Empirical analysis of the influence mechanism of green finance on carbon emission reduction

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Abstract. As the global climate problem continues to intensify, environmental governance issues have been attached importance by all countries. Building a complete green finance context system is an important means to reduce carbon emissions. In the context of the green, low-carbon and circular economy system, the state focuses on the development of green finance and green technology innovation, and takes the promotion of high-quality development of green finance as the primary goal. The realization of carbon emission reduction requires the support of the capital chain provided by green finance, so this study is of great significance. Therefore, the data of 30 provinces and cities in China (except Xizang) from 2010 to 2020 are used to build a panel data model systematically. Through the analysis of the intermediary effect model, the robustness test of the analysis results is carried out, and the correlation between green finance and carbon neutrality is proved by empirical analysis. The results show that the level of green finance development reduces carbon emissions with technological innovation as the intermediary factor.

Keywords: green finance; Carbon reduction; Technological innovation；fintech；Carbon neutralization.

1. Introduction

As the global temperature continues to rise and the negative effects of greenhouse gases intensify, countries around the world take solving the problem of carbon emission reduction as one of the important goals, and constantly put forward powerful policies and ensure the implementation of policies. For the first time, China has set an ambitious goal of achieving carbon neutrality by 2060 instead of continuing to grow when its carbon dioxide emissions peak by 2020. In essence, carbon neutrality means that the greenhouse gases such as carbon dioxide absorbed and purified in an economy or region can offset each other with the greenhouse gases produced, so as to achieve the "net zero emission" of greenhouse gases in the region [1] and achieve the macro-strategic goal of carbon neutrality.The realization of the green market mechanism and the transformation of enterprises to green innovative enterprises to achieve the reduction of carbon dioxide emissions reflects the determination of China to actively fight against environmental problems and is conducive to the maintenance of China's international image. In the increasingly complex environmental problems, although the one-way restriction of carbon dioxide emissions can restrain the degree of environmental deterioration to some extent, it is necessary to grasp the balance between economic and social development and ecological civilization environment construction, and steadily promote the development of green and low-carbon industries in China. Green finance takes ecological environmental benefit as its core and takes the development of environmental protection industry as its cornerstone [2], comprehensively supports the development of green industry in our country.At the 19th National Congress of the Communist Party of China, an important directive was put forward that China should vigorously develop ecological civilization construction, promote the transformation of various industries into green industries, and take green finance as one of the important ways of green development. A sustainable and efficient green finance system will create a green ecological atmosphere and help build a high-quality green society. The development of green finance emphasizes that our country follows the financial model of sustainable development, considering the material creation while developing economy, paying attention to the protection of environment and the coordinated development of ecology. In order to fully realize the goal of green finance, enterprises must be supported by science and technology

with low consumption and less pollution, and the continuous innovation of science and technology has become an important part of the development of green finance.By means of resource conservation and environmental protection, green technology innovation steadily improves the green finance index, establishes a sound green trading system, and truly realizes technological innovation to promote the development of green finance. The government should intervene and reduce the proportion of carbon emission enterprises, and promote enterprises to develop into high-tech green industries

2. Theoretical research and hypothesis analysis

2.1 The development of green finance and carbon reduction

In the process of economic development, the financial industry has become the core of the economic industry. In order to cope with the deteriorating world climate and the waste of resources, environmental protection and energy saving have become the key to innovation in various fields. The efficient use of clean energy by enterprises plays a decisive role in promoting economic activities of environmental protection. The rise of the financial industry is an important pillar for the advance and development of the real economy. The concept of green finance has improved the types of financial industry products and solved the concurrent problems in the process of the real economy and green development.The financial market continuously optimizes its resource allocation, promotes the transformation of various industries to green industries, controls the scale of polluting enterprises, abandons traditional old processes that pollute the environment and waste resources, increases the research and development of new and energy-saving technologies, and reduces the emission of carbon dioxide and other gases. Linghu Yuting proposed that green credit, green investment, green insurance and green support constitute green finance [3], Xiu et-al. By building a nonlinear threshold panel model, it proposes the view that the regulation of green credit can realize energy saving and carbon emission reduction in the process of industrial growth [4]. Later, banks take environmental detection index as an important basis for the amount of enterprise loans, which can help the development of green industry to a certain extent. 。 Our country implements top-down differentiated green credit policy, establishes relevant financial institutions such as green bank, which comparatively increases the financing cost of enterprises. The emergence of green finance regulation guides clean and efficient enterprises to continuously replace heavily polluting enterprises, thus achieving a qualitative reduction in carbon emissions. Before the green credit is issued, an in-depth background information investigation is carried out on the emission of the three wastes of the enterprises that are going to apply for financing and the financing environment to determine whether the enterprises meet the standards of lending. Jiang Hongli proposed that the emergence of green credit promoted the process of manufacturing transformation and technological upgrading, thus reducing the emission of polluting gases [5].Chinese provinces issue green bonds as an important part of financing funds for enterprises, broaden the channels of green financing, greatly reduce credit risk and research and development costs will make a large number of enterprises in droves, and the effect of financial leverage will improve the level of green financial innovation. The issue of green insurance has aroused high attention of the media, so as to achieve the effect of information symmetry. Therefore, this paper proposes hypothesis one.

H1: The improvement of the development level of green finance will lead to the reduction of carbon emission intensity.

2.2 Green finance and technological innovation

The rapid development of green finance in our country has promoted the development of green technology innovation, green technology innovation has strengthened the important position of innovation as the main body of development from a variety of perspectives, and green finance actively promotes regional green technology innovation [6]. In our pilot policy of green finance,

supply providers will develop new green technology as the initial goal of research and development, and constantly improve the market mechanism; To gradually establish a complete new trading system of green innovation technology as the middle-level goal, improve the efficiency of industrial green transformation, improve the structure of green production factors, and lead consumers to continuously optimize their consumption patterns.Under the requirements of both supply and demand for environmental protection, enterprises continue to introduce new green financial products and promote green technology innovation in areas where pilot policies have been implemented. Our long-term green innovation projects solidified thinking by reducing corporate income as the only way to practice the protection of environment and resources by reducing income. The policy with strong externality effect is the direct reason why enterprises are reluctant to enter the green field. Increasing policy support for technological innovation is an important means to stimulate innovation, which reduces energy consumption per unit of product and makes a milestone contribution to environmental protection and energy conservation.Scholar Ding Zhigang proposed that the adoption of scientific and technological innovation can save production cost, reduce waste discharge in the production process and make efficient use of labor productivity [7]. Under the background of technological innovation, the total green innovation index of our country is increasing linearly. The national financial department gives great support to the green industry and increases the investment of RD funds in various regions, which has achieved good results.The number of valid green patent applications has been increasing year by year, and the concept of green development has been deeply rooted in the people's mind, stimulating the market demand for green innovative products. Many provinces and cities have gradually established green technology trading centers, and Shanghai has established a foundation to raise funds for green economy. While developing, green finance provides financial support for technological innovation, escorts the demonstration of innovation effect, and achieves resource saving and integration in many fields. Therefore, this paper proposes hypothesis two.

H2: The development of green finance will promote technological innovation.

2.3 Technological innovation and carbon reduction

As the global climate continues to deteriorate, the development of green industry is imminent and the problem of insufficient technological innovation needs to be solved urgently. The carbon emission intensity of all key areas is still large, and China should promote the innovation of low-carbon technology as the core of carbon emission reduction. Professor Ren Yanyun proposed that enterprises should change the production mode with high energy consumption and high carbon emission into a green and low-carbon mode [8]. Green technology innovation provides technical support for the spread of green technology and the acceleration of the reduction of carbon emissions [9]. The key to innovation lies in the breakthrough of low-carbon technology.Scientific and technological innovation departments should first develop clean alternative technologies to solve the source path of carbon emissions at the root, directly utilize the energy terminal, and replace coal and fossil energy with new energy. The development of energy interconnection is also the backbone of promoting carbon emission reduction, promoting the transformation of enterprise driving force from the old to the new, and guiding enterprises to the direction of low-carbon development. The state should set strict carbon emission standards, implement carbon emission limits for key enterprises, and constantly guide enterprises to carry out green technology innovation. In recent years, the development of negative emission technology has become the preferred technology for carbon emission reduction.The development of negative emission technology is an important part of the core competitiveness of economic development. The systematic and large-scale technological innovation is in the ascendent stage, and becoming a technology-intensive power has become the future goal. Only with the continuous improvement of technological innovation can carbon emissions be reduced or even zero in a real sense, and only with the construction of a sound low-carbon technological innovation system can carbon emissions be reduced from individuals to the industrial chain. Therefore, this paper proposes hypothesis three.

H3: The progress of technological innovation can effectively curb carbon emissions.

3. Research design

3.1 Model setting

In order to deeply explore the relationship between the development level of green finance and carbon emissions, this paper takes total carbon emissions ($co2$) as the core explained variable, green finance development index (gfi) as the core explained variable, and the number of valid patents as the intermediate variable. Four control variables including registered unemployment rate (ur), gross domestic product (gdp), foreign direct investment (fdi) and RD expenditure ($rdjf$) were selected to set a benchmark regression model

(Model 1)$\ln co2_{it} = \alpha_1 gfi_{it} + \alpha_2 \ln rdyx_{it} + \alpha_4 \sum Z_{it} + \varepsilon_1 + \alpha_5$

In this paper, technological innovation as the intermediary, in-depth study of green finance development, technological innovation, carbon emission reduction relationship, set the intermediary effect model II, III.

model 2$\ln rdyx_{it} = \beta_1 gfi_{it} + \varepsilon_2 + \beta_2 + \beta_3 \sum Z_{it}$

model 3$\ln co2_{it} = \lambda_1 \ln rdyx_{it} + \varepsilon_3 + \lambda_2 + \lambda_3 \sum Z_{it}$

Where, $co2_{it}$ is the carbon dioxide emission in year t of i of a province or city,gfi_{it} is the development of green finance,$rdyx_{it}$ is the number of valid patent applications，$\sum Z_{it}$ represents the set of various control variables, $\varepsilon_1, \varepsilon_2, \varepsilon_3$ is the random interference term,α_5, β_2，λ_2 is the constant term.

3.2 Variable selection

1.Explained variable: total carbon emissions. According to the IPCC method, Hu Jianbo calculated the total amount of carbon emissions from the actual consumption of coal, coking coal, crude oil, gasoline, kerosene, diesel, fuel oil and natural gas. Therefore, the total amount of carbon emissions used represents the amount of carbon dioxide emissions in the production, transportation and use of products. The reduction of carbon emissions is an important part of achieving the goal of carbon neutrality. It is necessary to select total carbon emissions as the core explained variable to explore the relationship between the development level of green finance and carbon neutrality, denoted as$co2$。

2.Core explanatory variable: green finance development index. Lingfox Yuting puts forward four levels of green credit, green investment, green insurance and green support, and uses the entropy method to construct the inter-provincial (city, district) green finance index. The green finance index can clearly reflect the development trend of green finance in our country, and provide data support for measuring the situation of green finance objectively. Since there are some missing data in the collected data, the vacant data has been completed by interpolation method through stata, so the green finance development index is adopted as the core explanatory variable, denoted asgfi。

3.Mediating variable: number of valid patent applications. Our technology is in the ascendant stage of development and an important indicator of innovation ability is the number of patent applications. In the implementation of intellectual property rights, both the quality and quantity of patents have been greatly improved. The number of applications for a single patent adoption cannot accurately measure the level of technological innovation and development, and invalid patents cannot substantially improve our technological innovation ability. According to Fankhauser, green innovation is the core factor of green competitiveness [10], the number of valid patents adopted in this paper is more representative, denoted as$rdyx$。

4.Control variables: carbon dioxide emission intensity is not only affected by a single index of green finance development index. Ye Mengqi found through STIRPAT model that population structure and FDI are factors affecting carbon emission [9]. Therefore, in order to deeply explore the influence of green finance development level on carbon emission reduction, control variables

should be increased. The population unemployment rate affects the industrial structure, impedes economic development, reduces investment in green industries, and has a certain impact on carbon emission intensity. Therefore, the population unemployment rate is taken as the control variable. Both GDP and foreign direct investment can influence the investment in green finance, thus affecting the demand for the development of low-carbon technologies and having a significant impact on carbon emissions。According to the existing reference variables, four control variables including registered unemployment rate （ur）,GDP（gdp）,foreign direct investment （fdi）,RDexpenditure（rdjf）are added.

3.3 Data sources and descriptive analysis

The data in this paper are panel data of 30 provinces and cities in China (except Tibet) from 2010 to 2020. The data are mainly collected from China Statistical Yearbook, China Bureau of Statistics, and China Tai 'an Database. It is noted in this paper that there are some missing values in the data of the two control variables of RD expenditure and foreign direct investment. The data have been completed by interpolation method through stata. In order to prevent the problem of test effect caused by heteroscedasticity, logarithmic processing has been performed on the absolute value.

Table 1 below is a descriptive analysis table of each variable.

It can be seen from Table 1 that the average carbon dioxide emission is 1.107 tons, the standard deviation is 0.451, and the carbon emission varies greatly among provinces and cities. The average development level of green finance is 0.186, the maximum value is 0.839, and the minimum value is 0.060, indicating that the development level of green finance in different regions is not balanced.

Table 1 Variables and their descriptive analysis

variable	Variable name	Average value	Standard deviation	Min	Max
lnco2	Carbo dioxide emissions	1.107	0.451	0.239	2.289
gfi	Green finance index	0.186	0.113	0.060	0.839
ur	Registered unemployment rate	3.32	0.622	1.210	4.610
lngdp	Gross domestic product	9.841	0.834	7.209	11.615
lnfdi	Foreign direct investment	12.723	1.642	6.103	14.882
lnrdjf	RD expenditure	14.348	1.281	11.006	17.034

Note: ***, ** and * represent the significance level of 1%, 5% and 10% respectively

4. An empirical study on green Finance and carbon neutrality

4.1 Data stationarity test

4.1.1Unit root test

In order to reduce the pseudo-regression problem of baseline regression, unit root test was carried out for each variable before carrying out specific empirical analysis. In this paper, Fisher,llc,ips and hadri tests were respectively adopted. As can be seen from Table 2, at the significance level of 1%, more than two tests passed for each variable. Prove that the data stationarity is good.

Table 2 Unit root test

Variable	Fisher		llc	ips	hadri
lnc02	Inversechi-squared	74.683**	-2.663***	3.976	8.816***
	Inverse normal	1.480			
	Inverse logit t	0.974			
	Modifiedinv.chi-squared	1.549*			
gfi	Inversechi-squared	134.189***	-6.858***	-0.614	7.4913***
	Inverse normal	-1.4777*			
	Inverse logit t	-2.932**			
	Modifiedinvchi-squared	7.074***			
ur	Inversechi-squared	-45.373	-2.438***	3.827	8.124***
	Inverse normal	2.396			
	Inverse logit t	2.434			
	Modifiedinvchi-squared	-1,172			
lngdp	Inversechi-squared	68.211	-3.740***	1.515	9.572***
	Inverse normal	1.891			
	Inverse logit t	1.632			
	Modifiedinvchi-squared	0.948			
lnfdi	Inversechi-squared	103.505***	-7.358***	1.124	7.033***
	Inverse normal	1.073			
	Inverse logit t	-0.549			
	Modifieinvchi-squared	4.225***			
Lnrdjf	Inversechi-squared	49.230	-2.773**	3.301	8.828***
	Inverse normal	4.797			
	Inverse logit t	4.917			
	Modifiedinvchi-squared	-0.814			
lnrdyx	Inversechi-squared	223.260***	-10.099***	0.419	6.346***
	Inverse normal	-3111***			
	Inverse logit t	-7.750***			
	Modifiedinvchisquared	15.344***			

Note: ***, ** and * represent the significance level of 1%, 5% and 10% respectively

4.1.2 Panel co-integration test

In order to further verify the co-integration relationship between variables, the panel co-integration test was further conducted after the unit root test was carried out to confirm the stability of the data. All the data passed the test at the significance level of 1%, proving that there was no long-term equilibrium relationship between the data.

Table 3 Panel co-integration test

	Statistic
Modified Phillips-Perron t	7.0688***
Phillips-Perron t	-4.8216***
Augmented Dickey-Fuller t	-4.4202***
Variance ratio	5.8790***

Note: ***, ** and * represent the significance level of 1%, 5% and 10% respectively

4.1.3 Multicollinearity test

Multicollinearity may exist in panel data, and the impact caused by multicollinearity is inestimable. Therefore, multicollinearity test of data is very necessary. The VIF average of tested data is 5.35, so there is no serious multicollinearity problem.

Table 4 Multicollinearity test

Variable	VIF	1/VIF
lnrdjf	12.970	0.077
lngdp	6.990	0.083
lnfdi	3.130	0.319
gfi	2.020	0.494
ur	1.640	0.612

Mean VIF	5.35

Note: ***, ** and * represent the significance level of 1%, 5% and 10% respectively

4.2 Regression of benchmark model

Table 2 shows the regression results. By observing the table, it can be observed that the coefficient between the development level of green finance and carbon emission intensity is -1.563, indicating that the development of green finance will inhibit the intensity of carbon dioxide emission. From the perspective of control variables, the correlation coefficient of registered unemployment rate is 0.030. Therefore, the rise of registered unemployment rate will cause many people to engage in low-technology jobs and increase the use of polluting energy, which will greatly increase carbon emissions.The correlation coefficient between GDP and carbon emissions is 0.180, indicating that the reduction of GDP has a positive effect on the reduction of carbon emissions. There is a negative correlation between foreign direct investment and carbon emission intensity, and the increase of investment amount will strengthen technological innovation, so as to contribute to carbon emission reduction. The input of RD funds will also inhibit the amount of carbon emissions.

Table 5 Regression of the benchmark model

variable	
gfi	-1.563***
	（0.229）
ur	0.030
	(0.037)
lngdp	0.180**
	(0.076)
lnfdi	-0.042**
	(0.020)
lnrdjf	-0.021
	(0.273)

Note: ***, ** and * represent the significance level of 1%, 5% and 10% respectively

4.3 Intermediate effect test

At present, the test method of step-up regression has not been unanimously accepted, so we adopt the sampling test of Boostcrap to test the mediation effect. 100 data are selected from the data to test, and the data result passes the test with a significance of 1%, indicating that the mediation effect is real. Sobel test requires a normal distribution and sufficient amount of data as the basis for the test, so the test results are more accurate. Sobel,Aroian and Goodman tests have all passed the test, confirming the existence of intermediary effect.

Table 6 Test of mediating effect

_bs_1	-0.575***
	(0.136)
_bs_2	-0.987***
	(0.231)
Sobel |	-0.575***
	(0.124)
Aroian	-0.575***
	(0.124)
Goodman	-0.575***
	(0.123)

Note: ***, ** and * represent the significance level of 1%, 5% and 10% respectively

4.4 Inspection of intermediary mechanism

After establishing the intermediary effect model, regression test of variables should be conducted step by step. In this paper, the influence of the development level of green finance on carbon dioxide emissions is taken as Path(1). It can be seen from the table that the correlation coefficient between the development level of green finance and carbon dioxide emissions is -1.5023, and the development level of green finance inhibits carbon dioxide emissions. It has a positive effect on carbon neutrality and proves the validity of hypothesis 1.As Path(2), the correlation coefficient between the technological innovation level represented by the number of valid patents and the development of green finance is 5.022, indicating that technological update will improve the quality of green finance level, which proves the validity of hypothesis 2. The technological innovation of the intermediate variable has an inhibitory effect on the carbon dioxide emission intensity of the core explained variable, and the correlation coefficient between the two is -0.115, which proves the validity of hypothesis 3 through the significance test.

Table 7 Test of mediation mechanism

variable	Path(1) lnco2	Path(2) lnrdyx	Path(3) lnco2
lnrdyx	-	-	-0.115*** (0.020)
gfi1	-1.503*** (0.229)	5.022*** (0.608)	-0.987*** （0 .241）
ur1	0.030 (0.037)	0.073 (0.099)	0 .038 (0.036)
lngdp	0.180** 0.755）	0.739*** (0.200)	0.096 （0 .074）
lnfdi	-0.042** 0.020）	0.109** (0 .052)	-0.054*** （0.019）
lnrdjf	- 0.021 (0.051)	-0 .875*** (0 .136)	-0.121**

Note: ***, ** and * represent the significance level of 1%, 5% and 10% respectively

4.5 Robustness test

1.Increase the control variable education level（edu）

This paper verifies the robustness of the experimental research results by adding the education level of the control variable. It can be observed from the first column of Table 8 that after adding the variable, green finance level still presents a negative correlation with carbon emissions, and the value does not change significantly, indicating that the experimental results are not accidental and the conclusion is relatively reliable.

2. On the premise of increasing the education level of the control variable, further increase the total import and export volume of the control variable（open）， After adding two variables, the regression analysis was conducted again, and the results were shown in the second column of Table 8. The correlation coefficient between the total volume of imports and exports and carbon emissions was -0.021, indicating that the degree of openness represented by the total volume of imports and exports had a reverse effect on carbon emissions. The higher the degree of openness, the lower the carbon emissions.

3. In order to prevent the experimental results of baseline regression from being accidental, carbon dioxide intensity is adopted by replacing the carbon dioxide emission of the principal regression variable(cn)

The benchmark regression of this index was conducted again, and the relationship between green finance level and carbon emission intensity was still negative, and the correlation did not change, as shown in the third column of Table 8. Therefore, the conclusion was further verified.

4. In order to prevent endogeneity problems, the OLS regression model was used for regression again through model transformation, as shown in the fourth column of the table. Compared with the benchmark regression model, the values of each index changed slightly, but the empirical results were still valid, which once again proved that the analysis results were robust.

Table 8 Robustness test

variable	Increment control variable1	Increment controlvariable2	Change the principal regression variable	OLS regression
gfi	-1.545***	-1.442***	-4.140***	-1.571***
	(0.230)	(0.244)	(0.984)	(0. 246)
ur	0.035	0.046	0.164	0.019
	（0.038）	(0.039)	（0.160）	(0.042)
lngdp	1.172**	0.183	1.106***	
	（0.076）	(0.076)***	（0.324）	0.221***
				（0.087）
lnfdi	-0.046**	-0.038	-0.120**	-0.037*
	（0.020）	（0.021） *	（0.084）	（0.022）
lnrdjf	-0.022	-0.052	-0.346	-0.044
	（0.051）	（0.057）	（0.219）	（0.582）
edu	-0.0001***	-0.0002		
	（0.0002）	（0.0001）		
lnopen		-0.021		
		（0.017）		

Note: ***, ** and * represent the significance level of 1%, 5% and 10% respectively

5. Conclusions and suggestions

5.1 Research conclusion

Through the analysis of the panel data of various provinces and cities (except Xizang) from 2010 to 2020, this paper proves the correlation between green finance and carbon emissions by empirical analysis, and tests the robustness of the results obtained by benchmark regression in a variety of ways, and draws three conclusions. First, the development of green finance will lead to the reduction of carbon emission intensity, and the two show a negative correlation, which is the same as the conclusion of Zhangjiahao Institute [11]. The development of green finance has promoted the market demand for green products. Enterprises are gradually transforming to green enterprises, adopting new green technologies to replace traditional energy-intensive technologies, and achieving carbon emission reduction at the root.Second, the development of green finance will promote technological innovation, and the two show a positive correlation. Green finance has become the mainstream of economic activities. The state invests a large amount of funds in technological innovation, and enterprises carry out top-down technological innovation to improve the efficiency of resource transformation, so as to promote the process of technological society development. Third, continuous technological innovation can reduce carbon dioxide emission intensity, and the country vigorously develops technological innovation, which can provide sufficient capital chain for carbon emission reduction activities. In addition, enterprises will be subject to the requirements of green factors in the process of applying for loans, and enterprises will greatly improve their awareness of environmental protection, create a green enterprise environment, and promote the realization of carbon emission reduction.The development of green finance is the most important part of achieving carbon neutrality, and vigorously developing technological innovation is an important measure of energy conservation and emission reduction.

5.2 Suggestion and enlightenment

Based on the conclusion of empirical analysis, this paper has four enlightenments.

First, China should introduce new policies related to green finance. The government and financial institutions should strengthen the supervision of the green finance industry, strictly examine the indicators of enterprises applying for green financing, evaluate the degree of green implementation of enterprises, realize the accurate implementation of policies, guide enterprises to move towards the green industry, and strengthen the system and mechanism of green finance. In a real sense, the cooperation channels between the government and financial institutions should be established to give full play to the important role of green finance.Secondly, the development of green technology innovation reduces the intensity of carbon emissions, so it is urgent to establish a new society with green technology innovation as the core. The development of science and technology has a sharp rise in the demand for the number of scientific and technological innovative talents. Universities should take the cultivation of green technology innovative talents as an important trend of talent training. At the same time, funds should be directed to green innovative enterprises, focusing on the development of sustainable renewable energy and reducing carbon emissions brought by fossil energy.Third, our government should implement strict punishment policy for enterprises and improve the incentive mechanism, improve the rate of return of economic activities related to green finance, increase the supply of green financing funds, guide the flow of funds to green and low carbon industries, so that the public feel the government's strong support for green finance.Pilot projects will be carried out in areas with serious climate problems, and the implementation path of green finance will be constantly researched and developed to promote the development of green finance industry. Fourth, national energy should be shifted from rapid economic development projects to green environmental protection projects. At present, our country's green financial architecture system is still not perfect, and we need to carry out further construction of the system to realize the scale of green economy, so as to make contributions to the construction of a global favorable ecological environment.

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