International Journal of Energy
ISSN: 2957-9473 | Vol. 2, No. 1, 2023

Opportunities for China's new energy industry in the post-pandemic era

Yaqi Sun*

University of the Visayas, Cebu City 6000, Philippines
* **Corresponding author**: Email: syq20230901@163.com

Abstract: This article takes China's new energy industry as the research object and analyzes the development overview of China's new energy industry as well as the opportunities and problems faced by the development of the new energy industry based on the representative research views at home and abroad; and provides solutions and suggestions through a series of problems in the development of the new energy industry.

Keywords: Industry development; New energy.

1. Introduction

China's new energy industry refers to the development and utilization of renewable energy resources such as solar, wind, hydro, geothermal, biomass, and nuclear energy. In recent years, the Chinese government has been actively promoting the development of the new energy industry, aiming to shift the country's dependence on traditional energy sources to more sustainable and environmentally friendly alternatives.

The Chinese government has introduced a series of policies and measures to support the development of the new energy industry, including tax incentives, subsidies, and feed-in tariffs. The country has become the world's largest producer of solar panels and wind turbines, and has made significant investments in building large-scale renewable energy projects.

China's new energy industry is poised for continued growth in the coming years, driven by increasing demand for clean energy, technological advancements, and falling costs. The industry also presents significant opportunities for foreign investors and businesses looking to enter the Chinese market. But the COVID-19 epidemic has had a significant impact on China's new energy industry. In the early stages of the epidemic, the industry was hit hard by disruptions in supply chains, reductions in demand, and delays in project construction.

In the short term, the epidemic led to a slowdown in the deployment of renewable energy projects in China. Many new energy projects were postponed or cancelled due to the lockdowns, travel restrictions, and disruptions to the global supply chain. The slowdown in construction and installation also caused significant delays and increased costs.

Despite the short-term challenges, the epidemic has also presented opportunities for the new energy industry to innovate and adapt. For example, the epidemic has accelerated the adoption of digital technologies, such as remote monitoring and control, to help manage and optimize the operation of renewable energy assets. It has also led to increased investment in research and development of new technologies to improve the efficiency and reliability of renewable energy systems.

Looking ahead, China's new energy industry is expected to rebound and continue to grow in the post-epidemic period. The government's commitment to renewable energy, coupled with falling costs and increasing demand for clean energy, is expected to drive significant growth in the industry in the years to come. However, the industry will also need to adapt to changing market conditions and overcome ongoing challenges such as grid integration, energy storage, and regulatory barriers.

This article will discuss the impact of the new crown epidemic on China's new energy industry based on the above situation, and at the end of the article I will make a prediction on the future development of China's new energy industry.

2. World energy under the impact of the epidemic

The COVID-19 pandemic has had a profound impact on the global energy industry, affecting every aspect from production to consumption. As the world grapples with the pandemic and its aftermath, the energy sector has had to adapt to new challenges and opportunities.

One of the most significant effects of the pandemic on the energy industry has been the drop-in demand for oil and gas. With many countries implementing lockdowns and travel restrictions, transportation and industrial activity slowed down, leading to a sharp decline in demand for fossil fuels. This, in turn, has led to a drop-in price and a glut in supply, putting pressure on producers and leading to a reshuffling of the industry.

At the same time, the pandemic has also highlighted the need for a more sustainable and resilient energy system. With the world increasingly aware of the risks and vulnerabilities of our current energy systems, there has been a growing interest in renewable energy and other clean technologies. Governments and businesses around the world are now looking to accelerate the transition to a low-carbon economy, with many seeing this as a key part of their economic recovery plans.

China, in particular, has been a leader in the development of renewable energy. In 2020, China overtook the United States as the world's largest producer of renewable energy, and the country has set ambitious targets to reach carbon neutrality by 2060. The pandemic has only reinforced China's commitment to clean energy, with the government announcing a new stimulus package that includes significant investment in renewable energy projects.

In other parts of the world, the pandemic has led to a

slowdown in renewable energy investment, with many projects delayed or cancelled due to economic uncertainty. However, there are also signs of resilience and innovation, with some countries seeing the crisis as an opportunity to invest in new technologies and build a more sustainable energy system.

Ultimately, the pandemic has highlighted the need for a more flexible, adaptive, and sustainable energy system. As the world continues to navigate the crisis and move towards recovery, the energy industry will have an important role to play in shaping the future of our planet. By embracing new technologies and working towards a more sustainable and resilient energy system, we can create a better and more equitable world for all.

3. Prospects for China's New Energy Development

The outbreak of the COVID-19 pandemic in early 2020 disrupted the industry's momentum and created new challenges for its development. Despite these challenges, the post-epidemic era offers new opportunities for the industry to continue its growth trajectory.

First, the pandemic has highlighted the importance of energy security and the need for clean and renewable energy sources. As countries around the world look to reduce their reliance on fossil fuels and mitigate the effects of climate change, the demand for new energy technologies and solutions is set to increase. China, as the world's largest emitter of carbon dioxide, has an important role to play in addressing these global challenges.

Second, the pandemic has accelerated the digital transformation of the energy industry, creating new opportunities for innovation and growth. Remote work and social distancing measures have spurred the development of digital solutions, such as smart grids and energy storage systems, that can improve the efficiency and flexibility of the energy system.

Third, the post-epidemic era offers an opportunity to accelerate the transition to low-carbon transportation. With the decline in air pollution during the pandemic, there is a growing awareness of the need to reduce emissions from the transportation sector. China's new energy vehicle industry, which includes electric and hybrid vehicles, is well-positioned to benefit from this trend.

In conclusion, while the COVID-19 pandemic has created new challenges for China's new energy industry, it has also presented new opportunities for growth and innovation. By continuing to invest in research and development, promoting the adoption of new technologies, and strengthening international cooperation, China's new energy industry can emerge from the pandemic stronger and more resilient.

4. Problems in the development of China's new energy industry

4.1. Insufficient national protection of own intellectual property rights leads to insufficient incentive for innovation

The state's insufficient protection of its own intellectual property rights leads to insufficient motivation for innovation. Intellectual property rights ensure the high-quality development of the country and can promote the reform and innovation of the new energy industry, so it also plays an important role in the development of the new energy industry. The emergence of many pirated products has led to a weakening of the motivation of some new energy creators to create new energy products and the reliance on imported products, which affects the development of the new energy industry. The risk of own intellectual property rights includes four parts as shown in Figure 3-3, and controlling the risk of intellectual property rights is a top priority for China.

4.2. Grid construction is not synchronized and industry data accumulation is not enough, and information development is hindered

Grid construction is not synchronized and industry data accumulation is not enough, and the development of information technology is hindered. The degree of integration in some regions is not strong, and the industries are not well connected with each other leading to lower production efficiency, the power transportation facilities are not perfect, and the transmission pipeline construction and power generation systems are not developed at the same speed. And because China's development of new energy industry introduced in the initial period is relatively rough, the new energy power in the production and transportation of data records less, and the development of new energy software and research is the need for a very large amount of data support and data models, with the previous data to verify the real-time data. The previous sloppy data records hinder the development of new energy information technology, but also hinder the speed of new energy software updates, is the problem facing the development of the industry.

4.3. The cost of new energy remains high and affects profitability

New energy cost disadvantage is still obvious, with the continuous upgrading and transformation of new energy technology, the cost of new energy generation towards a good trend of year-on-year decline. However, some key assemblies of new energy power plants are still expensive, which makes new energy power generation more expensive than coal-fired power generation in many areas; and China's subsidies on renewable energy are being cancelled year by year, which will directly affect the profitability of new energy power plants, thus affecting the construction expansion of new energy power plants and having a greater impact on the development of the new energy industry.

4.4. The development of new energy sources is not coordinated and the development between various government departments is not coordinated

For new energy discharge on land far exceeds the amount of new energy generation in the ocean, which means that a series of construction of wind and solar energy on land is more important than the development of the ocean. Some coastal cities do not make good use of their own geographical advantages to develop new energy industries resulting in uncoordinated development between land and sea. At the same time, the development of various regulatory departments in some areas is not coordinated, and there is a certain lag in the implementation of policies for some new energy industries, and there is no good collaboration and communication mechanism between various departments, leading to the slow development of new energy industry

development efficiency.

5. Suggestions for countermeasures for the development of new energy industry

5.1. Optimize industrial application and promote industrial innovation

Optimize industrial application, promote industrial innovation and protect own intellectual property rights. Vigorously develop the field of use of new energy industry, and bring new energy industry closer to our daily life, not only new energy cars, but also integrate into various industries. At the same time, government departments should strengthen supervision to prevent monopoly and copying of some industries, and promulgate acceptable policies to actively promote the transmission of new energy industry to various industries; build a good set of new energy equipment sales standard system, and play a good role in monitoring the new energy equipment certification platform to prevent some machine failure and damage. Promote the upgrade of technical equipment and strengthen the help for local industries related to new energy; promote the development of talents in new energy industry and promote the development of cooperation between enterprise companies and research institutions around the world to promote industrial innovation.

5.2. Strengthen grid construction and increase industry data records

Strengthen the grid construction and increase the industry data records. Continuously improve and optimize the completed power grid system, vigorously implement the construction of a good intelligent network in the region, and improve the construction of the power grid in the region first, which is the top priority for future development, to eliminate some good power grid projects cannot enter the local construction and development; efforts to promote the economic construction of each region, in areas suitable for the development of new energy to pay more attention to the development of clean and less polluting industries, such as, as wind power In addition, take advantage of the synergy of regional development and some areas with better economic development have greater demand for electricity, and make more efforts to promote the region's environmentally friendly electricity to promote the region's economic Development level and visibility. At the same time, record the electricity consumption data to provide data support for new energy software development later.

5.3. Integrate scientific research forces and cultivate complex talents

Integrate scientific research forces, focus on conquering some of the technically complex products and chips that depend on imports; at the same time, strengthen the application of domestic products to our daily life, and create a good industrial atmosphere that allows for trial and error for domestic products, so that chips and products can be upgraded in practical operation and real life; at the same time, cultivate good complex talents, and provide a large reserve of future talents for the development of new energy industry to Improve the competitiveness of our new energy products in the world.

5.4. Promote the coordinated development of new energy and the coordinated development of government departments

Promote the coordinated development of new energy. To promote the coordinated development of new energy industry on land and sea, the economy of ocean wind energy and land wind energy also needs to be paid attention to. To mainly understand the local economic development, geographical environment and other factors, the implementation of a good regional development of new energy project approval and supervision system, to prevent the uncoordinated development of land and ocean power generation. Play a synergetic role and active policy innovation. Government departments should play a sense of ownership and play a role in coordinating the development of each region and promoting the solution and implementation of some difficult projects, while various departments between governments should coordinate development and monitor each other, while actively accepting the supervision of the people.

6. Conclusion

To sum up the analysis, the development prospect of the energy industry is very good and provides a demonstration role for the development of other industries. Its own opportunities are: first, the "double carbon" target will promote the development of the new energy industry; second, the implementation of the "two integration" policy; third, the new energy industry operation supervision will continue to be strengthened; fourth, the renewable energy industry financial support to increase. And through the market analysis of Ningde Times, a typical representative company of China's new energy industry, it is concluded that the new energy industry is developing well in the context of common wealth. And from the research of this paper, it can be concluded that there are several problems in the development of China's new energy industry as follows: firstly, the national protection of own intellectual property rights is not strong enough leading to insufficient motivation for innovation; secondly, the power grid construction is not synchronized and the industry data accumulation is not enough, and the development of information technology is hindered; thirdly, the cost disadvantage of new energy is still obvious; fourthly, the development of new energy sources is not coordinated and the development between various government departments is not Coordination. In view of the above problems, combined with the current financial market, the author puts forward several opinions and suggestions: first, optimize industrial applications, promote industrial innovation and protect own intellectual property rights; second, strengthen grid construction and increase industry data records; third, integrate the strengths of industry, academia and research to cultivate talents; fourth, promote the coordinated development of new energy sources and the coordinated development of various government departments. The final conclusion is that China's new energy industry develops for the better under the perspective of common prosperity.

References

[1] Zhao Tianyu. The phenomenon of excessive investment in the new energy industry and governance suggestions [J]. Enterprise Reform and Management,2016(16):173.

[2] Zhao Sen. Optimization and improvement of methanol distillation process and refinement of composite tower plate design model[D]. Zhejiang University of Technology,2015.

[3] Yun Guoqiang. Analysis of the current situation and market development prospect of commercial utilization of new energy industry[J]. China Business Journal,2015(14):121-123.

[4] Wang Yang. Application of double-effect distillation and heat pump energy-saving technology in methanol distillation process[D]. Northwestern University,2014.

[5] Tu Yuanyuan. Research on the impact of government subsidies on the development capacity of new energy industry[D]. Anhui University,2014.

[6] Wang Xixi. Analysis of the development of China's new energy industry[J]. China Business (second half of the month), 2010(10):188-189.

[7] Liu Ke. The development environment and prospects of China's new energy industry[J]. Enterprise Herald,2009(05):106-107.