

Research on China's Green Patent Strategy

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Abstract: Green patents based on clean technology are receiving more and more attention on a global scale. How to make full use of existing resources according to China's national conditions and coordinate with sustainable development strategies has become the focus of improving China's intellectual property system.

1. Introduction

Faced with the increasingly serious climate change issue, the concept of "green New Deal" came into being under the economic background of the international financial crisis. Countries around the world are pinning their hopes for economic recovery on the development of green technology innovation. According to a report released by the World Wide Fund for Nature, clean energy technology is one of the most promising technologies for humans in the 21st century. The development and transfer of green technology is not only related to the mitigation of climate change, but also will determine the pattern and trend of international game on climate change in the future. Depend on this, relying on green technologies to promote green development has become the consensus of the international community.

Green technology innovation and development is considered to be the key to preventing global warming and maintaining ecological balance. On the issue of how to promote the development of green technology, the focus of people's attention is the intellectual property system, especially the patent system which is closely related to technology.

Despite the ongoing debate over the patent system and climate, patents are of great significance to clean tech companies at the micro level. Whether it is to guarantee its monopoly in an increasingly crowded clean technology, or to attract investment support as a start-up companies, or to determine a stable return on investment through licensing, entering a specific market or start a business quickly, patents can provide powerful tools for creating value, acquiring competitiveness, and maintaining a sustainable competitive advantage in multiple ways.

2. Theory and practice of green patent strategy

2.1 Green patent

Patents for the protection of clean technologies and related products are given different names by different institutions. It is called Green Patent by World Intellectual Property Office (WIPO), UK Intellectual Property Office (UKIPO) and Korean Intellectual Property Office (KIPO). While the United States Patent and Trademark Office (USPTO) calls it an environmentally friendly Patent, SIPO usually refers to it as a low-carbon Patent. For the convenience of expression, this paper calls it green patent.

2.2 Disagreements between developed and developing countries

After years of efforts in international climate change negotiations, international consensus has been reached on promoting the transfer of green technologies. In contrast, there has always been a great deal of disagreement about intellectual property rights. A series of international discussions under the UNFCCC have seen a battle over green patent policy. The debate is divided into two camps: on one side are developed countries, which see patents as a tool to promote innovation and the spread of technology, and which argue for stronger intellectual property rights and stronger intellectual property laws. On the other hand, developing countries regard patents as an obstacle to technology transfer, so they advocate policies to weaken or even eliminate intellectual property rights in the field of green technology. The dispute over intellectual property rights between developed and developing countries to deal with climate change is actually a dispute over green patents and a dispute over the international dominance of low-carbon economy in the future.

2.3 "Fast track" for green patent applications

More and more countries are accelerating the development of green technologies at the national level, developing the deployment of green patents, and actively promoting various patent strategies to promote the development of green industries. Green patent examination is one of them. Around the world, more and more intellectual property institutions have started to implement the green patent expediting examination process, and actively speed up the granting of green and clean technology patents. For example, the United States, the United Kingdom, Canada, Israel, Australia and South Korea have introduced this process successively. China also began to incorporate green-related patents into the accelerated examination on August 1, 2012.

It is obviously to see that the green patent field is undergoing increasingly fierce technical competition and institutional competition, and it has become an international trend to establish a "green channel" for the application of environmental protection technology patent. Firstly, accelerated examination of green patents can accelerate the commercialization of green technologies, effectively avoid the application backlog, and help to introduce green technologies to the market faster. Secondly, the establishment of green patent examination procedure is helpful to the promotion of green technology concept and the construction of green patent information platform. Finally, the accelerated review of green patents can promote economic development. But each country's patent examination system and practice has its particularity. Therefore, it is necessary to promote the practice of green patent examination according to the practical situation of patent examination in China.

3. SWOT analysis of China's green patent strategy development

Under the background of the great success of the green patent strategy in foreign countries, China's green patents are in their infancy, which seriously restricts the development of green industries. This paper introduces SWOT analysis into the research of national green patent strategy.

3.1 the Strengthes of China's Green Patent Strategy Development

In recent years, the Chinese government has attached great importance to the development of green technology innovation and patent strategy, and has formulated a series of industrial planning and industrial support policies. At the same time, the Chinese government has also actively improved the fiscal investment incentive policy and increased the development and application of green technologies.

3.2 the Weakness of China's Green Patent Strategy Development

Firstly, there is a lack of coordination between policies that promote the development of green technologies. This is mainly reflected in the following aspects: there is no government department in charge of green technology development in China, most of the policies and demonstration projects come from different ministries and commissions which there is no coordinated overall management. Secondly, green patents lack systematic and effective legal protection. Comparing with the perfect legal regulation mechanism in developed countries, there are still many serious problems in China's green technology related laws, and it is difficult to mobilize the enthusiasm of enterprises to develop green technologies. Thirdly, weak support platforms for green technology innovation. China's green science and technology innovation platform is still at a low level of exploration and initial development, with problems such as insufficient construction amount, narrow service scope and low conversion rate of scientific and technological achievements.

3.3 the Opportunities of China's Green Patent Strategy Development

At the international level, the research on patent strategy with green technology as the research object is becoming more and more mature. All countries have adopted measures such as perfecting the legal guarantee system, policy incentive system, and accelerating green technology review to promote the development of their green industries. At the same time, various international organizations have formulated several programs to provide China with direct technical assistance, capacity building and policy support.

3.4 the Threats of China's Green Patent Strategy Development

First of all, the international institutional environment for green technology transfer is not optimistic. The developed countries continue to use technology transfer loopholes to infringe on China's green patents, resulting in China having to pay high-level licensing fees or import technology through commercial channels to obtain advanced green technologies. Secondly, developed countries have adopted various restrictions on non-environmental technologies. In order to enhance their competitive advantages in the field of green technology, developed countries have adopted various restrictions to prevent the inflow of non-environmental technologies, resulting in extremely fierce patent competition in China's green technology industry. Again, the double threat of international green trade barriers and investigations. As international organizations gradually adopt trade-related

agreements to address climate change issues, the links between environmental issues and free trade-related norms are becoming increasingly close. The most influential and increasingly stringent is the “green trade barriers”.

4. Path Selection for the Development of China's Green Patent Strategy

The importance of green technology to the environment is self-evident. Given the fact that China's green technology development is still in its infancy, problems such as imperfect laws and regulations, poor policy coordination, and weak public support systems, the disadvantages of green patent strategy construction and the problems faced threats should be the focus of our attention. In order to formulate a green technology innovation strategy suited to China's national conditions, the Chinese government should continue to take advantages of its green patent development and making full use of the opportunities offered by the development of foreign green patents. At the same time, we should also recognize the problems existing in the development of green technologies in the country and analyze the externalities threat carefully.

Firstly, improving the legal guarantee system of China's green patent strategy. The green patent strategy has strong legal attributes. From the development of technology innovation, the acquisition of patent rights to the use of patents, each link must be supported by relevant laws. A patent strategy without legal protection will not work. In order to make legal tools play a greater role in the research, development, promotion and application of green technologies, China should actively promote the construction of China's green patent strategy through the ecological adjustment of laws and regulations.

Secondly, optimize the international environment for green patent transfer in China. Climate change is a global issue, so green technologies that address climate issues are also international. Only when all countries' green technology resources can participate in new cooperative arrangements and effectively spread and flow among countries can green technology achievements be quickly promoted. Facing the green trade barriers and various restrictive measures of developed countries, improving China's green patent transfer system and broadening international technology transfer channels are the key to China's acquisition and improvement of green technology requirements. On the one hand, China should put forward the rigid requirements for green technology transfer at the level of international law and promote the establishment of a compulsory licensing system for related technology patents. At the same time, using the Clean Development Mechanism under the Kyoto Protocol, we will actively promote the transfer and authorization of green technologies in developed countries, and ensure the acquisition and follow-up research and development of green patent technologies in China. On the other hand, global green technology transfer based on low-carbon development will not be realized automatically. In order to obtain more legitimate and legitimate national interests, China should strengthen international coordination and cooperation in green patents, and actively cooperate with foreign governments, international organizations, and foreign research institutions. Conduct green technology cooperation research.

Thirdly, strengthen the policy synergy of China's green patent strategy. Policy synergy refers to the government's integration of individual policies such as intellectual property policy, industrial policy, fiscal policy, taxation policy, and cultural policy into a powerful linkage system that promotes the simultaneous implementation of policies to achieve the goal of maximizing policy effects. In order

to ensure the steady implementation of China's green patent strategy, the following aspects should be strengthened: First, promote the effective connection between intellectual property policies and other science and technology policies. The second is to strengthen the coordination between fiscal policy and tax policy. Promote the culture of green patents, and talent and education policies work together again.

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