

Centre for Business Sustainability, IIM Lucknow,  
Prabandh Nagar, Off. Sitapur Road, Lucknow – 226 013  
E-mail: cbs@iiml.ac.in Phone: +91 522 2736987, +91 522 2736989

## Business Sustainability News

### Hybrid Power Plants Can Help Industry Go Green

AFTAU

#### Researchers at Tel Aviv University develop affordable solar option for power plants

Hybrid cars, powered by a mixture of gas and electricity, have become a practical way to "go green" on the roads. Now researchers at **Tel Aviv University (TAU)** are applying the term "hybrid" to power plants as well.

Most power plants, explains **Prof. Avi Kribus** of TAU's School of Mechanical Engineering and its innovative new Renewable Energy Center, create power using fuel. And solar thermal power plants - which use high temperatures and pressure generated by sunlight to produce turbine movement - are currently the industry's environmentally-friendly alternative. But it's an expensive option, especially when it comes to equipment made from expensive metals and the solar high-accuracy concentrator technology used to harvest solar energy.

Now, a new technology Prof. Kribus has developed combines the use of conventional fuel with the lower pressures and temperatures of steam produced by solar power, allowing plants to be hybrid, replacing 25 to 50 percent of their fuel use with green energy. His method, which will be reported in a future issue of the 'Solar Energy Journal', presents a potentially cost-effective and realistic way to integrate solar technology into today's power plants.

The hybrid fuel and solar power system may not be entirely green, says Prof. Kribus, but it does offer a more realistic option for the short and medium term. Electricity from solar thermal power plants currently costs twice as much as electricity from traditional power plants, he notes. If this doesn't change, the technology may never be widely adopted. The researchers hope that a hybrid plant will have a comparable cost to a fuel-based power plant, making the option of replacing a large fraction of fuel with solar energy competitive and viable.



The researchers are starting collaboration with a university in India to develop this method in more detail, and are looking for corporate partnerships that are willing to put hybrid technology into use. It's a stepping stone that will help introduce solar energy into the industry in an accessible and affordable way, Prof. Kribus says.

**Source: American Friends of Tel Aviv University (AFTAU).**

[<Read more>](#)

# Denmark Passes Legislation: 100% Renewable Energy by 2050!

SustainableBusiness.com News

Denmark's Parliament has passed the most ambitious green economy plan in the world: it will generate 35% of its energy from renewable energy by 2020 and 100% by 2050.

Martin Lidegaard, Denmark's Minister for Climate, Energy and Building says, "Denmark will once again be the global leader in the transition to green energy. This will prepare us for a future with increasing prices for oil and coal. Moreover, it will create some of the jobs that we need so desperately, now and in the coming years."

First, cut greenhouse gas (GHG) emissions 34% below 1990 levels by 2020 and reduce energy consumption 12% below 2006 levels.

Second, supply 35% of energy from renewables, with wind providing 50% of that. The rest will come from renewable heat, smart grid, biogas, and other green technologies.

The agreement is important for delivering on the political goal that Denmark's entire energy supply (electricity, heating, industry and transport) is covered by renewable energy in 2050, says the document.

Wind energy, which Denmark has long exploited, currently provides 25% of the country's electricity. Vestas, the world's leading turbine maker, is based there.

While cleantech accounts for about 0.3% of U.S. gross domestic product, it accounts for 3.1% in Denmark, largely because of its strong wind industry.

[<Read more>](#)

## Nestlé removes artificial ingredients from entire confectionery range

The Guardian, Friday 2 March 2012

Nestlé, manufacturer of KitKat, Aero and Smarties, has removed artificial colours, flavours and preservatives from its entire confectionery range. Nestlé Crunch is the last of 79 products to become free of artificial ingredients since the company began to replace more than 80 additives with alternatives six years ago, it said.

The company, which was responding to consumer demand, says it is the first big UK confectioner to remove all artificial products. Concentrates of fruit, vegetables and edible plants such as carrot, hibiscus, radish, safflower and lemon are among ingredients used to provide colour. David Rennie, managing director of Nestlé Confectionery UK, described the move as a significant milestone.

"Nestlé is proud to be the only major confectionery company in the UK to announce it is 100% free of artificial preservatives, flavours or colours across its entire portfolio," said Rennie.

[<Read more>](#)

## Tips:

Shun wastage of power / electricity and thereby reduce consumption, by adopting some very simple measures:

- Switch off equipments from switch board and don't keep them on standby when not in use.
- While setting thermostat of conditioners act sensibly i.e. neither set very high nor very low temperatures.
- Insulate rooms properly and avoid unnecessary opening of doors etc. while conditioners are on.
- Instead opening door of refrigerator now and then decide and take out things at one time.
- Use CFLs and other energy efficient lightings and thereby reduce consumption and save on electricity bills.
- Purchase star rated energy efficient electric appliances.
- While charging mobiles and other chargeable equipments do not keep them plugged unnecessarily after being fully recharged.
- For corporate and institutions having high consumption it is a good

# World Switches off for Earth Hour 2012

To show their support and commitment towards Earth Hour 2012 hundreds of millions people around the world, in thousands of cities at hundreds of landmarks on all seven continents switched off their lights for one hour on March 31, 2012, to display a universal commitment to protect our planet earth.

Earth Hour is organized by the **World Wildlife Fund (WWF)**, one of the world's largest and most respected independent conservation organizations. The event encourages households and businesses to turn off their non-essential lights for one hour to raise awareness about the need to take action on climate change.

This year, Earth Hour completed a record journey across more than 6,525 cities, towns and municipalities in 150 countries and territories.

[<Read more>](#)

**Before**



**After**



**The National Gallery, Trafalgar Square, London, U.K.**

(Photo Credit: Earth Hour 2012 / Flickr)

**Before**



**After**



**Edinburgh Fourth Bridge, Edinburgh, Scotland**

(Photo Credit: Kate Chandler – Maverick Photo Agency / Earth Hour)



**Dolmabahçe Palace, Istanbul, Turkey**

(Photo Credit: Earth Hour)



**Bell Tower of Arnsberg, North Rhine-Westphalia**

(Photo Credit: Sebastian Marcel Witte / Earth Hour / Flickr)



**India Gate, New Delhi, India**

(Photo Credit: Mayank / Earth Hour / Flickr)



**Hong Kong**

(Photo Credit: Earth Hour)

## Some Improved Cookstoves may Emit More Pollution than Traditional Mud Cookstoves

The first real-world, head-to-head comparison of “improved cookstoves” (ICs) and traditional mud stoves has found that some ICs may at times emit more of the worrisome “black carbon”, or soot, particles that are linked to serious health and environmental concerns, than traditional mud stoves or open-cook fires.



Traditional mud stove used in villages in India

The report, which raises concerns about the leading hope as a clean cooking technology in the developing world, appears in ACS’ journal ‘Environmental Science & Technology’.

Abhishek Kar, Hafeez Rehman, Jennifer Burney and colleagues explain that hundreds of millions of people in developing countries in South Asia, Africa and South America are exposed to soot from mud stoves and 3-stone fires used for cooking, heating and light. The particles can be inhaled deeply into the lungs and have been linked to health problems similar to those associated with cigarette smoking. In addition, black soot released into the atmosphere is a major factor in global warming.

Aid agencies and governments have been seeking replacements for traditional cookstoves and fires to remedy those problems, with ICs as one of the leading hopes. Until now, however, there have been little real-world data on the actual performance of ICs - which have features like enhanced air flow and a battery-powered fan to burn wood and other fuel more cleanly.

The researchers measured black carbon emissions from five IC models and traditional mud stoves. They did the test in real homes as part of Project Surya, which quantifies the impacts of cleaner cooking technologies in a village in India.

Forced draft stoves burned cleaner than any other IC. However, black carbon concentrations from all ICs varied significantly, even for the same stove from one day to the next. Surprisingly, some natural draft stoves occasionally emitted more black carbon than the traditional mud cookstoves.

[<Read more>](#)

## India Supports Sustainable Palm Oil

### RSPO

Industry leaders shift towards sustainable solutions of palm oil as India’s palm oil footprint stands at approximately 2 million hectares.

India – The Roundtable on Sustainable Palm Oil (RSPO), a multi-stakeholder organization that aims to develop and implement global standards for sustainable palm oil, reaffirmed that keeping in line with the overall sustainable development goals for 2015, Indian majors and RSPO members have demonstrated affirmative inclination and measures forward.

HUL (Hindustan Unilever) is the one of the main player in the Indian market so far to procure certificates from GreenPalm’s Book & Claim system, aligned with its overall vision of Unilever, a long term committed member of the RSPO.

Commenting on this, Nitin Paranjpe, CEO and Managing Director, HUL, said, "There is a clear linkage between deforestation and climate change; therefore, companies can play an important role by adopting sustainable practices. We are committed to work with like-minded companies and NGOs to influence the sourcing of CSPO (Certified Sustainable Palm Oil) into India."

Further to discussions with stakeholders in India, Cherie Tan, Procurement Operations Director, Sustainable Sourcing, Renewables and Small Holder Development, Unilever, said, "By 2015, Unilever will buy 100% certified sustainable palm oil.

[<Read more>](#)

*The Economic times, Delhi dated April 2, 2012*

## Paris Show Bets on Green & Fair Luxury Market

### Out There

**EMMA CHARLTON  
PARIS**

Luxury and sustainable development may sound like polar opposites, but green pioneers gathered at a Paris show at the weekend were betting on a cleaner, fairer future for the industry.

Created in 2010, the four-day Paris event, dubbed "1.618 Sustainable Luxury", brought together some 40 firms, inventors and foundations, that aim to reconcile luxury with ethics and environmental good practice. One of these was Bruno Pieters, a Belgian fashion designer who in January launched Honest by, billed as the world's first wholly transparent company.

Color-coded as organic, vegan, recycled or European, each garment on its website comes with reams of data on the origin of its materials, right down to the buttons, on its manufacture, cost breakdown and carbon footprint.

"Just because something is expensive doesn't mean it is good," explained the 36-year-old Pieters. "I wanted to create a brand that I would buy -- to be able to shop in a conscious way with 100-percent guarantees." With clothes -- his own creations or sourced from partner firms -- priced at hundreds of euros apiece, Pieters rejects the label "eco-fashion" as unsuited to his target -- the high end of the market. "You don't buy a product because it's green, you buy it because you love it," he told AFP.

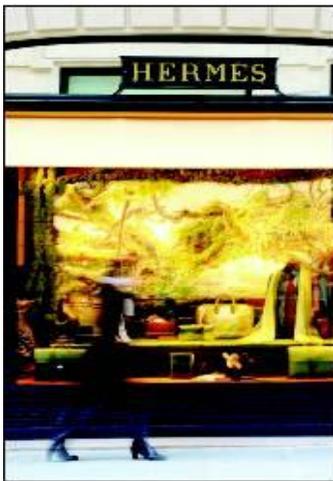
From designer fashion to jewellery, design or tourism, luxury firms are under rising scrutiny from pressure groups demanding traceability on raw materials, and transparency on manufacturing conditions and environmental impact. "Sustainability is about people, planet and profit," innovation consultant Francois Prevost told a debate at the show. "The luxury world is very good at one of the three pillars -- profit -- but needs more work on the other two!"

Just how much do luxury consumers care how their handbags, wristwatches or yachts are made? In the West, at least, the answer is rather a lot, according to a survey of French luxury consumers commissioned HEC business school. It discovered a yawning gap between what consumers expect of luxury brands -- and how they judge their performance.

Seventy percent said the sector should be showing the way on sustainability, given the prices it commands, according to the survey of 966 luxury consumers carried out by the pollster BVA in February.

Yet 52% thought the luxury industry was lagging in terms of sustainability, and 44% that it was wasteful. China could follow West's return to 'real luxury.'

For Anne Ponsard-Delliere, head of international marketing at Richemont, the Swiss luxury group behind such brands as Chloe and Cartier, in China



**French luxury goods firm Hermes, known for handbags & silk scarves, had a record year in 2011 with a 40.9% jump in net profit – AFP**

and Brazil the ferocious appetite for luxury goods trumps concerns over how they are made. But she believes China's rising green awareness, and its appetite for "authenticity", could see it follow Europe and the United States away from prestige-driven mass luxury, and back to a "real luxury" built on precious materials and exquisite craft.

For the fair's organiser Barbara Coignet, many luxury consumers worldwide need to be sold on sustainable luxury, which "has to prove that it is still exciting, glamorous and fun." "There no point telling someone to stop driving a polluting sports car if you haven't got a desirable alternative to offer" -- like the BMW concept sports car on display at the fair.

Parts of the luxury sector face real hurdles to sustainability, Coignet said, like jewellery which is limited by the small number of ethically-run mines, the hotel business with water management, or fashion with pollution from dyes. Tourism faces the biggest challenge of all since "the reality is there is no non-polluting alternative to air travel," she said.

Richemont and the French giants PPR or LVMH, the world's top three luxury groups, have all set wide-ranging sustainability targets, be it on sourcing, packaging, transport, or energy use.

AFP

*The Economic Times, Delhi dated April 13, 2012*

## Clean Energy Investments Jump to \$10.2 b in 2011

**New Delhi** Becoming the second fastest growing clean energy market among the G-20 nations, India attracted investments worth \$10.2 billion in this segment last year. The clean energy investment in India last year jumped 54% to \$10.2 billion, according a report by US-based non-profit group Pew Charitable Trusts. "India's clean energy sector was the second-fastest growing (market) in the G-20 in 2011..." said the report titled 'Who's Winning the Clean Energy Race?' "The wind sector in India led the way, attracting \$4.6 billion and spurring deployment of 2.8 GW during the year, a 38% increase in wind generating capacity," he added.

*The Economic Times, Delhi dated April 17, 2012*

## Breakthrough for Renewable Energy

Researchers from the Department of Chemistry at the Royal Institute of Technology (KTH) in Stockholm, Sweden, have managed to construct a molecular catalyser that can oxidise water to oxygen very rapidly. In fact, these KTH scientists are the first to reach speeds similar to those is nature's own photosynthesis, which is also a world record. The research findings play a critical role for the future use of solar energy and other renewable energy sources, which is of great interest as gasoline prices are setting new records. Researchers all over the world, including the US, Japan, and the EU, have been focusing for more than 30 years on refining an artificial form of photosynthesis. Speed has been the bottleneck when it comes to creating perfect artificial photosynthesis, says Licheng Sun, professor of organic chemistry at KTH. But now, together with research colleagues, he has imitated natural photosynthesis and thereby succeeded in creating a molecular catalyser that is record fast. The speed with which natural photosynthesis does its job is given as 100 to 400 turnovers per seconds. The KTH have reached over 300 turnovers per seconds with their artificial photosynthesis.

# HUL Bets on Innovations to Reach Sustainable Goal

Unilever can achieve some of its audacious sustainability targets only if it relies more on product innovation & research, and perhaps less on the mercurial ways of consumers



**NAREN KA RUNA KARA**  
NEW DELHI

The dry shampoo that Unilever, the €46 billion FMCG giant, is currently introducing in various markets is a significant step in the company's commitment to halve the water associated with the consumer use of its products by 2020. It also drives home another critical aspect in its sustainability agenda: that it can achieve some of its audacious targets only if it relies more on product innovation and research, and perhaps less on the mercurial ways of unpredictable consumers.

So, giving consumers a dry shampoo that doesn't need water is a far easier way of reducing water consumption in the bathroom than pleading with them to use less water. The dry shampoo is spray on, absorbs oil from hair, and also lends volume.

Nitin Paranjpe, CEO and MD of Hindustan Unilever, unveiling the first year's progress on the Unilever sustainable living plan (USLP) on Tuesday, as part of a simultaneous global release, admits reducing greenhouse gases, water and waste associated with the consumer use of its products has been rather challenging. It's a matter of concern and may jeopardise the ambitious sustainability goals the company has set for itself (see table).

Unilever has not only committed to reduce emissions from its manufacturing plants, but has taken upon itself the responsibility of the entire value chain, from suppliers, distributors to its consumers. Around 68% of the company's carbon emission is directly related to consumer use, while the manufacturing process contributes only 3%.

The company has progressed well in what it controls directly: sustainable sourcing, improving livelihoods of farmers, converting used plastic sachets waste to fuel, through a 'breakthrough' pyrolysis process.

Its sourcing record, barring sunflower oil, is commendable. "We may meet 100% sustainable sourcing of palm oil by 2012, three years before our 2015 commitment," Paranjpe told ET. Today, it's around 64%. Unilever is now working on a traceability plan to make the process more robust and credible. Under the circumstances, the success of the USLP hinges on the responsible conduct of its consumers, which is a daunting proposition. Therefore, the focus on the innovation bit of the strategy where consumers turn responsible by default. For

example, the Comfort One Rinse introduced in Vietnam that reduces the use of water from three buckets to one; a leave-on hair conditioner that doesn't need to be washed away; detergents that clean at room temperatures, doing away with the need for hot water at 70 degree Celsius in washing machines.

Unilever has great expectations from the dry shampoo. "It's an incredible consumer proposition," says Paranjpe. "A large number of women cannot wash hair every day because it's not convenient." He, however, refuses to discuss pricing or its launch in India.

"We need more, we need innovations," he asserts. "The entire issue of consumers is not only about behaviour change; much of the challenges can be addressed through new products." This is in line with the proposition made recently by John Elkington, the sustainability guru, that good choices by consumers ought to be default choices. Over two billion consumers use a Unilever product every day.

But there is only so much an in-house R&D infrastructure can do in terms of product innovation. Moreover, the progress would be slow if only in-house expertise was tapped.

Unilever, therefore, last month, unveiled its online open innovation initiative. Open innovation involves negotiating and integrating externally developed intellectual property into a business, and opening company R&D labs to outside individuals or institutions for collaborative work.

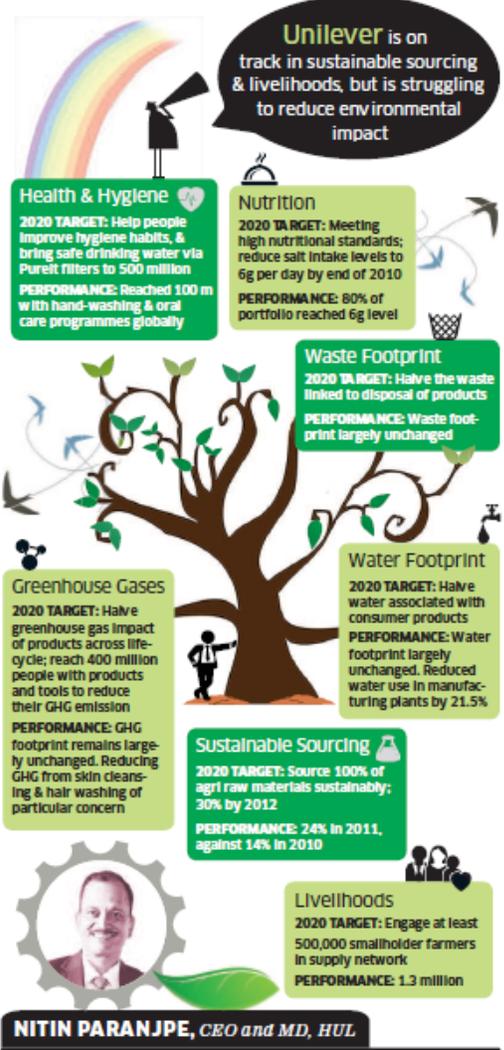
"The world is full of brilliant people with brilliant ideas, and we want to tap into that," says Roger Leech, Unilever's open innovation scouting director. Within a couple of weeks of launch, the platform has received over a 100 credible submissions from across the globe, and surprisingly about 5% are from its staff.

Unilever, as in the USLP, has put out a list of clear 'wants', all focused on sustainability—fighting viruses, reduction of salt in food products, preserving food naturally, storing renewable energy, sustainable showering, and of course, ways and means of altering consumer behaviour.

This new-found emphasis on product innovation doesn't mean Unilever is giving up on influencing consumer behaviour, which revolves around how a message is communicated to them. HUL has garnered immense learnings from its years of experience in conducting the Lifebuoy hand-washing programme.

For example, consumers have to be exposed at least three times in a period through television, movies, mobile vans, or whatever. It has to be then followed with a one-

## Sustainable Living Plan First year progress report



**NITIN PARANJPE, CEO and MD, HUL**

JAYEETA

on-one interaction where the efficacy of hand-washing is demonstrated. Only then is change seen. It's bearing fruit. The Madhya Pradesh government, impressed by the fact that the incidence of diarrhoea has dipped by 25% in a recent study, now wants to implement this across five districts in 5,000 schools. "It's cheaper than other government interventions," says Paranjpe. What the company is finding ex-

tremely challenging is weaning consumers from high-salt food products. Unilever has been gradually reducing salt levels in its products without changing its taste, but this approach has limits. The 2011 USLP progress report highlights it: "The gradual reduction (of salt) over time is only really effective if the whole industry moves together. If it does not, people will desert our products for more highly salted ones."

## Forthcoming Events

### **2012 International Conference on Environment, Energy and Biotechnology (ICEEB 2012)**

**APCBEEES** is organizing an international conference titled “2012 International Conference on Environment, Energy and Biotechnology” (ICEEB 2012) on 5<sup>th</sup> and 6<sup>th</sup> May, 2012. The conference will be held at Concorde Inn in **Kuala Lumpur, Malaysia**.

The conference shall be Co-chaired by Dr. Saji Baby, Environmental Manager (Research and Consultation) & Principal Scientist, GEO Environmental Consultation, Kuwait and Dr. Bal Raj Deshwal, Matu Ram Institute of Engineering & Management, Rohtak, India. It is expected to have speakers, participants and delegates from many other countries including Kuwait, India, Mexico, Taiwan, Egypt, Dubai, Thailand, Iran.

[<Read more>](#)

### **Sustainable City 2012**

7th International Conference on Urban Regeneration and Sustainability is being organized by Wessex Institute of Technology, Southampton (U.K.). The conference shall take place during May 7 – 9, 2012. This conference aims to address the many inter-related aspects of the urban environment, from transport and mobility to social exclusion and crime prevention also environmental challenges arising from the consumption of natural resources and the consequent generation of waste and pollution, contributing to the development of social and economic imbalances.

The Sustainable City 2012 will take place at the Hotel Excelsior La Fonte in Portonovo, 10km from central **Ancona (Italy)**.

[<Read more>](#)

### **1st National Symposium and Workshop on Environmental Science**

Institute of Environmental Science & Meteorology University of the Philippines is organizing First National symposium and workshop on Environmental Science on 7<sup>th</sup> and 8<sup>th</sup> May, 2012. This symposium and workshop is to engage experts and stakeholders from the scientific community, government, industry and other non-government agencies in a technical exchange of knowledge about the current and future environmental science tools that are essential for understanding the changing Philippine environment. A National Agenda on environmental science will be drafted from the output of the workshop sessions.

[<Read more>](#)

### **Workshop CASAMANSUN EnR 2012**

The objective of this workshop is the diffusion of technologies, scientific knowledge and skills those could enable and launch a sustainable development for our society in perfect adequacy to the expectations and needs of local populations. This workshop is opened to all industrial partners, associations and people who want to shape a better society according to sustainable development criteria.

The workshop will be held from 10<sup>th</sup> to 12<sup>th</sup> of May, 2012 in Ziguinchor, Sénégal, West Africa.

[<Read more>](#)

## Sustainable Brands Conference

Sustainable Brands is an international community that is organizing this conference. The sponsors of the event are big names in the field of industry and business like BASF, SAATCHI & SAATCHI, citizen, Hewlett Packard, Toshiba. The conference will take place during June 4 - 7, 2012 in SAN DIEGO, CA. Over 1000 attendees from diverse organizations – both large multi-national corporations and start-ups, investors and NGO's, design, strategy and communications agencies and more will attend to engage with each other in learning and action around forward-thinking ideas that will lead to a flourishing future.

The speakers so far registered come from corporate like Deloitte, Johnson & Johnson, 3M, Unilever, Hewlett-Packard Company, BASF, Ford Motor Company etc and also sustainability practitioners from organizations of repute are expected to give deliberations.

[<Read more>](#)

## Bristol's Big Green Week 2012

The BIG Green Week festival programme features one hundred events over nine days in Bristol, from Saturday 9<sup>th</sup> to Sunday 17<sup>th</sup> June. The organizers claim "BIG Green Week is shaping up to be a must attend festival for anyone with any interest in the environment. It already has a fantastic line up of world-class guest speakers and a wide-ranging programme of events in place, which is constantly expanding."

A diverse and exciting range of over 40 other BIG Green Week events are taking place right across the different communities of Bristol throughout the festival, organised by the cities' huge number of environmental community groups, projects and businesses.

The nine day long festival shall have exhibitions, talks, speeches, fun, debates, conferences, food etc. To have detailed programme brochure please click below.

[<Programme Brochure pdf>](#)

[<Read more>](#)

## IMS Sustainable Business Conference 2012

IMS Sustainable Business Conference 2012 is part of nine day long Bristol's Big Green Week - the largest national sustainability festival of its kind. This conference is scheduled to take place on 14<sup>th</sup> June, 2012. The conference is being organized by IMS Consulting at the Mercure Hotel, in Bristol city of United Kingdom. The Conference is a platform for bringing together influential business people and internationally renowned speakers, such as: Tim Smit KBE Chief Executive and co-founder Eden Project, Pooran Desai OBE Director, One Planet Communities, Juliet Davenport CEO and Founder Good Energy, Shaun McCarthy Chair, Commission for a Sustainable London 2012.

[< Read more>](#)

## Academic Programme in Sustainability

### Emory University: Launches Certificate course in Sustainability

Emory University in Atlanta, Georgia, USA has launched three courses in sustainability area viz.

- Organizational Change for Sustainability
- Technical Information for Innovations in Sustainability
- Community Involvement and Education for a More Sustainable Future

The first course shall start from May 3, 2012 and conclude on June 28, 2012. The dates for other two courses are yet to be announced. The registration of students is open for new as well as old students. Emory Alumni, Emory Employee, Emory Student, Military personnel, senior persons i.e. above 62 years of age are eligible for a discount in course fee.

[<Read more>](#)

*Edited by: Prof. Sushil Kumar  
Centre for Business Sustainability, IIM Lucknow*