

ticipants based on emission information provided by those participants and determining debits or credits for each certain participant in order to achieve the reduction schedule.”³⁰¹

While much of the impetus for these developments comes from actors in the United States, they also involve a growing number of non-American participants in the clean energy sector, such as the emerging Chinese producers; China’s green technology trade surplus keeps expanding.³⁰² Especially at a time when important early patents are to expire, such as GE’s ’039 patent, international trade disputes look set to encompass the green technology sector as well.

B. Standardization and Patent Pooling

1. Green Technology Standards and Patent Pools

Whereas traditionally, environmental standards primarily aimed to assure safety or prevent direct pollution, new standards in the area of climate change mitigation are now emerging.³⁰³ This trend will likely also impact the emergence of patent pools.

Standardization generally enables industry to achieve interoperability between products provided by different companies and thus to multiply consumer choice while reducing overall costs. Patent pools can also be beneficial in reducing coordination problems amongst licensors, licensees and other participants. They are frequently used in the telecommunication and consumer electronics industries where interoperability is key to performance. A more recent development is humanitarian patent pooling. For example, UNITAID, an international entity tasked with facilitating access to treatment for HIV/AIDS, Malaria and Tuberculosis, is in the process of establishing a patent pool for essential medicines.³⁰⁴ The “Eco-Patent Commons” is a more loosely defined pool launched by the World Business Council for Sustainable Development (WBCSD).³⁰⁵ Through a pledge of non-assertion, participants offer their patents free of charge, without prejudice to the possibility of defensive termination.

301 U.S. Patent No. 7,343,341 (issued Mar. 11, 2008).

302 E.g., Bettina Weiss, *Global PV Competition Creates Increased International Disputes*, at http://www.pvgroup.org/NewsArchive/ctr_041594 (last visited Jan 13, 2011).

303 E.g., International Energy Agency (IEA) and International Organization for Standardization (ISO), *International Standards to Develop and Promote Energy Efficiency and Renewable Energy Sources: A Common Position Paper 2* (June 2007).

304 See UNITAID Executive Board Special Session on Patent Pool, Patent Pool Implementation Plan, UNITAID Doc. EB11/SSPP/2010/R1 (Feb. 5, 2010), available at <http://www.unitaid.eu/en>.

305 See generally, WBCSD, Eco-Patent Commons, at <http://www.wbcds.org/web/epc>.

As to possible green patent pools, experts point out that the dispersed nature of green technology across technical fields makes it challenging to set industry-wide standards.³⁰⁶ Yet, as is the case for telecommunications and consumer electronics, interoperability is increasingly important to certain aspects of green technology, for example, the functioning of smart grids and other means of energy transportation.³⁰⁷ Both foundational technologies and commoditized applications (e.g., small-scale solar panels) also present opportunities for standardization.³⁰⁸

2. The Unocal Case: Abuse in Law of Environmental Standards

In December 1990, the Union Oil Company of California (“Unocal”) filed for a US patent on environment-friendly gasoline fuel.³⁰⁹ Meanwhile, the California Air Resources Board (CARB) was developing standards for clean reformulated gasoline in collaboration with interested parties that included Unocal. November 1991 saw the launch of new compulsory programs that adopted those standards, which would enter into force five years later.³¹⁰ In 1994, the USPTO granted Unocal’s patent application (the ’393 patent).³¹¹ As the CARB standards covered the ’393 patent claims, implementation of the standards by other companies effectively implied infringement of Unocal’s rights.³¹²

When Unocal subsequently announced a licensing plan involving royalties, its competitors responded by initiating declaratory judgment suits.³¹³ The competitors lost and a split panel of the Federal Circuit affirmed the judgment on appeal. In 2003, the competitors filed a complaint with the US Federal Trade Commission (FTC), arguing that Unocal “gained monopoly power by defrauding” the CARB and industry groups during the gasoline rule-making in the early 1990s.³¹⁴ Even-

306 Roger Ross, Via Licensing, Panel Discussion at the University of San Francisco School of Law Cleantech Symposium: Clean Technology and the Law (Oct. 1, 2010), Intellectual Property Mechanisms for the Development and Dissemination of Clean Technologies in the US (unpublished manuscript).

307 *Id.*

308 *Id.*

309 U.S. Patent Application No. 628,488 (filed Dec. 13, 1990) (the specification states that “by controlling one or more properties of a gasoline fuel suitable for combustion in automobiles, the emissions of NOx, CO and/or hydrocarbons can be reduced”).

310 *Id.*

311 U.S. Patent No. 5,288,393 (issued Feb. 22, 1994).

312 Janice M. Mueller, *Patent Misuse Through the Capture of Industry Standards*, 17 BERKELEY TECH. L. J. 623, 623-625 (2002).

313 Union Oil Co. of Cal. v. Chevron U.S.A. Inc., 34 F.Supp.2d 1222 (C.D. Cal. 1998).

314 Press Release, FTC, FTC Charges Unocal with Anticompetitive Conduct Related to Reformulated Gasoline, FTC Docket No. 9305 (Mar. 4, 2009).