

Research on the Guidance Mechanism of the Sharing of Green Patent in China

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Abstract

The sharing of green patent is a significant step in promoting green patents and dealing with currently severe environmental issues. The sharing of green patent refers to the sharing of rights, which is essentially different from the sharing of technology but innately connected with the sharing of technology and compulsory licensing of patents. The government should take active measures to establish an interest-oriented mechanism of stimulation and guidance, strengthen environmental protection legislation and green planning, improve right protection measures, establish shared information platform and jointly promote the sharing of green patent through fair, reasonable interest compensation, economic incentives such as annual fee reduction, special reward and loan financing, and methods on assessment and guidance including preferential procurement of the government, use of sharing identity and establishment of shared information platform.

Keywords: green patent, guidance Mechanism, institutional guarantee

1. Introduction

The environmental becomes increasingly prominent along with economic development. Global warming, frequent occurrence of extreme weather, severe pollutions in water, soil, air and ocean, destruction of biological diversity and scarce resource are posing a real threat to the very existence and development of mankind. The innovative development and extensive application of environmental-friendly green technology that represents new energy is the key to tackle development and environmental issues. The patent system, which is closely linked to the development and transformation of new technology, is undoubtedly playing a vital role. By giving inventor the monopoly right of the technology for business purpose in a certain period, the patent system can protect the interests of inventor and stimulate inventor to be engaged in technological innovation, however, it also imposes restrictions on the application and promotion of the technology. Therefore, how to boost the sharing and application of green patent technology has become a significant direction for many researchers to think about the way of solving environmental problem and climate change.

2. The Meaning and Discrimination of the Sharing of Green Patent

2.1 The meaning of green technology and the sharing of green patent

Green patent is also known as “environmental technology”, “environmentally friendly technology”, “clean technology” and so forth. So far, there is no unified definition from the authority. The Agenda 21 approved by the Rio Earth Summit in 1992, Basic Facts of the World Economy and Society in 2011: Major Transformation of Green Technology published by the United Nations Department for Economic and Social Affairs (DESA), and World Business Council for Sustainable Development (WBCSD) have respectively summarized and drawn up corresponding standards on “green technology”. The overall idea shared by all organizations and in international documents is that the experience and knowledge that can both boost productivity and a more coordinated relationship between human and nature is green technology, which in author’s view can be divided into the following three kinds: first, the technology being applied to the restoration of the environment; second, the technology doing no harm to the environment (cleaner production technology); third, the improved technology that will pollute the environment but is more advanced than before, the promotion and application of which will effectively mitigate the damage to the environment. Green patent is granted with green technology as the object, that is, an applicant is granted with monopoly right of use of a certain green technology in a certain period by the government in accordance with law. Without the permission from the obligee, no one can make use of his technology. The sharing of green patent means a patent is licensed for free or at low price by the patentee to other people or a specific group for business purpose. To put it bluntly, the sharing of green patent belongs to right transfer as one means.

2.2 The Discrimination of the sharing of the green patent and green technology

The sharing of green patent belongs to the sharing of rights, which is essentially different from the sharing of technology. This is mainly reflected in two aspects. First, purposes are different. The sharing of technology falls into knowledge and information sharing, which aims at the cognitive issue of technical knowledge, that is, whether a specific green technology can be understood and grasped by others while the sharing of patent (or right) aims to address problems on legitimate use of technology. Second, premises are different. The sharing of

technology is based on technological grasp without taking the existence of patent right as a premise while the sharing of patent (or right) must be premised on the existence of patent (or right) with use of technology and knowledge elevated to legally-guaranteed right and right assigned in the law level. For instance, in the movement of open source software (OSS), after an original inventor releases source codes, users can make innovation in accordance with individual requirements at no cost and share their innovations with others for use or secondary innovation for free. This innovation mode requires no interference of patent. Therefore, the sharing in OSS movement is on technology instead of patent (or right). But there is a strong link between them. For patent sharing, monopoly right is gained by the publicity of technical details, so the inventor of green technology has to release the technology information in application process in order to be the green patentee. Patent system objectively promotes the progress of technology sharing. In other words, the sharing of green technology is the premise and foundation for the sharing of green patent while the latter can greatly boost the sharing and application of green technology. In the previous research, many researchers didn't carry out a thorough analysis of the difference between technology sharing and patent sharing, instead, simply applied the theory of knowledge sharing to analyze the problems existing in patent sharing, thus forming biased viewpoints.

2.3 Relation between the sharing and compulsory licensing of green patent

Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) and United Nations Framework Convention on Climate Change (UNFCCC) and other international agreements provide that compulsory patent transfer is allowed for production and other crafts of equipment and commodities with relation to climate change. International organizations including Economic and Social Commission for Asia and the Pacific (ESCAP) and World Intellectual Property Cooperation Organization (WIPO) regard compulsory licensing system as an applicable choice in addressing climate needs under certain circumstances. The Article 49 of the Patent Law stipulates that in emergency and extraordinary situations or for the sake of public interest, the Patent Administration Department under the State Council can grant the compulsory license for patents for invention or utility models. All those regulations together form the legal source of compulsory licensing of green patents in China.

The sharing and compulsory licensing of green patent both are important methods for promoting green technology and of close connection. The compulsory licensing of green patent is to limit the amount of idle green patents or form the advantage of monopolizing with the help of green patents. The government is closely bound up with the intensity of the compulsory licensing of green patent, as well as the motivation of green patent sharing. Increased efforts in compulsory licensing will effectively reduce patent suppression and restrict market monopoly, thus stimulating switches from suppressing competitors by green patent advantages to patent sharing. In the broad sense, the compulsory licensing of green patent is also one of the approaches and ways for the sharing of green patent. There are evident differences between them although they both are methods of right transfer. The former is compulsory transfer while the latter refers to voluntary transfer. The licensed organization or individual should pay reasonable fees in the former method but use patents for free or at low cost in the sharing of green patent.

3. Establish a Stable, Reasonable Interest Compensation Mechanism

The sharing of green patent means a patent is licensed by the patentee to other people for free or at low price. A green patentee assigns part of interests for environmental public interest, so the government, as the representative of public interest, should give some compensation to the patentee so as to make up R&D expenditure. In this case, it is of necessity for the establishment of a government-led interest compensation mechanism based on compensation capital from various sources and scientific, reasonable compensation prices.

3.1 Improve the step-wise environment tax system and increase the tax burden on polluting companies as the main source of compensation capital.

Many countries including America and Canada collect capital for environmental management to aid in application and extension of green patent by the means of environment tax. China can draw on lessons from those countries' experiences so as to build a perfect environment tax system. Currently, China's environment tax system is still in the prototype stage. China's National Plan for Addressing Climate Change (2014-2020), approved in 2014 September, put forward the establishment of a carbon tax system suitable for China's national conditions. Action Plan for Energy Development Strategy (2014-2020), passed in 2014 December, introduced the improvement on energy tax policy. Environmental Protection Tax Law of the People's Republic of China, that shall come into force on January 1, 2018, is China's first single tax law for "green tax system", which primarily built the step-wise environment tax system, that is, tax varies with the environmental damage caused by the object. And on this basis, the green tax system will be set up with the increasing number of the new tax and improvement on objects, standards and methods. The revenue of environment tax will become one of the

stable capital resources to compensate patentees with shared green patent.

3.2 Take full advantage of government subsidies on environmental protection industry as the important source of compensation capital.

Action Plan on Environmental Protection and Energy Saving Subsidies and Temporary Management Methods of Special Funds for Architectural Application of Renewable Energy cover regulations on subsidies granted to clean energy, biomass energy and other cutting-edge technology and industry of environmental protection. Many provinces and cities successively introduced various types of subsidy measures for green patents and energy-efficient products. However, those subsidies and funding don't differentiate green patents from non-green patents, which is undoubtedly a major shortcoming. When revising and improving those subsidy policies, the government should fully absorb the previous experiences, differentiate between the subsidy standards of green patents and those of others and skew towards shared green patents so as to encourage R&D on green technology and facilitate the sharing of green patent.

3.3 Set up an open environmental protection fund as a favorable supplement for compensation capital resources.

Drawing on the experiences of National Climate Change Fund of Brazil and Carbon Fund of Britain, the government can set up national funds on environmental protection and meanwhile, encourage an industry or region to establish non-profit organizations in this field so as to absorb funding from public donations for environmental protection, promotion on green technology and compensation for patentees with shared green patents. For instance, to enhance ecological environment protection of Yangtze River, a protection base shall be set up in the Yangtze River Basin, which is led by major hydropower enterprises with the participation of enterprises of other industries including shipping and tourism, owned by joint distributions from the government, enterprises and social capital and operated in the market-oriented mode, thus raising funds for compensating the patentees who donate their green patents for repairing ecological environment of Yangtze River.

3.4 Establish a scientific valuation mechanism to lay the foundation for reasonable compensation.

Besides sufficient capital resources, a perfect compensation mechanism on shared green patents requires scientific valuation on those patents as the basis of reasonable compensation. The government should actively develop and standardize management on evaluation authority on intangible assets and rely on the industry to formulate scientific evaluation procedures. In the evaluation process of shared green patents, in addition to the life cycle, degree of monopoly and development expenditure of a technology and its transfer fee, the environmental protection performance of green technology is also a significant factor shown in a relatively standard and quantitative form. Besides, with the help of big data and information technology, public participation and evaluation are introduced in hope of objective and fair evaluation on shared green patents.

4. Establish an Effective Economic Stimulation Mechanism

4.1 Exempt annual examination fees on shared green patents.

After a patent is issued, the patentee shall pay an annual fee within the valid term. Implementation Guidelines of Patent Law and Methods for Reducing Patent Fees both cover no preferential policies on green patents. The author believes that in order to stimulate green patentees to share their patents with others, it is feasible to exempt annual fees since the registration of the patent sharing, thus greatly promoting the sharing of green patent.

4.2 Cut taxes for enterprises of patentees with shared green patents and provide enterprises with support of financial loan.

Laws and policies including Enterprise Income Tax Law of the People's Republic of China, Cleaner Production Promotion Law of the People's Republic of China, Environmental Protection Tax Law that will soon be carried into effect and Action Plan on Environmental Protection and Energy Saving Subsidies all provide that the industry of environmental protection shall be granted with tax credits. In line with the spirit of those laws and policies, enterprises of the patentees with green sharing should be incorporated in the range of China's industry of environmental protection with tax credits and exemption on some taxes. At the same time, the government should support this type of enterprises in expanding financing sources, develop various debt financing products and make use of diverse financing tools such as bond and stock to raise fund through preferential policies and concessional financing.

4.3 Set up a special reward for patentees with green sharing.

The Article 10 of Incentive Methods for Environmental Protection Science and Technology explicitly stipulates that in the process of application, promotion and transformation of applied technical achievements on environmental protection with significant market values, original contributions and remarkable benefits

environmentally, socially and economically shall be granted with rewards. The sharing of green patent definitely fits this category. In this case, the government should set up a special reward for patentees with green sharing, which falls into the range of Incentive Methods for Environmental Protection Science and Technology under the State Council, so as to reward shared green patent technology with extensive application and prominent environmental benefits, thus encouraging patentees to share their green patents with others.

5. Establish a Multiple Evaluation Leading Mechanism

5.1 Search for special mark for shared green patents.

Today, green growth, green products and green consumption go deep into public increasingly and the mark of green products will of course increase the credibility and sales. In combination with the unity reform of environment identity (or green identity), if special identity with the source of patent uniformly made by the environment department is applied to shared green patent technology, on one hand, it will promote product sales and the application of green patent technology and enterprises of patentees with shared patents will be more influential and competitive. And on the other hand, shared green patent technology is effectively differentiated from other technologies in products, and will contribute to protection on shared green patents.

5.2 Load the information of green patent sharing into the evaluation system of enterprises' environmental behaviors.

The evaluation system of enterprises' environmental behaviors refers to the comprehensive evaluation from the environmental protection department on an enterprise in accordance with the enterprise's environmental information and in light of some indexes and procedures. The evaluation result, ordinarily shown by a mark in green, blue, yellow, red or black, will be announced to the public, which releases how the enterprise abides by relevant laws and regulations on environmental protection in a straightforward manner. Enterprises' displaying their own green patents to the public for sharing is an important manifestation of their assuming social responsibility and boosting environmental protection actively. This behavior should be included in assessment system as the content of comprehensive evaluation on enterprises. In this case, those enterprises will definitely become more influential and push more enterprises to share green patent technology.

5.3 The government gives priority to purchasing green products from the sharing patentee.

Government will lead the market through preferred procurement and demonstration on application. In recent years, the government has actively advanced the work of green purchasing while some state organs, provinces and cities have successively introduced plans for green products. For green purchasing, the government should not only take into consideration the product's use and influence of production process on the environment but also think about the exemplary role of government procurement in society. Therefore, green products of the patentee with shared green patent (or enterprise) should enter the range of preferred procurement. Because the company shares its green patent with others at the expense of part of interests and therefore assumes some obligations of environmental protection for the government, which is representative of public interests, the government should make compensation for its products by preferred procurement, thus forming right guidance in society and greatly promoting the sharing of green patent.

6. Constantly Improve Other Relevant Leading Mechanisms

6.1 Strengthen environment legislation and policy planning.

China has enacted a series of laws and regulations on environmental protection with effective results. The basic value of environmental ethics has not been sufficiently respected or fully shown in many laws and regulations, thus requiring to be improved. Guided by ecological civilization and the value appeal of environmental ethics, the improvement on ecological environment legislation will effectively guide the development, application and sharing of green patent. Besides legislation guidance, "green planning" of the government can also get good effect. In recent years, the State Council and all ministries have attached ever-increasing importance on green development, and have successively issued several plans, including China's Plan for Addressing Climate Change (2014-2020), Action Plan for Energy Development Strategy (2014-2020), the 13th Five-Year Plan for National Strategic Emerging Industry and the 13th Five-Year Plan for Ecological Environment Protection. However, the phenomenon of "hot center and cold region" is prominent. Local governments introduced very few plans for promotion in environmental industry development and ecological protection and many provinces have not transited entirely from "GDP only". In this case, it is necessary to incorporate more "green elements" into plans of governments at all levels so as to better protect environment and boost the application and sharing of green technology.

6.2 Seek an interest protection mechanism of greater pertinence.

Objectively, the sharing of green patent brings about more patent disputes and risks of being infringed to the

patentee including new applications on the basis of repackaging green shared patents, use of green shared patents not in line with the sharing agreements or beyond the mandate and non-standard identities in use. Therefore, based on strengthened protection on shared green patents, the government should take some special protection measures in combination with infringements in the application process of shared green patents. In regard to administrative protection, government departments should give priority to infringement disputes in shared green patents and require special explanations in patent examination and licensing for new applications developed on the basis of shared green patents. The environmental protection department has right to sue for serious infringements in this field and all illegal activities should enter the credit archives of enterprises. Therefore, the occurrence of such infringements shall be prevented effectively. On judicial protection, the procuratorial organs have right to file lawsuits against serious infringements on shared green patents. The court in relevant cases should broaden the burden of proof on new patentees who make use of shared green patents as their development foundation and explicitly stipulate punitive damages for such serious infringements.

6.3 Set up an open information platform for the sharing of green patent.

The public have quick and easy access to the information of shared green patents, and then these patents can effectively take effect, thus pushing forward the application of green patents in environmental protection and modification. The government should integrate resources and take full advantage of new information technologies so as to establish an information platform featuring interconnectivity, open information and multi-level sharing of green patent, including an information base, a registration platform and an inquiry platform of shared green patents. In this case, green patentees can easily apply for the sharing of green patent while the public can quickly grasp the information on shared green patents. At the country level, the establishment of information platforms on shared green patents can rely on China's patent information center and this kind of platforms in different regions and industries can be developed with the support from local patent administrative organs and industry authorities.

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