CLIMATE CRISIS AT THE PATENT COUNTER: CAN INDIA COMPULSORILY LICENSE GREEN TECHNOLOGIES?

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ABSTRACT

India's ambitious climate targets under the Paris Agreement 500 GW of renewable energy capacity by 2030 and a 45% reduction in carbon intensity from 2005 levels depend critically on access to green technologies that are overwhelmingly held in foreign patent portfolios. Yet the intersection of patent law and climate technology governance in India remains largely untested. This essay argues that the legal architecture for green technology compulsory licensing already exists under the Patents Act, 1970, and that the sole compulsory licence granted under the Act Natco Pharma Ltd. v. Bayer Corporation (2012) establishes doctrinal precedents directly applicable to climate-critical patents. Sections 84 and 92 of the Act accommodate compulsory licensing on grounds of inadequate supply, unaffordable pricing, domestic non-working, and national emergency, with the latter potentially encompassing a declared climate emergency. The essay further contends that the political and diplomatic barriers particularly the threat of trade retaliation under the US Special 301 mechanism rather than legal incapacity, explain why no country has yet issued a green technology compulsory licence. Drawing on comparative experience from Brazil and Thailand, the essay concludes with specific legislative recommendations to operationalise this latent legal instrument in service of India's sustainability obligations.

Keywords: Compulsory Licensing, Green Technology, Patents Act 1970, Natco-Bayer, TRIPS, Climate Emergency, SDGs, India.

I. INTRODUCTION

A solar panel that cannot be afforded is no different, for the climate, from a solar panel that does not exist. India's Nationally Determined Contribution (NDC) under the Paris Agreement commits to 500 GW of renewable energy by 2030 a target that requires the rapid deployment of solar photovoltaic, wind, battery storage, and associated green technologies, many of which are protected by dense patent portfolios held by corporations in the United States, Japan, Germany, and China. The pricing premium enabled by patent exclusivity renders many of these technologies financially inaccessible to domestic manufacturers, state distribution companies, and rural energy programmes precisely the actors needed to operationalise India's energy transition at scale.

Compulsory licensing the legal mechanism by which a government may authorise use of a patent without the rights-holder's consent, subject to adequate remuneration has been extensively litigated and applied in the pharmaceutical domain. Its application to green technology has, by contrast, generated negligible jurisprudence. No country, as of the date of this essay, has formally issued a compulsory licence for a green technology. This absence does not reflect legal incapacity but rather political hesitation, diplomatic deterrence, and doctrinal uncertainty. This essay interrogates each of these barriers and argues that the legal pathway rooted in India's Patents Act, 1970 and the TRIPS Agreement is already open. The Natco-Bayer jurisprudence provides the doctrinal key.

II. THE LEGAL PATHWAY: SECTIONS 84 AND 92 OF THE PATENTS ACT, 1970

Chapter XVI of the Patents Act, 1970 provides a tripartite compulsory licensing architecture particularly suited to green technology access. Section 84(1) permits any 'person interested' to apply to the Controller for a compulsory licence after three years from the patent grant date on any of three independent grounds: (a) the reasonable requirements of the public have not been satisfied; (b) the patented invention is not available at a reasonably affordable price; or (c) the invention is not worked within India. Each of these grounds maps directly onto common deficiencies in the green technology landscape: foreign patent holders who neither supply the Indian market at affordable prices nor manufacture domestically regularly satisfy all three concurrently.

Section 92 provides a more expedited route: where the Central Government is satisfied that the

public interest so requires, it may issue a declaration enabling the Controller to grant compulsory licences without any waiting period and without prior negotiation with the patent holder. The phrase 'national emergency or circumstances of extreme urgency' in Section 92 has not been judicially interpreted in the climate context, but the legal argument for its applicability is compelling: India has formally acknowledged climate change as an emergency across multiple governmental instruments, and the Paris Agreement itself characterises climate change as 'an urgent and potentially irreversible threat to human societies.' If epidemic disease constitutes an extreme urgency as confirmed by the Doha Declaration on TRIPS and Public Health (2001) then a crisis threatening the physical foundations of civilisation must surely qualify.

Table 1: Key Compulsory Licensing Provisions Green Technology Applicability

Provision	**Ground**	**Green Technology Application**
S. 84(1)(a)	Public requirements not satisfied	Inadequate supply of solar/wind technology
S. 84(1)(b)	Not available at affordable price	High-cost renewable energy patents
S. 84(1)(c)	Not worked in India	Foreign-held green tech not manufactured domestically
S. 92(1)	National emergency / extreme urgency	Climate emergency expedited, no prior negotiation needed

III. THE NATCO-BAYER PRECEDENT AND ITS TRANSPOSABILITY

India's sole compulsory licence granted by the Controller General of Patents in Natco Pharma Ltd. v. Bayer Corporation (2012) and upheld by the IPAB and the Bombay High Court is the most authoritative judicial construction of Section 84 in Indian law. Its doctrinal holdings are directly transposable to green technology.

The Controller found that Bayer's supply of Sorafenib Tosylate reached only approximately 2% of the patient population in need establishing failure to satisfy the reasonable requirements

of the public under Section 84(1)(a). The price of approximately Rs. 2.8 lakh per month was held manifestly unreasonable relative to patient purchasing capacity under Section 84(1)(b). Domestic non-manufacture satisfied Section 84(1)(c) autonomously. The IPAB affirmed that 'reasonable requirements of the public' must be assessed with reference to societal need, not patent-holder commercial interests a principle the essay terms the 'society-centred interpretive approach.'

This interpretive approach is directly applicable to green technology. A renewable energy technology that reaches less than a fraction of India's energy-deficit households fails to satisfy the public's reasonable requirements just as surely as an unaffordable cancer drug. The 6% of net sales royalty rate established by the Controller and affirmed through the appellate chain provides a quantitative benchmark for adequate remuneration under any future green technology compulsory licensing application, satisfying the TRIPS Article 31(h) requirement without necessitating fresh judicial deliberation.

Crucially, the working requirement under Section 84(1)(c) was confirmed as an autonomous and independently sufficient ground. Many climate-critical patents in offshore wind, advanced solar cell chemistry, carbon capture, and battery storage are held by multinational entities that have not established manufacturing operations or domestic licensing arrangements in India. This ground alone may suffice to ground a compulsory licence application, without requiring the applicant to prove affordability failure.

IV. WHY HAS NO GREEN TECHNOLOGY COMPULSORY LICENCE BEEN ISSUED? THE BARRIERS EXAMINED

The absence of green technology compulsory licences globally is not a legal problem. It is a political and structural one. Three categories of barriers explain the gap.

First, diplomatic deterrence. The US Special 301 mechanism, under which the US Trade Representative may designate countries as 'priority watch list' economies and impose trade sanctions for perceived IP inadequacies, has been deployed against Brazil following its 2007 Efavirenz compulsory licence and against Thailand following its 2006–08 Government Use licences. The threat of designation creates a substantial deterrent that operates entirely outside the TRIPS legal framework, which expressly permits compulsory licensing. For green technology where the patent-holding corporations are even more politically powerful than

pharmaceutical companies this deterrent effect may be amplified.

Second, technical complexity. Unlike pharmaceutical compulsory licensing, where the licence enables reproduction of a molecular formula, green technology transfer requires transmission of complex manufacturing know-how, systems integration expertise, and ongoing technical support. Compulsory licensing of a solar cell patent without the accompanying tacit manufacturing knowledge produces an incomplete solution. This complexity calls for licensing mechanisms that encompass know-how transfer alongside patent rights a gap that legislative reform can address.

Third, institutional unreadiness. India's Office of the Controller General of Patents lacks a dedicated green technology evaluation unit. Without the technical capacity to assess green patent landscapes, identify priority technologies, and process compulsory licensing applications with the necessary domain expertise, the legal pathway though open remains operationally inaccessible.

V. RECOMMENDATIONS

Three targeted reforms would convert green technology compulsory licensing from a legal abstraction into an operational instrument.

First, Parliament should amend Section 92 of the Patents Act to explicitly enumerate climate change mitigation and adaptation as grounds for emergency compulsory licensing. A proviso should specify that any climate emergency declaration by the Central Government, or India's existing commitments under the Paris Agreement and the National Action Plan on Climate Change, constitute 'circumstances of extreme urgency' within Section 92. This removes residual ambiguity and provides a clear statutory basis for expedited licensing without the three-year waiting period.

Second, the Ministry of Commerce and Industry should gazette a National Green Technology Compulsory Licensing Policy specifying: eligible technology categories (prioritising solar PV, offshore wind, battery storage, and carbon capture); standardised remuneration methodologies building on the 6% Natco benchmark; mandatory know-how transfer requirements accompanying any patent licence; and an expedited processing timeline for Section 92 applications.

Third, the Office of the Controller General of Patents should establish a Green Technology Patent Evaluation Cell staffed jointly by IP lawyers and renewable energy engineers. This unit should publish annual Green Technology Patent Landscape Reports identifying climate-critical patents amenable to compulsory licensing, reducing the transaction costs for potential applicants and enabling proactive governmental action under Section 92B (government use).

VI. CONCLUSION

The Natco-Bayer decision demonstrated that India's compulsory licensing law, when invoked with doctrinal clarity and political resolve, can override patent exclusivity in the service of urgent public need. The same law Sections 84 and 92 of the Patents Act can and must be extended to the green technology domain. The climate crisis is not less urgent than the HIV/AIDS epidemic that prompted the Doha Declaration; by most scientific measures, it is more urgent. India's NDC obligations under the Paris Agreement, its constitutional obligation to protect the environment under Article 48A, and its commitment to SDG 7 and SDG 13 collectively demand that this latent legal instrument be operationalised without further delay. The patent counter need not be an obstacle to the energy transition but only if policymakers choose to use the tools the law already provides.

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