Protecting Innovation: Cleantech and Patents Are Natural Allies

MICHAEL DAVIS-WILSON

FENWICK & WEST LLP

In recent years, the private sector's efforts to develop responses to environmental challenges have focused strongly on technological solutions. For many businesses in this field, patent protection for innovative technology is a key element of their business strategies. But as global economic conditions make it more difficult to mount capital-intensive ventures, and as competition stiffens in many subsectors, patents on traditional technology may not be as rewarding an investment as they have been. In this new environment, we are likely to see more investment in logistical and structural innovations, and consequently in patents on business methods.

Most recent "green" businesses are technologically oriented; the sector is commonly called "cleantech" for a reason. Even after a substantial decline from its 2008 peak, the Cleantech Group reports that nearly a billion dollars was invested in clean technology ventures – particularly solar technology, biofuels, and advanced batteries – in the first quarter of 2009 alone. However, some commentators argue that too many resources are being devoted to the search for technological solutions to environmental challenges. These critics suggest that the quest for a technical fix (and, perhaps, for a "magic bullet") distract from the possibility of finding structural solutions. It might ultimately be more effective to rework some of the processes that we use in our lives and our businesses than to try to do the same old things, only with less carbon-intensive fuels.

That sort of structural innovation has largely been left, so far, to the public sector. Consider, for example, the city of Berkeley's recent Berkeley FIRST program. This program seeks to address one obstacle to the deployment of residential solar energy systems – namely, the fact that property owners may hesitate (or may be unable) to invest substantial sums in a system that will pay off over the long haul, out of concern that they may not be able to recoup that investment if they want to sell their property in the short or medium term. Berkeley FIRST finances the installation of solar panels through a tax obligation that runs with the property; this couples the costs of solar infrastructure over time with its benefits.

Of course, structural schemes that depend on allocating property rights will necessarily be primarily the domain of government. However, schemes that enable better deployment and more efficient use of resources can be and are developed in the private sector. San Francisco startup Virgance operates a project called Carrotmob, which coordinates environmentally minded consumers to shop *en masse* during special events at stores that have committed to use some portion of the event proceeds on green improvements. Coordination of private action thus creates opportunities for investment in efficiency. This kind of private structural innovation, however, appears to be the exception rather than the rule.

In part, this imbalance may be due to the fact that, especially in the Bay Area, there is substantial infrastructure for technological innovation. There are many well-established resources for anyone seeking to mount a new technological venture – investors experienced in evaluating technology opportunities, a deep pool of talent accustomed to developing new technology, and a sophisticated patent system offering property rights in any useful innovations which emerge from the new venture. Those patent rights can then be leveraged into a return on investment in a variety of ways. Structural and logistical innovations, by comparison, are *terra incognita*. But the same essential model remains viable. In the words of *Diamond v. Chakrabarty*, 447 U.S. 303 (1980), patent protection extends to "anything under the sun made by man," even in less technical fields. The business method patent allows innovators who create not a new machine or a new molecule, but a better way of doing things, to recoup their investment in innovation.

Cleantech companies have largely neglected the business method patent in the past, which the exception of a cluster of patents addressing methods of trading carbon credits issued under cap-and-trade schemes. It seems very likely that this will change in the future. Because relatively little effort has been devoted to structural innovation in the past, there may be more unexplored opportunities for innovation in that realm than in crowded fields like biofuels or solar technology. Furthermore, the credit crisis poses a serious

problem to cleantech firms whose technology requires large installations, and thus large capital investments. Some firms, unable to fund planned capital expenses, have been able to pivot to a different business model in which they license technology rather than deploying it themselves, but other firms have not survived. Businesses that focus on structural and logistical efficiency may prove less capital-intensive than more traditional technology companies, and thus better suited to the current environment.

A significant obstacle to cleantech innovators considering business method patents, however, is the Federal Circuit's recent en banc decision in *In re Bilski*, 545 F.3d 943 (Fed. Cir. 2008). In that case, the court upheld the Patent and Trademark Office's rejection of a patent for a method for hedging commodity risk, holding that a process is only eligible for patent protection if it passes the "machine-or-transformation" test: that is, it either is tied to a particular machine or apparatus, or transforms a particular article into a different state or thing. The full implications of this decision may not be seen for some years; commentators and practitioners are divided on whether *Bilski* substantially narrows the potential scope of business method patents, or simply presents a new set of drafting challenges for patent prosecutors.

The *Bilski* court did explicitly state that processes that transform or manipulate abstractions like legal relationships or business risks, like the hedging method claimed in *Bilski*, are ineligible for patent. Another recent Federal Circuit decision, *In re Comiskey*, 499 F.3d 1365 (Fed. Cir. 2007), which rejected a patent for a method of arbitration, further supports the conclusion that purely financial or legal processes may no longer be patentable subject matter. This rule may imperil the aforementioned carbon trading patents; carbon credits, ultimately, are simply legal entitlements to emit greenhouse gases, and processes that manipulate them would seem to fall within *Bilski's* exclusion.

Many green innovations that might be candidates for a business method patent, however, involve moving around or transforming actual things. As an example, consider U.S. Patent Application No. 20070008181 (filed Apr. 21, 2006), which teaches a system to reduce fuel and time wasted while drivers search for parking by connecting parties with spaces to offer with parties in need of a parking space. Although such a method largely manipulates data, that data represents physical spaces and vehicles. Methods that manipulate data representative of physical objects were specifically distinguished in *Bilski* from the purely abstract transactions barred by the machine-or-transformation test. Thus, these kinds of methods, which squeeze opportunities for improved efficiency out of everyday activities, ought to remain viable patent opportunities, even in a post-*Bilski* world.

Another concern that may hold back potential patentees is the possibility of backlash. Patents that cover innovations of significant public value are often deeply resented. This problem is compounded when a patent's subject matter is not the sort of thing one traditionally thinks of when one thinks of patents – software, business methods, etc. Exclusive rights in a better battery are more intuitive than exclusive rights in a better way of collecting and recycling used cooking oil. Indeed, inventor expectations may be as much of an obstacle as public relations. It's hard to imagine a cleantech business method patent that could invite as much controversy as a patent on a life-saving but expensive drug, but some innovators might themselves balk at preventing others from using their logistical innovations.

Cleantech and patents are natural allies. The fundamental challenge of cleantech is to find better and more efficient ways to do all the things that we need to do; the patent system exists to provide incentives for everyone who devises a better way to do things, regardless of the form that better way takes. In these difficult times, cleantech firms will need to use that synergy to the fullest, exploring new forms of innovation and new ways of profiting from their investments.

Michael Davis-Wilson is an associate in the technology transactions group at Fenwick & West.