

# GREEN incentives



The carbon trading market may not have sheer scale right now, but it serves as an incentive for developing countries to go green. And, while India may have a lot of ground to cover, it is on the path of 'carbon smart growth' with a high number of carbon credits

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**G**OING GREEN seems to be the mantra on every mind, but for India, it's a fact as well. India ranks an impressive second in the number of certified emission reduction (CER) credits, or carbon credits, second only to China. CERs are part of the Clean Development Mechanism (CDM) initiated by the United Nations Framework Convention on Climate Change (UNFCCC), which allows emission reduction projects in developing countries to earn CER credits, each equivalent to one tonne of carbon dioxide. These CERs can be traded and sold, and used by industrialised countries to meet a part of their emission reduction targets under the Kyoto Protocol. Under the CDM, emission reduction (or emission removal) projects in developing countries can earn certified emission reduction credits.

Countries listed in Annex I (developed) of the UNFCCC can purchase CDM credits. Non-Annex I countries (developing) can host CDM projects. And that's not all. While investors profit from CDM projects by obtaining reductions at costs lower than in their own countries, the gains to the developing country host parties are in the

**NOT ONLY BUSINESSES, BUT GOVERNMENTS TOO ARE NOW LOOKING AT CARBON CREDITS AS AN EXCITING OPPORTUNITY. HIMACHAL PRADESH HAS ALREADY TAKEN A LEAD BY SIGNING A PACT WITH THE WORLD BANK FOR HARNESSING CARBON CREDITS TO GENERATE CARBON REVENUE AMOUNTING TO ₹20 CRORE FOR 20 YEARS**

firm of finance, technology, and sustainable development benefits. Projects are related to energy efficiency, transport and methane recovery, among others.

**India on the green path**  
With Indian firms evidently entering the domain in a big way, carbon trading seems to be the way forward for India too to contribute to a reduction in GDP emission intensity by 20% by the year 2020. The sector is estimated to be over ₹1,000 crore in size. India currently has 15% share in the global CER space, while China has 54%. By 2012, this is expected to rise to 16% with 444 million CERs for India. But given that China has bagged more than a 100% share, India still has a lot of catching up to do.

However, on the flip side, India still has a lot of potential in a sector that is now beginning to be taken really seriously by businesses. Not only businesses, but governments too are looking at carbon credits as an exciting opportunity. Himachal Pradesh has already taken a lead

by signing a pact with the World Bank for harnessing carbon credits to generate carbon revenue amounting to ₹20 crore for 20 years under 'Bio Carbon Projects' in 10 districts of the state.

As Arvind Sharma, director, advisory climate change and sustainability, KPMG, explains, "If you consider the price of one CER to be 12 US euros, it means till date India has already earned over \$1,300 million through carbon credits. The CDM has been a great success to build up the institutional framework for a carbon market in developing countries, including monitoring, reporting and verification and provide a carbon signal in these countries. It has also leveraged considerable investment in developing countries."

The importance of carbon credits for a developing economy, and especially India, is evident from the fact that these in the policy circles, as well as experts on the issue of climate change, are of the view that carbon needs to be "priced" in order to reduce emissions.

On the eve of the inauguration of the recently held Delhi Sustainable Development Summit (SDS) 2012 in New Delhi, The Energy and Resources Institute (TERI) director general and noted climate change expert Dr RK Pachauri said, "Place a price on carbon if you want to reduce emission of carbon dioxide. There are a number of issues to be covered, as it raises institutional issues and issues of equity and ethics."

In India, the oil and gas sector has the highest number of carbon credits, followed by infrastructure, biomass, among others. For instance, construction and power company Lanco earned two lakh CERs in 2010 and sold all of them to European carbon traders and intends for another 1 lakh CERs this year. Same in the case with Jindal Steel and Power, which also had some CERs in the past and is also looking at getting to 24 mw wind power plant in Maharashtra registered for CDM.

With 1,600 projects registered for CERs in India, most of these projects come from the biomass and energy efficiency sectors. India has 522 CDM projects registered with the UNFCCC.

India has two commodity exchanges trading in carbon credits. Multi Commodity Exchange (MCO) engages in futures trading in carbon credits. The National Commodity and Derivatives Exchange (NCDEX) also started futures contract in carbon trading for delivery in 2008.

Reports say 40% of the CDM projects got dropped at the UN level.

**94 million**  
CERs with India, second only to China

**15%**  
India's current share in the global CER space

**1,600**  
Projects registered for CERs in India

## WHAT ARE CARBON CREDITS

- The United Nations' Clean Development Mechanism (CDM) scheme under the Kyoto Protocol awards tradeable carbon credits to projects that reduce developing countries' greenhouse gas emissions, such as wind farms, solar power, etc.

- Each carbon credit, known as a Certified Emission Reduction (CER), represents a tonne of carbon dioxide, or equivalent for other greenhouse gases, which are not emitted.

- Countries listed in Annex I (developed) of the UNFCCC can purchase CDM credits. Non-Annex-I countries (developing) can host CDM projects. While investors profit from CDM projects by obtaining reductions at costs lower than in their own countries, the gains to host parties are in the form of finance, technology, and sustainable development.

- Credits' prices are determined by the market. They are volatile and currently sell for about 10-15 euros

el, 30% at the government level and 10-20% at the validation level itself.

**A sagging global market**  
However, there have been concerns over a sagging carbon credit market over the past few months, given the confusion and lack of clarity over the future of global policies and frameworks for the mitigation of climate change. Despite a last-minute deal worked out at the Durban climate talks in December 2011, CER prices have been lingering around rock bottom.

Indian companies dealing in CERs have been looking at climate change dialogues shaping up with bated breath, as there is complete uncertainty over future commitments, especially by the developed nations, over the future of the Kyoto Protocol. The economic crisis in Europe has also added fuel to fire as Europe is a prominent market for CERs, given the US's own woes and its lack of commitment to the Kyoto Protocol, as it never even got ratified in that country. But hope was still renewed in Durban as the Conference of Parties salvaged the talks and bestowed a new lease of life to CDM.

As per the UNFCCC, the rate of technology transfer from developed to developing nations has declined over the years, affecting CDMs. The decline has been steeper than the overall average in Brazil, China and India. Initially, China had a rate of technology transfer higher than the average for all countries, but the rate is now substantially lower. India has consistently had a rate of technology transfer lower than the average for all countries. The rate of technology transfer for other host countries has been much higher than the overall average and has declined only slightly.

Several factors contribute to these results. First, as more projects of a given type are implemented in a country, the rate of new technology transfer declines, since local technology access has been created through previous projects. Second, the transfer of technologies used by CDM projects appears to have been happening through other channels as well, for example via licensing, foreign direct investment, R&D networks, mergers, acquisitions and the recruitment of foreign experts.

Finally, changes in the mix of registered projects may affect the rate of technology transfer, since each project type has a different frequency of technology transfer.