

*Original Research*

# Green Investment and Sustainable Business Development: Risks and Opportunities for China

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*Received: 26 April 2023*

*Accepted: 27 June 2023*

## Abstract

China actively promotes green investment and sustainable business development, recognising that green technology and infrastructure investment can boost economic growth while lowering greenhouse gas emissions. Green investment does come with environmental, financial, regulatory, and political risks, though these can be managed to increase investors' long-term success. The importance of green investment and sustainable business development research stems from the need to identify challenges and promote long-term economic growth. This study seeks to identify opportunities and challenges for sustainable business development in China and the potential of green investment to address environmental issues. According to the study, the number of workers in the renewable energy industry reached 3.6 million in 2019, 4.3 million in 2020, 4.7 million in 2021, and 5.4 million in 2022, with renewable sources accounting for 34.2% of China's electricity production in 2022. Furthermore, China has reduced air pollution by using renewable energy sources and reducing carbon emissions. A study on green investment and sustainable business development in China has practical significance in identifying market potential for green products and services. Further research could lead to recommendations to improve China's green investment landscape.

**Keywords:** alternative energy, ecology, economy, employment, renewable energy sources

## Introduction

Green investment and sustainable business development are interconnected concepts responding to current economic and business trends.

Green investment is an investment in environmentally friendly technologies and projects with a low environmental impact. Both developed, and developing nations are eligible for such investment opportunities. Green investment can help reduce emissions and pollution, improve energy efficiency, develop renewable energy sources, and decrease reliance on natural resources [1].

Sustainable business development is a business approach that focuses on meeting the needs of society

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today while preserving natural resources. Businesses that pursue sustainability ensure their success and contribute to society's advancement on the social and environmental fronts [2].

By minimising the harmful effects of businesses on the environment and protecting resources for future generations, green investment and sustainable business development promote economic growth and raise people's quality of life. Moreover, such methods are consistent with a conscientious attitude towards the environment and society as a whole; as a result, they are becoming more significant, and discussing them adds to the study's significance.

The following are possible prerequisites for introducing green investment:

- Environmental Issues: Environmental pollution and climate change are serious issues that are becoming increasingly urgent worldwide. Green investment can help tackle these challenges by incorporating cleaner technologies and practices into manufacturing and infrastructure.
- Energy Security: Because many countries rely on imported oil and gas, they are vulnerable to economic and political risks. Green investment can help a country's energy security by reducing its reliance on fossil fuels.
- Economic Growth: Green investment can become a new source of economic growth by developing new green industries and creating new jobs.
- Technological Progress: Green investment can foster the growth of new green technologies and innovations, creating new products and services.
- Social Issues: Green investment can also help address social issues such as poverty and unemployment by creating new jobs and spurring economic growth.
- Political Motivations: Green investment can be essential leverage of public policies and strategies to achieve environmental goals while strengthening the country's international standing.

Green investment, like any other type of investment, has issues and challenges. Some examples are:

**Political Risks:** Government policies can significantly impact green investment success. Some governments may not allocate enough resources to developing green technologies, preferring to focus on traditional industries.

**Lack of Experience:** Some investors may lack sufficient experience investing in green technologies and environmental projects, which could result in losing the investment.

**Low Returns:** Some green projects may appear less profitable than traditional projects, making green investments less appealing to investors.

**Technology Risks:** Green technologies are frequently new, unstable, and unpredictable. New technologies may fail commercially or become irrelevant within a few years of their introduction, posing a risk to investors.

**Financial Risks:** Green projects sometimes necessitate significant investment in the initial period

before they generate a profit. Because of this, investors may experience difficulties meeting their financial obligations.

**Regulatory Risks:** Green investment regulation can be burdensome and varies by region. Some investors may encounter legal compliance issues, jeopardising their investment success.

As environmental concerns have not always been a top priority in business and investing, green investment research is still a relatively new field. However, the importance of green investment has increased as people become more aware of climate change and its effects on the economy and society.

Green investment is significant in China due to severe pollution issues. In recent years, the Chinese government has introduced a range of policies to incentivize green investment, such as tax incentives and other favourable measures. Locally in China, green investment is prevalent in sectors such as renewable energy, waste management, energy efficiency, and agriculture [3].

Hence, the research focuses on green investments and sustainable business development in China. This entails studying and analyzing the risks and opportunities associated with investing in green projects and business development. The novelty of the research lies in applying a comprehensive approach to assessing economic, environmental, and social issues in the context of green investments. This article is a unique and thoughtful examination of the opportunities and risks associated with green investments in China.

## Literature Review

Green investment and sustainable business development are two critical areas actively promoted in China and worldwide. Like many other countries, China faces challenges associated with climate change, pollution, and limited resources; consequently, it has prioritised sustainable development and green investment.

Global investment in green technologies and infrastructure has increased significantly in recent years. According to the report *Global Trends in Renewable Energy Investment*, global investment in renewable energy reached \$ 303.5 billion in 2020, an increase of 2% from 2019. Furthermore, energy investment reached an all-time high of \$ 755 billion in 2021 and \$ 1.1 trillion in 2022 (Renewable Energy Information Bank - BloombergNEF).

Besides, according to data presented by the China Greentech Initiative, renewables accounted for 82% of all new power generation capacity installed globally in 2022. China, the United States, and the European Union were the top three countries investing in renewable energy. Solar and wind were the top renewable energy sources (China Greentech Initiative).

According to Qiao et al. [4], China is currently focusing its economic strategy on two crucial areas: green investment and sustainable business development. China is implementing steps to reduce greenhouse gas emissions, utilise renewable energy sources, and improve the national environmental situation as part of its green strategy [5].

The Chinese government also actively promotes green technology and sustainable business. For example, the country set a goal in 2015 to peak greenhouse gas emissions by 2030 and reduce emissions by 60-65% from 2005 levels by 2030. In addition, the government has allocated substantial funds for research and development in renewable energy, energy efficiency, and sustainable development [6].

According to L. Liu et al., the enormous market for new technologies and products is one of China's primary benefits of green investment. In addition, the country is one of the largest energy consumers in the world, so introducing energy-efficient technologies and renewable energy sources presents substantial investment opportunities [7].

In light of the challenges posed by climate change and sustainable development, green investment and sustainable business development are among the most pressing issues in the world today.

Li et al. [8] say that China, one of the world's biggest polluters, has set ambitious goals to cut greenhouse gas emissions and promote green technologies. China already leads the world in renewable energy investment, electric vehicle production, and the number of solar and wind farms installed [8].

Another vital aspect is China's cooperation with other countries on green investment and sustainable development. China is a prominent signatory to international climate treaties, such as the Paris Agreement, and collaborates with other nations to develop sustainable development technologies and practices [9].

Nevertheless, according to Zhang et al. [10], China also faces risks associated with the declining production and exports of traditional industrial goods and the rising costs of green technology. Furthermore, one of the major risks is a scarcity of resources and human resources needed for intensive green technology development.

Chen et al. [11] say that one of China's risks is the possible cost to the economy of switching to more environmentally friendly ways of doing things. This could include job losses in industries that rely heavily on nonrenewable resources, alongside the financial costs of implementing new technologies and practices.

Nonetheless, significant opportunities exist. As per the findings of Malik et al. [12], investing in green technologies and sustainable practices can yield several benefits, including accelerated economic growth, enhanced competitiveness, and improved environmental outcomes. This is especially true because consumers worldwide are asking for more sustainable products and ways of doing things.

Transitioning to a more sustainable economy could also help China address some of the country's environmental issues, such as air and water pollution. Furthermore, China is a major producer of renewable energy technologies, allowing it to expand its export markets [13].

Investing in clean technologies and sustainable practices can help the country position itself to lead the global transition to a more sustainable economy. In addition, this status can make the economy more competitive and open new export methods.

According to Yahya et al. [14], green investment can play an essential role in business stability because it reduces harmful environmental effects while increasing energy cost savings.

Among the implemented projects in the field of renewable energy in China, the following are noteworthy:

1. Three Gorges Dam: This project involves the construction of hydroelectric power stations on the Yangtze River, making it the world's largest river-based project. It possesses significant production potential and contributes to the generation of clean energy and the reduction of greenhouse gas emissions.
2. Longyangxia Solar Power Station: Located in the Qinghai province, it is one of the largest solar power stations in the world. With substantial capacity, it promotes the production of environmentally friendly energy.
3. Wind Farms in Gansu Province are renowned for their large-scale wind farms that generate significant volumes of renewable energy. These farms are situated along the coast of the Yellow Sea and harness strong winds for electricity production.
4. The Large-Scale Solar Panel Project in the Taklamakan Desert involves the installation of solar panels in the western part of China's Taklamakan Desert. It aims to use solar energy to provide electricity to remote regions and reduce dependency on coal.
5. The Dongguan Solar Power Station, located in Guangdong Province, is one of the largest in the world. It uses solar panels to generate electricity and contributes to the reduction of greenhouse gas emissions.

These projects demonstrate China's ambition to transition towards sustainable and environmentally friendly energy. These projects provide evidence that investments in renewable energy yield dual benefits: mitigating adverse environmental effects and fostering prospects for technological innovation, diminishing greenhouse gas emissions, and diminishing reliance on conventional energy sources.

Moreover, these projects demonstrate the potential of green investments to positively influence the economy through job creation, innovation promotion, and sustainable development support. Additionally, the achievements of renewable energy projects in China

can serve as a compelling example for other nations, inspiring them to allocate resources towards the implementation of green technologies and initiatives.

Although green investment is becoming increasingly popular in China, several issues have yet to be adequately addressed by scholars, so discussing them is critical today:

1. **Investment Risk:** Green investment, like any other, carries some risk. Even though it may have a high return potential, there is a chance that investors will not get the return they expect. In addition, changes in legislation and government policies may also pose risks to investment returns.
2. **Standards and Methodologies.** The ambiguity of standards and methodologies for evaluating green investments is an issue that has not received enough scholarly attention. As a result, there are numerous methodologies and approaches for measuring the impact of green investment, some of which may be incompatible. This can create ambiguity when evaluating the performance of an investment and complicate decision-making.
3. **Insufficient Understanding of Climate Change Risks.** Climate change may pose unforeseeable risks to investors. Weather changes, for example, can increase the severity of natural disasters, potentially reducing green investment returns.
4. **Insufficient Transparency.** Some green investment cases may fail to meet stated environmental criteria and standards. This could be attributed to a lack of transparency in investment performance reporting or ineffective monitoring mechanisms.

Despite these gaps, China's research on green investments is still a crucial and necessary step in developing the country's green economy and green finance. One way to fix the lack of data would be for government, non-government, and business organisations to collaborate more closely to collect and share information.

Overall, research on green investment for business sustainability aids in understanding how adopting green technologies can benefit businesses and what steps are necessary to ensure their stability and longevity.

### **Problem Statement**

According to a review of recent scholarly literature, information on green investment in China is important for understanding the country's current state of green finance. China has conducted extensive research and data collection on green investment. The Chinese government has approved five-year plans for green investment and green finance, which include targets and steps to accelerate the industry's development.

Therefore, it is particularly significant to conduct research on green investment in China today, given that the country is one of the world's largest producers and

consumers of energy, with a significant impact on the global economy and ecology.

Green investment research in China will help identify the potential for developing a green economy and green finance in the country. In addition, China's role in achieving global targets to reduce greenhouse gas emissions and combat climate change must be assessed.

Such studies can also assist in identifying and overcoming barriers to green investment in China. In addition, they can help increase the transparency and accessibility of data on green investment in China, attracting investors more effectively and accelerating the growth of their businesses and the green economy overall.

It is essential to recognise that researching green investment in China can facilitate the exchange of knowledge and experience between China and other countries, thereby accelerating the global development of a green economy.

Consequently, this study aims to identify opportunities and barriers to sustainable business development in China and the potential for green investment to address the country's environmental challenges.

With this in mind, the study established the following objectives:

1. Assess the current state of green investment in China by examining the investment amount, how it is allocated, and which basic industries receive it.
2. Identify the barriers and challenges investors seeking to invest in green projects in China face.
3. Evaluate the role of green investment in China's economy, ecology, and society and the impact of renewable sources on GDP, carbon reduction, and employment rates.

### **Materials and Methods**

To accomplish the study objectives, this research used methodological, scientific, and practical provisions to identify the current state of green investment and the opportunities and risks associated with putting it into practice for China's sustainable business development. The review of scholarly works by researchers on green investment in China is also covered in the theoretical section of the paper.

In addition, official materials and publications from United Nations (UN) commissions, the Food and Agriculture Organization (FAO), the International Energy Agency (IEA), the International Renewable Energy Agency (IRENA), the China Wind Energy Association (CWEA), the World Bank, and the Organization for Economic Cooperation and Development (OECD) informed the study. The authors incorporated monographs, periodicals, and the outcomes of their research into their study. A comparison method and an abstract-logical method were used to study the materials throughout the study to examine

the significance of green investments in the Chinese economy and the potential for sustainable business growth in the country.

Numerous specialised and generally scientific methods were employed throughout the study, including:

- Induction and deduction (induction was used to gather data for a more thorough analysis and study of green investment for sustainable business development in China, while deduction was used to develop general principles based on these data);
- Analysis (to analyse the collected information, conclude, make recommendations, and determine future research opportunities);
- Cluster analysis methods (for categorising the various types of green projects in the country);
- Statistical methods (for quantifying the data obtained);
- Synthesis (combining acquired knowledge into a cohesive whole);
- Scientific abstraction (in determining the essence of the sustainable business and green investment development model);
- Comparative analysis (to compare the results obtained). Furthermore, the methodology used is supported by an economic system of approaches to the subject's study.

The existing legal and regulatory framework was examined to conduct adequate research on the current state and development of green investment. International research platforms, businesses, and corporations such as BloombergNEF, Statista, China Greentech Initiative, and China International Capital Corporation (CICC) were also consulted for statistical data. Green investment statistics were also examined on official Chinese government websites such as the Ministry of Ecology and Environment of China, the National Bureau of Statistics of China, the National Development and Reform Commission, and the China Securities Regulatory Commission.

A survey of investment flows was also part of studying green investment in China. This method was based on examining China's green project investment flow. Another approach employed in the study involved the examination of economic and social indicators, such as GDP, carbon emissions, and employment rates. This aided in determining the value of green investment to the economy and society as a whole.

## Results

China is currently one of the most active green investment players. It is the world leader in the manufacture and installation of solar panels and wind turbines, as well as the manufacture of electric vehicles and their batteries.

Furthermore, the Chinese government actively encourages green investment by offering subsidies and tax breaks to businesses that invest in renewable energy.

China is also actively involved in international climate change projects and assists developing countries.

China invested more in the environment than the US and EU combined in 2020, 2021, and 2022, totalling more than \$83 billion, \$2.5 trillion, and \$3.3 trillion, respectively [15].

It is also important to note that China issued green bonds and asset-backed securities worth \$56.3 billion in 2021, a 64% increase from 2020, and \$59.4 billion in 2022 (Fig. 1).

Midway through 2022, China issued 20.6 million green certificates, or 20.6 billion kWh of electricity, an increase of 135% over 2021. Additionally, 9.69 million transactions, or 9.69 billion kWh of electricity, an increase of 15.8 times over 2021, were made. By the end of 2022, 59.54 million green certificates had been issued nationwide, totalling 10.31 million transactions.

Renewable energy, energy efficiency, waste management, electric vehicles, and the solar industry are China's primary green investment avenues, with investors actively investing in renewable energy projects. China is also working hard on green technology, architecture, and infrastructure projects.

Leading renewable energy equipment manufacturers worldwide include Chinese firms BYD, CATL, Longi Solar, JinkoSolar, and Envision Group, which are also making significant investments in the sector domestically and abroad.

It is important to note that China has numerous public and private initiatives to encourage green investment and advance green technologies. This makes the country a good place for investors and helps green investment grow in the country.

Another intriguing fact is that Chinese investors have increased their involvement in green investment globally, including in the US and Europe, in recent years. Overall, green investment is expanding quickly in China, and this trend is expected to last.

China is the world's largest producer of renewable energy, and the country has significantly increased its production capacity in this area in recent years (Fig. 2).

China produced only 18 megawatts (MW) of renewable energy in 2000, according to the International Renewable Energy Agency (IRENA). However, this

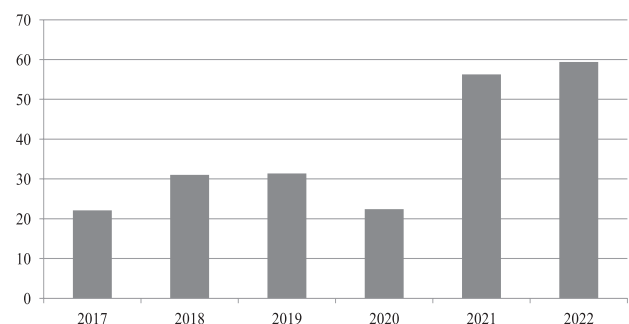


Fig. 1. China's Green Bonds, \$ Billion.

Source: <https://www.statista.com>

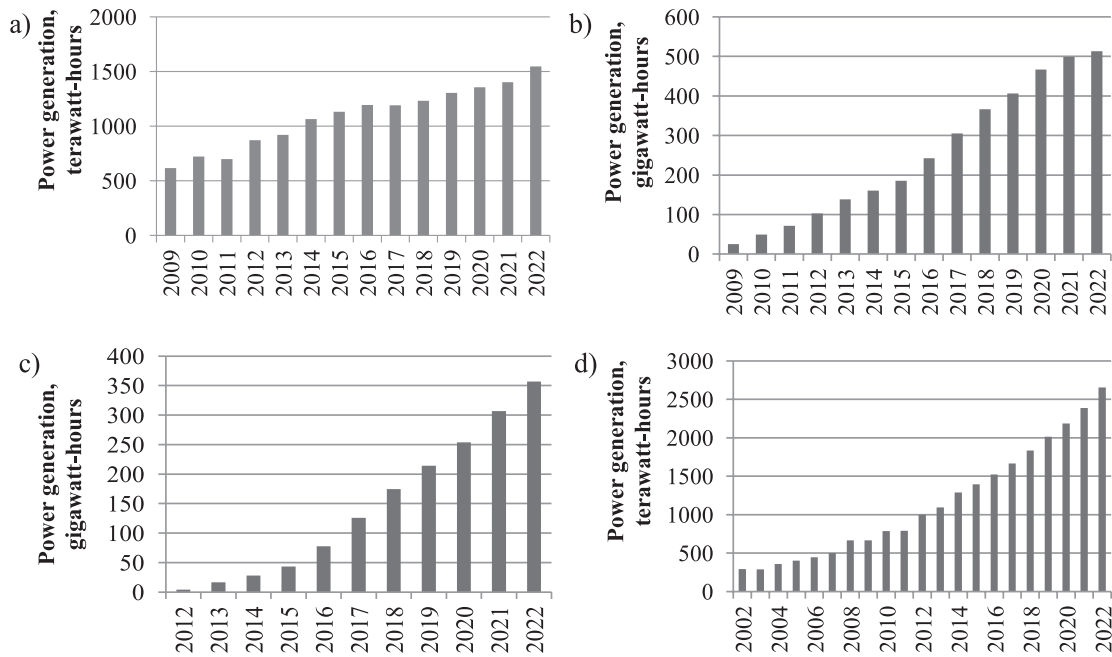


Fig. 2. Renewable Energy Production in China.

Note: a) Hydroelectricity production; b) Wind energy production; c) Cumulative installed solar power capacity; d) Total electricity production from renewable sources. Source: <https://www.statista.com>

number had increased to 895 gigawatts (GW) by 2021, representing more than 40% of the world's total renewable energy production. After that, as early as 2022, the newly installed renewable energy capacity was 3,000 terawatts (TW), 76.2% of the country's newly installed electricity generating capacity.

Wind and solar power account for the vast majority of China's renewable energy production. China increased wind power by 37.63 million kW, solar power by 87.41 million kW, biomass-based electricity by 3.34 million kW, conventional hydropower by 15.07 million kW, and hydro storage by 8.8 million kW in 2022.

China is investing heavily in renewable energy, with ambitious plans to further develop the industry.

Many Chinese businesspeople focus on important issues like green investment and sustainable business growth. However, investors in this sector face both risks and opportunities.

The risks are:

- **Regulatory Risks.** The Chinese regulatory framework for green projects is still in development, which could cause investor uncertainty. In addition, China's laws and regulations change frequently, so the regulatory framework for green projects may be subject to change.
- **Financial Risks.** Due to a lack of funding, payment delays, or other financial issues, investors may risk not receiving payment for green projects.
- **Environmental Risks.** Environmental risks associated with green projects include water and soil pollution, impacts on flora and fauna, and climate change.

- **Political Risks.** Investors in China's green projects may face additional risks if the country's political stability deteriorates.
- **Cultural Differences.** Cultural differences between China and other countries can make implementing green projects and interacting with local teams and partners challenging.
- **Limited Access to Information.** Investors in China may have limited access to information about green projects, making it difficult to assess risks and opportunities.

Separately, there are issues and challenges concerning green investment in China:

1. **Vast Amount of Investment.** China has the world's largest economy, and significant improvements in green technologies and projects will necessitate significant investment.
2. **The Lack of a Unified Strategy.** China lacks a unified green investment strategy. As a result, many investors and businesses are unsure of what constitutes a green project or how to assess investment success.
3. **Lack of Investment Channels.** While China is working hard to develop its green investment infrastructure, there are still limited ways to invest, making it hard for investors to take advantage of new opportunities.
4. **Low Yield.** Green investment in China often does not yield high returns due to the high investment amount and risks, making it difficult to attract investors.

Furthermore, China may face a range of challenges in implementing green investments in the field of renewable energy:

1. **Financial costs:** The implementation of green technologies and infrastructure for renewable energy may require significant financial resources. The development and construction of solar power plants, wind farms, or hydroelectric power stations can entail substantial investments, posing a challenge to China's budget.
2. **Technological dependence:** Some green technologies may be imported, particularly in the initial stage of renewable energy development in China. This presents a challenge of relying on external technology and equipment suppliers, as well as the need for local development and implementation of innovative solutions.
3. **Infrastructure:** Increasing the capacity of renewable energy requires the development of corresponding electrical infrastructure and grids. Expanding the electric grids to ensure stable transportation and distribution of renewable energy can pose a challenge, particularly in remote regions or populated areas.
4. **Job Preservation:** The transition to renewable energy can impact employment in industries related to traditional energy sources, such as coal or oil.
5. **Social Consequences:** The transition to green energy can impact communities that traditionally rely on industrial sectors using coal or oil. This can create social and economic challenges related to workforce retraining and providing new employment opportunities for these communities.
6. **Ecological Challenges:** The development of renewable energy can be accompanied by ecological challenges, such as impacts on biodiversity, land resources, and aquatic ecosystems. Improper siting of wind farms or hydroelectric power stations can have negative consequences for nature and ecosystems.
7. **Regulatory Challenges:** The implementation of green investments requires effective regulatory policies and a legal framework. It is necessary to develop and implement relevant legislative acts, promote an investment-friendly climate, and create incentives for the development of renewable energy.
8. These challenges are not an exhaustive list, but they reflect the complexity of implementing green investments in the field of renewable energy in China. However, the path towards sustainable and environmentally-friendly energy is worth the effort, as it brings numerous ecological, economic, and social benefits to China and the global community as a whole.

Nevertheless, despite the inherent risks and difficulties, there are still enormous opportunities for business development and the introduction of green investment in China, including:

- **Excellent Growth Potential:** Because China is one of the world's largest energy consumers, there are numerous opportunities for investment in green technologies and projects.

- **Government Support:** The Chinese government actively promotes green projects and investments in green technology, which can foster a favourable business climate.
- **Technology Leader:** China is the leader in producing green technologies; therefore, investing in businesses that develop and implement such technologies can be lucrative.
- **Emerging Market:** China is one of the world's fastest-growing markets, which could lead to many promising green investment opportunities.

Thus, green investment in China can be risky, but it can also provide investors with excellent opportunities if they are willing to accept the associated challenges and risks.

Green investment has made a significant contribution to China's economy and society. It has helped to reduce greenhouse gas emissions, decrease reliance on oil and gas, create new jobs, and contribute to GDP growth [10].

Green investment has an immediate impact on China's GDP. According to the World Bank, a 1% increase in each renewable energy category, such as hydroelectric, solar, wind, geothermal, and biomass, results in a 0.14%, 0.39%, 0.12%, 0.03%, and 0.029 increase in GDP per capita. Furthermore, these factors help to create jobs in the renewable energy, energy preservation, and environmental protection sectors (Fig. 3). According to the China National Bureau of Statistics, the number of workers in the renewable energy industry reached 3.6 million in 2019, 4.3 million in 2020, 4.7 million in 2021, and 5.4 million in 2022.

China has extensively invested in renewable energy in recent years, reducing its economy's reliance on fossil fuels. As a result, the International Energy Agency (IEA) reports that the share of renewable energy in China's electricity generation increased significantly between 2010 and 2022. Renewable sources accounted for approximately 8% of China's electricity generation in 2010, but by 2022, the share of renewable sources had increased to 34.2%.

Green investment in China also benefits the environment and human health. China has made significant efforts in recent years to increase green investments and develop environmentally friendly technologies and projects, lowering greenhouse gas

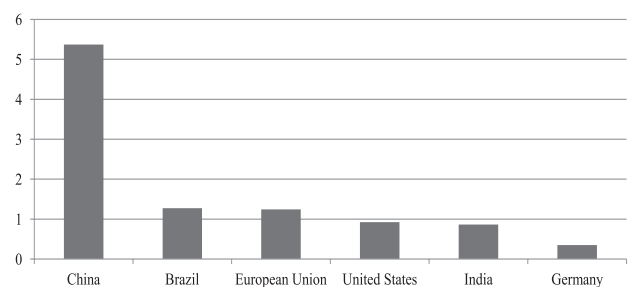


Fig. 3. Number of Renewable Energy Employees Globally in 2022, Million.

Table 1. Energy Consumption and Carbon Emission Reduction, per unit of GDP.

	2011-2015 vs 2010		2016-2020 vs 2015		2021-2025 vs 2020
	Target	Achievement	Target	Achievement	Target
Reducing energy consumption per unit of GDP	16%	18.2%	15%	13.2%	13.5%
Reducing carbon emissions per unit of GDP	17%	20%	18%	18.8%	17.6%

emissions and making the economy more sustainable and environmentally friendly.

China has reduced urban air pollution and the risk of pollution-related diseases by using renewable energy sources and lowering carbon emissions (Table 1).

Furthermore, green investment reduces water consumption, pollution, desertification, and biodiversity loss. Green investment, in general, is an essential tool for improving people's quality of life while also protecting the natural environment.

Accordingly, the effects of green investment in China may result in the following improvements:

- Environmental Improvement. Green investment can lessen China's contribution to climate change and air and water pollution.
- Development of Green Industries. Green investment can foster new green industries as well as green technologies like solar and wind energy.
- Improving Public Health. Green investment can help reduce air and water pollution, lowering the risk of respiratory and other environmental illnesses.
- Improving Competitiveness. Green investment can help China become more competitive internationally by developing new green technologies and products.

Overall, green investment and sustainable business development are essential tools for promoting economic growth while addressing environmental issues and contributing to GDP growth, job creation, and environmental improvements.

## Discussion

Green investment and sustainable business development are two closely related concepts. Investments in green projects, businesses, or organisations seek to improve the environment while also bringing in a profit for investors. Sustainable business development means developing an economically viable, socially responsible, and environmentally sustainable business. Green investment can benefit the environment, society, and economy.

Jirawuttinunt et al. [16] discuss several ways that green investment can benefit businesses. These benefits include the following:

1. Increased demand for environmentally friendly products and services. As most consumers now prioritise green products and services, businesses investing in green projects can anticipate a rise in demand for their products or services.

2. Lower costs for resources and energy. Green initiatives, such as energy-saving technologies, can assist businesses in lowering their energy and resource costs, resulting in improved financial results.
3. Improving business reputation. Investing in green projects can help businesses improve their reputation and become sustainability leaders. This can attract more customers, investors, and partners.
4. Enjoying tax incentives. Some governments offer tax breaks to businesses that invest in environmentally friendly projects. This could aid businesses in enhancing their financial performance [16].

Therefore, green project investments can improve business performance and reputation. More customers, investors, and partners will be attracted, resulting in increased business growth.

H. Wu and co-authors [17] offer the following green investment ideas for businesses:

1. Renewable energy projects: Solar, wind and hydroelectric power plants. Such projects contribute to lower carbon emissions and oil/gas consumption.
2. Improving building energy efficiency. Energy-saving equipment can be installed, windows and doors replaced with more energy-efficient models, insulation added, and other improvements can be made.
3. Sustainable products such as recycled products or environmentally friendly packaging.
4. Waste management projects. Resource use can be managed, and waste in landfills can be decreased by recovering and recycling.
5. Zero-emission vehicles. This could be a fleet of electric cars, trucks, or buses.
6. Green projects. Introducing environmentally friendly urban design elements like vertical gardens or green roofs.
7. Ecotourism projects. Eco-resorts and eco-tours encourage environmental preservation and attract eco-tourists [17].

According to Dobler's research, generally speaking, green investments can aid businesses in reducing adverse environmental effects, opening up new avenues for growth and development, enhancing their reputation, and luring environmentally conscious clients and investors. The study supports this finding [18].

The present findings are supported by Liao's scholarly writings, claiming China is a leader in green investment. Furthermore, the Chinese government has demonstrated strong support for emerging clean



technologies and green initiatives in recent times. Notably, China has embarked on several significant projects, such as the development of electric vehicle infrastructure and the establishment of solar and wind farms, as highlighted in reference [19].

Furthermore, Ren claims that China is the world's largest manufacturer of solar panels and wind turbines. Due to its leadership position, China has tremendous potential for green technology development and green infrastructure projects [20].

However, Chan asserts that despite the significant opportunities, green investment deployment in China still faces some difficulties. To attract investors, there is a need to enhance the legal and regulatory framework and decrease the reliance on coal for electricity generation, as indicated in reference [21].

Overall, the prospects for green investment in China remain favourable, with the government continuing to support green technologies and projects, creating a favourable business environment. China, for example, has numerous government programmes to support and finance green projects and various tax breaks for green technology businesses. Schmidt believes that China has the potential to become a key player in the global environmental revolution, thereby contributing to sustainable development and environmental protection [22].

In light of this, the demand for eco-friendly products and services is increasing in China, which may create new business opportunities. China is one of the biggest markets in the world, so many people can buy green products and services there [23].

It is also worth noting that financing environmentally friendly initiatives can help businesses thrive in the long run. For example, green projects like solar and wind farms can help businesses reduce their reliance on volatile and expensive energy sources while lowering their carbon footprint.

Furthermore, China is the world's largest producer of solar panels and wind farms, which opens up numerous opportunities for China and other countries to collaborate in the renewable energy sector. In this regard, Koçak emphasises that cooperation allows China and other countries to exchange knowledge and technologies and invest in cooperative renewable energy and environmental sustainability projects. The study [24] shows that such cooperation will create jobs, reduce energy costs, and lessen adverse environmental effects.

Thus, China's green investment is a promising path for the country's businesses to develop sustainably. The expansion of green investment has the potential to give businesses access to the new technologies and products they need to transition to more sustainable modes of production and consumption. Businesses working hard to promote green investment and sustainable technologies can position themselves for future success and gain a competitive advantage in the global marketplace.

## Conclusions

As China faces numerous environmental challenges, such as air and water pollution, climate change, and declining public health, green investment can assist in addressing these issues by incorporating cleaner technologies and practices into manufacturing procedures and infrastructure. Furthermore, green investment can help China reduce its reliance on fossil fuels, thereby improving its energy security.

Green investment has enormous potential and represents a promising avenue for China's long-term growth. Therefore, the country is actively growing its economy while giving green energy and environmental sustainability more consideration. China is investing in many renewable energy and environmental sustainability sectors as part of this strategy, including solar energy, wind power, and electric vehicles.

China's green investment market presents a plethora of business opportunities, particularly for businesses making eco-friendly products or providing green services.

By developing new green industries and creating new jobs, green investment can become a new source of economic growth for China. Overall, green investment is vital to China's economic, social, and environmental health.

However, certain environmental, financial, regulatory, and political risks may arise during the green investment process, but effective risk management can help businesses achieve long-term success.

The renewable energy industry employed 3.6 million people in 2019 and 4.3, 4.7, and 5.4 million in 2020, 2021, and 2022, respectively. Due to its use of renewable energy sources and efforts to lower carbon emissions, China generated 34.2% of its electricity in 2022 from renewable sources, and its air pollution levels have accordingly decreased.

Studies on green investment and business sustainability in China shed light on the identification of market opportunities for green products and services. Consequently, it has implications for various stakeholders, including the business community, the government, investors, and environmental activists.

Further research could lead to recommendations for improving China's green investment landscape.

## Conflict of Interest

The authors declare no conflict of interest.

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