

Climate Change – A Catastrophe or a Gift Horse?

Oscar Wilde is supposed to have defined a pessimist as someone who complains of noise when opportunity knocks. Business cannot afford to be pessimist. Lee Scott, CEO of Wal-Mart and Stuart Rose, CEO of Marks and Spencer both admit that they started their sustainability drive as “a defensive strategy”, but it has turned out a cash cow creating value for both customers & company in an unprecedented way while protecting environment.

Climate change is an opportunity similar to the one this planet experienced millions of years ago when extreme drought forced hominids to adapt to new environment and brought humans with larger brains into being.

The social responsibility of the business has always been to enrich itself. In the knowledge economy of today the route to enrichment has changed. It now passes through social agenda and environmental uplift. The corporate social responsibility today has turned out to be corporate business opportunity. Businesses are burning midnight oil in proving who is socially or environmentally more responsible. While governments are struggling to cut CO₂ by mere 7% below 1990 levels, some smart companies have achieved spectacular results in their bid to drive a low cost economy.

HSBC bank & ITC claim they have offset their carbon impact and become carbon neutral. M & S claims they will soon become zero waste and have grossed a billion pound profit on the back of their sustainability, “Fairtrade”, organic food, and zero waste slogan “Just as our sandwiches disappear in your mouth so does our packaging.”

Radical advances in energy conservation are taking shape. Hybrid cars, solar panels, windmills, ethanol plants, nuclear fission, desalination, biofuels, organic farming, precision farming and bioengineering are but few examples. The evidence shows that industry is aggressively responding to environmental challenges with a wave of innovations in alternative energy. Brazil is already meeting 40% of its transportation requirements from ethanol. Bio fuels can be produced without sacrificing land for food crops. India’s 600 million tonne agricultural waste can generate equivalent of 80,000 mega watts of electricity, ie 60% of its installed capacity, and empower the rural India by creating 30 million new jobs. The experts of TechCast project directed by Bill Halal, Professor of Innovation and Technology at George Washington University detail “scores of new fuel cell technologies developed to create H₂ directly from biomass. Photosynthesis is offering the prospect of converting sunlight into energy as plants do, at 100% efficiency.”

Bill Halal in his yet to be published authoritative book "Technology's Future" talks about how tidal energy is being harnessed in Manhattan, France, and Nova Scotia. Geothermal energy is producing the first hydrogen economy in Iceland. Cold fusion is being re-examined because of new supporting evidence. Researchers at the University of California are converting the biggest problem in global warming - CO₂ - into oxygen and carbon monoxide, the primary feedstock for plastics and other products. Wind turbines are being developed that ride 10 Km up in the jet stream to capture 100 times as much energy, which is transmitted to Earth on supporting cables. The U.S. military and India are studying the use of solar satellites for producing energy.

Nanotech can provide plastic solar cells at \$0.20/watt and increase efficiency. Nanosolar Company is mass producing solar cells at far less cost by simply printing them, and expects to increase the global supply 20- fold. The world's largest solar power plant, located in the Mojave desert, is 30% efficient. The CEO says that "11 square miles could produce as much energy as Hoover Dam." The consensus is that costs will become competitive with other energy sources about 2012 to 2015, and some experts estimate solar and wind power will reach 10% of U.S. energy by 2013. The trend is unmistakable. California Edison increased

its use of renewables from 1% in 1985 to almost 30% today. The U.S. DoE thinks renewables will reach 28% by 2030, and the EU expects renewables to reach 22% of energy use by 2010.”

Melting of glaciers is reducing the water supply for future generations. Water promises to be in the 21st century what oil was in the 20th century. Gangotri glacier the font that supplies fresh water to millions in 106 India is receding by 23 meters every year. Desalination technologies will change the equation. According to TechCast studies, innovations in desalination have brought down the overall desalination costs from \$20 per gallon in 1950, to \$6 per gallon in 1960. The cost is now approaching 1 cent per gallon. Ovation Products claims it can distill water contaminated with anything into pure drinking water for 1 cent per gallon.

New business models are emerging which are material efficient and service based. The classic example is Interface Corporation, a \$ 1.1 billion company that provides “carpet service” rather than selling carpets. They learnt to recycle carpets and found recycling makes carpets last four times longer and uses 40% less fabric while reducing the amount of replaced carpeting by 80%. This resulted in 35 fold reduction in overall use of materials. Ray Anderson the CEO says: “Sustainability doesn’t cost. It pays. Our costs are down. Our products are the best they have ever been. Our people are motivated by a shared higher purpose. And the goodwill in the marketplace is astonishing. Doesn't it feel good to have this kind of commitment made by the company that you are part of? Don't you feel proud?”

Smart companies are not following piecemeal approaches to climate change. They realise that modern technology can give multiple benefits. The intimate interplay between a DNA molecule, the IT power, atomic matter, bioengineering has driven commercial innovation through the roof. Bridgestone, the Japanese tyre company no longer sells tyres in Europe. They charge customers on “pay as you use” basis. Tyres have sensors to track their usage. So instead of proliferating models, the company focuses on improving the durability of tyres. Because customers pay on usage, even the poor can afford thus the company enhances its market, improves its sales and boosts social inclusion.

Corporations are greening their businesses at an astronomical pace. Greentech stocks are hot as never before. Cleaner energy companies that attracted 1% of venture capital before 1999 are now getting 8% of all investment. The world market for pollution control was \$500 billion in 2000. It is expected to rise to \$10 trillion in 2020, larger than automobiles, health care and defence.

It was Einstein who said that the significant problems that we face today cannot be solved at the same level of thinking as we created them. Climate change is an opportunity that knocks after a million years & poses the biggest ever threat to the business as usual. It is time we cut out the act, stop looking the gift horse in the mouth and get real.