the distribution of climate mitigation responsibilities. As a developing country, China recognizes the principle of common but differentiated responsibilities, while Europe hopes that China will undertake the same emission reduction goals as major developed countries.

In the short term, the relations between China may be affected by the presidential election of the State, such as Within the next 25 years, it is reasonable to expand the investment or cooperation between the EU and China in response to environmental issues. China may also learn from the EU's policies such as collecting carbon tax from those who cooperate which decelerate or even increase emissions of carbon dioxide.

Ultimately, imposing tariffs is not the EU's only option. In the past, foreign automakers had to form joint ventures with Chinese companies to produce cars in China. Now, the EU can make similar demands to help Europe increase its capacity for electric vehicle production and create more employee opportunities in Europe, which may relieve the impacts of fossil fuel industry changes. To make sure of a new vision with coal phase-out, policies are needed to help those affected and create opportunities for new growth models in new energy regions.

Although uncertainties remain, China is now a global leader in renewable energy investments and installations, as well as in the manufacturing and deployment of electric vehicles, achieving carbon neutrality will be of strategic philosophy of EU-China governance will be mutually reinforcing objectives to achieve.

6. Conclusion

Although the EU Green Deal has long been formulated, its implementation requires practical actions by member states. Under the premise of slow economic recovery, many industries, including the

automotive industry, are gradually losing their advantages, forcing the industry to transform and make more compromises for environmental protection. Overall, each member country has given specific plans for emission reduction steps before 2050, providing industry predictability for enterprises, stakeholders and citizens. It can be seen that nature-based solutions are feasible and effective. In the long term, Europe should make an effort to achieve strategic autonomy and pursue more mutually beneficial international relations rather than concerned about energy security issues.

It has been shown that the next generation will require the deployment of significant collective resources for green and digital transformation. Achieving the EUs 2030 climate targets requires more than just \$1 trillion in investments every year. For suggestion, this study should include a comprehensive approach to decisions and investments introduced by all EU countries, because the goal of the Green Deal is single and definite, each country should develop a set of economic and environmental mechanisms suitable for its transformation as there is no backup plan.

To ensure a healthy growth of China-EU relation, the country's social employment situation, energy security issues and flexible handling methods in the face of unforeseen shocks should be considered in advance. These are all information that needs further investigation. In the future, the Green Deal should focus more on distributional impact to ensure that every region in Europe has the opportunity to develop according to its own technical and economic expertise. The EU should play an active role in multilateral environmental agreements and negotiation processes. Especially support for developing projects such as China-Europe freight trains, which have become an important project for international logistics and transportation between the two places. Over the decade, the Belt and Road Initiative has created jobs opportunities for countries along the routes and lifted nearly 40 million people out of poverty. These interests develop on the premise that they are tied to each other. Regarding trade regulations, EU countries should have more consultation and communication with China to make the green transformation smoother and allow international cooperation to be based on mutual trust and understanding.

References

- [1] Eckert, V., & Sims, T. (2023, January 5). *Even in crisis, Germany extends power exports to neighbours*. Reuters. <https://www.reuters.com/business/energy/even-crisis-germany-extends-power-exports-neighbours-2023-01-05/>
- [2] Lu, Y. (2020). *Hydropower and sustainable development in China*. United Nations Sustainable Development Knowledge Platform. https://www.un.org/esa/sustdev/sdissues/energy/op/hydro_luyoumei.pdf
- [3] Daye, C. (2024, October 5). *German automaker calls for postponement of EC tariffs on Chinese EVs*. Global Times. <https://www.globaltimes.cn/page/202410/1320721.shtml?id=12>
- [4] Chen, C. (2024, February 20). *BYD set to challenge Tesla for the crown in EV sales in 2024*. TrendForce. <https://www.trendforce.com/presscenter/news/20240220-12030.html>
- [5] Opletal, J. (2023, November 14). *BYD and CATL to supply batteries to Audi's China-made models*. Cars News China. <https://carnewschina.com/2023/11/14/byd-and-catl-to-supply-batteries-to-audis-china-made-models/>
- [6] Wehrmann, B. (2024, August 1). *Cooperation with China needed to achieve Germany's 2030 EV target – Analysis*. Reuters. <https://www.reuters.com/business/energy/even-crisis-germany-extends-power-exports-neighbours-2023-01-05/>