This open innovation[261] model differs from the Eco-Patent Commons in certain ways. Implementers can use the offered patents free of charge, but are obliged to grant back a license to the donor on the same conditions with regard to any improvements created as a result of their use of the offered patents.[262]

B. IP Issues in Green Technology Transfer

According to a patent licensing survey, one in five European companies and one in four Japanese companies licenses patents to non-affiliated parties.[263] Major motivations for companies to license are to: (i) earn revenue; (ii) enter into cross-licensing or technology sharing (*e.g.*, open innovation); (iii) establish their technology as a *de facto* standard; (iv) outsource manufacturing; or (iv) stop infringement of their patents.[264] While comprehensive illustration of the various licensing principles would exceed the scope of this paper, set out below are a few specific considerations in the context of innovation and transfer of green technology.

1. Effects of Non-assertion Commitments

A non-assertion commitment such as in Eco-Patent Commons is comparable to non-exclusive, royalty-free licenses to any potential licensees. From a competition law perspective, non-assertion can be procompetitive because it reduces transaction costs (by avoiding costly litigation), stimulates information exchange, and prevents patent holdup.[265]

However, the scope and duration of non-assertion may create legal uncertainty. Under what circumstances can the patent pledger revoke or terminate its non-assertion commitment? A dispute between IBM and a French open source software company illustrates the issue. IBM warned the French company that it would defend its patents against any unauthorized use.[266] However, it turned out that in relation to at least two of the patents that IBM argued likely to be infringed, IBM had

261 *See generally* Henry William Chesbrough, Open Innovation: The New Imperative for Creating and Profiting from Technology (Harvard Business School Press 2003); *see also* InnoCentive's website *at* http://www.innocentive.com (last visited Aug. 16, 2010).

262 *Supra* note 260.

263 Maria Pluvia Zuniga and Dominique Guellec, *Who Licenses Out Patents and Why? Lessons from a Business Survey* 3-7 (OECD Directorate for Science, Technology and Industry, Working Paper No. 2009/5 DSTI/DOC(2009)5, 2009).

264 *Id.*

265 *See* U.S. Dep't of Justice & Fed. Trade Comm'n, Antitrust Enforcement and Intellectual Property Rights: Promoting Innovation and Competition 89-90 (Spring 2007), *at* www.usdoj.gov/atr/public/hearings/ip/222655.pdf.

266 Letter from Mark S. Anzani, VP and Chief Technology Officer, IBM, to TurboHercules SAS (Mar. 10, 2010), *available at* http://www.turbohercules.com/TH_IBM_Letters.

previously committed to non-assertion.[267] Although IBM reserves the right to terminate such commitment,[268] the conditions are not very clear. The European Commission is currently investigating any competition law violation by IBM.[269]

As a matter of patent policy, challenging patent validity can be desirable when it improves overall patent quality and diminishes the adverse impact of exclusive rights.[270] However, if, as a result of good-faith non-assertion commitments, such pledged patents are more prone to challenge, this may discourage companies from engaging in such commitments. Therefore, balancing the different interests is crucial.

Transfer of technology is thought to work best when potential adopters are capable of implementing such technology themselves. However, developing countries are not always in a position to do so and may require a more comprehensive form of technology transfer. This creates scope for the availability of a wide range of technology transfer options including technical consultancy agreements combined with know-how transfer, turn-key contracts, franchising structures and R&D joint ventures.[271]

2. IP Ownership in R&D Collaboration

Much of green technology innovation involves R&D collaboration among universities and research institutions, industries and governments. A key and internationally complex issue in this context is IP ownership, which can be subject to diverging national norms. Here, the German model is briefly discussed.

Ownership of employee inventions in Germany is traditionally governed by the German Employees Invention Act (ArbErfG). Under this law, the employee inventor must notify the employer of every service invention he or she makes. The employer can then choose to acquire the invention, in which case it must seek patent protection.[272] Prior to 2002, professors were exempted from this obligation and free to assign or otherwise dispose of their title to inventions (so-called professors' privilege). However, since the abolition of this privilege, university technology

267 Press Release, IBM, IBM Pledges 500 U.S. Patents to Open Source in Support of Innovation and Open Standards (Jan. 11, 2005). The patents-at-issue are U.S. Patent Nos. 5,613,086 (issued Mar. 18, 1997) and 5,220,669 (issued June 15, 1993).

268 *Id.*

269 Press Release, European Commission, Antitrust: Commission Initiates Formal Investigations against IBM in Two Cases of Suspected Abuse of Dominant Market Position (July 26, 2010).

270 *Supra* note 265, at 90-91.

271 *E.g.*, Stanisław Sołtysiński, Lecture at the Munich Intellectual Property Law Center: License Contract Drafting (June 22-25, 2010) (on file with author).

272 *See generally* Michael Trimborn, Employees' Inventions in Germany: A Handbook for International Business (Carl Heymanns Verlag 2008).