



## A Policy Approach for Supporting Clean Energy Technology Development, Job Creation, and Economic Growth in India

Realizing the environmental challenges the world faces today, India has taken a number of steps to develop innovative “green” solutions to its environmental and energy challenges. Pursuing these goals can also drive new job creation, economic growth and technological advancement in India. Protecting the intellectual property (IP) rights of innovators will be vital to achieving any of these worthwhile objectives.

In the comprehensive study *A Policy Approach for Supporting Clean Energy Technology in India*, researchers found that the development and deployment of advanced clean technologies –from biofuels and hydropower, to wind and nuclear energy—**could create nearly 10 million jobs in India by 2025**. The report adds, however, that reaching this milestone depends on protecting the IP rights of innovators and inventors around the globe, including in India.

The study highlights the fact that leadership in the development of clean technology is wide open; no single country or region dominates. In fact, Indian companies are at the forefront of developing, deploying and licensing many green technologies. Companies like Suzlon, Tata BP Solar and Moser Baer PV Technologies are well positioned to play leading roles.

Despite these conclusions, India has joined with China and a number of other countries to weaken IP rights in UN climate change negotiations. These countries, which are being prodded by a handful of activist NGOs, are also arguing against intellectual property protections at multilateral forums in Geneva and elsewhere. If successful, these efforts would surely undermine the international community’s goal of reducing carbon emissions, while also harming the ability of developing countries to create jobs, spur economic growth, and advance their own development through technology transfer and innovation mechanisms.

To incentivize innovators, advance technology transfer, and keep the pipeline of ideas flowing, intellectual property protection must be **enhanced and enforced**, not eroded. Strong IP rights are a critical part of the climate change solution, not the problem. India will be best served by welcoming innovators and green tech firms, and working with them to identify, transfer, and employ the best technologies to solve the country’s many challenges.

### Progress Brings Challenges

The Indian economy is growing at an amazing rate. Yet, progress brings problems and challenges, including environmental concerns that affect all sectors of the country and its people. According to the 2007 World Energy Outlook report, India accounted for 4% of the world’s overall carbon emissions in 2005. However, this share is expected to double to 8% by 2030. The need for clean tech innovations that

will supply new forms of clean and renewable energy is real, and these technologies will only be developed and deployed through the protection of IP rights.

India's economic growth will move millions of its citizens out of poverty and vastly improve their welfare, but it will also mean dramatically increased energy consumption for transportation, manufacturing, heating and other applications. If this increase in energy consumption occurs in a dirty and inefficient manner, it will mean even greater health and environmental problems. This report highlights the clean technologies that will make a positive difference to the Indian people and economy, and stresses the importance of establishing and enforcing laws and policies that respect the IP rights that will serve as the foundation for clean tech innovations.

## **The Technologies that will Matter for India**

There are tremendous opportunities for India to make significant advances in clean technology, which will improve the environment and create jobs in the process. The Indian government has implemented policies designed to incentivize solar technology production and investment in the Indian solar industry, which is expected to grow by more than \$10 billion over the next ten years. The same can be said for biofuels, where India's farmers stand to profit from second generation fuels that concentrate on non-food crops, such as jatropha and karanj. Usage of nuclear and wind energy is also on the rise: India has the capacity to produce over 10,500 MW of electricity--or about 3% of all energy production in India--through wind power.

Realizing the potential of hydrogen as a carbon free fuel of the future, the Indian government is fostering public-private partnerships in this area. In the area of thermal power, which constitutes 63% of the total generating capacity in India and accounts for 81% of the total power produced, several private sector groups have pulled together significant new funding for the development of innovative technologies. Hydroelectric is another promising form of alternative energy that has seen its share of technological advancement, and private investment is needed to take advantage of this real energy potential.

**In order to realize the full potential of these energy sources, intellectual property must be protected.** It is the vital component that will help ensure the needed research and development dollars come to India to develop these technologies of the future.

## **Intellectual Property as the Catalyst for Clean Tech and Job Growth**

A growing body of research has shown that a strong global system of intellectual property rights will be the catalyst for developing and deploying the clean technologies the world needs to address its environmental and energy challenges. Nowhere is this more true than in India, where realizing the potential of these green technologies will not only accrue to India's environment and its energy sectors, but the secondary effects on the country's economic growth, job creation and development are enormous.

With IP rights guaranteed, the flow of investment capital and new technologies into India will create millions of jobs, improve economic growth, and help advance the country's technology sector. The deployment of the technologies discussed in this report could lead to the creation of **nearly 10 million new jobs in India over the next 25 years**, while also helping address the country's environmental challenges. History has proven, and research demonstrates, that nations with clear, predictable legal systems that protect the rights of innovators and inventors experience markedly higher levels of growth and development than those who do not. Ensuring such a system is in place in India will be critical if it is to capitalize on the green revolution that is soon coming.