



The CLSA Clean & Green Update features our ongoing efforts towards a healthier environment.

CLSA has been taking a series of steps to promote the awareness of climate change among the public, investors and regulators as well as initiating creative and concrete measures to reduce our own carbon footprint.

There is much more to do, but we believe every little bit of energy reducing effort helps.



February 2007

Clean & Green Update

Clean & Green research

Well recognised for our innovative research, we have been highlighting key environmental issues in special-focus pieces since 2004. Our reports delve into the business issues Asian firms and investors are facing against the backdrop of a growing environmental crisis.



Sustainable homes: The trend towards energy-efficient housing looks at the technologies that homeowners increasingly use to reduce their impact on the environment. No longer a tree-hugging trend, energy efficiency has implications for stocks in the solar panel, fuel cell, geothermal equipment/installer, small wind turbine, light-emitting-diode bulb and utilities segments.

CLSA U

CLSA U is an executive-level education programme conducted by independent experts on a broad range of themes that impact Asian investment portfolios. Recent CLSA U Clean & Green topics include:



Asia goes gas: Natural-gas pricing and profits provides insights about natural gas and liquefied natural gas, its derivatives and prices as governments and users turn towards green-energy alternatives.

Dragon alchemy: China's hand in coal-to-oil substitution looks at the country's focus as it leads the effort to substitute ultraclean fuel and feedstocks for conventional oil products. As the most affordable fuel source, investment drivers behind coal conversion are considerable. In the long run, coal-conversion technology could provide a clean-coal energy solution that will have a structural impact on coal demand and the pricing levels of alternate fuel sources.

The emissions game: How markets can help save the planet outlines the basics of emissions trading and how it has evolved in different regions. Apart from a clearer sky, emissions-trading mechanisms imply significant earnings opportunity. Whether it is a developed state or developing country, all markets hold a card in the emissions game and, no matter who wins the trading game, the outcome - reduced pollution - will benefit everyone.

CLSA was the financial adviser on PNOC Energy Development's US\$334m December 2006 IPO - the world's second largest listed geo-thermal play







PNOC
The Energy Company

Energy Development Corporation



Sustainability at the Forum

-  All research printed on recycled paper
-  Air conditioning set to WHO acceptable temperatures
-  Recycling bins for paper as well as bottles
-  Staff flights all carbon neutral



Al Gore at the 3rd CLSA Japan Forum in Tokyo, March 2006

For more information on investments on the Clean & Green horizon, contact:




Andrew Pidden,
Chief Investment Officer
andrew.pidden@clsa.com
Tel: (65) 6512 2368

Anthony Wilkinson,
Head of Research
anthony.wilkinson@clsa.com
www.clsa.com

CLSA Japan Forum 2007

Since hosting Al Gore at the 3rd CLSA Japan Forum in 2006, we have featured many other leading energy thinkers as keynote speakers at our events around Asia to discuss the growing importance and implications of climate change.

This year, CLSA Japan Forum speakers include:









-  Daniel Esty, Yale Professor and author of *Green to gold: How smart companies use environmental strategy to innovate, create value and build competitive advantage*.
-  Roger Raufer, former UN adviser, University of Pennsylvania Professor and author of CLSA U Blue Book *The emissions game: How markets can help save the planet*.
-  James Newcomb, managing director of bioera, and author of several CLSA U reports on alternative energy.



Previous speakers include *Pulitzer Prize* winner Daniel Yergin, founder of Cambridge Energy Research Associates; Amory Lovins, founder of Rocky Mountain Institute; acclaimed scientist, conservationist and author of *The Weather Makers* Tim Flannery; environmental advocate and CEO of Civic Exchange Christine Loh; and visionary founder of the Chicago Climate Exchange, Richard Sandor.

Investing in Clean & Green

Clean Resources Asia LP (CRA) is an absolute-return fund managed by CLSA Capital Partners, our asset-management arm that manages US\$1.3 billion in assets. CRA is the first fund of its kind, investing in the high-growth theme of energy and resource efficiency in Asia.

-  CRA's theme of the month has been on recent policy changes:
-  US President's catch-up-with-consensus State of the Union address
-  Democrat-led congressional focus on fuel efficiency
-  Australia/China deal on uranium exports
-  EU's proposal to cut developed countries greenhouse emissions
-  UN/China talks on a China-based carbon exchange
-  Asean focus on biofuels, clean coal and alternative energy
-  California governor's move to mandate a 10% cut in the carbon content of transport fuels.

Although parts of Asia are far from rigorously implementing environmental legislation, there are encouraging signs that state and municipal actors like China's State Environmental Protection Agency are being given real authority to enforce environmental laws. This issue is one of the key drivers behind the CRA's theme.

Reducing CLSA's carbon footprint

CLSA aims to be certified to the international ISO 14001 standard for Environmental Management Systems (EMS) by April 2007. With environmental targets now set, we are reviewing how to reduce the consumption of materials - through reusing and recycling, water and electricity on a company-wide scale. We have already implemented policies for carbon-neutral staff travel and energy-efficient indoor air-conditioning systems. In the quest for environmental improvement, we encourage like-minded organisations to join us in pursuing carbon-reducing initiatives in their workplace. Check out CarbonNeutral.com for more on the issue of carbon-neutral travel.



Eau No!

One of the easiest things we can all do to play our part in the battle against climate change is to say no to bottled water. (Our enclosed Earth Day fact sheet provides more tips on living green.) Bottled water is no better for us than tap water. US-based Earth Policy Institute estimated that bottled water is 10,000 times more environmentally damaging than tap water because of the effort involved in extraction, packaging and transportation.

Given that people are dying every day because 20% of the world's population lacks access to safe drinking water, the fact that we are not prepared to drink what is available on tap seems ludicrous. Go on - ask for iced tap water in restaurants when the waiter asks 'still or sparkling?' - and just order the lobster if you are worried about appearing to be a cheapskate! If you are really bothered by the taste of tap water then buy a Brita filter, which removes any lingering traces of chlorine. And if you're still not convinced, just remember Bob Geldof's words of wisdom: 'Bottled water is boll*cks'.

More CLSA environmental research





Earth Day - Saturday 22 April

On 22 April, join some 140 nations as they celebrate the environment with a focus on global warming, deforestation and pollution issues. The original Earth Day was proposed for 21 March, the date of the vernal equinox, but on 22 April 1970, US Senator Gaylord Nelson sponsored a nationwide event that evolved into the current annual international celebration.



Around the world on biofuels

New Zealand sailor, Pete Bethune is seeking to break the official UIM* world record for circumnavigation of the globe by a powerboat in his trimaran named *Earthrace*. *Earthrace*'s quest will mark the first time in history that an official UIM Powerboat record will be attempted using only renewable fuels. The present record is 75 days, set in 1998 by the British powerboat *Cable & Wireless*. At over 24,000 nautical miles it's the world's longest race. The anticipated start date for the record attempt is 6 March 2007 - starting and finishing in Barbados.

Made using the latest in eco-friendly shipbuilding technologies, *Earthrace* is specifically designed to pierce through waves rather than go over them. Check for race updates on www.earthrace.net

*UIM = *Union Internationale Motonautique*
(www.uimpowerboating.com)

Greener living

We can all do our part to reduce carbon-dioxide emissions - it's really not that difficult. Here are some easy tips to get you started:

1. **Can you feel the electricity? Turn your electronics to standby**
Aside from saving money on energy bills, if just 20 people switch off their computer screens during the lunch hour for one week, 1kg of CO₂ would be saved.
2. **Buy energy-efficient compact fluorescent light bulbs**
If an office switched off 40 lights at night for a year, 10 tonnes of CO₂ emissions would be saved. According to Energy Star, if every US home replaced one light bulb with a CFL, the emissions cut would be equivalent to those of about 800,000 cars. (See our *Sustainable homes* report for related investment ideas).
3. **Get in shape: Walk, cycle or use public transport**
If you cycle or walk to work (4 km), in just one day you can save 1kg of CO₂. If 15 people joined a carpool for a year, 10 tonnes of CO₂ would be saved.
4. **Tune your car and inflate your tyres**
When you do drive, keep your car tuned and its tyres properly inflated to save on fuel costs as well as reducing carbon-dioxide emissions. A tune-up boosts fuel efficiency anywhere from 4-40%; a new air filter could get you 10% more miles per litre. Keep your car tyres adequately inflated for an additional 200kg of CO₂ savings.

P.S. Go green
In emails remind others to
conserve with a note:



Please consider the
environment before printing
this email.

5. Can you see me now? - Video-conferencing

Since 2003, we have been using our Virtual Odyssey machines to hold 3D videoconferencing meetings with those overseas - negating the need to travel. By not taking 100 flights (5,000km per flight) in a year, you could save 100 tonnes of CO₂.

6. Would you like something to drink? Filtered water

Switching to filtered tap water instead of consuming two plastic bottles saves 1kg of CO₂. One tonne of CO₂ would be saved if an office of 11 staff used mugs instead of plastic cups everyday.

7. Making copies: Use recycled paper and print on two side

Using 100% post-consumer recycled paper as copy paper saves 2kgs of carbon dioxide per ream of paper. If 21,000 one hundred-page documents were printed double-sided instead of single-sided, you would save one tonne of CO₂.

8. 'It's getting hot in here' - Adjust your thermostat

If you move your heater thermostat down two degrees in winter and up two degrees in the summer, you'd save 1 tonne of CO₂.

9. Reduce your household garbage

If you reduce your household garbage by 10%, you can save 1.2 tonnes of CO₂.

10. Know your footprint: Estimate your CO₂ output

For a customised estimate of your CO₂ output, use the following formula:

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|--|---|
| <p>1. Estimate gallons of gasoline purchased per month. (From last month's gasoline receipts, or number of miles driven monthly divided by your car's miles per gallon).</p> | <p>Units x Conversion factor = total
_____ gallons x 20 =
_____ lbs CO₂</p> |
| <p>2. Find your electricity bill from April or October (as an average for the year) and find kWh used or gather your electricity bills for the year and divide by 12.</p> | <p>_____ kWh x 1 =
_____ lbs CO₂</p> |
| <p>3. If you use natural gas, find your April or October bill (as an average bill) and find how many therms you used.</p> | <p>_____ therms x 12 =
_____ lbs CO₂</p> |
| <p>4. If you use heating oil, estimate total gallons purchased per year and divide by 12.</p> | <p>_____ therms x 12 =
_____ lbs CO₂</p> |

Monthly CO₂ emissions = _____ x 12 = _____ lbs of CO₂ of emissions annually

Sources: The CarbonNeutral Company, Climate Solutions, Stopglobalwarming.org



At CLSA we support sustainable development. We print on paper sourced from environmentally conservative factories that only use fibres from plantation forests. Please recycle.