



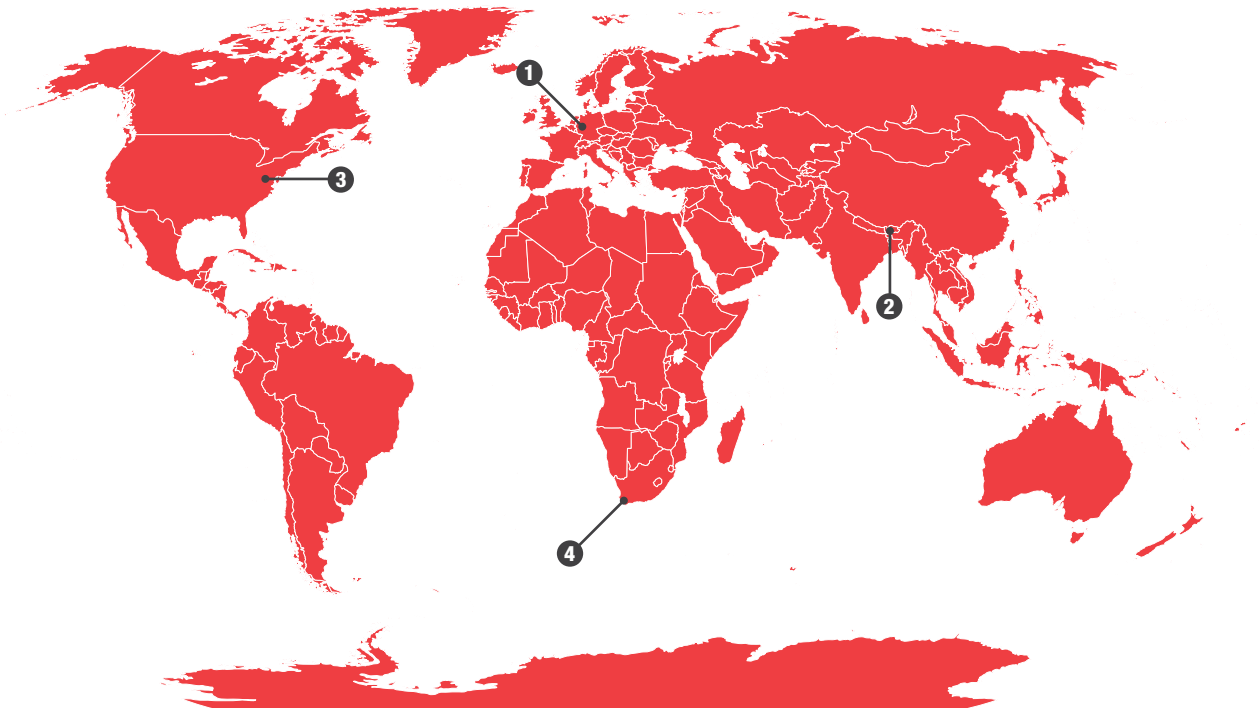
# DEAR READER

**We are happy to report that the last couple of months have been very rewarding. We have seen our prestigious LED project take off with the Kolkata Municipal Corporation (KMC) in April. This was followed in May by the launch of our highly-acclaimed Climate Change and Finance in India: Banking on the low carbon Indian economy report by none other than the Deputy Governor of the Reserve Bank of India, Subir Gokarn.**

There has also been increased global diplomacy in the lead up to **Conference of Parties** in Cancun with **UN negotiations** in Bonn preceded by meetings by the **BASIC** group in Capetown, **SAARC** in Thimpu, Bhutan, as well deliberations by the Major Economies Forum in Washington DC.

Domestically, there have been major moves to set up an **Energy Efficiency Financing Platform** (EEFP) to overcome funding difficulties of projects. In addition, the **UN approved the world's biggest CDM project** which will bring India carbon credits for replacing 400 million inefficient, incandescent light bulbs at a considerably reduced price to the consumer. India also approved its **Water Mission**, one of the key components of the **National Action Plan on Climate Change**.

## INTERNATIONAL



### 1 Bonn

As delegates prepared for UN deliberation in Bonn (end-May to early June), **India through its official submission let it be known that it will not accept any pact that “erodes” the differentiation between rich and developing nations inscribed in Bali Action Plan**, while firmly stating that the issue historic responsibilities of GHG gas emissions was central to the debate. Analyst believe the move is aimed at preserving the core of the Kyoto Protocol and that it guards against moves to get rapidly growing economies to take up emissions cuts.

India has submitted its position on various aspects to ad hoc Working Group on Long Term Co-operative Action (AWG-LCA) of the UN on May 10 that would be in focus for discussions to move forward after the Copenhagen conference last December.

### 2 Thimpu

Heads of states of eight nations met in April for the **16th Summit of the South Asian Association for Regional Cooperation (SAARC)** and reiterated that climate change is central to their concerns. At the summit India hoped the eight-nation bloc would hold the dialogue on the issue in a “meaningful manner” and backed its “fresh” position on global warming to be adopted at the Cancun meet later this year. The SAARC nations had also decided to set up 50 automated weather stations in the region to monitor and measure variations to meet the challenges of climate change. The stations are expected to come up in Bangladesh, Nepal and Bhutan to begin with and the responsibility of opening these would largely be that of India. Afghanistan and Pakistan would be covered in the second phase and Maldives and Sri Lanka in the third phase.

### 3 Washington

At the Major Economies Forum meeting in mid-April, India's **Minister Jairam Ramesh, stressed that the world needs to reduce “the huge trust deficit that prevails in the climate change negotiating community”** for any meaningful progress. He was to initiate discussions on MRV, but could not attend due to flight disruptions. However, in a written speech he said that it was not just developing countries whose climate change actions had to be brought under the ambit of MRV, but the actions of the developed world should be covered as well.

### 4 Cape Town

April also saw the **Environment ministers of the BASIC group meeting to chart out strategies for Cancun**. The stressed that the negotiations should follow a two-pronged approach which: **a)** develops a politically balanced comprehensive outcome in the formal negotiations under the two ad hoc Working Groups, underpinned by the principles of equity and common but differentiated responsibility and respective capabilities; and **b)** uses the 2010 \$10 billion fast-start funding to develop, test and demonstrate practical implementation approaches to both adaptation and mitigation, which can be used to inform the comprehensive package.

# INDIA GHG DATA

**In late May, the Government of India has released the country's emissions data for 2007, the first such official estimate to be presented since 1994. The figures show that India's greenhouse gas (GHG) emissions grew by 58 percent between 1994 and 2007, amounting to 1.73 billion tonnes in 2007, or approximately 4-5% of the world total. This ranks India – Asia's third largest economy, with 17% of the world's population – fifth in aggregate GHG emissions in the world, behind China, USA, EU and Russia.**

Internationally, **India has committed to using per capita emissions as the metric for defining its contribution to global climate change efforts.** Since 1994, the per capita CO<sub>2</sub> emissions in India have risen from 1.2 to 1.5 tons in 2007. This compares to per capita emissions (in 2005) of around 23 tonnes in USA and over 5 tonnes in China.

The study found that **electricity generation** accounted for 37.8% of GHG emissions, up by over 200% since 1994. **Agriculture** accounted for the second largest share of emissions (17.6%), although it has shown a notable decline in its absolute and relative emissions since 1994. The **industrial and transportation sectors** accounted for a large and increased share of India's emissions mix, as the country's GDP continues to grow at a rate over 7%.

## INDIA

### India Smart Grid Forum

Union Minister of Power Sushilkumar Shinde launched the India Smart Grid Forum, the first initiative of its kind in the power sector, in late May. At the launch he said that suddenly **'Smart' and 'Intelligent' are becoming the buzz words for Indian Power Sector because deployment and adoption of latest technologies will help it to leap into a new orbit.** He said that Smart Grid will bring the Communication, IT and Power Technologies in unison and establish a comprehensive power infrastructure. The Minister added that Smart Grid envisages providing choices to each and every customer for deciding the timing and amount of power consumption based upon the price of the power at a particular moment of time. Sam Pitroda, Advisor to the Prime Minister on Public Information Infrastructure and Innovation has been appointed the chair of "India Smart Grid Task Force" which will evolve a future roadmap for development of Smart Grid in India aided by modern and latest technologies in the field. This Task Force will be an Inter-Ministerial Group and will serve as a focal point for activities related to the Smart Grid.

### CFL

The CDM executive board approved one of the biggest carbon credit projects under which **India seeks to replace 400 million inefficient, incandescent light bulbs with energy saving compact fluorescent lamp (CFL) bulbs** at considerably reduced price to the consumer. In the bargain, India is expected to avoid the emission of 40 million tonnes of carbon dioxide.

The Bachat Lamp Yojana (BLY) project, which translates to Savings Program through Lamps, promises to lower the price of CFLs to Rs 15 (about US \$0.33) each, instead of the current market price of Rs 100 (US \$ 2.10). The United Nations approved the project on April 29 as part of the Clean Development Mechanism (CDM), a Kyoto Protocol tool that allows industrialized countries to meet their carbon emission reduction targets by paying for greenhouse gas emission reductions in developing countries. Ajay Mathur, director general of the Bureau of Energy Efficiency (BEE), the Indian agency responsible for the project, said: "Almost half the households in India will immediately benefit from the scheme, and as other areas get electrified, those villages will get added on."

### Funding Energy Efficiency Project

**The Indian Renewable Energy Development Agency Limited (IREDA), Power Finance Corporation, SIDBI, PTC India Ltd and HSBC India have joined the Bureau of Energy Efficiency's proposed financing platform Energy Efficiency Financing Platform (EEFP).** This grouping will

promote instruments such as bankable Detailed Project Reports (DPRs) and other risk mitigation measures to encourage lenders promote energy efficiency projects in commercial buildings, municipalities, SMEs and the agriculture sector. Analysts believe this will present an opportunity worth estimated Rs 74,000-crore (over \$ 16 billion) energy efficiency investment market.

The BEE has already initiated work towards developing guidelines and tools for partial risk guarantee and venture capital funds to augment the work that will facilitate the platform. "EEFP is being positioned as a platform to facilitate learning and experience sharing on removing barriers that have stunted financing to the energy efficiency projects. The platform aims at ensuring availability of finance at reasonable rates for energy efficiency project implementation and its expansion to include other FIs (financial institutions) and public and private sector banks," Dr Ajay Mathur, Director General, BEE, told Business Line newspaper.

### Water Mission

The Prime Minister's Council on Climate Change approved the **National Water Mission focusing on making water conservation a peoples' movement in the country.**

The Council plans to make available all data on water in the public domain to be able to mobilise citizens, local bodies and state governments for focused action on water conservation and augmentation. A Prime Minister's Office (PMO) statement said that the first step in this direction would be to prepare a comprehensive water data base in the public domain and assessing the impact of climate change on water. "Action needs to be focused on vulnerable areas, where ground water is overexploited. It was also decided that water use efficiency should be raised by 20 per cent through the promotion of water-positive and water-neutral technologies," the statement added.

## TCG Showcase

### Kolkata launches LED pilot

The Climate Group and The Kolkata Municipal Corporation (KMC) have unveiled an extensive LED pilot project on 25 April. The trial will see LED streetlights installed in nine arterial roads across Kolkata with 270 lights being tested in total. The project will evaluate the performance of LED luminaries with respect to illuminance, uniformity, color temperature, durability, longevity, and color shift over two to three years.

In launching the pilot, Kolkata is teaming up with ten other cities around the world including New York, London and Hong Kong, which are all participating in the first phase of The Climate Group's LightSavers program. The installation of LEDs, which use substantially less power than conventional light bulbs, is an important step towards making street-lighting more energy efficient, greener and cheaper to run.

Pilot projects internationally have so far shown a reduction of 40-50% in electricity use when LEDs replace high efficiency sodium vapour lamps, and savings of up to 70 per cent when LEDs are used with smart controls. With lighting accounting for around nine per cent of global greenhouse gas emissions with total operating costs of \$19 billion per year, the technology has huge potential to lower emissions and save money. In addition, LEDs have demonstrated a variety of additional co-benefits, including better quality lighting, lower maintenance costs, enhanced public safety, and improved public satisfaction.

## Electric Vehicles

The auto giant Mahindra & Mahindra completed the acquisition of majority stake in India's electric car manufacturer Reva beating off several other suitors in late May. This clearly places the company in the forefront of exciting new developments in the Electric Vehicles space.

Dr Pawan Goenka, President, M&M, Automotive & Farm Equipment Sector, feels that "this is a key strategic acquisition in our march towards sustainable mobility. Mahindra and REVA bring together complementary strengths, helping us synergise Reva's breakthrough expertise in technology with our knowledge of mainstream auto industry and customer preferences," he added in media interviews.

## Climate Change and Finance in India

### Report launch: Climate Change and Finance in India: Banking on the low carbon Indian economy

Following a roundtable discussion for CEOs of financial institutions, convened by The Climate Group in 2009 it was felt that there was a need for engagement with the Indian Banks' Association (IBA) and a larger cross section of banks to raise awareness on climate change. We worked hard with PricewaterhouseCoopers (PWC) and brought out a new report to engage in further dialogue with the banks operating in India to discuss the most effective ways to tackle climate change.

The Climate Group and the IBA agreed to produce a report outlining best practice in the finance industry in India and recommend action that banks can take to accelerate a low carbon economy. Working with PricewaterhouseCoopers, a survey was carried out to gather this information.

### Amongst the report's most important conclusions are:

- A small number of banks are initiating change: There is a small group of banks in India that are leading the sector in tackling climate change and that recognize the commercial advantage this will provide. Energy efficiency is one key focus, with an estimated market worth more than US\$15 billion by 2015.
- Taking advantage of policy: The action being taken by banks is no longer limited to reducing operational emissions – it is focused on taking advantage of domestic and international climate change policy and frameworks, such as the Clean Development Mechanism (CDM) and India's National Action Plan on climate change, to open new markets.

## Member's Corner

With the Electric Vehicle (EVs) space gaining momentum the world over, **Project Better Place** ([www.betterplace.com](http://www.betterplace.com)), a consortium to accelerate the global transition to sustainable transportation is now poised to move beyond the experimentation phase. As an active member The Climate Group believes EVs are one of the crucial transformative technologies that will shape our future mobility. Mass adoption of EVs achieves an increase in the energy efficiency of our transportation system and a move beyond vehicles that burn oil, achieving major emission reductions.

Electric motors are inherently more efficient per unit of energy than vehicles with internal-combustion engines. And shifting to electricity-powered transport creates new opportunities to use excess electricity that is currently wasted at off-peak times. More important, EV batteries serve as distributed storage to enable wind and other carbon-free forms of intermittent renewable energy to be added to electric grids as quickly as possible.

# NATIONAL ACTION PLAN ON CLIMATE CHANGE

**The Indian Government's National Action Plan on Climate Change (NAPCC) seeks to promote sustainable development through the conservation of natural resources and the use of clean technologies. The NAPCC is being implemented through eight strategic missions – including the National Solar Mission and the Green India Mission.**

## Guidelines for National Solar Mission

Following months of public and industry consultations, the government unveiled the guidelines of two schemes under the Jawaharlal Nehru National Solar Mission in mid-June. These cover (i) off-grid (photovoltaic and thermal) and decentralized solar applications and (ii) rooftop as well as other small solar power plants.

Minister Farooq Abdullah stressed that the solar mission was a key priority for the government and hoped that it would fulfill the promise to establish India as a global leader in solar energy; not just in solar power generation but also in manufacturing and generation of solar technology.

The guidelines are meant to tap into diverse potential of solar energy in all applications-rural, industrial as well as urban areas. They seek to address four critical areas: access to rural households for lighting and daily power requirements; reduction in consumption of kerosene and diesel; energy demand management through solar thermal systems and improvement of efficient transmission by feeding power at consumption points.

## Green India Mission

The Green India Mission (GIM), one of the eight missions under the National Action Plan on Climate Change, has been launched. It aims to address climate change by enhancing carbon sinks in sustainably managed forests and other ecosystems. It also will address the issues of protecting vulnerable species and ecosystems and the need to assist forest-dependant local communities in the face of climatic variability. Its goals include the afforestation of six million hectares of degraded forest lands and expanding our forest cover from 23% to 33% of the country's geographic area.

Amongst other things, it focuses on CCS in forests and similar ecosystems. The total cost is estimated to be Rs 44,000 crores (approx GBP 5 billion).

## The objectives of the GIM are three-fold:

- 1. Double the area to be taken up for afforestation /eco-restoration in India in the next ten years, taking the total area to be afforested or eco-restored to 20 million ha.**
- 2. Increase the GHG removals** by India's forests to 6.35% of India's annual total GHG emissions by the year 2020. This would require an increase in above and below ground biomass in ten million ha of forests/ecosystems, resulting in increased carbon sequestration of 43 million tons CO<sub>2</sub>e annually.
- 3. Enhance the resilience of forests/ecosystems** being treated under the Mission through increased efforts at groundwater recharge, stream and spring flows, biodiversity value, provisioning of services (fuel wood, fodder, timber, etc) to help local communities adapt to climatic variability.

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