Sustainability Forum @ IIML

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Business Sustainability News

Sustainable business comes to the White House

By **Marc Gunther**

Corporate executives lobby Washington every day. Not many come to plead for higher taxes and stronger regulation.

This week, though, a group called the American Sustainable Business Council (ASBC) convened in our nation's capital to issue "A Business Call for a New Economy" that's built around "triple bottom line" principles, shared prosperity and environmental stewardship. The event was unofficially closed to the media, but ASBC invited GreenBiz.com as an exclusive media observer.

The ASBC members -- about 125 showed up for a couple of days of meetings -- are supporting, among other things, higher taxes on big companies, closing overseas tax havens, tax credits for renewable energy, EPA regulation of greenhouse gas emissions and stricter regulation of chemicals.

In the Business Call for a New Economy [PDF, download], the group says it wants to preserve the efficiency and dynamism of markets, while curbing what it calls capitalism's "destructive tendencies" toward "overuse of resources" and "extremes of wealth and poverty."

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GM, US companies lead way on corporate carbon offsets

By **Bruce Kennedy**

Recent news that corporations are largely responsible for elevating last year's carbon offset market to a three-year high appears to reverse a long-standing trend.

Leading the way in these voluntarily purchases are US companies such as General Motors, which could be part of a growing momentum that paves the way for others to follow. This upward trend among US companies appears to be what's behind the report's revelation that the US was the world's largest single-country purchaser of voluntary offsets in 2011.

Issued by the Forest Trends' Ecosystem Marketplace initiative and Bloomberg New Energy Finance, the "State of the Voluntary Carbon Markets 2012" report revealed that the corporate sector purchased close to 65 percent of the more than $576 million in offset transactions in 2011 – a greater share of purchases than any other sector.

And despite the lack of U.S. climate regulations, "the trend has been up on voluntary market action, and shows no signs of abating," said Todd Jones, the climate manager with the Center for Resource Solutions' green-e program which certifies retail carbon offset programs.

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BusinessClimate: Bringing corporate sustainability to the mainstream

By **Chrissy Coughlin**

Nature of Business radio, created and hosted by Chrissy Coughlin, is a weekly show on business and environment.

This week's conversation with Andrew McKeon, founder and principal of Business climate touched upon the evolution of corporate sustainability and how environmental strategy must be at the core of business strategy.

In particular we discussed how the arc of sustainability is moving from the realm of corporate social responsibility or CSR to competitiveness to national security, but how a transformation is needed in the practices of management to bring this into the mainstream.

The good news is that although this transformation actually calls for new thinking about. management, this new thinking is actually based on old systems thinking as you will hear throughout the podcast.

As a trained engineer, Andrew is programmed to see the big picture, identify connections, and bring project parts together. Informed in great part by the work of W. Edwards Deming, he sees continuous improvement of business (such as reducing waste and customer satisfaction) as a result of looking through this systems lens.

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How cows, chemicals and Walmart benefit from sustainability metrics

By **Padma Nagappan**

Last week, we looked in to Walmart's use of the metrics underlying the Sustainability Index to drive changes in its supply chain. Presented at a panel the Sustainable Brands conference in San Diego, Walmart's Jeff Rice was just one of several corporate leaders to share how they plan to use The Sustainability Consortium's measurement systems to boost efficiency throughout their supply chains.

In addition to Rice, Walmart's director of sustainability; also participating in the panel were Cristian Barcan, director of sustainability with the nutrition and health division at BASF; James Reagan, senior vice president of research, education and innovation at the National Cattleman's Beef Association; Mike Faupel, director of operations at TSC; and Charlene Wall-Warren, sustainability leader for BASF North America who served as moderator.

The TSC is ramping up its development of metrics to help in the process: This year, the group will complete metrics for 100 product categories that include apparel, food, toys, personal care, automotive, electronics and paper. Of these, it's made the most progress in food and beverage reporting tools.

And over the next couple years, it will roll out metric tools for several hundred categories of products. Walmart is working with the TSC to go beyond that and develop tools for up to 1,500 categories of products that it will eventually use internally.

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Coke, Ford join forces to juice supply of plant-based plastic

By **Amy Westervelt**

Three words explain why the 100 percent bioplastic bottle isn't ubiquitous yet: Supply, supply, supply.

Coca-Cola, Pepsi and several other Fortune 500 companies are working to address that. The beverage makers earlier this month announced they're teaming up with Nike, Ford, Procter & Gamble and Heinz to accelerate the development of 100-percent plant-based PET via a new initiative called the PET Plant Technology Collaborative.

"There's limited supply and we're all competing for it," said Michael Washburn, director of sustainability for Nestle Waters North America. "Not just in the beverage industry, but also the carpet industry, technology companies like HP, food companies, and so on, and because of that we have to pay a premium for rPET. That dynamic needs to change for us to increase our use of it."

It's not just plant-based PET that's in short supply, but recycled PET as well, said Washburn, who noted the limited supply of recycled PET (rPET) is keeping recycled content low in U.S. beverage bottles.

And with the beverage companies' ambitious goals -- Coke and Pepsi are each aiming to convert as many of their bottles to plant-based plastics in the next five years as possible -- collaboration, rather than cutthroat competition, made sense.

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Can electric vehicles jumpstart Saab?

By **SustainableBusiness.com News**

In an interesting development, bankrupt automaker Saab is being sold to a group that will convert the brand into an electric car manufacturer, Bloomberg reports.

The new manufacturer, National Electric Vehicle Sweden, plans to offer the first vehicle for sale in China in 2013-2014, although manufacturing will be in Sweden at Saab's plant.

"We're striving to be a world-leading company for electric cars," says Mattias Bergman of National Electric Vehicle Sweden. "It's not only about China being a big market for electric cars, it's also about China having the ability to make the investments required and build the needed infrastructure."

Who bought Saab? Hong Kong-based National Modern Energy Holdings Ltd., which builds high efficiency biomass plants in China, and Sun Investment, a Japanese investment firm that focuses on high tech projects with environmental solutions. About six other firms made offers.

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The cost of disaster: Putting a price tag on climate change

By Ann Goodman

In this era of apparently mounting natural disasters worldwide—many, such as floods from hurricanes, likely related to changing weather patterns linked to climate change—one might ask: How much do such disasters cost? How are the costs calculated?

In fact, someone has asked—analyzing not just the cost of the event itself, but the larger economic costs linked to build-up and often long recovery.

"The public focus [of a disaster] is on the moment, the trauma of the extreme event," says John Mutter, Professor of Earth and Environmental Sciences, as well as International Public Affairs, at Columbia University's Earth Institute. "The economic loss focuses on that moment, too—what was actually lost at the time."

However, that loss to the economy—the chain of production, consumption and everything that goes into it—doesn't happen in a moment, but actually begins after, he says, "with losses that go beyond the value of the built structures trashed at the time, beyond the capital asset loss, to a deeper economic loss that happens over time."

Three-pronged process

The theory of calculating disaster costs is just developing, as natural disasters become more prevalent; business can incorporate principles from a three-pronged process into new strategic thinking on what disaster is and how it might affect particular sectors or individual companies.

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Bank of America's $50B green initiative: Mighty or misplaced?

By Heather Clancy

Bank of America recently announced a 10-year goal to put $50 billion towards renewable energy projects, energy efficiency and alternative transportation – a move the bank says will help grow the economy and its own business as well. But critics say the bank could make a greater impact by cutting off the billions it invests in coal each year.

Scheduled to become effective on Jan. 1, 2013, the initiative will be implemented through lending, equipment financing, capital market activities, carbon finance and investment solutions – services which the bank says are needed by its customers.

"Many of our clients are transitioning to more environmentally conscious business practices, products and services," said Cathy Bessant, Global Technology and Operations executive and chair of Bank of America's Environmental Council. "We can continue to grow our business, promote a greener global economy and address climate change by helping our clients meet their own sustainability objectives."

But vocal critic Rainforest Action Network says that though the initiative is a step in the right direction, the bank's approach is missing the point.

"The bottom line is we cannot reduce the emissions necessary to stem climate change with renewable energy funding alone," RAN's director of energy and finance Amanda Starbuck said in a statement.

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Sustainable development flourishing in Wales's green economy

Wales is fast becoming Europe's testbed for sustainable development and what the UN would call "the green economy".

Not only does it have three of Europe's pioneering solar cell makers – Sharps in Wrexham, G24 in Cardiff and Dyesol at Shotton – it aims to be totally self-sufficient in renewable energy, it's the only country in the UK to introduce statutory recycling and waste targets, it has put a tax on plastic bags, it has

Plas Newydd on Anglesey, used to use 1,500 litres of fuel oil a day for heating – what most houses use in a year. Photograph: The National Trust/Alamy

the impressive Centre for Alternative Technology at Machynlleth turning out a new generation of clean energy engineers, and its local authorities are investing heavily in renewables.

Moreover, it is one only three nations in the world to have sustainable development enshrined in its constitution, and later this year, it hopes to underline its growing divergence from Westminster by passing one of the world's first laws to force all government spending to take into account environment and social needs.

The country of three million people now stands a chance of picking up another accolade when the National Trust in Wales comes under consideration for a coveted Ashden award for reducing energy use by 46% in just two years.

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How sustainability can give your company a competitive edge

By **Network for Business Sustainability**

Pressure from customers, shareholders, governments and the general public pushes firms to improve their environmental performance -- but what about a firm's competitors? What role does competition between companies play in influencing environmental practices? Christian Hofer (University of Arkansas), David E. Cantor (Iowa State University) and Jing Dai (Iowa State University) asked the same questions. They looked at the two largest firms in 48 different manufacturing industries from 2006 to 2009 and found that competition within an industry does affect environmental performance.

Specifically, the trio found that businesses are likely to undertake new environmental practices if their rivals had improved their own environmental performance in the previous year. The reason for this is straightforward: environmental performance is a valuable source of competitive advantage and companies don't want to fall behind.

The study also found that smaller companies respond faster to their competitors' environmental moves, possibly because they are less constrained by bureaucracy. Similarly, more profitable companies are more responsive to competitors' environmental strategies, likely because they have the necessary financial slack.

Finally, and perhaps most importantly, the study found that industry leaders generally show worse environmental performance than their nearest rival. This may be because leaders become complacent and their rivals actively leverage environmental performance to narrow the competitive gap.

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3 ways Walmart and its suppliers are reducing packaging

By **Eric Louie**

When you open a new cereal box, before you tear into the bag, you're likely to see some empty space at the top. Cereal settles during shipping, with smaller pieces filling all the space at the bottom and leaving that extra space on top. If you've ever tried to squeeze more cereal into something – a bowl, a bag or a storage container – and you've done it by shaking the container, you've taken advantage of this same phenomenon.

Earlier this year, General Mills (NYSE: GIS) found a way to use it to reduce the amount of packaging it uses for its bulk boxes of Cheerios. Thanks to a proprietary technology that had been under development for five years, the cereal now settles on the production line instead of during shipping, said Liz Mahler, General Mills' marketing manager for the product. As a result, 10 percent more cereal fits into the product more cereal fits into the boxes, reducing the packaging per volume and the related shipping costs and emissions.

The new cereal-box design was one of many packaging innovations showcased at the Walmart Sam's Club Sustainable Packaging Exposition in May. Other examples include wine bottles and shoe boxes that were redesigned by Walmart (NYSE: WMT).

In the case of the Cheerios, the new boxes hit the shelves at Sam's Club, Costco and BJ's in February. Even though they contain 10 percent more cereal, the boxes are actually smaller, too: The new bulk packages consume roughly 4 percent fewer materials, resulting in an estimated reduction of 200,000 pounds of paperboard a year. That's the equivalent of more than 1,000 trees. Between the smaller boxes and the higher volume of cereal, the boxes are now 92 percent full instead of 75 percent full, said Ron Sasine, Walmart's senior director for private label packaging.

Fitting more cereal into less space means fewer trucks are needed to transport the same volume of Cheerios. General Mills estimates it will need 10 percent less trucking for these boxes, which will save 25,000 gallons of fuel and reduce its carbon footprint by 220 metric tons annually. The company accomplished the smaller packaging – and more cereal per package – in spite of trading a single big box for a package of two smaller, connected boxes that can be split apart.

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Inside Mars' science-based quest for sustainability

By **Marc Gunther**

When it comes to corporate sustainability, Marsmatters. Mars has an impact, first of all, because of the company's heft. With $30 billion in revenues and more than 65,000 workers around the world, Mars is the world's second largest chocolate company (behind Kraft, which owns Cadbury). It's also the world's largest branded rice company (Uncle Ben's), one of the world's largest pet food companies (Pedigree, Whiskas) and the world's largest chewing gum company (Wrigley, Orbit, Doublemint).

The company stands out because unlike most big companies, its sustainability goals are guided by science. By 2040, Mars says, its offices and factories will use no fossil fuels and emit no greenhouse gases -- because scientists believe that greenhouse gas emissions need to be reduced by 80 percent by 2050, and getting to zero in the company's offices and factories will be needed for Mars to do its share. In agriculture, where it has the greatest power to influence change, the company also pledged to buy 100 percent of its cocoa, coffee, tea, fish and palm oil from sources certified as sustainable by third parties. Owned by the Mars family, which began making candy in 1911, it's well known for its private nature. There's no sign on the unassuming offices at its headquarters, for example. And reporters aren't often invited inside.

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St. Louis Cardinals hit an efficiency grand slam

By **Alice Henly**

The 2011 World Champion St. Louis Cardinals are accustomed to winning. With a total of 11 World Series titles under their belt -- second only to the Yankees -- it's no surprise that they set the bar high for all aspects of their game, even off the field.

In fact, with the help of NRDC's Sports Greening Project, after several years of work on resource efficiency in the areas of energy, water and waste, this year the Cardinals are proud to announce huge savings across the board.

With a 30 percent recycling rate, 20 percent reduction in overall energy use (and base power demand) and 10 percent cut in water use across all operations, the Cardinals are putting up some impressive numbers -- and you might say they've earned a "Triple Crown" for efficiency and environmental stewardship amongst clubs in the Central division.

In addition, the team recently unveiled a new 110-panel solar array atop a ticket building and concession area at one major entrance to the ballpark. The array will produce more than 30,000 kWh of energy annually, enough to power the stadium scoreboards, or all of the ballpark's retail stores, or cook about 4 million hot dogs!

One key to the Cardinals' energy successes to date is that they commissioned an "investment-grade" energy audit in 2011 to identify potential energy efficiency measures for the ballpark. They found close to 200 cost-effective energy improvements, despite the fact that Busch Stadium was just built in 2006.

The Cardinals' operations team and Microgrid Energy, Busch Stadium's energy manager, have been working hard to make the ballpark a high-performance building. Based on the many energy saving opportunities they identified in their audit, they devised and are systematically implementing a comprehensive energy efficiency strategy, including no or low cost controls systems optimization and potential capital upgrades.

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Tips:

Falling Indian rupee has further caused hike in fossil fuel prices. Above all, the reserves of petroleum are not unlimited. So conserving this energy reserve is very important. Fuel efficiency depends on manner in which vehicle is driven and how vehicle is maintained. Here are some useful tips regarding these, which will help in conserving this scarce resource as well as reduce your fuel bills.

1. While driving always accelerate smoothly and slowly. Never press accelerator too hard. Sudden acceleration and abrupt braking consume more fuel.
2. Shift to highest gear as soon as you reach speed of 50 km/ hour. Adjust gears according to speed and conditions. Driving in a lower gear than required, cause fuel wastage. Similarly driving in a higher gear while driving in hills puts extra load on engine and results in higher fuel consumption.
3. While approaching traffic signal do not accelerate to reach, this will burn more fuel and if one has to wait for more than 45 seconds on a traffic signal he should switch off ignition.
4. Ensure tyres inflated to right pressure as recommended by the manufacturer, lower pressure will not only cause higher fuel consumption but also makes the steering and the brake unstable. Check air pressure of tyres regularly.
5. Check air filter and replace as and when required. Dirty and clogged filter affect performance adversely. Change air filter with every oil change i.e. about 2500 kms and 5,000 kms for diesel and petrol cars respectively.
6. Keep vehicle parked in the shade, so that the car does not warm much and thereby result in lower load on Air conditioner which will save fuel. Also unplug/ switch off all the accessories that suck power like stereo, mobile charger, Air conditioner.

Ultracapacitors: The next big thing in energy storage?

By **Chrissy Coughlin**

Nature of Business radio, created and hosted by Chrissy Coughlin, is a weekly show on business and environment.

We've all heard of the battery, of course -- but how many of us have heard of the ultracapacitor? I'm guessing that's a pretty small slice of the audience, so I'm pleased to say that that's about to change when you listen to my conversation with Mark McGough, CEO, of Oneonta, N.Y.-basedIoxus, the world's top-tier producer of ultracapacitor-based energy storage systems.

A veteran of the alternative energy space, Mark has been at the helm at Ioxus since 2010. He talked ultracapacitor functionality, applications, and why ultracapacitors are being touted as the next big thing in energy storage. Even Elon Musk of Tesla and SpaceX fame has indicated that ultracapacitors will be the future of the electric car. Who knew?

So what exactly is an ultracapacitor? To say that it is a battery on steroids is oversimplifying things, but they do, indeed, more or less look like a battery, are more powerful than a battery, and can be charged and discharged up to a million times and in just a matter of seconds -- obvious advantages over battery technology. They basically store and release energy quickly, which in the world of renewable energy is rapidly changing the energy storage landscape.

When paired with a battery (or by itself) they are the power on board allowing manufacturing equipment, buses, passenger cars, wind turbines to achieve performance that they could never have achieved with battery technology alone. On hybrid buses, for instance, ultracapacitors are pivotal in making them cleaner and more fuel-efficient by providing propulsion. On wind turbines they provide the adjustment of the blades in different wind conditions allowing for more efficient energy harvesting.

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Why are institutional investors ignoring climate change risk?

By **Robert Kropp**

A recent analysis of 2011 proxy voting patterns indicates that mutual funds -- with almost $12 trillion in assets under management and 35 percent of which is invested domestically -- are failing to acknowledge the financial relevance of climate change.

The three largest mutual fund companies -- American Funds, Fidelity and Vanguard, which manage a total of $1.6 trillion in U.S. securities -- did not vote in favor of a single resolution addressing climate change in 2011. American Funds voted against every climate-related resolution, while Fidelity and Vanguard each abstained nearly 90 percent of the time.

"The movement over the last few years by Fidelity and Vanguard from voting against all shareholder resolutions related to climate change to abstaining on most is a very small step in the right direction," Mindy Lubber, president of Ceres, said. "But it is also a very passive strategy that simply defers responsibility to management."

The proxy voting policies of the three largest mutual funds do little more than note that economic factors associated with environmental issues will be considered.

"These decisions should be the province of company management unless they have a significant, tangible impact on the value of a fund's investment and management is not responsive to the matter," the policy of Vanguard states.

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Sellafield swallows contaminated by radioactivity

Swallows are thought to have fed off insects by the waste ponds at the Sellafield plant in Cumbria. Photograph: Brian Harris / Rex Features

Swallows nesting at the Sellafield nuclear complex in Cumbria have been contaminated with low levels of radioactivity from the site, according to the Environment Agency.

Monitoring by the site's operator, Sellafield Limited, has found traces of radioactivity in the birds' droppings. This is thought to come from the insects they have consumed around the storage ponds for radioactive waste.

Investigations have been launched by the agency, the government's Office for Nuclear Regulation (ONR) and Sellafield, while measures are being taken to try and prevent the contamination from recurring. According to Sellafield, the levels of radioactivity discovered were very low and there was "no threat" to public health.

"There is no direct pathway for exposure to members of the public," said a Sellafield spokesman. "Measures are in place to reduce the possibility of birds gaining access to facilities."

Nutrients and nesting materials are being removed to try and make the site less attractive for birds' breeding. "Possible problems are reduced by applying the principle of good housekeeping and the incorporation of bird exclusion measures," the spokesman added.

Up to 30 swallows had been surveyed. "There was insufficient radioactivity in the guano to require personal protection beyond that required for hygiene purposes," he said. Though it was difficult to be sure, contaminated mosquitoes were "a possible pathway".

Anti-nuclear groups pointed out that swallows fly long distances. "These much-loved and now radioactive birds and their offspring will unwittingly be carrying a toxic message from Sellafield when they migrate back to southern Africa at the end of the summer," said Martin Forwood from Cumbrians Opposed to a Radioactive Environment.

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New cars in Europe will have to cut carbon emissions by a third

New cars sold in Europe will have to slash their carbon emissions by a third by 2020, according to leaked European Commission documentsseen by the Guardian.

The proposed regulation would be legally binding and the document plans for even stricter emissions targets for 2025 and 2030, which could only be met if hybrid or electric vehicles become mainstream.

"Tighter CO2 standards for cars will be welcomed by drivers across Europe who will save €500 per year at the petrol pump on average if this proposal is adopted," said Greg Archer, from campaign group Transport & Environment. However, car manufacturers warned tough regulation could harm an industry already struggling with the economic crisis and foreign competition.

New car registrations in Europe are expected to fall by 7% in 2012, Volkswagen was the only major manufacturer in Europe that did not lose money in 2011. "Regulation, rigid by nature, too often adds undue complexity and costs, or limits flexibility," said ACEA, the European Automobile Manufacturers' Association, in a statement calling for "smarter" regulation.

The commission document is expected to be published in July and later approved by the European parliament and the Council of Europe over the next year. Transport exhaust fumes contribute roughly a third of the continent's greenhouse gas emissions and rose by 26% between 1990 and 2008. Measures to cut carbon dioxide from transport are essential if Europe is to meet its targets for tackling climate change.

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Kyocera Grows Green Curtains to Save Energy

SustainableBusiness.com News

In an innovative move to save energy, Japan-based Kyocera is planting green curtains on all its buildings.

In the wake of the nuclear shutdown, Japan has set energy reduction targets, and this is one way Kyocera is meeting them.

Curtains of foliage grace the walls of manufacturing and office buildings and grow on trellises over windows, providing shade from direct sunlight and heat radiation. They reduce the temperature inside buildings, reducing the need for air-conditioning systems in the hot summer months.

They also produce food! Green Curtains can be grown using vegetable plants such as goya or kidney beans, which are now joyfully harvested by employees and served in their cafeterias.

Kyocera, which is a major solar panel manufacturer, has 2 megawatts installed at 18 company facilities in Japan.

Some of the other simple measures it's taken to conserve energy, which can apply to any business, include:

Reduce Air Conditioning Use:

- Allow people to dress casually and set the thermostat to 82 degrees Fahrenheit during work hours (wow, that's hot!)
- Use a digital, programmable thermostat and automate ideal settings for different times of day.
- Install automatic door-closers everywhere, including exterior and interior freight doors and walk-in refrigerators and freezers.
- Maintain ventilation systems with regular filter replacement and duct cleanings.
- Insulate water heaters and supply pipes.
- Install blinds and reflective film on windows to decrease room temperature from sunlight.

Improved Lighting and Other Energy Reducers:

- Turn off of all unnecessary lights, and install motion detectors for lights in stairways, hallways and other places employees are not constantly using.
- Replace old fluorescent lights with new models and stop using incandescents; install LED exit signs for more savings.
- Shorten the delay time before employee computer monitors automatically go to sleep or "power down" mode.
- Have employees use laptops when possible, which use up to 90% less energy than desktops. Shut down and unplug all computers at the end of the work day.

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Figure 1 KYOCERA Nagano Okaya Plant

Figure 2 KYOCERA R&D Center, Keihanna

Figure 3 KYOCERA Shiga Gamo Plant

Figure 4 KYOCERA Kagoshima Sendai Plant (Morning glory)

News in Brief

The Better Buildings Challenge: An energy diet for facilities

How can the sustainability world best brand more energy-efficient buildings without focusing solely on cost savings?

That is the quintessential challenge of the recently launched Better Buildings Challenge by the U.S. Department of Energy (DOE).

After its first year, the initial 60 participating organizations appear to be off to a smooth start; but using 20 percent less energy throughout their entire stock of facilities by 2020 will be no small task. Then again, some companies are angling for even-greater savings. And therein may be the appeal of the Better Buildings Challenge. If building owners and employers value sustainability, increasingly they will want to create and work, in buildings that meet -- and continue to meet or exceed -- ambitious criteria.

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Germany's renewable energy revolution leaves UK in the shade

The blazing blue skies that Germany baked under last weekend added a fresh gleam to the nation's renewable energy revolution: a new world record for solar power generation, equivalent to 20 nuclear power stations. It is the battle between nuclear, fossil fuels and renewables, and between the big utilities and the community-owned renewables eating into their profits, that has driven Germany's radical energy transformation to the top of its political agenda, with success seen as vital to chancellor Angela Merkel's hopes of re-election in 2013.

"We are still occupied by the four powers," says Werner Frohwitter, standing in the harsh sunlight below an 85-metre tall wind turbine in the flat east German countryside – referring to the four giant energy companies that have carved up the nation. They are RWE, E.ON,Vattenfall and EnBW.

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The village Feildheim, near Berlin, gets all its energy from 43 wind turbines dotting the fields around it and a biogas plant that turns farmyard manure into gas-powered electricity. Photograph: Damian Carrington for the Guardian

SABMiller, Sainsbury's honored for sustainability leadership

Worldwide brewer and Coca-Cola bottler SABMiller dramatically reduced its water consumption, while UK supermarket chain Sainsbury's created the world's first smart-grid ready supermarket and worked with over 2,600 farmers to cut their carbon emissions.

These are just two of several businesses recognized recently in the UK at the second annual Guardian Sustainable Business Awards(GBSA) and in a new US study ranking the top American firms with strong environmental governance, policies and infrastructure.

Both underscore a rising trend of honoring concrete environmental results based on sustainability metrics rather than praising firms by the merits of blue-sky promises alone.

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News in Brief

REC Analysis: 7 projects with 67,918 RECs generation potential registered

There is 1.45% increase for the week ending on 17 June 2012, in the number of renewable energy project developers who have signed up under the REC scheme, increasing this number from 1376 to 1396. During the previous week, nine projects developers had signed up under the REC scheme.

12 projects were granted accreditation by Maharashtra and Gujarat between 11 June and 17 June 2012. This includes a solar PV project as well. These projects have a combined generation capacity of 49.45 MW. 12 projects with combined generation capacity of 5.55 MW were accredited during the previous week. Total number of projects accredited reached 569 and the total generation capacity accredited remained at 3,088.49 MW.

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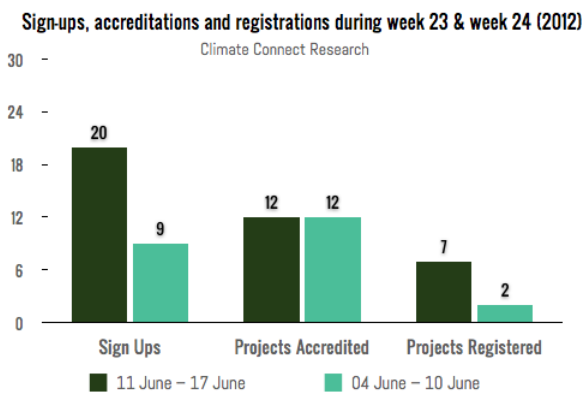

Canadian Olympic team to offset emissions, aims neutrality

The Canadian Olympic team plan to offset 1,500 tones of GHGs emissions with carbon credits to compensate the carbon footprint likely to be generated by the Olympic team and support staff when they travel to and from the Summer Olympics in London, reported the Vancouver Sun. This is first time ever an Olympic team is opting to be carbon-neutral for the London 2012 Games.

The Canadian Olympic Committee will be partnering with Off setters Clean Technology Inc., a local carbon offset company, to cover the round trip.

The company is developing four carbon offsetting projects to generate enough reductions in GHGs to cover the Olympic team's emissions. According to James Tansey, CEO , Offsetters the projects include two landfill gas ventures in Canada, a bio-gas project in Thailand, and a wind farm in Turkey.

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India's RE capacity crosses 25,000 MW, at 12.4% of total power capacity

India's renewable energy installed capacity has crossed 25,000 MW, according to the latest figures released by the Ministry of New & Renewable Energy (MNRE). The milestone was crossed during April 2012 when a capacity of 103.62 MW was added to the grid. The ministry has set target to install 4,125 MW of grid-connected renewable energy capacity during FY2012-13.

Solar energy and wind energy capacity contributed 36 percent and 35 percent respectively in the capacity installed during April 2012. Small hydro, biomass and biofuel cogeneration technologies contributed to the rest of the capacity addition during the month.

Share of wind energy capacity in the overall renewable energy installed capacity remained steady at 69 percent. Wind energy installed capacity stands at 17,389.31 MW at the end of April 2012. MNRE expects 2,500 MW of wind energy capacity to be added during the current financial year. Solar energy capacity stands at 979 MW or almost 4 percent of the total capacity. 941.28 MW solar power capacity was added in FY2011-12. 800 MW solar power capacity is expected to be commissioned during FY12-13.

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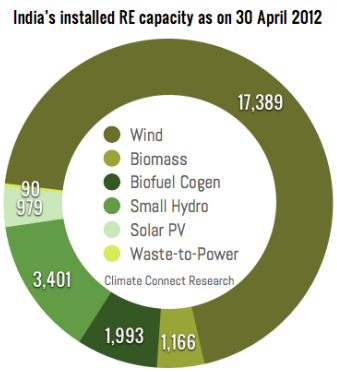

News in Brief

Indo US tie up for $20 mn contract for promoting clean energy

In June 2012, USAID launched a new five-year technical assistance program to accelerate India's transition to a high performing, low emissions, and energy secure economy, in partnership with the Ministry of Power and the Ministry of New and Renewable Energy. The $20 million Partnership to Advance Clean Energy Deployment (PACE-D) contract will improve end-use energy efficiency, increase the supply of renewable energy; and adopt and accelerate deployment of cleaner fossil fuel technologies. The focus of the program will be on strengthening the enabling environment, increasing access to finance, and enhancing institutional and human capacity. It will also support the National Mission on Enhanced Energy Efficiency and the Jawaharlal Nehru National Solar Mission being implemented under the India's National Action Plan on Climate Change.

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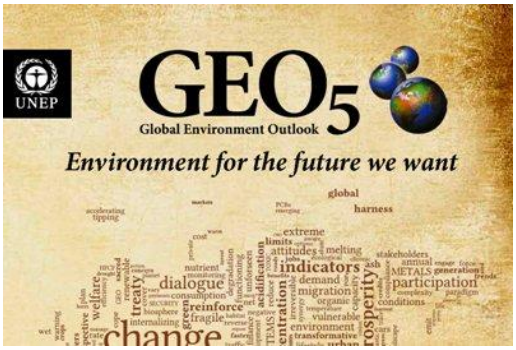
UN Releases 5th Global Environment Outlook Report

Rio – The world continues to speed down an unsustainable path despite over 500 internationally agreed goals and objectives to support the sustainable management of the environment and improve human wellbeing, according to a new and wide-ranging assessment coordinated by the **United Nations Environment Programme (UNEP)**.



The fifth edition of the **Global Environmental Outlook (GEO-5)**, launched on the eve of the **Rio+20 Summit**, assessed 90 of the most-important environmental goals and objectives and found that significant progress had only been made in four.

These are eliminating the production and use of substances that deplete the ozone layer, removal of lead from fuel, increasing access to improved water supplies and boosting research to reduce pollution of the marine environment – for a full list of goals and status of implementation, visit:www.unep.org/geo/pdfs/geo5/Progress_towards_goals.pdf

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Solar-Ready Roofs Standard for New California Buildings

California's latest update on its energy efficiency code for new homes and commercial buildings is doing a wonderful thing: It requires them to be "solar-ready!"

That puts into place common sense design standards that ensure a building can accommodate solar, opening the possibility for many more buildings to run on solar and helping California's solar industry. Today, many buildings can't have solar because they have too much shade or face away from the sun.

California's updated energy efficiency standards require builders to: orient the building toward the south, make sure the roof isn't shaded, and keep the roof as clear as possible so that it has room for a maximum number of solar panels - that affects the placement of chimneys, attic vents, fans and skylights.

Besides applying to new buildings, the standards would also be in force for major renovations and additions to existing buildings.

It's expected to be approved by the California Energy Commission when they vote today and would take effect January 1, 2014.

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Forthcoming Events

The 2nd World Smart Grid Conference India Week

'Smart Grid' has become a buzz word in the past few years as countries worldwide are facing serious climate challenges. SZ&W Group is pleased to announce The 2nd World Smart Grid Conference India Week, which will be held in Delhi on September 12-14, 2012.

The event aims to provide understanding on India's smart grid initiatives, roadmap, regulatory environment, ongoing pilots of local utilities; facilitate networking with local & international smart grid industry executives; and share insights on future market developments.

Introduction:

"Smart Grid" has become a buzz word in the past few years as countries worldwide are facing serious climate challenges. But the pursuit of lower carbon emissions is not the only driver for the world's leading utilities' 'going green'. A self-healing, more reliable, less constrained, safer and more efficient grid is in the interest of all stakeholders. That is why in U.S., Europe and Australia, utilities are constantly implementing smart technologies into their grids. China is planning to increase the renewable energy proportion to 10 percent of the total energy use by 2010, and 15 percent by 2020. There are signs of active smart grid initiatives in Brazil, Africa and Middle East as well.

India has the fifth largest Electricity Grid in the world and the world's third largest Transmission & Distribution network. However, the demand from increased economic activities and the rising living standard of population has led to a situation where the supply of energy falls short of the demand. India power industry is facing major challenges like huge supply shortfalls, power theft, poorly planned distribution networks, and low metering efficiency and bill collection. For India, the smart grid may offer a unique opportunity to leap -frog into a vastly improved electricity environment.

Following the success of Smart Grid Conference organized in Mumbai last year, **SZ&W Group** is pleased to announce **The 2nd World Smart Grid Conference India Week**, which will be held in Delhi on September 12-14, 2012. By moving to Delhi, the event will attract more senior participations from India Ministry of Power, central regulatory authorities and Delhi utilities, and would provide understanding on India's smart grid initiatives, roadmap, regulatory environment, ongoing pilots of local utilities; facilitate networking with local and international smart grid industry executives; and share insights on the future market developments.

ThinktoSustain.com is the **Media Partner** for the event.

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Master of Science in Sustainability Management

Columbia University is running a Post graduate program in sustainability. This program can be pursued as full time student as well as part time student. Students typically complete this program in three years, depending on the pace of study the course can be completed in as little as one year. This unique program is offered on both a full-time and part-time basis and draws on expertise from across the campus and throughout the Earth Institute.

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Leadership for Sustainability

Program Summary & Schedule

- Timeline: 18 months
- Orientation Session
- Classes meet one weekend each month (e.g., Friday afternoon and Saturday)
- Two 4-week breaks each year (January and August)
- International Residency (10 days)
- Capstone project

Virginia Tech's *Executive* Master of Natural Resources (XMNR) program is an accelerated, 18-month graduate degree for full-time working professionals with significant prior work experience. Students represent a wide range of organizations in the public and private sectors throughout the Washington, DC region and beyond. Immediate program outcomes include organizational and policy changes while long-term outcomes include personal and cultural transformation.

In January of each year, a new cohort of 16-24 students starts the program and begins a rigorous process of peer-to-peer experiential learning and collaborative problem-solving. By focusing on the needs of their own organizations and the needs of others, students gain a robust understanding of the opportunities to address a broad range of sustainability challenges in local communities and throughout global society. Throughout the program, students work individually and in interdisciplinary teams to develop strategies for real-world challenges. Major elements of the XMNR program include an orientation session, series of core courses and learning modules, skill development seminars, international residency and capstone project.

All aspects of the curriculum emphasize the development of advanced leadership, management, and administrative skills for achieving local, regional, and global sustainability goals. Students graduate with competencies in leading people, leading change, business and political acumen, and demonstrated results for their respective employer. The program emphasizes a broad range of leadership skills and executive core qualifications identified by public and private sector employers, including interpersonal and organizational communication; financial, information and technology management; program evaluation and policymaking; marketing and public relations; partnerships, team building and conflict resolution; entrepreneurship, innovation and resilience.

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What Happened at Rio, and What Didn't

Rio in 1992 is where a divisive world started coming together to save a planet crumbling under its own weight. After 20 years of more words than action, when the world assembled there again, not much had changed. Many words were exchanged, but not enough action charted. **Naren Karunakaran** traces two decades of efforts in trying to save the earth, what transpired in the latest round, and what it all means for companies and citizens

Words, Not Action A native listens in on the last meeting of the people's summit for Rio+20. The Rio 2012 document, 'The Future We Want', has been roundly criticised as merely 'exhortatory and aspirational'

The Debate

How the debate has progressed in the last 20 years

1 What was Rio+20 all About?

The United Nations Conference on Environment and Development (UNCED) is usually referred to as the Rio Conference or the Earth Summit. The first landmark summit, held in 1992, resulted in conventions on climate change, biodiversity and desertification.

Rio+20, the sequel, held again, in Rio De Janeiro, from June 20-22, was attended by over 100 heads or representatives of government, and over 45,000 people. It basically sought a renewal of sustainable development affirmations by nations, civil society and, now, also businesses, that were first laid on global policy tables two decades ago. Over 200 CEOs attended. World leaders, at Rio+20, approved the outcome document, 'The Future We Want' (*See 'The Outcome'*)

"It is now our responsibility to build on it. Now, our work begins"

Ban Ki-moon
Secretary General, UN, at Rio+20

2 What is 'Sustainable Development'?

During the seventies and the early-eighties, world leaders began seriously examining the nexus between economic development and environmental degradation. This, in 1987, culminated in 'Our Common Future', a seminal piece of work steered by Norway's Gro Harlem Brundtland.

It defined sustainable development as: "development which meets the needs of the present without compromising the ability of future generation to meet their own needs." The former Norwegian prime minister, who was present at Rio+20, told the *BBC* that the world could have done better in pushing the sustainability agenda.

"When you look back 25 years now, less than one would have expected has happened, that's clear, but you can't think you can turn the world round in 25 years"

Gro Harlem Brundtland
Former PM, Norway, to the BBC

"We meet at a critical moment. For some countries and some people, this is not a matter for long-term planning but immediate pressing action"

Hillary Clinton
Secretary of State, US, at Rio+20

3 Why is it so Relevant Today?

A host of economies are in turbulence. Many are saddled with deep inequities caused by past and prevalent political and economic systems. A sense of collective disquiet prevails as the present dispensation seems to be failing the people of the world. Social unrest, manifest as farmer suicides, growing protests and violence over the loss of land and livelihoods, food, water and energy insecurity, and erosion of the ecosystem is now widespread. A new pathway for growth, based on sustainability, has to be found. The world of 7 billion people is already on the edge, and living beyond its means.

4 How Bad is the Situation?

The Stockholm Resilience Centre has quantified nine global planetary 'boundaries', which, if breached, could lead to irreparable instability of the world we live in. Three limits may have been already breached—climate change, biological diversity and nitrogen input to the biosphere.

The current blend of economic uncertainty, environmental tipping points and a civil society uprising of sorts, therefore, portray a grim future. All the three pillars of sustainable development—economic, environmental, and social—are under tremendous stress. One solution proffered at Rio+20 is migrating to a 'green economy'.

5 What is a 'Green Economy'?

The United Nations Environment Programme (UNEP), guiding much of the debate on green economy, describes it as one that results in "improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities." It explains further: "For governments, this would include levelling the playing field for greener products by phasing out antiquated subsidies, reforming policies and providing new incentives, strengthening market infrastructure and market-based mechanisms, redirecting public investment, and greening public procurement."

The debate on what constitutes a green economy is still evolving even as new measurement tools emerge: the System of Environmental–Economic Accounts (SEEA), for instance, is expected to replace or support existing national accounting systems. Going beyond GDP as a measure of economic performance—and including natural and human capital—is integral to the green economy.

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6 Why are Developing Nations Wary of this New Growth Model?

A few countries have begun to experiment with aspects of the green economy—Barbados, Cambodia, Indonesia, South Africa, South Korea—but the fear is any new model would distract developing nations from their principal challenge of eradicating poverty. Developing countries, India included, are also unwilling to share the same degree of responsibility as the west in setting right the mess. They, therefore, put forth the 'common but differentiated responsibility' (CBDR) dictum, and its adoption was seen as a gain for developing nations. The other issue is that of finance and technology required to transition to a green economy. The west is not ready to commit money for this.

"The outcome document takes into consideration our interests and concerns, and we are satisfied with the overall package"

Jayanthi Natarajan
Environment Minister

7 What is the Civil Society View?

They are uncomfortable as they see the green economy as yet another attempt to mesh biological process and the ecosystem into the 'capital cycle for a new phase of capitalistic expansion'. Statements from key policymakers only deepen suspicions. Consider this by Janez Potocnik, European commissioner for environment, quoted by *Outreach* journal of the Stakeholder Forum, a UK-based advocacy group: "We must transit to a situation where we are protecting the environment from business to a situation where we are using business to protect it." However, concerns by civil society are being addressed and experts now evangelise an 'inclusive green economy'.

"We have to be careful about old tricks hidden by new words like the green economy. It only means corporate hijack of our remaining resources"

Vandana Shiva
Environmental Activist, to Current TV at Rio+20

The Fallout

Greenpeace blames banks; UK tells its companies to report on sustainability

"The Longest Suicide Note in History"

Kumi Naidoo's angst and despair at an opportunity lost in Rio+20 found resonance among thousands of civil-society activists who had gathered in the city. The executive director of Greenpeace International dubbed the outcome document—49 pages, 283 paragraphs—as the "longest suicide note in history".

His tweet—"This is Rio minus 20; it fails on equity; fails on ecology; fails on economy,"—marshalled activists who were aghast at the utter lack of ambition in the pages of 'The Future We Want'. According to attendees at the 'People's Summit,' a parallel meeting at the venue, the document lacks firm commitments, goals or deadlines, and is merely a listing of aspirations. "A failure of epic proportions," says Naidoo.

The South African told *The Guardian* that he is preparing to ratchet his campaign against the financial sector he holds responsible for much of the world's inability to handle sustainability issues. His campaigners have been educating themselves on the complexities of the financial sector over the past couple of years. Now, they are ready. "The time is right; banks are at their most vulnerable in terms of public legitimacy," Naidoo said.

Friends of Para 47

Para 47 of the outcome document urges publicly listed and large corporations to integrate sustainability information into their reporting cycle. Brazil, Denmark, France and South Africa—pioneers in fostering the spread of sustainability reporting in their respective countries—announced the creation of 'Friends of Para 47' to share their experience with the rest of the world.

On the occasion, UK deputy PM Nick Clegg announced that companies listed on the main market of the London Stock Exchange will have to report on their greenhouse gas emissions from April 2013. Sustainability reporting in India is still voluntary, though Sebi and the ministry of corporate affairs have been making some moves towards encouraging reporting on ESG (environmental, social and governance) and CSR (corporate social responsibility) spends.

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The Outcome

What the new document says and doesn't say

The Rio+20 document, 'The Future We Want', has been roundly criticised as 'exhortatory and aspirational', and failing to tackle head-on some of the developmental challenges on hand. Oxfam, the international NGO, described the summit as a "hoax". Those in the thick of negotiations concede the shortcomings, but affirm it's a step forward.

One particular aspect, however, stood out: during the 1992 earth summit, it was largely the West that called the shots. At Rio+20, developing countries—the BRICS nations and others—were seen and heard, prompting Nick Clegg, the deputy PM of UK, to declare at a session: "Power is shifting from the west to the east."

Goals

The decision to create a set of sustainable development goals (SDGs) is the most significant. A working group is expected to report to the 68th session of the UN General Assembly (UNGA) with concrete proposals on SDGs.

Forums

An inter-governmental, high-level political forum is to be created to follow up and strengthen debate, institutional mechanism and implementation of sustainable development issues. An international process to design a sustainable development financing strategy is also to be put into motion.

Oceans

The paras on conserving biological diversity of oceans beyond national jurisdiction are weak and don't address concerns on abuse of the high seas. Development of a mechanism before the 69th UNGA session has been promised.

Private Sector

The document recognises the significant role the private sector will play in taking the SDGs ahead, through partnerships with governments and other innovations.

Consumption

It has been recognised that societies need to undergo a fundamental change in the way they consume and produce to achieve sustainability, but there is little on how this can be achieved, the sole reference being an invigorating 10-year framework programme on sustainable consumption.

Green Economy

The benefits of transiting to a green economy have been detailed. But under pressure from developing countries, including India, it was clarified that countries may have their own, independent approaches to a green economy.

The Pledges

Some commitments, but mostly not binding

Even as officials negotiated the outcome document, over 700 side events convened by governments, companies, alliances, partnerships, NGOs and interest groups created a buzz through the event. The voluntary commitments, financial or otherwise, made by some of these groupings at these side events, total $513 billion (about Rs 25,65,000 crore). The caveat is that these are voluntary, not binding, with no monitoring mechanism.

Sustainable transportation systems

The Asian Development Bank and seven multilateral development banks pledged $175 billion to support sustainable transportation systems in developing nations, via loans and grants, by 2022.

Energy

The OPEC Fund for International Development (OFID) has announced $1 billion for its 'energy for the poor' initiative.

Deforestation

Companies in the Consumer Goods Forum, led by Unilever, have pledged to eliminate deforestation from the supply chains of soy, palm oil, paper and beef products by 2020. This is expected to create a market of $25 billion per year in sustainable purchases. The USAID will partner the Forum, with India, China and Russia as the focus countries.

Oceans

Over 80 governments, civil-society groups, companies and international organisations have banded together in support of a new entity, the Global Partnership for Oceans. Its principal goals include: reduce the open access nature of fisheries by creating responsible tenure arrangements; rebuild the world's over-fished stocks; and increase the annual net benefits of capture fisheries by at least $20 billion.

Infosys

Infosys has committed to reduce its per capita energy consumption by 50% over its 2007-08 levels by 2018. It also wants to source 100% of its electricity from renewable sources by 2018.

The Economic Times, Delhi dated June 4, 2012

The Gas Station of the Future Just Opened

The Apple store of the alternative energy market is laying foundation of slow, exciting transformation of auto industry

Going Green

KARENE KLEIN

Matt Horton wants to solve a problem that makes alternative-fuel vehicles unappealing to would-be buyers: lack of convenient places to refuel.

Last month, the CEO of Propel Fuels opened US' first station where drivers can pump gasoline, ethanol, and biodiesel, cyclists can get tuneups, and commuters can find public transit schedules.

Backed by more than $19 million in venture capital and nearly $12 million in grants from the US Department of Energy and the California Energy Commission, the 23-person California startup received an additional $10.1 million grant from the Commission to help build 100 stations around the state in the next four years.

With its alternative fuels pumps at about two dozen other stations, Propel is laying the foundation for what 37-year-old Horton calls the "slow, but exciting" transformation of the US automotive industry. Despite increased consciousness about their benefits, roughly only 3,100 of the 1,60,000 filling stations across the country sell alternative fuels, according to the Department of Energy. "The gasoline stations don't want a competitor but the alternative fuels industry is dependent on its largest competitor as a pathway to the market," says Geoff Cooper, vice president of research and analysis at the Renewable Fuels Association. "In many cases, you aren't going to see a retailer take a gasoline pump out of commission to put in a product that competes with gasoline."

Four-year-old Propel, which Horton says had more than $10 million in revenue last year and has been averaging 300% growth since 2010, is removing that obstacle by selling directly to drivers. It's using its experience pioneering the model across California and software it built to choose locations. The new center, near Anaheim, is in "one of the top 10 trade areas for alternative fuels, based on the customer demographics, vehicle counts, and traffic patterns," Horton says. "In this business, the vehicle drives everything. You can have all the infrastructure in the world, but if there aren't any vehicles around that use it, it's not going to make any difference." Propel provides information about alternative fuels at its pumps, since studies have shown that more than one-third of drivers of flex-fuel cars don't realize their cars can run on something other than gasoline. And it encourages customers to sign up for a system that tracks their carbon emissions. They can then log on to Propel's website for customized reports about the benefits they're getting from avoiding imported fuel.

Despite increased consciousness about their benefits, only 3,100 of the 1,60,000 filling stations across the country sell alternative fuels

Propel is "a remarkable company, like the Apple store of the alternative energy market," says Jim Lane, editor and publisher of BiofuelsDigest, a daily online publication. "We have these transformative fuel products that are being sold as commodities, like computers used to be sold. But Apple really showed that if you start thinking about customer experience you can change people's minds and get them thinking about something in a whole new way." Being first to market is a risk, Lane acknowledges. "There are not a lot of companies that are trying this. But 10 years ago, they called them crazy in Cupertino, too."

Horton is an environmentalist who spends his free time climbing rocks and 200-foot-tall California redwood trees, but says he's also a results-oriented pragmatist. "I believe strongly in the power of business and the American consumer to drive change. A company like Propel moves us in a more sustainable direction, rather than relying on regulation and government mandates."

Horton is following sales of natural gas-fueled and electric vehicles closely, and is considering adding natural gas pumps and battery recharging to his stations in the future when the market matures.

"The energy industry is ripe for disruption," he says, noting 10,000 people have already signed up for Propel's carbon emissions tracking programme.

They're using cleaner fuels that cost less than traditional gasoline, says Horton. "We're trying not to ask people to pay more to do the right thing."

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Deccan Chronicle, Hyderabad dated June 4, 2012

Sea level rise: Blame it on India

RASHME SEHGAL | DC
NEW DELHI, JUNE 3

Is India's thirst for fresh water causing ocean levels to rise? Already, experts have warned that the backwaters of Kerala and the deltas of the Ganga, Krishna, Godavari, Cauvery and Mahanadi are being threatened by rising ocean levels.

A NASA study had confirmed that water tables in north India were declining at the rate of one foot per year. Even the ministry of water resources has admitted that 109 cubic kilometers of water was lost from the aquifers along the Indus alone.

Water expert Prof Vikram Soni calculates that during the last 30 years, "India has lost close to thousand trillion tonnes of ground water which would have raised sea levels by one centimeter for this same period."

In the last 50 years, tonnes of groundwater has found its way into the ocean which is more in scale than melting of ice caps

Thirty per cent of the world's ground water is being withdrawn from India alone, Prof. Soni points out. Overall, in the past five decades, several trillion tonnes of ground water has found its way into the ocean, which is much more in scale than the melting of the two great ice caps, Greenland and Antarctica.

Prof. Yadu Pokhrel, from the University of Tokyo, has published research in *Nature Geoscience* suggesting that groundwater is a major contributor to the observed sea level rise. The drawing of water from deep wells has caused the sea to rise by an average of a millimetre every year since 1961.

The Economic Times, Delhi dated June 5, 2012

Help India Inc Bet on Wind, Solar Energy

SHREYA JAI
NEW DELHI

India's green energy initiatives, which aim to boost solar power capacity to 20,000 mw in a decade, and expand windmills, have made rapid progress but entrepreneurs want supportive policies to sustain growth.

India aims to meet 15% of its power needs, or 80,000 mw, from renewable sources by 2020, with an investment of ₹1.5 lakh crore. This has boosted investment in the sector by 54% in just one year, and solar power capacity has leaped to 905 megawatts from a negligible 8 mw three years ago, making India one of the top 10 global destinations for investments.

"The sector is highly optimistic. Between the national solar mission projects and the state sponsored projects, the total demand is more than 1 gw over the next year," said Rajiv Arya, CEO of Moser Baer Solar. Solar power rates have plunged to ₹7.49 per unit. "From a sector that was almost non-existent in 2008, today has over 400 companies bidding for power projects across the country," said Inderpreet Wadhwa, CEO of Azure Power.

Solar power capacity has leaped to 905 mw from 8 mw three years ago, making India a top global player

But several concerns lurk behind the phenomenal growth. Solar firms want anti-dumping duties, saying that foreign frims are selling equipment at ridiculously low prices. "There are problems with regard to financing and fund availability. There is a lack of robust policy to support capacity utilisation," said S. Venkatramani, general secretary, Indian solar manufacturer's association. The government plans to help. "Efficiency of the local industry needs to be upgraded and we may come up with a scheme to support their funding which will help them compete with the global technology," said Tarun Kapoor, joint secretary, in the renewable energy ministry.

Wind energy has also expanded, making India one of the world leaders in the sector. "There is no doubt that the wind market is set to maintain its strong growth trajectory," said Chintan Shah – Head, Strategic Business Development at Suzlon Energy.

The sector is craving for the accelerated depreciation scheme, that was terminated in March, but optimism remains.

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The Economic Times, Delhi dated June 5, 2012

India Needs Mix of Green & Traditional Power Sources

We must think beyond coal. Diversified fuel sources and new technologies will help the country strike a balance between growth imperatives and sustainability

By Invite

J.P. CHALASANI

Recently, Reliance Power commissioned India's largest solar power plant in Pokharan, close to the western periphery of Rajasthan. We felt justifiably proud. It has displaced over 70,000 metric tonnes of carbon dioxide emissions annually, which is roughly the equivalent of taking 25,000 cars off the road. And yet, for me, the thought that a 40 MW solar plant represented no more than a drop in the ocean was inescapable.

Today, India finds itself at the crossroads, grappling with the energy security-sustainable development conundrum. So, can rapid economic growth and sustainable, more inclusive, development be achieved in tandem? As a concerned and responsible organisation, we pause and ponder once again about what we can do to recalibrate and escalate efforts towards ensuring that we can answer that question in the affirmative.

That over one-third of India's rural population has no access to electricity must surely be a sobering thought for those of us who feel proud that we are a fast emerging global economy. India needs to substantially bridge the gap between demand and supply of electricity for sustained economic growth and to kindle hope in the lives of its people. To bring light into the lives of those many people we need all sources of power that we can get access to.

I believe diversified fuel sources and new technologies will, in the years ahead, come to India's rescue and help us strike a balance between our growth imperatives and sustainability.

To begin with, in the energy mix in India, as in the case of other fast growing economies, coal continues, and will continue to, play a crucial role. In India, coal accounts for more than 70 per cent of the country's electricity generation. Of the 54,000 megawatts of power capacity added between 2007 and 2012 in India, over 70 per cent was coal-based. While coal-fired power generation is perceived as a major factor in carbon dioxide emissions leading to global warming, the use of advanced technology in recent times is rapidly changing that scenario. Supercritical steam power plants notably meet the requirements for high efficiencies to reduce both fuel costs and CO_2 emissions. The 11th five year plan saw the commissioning of the first few supercritical power units in India. I am sure, this trend will continue in the 12th plan with many more supercritical units being commissioned including those from Ultra Mega Power Projects (UMPPs).

To bring light into the lives of millions of powerless, we need all the sources of power that we can get access to

The impact of greener supercritical technology in coal-fired power generation is also important because coal will remain the mainstay of power generation in the foreseeable future.

Coal mining is in itself not a carbon emitting activity and is only a temporary use of land. It is vital that rehabilitation of land takes place once mining operations have stopped. A detailed rehabilitation or reclamation plan is designed and approved for each coal mine, covering the period from the start of operations until well after mining has finished. Mine reclamation activities are undertaken gradually – with the shaping and contouring of spoil piles, replacement of topsoil, seeding with grasses and planting of trees taking place on the mined-out areas. Care should also be taken to relocate, among others, streams and wildlife.

Effective steps are now being taken in modern mining operations to minimise any adverse environmental impact.

Recent reports in the British press that the European Union is set to accept energy generated from natural gas as a clean, green source of power is another encouraging development for power producers like us. Indeed, I am of the view natural gas can contribute significantly to the transformation of the Indian energy system with much lower emissions, and its suitability to the varying electricity load requirements. It is time our regulators consider mandatory procurement of gas based power as a portion of total power purchased by the distribution companies similar to the Renewable Purchase Obligations (RPO).

In addition to coal and natural gas, India's large hydropower potential needs to be tapped to ensure a perennial source of clean and renewable energy. I believe hydro projects can be the answer to cost effective and green source of electricity generation for our country. In addition, it can prove to be the harbinger of development in some hill states, such as Arunachal Pradesh.

While wind continues to be the dominant source of power generation among the non-convention sources, solar energy is catching up fast with reduced tariffs and other advantages such as higher predictability of generation, its potential in India and the government's initiatives such as the National Solar Mission. On the World Environment Day, I would say new technologies and diversified fuel sources are sowing the seeds of success in the monumental task that faces India as it tries to bridge the yawning gap between its power generation capacity and the ever-growing demand for affordable electricity.

We at Reliance Power with our diversified portfolio of coal, gas, hydro, wind and solar projects will continue to lead the efforts towards a greener future for India's future generations.

(The author is the Chief Executive Officer

The Economic Times, Delhi dated June 5, 2012

Future's Bright for Clean Power Cos

Growth opportunities in the renewable energy space are shifting to Southeast and South Asia, where investors are lured by generous incentives, reports Rachita Prasad

Billions of dollars worth of investment in clean technology and green energy are eyeing India, where the market for low-carbon technology is expected to expand to $135 billion by 2020, according to industry experts, making the country one of the most lucrative destination for companies in the domain.

Renewable energy has already lured stars such as Sachin Tendulkar and Aishwarya Rai and large companies such as Reliance Power and Lanco, and the flow of venture capital has increased in the sector. In addition, foreign companies involved in solar power and wind energy, as well as global funds that scout for opportunities around the globe are increasingly eyeing India for a slice of the lucrative market.

The market is promising as the government strives to tame energy-guzzling factories that spew toxic fumes, and old vehicles that contaminate the air with emissions. Analysts say that the market would expand even faster after the country's economic growth bounces back from the current global slowdown.

"We are really bullish on India in the long run, because the private sector is focused to grow. Like in US, political system is paralysed in Indian at the moment that could lead to economic stagnation but we see opportunity in clean energy and environment and natural resource management businesses," said Jeffrey Leonard, founder and chief executive of Global Environment Fund (GEF).

Leonard has been making at least two trips to India every year, looking for investment opportunities, and set up a local team. The private equity investment firm he set up in 1990 invests in energy and environment sectors and has $1 billion of asset under management spread across the world. India, among other emerging economies, would be a key growth area for GEF.

Analysts say that growth opportunities in the renewable energy space are rapidly shifting from the developed world to Southeast and South Asia, where investors are lured by generous incentives offered by governments. "European countries like Spain are cutting down on subsidies to renewable energy and overall business environment is dull there. So investors from these countries are looking at destination like India to drive their growth," said Hemal Zobalia, Partner, KPMG India.

Spain, which was the most sought-after country for renewable energy business until five years ago, has lost favour as the government has suspended sops for new renewable energy units. Incentives were also rolled back in Portugal, while other countries such as Italy and Ireland scaled down the incentives. In sharp contrast, developing economies continue with their incentives for renewable power projects.

India launched incentives for renewable energy in the 1990s, which led to a significant capacity addition, particularly in the wind energy space, where it is among the global leaders. Local and international project developers and investors thrived on the incentives and upped their investment in the country.

The government has also introduced generation-based incentives for wind and solar power in 2007, in an attempt to weed out non-serious players and increase participation of independent power players. The next big step by the government was introducing the National Solar Mission in 2010.

"Government's siniitiatives for renewable energy has encouraged companies like ours to enter renewable energy businesses. Next generation entrepreneurs are looking at renewable energy to give back to the environment. That these businesses are also giving our shareholders' return helps," said Vikalp Mundra, promoter and director of M and B Switchgears which has diversified into solar power. His company recently started trading renewable energy certificates on Power Exchange of India.

For GenNext businessmen, renewable energy not only helps their conscience, but also bosts their profits

Renewable energy certificates allows renewable energy producers that do not receive a preferential tariff to sell certificates to distribution companies and large captive consumers to meet their renewable energy obligation targets. Sector experts believe that the sector would also get a boost when power distribution companies start working towards achieving Renewable Purchase Obligations, which requires them to procure a certain percentage of power from renewable energy units.

Deloitte's report 'Private Equity fuelling India's growth' says, "The government's endeavor to increase investment in core infrastructure is also expected to receive private equity's support in the areas of infrastructure, healthcare, education and renewable energy."

In Print Media

The Economic Times, Delhi Dated June 5, 2012

Daily health in a package

How many times have you caught a sneezing fit after you have moved out of a conference, hospital or an airport? This happens because your air-conditioning system may be taking the biblical theme of sharing what little you have, too far. Sharing other people's sorrows and joys is one thing but when it comes to sharing bacterium and viri then you may want to draw the line somewhere. Debasish Roy stumbles upon Zeco's new product manufactured in the USA

Zeco has been in the air-conditioning business for corporate and insitituional customers for a very long time.

Their brand value within the HVAC industry has skyrocketed off the graphs. They have nothing to establish in this industry right now, except for any value addition in the product range.

This way, the company can leverage the brand recall they enjoy in the B2B space for air-conditioning and carry it off with more profits and pay back their shareholders in a big way.

Currently, the A-team of Zeco's Pureair division have identified a company in the United States which manufactures in its own laboratories a range of products, which specialise in establishing clean air within the environs of the office and if required the home.

The underlying principle for this range of products is that the traditional cleansers such as bleaching by chlorine and sanitizing by ultra-violet rays is not effective after a point. In fact, both systems run out of steam given extraneous conditions of pollution. This company from the United States has identified that ozone as a cleanser is many times more effective than chlorine and further, hydroxides work even many times more than ozone as air cleansers. These products idenfied by Zeco create airborne plasma that consists of friendly oxidizers such as hydro-peroxides, super-oxide ions and hydroxide ions. This process is known as the Advance Oxidation Process.

After honing in an finding a niche for these products in the Indian market, Zeco has tied up with the American company called RGF Environmental Group, as the American company's sole and exclusive distributor in India.

Currently, Zeco and RGF have not agreed on a technology transfer as both parties will wait and watch for the demand that develops for this range of products.

Shikha Jain, director, Zeco Environmental Solutions says: "we don't expect too many units to be sold in the first year. We plan to educate the customer through word of mouth publicity and plan to take this relationship between two nations and countries forward as and when we need to evolve into the next stage."

Both parties are highly optimistic about the future of this joint initiative and plan to push this concept in large buildings successfully so that healthy living and good hygiene becomes a by-word in the Indian construction industry.

Such developments may be a harbinger of evolution i n the real estate industry and for B2B construction.The time has come when the Indian customer demands more than just the basics and gets it.

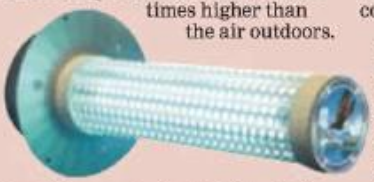
www.pureair.co.in

In Print Media

The Economic Times, Delhi Dated June 5, 2012

The science to kill pollutants

Poor indoor air quality can threaten your health. Most people spend over 90 per cent of their time indoors, not knowing that the air they are breathing may be more polluted than the air outside. The Environmental Protection Agency has reported that indoor air pollution levels can be 100 times higher than the air outdoors.



Breathing contaminated air puts the health of you and your family at risk. In fact, the American College of Allergist says that 50% of illnesses are caused or aggravated by polluted indoor air. So take control of your indoor air quality by reducing pollutants that can contribute to headache, lung irritation and fatigue as well as more long-term conditions such as asthma, allergies and infectious diseases.

Indoor Air Quality is rapidly becoming a buzz word for the HVAC Industry. Most people associate indoor Air Quality with air filtration, which is designed to remove airborne particles. The quality of indoor air inside offices, schools, and other workplaces is important not only for workers' comfort but also for their health. Poor Indoor Air Quality has been tied to symptoms like headaches, fatigue, trouble concentrating, and irritation of the eyes, nose, throat and lungs. The problem is that standard air filters have little or no effect on microbial such as viruses and bacteria, or molds, VOC, odors and other health-related air contaminants.

IAQ got its start with the media rash of mold stories of the 1980s. Odor control was the buzz word of the 1990s, and with the fears of SARS, Bird Flu, MRSA and H1N1 (Swine Flu) and 2000s the decades of infectious diseases and control of bacteria and viruses.

Major hotel chains, hospitals, cruise lines, schools/colleges, restaurant chains, property managers and major corporations are developing infectious diseases contingency plans. It began with the Norwalk Virus on cruise ships and MRSA in hospitals, The SARS Virus in China, and the widely spread N1H1 (Swine Flu). The concern is negative publicity, employee safety and, of course, legal liability.

Most infectious diseases contingency plans consist of the multiple interventions concept, which consists of the utilization of multiple disinfection technologies and procedures.

The problem with any HVAC Ultra Violet (UV) air disinfection system is that the air has to travel a long distance before the bacteria or viruses may or may not be killed. Let's say you have a virus and you sneeze.

- People spend 75-90% of their time indoors
- Exposure to airborne contamination is con siderable
- 50% of all major office buildings have contaminated heating, ventilation and air conditioning systems.
- Each person inhales over 3,500 gallons of air each day.
- Polluted air causes 94 per cent of respiratory problems.
- About 40,000 dust mites, a common household allergen, can live in one ounce of dust
- An estimated 10-15% of the entire population may be allergic to cat or dog dander
- A person sheds up to 700,000 skin flakes per day

In Print Media

The Economic Times, Delhi Dated June 5, 2012

More to come: food, water purification

The arrangement between Zeco and RGF may translate into a large scale representation of the US technical giant in India by the air-conditioning major for all its products. Currently, both parties are working towards solutions for air purification but both have plans to work on food sanitation and also water recycling on a large scale, says **Debasish Roy**

Siddharth Jain, director marketing Zeco Environmental Solutions, reasons that his company's US partner has every opportunity to outsource the manufacture of their air cleaning products to factories in China. However, the American company has consistently stuck to its guns (read quality standards) and held on to its own manufacturing facility on US soil.

The instance of launching this range of air cleaning products in India through Zeco Aircon's channel partners and distribution network has been brought about after a team of professionals have been working together in tandem continuously for the last few months.

The patriarch of the business house in India, Ravi Singhal, has masterminded the testing and evaluation of the US company's concept and products.

He wanted to make sure that his company was not going to deal with a doubtful product. The result: he and his team of testers were left with no doubt whatsoever about the efficacy of the product.

Having satisfied his own need to make sure of the product veracity, he delegated the implemantation of the roll out to market to his daughter and son-in-law,, Shikha Jain and Siddharth Jain respectively.

The duo took up the agreement and the other paperwork that was required to push this range into the Indian market.

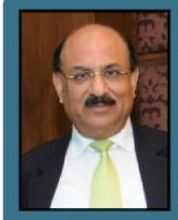
At the same time, they formed an action plan, which targeted all their currently active distributors who already were dealing with a share of the pie that was being

Most infectious diseases contingency plans consist of the multiple interventions concept, which consists of the utilization of multiple disinfection technologies and procedures.

The problem with any HVAC Ultra Violet (UV) air disinfection system is that the air has to travel a long distance before the bacteria or viruses may or may not be killed. Let's say you have a virus and you sneeze. Anyone within six feet of you has been potentially exposed to that virus. The fact that the airborne virus might or might not be killed in the UV air disinfection system is of no consequence. You have already been potentially exposed to it. The Advanced Oxidation technology looked promising as having the ability to kill an airborne virus within three feet. When you sneeze, you evacuate one lung of air volume. You expel about one gram of fluid at about 100 miles per hour. Advance Oxidation creates airborne plasma basically consisting of friendly oxidizers. Friendly being those found in nature that return to oxygen and water after they oxidize, such as hydroperoxides. The process is like misting the air with an atomized or very fine mist of hydrogen peroxide. A series of tests were conducted by Kansas State University, who works closely with Sandia National Labs. The first results were outstanding with a kill rate of 78% of a sneeze at three feet. A more advanced cell was later developed by RGF, REME or Reflective Electro-Magnetic Energy, that ionized the Advanced Oxidation plasma making it far more effective on a broader scope of contaminates. REME sneeze results were 99 per cent.

During the SARS scare in China, the government installed Advanced Oxidation Cells in city buses and subways after determining it killed the deadly SARS virus.

The breakthrough in the RGF Advanced Oxidation technologies is a group of oxidants known as Hydroperoxides. Hydroperoxides have been a common part of our environment for over 3.5 billion years. Hydroperoxides are created in our atmosphere whenever three components are present: oxygen molecules, water vapor and energy (electro magnetic). REME+ also has the ability to super charge these hydroperoxides or ionize them into Ionized-Hydro-Peroxides. Ionized - Hydro-Peroxides are very effective at destroying harmful microbial in the air and on surfaces. As oxidants, they do this by either destroying the microbe through a process known as cell lysing or by changing its molecular structure and rendering it harmless (which is the case in VOC's and odors). It does not require the pollutants to travel to the unit for treatment or filtration. This is proactive and sends ionized aggressive advanced oxidizers into the room to destroy the pollutants at the source, in the air and on surfaces, before they can reach the occupants of the space. The amount of hydroperoxides required to accomplish this task in a conditioned space is below the level that is constantly in our outside air. The Advanced Oxidation technology has brought the oxidants found in the outside air into the indoor conditioned air. One of the best features of ionized Ionized-Hydro-Peroxides is as they settle out of the air they disinfect surfaces.



Health is no longer available at a premium in India. It is a given and a constant demand from people who are the rising middle class with increasing incomes and better lifestyles. Zeco Aircon's new range of products bring into focus a constant need for clean air that is felt and asked for everywhere. Till date, Indian public places did not have any such way out. Today, it is possible and being implemented. Thanks to this project that has been launched.

RAVI SINGHAL, MANAGING DIRECTOR, ZECO AIRCON

The technology has been extensively tested under laboratory conditions and it does not need to be tested in real time conditions in India as the gases, particulate matter and other pollutants are essentially the same around the world.
We look forward to supplying Indian buildings with the ultimate health factor and introducing it seamlessly within their lives in the form of a product inserted into the air-conditioning cycle or as a desk top product.

WILLIAM SVEC, SENIOR VICE PRESIDENT, RGF ENVIRONMENTAL

I am a mother to be and I am the perfect candidate for the new range of products from Zeco Aircon for inhaling clean air throughout my time indoors. I want my child to come into this world free of all harmful bacteria and viri. For this, as a consumer I want a trouble free, seamless product, which provides me a stress free and germ free environment available off the shelf. Sounds like an ideal product as a great price. As a director, I am excited to deal with this project and am involved.

SHIKHA JAIN, DIRECTOR, ZECO ENVIRONMENTAL SOLUTIONS

Family run businesses have always successfully identified needs from communities and consumer groups in India. Zeco Aircon's foray into selling technologically cutting edge products will find exceptional acceptance within middle class and upper middle class buyers in India. This is a latent demand and will be met instantly with our range of products all over the country. We must start planning for phase two in no time at all.

SIDDHARTH JAIN, DIRECTOR, ZECO ENVIRONMENTAL SOLUTIONS

Our company has successfully dealt with this range of products in the developed economies and we want to carry this over to the developing economies as and when they are ready for its consumption. We are happy to team up with Zeco, a leading name in India in the HVAC space. I am glad that our products are adding value to Zeco's range of already successful and popular products that are sold through its network of distributor and channel partners.

SHARON RHINEHIMER, VICE PRESIDENT, RGF ENVIRONMENTAL

Water Recycling

The fresh water availability vis-à-vis population growth is on a constant decline thereby leading to a situation of water crisis. It is a general term used to describe a situation where the available water within a region is less than the region's demand. Water recycling should now be an industrial priority. Various technologies are available in today's world for Industrial Washwater Recycle System, Oil Water Separation Technology, The Universal Advanced Bio-Reactor, Advanced Grease and Odor Treatment System, Sewer Discharge Systems and the Grey (Domestic) Waste Water systems. These technologies can be applied to Military Bases, Waste Haulers, Car Truck Buses and Tractor repair shops, Agriculture, Universities, Government, Facilities, Sod Farms, Resorts, Camp Grounds, Domestic use and so on. It is worthwhile to mention that the machines can be designed to accommodate different customer preferences as well. 'Recycling can no longer be viewed as a necessary evil. It should be viewed as a viable cost reduction program and positive public relations vehicle'

Food Sanitization

Photohydroionization is a chemical-free, advanced oxidation technology utilizing high intensity ultraviolet light rays targeted on hydrated tri-metallic targets in a safe, low-level, humid ozone atmosphere. The resulting non-penetrating, ionizing UV radiation in an advanced oxidation atmosphere is a very effective and safe food sanitation method. The effectiveness of photohydroionization as an anti-microbial on food surfaces is basically the same as penetrating radiation: 99.9% surface microbial reduction up to 6 log reductions. RGF utilizes other advanced, friendly oxidizers to provide a food processor with a total anti-microbial package, such as ozone, which has been receiving a lot of attention in the

food industry as a friendly replacement for chlorine. Ozone is 3,000 times faster killing

bacteria and 150% more powerful than chlorine. RGF's three-part food sanitation process

utilizes ozone in water for safe, friendly and chemical-free food washing. Some of the Independent Laboratory Tests of RGF's Non-Chemical Photohydroionization, Ozone and UV Targeted Technology in Plant applications include Grain, Pork, Vegetables, Poultry, Seafood (Reducing the surface bacteria by over 90% and enhancing the increased shelf life up to 25%), Frozen Tortellini (eliminated listeria and E-coli at a pasta company) and ICE (Reducing E-coli by up to 99.99% in commercial ice machines). Some of the technologies available to sanitize food are Food Surface Sanitation Tunnel, Conveyor Belt Sanitation Hood, Integrated Ozone Contacting System, High Volume Fluid Sterilizer, Advanced Air Sanitation System and so on.

'Clean & Safer food by using Photohydroionization vis-à-vis traditional chlorine and radiation'

In Print Media

The Economic Times, Delhi Dated June 5, 2012

Energy Efficiency may Save Thermal Units ₹3,000 Cr in 3 Years

SHREYA JAI
NEW DELHI

As many as 144 thermal power stations across the country will be able to save ₹3,000 crore in three years by being energy efficient and save on coal consumption as well. Under its PAT (Perform, Achieve and Trade) scheme, Bureau of Energy Efficiency (BEE) has notified these thermal power stations a target figure for fuel consumption reduction, which will make them energy efficient by March 2015.

"One-fourth of our power capacity needs to be upgraded to be able to ensure that this target is met," said Ajay Mathur, director-general, BEE. The proposed target in the PAT scheme is around 3.2 million tonnes of oil equivalent which roughly translates into 6 million tonnes of coal required to produce electricity.

The implementation period for PAT cycle is three years, from April 2012 to March 2015. After completion of the first commitment period, the savings will be on an annual basis.

"Around 25% of the current installed thermal power capacity needs special attention as they are completely energy-inefficient," said Mathur. The current installed thermal power capacity is around 1 lakh mw. BEE calculates the efficiency of a thermal power plant on the basis of the design value of individual power stations. "On this basis, the target for their fuel consumption reduction has been worked out. The efficient plants have fewer targets whereas plants operating far away from the designed value has higher target," said Mathur.

Over achievement by a power station will be converted into tradable 'Energy Savings Certificate' at the end of a targeted year, which it can sell to the ones who couldn't achieve the targets. These savings though will not directly reflect in the bill of consumers for now, but subsequently with less consumption of coal, BEE expects that cost of power will drop.

The Times of India, Lucknow Dated June 6, 2012

'Green economy may lead to equitable growth'

TIMES NEWS NETWORK

Lucknow: A unique 'Paryavaran Mela' was organised on the occasion of World Environment Day at Regional Science City in association with Centre for Environmental Education (CEE) on Tuesday. Dignitaries who spoke to the students on this occasion included Atul Jindal, project director, forest department, UP and Preeti Kanaujia, coordinator, Centre for Environmental Education.

About 500 students and parents participated in the celebrations of World Environment Day. Atul Jindal, who was the chief guest of the function while interacting with the students said that the theme for the World Environment day-2012 is "Green Economy: Does it include you?". He informed that the UN Environment Programme defines Green Economy as one that results in improved human well-being and social equity while significantly reducing environmental risks and ecological scarcities.

He said that people should actively indulge in bringing about sustainable and equitable development and should promote green economy.

Preeti Kanaujia said that protection of the environment can help in improving economic development because it nurtures our natural capital like forests, water, soil and foodstocks. "We all should utilise this day to make a new start towards protection of the environment," she said. Various programmes organised for the students can prove very helpful in emanating concern for the environment in their minds. Reckless use of natural resources can lead to disastrous consequences in future and it is very essential to create awareness about environment in the children's mind," she pointed out.

On this occasion, a series of environment related educational programmes like creative art and craft corner based on clay modelling and hand/ face painting, hands on corner based on pottery, card making contest, quiz contest, treasure hunt games, puppet show related to environment were organised for the children.

In Print Media

The Times of India, Lucknow Dated June 6, 2012

Even The Best Performers Got 40 On A Scale Of 0 To 100

Iron cos don't meet green norms

TIMES NEWS NETWORK

New Delhi: The iron and steel industry might be recording an 8% annual growth but it's struggling to meet environmental norms in the process, the Centre for Science and Environment concluded, while rating the industry for its performance.

The results of the study were released by environment and forests minister Jayanthi Natarajan and Planning Commission member Arun Maira in New Delhi on Monday.

After a two-year study, the Delhi-based green NGO said that Ispat Industries, Raigad, Maharashtra performed the best among the 21 plants of above 0.5 million tonne per annum capacity, followed by Essar Steel, Hazira, Gujarat and Rashtriya Ispat Nigam Ltd (Vizag Steel), Visakhapatnam.

Even the best performers, CSE noted, got a maximum of 40 on a scale of 0-100, with the steel industry performing on an average far below the global best and one of the worst performers when compared to other large industries that CSE has rated previously, such as the cement, paper and pulp industry.

A majority of the companies did not meet environmental compliances, the report went on to add.

"For us, this rating has come as a bit of shock. We ourselves are shocked with the scale of non-compliance. This sector has the ability to fix it as it has money, most of the companies are profitable," said Sunita Narain, director general of CSE.

Down To Earth

Untreated waste flowing out of the Tata Steel plant at Jamshedpur

The Times of India, Lucknow Dated June 6, 2012

Min: Encourage kids to build bond with trees

TIMES NEWS NETWORK

Lucknow: Saving trees is must to save environment. On the occasion of World Environment Day on Tuesday, state labour minister Waqar Ahmed Shah said there is a need to create awareness among children, especially at the village level, so that they develop an emotional connect with trees. "Let them plant trees under the names of their family members and that will develop a bond with trees," he said. The minister was the chief guest at the World Environment Day programme organised by the forest department. The theme for this year's World Environment Day was "Green Economy: Does it include you?"

Chief secretary Jawed Usmani said to save environment, development schemes should be environment-friendly. He also called for active participation of people in saving environment. RK Pachauri, director general, The Energy Research Institute, said, "The worst fallouts of climate change, the frequency of heat waves and extreme precipitations will go up in years to come, if nothing is done to save environment."

"The biggest cause of climate change is human activities," he said. The impact of climate change can be mitigated if the states install early warning systems. Pachauri said his institute can help UP forest department "use knowledge" in battling the impacts of climate change.

He said the state should assess the potential of non-conventional sources of energy. "The revival of state's natural wealth should be the focus of developmental policies," he added. Minister of state for zoological gardens SP Yadav expressed concern over loss of green cover. "Forests are getting wiped out gradually and there are no incentives for planting trees," he said.

Several other institutes also celebrated the World Environment Day. The Regional Science City organised a Paryavaran Mela in association with the Centre for Environmental Education. The National Botanical Research Institute (NBRI) also organised several programmes to mark the day.

GREEN DRIVES

Director SGPGI prof RK Sharma planting a sapling

Tree plantation at SGPGI

To mark the World Environment Day, a tree plantation ceremony was held at SGPGI. About 25 saplings of Maulshree trees were planted at the lawns of SGPGI's administrative block. SGPGI director Prof RK Sharma started the ceremony by planting a sapling and tying a rakhi on it, pledging to protect the trees. Faculty members, officers, and staff also planted saplings. Prof Sharma said, "Keeping the environment clean, green and pollution free has always been the prerogative of SGPGI, hence a green belt was laid out in the institute. It is the duty of all of us to not only plant trees in abundance but to take care of them and protect them."

Exhibition on environment: On the occasion of World Environment Day, the Katarniaghat foundation organised an awareness about benefits of balanced environment was organised at Lal Baradari on Tuesday. Rupak De, PCCF (wildlife), inaugurated the programme. A picture exhibition was also organised on the occasion. Rupak De exhorted people to come forward in conserving the environment.

Green Pledge campaign: On World Environment Day, The Times of India and GAIL India Ltd organised a Green Pledge Signature Campaign to spread awareness on turning our city greener and cleaner. Four graffitti boards were put up at Hazratganj on which people wrote their suggestions for a better environment. Some jute bags were distributed as symbol of the Go Green theme. More than 2000 people took part in the signature campaign.

A graffitti board put up at Hazratganj

In Print Media

The Times of India, Lucknow Dated June 6, 2012

Increasing vehicles amplify city's air, noise pollution levels

CAG Slams UPPCB For Failing To Evolve A Plan To Control Air Pollution

TIMES NEWS NETWORK

Lucknow: The 8.68% rise in the number of vehicles during 2011-12 has taken its toll on city's ambient air quality. As a result, there is no let-up either in the air pollution or the noise pollution levels. The increase in the number of vehicles has also led to a rise in the concentration of fine particulate matter in the air.

The ambient air quality assessment report released by the Indian Institute of Toxicology Research on Tuesday, shows rise in pollution levels for residential, commercial and industrial areas of the city. The Respirable Suspended Particulate Matter (RSPM) level at nine monitoring locations was found to be higher than the National Ambient Air Quality Standard.

When the data for this year was compared with the previous years, it showed an increasing trend of air pollution, except Indiranagar and Alambagh. The concentration of gaseous pollutants has also increased, as compared to last year. The only respite is that the levels recorded are within the prescribed national standards.

The rising level of air pollution indicates that state agencies have failed to fulfil their role. The Comptroller and Auditor General in its report on May 30, had pulled up the Uttar Pradesh Pollution Control Board (UPPCB) for not performing its role effectively. The report said that the board has failed to plan a comprehensive programme for prevention and control of air pollution in Lucknow since its inception in 1975. Low priority was accorded to environmental issues by the state government, as expenditure on it was reduced from Rs 14.08 crore (0.025%) to Rs 3.11 crore (0.002%) of total expenditure of the state during 2005-11. The CAG report further observed that 23 out of 82 recognised private centres meant for checking the level of vehicular emission have not upgraded their software, but have still issued Pollution Under Control certificate.

Infographic: Anil Dinod

HARD ON SENSES

PRE-MONSOON ASSESSMENT OF LUCKNOW'S AMBIENT AIR QUALITY

TOTAL VEHICLE POPULATION IN LUCKNOW CITY AS ON MARCH 31, 2012

13,14,705

Growth of vehicles over 2009-10

8.68%

ROAD TRANSPORTATION (percentage change from last year)

Two wheelers	Three wheelers	Cars	Buses	Taxi	Jeep
8.43%	11.71%	10.69%	5.55%	15.71%	9.15%

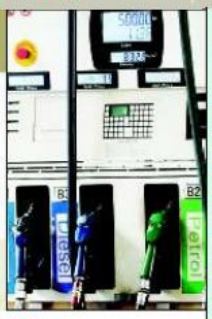
Multi-articulated	Light medium and heavy weight vehicles	Light commercial vehicles
10.14%	2.29%	5.70%

Total number of filling stations (Petrol/diesel/CNG) 100

Consumption of petrol	Consumption of diesel	Consumption of CNG
1,24,805 kl	1,30,372 kl	2,14,39,460 kg
Increase in consumption	Increase in consumption	Increase in consumption kilolitres
3.95%	3.73%	12.15%

Major source of pollution | Automobiles, DG sets, civil constructions

Parameters monitored | Particulate Matter (PM10 and PM2.5), gaseous pollutants and heavy metals (in traces)



AIR QUALITY MONITORING LOCATIONS

Residential | Aliganj, Vikasnagar, Indiranagar and Gomtinagar

Commercial cum traffic | Charbagh, Alambagh, Aminabad and Chowk

Industrial | Amausi

TRENDS OF AMBIENT AIR QUALITY IN CITY

Respirable Suspended Particulate Matter (RSPM) | All the residential locations, except Indiranagar, have become more polluted as compared to last three years. In commercial areas, only Alambagh showed decreasing trend and Amausi recorded higher value of RSPM. The values recorded at all places are higher than the National Ambient Air Quality Standards (NAAQS).

Sulphur Dioxide (SO2) | Indiranagar and Aminabad recorded values lesser than the last year. The values recorded at all the locations in the city are lesser than NAAQS.

Oxides of Nitrogen (NOx) | All the monitoring locations showed an increasing trend over the last years, though the values recorded were lesser than NAAQS at all the places

Ways To Go Green

- Encourage plantation along roadsides and in public parks
- Encourage and strengthen public mass transport
- Improve traffic management
- Remove roadside encroachment
- Prevent fuel adulteration
- Increase use of alternative fuel like CNG
- Travel at moderate and steady speed (to reduce emissions)
- Restore footpaths
- Fix congestion charges for certain areas for peak hours
- Encourage regular sweeping of roads to avoid re-suspension of soil dust
- Improve engine efficiency and fuel quality
- Run public awareness programmes for automobile pollution
- Remove pressure horns from vehicles

In Print Media

Deccan Chronicle, Hyderabad Dated June 7, 2012

Indian firms gain green foothold

MONU RAJAN | DC
HYDERABAD, JUNE 6

In what is a sea change from the days when going green meant a sacrifice for a greater cause or a part of an image-building exercise, Indian companies today see it as a means to substantially cut operational costs.

"India has the largest green building footprint in the world, next only to the United States," CII president Adi Godrej said at the GBC on the occasion of World Environment Day, "and with projections that built-up space will see an expansion of 80 billion sq.ft by 2022, the business opportunities for green technologies are tremendous."

Indian IT leaders TCS and Infosys were ranked seventh and eighth on a Newsweek list of most green companies in the world last year. Infosys has also been identified as one of the top 25 performers in Caring for Climate Initiative by UN Global Compact and UN Environment Programme.

According to Infosys executive co-chairman Kris Gopalakrishnan the company is committed to becoming "carbon neutral across all our emissions by 2018 and sourcing 100 per cent of electricity requirement from renewable resources."

"Over our FY 2008 levels, have reduced our per capita energy consumption by 30 per cent by FY 2012. Considering we consume 271 million units of electricity across all our campuses, that would mean a savings of ₹75 crore this year compared to 2007-2008 levels," said Rohan Parikh, the head of green initiatives and infrastructure at Infosys Technologies told this correspondent.

A recent World Economic Forum report indicated that "inability to meet energy demand could be the single biggest constraining factor to India's growth story."

Green buildings have superior heating, ventilation, and air conditioning technologies, which make optimum use of natural light and are significantly less energy-intensive for cooling purposes.

The Infosys campus at Pocharam in Hyderabad — the fourth of the company's LEED Platinum buildings, the highest such rating for a green structure — makes use of a certain radiant-technology to ensure building temperature is maintained at comfortable levels.

Highlighting the change of mindset among corporates, green construction products maker Hyderabad Industries managing director Abhay Shankar said an increasing number of companies are adopting greener technologies as they see long term benefits in such a move.

While registered green buildings formed just around 20,000 sq.ft in 2003, the current figure is 1,650 buildings with a floor space of 1.16 billion sq.ft, according to figures from the Indian Green Building Council, an initiative by the CII, which has been pioneering efforts on going green.

While India looks to be leading the global charge in green building construction, it is but natural that green becomes the norm to stop power woes from pulling the plug on the charging elephant.

GREEN INDIA

- India has the largest green building footprint in the world, next only to the United States.
- TCS and Infosys have been ranked seventh and eighth on a *Newsweek* list of most green companies in the world in 2011.
- Infosys is committed to become carbon neutral across emissions by 2018.
- It plans to source 100 per cent of electricity requirement from renewable resources.

THE FLOOR SPACE OF GREEN BUILDINGS HAS RISEN TO 1.16 BILLION SQUARE FEET TODAY FROM JUST 20,000 SQ.FT IN 2003

Deccan Chronicle, Hyderabad Dated June 7, 2012

SOLAR-POWERED PLANE MAKES HISTORY

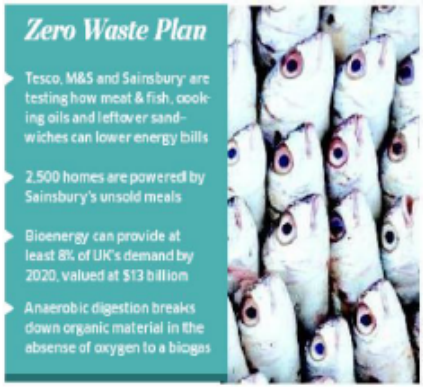
Rabat: Swiss pilot and adventurer Bertrand Piccard has flown his way into the record books again after completing the world's first intercontinental flight in a giant solar-powered plane. Piccard, a 54-year-old balloonist, landed in the Moroccan capital of Rabat late on Tuesday after completing the 19-hour voyage from Madrid on his experimental carbon-fibre aircraft. His wife Michele as well as flight organisers and Moroccan officials, gathered to witness the touchdown of the Solar Impulse.

In Print Media

The Economic Times, Delhi Dated June 7, 2012

Chicken Fat, Fish Heads, Leftovers Light UK Homes

LOUISE DOWNING BLOOMBERG



Fish heads and chicken fat are being turned into electricity by the UK's largest retailers including Wal-Mart Stores that ship food waste to power plants to reduce garbage-removal fees. Tesco, Britain's biggest supermarket chain, along with Marks & Spencer Group, John Lewis Partnership's Waitrose, William Morrison Supermarkets and J Sainsbury are testing how meat and fish, cooking oils and leftover sandwiches can lower energy bills and landfill costs when they're transported to plants for converting into power.

Companies around the world have invested about $18.2 billion in waste-to-energy assets in the past five years, according to Bloomberg New Energy Finance. Waste Management, North America's biggest trash hauler, purchased stakes in eight companies developing systems to convert rubbish into electricity, fuel and chemicals. In Brazil, cities are building incinerators that burn trash to produce electricity.

Bioenergy can provide at least 8% of the UK's demand by 2020, valued at about $13 billion at today's oil prices, the government forecasts. Supermarkets are motivated by a landfill tax that makes it increasingly costly to bury waste. The tax starting in April was £64 a tonne and is set to increase by £8 a year.

"Diverting food waste from landfill to anaerobic digestion is a no-brainer for the supermarkets — landfill charges and energy costs are only getting more expensive," said Niamh McSherry, a food retail analyst at Berenberg Bank. Anaerobic digestion breaks down organic material in the absence of oxygen to make a biogas that can be burned to generate power. Electricity from this process currently costs about $142.80 a megawatthour, according to data from the London-based researcher Bloomberg New Energy Finance. This compares to coalfired power that costs $78 a megawatt-hour. Waste-to-power projects in the UK benefit from state subsidies under the government's Renewable Obligation program that requires utilities to buy increasing amounts of electricity from clean energy sources.

The Economic Times, Delhi Dated June 12, 2012

GENETICS AT GRASSROOTS

Tech to Lift Yield, Reduce Withering

Climate change threatens agriculture, but genomics comes to rescue

HARI PULAKKAT
BANGALORE

Kulvinder Gill, professor of breeding and genetics at the Washington State University in the US, describes himself as a dreamer and an optimist. One of his dreams is to make sure food production does not decline over the next few decades, when increasing temperatures act on the yields of major crops. Specifically, he is beginning a project with six other organisations in India to make wheat less sensitive to heat while flowering. "We hope we can solve the problem in four years," says Gill.

Wheat and rice, two major crops in India, are sensitive to rapid changes in temperature. An increase of 2 degree centigrade over normal during flowering will reduce the yield of wheat by 15-20%. An increase in 1 degree centigrade at night can reduce the yield of rice by 10%. India's average temperature is supposed to rise by at least 1 degree centigrade by 2050.

"We do not know how the increase in temperature will be distributed," says Krishna Kumar, senior scientist at the Indian Institute of Tropical Meteorology (IITM) in Pune. "In certain regions temperature can increase by more than one degree."

Till the 1990s, night temperatures in India had not risen much. However, in the last 15 years it has increased by at least half a degree, and is expected to increase at least as much in the next 15 years. Concomitant with temperature rise would come irregular monsoons, droughts, flooding, and prolonged heat and cold spells. All this threatens agriculture productivity, but genomics is promising to rescue us from disaster. Agricultural scientists understand crops better now mainly due to the enormous investments in genomics globally.

Gill's project aims to tap the natural resistance of certain crops to higher temperatures and transfer this property to wheat. Gill is not aiming at a few simple tweaks of wheat genes. He has to understand the complete machinery behind the tolerance to heat of some crops, and then transfer this property to wheat. To finish the project in four years, his lab and the six organizations have to work together like a clock, in perfect sync with each other. Yet Gill is not making some blind estimates. He has deep experience in the genetics of crops and has transferred many complex traits before. "It is a difficult but not unrealistic goal to finish the project in four years," says KK Narayanan, MD of Tata group firm Metahelix Life Sciences in Bangalore.

The Bangalore-based Metahelix is one of the partners in the project, which is yet to start. The other private sector partner is Krishidhan Seeds in Aurangabad, and the project has four other universities and government organisations as well. Metahelix has its own project to develop heat-resistant bajra. Around the country, several organizations are preparing for climate change, working to use genomic technologies to develop traits like heat-resistance, drought tolerance, submergence (flood) tolerance and so on. They include the Indian Agricultural Research Institute (IARI), the International Crops Research Institute for Semi-Arid Tropics (Icrisat), Punjab Agricultural University and several agricultural research institutes in the country. "Use of genomics has the potential to increase the yield by up to 20%," says Vinod Prabhu, head of the department of genetics at IARI.

Prabhu's lab at the Pusa campus of IARI in Delhi has been working on the genetics of several crops. It has recently commercialised submergence-tolerant rice, which is able to withstand flooding. It is ready with temperature-resistant mustard. It turns out that the pungency of mustard oil – which makes it less acceptable to many people – can be removed with genetic engineering. Removal of erucic acid, which gives mustard the pungency, makes the oil healthier. With the added property of heat-resistance, mustard can be grown in South India as well in places where rice could not be planted due to poor monsoon. The IARI genetics department has long-term projects on heat-resistant wheat and drought-resistant rice, among other things.

Genomics technologies have improved over the last few years, making it possible for agriculture scientists to reduce fieldwork. Many Indian agriculture labs are now also well-networked and carry out parts of the project simultaneously speeding up research. In many cases, genomics allows researchers to study problems before they manifest as symptoms in the plant. Plus, conventional methods like breeding aid development of crops with special properties, helping farmers to use difficult conditions.

Metahelix, for one, has developed a temperature-resistant bajra for use in the hot areas of Rajasthan. With increasing irrigation, farmers there are trying to cultivate this crop in the summer, when temperatures reach 47 degree centigrade. Bajra grows well in the heat by its pistils (which receives the pollen) dry up in the heat making the plant infertile. Farmers are now in the middle of trials with heat-resistant bajra. Traditional breeding still has some steam left, but genomics can alter the course of agriculture over the next decade or two.

Food Genomics

THE AIM

The project plans to make wheat less sensitive to heat while flowering

The aim is that food production does not decline when increasing temperatures act on the yields of major crops

THE NEED

An increase of 2 degree centigrade over normal during flowering will reduce the yield of wheat by 15-20%. A rise of 1 degree at night can reduce rice yield by 10%

HOW IS IT DONE

The project taps the natural resistance of crops to higher temperatures and transfer this property to wheat

This and other projects use genomic tech to develop traits like heat-resistance, drought tolerance and submergence (flood) tolerance

For feedback, write to us at et.technology@indiatimes.com

In Print Media

Deccan Chronicle, Hyderabad Dated June 14, 2012

GARBAGE BURNING CONTINUES UNABATED

DC CORRESPONDENT
HYDERABAD, JUNE 13

Indiscriminate burning of garbage is continuing unabated in the city, posing a threat to the lives and properties of citizens, besides causing health problems. The fire at the exhibition at Kukatpally is suspected to have started from burning garbage.

Acute shortage of garbage bins and irregular clearance of garbage were the main reason for garbage being burnt, revealed investigations.

GHMC sweepers burn rubbish in the bins to prevent paper and plastic from spilling on to the road, thus undoing the work they have done.

A contractor who has hired 11 workers to sweep a road in the city said, "Regular lifting of garbage and adequate number of bins will put an end to garbage being burnt. If garbage is lifted regularly, the sweepers need not fear that it will spill on to the roads."

Currently there are less than 3,800 bins in the city and the numbers are decreasing. Many bins were removed following complaints from citizens who did not want a dump near their residences. The city requires over 10,000 bins to eliminate open garbage dumps.

GHMC additional commissioner L. Vandan Kumar said orders had been placed for new bins and standing instructions would be given to sweepers not to set garbage on fire.

In Print Media

The Economic Times, Delhi Dated June 15, 2012

Recycling E-Waste for Moolah Magic

NITIN GUPTA
Co-founder, Attero Recycling

Even as the digital revolution gains pace, the ensuing by-product, continues to get a short shrift in the country. It is exactly this mess that Attero Recycling aims to clean up. The five-year old Noida-based startup, founded by brothers Rohan and Nitin Gupta, handles almost 500 tonnes of e-waste every month. Attero has developed its own proprietory technology that extracts precious metals, including, copper, lead and gold, and also recycles hazardous materials emanating from electrical appliances.

"It is a billion-dollar market in India, and growing at 25% year-on-year. Plus, we also get carbon credit approvals for re-cycling the waste," Nitin Gupta, chief executive, Attero, pointed out. The company has set up an automated and integrated electrical and electronic waste recycling plant in Roorkee, and currently services 100 cities across 22 states in the country.

"There was no infrastructure in India to handle e-waste. Some precious metals would be extracted using very crude methods, before the entire device was dumped in some scrapyard. I don't think anyone knew the opportunities that existed," Gupta said.

But Attero's business plan has caught the eye of the country's risk capital players. The company has raised over $10 million from marquee venture capital funds, including, NEA-IndoUS Ventures, Draper Fisher Jurvetson and Granite Hill India Opportunity Partners. Inter-national Finance Corp, the investment arm of the World Bank has also stepped in as an investor. "We are considering going for our next round of funding around later this year, or early 2013," Gupta revealed.

But it has not been smooth sailing. A lack of regulatory foresight when it comes to e-waste, and a lack of proper waste disposal practices has made it hard for the firm and to scale. "It's a very niche sector, therefore, getting investors interested, is tough," Gupta said.

Biswarup Gooptu

3 TIPS TO RAISE MONEY

One can't start off by looking for funding. Get your marketing and operating plans in place first.

Don't go for the first term sheet you see.

Make sure you do not take too money, too early

The Times of India, Lucknow Dated June 16, 2012

State all set to wear green look

More Than 4 Cr Saplings To Be Planted

TIMES NEWS NETWORK

Lucknow: The state will be made greener by about four crore trees this monsoon. The forest department has set the target for plantation for 2012-13. The plantation will be done by forest and other government departments like PWD, irrigation, energy, rural development and others. The state's 61,450 hectare area will be made green under the annual plantation project. The last year's target was 55,000 hectare.

The biggest chunk will be planted by the forest department. It will plant 2.9 crore plants in the state, over an area of 45,000 hectare. The plantation will extensively be done in forest land, gram sabha land, agricultural fields, along roadsides, canals and rail tracks and private land.

The other departments have been given a lesser target as compared to the forest department. They will together plant trees on 16,450 hectare area. The plantation will begin at the onset of monsoon. "We will start as soon as 6 to 8 inches of soil gets wet," said sources in the department. It might happen after it rains sufficiently well for two three days at a stretch.

The targets were decided in January. The department has to complete the soil work by March. "That is done and the wait is on for rain," said sources. Plantation begins with the state observing Van Mahotsav on July 1. But, in case monsoon does not arrive by then, the plantation efforts will have to be kept waiting. The effort to raise green belts though will start on July 1.

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In Print Media

Deccan Chronicle, Hyderabad dated June 18, 2012

GROWTH JOLT

Green index shows lower growth

NINA CHESTNEY
RIO DE JANEIRO, JUNE 17

Some large economies show significantly lower growth when natural assets such as forests and water are factored into growth indicators, an index showed on Sunday, a few days before an international sustainability summit starts in Rio de Janeiro.

The Inclusive Wealth Index was unveiled by the United Nations University's International Human Dimensions Programme on Global Environmental Change (UNU-IHDP) and the United Nations Environment Programme (UNEP).

Major countries' growth declines

The index showed that 19 out of the 20 countries experienced a decline in natural capital while six nations among them saw a decline in overall inclusive wealth

Scientists and environment groups have been pressuring governments to include the value of their countries' natural resources — and use or loss of them — into future measurements of economic activity to show their true future growth prospects.

The idea of an expanded indicator known as GDP+ to include GDP and natural capital will be on the agenda of the Rio+20 summit from June 20 to June 22, when environment ministers and heads of state from around 200 countries will try to define sustainable development goals.

The index shows the "inclusive wealth" of 20 nations, taking into account manufactured, human and natural capital like forests, fisheries and fossil fuels, instead of relying only on gross domestic product (GDP) as a growth indicator.

The index assessed Australia, Brazil, Canada, Chile, China, Colombia, Ecuador, France, Germany, India, Japan, Kenya, Nigeria, Norway, Russia, Saudi Arabia, South Africa, United States, Britain and Venezuela, from 1990 to 2008. Together, these countries accounted for almost three-quarters of global GDP over a 19-year period.

The index showed that 19 out of 20 countries experienced a decline in natural capital. Six nations also saw a decline in their overall inclusive wealth, UNEP said. — *Reuters*

The Economic Times, Delhi dated June 21, 2012

Recycling Water

HARSHAD BASTIKAR
Founder, Jaldhara

Harshad Bastikar, former vice-president & SBU head at Thermax, wanted to change the way water is managed in the country and to this end set up Jaldhara Technologies in October 2010. Bastikar says while almost 80-85% of each drop of water used can be recycled and reused, at least for non-potable purposes, high costs have hobbled the acceptance of recycling. That is why Bastikar began developing a water treatment technology in 2010 that can fit in a container and can recycle water at the point of generation and reuse. What this means is that his Grewa brand of plug-and-play modular water treatment units that was launched in April 2011 can be installed at an apartment block or a manufacturing unit where the waste water is generated. "Our products don't need big constructions. What used to be done in three tanks can be done in just one unit," says Bastikar, who claims that his solution is 40-45% cheaper than other solutions in the market. The company raised $2 million from Nexus Venture Partners in February 2011 on the back of the prototype they built. "They were convinced by our passion," says Bastikar, adding that the company was able to bring the product to market quickly because of the funding. The company, which had an order book of Rs 7 crore in 2011-12, has 20 clients including L&T, Club Mahindra and Unitech.

The entrepreneur says the focus will continue to be on acquiring customers. "Our biggest challenge is to change the existing mindset. People are only beginning to realise that recycled water is important and can reduce costs."

Radhika P Nair

3 TIPS TO RAISE MONEY

- ✓ **Be passionate** about what you are doing. If not you cannot convince others
- ✓ **Your product** or service should better the lives of your customers
- ✓ **If you** have a good product you will get money

Publication: The Economic Times Delhi;Date: Jun 21, 2012;Section: Special Feature;Page: 6.

The Future of CITIES

An R&D centre gives back more power than it takes; a residential complex and a hospital have cut power and water consumption by 40%-60%. Green buildings are gaining momentum and could account for 20% of all construction by 2030, reports Hari Pulakkat

Breathing Buildings

Despite being a skyscraper, the Shanghai Tower incorporates several sustainable features like complex rainwater collection systems, wind turbines, and nine interior gardens

The California Academy of Sciences in San Francisco reflects sustainability from base to the roof. Including using 30% less energy than mandated and substantial use of recycled materials

Bayer ECB Centre of Excellence, Noida

10,700 sq ft TOTAL AREA

NATURE OF BUSINESS: R&D centre

KEY FEATURES: Generates more energy than it uses

KEY BENEFITS: Avoided 68,500 kg of carbon dioxide emissions

Kohinoor Hospital, Mumbai

2 lakh sq ft TOTAL AREA

NATURE OF BUSINESS: Hospitals

KEY FEATURES: 24X7 operation with critical equipment

KEY BENEFITS: 40% less energy and water use

Beary's Research Triangle, Bangalore

930,245 sq ft TOTAL AREA

NATURE OF BUSINESS: R&D centre by private developer

KEY FEATURES: Unusual design, low-energy operation

KEY BENEFITS: Zero discharge, 54% reduction in energy consumption

If you want a taste of the green building movement in India, there are plenty of interesting places to visit in cities. ZedEarth, a residential enclave being developed about 20 km from the heart of Bangalore, is as good a place as any if your interest is in green homes. This 20-acre enclave is being developed for around 130 villas that do not rely on the external world for basic needs, barring 15% of its power requirements. It does not use deep bore wells but would have sufficient fresh water. No sewage or water or waste is let out of the enclave, except things like old electronic equipment or some recyclable items. Zed Earth is not sold at a premium. It does not use sophisticated technology either. It uses instead a sophisticated mindset to analyse the finer points of living and save resources. Most of its electricity needs are met by solar panels, and unused electricity is given to the grid. All the water is recycled, bio waste composted, and clinical waste used in 'scientific landfills' inside the enclave. Recycling agencies take care of the rest of the waste. The villas themselves are marvels of low-footprint design, bringing nature inside as much as possible. It restricts water and energy use by nearly 60% of non-green homes. ZedEarth is built by Biodiversity Conservation India Ltd (BCIL), which had built India's first platinum-rated green home in the city. Set up in 1995, BCIL has remained small and has focused on developing deeplyresearched and intensely-specific homes for different locations. "We consider ourselves pioneers rather than leaders," says its founder-chairman Chandrashekar Hariharan. This is because BCIL's efforts are increasingly being muffled by the din of larger and more ambitious projects now sprouting around the country. According to the India Green Building Council (IGBC), 450 million square feet of green homes have come up in India now. This is apart from the green homes certified by Griha, the agency managed by the Ministry of New and Renewable Energy (MNRE). The Indian green building movement is now so deep and vast that it promises to change the course of its construction industry. The country has 1.2 billion square feet of green buildings being built or ready, and pre-certified by Leadership in Energy and Environmental Design (LEED), of which IGBC is the representative in India. It has another 105 million square feet of Griha-certified buildings ready or being built. India's total built-up space is 25 billion square feet, and it is expected to increase to 80 billion by 2030. The share of green buildings in this construction boom could be as high as 20%. New cities, such as those coming up along the Delhi Mumbai Industrial Corridor (DMIC), would have a substantially higher green building component. Says Prem Jain, chairman of IGBC: "Since 60% of the buildings that would exist in 2030 are yet to be built, we have a big opportunity to develop environment-friendly cities in the country." IGBC estimates that green building products provide a $100-billion opportunity by 2015. The country's green buildings span a large variety. They include corporate campuses, residential complexes, R&D units, commercial complexes,universities, hospitals, factories, schools, hotels and so on. The truly environment-conscious aim for nothing less than a platinum rating, and sometimes exceed even all LEED requirements. The government, aided by the National Building Code and energy efficiency laws, has been pushing all builders to confirm to minimum standards in cities and towns. Some municipalities (Pimpri in Maharashtra is an example), seeing the reduced need for services in green buildings, now offer incentives in the form of lower taxes. New campuses of the Indian Institutes of Science Education and Research (IISER) are being developed as zero waste campuses. The green building movement has penetrated even slums, as is evident from the slum rehabilitation at Lonar in Maharashtra. Says Priyanka Kochhar, programme manager of Griha: "We develop ratings for green buildings right from slums to large multistoried complexes." Noida near Delhi is one of the nodes of the green building movement. The builder 3C was an early mover. 3C built what was the country's largest green apartment complex. Called Lotus Boulevard, this was planned as a 500-unit complex, but all of it was immediately sold out and the enclave ended with 3000 units. The success of thisproject and some incentives by the Uttar Pradesh government have led to a rush of green building development in Noida. None of them is probably more impressive than the Bayer ECB Centre of Excellence. It claims to have bagged highest number of points in its LEED certification process, making it the greenest LEEDcertified building in the world. The building is the R&D centre of Bayer Material Science. It is inside a larger campus of Bayer, with buildings that are attached to it electrically. The R&D centre, which has solar panels, draws power from the other building at night but gives it back during the day. Last year it gave back more than it took, thus making it a net-positive energy building, but Bayer claims it to be only a net-zero energy building. "We have ensured that we get segment-wise energy consumption data from each part of the building," says Ram Sai Yelaminchili, head of the centre. "That helps us monitor and control energy consumption efficiently." The R&D centre becomes a net zero energy building not by generating a lot of electricity but by incorporating features that are now becoming common in many platinum-rated green buildings in the country. It uses natural light during the day, and through good design – that uses a mixture of wall and glass – and orientation ensure that light gets through without heat. High quality foams insulate the building, making sure that heat is not let in during summer and not let out during winter. "It does not need very high technology to make a building energy efficient," says Jain. But high technology helps sometimes, and ingenuity helps even more than technology. Take the Beary Golden Research Triangle (BGRT) in Bangalore, a name inspired by both the triangular nature of the land and the Research Triangle in North Carolina. This building, when ready for occupation in four months, would be let out mostly to R&D units of companies. Two major multinational companies have taken up space for global R&D centres. BGRT has been pre-certified as a platinum-rated building – the final certification is usually given after the construction is complete and occupants have moved in – and it has design features that will become common in many large buildings across the country. Visitors would note from a distance the unusual alignment of the building. It slopes on one side, thus keeping out direct sunlight till late afternoon. The glazing lets light through but not heat. The air-conditioning is extremely efficient; the outgoing air partly cools the incoming air without mixing, and water cools it further and minimizes the energy consumption. It is designed to use air from outside for cooling when outside temperature is below a certain level, a feature that is very useful in the salubrious climate of Bangalore. Says Syed Mohammed Beary, chairman of the Beary Group: "This is the first time a private developer has built a platinum-certified commercial R&D space." Such features are part of many buildings certified by LEED or Griha. Technology comes in handy too, especially in large corporate offices. You could have the most energy-efficient lighting in the world, but leaving the lights on all the time defeats the original purpose. In the year 2008, a study commissioned by the US non-profit New Buildings Institute showed that some green buildings do not save energy as much as planned. Many green buildings now avoid this problem by becoming smart. "Smart technologies are necessary to minimise energy consumption," says Sandeep Dave, principal of Booz & Company, who studies smart buildings in the country. Many green buildings now use Intelligent Building Management Systems (IBMS) to optimise energy consumption. "IBMS is not just about controlling the entry and exit of people," says Srimanikandan Ramamoorthy, assistant vice-president of administration at Cognizant, who is overseeing the development of a large green campus in Chennai. In three other gold-rated campuses in the country, Cognizant has reduced per capita carbon dioxide emissions by 35% and energy use by 34%. "Many buildings are over-optimised," says Honeywell Automation India managing director Anant Maheswari. "IBMS can save 20-30% of energy used." Honeywell and other IBMS companies have been involved in a large number of green buildings in the country. While smart technologies are useful, smart strategy works even well after certification.

In Print Media

(Contd. from previous page)

That is how Kohinoor Hospital in Mumbai, Asia's only LEED-certified and platinum-rated hospital, slashed its electricity bills by a third, its water taxes by a fourth and substantially increased patient footfall after certification. "When we save on water and electricity costs, these benefits get passed on to patients who pay less for their treatment," says Rajeev Boudhankar, vice president of Kohinoor Hospital. Because of the nature of their business, which requires round-the-clock operation, hospitals find it hard to get LEED certifications. "You are open day and night, running facilities that are highly energy-consuming," says Sandeep Shikre of SSA Architects and IGBC member. This puts tremendous pressure on your power resources." The IGBC also awarded points to the hospital for some of its human resource initiatives, like encouraging employees to car-pool to work and limiting the total parking area to only 10% of the plan. Such extensions of the green concept are not uncommon in other green buildings. Wipro, which has the largest number of LEED-certified office campuses in the world, has now started looking 20 years ahead and merge its building futures with the master plan of the area. Its aim is to build an ecological plan that fits with the master plan. "We are linking sustainability across the supply chain," says Hari Hegde, Wipro's global head of operations. It is now studying the impact on the surroundings of a Bangalore campus that is being built. Companies now want to see how their campuses influence the life around them. Being green is acquiring a new meaning, which will drive the growth of sustainable cities.

In Print Media

The Economic Times, Delhi dated June 21, 2012

Rio Statement to Address India's Major Concerns

JAVED SAYED RIO DE JANEIRO

Indian officials say the agreement that will be ratified by government leaders at the Rio 20+ conference on sustainable development on Friday addresses their major concerns even as NGOs stepped up their opposition to the final text, saying it contained no specific commitments and no timetables. Government officials say the outcome document, called the "The Future We Want'', retains the principle of Common But Differentiated Responsibility (CBDR), which creates a firewall between the responsibilities of developing and developed countries, and the principle of equity, as the G-77nations, which includes India, were able to defeat the attempts of the European Union to dilute these principles during negotiations. The EU also wanted the outcome document to commit to the adoption of Sustainability Development Goals, which will replace the Millenium Development Goals. But, the G-77 took the view that the developed economies would have to agree to provide funds to the developing countries for meeting these goals, a condition that was not acceptable to the EU. India's position has been that the SDGs should be aspirational and non-binding, based on the principles of equity and CBDR, and should not impinge on India's domestic policy space. While EU had hoped that Rio+20 would also create the conditions for a lowcarbon, resource-efficient Green Economy, many provisions related to this have been diluted because of opposition from developing countries. India, too, has been opposed to the Green Economy norms that have been propounded by the EU. The outcome document calls for a wide range of actions, including beginning the process to establish sustainable development goals, detailing how the green economy can be used as a tool to achieve sustainable development, strengthening the UN Environment Programme, promoting corporate sustainability reporting measures, developing a strategy for sustainable development financing, adopting a framework for tackling sustainable consumption and production, focusing on improving gender equity; recognizing the importance of voluntary commitments on sustainable development, and stressing the need to engage civil society and incorporate science into policy; among other points. But it has clearly left NGOs disappointed who say the "watered down draft" has junked proposals for valuing biodiversity, reducing poverty and moving the global economy onto a more sustainable track.

Prime Minister Manmohan Singh, Chinese Prime Minister Wen Jiabao, US Secretary of State Hillary Clinton, UK Deputy Prime Minister Nick Clegg, Sri Lanka President Mahindra Rajapaksa, and 100 government leaders have flown to Rio for the summit, which has been held on the 20th anniversary of the Rio Earth Summit of 1992. But, the absence of US President Barack Obama, UK Prime Minister David Cameron, German Chancellor Angela Merkel, all of whom attended the G-20 summit at Los Cabos earlier this week, is being seen as an indication that economy, not environment is the most important issue facing the world today.

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Deccan Chronicle, Hyderabad dated June 24, 2012

'ZERO WASTE' PLAN TO BE LAUNCHED FOR GREEN CITY

DC CORRESPONDENT
HYDERABAD, JUNE 23

A "zero waste management" sanitation and environment programme to convert public spots into green and healthy places will be organised by We Love U, an international foundation, on June 24 and 25 in association with the SIRD Creed and Skinner Foundation.

The two day programme will start with an induction session. More than 200 members of the foundation will train and educate the residents to take up the responsibility of planting trees.

The two day programme will start with an induction session. More than 200 members of the foundation will train and educate the residents to take up the responsibility of planting trees.

According to Christine Lazarus, MLA, the foundation members will clean the entire area and plant avenue trees. The members will also distribute saplings to the each household at Adarshnagar, Shivarampally in Hyderabad. Majid Hussain, Hyderabad mayor, is scheduled to address the gathering on the second day.

In Print Media

The Economic Times, Delhi dated June 25, 2012

HUL Tests its 'Magic' Formula to Reduce Water Usage for Laundry

First product from India under Unilever's global sustainable living plan initiative

Magic to Save Water

An analysis by Unilever shows that around 38% of its water footprint comes from the laundry process

HUL's Magic becomes the second indigenous brand launched by HUL in the last seven years ago

It becomes the second indigenous brand launched by HUL in the last 7 years

All new launches by Unilever are part of its global commitment to halve the water use by 2020

Per capita usage of laundry products in India is just $2, almost half of China

Within the detergent segment, HUL added new categories with fabric conditioner brand Comfort & Rin Perfect Shine

₹13,000 cr The value of laundry market in India

SAGAR MALVIYA
MUMBAI

Hindustan Unilever is test marketing an after-wash laundry brand known as Magic that the company claims reduces water usage by two-thirds. Magic is used for rinsing clothes and is the first product to have emerged from India as part of an initiative called the global sustainable living plan launched by parent company Unilever.

It also becomes the second indigenous brand launched by HUL in the last seven years ago, the first being water purifier Pureit launched in 2005.

"It is estimated that by 2030, the supply of water in India would be half of the demand for it. Laundry is the easiest area to reduce water usage," Priya Nair, vice president – laundry category at HUL, said. "We have launched Magic to test market in the water scarce state of Andhra Pradesh."

Globally, parent company Unilever has so far launched a dry shampoo that doesn't need water, a hair conditioner that doesn't need to be washed away; detergents that clean at room temperatures and doing away with the need for hot water at 70 degree Celsius in washing machines; all part of the Anglo-Dutch firm's commitment to halve the water associated with the consumer use of its products by 2020.

An analysis by Unilever shows that around 38% of its water footprint comes from the laundry process — and a significant proportion of this on account hand-washed clothes, a practice widely prevalent in the developing world.

Unilever has set itself a target to reduce the water required in the laundry process by making rinsing products more widely available and by providing 50 million households in water-scarce countries with products that deliver cleaning but use less water.

Corporate social responsibility is not the only motivation driving the country's largest consumer products company. HUL's largest business — soaps and detergents — is fast reaching maturity in terms of penetration, forcing it to drive up-trading — or persuading consumers to buy more expensive or new products — within these segments for long-term growth, said analysts.

"Penetration in the core detergent segment is as high as 90%. HUL is trying to create newer consumption opportunities in the laundry portfolio both in the post and pre-wash space and expand the consumption spends," said Anand Mour of Ambit Capital.

Per capita consumption of laundry products in India is just $2, almost half of China. India's laundry market is the largest category in the home and personal care basket with annual sales of over ₹13,000 crore. Companies such as Procter & Gamble and Henkel compete with HUL.

Within the detergent segment, HUL has recently added newer categories with fabric conditioner brand Comfort and more recently a brand called Rin Perfect Shine, which was launched earlier this month.

In fact, HUL has significant exposure to high penetrated - low usage categories. Hence, the company has been adding newer products that it claims provides enhanced benefits. At the same time HUL has been introducing more expensive products to earn higher margins. A case in point is the sharp growth of liquid soap, shower gel, skin cleanser, fabric and hair conditioner products in its portfolio.

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In Print Media

Deccan Chronicle, Hyderabad dated June 29, 2012

Go-green plans put on hold

S. UMAMAHESHWAR | DC
HYDERABAD, JUNE 28:

The slowing economic growth has affected the sales of green building products, which have not yet gained acceptability among the crucial residential construction market, which is the volume driver in the real estate sector.

"The sales of green building products have taken a hit as companies cut down on spending due to slower economic growth in the country," said Abhay Shankar, the managing director of Hyderabad Industries Ltd, the flagship company of the C.P. Birla Group.

The consumption of high-end green products are mainly driven by companies, which find long-term incentive in the optimal use of space and power usage.

Mr Shankar said that his company's Aerocon brick and partition sales have been negatively affected by the slow down.

"Corporate expansions are likely to decrease due to uncertainties in the global economic situation, which will have an impact on business budgets in 2011," said Ashutosh Limaye, head of research and real estate intelligence service of Jones Lang LaSalle India.

However, Mr Shankar plans to go ahead with expanding the company's green product portfolio.

He wants to add capacity with an investment of over ₹100 crore in the current fiscal as part of the company's plans to reduce its dependence on cement sheeting business, driven mostly by rural demand.

The capacity addition, Mr Shankar believes, would enable the company to cater to increased demand once the economic growth picks up.

Slowdown takes sheen off green

While the high-end green products find takers among companies who see long-term incentive in it, the slowdown has forced most others, especially the crucial residential construction market, to spend less on such eco-friendly products

The Economic Times, Delhi dated June 30, 2012

Solar-Powered Cycle Rickshaw

Solarick Tourism, founded by two young entrepreneurs in Jaipur, has invented solar-powered cycle rickshaws. When charged with direct sunlight for six hours, the panels can store enough energy that allows the rickshaw to run for 45 kilometres. It also has electric charging options to help augment the charging capacity of the vehicle. The driver simply peddles the bicycle to kick start the motor, after which solar power kicks into for the ride, which can reach speeds of 20 kilometres per hour. The vehicle can comfortably fit three passengers for an innovative experience of eco-friendly transport, which sustains a tradition while also modernising it.

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