



## ***Climate Change: Technology Transfer or Compulsory License?***

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I. Introduction and Welcome

II. Overview of the Copenhagen Conference

- Slate Magazine “*Copenhagen was the climate conference to end all climate conferences*”

A. Legal Objective: To reach a legally binding Kyoto Protocol successor agreement pursuant to which: i) all nations would enact strict EU hazard & correlation (not causation)-based precautionary principle driven national environmental regulations to ensure mitigation of their citizens’ greenhouse gas (GHG) emissions for the period following 2012; and ii) developed nations would ensure the transfer of clean technologies for little or no cost to developing nations.

B. Political Problems:

- **Lack of Trust in GHG Emissions Reduction Verification**: An international political deadlock arose, in part, because of the distrust between China and the US (two countries do not trust each other—after Kyoto, China does not believe that the United States will follow through on its international-emissions pledges, while in the United States, few believe anything that China promises). (*However, one must truly wonder about the extent to which the US-China dance was choreographed in advance for a global public audience to achieve the desired result – no mandatory binding GHG emissions reduction obligations - Guardian UK*).
- **Clean/Green Technology Patent/Trade Secret Protections at Risk**: Developing countries have called for the weakening of developed country industry Clean/Green technology IPRs (patents & trade secrets) to facilitate technology transfer to developing countries. China and India led a group of 77 developing countries arguing how intellectual property rights (IPRs), namely patents and trade secrets, hinder the free exchange of vital clean-energy technologies, they claim is required by provisions contained within the texts of the UN Framework Convention on Climate Change (UNFCCC) and the World Trade Organization Agreement on the Trade Related Aspects of Intellectual Property Rights (WTO TRIPs Agreement).
  - China, India and Brazil have proposed that new green technologies be made subject to “**compulsory licensing**”, which is tantamount to waiving IPRs.
    - Compulsory licensing has to date only been authorized by the WTO TRIPS Agreement in emergency situations where patent-protected pharmaceuticals were seen as prohibitively expensive.

- Now, the group of 77 developing nations, led de facto by China, wants to apply the same logic to the climate crisis.
- These countries rely on Articles 4.3 and 4.5, respectively, of the UNFCCC, which includes a specific commitment by developed countries regarding provisions of financial resources and technology transfer, even though the UNFCCC does not explicitly refer to intellectual property rights or patents.
- These countries have also referenced Forty-five recommendations adopted by the World Intellectual Property Organization (WIPO) General Assembly in October 2007, some of which relate to the transfer of technology. Specifically, Cluster C “Technology Transfer, Information and Communication Technologies and Access to Knowledge”.
- The following statements were made by Chinese, Indian, Brazilian (and even US) government officials:
  - Xie Zhenhua, President Hu Jintao’s Special Representative on Climate Change and Vice Chairman of the National Development and Reform Commission of China: Developed countries should also fulfill their obligations under the Convention to provide financial support and technology transfer to enable developing countries to effectively tackle climate change.
  - Shyam Saran, climate change envoy to Indian Prime Minister Manmohan Singh: technology transfer to developing countries is “a burning issue” and that “intellectual property rights may need to be slacked for it.” India wants “a global fund that could buy out IPRs of green technologies, and then distribute these technologies free, in a way that is similar to what is done for HIV/AIDS drugs.”
  - Haraldo de Oliviera Machado Filho, a senior advisor in Brazil’s government committee on climate change, said that by easing the transfer of patented technology to tackle global warming to developing countries.
  - US Senator Jay Rockefeller (W.VA) is on record as stating that, “If we get a good technology and Wall Street and industry and everybody else buys into it, then I want to give it free of charge to the Chinese and the Indians and to others, anybody who needs it,” Rockefeller told reporters Oct. 30. “Just give it. This is a worldwide problem.”
- Activist James Love of the George Soros-funded Knowledge Ecology International (KEI) was quoted in a November 2009 interview as saying that,

India, Brazil and China simply want easier access to licenses to make and export systems that produce electricity with fewer emissions. “If what you’re trying to do is mobilize the world to do something about climate change, you could actually be in favor of a lot of compulsory licensing,” Love said.

C. Non-Legal Result/Outcome: With Brazil, India, and South Africa in the room, China and the US negotiated the contours of a final **limited and nonbinding instrument** known as the “Copenhagen Accord”. Ultimately, most of the remaining UNFCCC member governments begrudgingly endorsed it. Guardian UK - “Under UN laws, consensus is required. There is confusion over the legal standing of the agreement reached in Copenhagen and many countries may not be in a position to sign up by 31 January because they have yet to consult their parliaments.” Excerpts of the relevant provisions of the Copenhagen Accord are as follows:

- “2...*We agree that deep cuts in global emissions are required according to science, and as documented by the IPCC Fourth Assessment Report with a view to reduce global emissions so as to hold the increase in global temperature below 2 degrees Celsius, and take action to meet this objective consistent with science and on the basis of equity.*”
- “3...*We agree that developed countries shall provide adequate, predictable and sustainable financial resources, **technology** and capacity-building to support the implementation of adaptation action in developing countries.*”
- “8. *Scaled up, new and additional, predictable and adequate funding as well as improved access shall be provided to developing countries, in accordance with the relevant provisions of the Convention, to enable and support enhanced action on mitigation, including substantial finance to reduce emissions from deforestation and forest degradation (REDD-plus), adaptation, **technology development and transfer** and capacity-building, for enhanced implementation of the Convention.*”
- “10. *We decide that the Copenhagen Green Climate Fund shall be established as an operating entity of the financial mechanism of the Convention to support projects, programme, policies and other activities in developing countries related to **technology development and transfer.***”
- “11. *In order to enhance action on development and **transfer of technology** we decide to establish a Technology Mechanism to accelerate technology development and transfer in support of action on adaptation and mitigation that will be guided by a country-driven approach and be based on national circumstances and priorities.*”

Jonathan Pershing, who helped lead US government talks at Copenhagen rationalized the diplomatic approach that resulted in the Copenhagen Accord. He said the flaws in the UN process, which demands consensus among the international community, were exposed at

Copenhagen. “The meeting itself was at best chaotic”, he said. - *Guardian UK; Washington Times*.

- Pershing’s rationalization reflects the strategy of lead US climate change negotiator Todd Stern, who envisioned an “E-10” group of countries which would “identify the most pressing global environmental challenges exclusively and impose standards upon themselves...Member nations of the E-10 would include: the United States, the European Union, China, Russia, India, Japan, Canada, South Africa, Australia, and Brazil. By 2006 estimates, E-10 nations, which comprise seven of the top ten largest emitters (South Africa, Australia, and Brazil are in the top 20), would include over 76 percent of total global CO2 emissions...[And, it has been suggested that] [a]ll E-10 members are in economic positions to acquire climate change mitigation technologies ***without the need for special financing mechanisms like compulsory licensing and patent pools***. Furthermore, each E-10 nation represents a leader in R&D and patenting of clean technologies.” Brookings Institution Study (Nov. 2009).

### III. Top-Down Proposed International Solutions to the Broader Problem that Threaten to Adversely Reform International Regulation of IPRs:

#### A. Creation and execution of a Doha Declaration on Climate Change:

As recommended by a Brazilian Foreign Minister at the May 2009 UNFCCC Bali Conference, a Doha Declaration on Climate Change would be similar to the current Doha Declaration on Public Health negotiated during 2001. In other words, such a declaration would permit WTO developing country parties to exercise the “TRIPS flexibilities” ***with respect to compulsory licensing*** of patented clean/green technology products and their mechanical and ICT components, and the application of patentability and competition law standards, much like they have tried to do with respect to biotechnology, pharmaceutical and medical technology products.

- With respect to a Doha Declaration on Climate Change, do developing countries have in mind also to require developed countries to incur specific *additional affirmative obligations* which would generate new rights for developing countries to clean/green technologies??
- Wouldn’t negotiations on a Doha Declaration on Climate Change likely be tortuous and break down into political debate that would divert countries’ attention away from the task at hand – arriving at definite solutions?
- Would not such a declaration result in the widespread exercise of TRIPS flexibilities, and consequently, to a permanent change in the international regulation of IPRs?

- Would such a declaration reduce the pressure on national governments to renegotiate TRIPS to address how to better facilitate green technology transfer?
- What would the legal relationship be between such a declaration, if adopted as part of the UNFCCC negotiation process, and the WTO TRIPS Agreement?
- Do developing countries believe a productive outcome could follow from ignoring IPRs, reforming the TRIPS Agreement and/or subjecting developed country clean/green technologies to ‘compulsory sharing’?

B. Creation of Multilateral and/or Intergovernmental Funds:

UNFCCC-affiliated fund structures would support (finance) development and delivery (transfer) of clean technologies addressing the needs of developing countries.

- The “Global Access Principles” of such funding structures **would set forth rules for the international management of IPRs** (e.g., patents, trade secrets, copyrights, plant breeders’ rights) developed as the result of international collaborations or research grants.
- Contractual agreements for access, ownership and exploitation of IPRs would contain:
  - Limitations on the exclusivity of IPRs within a given territory or geography for exploitation;
  - March-in rights;
  - Development targets; and
  - Milestone payments.
- An additional UNFCCC bureaucracy and outside ‘expert’ committees would need to be created in order to:
  - Evaluate, refine and/or revise “global access principles”, and to oversee their implementation; and
  - To develop centralized reporting to the COP of such funding structures’ implementation and effectiveness.
- Would this proposed solution avoid the need for an agreement in UNFCCC negotiations?
- Would this proposed solution avoid the alleged need for WTO TRIPS Agreement reform?
- Would this proposed solution avoid the exercise by developing and developed country governments (e.g, European Union Member States) of compulsory licensing?

- How would this proposed solution facilitate more than negligible clean/green technology transfer if private parties choose *not* to collaborate or accept the resources of such funding structures? Wouldn't the Global Access Principles be applicable to private parties only if they chose to participate?

C. Proposals Made Within the WIPO Standing Committee on the Law of Patents:

- The WIPO Secretariat has also indicated that “various aspects of the patent system may have implications for the transfer of [alternative energy] technolog[ies]. In this respect, some provisions under the TRIPS Agreement which are not mentioned above may be also relevant to the effective transfer of technology. These include: Article 29.1 concerning the disclosure requirement, Articles 30 and 31 concerning exceptions and limitations to the right, and Article 40 with respect to control of anti-competitive practices in contractual licenses.” SCP/14/4 pars. 86-87; 122-123.
- “As confirmed by the Doha Declaration on the TRIPS Agreement and Public Health, each Member has the right to grant compulsory licenses and the freedom to determine the grounds upon which such licenses are granted. Indeed, national legislation provides different grounds for the grant of compulsory licenses. Some of the grounds often contained in national legislations include, for example: non-working or insufficient working of the patented invention; anti-competitive practices and unfair competition; public interest, including public health, national security, national emergencies and other circumstances of extreme urgency; failure to obtain a voluntary license under reasonable terms within a reasonable period; and dependent patents and other titles that relate to the protection of inventions.” SCP/13/3 at par. 142.
- As is made abundantly clear by pars. 13, 46, 91-93 and 141-142 of SCP/13/3, the WIPO Secretariat was suggesting in pars. 141-142 of SCP/13/2 that an analogous international compulsory licensing or governmental noncommercial use regime should be erected to facilitate the free, or virtually free, dissemination of patented ideas deemed ‘essential’ to the implementation of a technical multi-component product standard by developing countries in need of a relatively inexpensive information and communication infrastructure and related ICT technologies and end-user products.
  - [http://www.wipo.int/export/sites/www/scp/en/meetings/session\\_14/studies/itssd\\_2.pdf](http://www.wipo.int/export/sites/www/scp/en/meetings/session_14/studies/itssd_2.pdf)
- Concurrently, there is a need for *more than* fair, reasonable and non-discriminatory (FRAND/RAND) licensing terms relating to multi-component patented clean/green technologies to foster ‘interoperability’ of ICT technologies and to avoid the potential for patent hold-ups and legal conflicts among manufacturers and licensees that could hamper the exploitation and transfer of such technologies to developing countries. **Mandatory ‘open’ ‘royalty-free’ patent-rich standards coupled with Patent Pools and/or Licenses of Right are favored solutions.**

- Patent pools may or may not be useful market mechanisms to assist multiple patent owners in facilitating the development of multi-component technology standards without conflict. However, there is not yet enough data to conclude how to address their shortcomings and to construct a successful pool arrangement that does not engender conflict. Similarly, the Industrial Royalty Pie Model of allocating patent pool royalties is untested and requires more time to evolve and study.
- The term ‘interoperability’ reflects European and other Roman civil law preventive justice-based legal systems’ national and regional policies, which express a preference for **royalty-free open standards AND royalty-free open source software**, primarily at the expense of rights holders. Within these jurisdictions, private property rights are attenuated and subject to a relatively broad ‘public interest’ override.
- The ‘license of right’ also accurately reflects this notion of private property rights. It is currently described as entailing a *voluntary* decision by a patent owner to register its patent with a national Patent & Trademark Office as a nonexclusive license available to all interested prospective licensees on ‘reasonable terms’, contingent on the patentee waiving injunctive relief against future infringers. Nevertheless, the license of right has historically functioned as a compulsory licensing statute. Indeed, it actually **functions as a *de facto* compulsory license** where the national patent and trademark office executive intervenes to determine reasonable licensing terms if the parties themselves are unable to agree, and where, in infringement suits, defendants are directed by the court to abide by the patent owner’s reasonable licensing terms.
  - [http://www.wipo.int/export/sites/www/scp/en/meetings/session\\_14/studies/itssd\\_1\\_summary.pdf](http://www.wipo.int/export/sites/www/scp/en/meetings/session_14/studies/itssd_1_summary.pdf)
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D. Top-Down Patent and Standardization Proposals Made by the Chinese Government at the National Level with International Consequences:

- China 2005 proposal to WTO Technical Barriers to Trade (TBT) Committee for it to further study, with respect to technologies protected by IPRs in standards, how standardization interoperability needs at a societal level may be appropriately balanced with IPR protection needs at the innovator level, in light of the need for standards to facilitate and eliminate barriers to international trade, especially in the case of WTO Developing Country Members which typically require technical assistance and capacity building. (G/TBT/W/251, G/TBT/W/251 Add.1. (2005)).



- The Standardization Administration of China (“SAC”) recently drafted Proposed *Regulations for the Administration of the Formulation and Revision of Patent-Involving National Standards*. These proposed rules reflect that only patented technology that is ‘essential’ to the implementation of a standard may be incorporated into the development of a national standard. Art. 3. It also provides that “[a] patentee and its affiliate taking part in the drafting of a standard will be deemed as having granted a free license by failing to make disclosure”, and will be held legally responsible in the event that such disclosure failure is found to be a ‘purposeful concealment’. Art. 8.
  - A patented technology may be included in a national standard only if the patentee chooses either to “license, on a *free-of-charge*, reasonable and nondiscriminatory basis” or “on a reasonable and nondiscriminatory basis...*at a price significantly lower than the normal royalties*”. Art. 9.
  - A “compulsory national standard” generally shall not involve any patents. Art. 12. However, where “a compulsory national standard...indeed needs to involve a patent, the patentee shall grant license free of charge...If the related departments...[of] the national administration department of standardization...fail to agree with the patentee on the disposal of patent, the approval for release of the national standard will be temporary withheld *or a compulsory license will be granted according to law.*” Art. 13.
    - This will have a severe impact on developed country renewable/alternative energy companies because most manufacturing of solar panels windmills, hybrid auto batteries and compact fluorescent light bulbs occurs in China.
    - “Only one of the top ten solar photovoltaic (PV) producers in the world is American; only one of the top ten wind turbine producers is American; and only two of the top ten advanced battery producers are from the U.S. China and Japan host seven of the ten leading producers of photovoltaics. India’s Suzlon Corporation is a leading producer of wind turbines, another renewable energy category dominated by Chinese firms. Brookings Institute study.

#### IV. Is There Still a Sufficient Incentive to Innovate in Clean/Green Technologies After Copenhagen and With China in Mind?

- IPRs (patents and trade secrets subject to reverse-engineering) held by US clean/green technology inventors and innovators that are manufactured in China or otherwise subject to compulsory licensing or compulsory technology transfer to developing countries, are threatened.

- The industries of both the US and the EU recognize that IPRs are necessary for firms to undertake investment in research and development of clean technology. As with any investment, if the risk on returns increases, a firm will tend to invest less. This could seriously increase the costs of compliance in reaching GHG reduction targets and reduce the opportunities for job creation. It is believed that millions of jobs could be created in the US and Europe through research and production of innovative green technologies would be jeopardized by weakening IPRs.

## V. US Domestic Considerations

### A. Top-Down Proposed US National Solutions:

- Condition federally funded government patent grants to universities and private parties on the licensee's exhaustion of the patent on compliance with 'humanitarian licensing clauses'.
  - For example, the US National Institutes of Health's Office of Technology Transfer includes a contractual clause within its licensing agreements which provides that where federal funds are received, recipients will be required to devote a portion of that funding to develop clean technologies for developing countries.
  - NIH grants are essentially subsidies, often given to public institutions that fund research which the private sector may appropriate through ownership or licensing of patents. U.S. Bayh-Dole legislation facilitates such grants and authorizes federal research funding recipients to patent the results of their efforts unless the government chooses to undertake the patenting itself (and still out-license the technology). The US Bayh-Dole Act and related legislation applies to alternative energy resources and climate change mitigation technologies research, as well as, to pharmaceutical research.
- Reform Bayh-Dole legislation

### B. Bottom-Up University Alternative Licensing Solutions:

- Some US universities have begun to change their licensing practices to incorporate 'humanitarian' or 'open licensing' policies.
  - *Humanitarian* – Licensing clauses may require the marketing of a product in developing nations at a reduced royalty or price, the donation of materials for evaluation/testing or cooperation with a humanitarian licensee in a specified way. A licensee may also be required to make products developed from improvements to the technology available in a particular low or middle income country(ies) at a

reduced cost. And, licensees may be encouraged to perform research targeting a particular technology or problem. If such research assignment is accepted, it would entitle the licensee to pursue research anywhere in the world using university technology and licensee improvements without payment of a royalty.

- *Open Licensing* – A self-reinforcing licensing approach that employs patent and other rights rather than simply dedicating innovations to the public domain. It employs a ‘commons-based’ approach analogous to GPL open source software.
  - **Equitable Access Licensing Clauses:** University and licensee agree that any licensed technology and licensee improvements (including improvement patents, registration or other data, trade secrets, etc.) to be sold in low or middle income countries must be openly licensed to any company that meets certain Good Manufacturing Practice (GMP) standards. This ensures that the licensed technology and subsequent developments remain freely available to all potential users.
  - **Reach-Through Licensing Clauses:** University endeavors to reach beyond the licensed technology to ensure the licensee treats new technologies developed through use of licensed technology *or* under a cooperative agreement, as honoring the same kinds of development obligations covered by the original license. This type of clause is sometimes used in the context of Public-Private Partnerships (PPPs) to encourage the development of specific technologies that benefit developing nations while allowing the private sector partner to benefit in the developed world.
- As of 2004, at least five prominent universities, the first four of which are US government patent recipients, have incorporated either a humanitarian or open licensing clause within their licensing agreements:
  - University of California;
  - California Institute of Technology;
  - Massachusetts Institute of Technology;
  - University of Texas;
  - Yale University.

VI. Which do you prefer: tech transfer or compulsory license?