ISSUE 2 January 2011

Hot air at UN climate debate?

The Cancun climate conference (COP16) achieved little in terms of its goal of tempering the climate. It did, however, get 193 countries to sign an accord. But Bolivia refused. Its chief negotiator, Pablo Solón, said: "These pledges contradict the stated goal of capping the rise in temperature at 2°C, instead guiding us to 4°C or more." These objections were "noted" and "consensus" was declared. COP16's main achievement was to increase the trust between participants. A path has been laid towards some concrete decisions at November's meeting in Durban.

The headline outcomes from COP16 are:

- Voluntary, but nonbinding pledges on cutting emissions were made by developed countries.
- Developing countries



agreed to look at how they can cut emissions.

- A green climate fund will be established. Disbursements, including the \$30bn in "fast start" funding already pledged, will be more transparent.
- The "reduce emissions from deforestation and degradation and increase carbon storage" (REDD+) proposal was approved.
- Carbon capture and storage (CCS) projects in

developing countries are now eligible for carbon credits.

- A clean technology knowledge sharing centre and network will be set
- Countries agreed that monitoring of emissions and removals is important.

Cancun has led to an agreement of principles to be worked on prior to COP17 in Durban in November.

World Climate Summit, Cancun

The first World Climate Summit took place during the middle weekend of COP16. Gathering over 800 delegates and 140 business, government and finance leaders, it is determined to accelerate economic solutions to climate change. Leading lights are people like Sir Richard Branson, Ted Turner, Lord Stern, Mary Robinson and Mexican President Calderon.

It is a collaborative, global, 10-year framework dedicated to helping governments, businesses and financiers to implement, scale and collaborate on bottom-up solutions to climate change.

To quote from the Carbon War Room (well represented at the conference): "Systems do not change themselves. The same stale, businessas-usual thinking that has driven us to our current state of emergency will continue to endanger our safety, our livelihoods, and our planet. We need new thinking, new leadership, and innovation to create a post-carbon economy. Our goal is not to undo industry, but to remake it into a force for sustainable wealth generation." Carbon War Room's Sir Richard Branson expressed his hope, "to get close to 17 gigatons out of industries in 10 years." wclimate.com

London gets a hydrogen bus

Transport for London's RV1 route from Tower Bridge to Covent Garden has started running hydrogen-powered buses. As you might expect, Mayor Boris Johnson is cocka-hoop about this.

It runs for 18 hours without refuelling and all that comes out of the tailpipe is water vapour. This makes for cleaner air in London, but its overall impact on global emissions rather depends on how the hydrogen is extracted in the first place and what is done with the atmospheric byproducts of that process.

One hopes that Boris is keeping a close eye on this sort of thing.



NEWS

The good, the bad and the downright daft from B & Bs are going home and abroad.

TRAVEL

Britain's hotels and green! p.13

MONEY

Get a balanced view of investing for your future. p.20

ENERGY

Why not get FiT and make a profit too? p.15

SHOPPING

Valentine gifts for loved ones and the planet. p.26

CONTENTS

MAIN FEATURES

16,17 The View from 2020 2 0 2 0



26, 27 Valentine's Shopping



NEWS

1,5,9 News

6, 7 **Our Planet This Month**

THINKING ALLOWED

3 **Have Your Say**

25 **Climate Confusion**

MONEY

20 The Future of Ethical Investment

21 Money, Money, Money

24 **Balancing Your Values & Your Investments**

22, 23 Map of Ethical IFAs

BUSINESS

29 **Embracing Uncertainty**

HOME

10 **Get Your House in Order**

11 **Green Cars**

15 FiT for Purpose?

LEISURE

Green Travel 13

28 **Films & Books**

31 **Cartoon**

NEED MORE?

4 **Vouchers**

8 **Newsletter**

14 **Travel**

30 Links

Need More

Why Blue & Green Tomorrow?

We're indebted to Douglas Adams for writing The Hitchhiker's Guide to the Galaxy, in which he describes Earth as "an utterly insignificant little blue-green planet". Now you know where the title comes from ...

Our magazine is for thinking people who'd like our planet to be as blue and green tomorrow as it was yesterday.

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EDITORIAL

In the previous issue of *Blue* & Green Tomorrow we asked you for feedback. We really do want to shape the magazine to your needs and interests and we do listen carefully to what you say, good or bad.

A great example of this was the request from Lesley Collins who wanted sober coverage of the UN's COP series of climate conferences. The 'received wisdom' was that not much happened in Cancun apart from a lot of emissions of hot air during the conference and emissions to get there.

Well, thanks to reader Lesley Collins, we dug deeper and discovered the parallel mini-conference in which huge businesses from around the globe are pledging to cut billions of tons of emissions and waste from their operations.

Their conference, called World Climate Summit (WCS), is in marked contrast to the main event in which all the countries of the world are seeking a political way forward. This organisation is determined to weld business, finance and politics together. Christiana Figueres, Executive Secretary of the United Nations Climate Change Secretariat, has pointed out: "The progressive approach [of the COP process] is probably a sane approach but it is in stark contrast to the urgency of the matter."

So we have a two-speed system: a global political

process that has to build in incremental but soundlybased steps and a business and financial system that can be mobilised relatively quickly, and pledge huge savings in realistic timescales.

They are driven by other major forces, such as their customers and their bottom lines, which are entirely complementary to their responsibilities to the environment we share.

All of which brings us back to the point of this editorial, which is that, thanks to a reader, we went off on a substantial expedition into the highways and byways of the climate change conference process and, along the way, picked up a lot of interesting (we think) insights. It doesn't mean we're going to obsess about this sort of thing, but it is certainly firmly on our radar.

This issue of Blue & Green Tomorrow contains a mix of stories, insights and speculation. Some of it you'll agree with, some you'll be able to provide a deeper insight on and some you'll flatly disagree about. All reactions are okay by us. And we'd love to hear from you so we can start making the magazine a product of all our minds, not just the editorial team and the contributors.

Thank you for your time. We look forward to hearing from

David Tebbutt, Editor



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HAVE YOUR SAY

We love to hear from vou, whether vou're extending a brickbat or a bouquet; that's how we fine-tune our magazine to your needs. Whenever the urge takes you, please put fingers to keyboard (or pen to paper).

The Blue & Green front of W11?

Today I received your magazine. Interesting BUT, the advertisers and general slickness left me with the impression that it is a "front" for several organizations. Until I understand who owns this publication I am not interested in receiving it.

George Robbins, Company Director, Sussex

Thank you for the "general slickness" comment. The small team that produces it are all publishing professionals, which probably explains that. The project is a start-up and is only a "front" in the sense that we partner with companies that share similar values. We are completely transparent about this - we like them, they like us and we support each other.

Cancun hot air

I hope you will provide some considered coverage of the failure of Cancun to deliver a real political consensus around climate change. It

seems that corporations, who see threats to their long-term profits, and individuals, who see threats to their children's futures, are doing more than the political classes. There was a lot of hyperbolic hot air from both sides of the debate around Cancun and the previous Copenhagen farce. It would be great to read a considered long view before the next event in Durban in

Lesley Collins, Event Organiser, Warwickshire

Thank you for your suggestion. We have been carefully considering how much space to allocate to these events. Our instinct is to simply report any interesting outcomes, good or bad. We agree with you that it will be real people doing real things that will change our world for the better despite, rather than because of, the climate conference merry-go-round.

I don't want to be a tree

Did the editorial team know that the UN has declared 2011 the International Year of Forests? The World Bank estimates that forestry trade represents more than the economies of all but 31 countries globally. They also estimate that deforestation accounts for a fifth of global greenhouse gas emissions. Untouched, they store twice the tons of carbon found in the atmosphere. We are potentially losing 100 species per day, species that may contain the natural solutions of many of the world's

problems requiring medical or technological innovation. 32% of the land on earth is forest and we lose 1% every 4 years, meaning that by the time my new born son is my age (40) we will have only 22% forestation. I cannot imagine the world he would live on when forests represent a fifth rather than a third of the earth's land surface. Maybe your magazine will have to be called Blue & Brown Tomorrow

Dale Atherton, Business Analyst, London

Well you've provided some sobering statistics. Thank you. The term "forestry trade" is a concern because it suggests that such trade is okay. Perhaps the World Bank should focus on "sustainable forestry trade", thus sending out a better message.

Snow falling on idiots

When will snow falling not cause a flurry of tedious editorials in the national press about global warming being a lie? When will these idiots realise that local weather isn't global climate? As the great Stewart Brand said in his TED talk of June 2009, "Climate is a profoundly complex nonlinear system, full of runaway positive feedbacks, hidden thresholds and irrevocable tipping points." When will the irresponsible press stop reducing the debate to trite "just look out of the window" observations and ill-informed one-liners? The climate is big, complex, highly interconnected and all of our

lives depend on it. I wouldn't experiment with something like that by changing its basic chemistry, why would anyone?

Abigail Crompton, Scientist, Suffolk

Does our climate piece on p.25

Green propaganda

I am profoundly disinterested in propaganda about climate change. The so-called science is far from proven and in the 70s there was discussion of a mini ice age! Global warming or climate change, to give it its fashionable brand as the snow falls, is just the latest fraud perpetrated by pious eco-fascists and tree hugging fundamentalists who want to swindle more money from successful individuals and businesses and impose their failed socialist agenda on us

John Brown, Government employee, Newcastle

It's easy to get trapped into being a climate change believer or a denier. And you're right: other agendas are being pursued by many of the debate participants. A belief in "sustainability" is probably healthier. Sustainability abhors waste and pollution and tries to leave the planet as good as, or better than, it found it.

A cheery note

The pilot issue has been a very enjoyable and informative read without being evangelical and I would like to say a belated well done to you and your team, a very good start.

Martin Stewart, IFA, Bristol



The next issue of **B>** is out on Friday 11 **February**



Tell us what you think And Win!



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Blue & Green Tomorrow is a new magazine, a baby magazine, and we like to think we've done a good job. You might agree, you might not. Either way we'd like to know what you think. Tell us what you want more of, what you want less of, what you liked and what you hated. Ultimately this is your magazine and we want it to address the things that matter to you.

Closing date 25 February

www.blueandgreentomorrow.com/survey

NEWS

Solar cells that work at night

The Idaho National Laboratory explains that half of the available energy in the solar spectrum resides in the infrared band. And infrared is reemitted by the Earth's surface after the sun has gone down. The laboratory is working on a new breed of nanoscale light-sensitive antennas that respond to light waves rather than to photons, as in conventional photovoltaic (PV) systems. This means they can work at a wider range of sun angles than PV systems.

Technical problems still need to be overcome, mainly to do with the ability of diodes to handle frequencies of current being generated. But a team at the University of Colorado is creating the necessary new diodes and everyone is very optimistic that this will be the new wave (no pun intended) of energy generators.

Cold water shampoo?

Boots the chemist, or Alliance Boots as we're now supposed to call it, is toying with the idea of getting us to wash our hair in cooler water. even cold. It's better for the hair, apparently, but you still need a shampoo that works effectively.

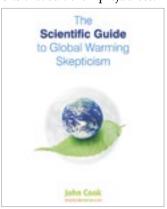
The company's chemists are working on that one after research revealed that 93 percent of the carbon footprint of its hair washing and straightening products is created in use by the customer. This echoes the findings of Procter and Gamble, which is also trying to figure out ways of encouraging users to change their ways.

This doesn't exempt such firms from cutting their own emissions, but it sure makes for a better CSR story if you can talk about the collective impact of a company and its customers on the planet. Many years ago, shampoo-

makers discovered they could double sales by adding "rinse and repeat" to their instructions. Generations grew into the habit. Let's hope "just use once" will become just as natural. But please, not cold water.

Global warming skepticism: A free guide

Genuine sceptics are okay. They've weighed up all the evidence and their opinions have some value. The nightmare sceptics are the ones, often already in positions of influence, who cherry pick the bits that suit their prejudices.



Skeptical Science, which subtitles itself the catchy (not) 'Getting skeptical about global warming skepticism', has released *The Scientific* Guide to Global Warming Skepticism. Phew, that's a lot of "skepticisms"!

As the title suggests, this is a paper that unashamedly argues the case for humancaused increases in global warming. If you're uncomfortable with that, it's probably even more important that you read it. At least then you'll be able to argue from a solid base.

The 16-page paper was written by John Cook, for the lay person, with the help of many experts in the various fields covered. You can pick up your copy at skepticalscience. $com/docs/Guide_to_Skepticism.$ pdf

Out of the mouths of babes?

Any research conducted by a government department should ring loud warning

bells. This particular one asked young people for their views on the UK's energy policies after exposing them to 'pitches' from all manner of different energy providers. Interestingly, comfy travel, refreshments and flashy brochures didn't have much of an effect when it came to their final conclusions, published in a report called 'Energy: How Fair Is It Anyway?' You can download a copy from tinyurl.com/388lsxb

The report gives a rundown of the various kinds of energy as well as giving the views of the participants on each. It's a useful educational tool if you're unfamiliar with the highways and byways of energy production.

A summary of the conclusions on the "fairness" of various technologies is tucked away in Appendix C. Solar, offshore wind and smart grid are all declared "most fair" by at least 90 percent of respondents. Biomass comes next at a lowly 34 percent, followed by biofuels at 26 percent. Nuclear, at 20 percent, is about three times more popular than gas. And coal trails in last place, at just over 2 percent.

Archimedes makes a comeback

Over 2,000 years ago Archimedes invented a pump based on a rotating spiral housed in a tube. The operating energy came from humans or animals.



Now, the same principle is being reversed to capture energy from a river's flow by pouring water through a screw, and forcing it to turn to drive an electricity generator. The first installation in Britain, which moved from experimentation to full production in the latter part of 2010, is in the River Dart Country Park near Ashburton in Devon. It fully powers Holne Park House, offices, a caravan park, kitchens and a cafe for eight months of the year, feeding the excess into the grid at peak flow times.

Mark Simpson, Managing Director of the park, says: "The screw has proved that it is very environmentally friendly with regards to migrating salmon, eels and other fish."

It generates an estimated £35,000 of electricity each year and was designed and installed by GP Electronics, of Bovey Tracey.

North Sea grid

Ten countries have signed the North Sea Countries Offshore *Grid Initiative*, which obliges them to collaborate on the creation of a network of offshore connections to an electricity grid. Despite its name, it will enable offshore wind generators in the North Sea, the Channel, the Celtic Sea and the Irish Sea to feed into the one grid.

You won't be surprised to learn that this project has been prioritised by the European Commission. To quote from Gunther Oettinger, the European Commissioner for Energy: "The offshore grid in the North Sea and its connection to northern and central Europe has been identified as one of the priorities in matters of electricity."

What is interesting is that Norway, which is not an EU country, has signed the Initiative. The ultimate aim is to have a single European electricity market. Eventually it hopes to include energy resources from the Mediterranean and North Africa.

Biofuel ethics - Canada

A report from the University of Calgary poses key questions that should precede biofuel projects. They

- What is the effect on food costs, especially for poor populations?
- Should more land be used for biofuel when the return of energy per acre is low?
- Are there better uses for the land?
- What is the impact on land of massively expanding production?

Click on "latest papers" at policyschool.ca.

Birds shut wind turbines - USA

NextEra has been forced to shut down 2,400 wind turbines in California because of bird kills. It will replace them with less dangerous modern equipment. Bloomberg estimates the turbine replacement programme will cost \$350m.

The number of bird kills per turbine each year is fewer than one, but the case gained traction because the birds include protected species, especially the Federally-protected Golden Eagle.



Hawaii to get hydrogen fuel - USA

By 2015, the Hawaiian island of Oahu should get hydrogen fuel-cell vehicles and a refuelling infrastructure. The project is being led by General Motors and The Gas Company, the main supplier of gas to the islands.

The initiative works by tapping into the existing 1,000-mile synthetic natural gas pipelines, extracting the hydrogen component and feeding it to 20 to 25 refuelling stations.



Poisonous plant powers planes - Brazil

TAM Airlines and Airbus flew 20 people on a 45-minute flight out of Rio de Janeiro using a 50/50 mix of locallysourced Jatropha-based biofuel and conventional aviation kerosene.

Airbus, together with TAM Airlines and a group of specialist companies are working to establish a biokerosene jet-fuel processing plant in Brazil, aiming to gradually substitute fossil fuel in aviation with biofuel. Airbus claims that this has the potential to reduce the sector's carbon footprint by up to 80 percent.

Boris bubbles next? - France

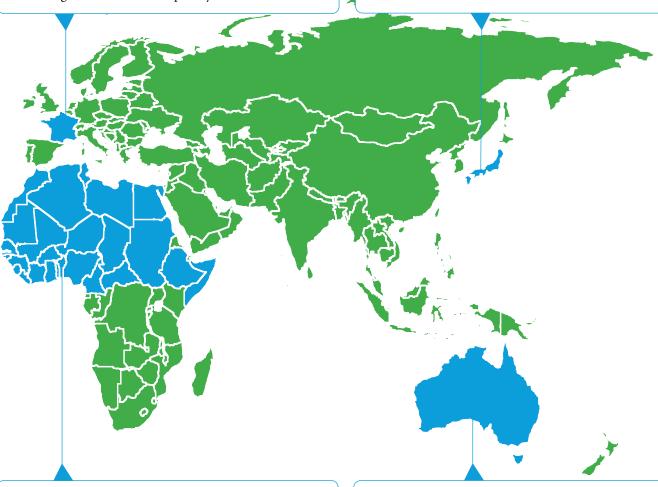
In the autumn of 2011, Paris will be sporting 3,000 fourseater bubble-shaped battery electric cars at 1,000 selfservice points across the city and its suburbs. The 'Autolib' scheme will cost potential drivers €12 a month, then €5 for the first half an hour, €4 for the next and €6 for each subsequent 30-minute slot.

Something else for Boris to keep an eye on.

CO₂ is not the only culprit - Japan

Gases such as sulphur hexafluoride and dinitrogen monoxide have, respectively, 20,000 and 300 times the global warming effect of CO₂. The Japan Meteorological Agency will monitor the levels of these 'super' greenhouse gases at observatories on Minamitori Island and in Ofunato starting in April.

Sulphur hexafluoride is only 6 to 7 parts per million compared with 380 ppm of CO₂, but the level has doubled from the 1990s, mostly owing to man-made emissions. You can do the sums.



Africa to power 1/2 the world? - North Africa

Semiconductors are made from silicon, which is made from silica. The Sahara Desert has plenty of this. So why not manufacture solar panels right there in the desert? Use the energy to power new plants, irrigate the desert and transmit the surplus energy along buried and supercooled cables? The Japanese/Algerian consortium has called it the Sahara Solar Breeder Project. It could power ½ the world by 2050.

Video: youtube.com/watch?v=UdO6T1TIDzQ

Australia to try Israeli solar - Australia

Greenearth Solar Energy and Israel based ZenithSolar Ltd will trial a combined heat and power solar concentrator in Victoria. Its two collectors are 11m2 and focus on a multi-junction PC coupled to a heat exchanger, delivering electrical current and thermal energy. The collectors are mounted on a dual axis tracker.

The electrical power is fed direct to a customer or to the grid. Thermal energy is pumped through a closed local loop system.



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NFWS

Branson's energy efficiency database for shipping

In a bid to reduce shipping emissions by nearly 25 percent, Richard Branson has set up a free internet database showing the energy efficiency of nearly 60,000 ocean-going vessels. Customers will be able to choose easily between clean and dirty ships of the same

The ratings are provisional and subject to validation, something that Cunard might want to do, since its flagship Queen Elizabeth rates a lowly "F" compared with the QE2, which earns a "B".

£10m sea power prize

Alex Salmond, Scotland's First Minister, has promised £10 million to the team that can demonstrate, in Scottish waters, the best commercial wave or tide energy technology. All participants have 100 GWh continuously over two years set as the lowest bar. That equates to an output of 12.5 MW, which is somewhat less of a soundbite. In fact, it's about a fortieth of the average nuclear power station.



Proposed areas for tidal and wave energy [adapted from tinyurl.com/37wkht3].

However, watch out for anything to do with the Saltire Prize: the process should prove to be very

interesting and, if the best solution is replicated, the end deliverables should be amazing for Scotland. It could make a great contribution to the North Sea grid (assuming it goes ahead) and, hopefully, give England and Wales a clean energy boost, although we'll no doubt have to pay for it. The Scots aren't daft.

A Nissan Leaf for £400 a month?

Fancy yourself driving an electric car? Like the idea of saving on fuel and running costs? Well, if you've got just under £4k as a deposit you could drive one away for a fraction under £400 a month for three years. It's free of vehicle excise duty and it carries no benefit-in-kind liability, thus potentially saving on tax. If you live in the London area, you'll also attract no congestion charges.

According to Nissan: "A company car driver on £45,000 a year with fuel benefits could swap his or her Vauxhall Astra 2.0 CDTi SE auto for a Nissan Leaf and find an extra £300 in their pay packet every month." Nissan claims the car's performance is the equivalent of a 1.6 litre petrol-engined car.

A full recharge would cost just £2, giving you a range of 100 miles. Sounds fine as a city runabout but you wouldn't want to undertake many long journeys, as even a quick recharge (to 80 percent capacity) would take 25 minutes.

Electric vehicle subsidy

The UK Government will give you 25 percent off an electric car (up to £5,000) until March 2012, assuming the earmarked £43m doesn't run out. It has chosen nine cars, with more to come. They are Chevrolet Volt, Citroen CZero, Mitsubishi iMiEV, Nissan Leaf, Peugeot iON, Smart Fortwo ED, Tata Vista EV, Toyota Prius Plug-in and Vauxhall Ampera. No Tesla [sob]. The theory is that, once the

car makers ramp up production, the battery costs (especially) will fall, reducing the cost of the cars and, maybe, making a subsidy unneces-



The unapproved Tesla. Photo courtesy of Tesla Motors.

The Government also supports the installation of charging points with the most recent £20m tranche going to the Midlands, the East of England, Scotland, Greater Manchester and Northern Ireland

Formula One to go green?

New engine regulations in 2013 will oblige the sport to become more environmentally friendly. The new engines will be 1.6 litre four-cylinder units instead of today's 2.4 litre V8s. According to the Fédération Internationale de l'Automobile (FIA), the new engines will reduce fuel consumption by 35 percent and include energy management and recovery systems, without impacting performance levels. Another planned measure is reducing the number of engines a driver can use in a season.

Doesn't this come close to greenwash? Deflect attention towards the greenness of the observable bit of events and away from the travel emissions, as the circus and its audiences move around from country to country. The one good thing about it is that the industry will be busy crowing about its green credentials and raising awareness - after all, the subject must be important if F1 is taking it seriously.

Big sustainability bash in **Birmingham**

From 24 to 26 May the NEC Birmingham will host Sustainability live!, the largest event of its kind in Britain. In fact it's a blend of five events: Brownfield Expo (BEX); Environmental Technology (ET); International Water and Effluent Exhibition (IWEX); National Energy Management Exhibition (NEMEX); and Sustainable Business (SB).

It's a place where you can touch and feel exhibits and get a real sense of what's going on in the world of sustainability. It's also a place to network, listen to conference sessions and check out potential suppliers, customers and investments.

Last year one of the conference speakers, Jim Hayward from Business in the Community, said: "We're all about communicating the message of sustainability in a very positive way. It's not about doom and gloom. It's not about hair shirts. It's not about stopping doing things. It's about starting to live life in a different way and helping businesses to play their part and make a contribution to that quality of life."

Last year's show sported over 400 exhibitors, 240 conference presenters and attracted almost 9,000 visitors. If past progress of the event is anything to go by, this year's will be even more successful. Despite recent recessionary pressures, the environmental space is increasingly busy. You might like to take a look at an electric car or stop by the water pipe drilling and tapping competition. Yes, really. sustainabilitylive.com

And finally ...

You won't find many ethical IFAs that have been around for a quarter of a century. It was a founder member of investment ethics and sustainability organisations EIA and UKSIF. Hats off, then, to Barchester Green Investment Limited, which was founded in 1985, just one year after the first ever ethical fund was launched. Congratulations on your first 25 years.

Taking Stock of Our Housing

It's all very well building zero carbon homes, but what about the properties that already exist? Adam Hewson investigates.

Much time and government money is spent trying to attain the Holy Grail of sustainable house building - the zero carbon home. That means zero from materials, zero from building and zero from occupancy. It's a tall order.

The UK has some of the oldest housing stock in Europe – almost 25 percent of it was built before 1919. When you also consider that, even with some aggressive assumptions, we've already built more than 80 percent of the homes we'll need in 2050 you can see the problem. By 2050 still only less than 20 percent of the entire housing stock will conform to zero carbon targets.

Further, homes account for over 30 percent of UK energy usage. So, unless we do something, over 80 percent of homes will be consuming the same amount of energy in 40 years' time as today.

The high-profile sustainable building industry may desire zero carbon homes, but it really needs to tackle the energy impact of existing "hard to treat" properties (often deemed "too hard to try"). To make a significant difference, the building industry needs better yet cheaper technology for existing homes.

Perhaps it could:

- use super insulating materials to fit inside existing joist spaces (meaning no need to employ a carpenter to pack out joists to 270 mm, so saving weight and materials);
- insulate internal walls without overly reducing room area (meaning the sofa still fits);
- insulate external walls without changing houses into featureless boxes (meaning cladding won't hide the house);
- double or triple glaze in a way that works with the property's historical features (meaning it won't look a mess).

Zero carbon housing might be glamorous, but currently can deliver only relatively little. We need our sustainable building industry to focus instead on the more functional elements that could make the real difference.

Both Adam Hewson and Tarquin Henderson are directors of ReEnergise

reenergiserenewables.com

Get Your House in Order

Tarquin Henderson examines what we can do to improve energy management in our homes.

In a recent survey of 200 homeowners, an overwhelming 85 percent said they would consider installing a renewable energy system only if it was going to lower their energy bill. "I'd like to save the world but I need to save my own money first," said one homeowner.

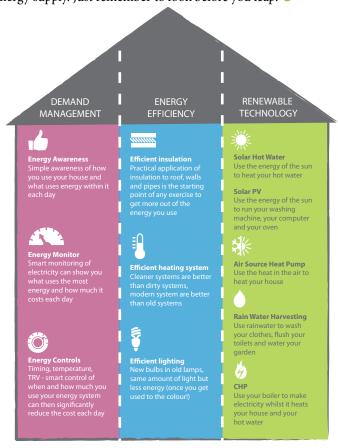
Like many early stage markets, the renewable energy sector can be a minefield for the average consumer. The temptation is to jump straight in, with solar in most cases being the de facto choice.

However, anyone wanting to consider whether a renewable energy system could work for them should review from the ground up and in three stages:

- **Demand management** we need to review how we each use energy and what steps we can take to reduce daily consumption.
- Energy efficiency over 80 percent of energy used in UK homes is for heating and hot water. Improving the efficiency and insulation of our homes as they currently are has to come before any thought of installing a renewable energy system.
- Renewable generation -the key here is to find a solution that is right for a specific situation. The latest forms of solar energy (both for hot water and electricity) are terrific but only if you have enough roof space pointing in the right direction.

Factors such as available outside space, local planning, proximity of neighbours and integration with existing gas/ oil-based heating systems will govern the potential for other renewable systems such as biomass boilers, ground and airsource heating and wind turbines.

With government help renewable energy can be economically viable today and will undoubtedly play a significant part of future energy supply. Just remember to look before you leap.



The Car of Tomorrow

Nick Slawicz investigates tomorrow's cars before taking a close up look at today's electric vehicles.

In 2006, Chris Paine's documentary Who Killed the Electric Car? was released to lukewarm (but still generally favourable) critical consensus. A common complaint, however, centres on its polemical view that the auto industry's future lies in the battery electric car (BEV), implying a lack of alternatives as serious contenders for the title of Car of Tomorrow.

But this is not the case, and research is ongoing into dozens of fuel sources, ranging from the well known (liquid petroleum gas, hydrogen, biofuels made from renewable plant material) to the less publicised (liquid nitrogen, compressed air). There are also the outright ridiculous: despite its breaking two out of the three laws of thermodynamics, claims of a car fuelled entirely by water have been running wild since at least 1935. Though several websites offer engineering schematics and testimonials as to its success, there is no proof that it works under laboratory conditions.

Assuming for a moment that Big Oil is not attempting to smother the threat of water-fuelled vehicles, it seems likely that whichever fuel source powers the car of the future is going to have some serious drawbacks. Fossil fuels release harmful gases into the atmosphere. Biofuels generally have a lower efficiency than fossil fuels, and may produce harmful by-products at the point of production. Hydrogen fuel cells emit water only at the user's end, and still require a lot of energy – and thus harmful waste – to manufacture; they are also subject to "leaching", which is when (like a helium balloon) the fuel seeps through the container itself and is lost without being used. BEVs work well, but currently have a limited range and are significantly more expensive than internal combustion engines.



It seems as though a compromise is needed for now. And, with the infrastructure already in place for gasoline-powered vehicles, an economic downturn and a waiting period of years before a single suitable alternative could be implemented (let alone supported for multiple vehicular energy sources), that compromise may well be the hybrid electric, which has already been snapped up by millions of people around the globe. Sales of the Toyota Prius alone reached 38,600 in the UK between 1997 and 2010, and show no signs of slowing down.

Yet, improvements to all alternative fuel sources will come about with funding and effort from industry. When the clear successor to petrol power emerges, as it must, billions of pounds will be up for grabs – and the environmental benefits will be felt by all future generations.

Who Killed the Electric Car: whokilledtheelectriccar.com/

The electric car might be a promising option in the future of alternative fuel vehicles, but it is not without its flaws. In the recently-released RAC Report on Motoring for 2010 32 percent of respondents stated they would "definitely consider buying an environmentally friendly



a travelling distance of 245 miles per charge and 0–60 mph in 3.7 seconds.

More recent developments in technology **BEV** have resulted the production the Nissan Leaf, the latest darling of the environmental

car", with an additional 56 percent claiming they "might" consider this as an option. However, fewer than half of those polled stated that an electric car would be a consideration.

And why is this the case? Worries about the practicality of electric cars are many and varied, including the top speed and the distance they can be driven between charges, both of which, in the past, have been limiting factors in the development of battery electric vehicles (BEVs).

Thankfully, we're now past the stage of the concept car, and new production cars are emerging that are designed to fix the perceived problems and test the boundaries of what BEVs can do. The most famous of these is probably the Tesla Roadster – developed two years ago in America and currently available for approximately £87,000. It offers an impressive range and speed:

movement. Although its top speed and average miles per charge are low compared to the Tesla Roadster (0–60 mph in 7 seconds and between 73 and 100 miles per charge, depending on which source you go to), so is the price tag: at £23,990 (including the new 20 percent VAT rate), the Leaf is proof that affordable electric cars are a practical solution, even if they are not yet as widespread as they could be. In fact, the car industry seems so confident its future lies in this direction it has already awarded the Nissan Leaf 2011 European Car of the Year.

As the question of BEV technology's future success is still up in the air, we environmentally concerned can remain confident that it is being given every opportunity to flourish in the automobile marketplace.

RAC Report on Motoring 2010:rac.co.uk/report-on-motoring/report-2010/

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The Green, Green Grass of Home

Are environmentally-friendly guest houses and hotels getting the upper hand?



We're all familiar with the rosettes and stars brandished by guest houses and hotels, but did you know that they might also sport green awards for their environmental performance? The Green Tourism Business Scheme (GTBS) has been assessing various kinds of accommodation for 13 years, starting in the Shetland Islands and spreading throughout the UK and many parts of Ireland. About 2,200 establishments now sport one of the "Green Tourism" logos on their premises, promotional materials and websites.

Assessments are based on over 150 measures and some can offset others. For example, a historic building could be ruined by double glazing, but earn points for recycling or some form of local community involvement. Once assessed, they are awarded Gold, Silver, Bronze or "Going Green" status.

Some recent research done by VisitEngland revealed that most people are not that interested in "overt sustainability". Just 7 percent have taken a volunteering holiday. And only 13 percent claim to have ever stayed in accommodation with green awards or environmentally-friendly practices. (*Perhaps they hadn't noticed, since some big name hotel chains have earned green tourism awards – Ed.*) The same research revealed that over 50 percent were interested in staying in environmentally-attuned accommodation and about the same number in break locations that benefit the local community. However, the same number agreed, "I don't want to have to think about being green (on holiday in England); I just want to relax."

The general public are not the only users of accommodation. Organisations are huge buyers and, if they have a strong environmental ethic, it's highly likely they will choose hotels and guest houses with similar values. Given the general drift towards environmental awareness, this can only be good news for hoteliers and the like who seize the initiative now and build a loyal customer base before "environmentalism" becomes the norm.

At least when everyone's doing it, establishments can still strive for the Gold standard. Of course, environmentalism may become part of the established grading systems, but that's for the future. Right now, the "Green Tourism" logo is the principal mark of credibility.

Andrea Nicholas is Managing Director of the GTBS and she talks about the dark and light sides of her organisation's work. On the dark side she admits that a lot of environmental claims people make are born of ignorance. Some think that "locally sourced food" means "from a nearby supermarket" until the term is explained. Or maybe they claim to minimise energy consumption while keeping empty minibars plugged in or office computers switched on at night. These are the sorts of things an inspection can easily spot and correct.

Nicholas speaks of the most common eco-fibs: "a towel reuse policy which is ignored"; "fairtrade coffee and tea promises not fulfilled in hospitality tray sachets"; and "claims to minimise waste disproved by individual cereal packets or bottled water". She also highlights phrases to look out for, such as "... wherever possible" and "... as much as we can", pointing out that they sound like solemn pledges but are fluffy to the point of being meaningless.

On the light side Nicholas talks about hotels that have gone above and beyond the environmental call of duty. For example, the Lancaster Hotel has installed beehives on its roof and serves guests its own honey; Gleneagles asks for a voluntary £1 per night towards the restoration of local orchards, which will eventually supply the hotel with crops; and Carey's Manor in the New Forest gives a 10 percent discount on guests' bills if they don't use their cars during their stay. All of these examples show people taking environmentalism to heart and probably reflecting the culture of the hotel as a whole.

Nicholas believes the way to change the culture in hotels is to ensure that managers are appropriately "green-minded". She even believes that green personality testing will soon become a recruitment requirement, and suggests that any venue would fail to meet environmental standards only by taking "a bolt-on rather than a built-in approach".

These are wise words indeed – and ought to be noted by all organisations that treat environmental activities as somehow separate from their business.

Green Tourism Business Scheme: green-business.co.uk VisitEngland: enjoyengland.com/corporate/



relax&roam

Introducing Blue & Green Travel Luxury travel without the footprint

A bespoke travel service that won't cost the Earth

Seeing the world is good. It opens our minds, shows us we have more in common than that which divides us and provides valuable income to the countries we visit

Luxury travel without compromising our planet or its people

But travel comes at a cost, especially when travelling damages the environment and leads to the people staffing the hotels and resorts being treated badly and the locals not benefitting

In this magazine's first class lounge in 2011

With Blue & Green Travel you're confident you're getting there in the least harmful way and the locations you visit have a good record of treating their people and environment well

Coming in March 2011



FiT for Purpose?

Hugo House discovers how the Government's Feed-in Tariff delivers excellent rates of return.

For the Hole family

a sunny day is a

sianal to switch

on the washing

machine 🧻

For the Hole family a sunny day is a signal to switch on the washing machine. In January 2010 they installed a 22-panel solar photovoltaic (PV) array - rated at 3.6 kW (peak) - on their farmhouse home in Shepton Mallett, Somerset.

"We have an indicator in the kitchen so we know at any one time how much electricity we are generating," says Good Energy customer Richard Hole. "When we are exporting, that is a trigger for us to put on, say, the washing machine. Having that indicator in the kitchen means we can make the best use of our electricity."

While Richard's decision to install solar PV was motivated partly by ecological considerations, it was the introduction of the Feed-in Tariff (FiT) - a subsidy paid to those generating their own renewable electricity - that tipped the balance. "Our decision was half about wanting to be more green and the other half was about being more economic," says Richard. "We wanted to reduce the amount of energy we were using to cut both costs and our carbon footprint. But we certainly wouldn't have done it without the FiT."

After spending £17,000 on their installation, the Hole family earns over £1,600 a year thanks to the FiT - and that's not

including the money they save on electricity bills, which they have reduced by around half.

Introduced by the Government in April 2010, the FiT entitles owners of generators, once registered, to a sum of money for every unit of electricity they produce - even if they use it on site - and a further sum for the units

they export to the grid. While small-scale energy generation was previously the preserve of a visionary minority, the FiT has reduced payback times, made it financially viable, and is helping to bring microgeneration into the mainstream.

The first six months of the initiative saw over 13,000 generators register for payment. That amounts to nearly 44 MW of added



renewable capacity, which is particularly important when considering the UK has to reach a target of generating 15 percent of its energy from renewables by 2020. Currently the figure is just

But it's not just homeowners who are taking advantage of the Feed-in Tariff to start generating their own green electricity and earn money at the same time.

Two more Good Energy customers, Mike Hill and his stepfather Ray, own DMR, a vehicle accident repair centre, in Harworth,

Doncaster. In 2009 they invested £200,000 in two 18-metre wind turbines at their premises. Selling all the energy generated back to the grid yields them £50,000 annual return. As Mike told



Good Energy recently: "Nothing else out there could touch this rate of return."

Of course, it's appropriate to invest in a wind turbine only if

you're in an area with a good wind resource. However, numerous businesses are already benefiting from the FiT scheme - of the 2,771 renewable installations registered between 1 April and 30 June 2010, almost half were commercial installations.

Businesses and homeowners should look at Mike, Ray, and Richard and his family and ask themselves why they aren't making

a similar investment and return. Independent renewable energy generation not only reduces and potentially eliminates energy bills but the FiT means you can earn a good income as well.

Good Energy already works with over 1,500 independent renewable generators across the country, paying the FiT to those who are eligible as well as offering guidance on getting microgeneration projects off the ground. Good Energy has also developed a pathway showing how the UK can be powered by 100 percent renewable energy by 2050. But to make it happen we need to revolutionise the way we generate and consume energy, with households, the public sector and businesses all playing their part. The FiT not only makes this financially viable, but also represents a strong long-term proposition for businesses, where energy usage can have a significant impact on the bottom line.

Microgeneration helps individuals develop a more personal relationship with energy, resulting in reduced demand. When households and businesses generate their own energy, it becomes a visible, tangible part of their lives - consequently they value it more and use it less. Lower demand means greater savings and, of course, lower emissions.

So, the question shouldn't be "Why invest in renewable generation?" but "When?" The incentives won't last forever. To take full advantage of the current FiT level you should act before 2013 at the latest, when the scheme is due to be reviewed, meaning payments may fall.

There's no doubt that the Feed-in Tariff makes it financially viable to invest in renewable generation. The time to do it is now. goodenergy.co.uk

The View from 2020

Rather than taking the traditional look at the coming year, David Tebbutt travels into the future to see what our world's like in 2020. Why not give us your views? We'll publish the best.

New education act Be Your Own Doctor launched

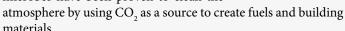
LEDs trump CFLs Pan-UK Energy Tre

2014

Personal fuel

Fewer petrochemical miles driven have improved local air quality and reduced asthma and other breathing difficulties. Globally, levels of hydrocarbon burning and greenhouse gas emissions continue to rise.

Carbon capture and storage systems do their job okay, but have been restricted owing to the need to transport and store the CO₂. Fortunately, genetically modified microbes have been proven to clean the



We're lucky with regard to water, compared with, say, South East Asia, which draws huge amounts of its fresh water from Tibet. Abstraction, damming and pollution, by China in particular, have created massive tensions in the area. Meat prices have soared -reflecting production costs and demand - but we still can't stop eating it.



Some people opt to retire at 70 (state pension age) but many go on earning. Life expectancy keeps rising - our average newborn today should still be around in 2120.

Work and life have blended for many people: they focus on a series of self-defined projects to meet agreed objectives, and are just as likely to work from home, in a café or from a beach-side shack as in an office. Many of the old office blocks have been turned into environmentally-friendly apartments.

Much travel has been replaced with videophone contact. Most hotels have a telepresence room and face-to-face meetings are largely reserved for initial serious business encounters.

Many immigrants have returned to their own booming economies, creating vacancies for legions of hard-up pensioners looking for pin money. Charitable and socially good works are also popular: parks are cleaned up, outings are organised and communities are benefitting.

Education

Schools now deliver the right education to the right students at the right time. Instead of putting children together by age, they teach by ability. Teachers and students are equally



fulfilled, so disruption levels have dropped and all pupils get the attention they need. Wi-Fi gadgets are allowed for school-related activities, and

material can be flashed to e-walls during class discussions. Children build portfolios of project work to use in progress interviews, which have replaced most formal tests.

University attendance has dropped, balanced by a rise in vocational training and apprenticeships. The most popular university subjects are those that promise a decent income on

Anyone who wants a proper career is expected to continue learning and is busy keeping up with massive developments, especially from Eastern countries. Graduates who choose to fossilise end up with mundane work and no prospects.

Leisure

Some leisure activities haven't changed: we still run, cycle, swim, kite surf, wind surf, walk the dog, and so on. (Although many environmentalists are "anti pets" because animals resources gobble and



are unproductive, the psychological value of having furry or feathered friends is increasing in profile.)

Community activity is increasing, as people realise that by cooperating and sharing they can save money, reduce environmental impacts and widen their social circle. Online virtual communities are probably even more important - global shoulders to the environmental wheel.

Good restaurants are still appreciated, the favourite being the Carbonara chain, which spells out the environmental impact of every dish it cooks. It's certainly changed our awareness of meat versus vegetables and food miles, for example.



Commercial-scale microbial CCS roll-out starts
Polytechnics reintroduced
Battery swap booths in all Shell-BP garages
UK leaves the sclerotic EU

Feed-in Tariff premium dropped State pension age becomes 70

2017

New genetic abuse law New Pro-Pet League lobbies for psychological value of pets

2018

Health

People are living longer, although end-of-life illnesses are lasting longer too. At least these can be managed – insulin and statins have been replaced with personalised drugs and targeted gene therapy. A cancer's ge-



netic fingerprint, for example, can be taken, with drugs reacting only with the cancer cells.

Germline therapy to alter the sperm or egg before fertilisation is another matter. Arguments are still raging about whether we should introduce man-made elements into the human gene pool. At least DNA drugs die with the patient.

Everyone is encouraged to store their genetic code with one of the many secure "banks" around. The controversial 2018 Gene Law protects your information but the medical exemption has seriously damaged the life and health insurance businesses. Accident insurance is largely unaffected.

Anyone can self-check their health for free on the NHS "Be Your Own Doctor" site, where you answer questions and even upload photos. If it identifies a problem or can't make a diagnosis, it makes an appointment with your local doctor. Otherwise, it reassures you and suggests self-help measures.

Home

Fuel bills continue to rise faster than we can cut consumption. Triple glazing is common on north-facing windows, all manner of insulation products have been deployed and we're all using our mobile phones and com-



puters to fire up home appliances when energy is cheap. We're still waiting for the full implementation of the smart grid but that, too, will make a big difference. All the early resistance to it has pretty much evaporated.

People who bought houses with a "sunny aspect" are crowing now, having taken advantage of the photovoltaic/Feed-in Tariff boom. Some "sold" their roofs to energy companies for a quick buck; others invested in solar panels and still get a good return. Solar shingles are very popular – they look good and they're easy to install.

Bright LED lights that last around 20 years have displaced all other forms since the price crashed in the middle of the decade. Pullovers, cardigans and slippers have made a comeback, especially among pensioners who are in real danger of tipping into fuel poverty. They've gone back to their childhoods, in which they kept doors shut, used draught excluders and warmed only the rooms they needed to.

Travel

In major cities, you can walk or get public transport to just about anywhere. Radial lines take you to other towns and even other countries



quite conveniently. Outside town you still need taxis or personal transport.

Electric vehicles (EVs) are poised for take-off thanks to the arrival of "swap booths" in all major service stations. Flat batteries can be exchanged for fully charged ones in under 60 seconds; they can also be charged from domestic, roadside or car-park charging points.

Casual visits to friends and relatives are increasingly paid through interactive TV links and even 3D. Hugs and cuddles are difficult, although sensory feedback sleeves, chest pads and gloves are available. Not quite the real thing but they work surprisingly well. Kisses are still out, though.

Flying is an expensive luxury that's growing in the East but shrinking in the West, probably because the US and EU are stagnating compared with places like China and India.

Of course, you can still always get on your bike.

The UK

The 2016 referendum on the EU finally persuaded our leaders to quit. We maintain positive relationships with other EU countries, though, truth be told, some of them seemed relieved to see us go. We're a trading partner and we're continuing our close alliances in defence, energy, water, etc.



We're also now more like Norway or Switzerland, having resisted any urge to align more closely with the USA. It means we can "be ourselves", which we believe will stand us in good stead with all major economies.

We're self-sufficient in energy, thanks to an improved relationship with Scotland, which provides a good chunk of our power through its onshore and offshore wind farms, its hydro-electricity plants and its tidal turbines. It may not get a lot of sunshine, but Nature throws a heck of a lot of other stuff Scotland's way.

We're still sitting on hundreds of years of coal and it's looking very much as though microbial carbon capture techniques are going to do the job, so we've a lot of power in reserve should we need it.

The next issue of *Blue & Green Tomorrow* is out on **Friday 11 February**



That's three days before St. Valentine's Day (guys).

Don't tell us we didn't warn you ...

Short of inspiration? Why not visit our Valentine's feature on pages 26 & 27 or go to blueandgreenshopping.com for lots of heart-warming, clear conscience gifts?

Green Dragon

Lori Heaford reports on how Juliet Davenport's green energy dream is fast becoming a reality.

Good Energy provides electricity to more than 26,000 electricity customers from wind, water, sunlight and sustainable biomass and is the only dedicated 100 percent renewable electricity supplier in the UK. It offers the UK's first renewable heat incentive to those with solar thermal installations, funded by revenue from gas sales; and its online shop sells products and equipment for saving energy, including microgeneration. Good Energy has pioneered reward schemes that support over 1,500 independent green generators, and has won numerous awards for its business.

The dynamo behind this remarkable company is CEO and founder Juliet Davenport.

The birth of an idea

Juliet first became interested in climate change while working towards her MA in atmospheric physics, which she got in 1989. Finding the climate system's sensitivity to changing atmospheric gas densities fairly alarming prompted her to think: "Right, I'd quite like to do something about it."

By the time she had completed her MSc in economics and environmental economics five years later, in 1994, Juliet had made the vital connection between energy and the economy: with economic growth comes increased energy use. For Juliet, "[energy] is the key element to sort out if you are going to do anything about climate change".

But her vision didn't stop there. Having worked first for the European Commission and then at the European Parliament, on energy policy and carbon taxation respectively, Juliet became increasingly frustrated at not being able to make any real changes within the energy market. It seemed that the only way to make a radical difference was to set up her own energy company to deal directly with consumers – so she did.

In 1999, with environmental consultancy ESD, Juliet set up the company that would become Good Energy. She became CEO in 2000 and, following the first share offering in 2002, saw over 600 customers buying into her idea. That extra finance bought a wind farm in Delabole, Cornwall. In 2004 Good Energy joined the PLUS Market, leading to more share offers. Most of Good Energy's shareholders are also customers.

The driving force

Juliet is an influential and powerful executive whose refusal to sit back and do nothing is an inspiration to us all. Her numerous awards and tributes, including an honorary doctorate for her contribution to renewable energy, point to tireless energy and determination to "create a blueprint that we can use for the UK to disrupt the existing systems from large generators and large suppliers to a wholly different way of doing things [...] creating a large marketplace that can support local generators delivering to local customers". But what of the woman herself? Assuming she finds the time, what does she do to relax?

In terms of likes, Juliet's in the process of renovating her 400-year-old Cotswold house in the most eco-friendly way possible, as well as maintaining the surrounding land and wildflower meadows. She also looks after her daughter and her lurcher Patchy, cooks, gardens and rides a horse. The only two things she professes to dislike are travel and "not having enough time to do the above!"



The future

So how does Juliet see the world shaping up? Well, her company has developed a pathway, built around a home-grown energy movement, which demonstrates how the UK can become 100 percent renewable by 2050. Juliet believes that locally and independently produced energy is better for the UK's future energy security as well as for cutting our carbon emissions. She's also in favour of simplifying things; once people understand energy they value it more and use it less.

In terms of shifting patterns in market demand, Juliet considers the Feed-in Tariff to be fantastic news. It moves control away from a handful of big energy firms to a market where power is generated and delivered locally – empowering individuals, communities and small-scale generators.

So how else does Juliet see herself standing out from mainstream thought? "Working in the energy sector, I've seen that our industry lacks women in top-level roles. What I find is that women can often have very different natural skills and abilities to men as well as different ways of resolving conflict, which can very much complement and enhance business. It seems that a lot of time in the energy industry is spent trying to protect the status quo; but in fact there are so many opportunities in a low carbon energy sector that there is space for everyone to develop. I think more women in senior positions could help this, and make the whole industry more forward thinking."

And finally ...

Having already put her money where her mouth is, Juliet's advice to others is: "Use less, generate more, and buy 100 percent renewable. Together we do this."

The Future of Ethical Investment

Sustainability fund expert, Clare Brook, takes a close look at the strategies being adopted by ethical fund managers.

Interest in ethical and sustainable investment has grown in lockstep with consumer interest in fair trade, organic and locally sourced food, recycling, alternative energy and other green initiatives. The movement has been further fuelled by reaction to corporate scandals, the role of large banks in the credit crunch and, most recently, the BP oil spill.

Some investors wanted to do more than just avoid companies doing things they disapproved of; they wanted to invest in companies that were actively making the world a better place. So the 'socially responsible investment' movement grew up in the early 1990s to enable just that.

The trouble was that, back then, not many companies were "pure plays" on environmental or social protection. Increasingly complex ratings systems and strategies were devised to justify investing in larger companies. Investors managing UK only funds, especially, found the number of genuinely environmentally or socially responsible companies available to them extremely limited.

These days the top 10 holdings of a sample of UK ethical funds nearly all contain HSBC, Tesco and Vodafone. And quite a few contain BP, Shell and BHP Billiton. While none of these companies is directly involved in nuclear power, tobacco, animal testing or pornography, it would be stretching a point to say they were solving the world's problems. At best, they might be said to be adapting to the challenges of climate change and human rights issues by improving their environmental, social and governance (ESG) performance and employing ever larger corporate social responsibility (CSR) departments to convince investors and other stakeholders of their credentials.

Investors who are baffled by the complexity of different terms around ethical, socially responsible and sustainable investing, the Holden & Partners Guide to Climate Change and Ethical Investing is an invaluable tool. It lists the top 10 holdings of every fund in the ethical, socially responsible and climate change sector, which is by far the best way of seeing at a glance whether a fund chimes with an investor's values.

The good news for investors is that a new phase in ethical/ socially responsible investment is emerging. Called either "sustainable" or "climate change" investment, it began as the

Figure 1 The top 10 holdings of a typical UK ethical fund (though not by any means the worst of the genre)
ВР
HSBC
Vodafone Group
Glaxosmithkline
Royal Dutch Shell A Ord
BHP Billiton
Rio Tinto
Barclays
Astrazeneca
Royal Dutch Shell B Ord

science and economics around climate change widely became more accepted. The publication the Stern Report 2006 was critical convincing policymakers and financiers that climate change is a real threat to our future existence; that it will cost the global economy a huge amount to rectify and so a significant amount must be spent on its prevention; and that a

range of solutions to the problem already exist in products and services offered by well-managed, profitable companies.

This made possible a new breed of specialist investment fund

Figure 2 The top 10 holdings of the IM WHEB Sustainability Fund			
American Superconductor	Superconductors and energy efficiency		
CSX	US rail		
Iberdrola Renovables	Spanish wind developer		
Trina Solar	Chinese photo voltaic manufacturer		
Badger Meter	US water and gas metering		
Geberit	Swiss water saving sanitary ware		
Sound Global	Chinese water treatment plants)		
Amplifon	Italian hearing aids		
Davita	US kidney dialysis		
Rhoen Klinikum	German hospitals		

focusing on investing in solutions to climate change as well as the accompanying problems of waste disposal and water resource shortages. Forestry and agriculture funds have also performed particularly well over the last year, according to Holden & Partners. Yet, the investment strategy of all these funds is global, because the UK environmental industry remains woefully small in terms of quoted companies compared with the US, China and much of Europe.

WHEB Asset Management focuses its fund on three themes that stem from the main challenges facing humanity over the next few decades: climate change and energy, global water shortages and an ageing population. It invests only in companies whose business is driven primarily by at least one of these themes. As a result, the fund invests in companies which are tackling serious global challenges head-on.

The prospects for "sustainable" funds look better than ever. Even if there is a lack of coordinated global action to tackle climate change, the pace of legislative change on a national and state level is picking up all over the world and creating a background that is more supportive for the environmental economy. Meanwhile, worldwide water shortages (and floods) underline the need for improved management of this limited resource.

Also boosting the situation worldwide are the stimulus packages aimed at kick-starting the environmental economy. Energy efficiency measures attract a substantial portion of the global stimulus package. HSBC estimated last year that the green stimulus package amounted to \$521bn to be spent globally over five years. By October 2010 \$194bn of this had been deployed (over half of it by China) - the majority going on energyefficiency projects, including upgrading national grids, building efficiency, insulation and lighting.

Sectors such as water, energy efficiency and alternative energy have compelling growth outlooks over the next few years, too, though valuations, for the most part, are still way off their 2007 highs.

So the would-be ethical or sustainable investor can now choose from an interesting range of funds focused on companies that provide solutions for the world's gravest challenges. At the same time, such funds offer investors the chance to pursue a truly ethical investment strategy because their investments will help to secure the existence of future generations.

Clare Brook is Co-Fund Manager of the IM WHEB Sustainability Fund. whebam.com

Money Doesn't Have To Be Taxing

With only three months to go, don't miss this year's tax breaks, urges Lee Smythe, of Smythe & Walter financial planners.

Another New Year is upon us, meaning you have just under three months to take advantage of the various tax breaks offered by the taxman.

With interest rates still low and forecast to remain so for some time yet, getting the tax breaks you're entitled to can give an important boost to your savings and investments. A huge range of investment options are available to suit all risk appetites and investment preferences, and tax allowances can have a big impact on your overall returns.

ISAs – you can invest up to £10,200 free from capital gains tax and largely free from income tax (the 10 percent tax on UK equity dividends is still payable).

Pensions – recent changes have made who can pay what complicated, but with up to 50 percent tax relief available it's certainly worth looking in to what you could be able to pay.

Venture capital trusts – you can put in up to £200,000 with income tax relief of 30 percent and no tax on dividends or gains, although you must hold the investment for at least five years.

Enterprise investment schemes – you can invest up to £500,000 with income tax relief of 20 percent and no tax on gains when held for three years. After two years the investment could also be discounted for inheritance tax purposes in the event of death.

All of the above have "use it or lose it" allowances. Review your finances now so you don't miss out.

Investors for Biodiversity?

Can we investors save life on earth? EIRIS's Mark Robertson believes so.

It's almost two months since delegates from around the world met in Nagoya, Japan, to sign a UN agreement aimed at reducing biodiversity loss and habitat change. But even the UN's own environment officials have found little evidence of any "meaningful and decisive action".

All companies affect ecosystems and are also dependent on functioning ecosystems to remain in business. Biodiversity loss creates significant risks for businesses in the shape of increased costs, of raw materials such as fresh water and insurance against disasters, new governmental taxes and policies on biodiversity, and reputational damage from NGO and consumer campaigns.

However, a recent EIRIS report* finds that only 6 percent of the top 1,800 international companies listed on the London Stock Exchange have an adequate policy on biodiversity.

Over the next few decades ecosystems will be altered faster and more extensively than ever before. Investors must understand the systematic risks biodiversity loss represents and use their influence to increase company participation in voluntary stewardship schemes to protect biodiversity. A number of "green and ethical" financial products are available, the lending and investing activities of which help to safeguard biodiversity. You can find a list of these products at yourethicalmoney.org.

* eiris.org/files/research%20publications/Biodiversity2010.pdf EIRIS – Experts in Responsible Investment Solutions, eiris.org

Publisher's Perspective

Simon Leadbetter makes the case for a paper-based publication.

"We're launching a new magazine."

"Digital?"

"No, a posted print magazine."

"Right. Ok. Hmm?"

And so began the first conversation Blue and Green Communications had with a potential investor. Publishing is littered with magazines that have gone bust.

Well, we're proud to be a paper-based product in a digital world. Why? Blue & Green Tomorrow is printed on paper from sustainable forests that will capture CO_2 for generations to come. It's printed domestically, providing investment in a British business, and it's delivered by hand by one of the businesses that depend on there being a physical local economy as well as a digital global one.

Consider, one PC requires more than a tonne of raw materials (many of them toxic) and water, and consumes many times the computer's weight in fossil fuels in manufacturing and global distribution, only to be sent back to the Far East and Africa for recycling at the end of its useful life. Oh, and only 73 percent of UK households have an internet connection.

You don't need a Master's in Computing to operate a magazine. This one is available to everybody and will be a new publication within seven days of being recycled.

Don't get us wrong, we're not luddites. B & GT is produced by people in different parts of the country who regularly use the internet, software and smartphones to create our content. We adore technology but we want to celebrate the art of slow communication, and the growth of trees.

Paper, virus-free and serving humanity since 3700 BC, we salute you.

tinyurl.com/5sfa2 – internet access statistics tinyurl.com/375on3u - Energy and environmental impacts of personal computing



Good Advice

Your guide to finding an ethical financial adviser in your area

The start of a new year is the perfect time to get your finances in order, especially in these three critical months to the end of the financial year. But having probably spent time with family and friends it is also the time to think about what your money is doing, not only for your own future but also for the long-term futures of your children, your grandchildren and friends and families here and around the world. To quote the Wall Street film sequel, "money never sleeps"; and round the clock you can make your investments do a lot less harm, a lot more good or support the causes you care about most. It doesn't necessarily mean compromising on your return either, as many environmental and ethical investments you can make today will be the stock market heroes of tomorrow.

Blue & Green Tomorrow works with experienced independent financial advisers who specialise in and understand how money can be used to create a secure future for you, for your families and for our planet. Give one of the IFAs here a call and talk about your plans - you may even find you sleep easier at night if, like us, you want a better future for all. Your hard-earned money can do some of the hard work of making that happen while you sleep.

In accordance with the Financial Services and Markets Act 2000, Blue and Green Communications Limited does not provide regulated investment services of any kind, and is not authorised to do so. Nothing in this magazine and all parts herein constitutes investment of any kind. Any specific investment-related queries or concerns should be directed to a fully qualified financial adviser.

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Ethical Saving

Personal finance journalist and author Sarah Pennells looks at planning your ethical investment strategy.

According to the ethical research organisation EIRIS, consumers have invested over £9.5 billion in green and ethical funds; and in a survey carried out for UKSIF (the sustainable investment and finance association) over half of those questioned want to make money and make a difference. But what does this actually mean?

If asked to come up with half a dozen companies you'd be happy to include in an ethical or sustainable fund, what would you say? "A mobile phone company; a gas production and supply company; a supermarket chain; a bank." Hmm, perhaps not.

But whether you want to invest in an ethical or a sustainable way, or both, you'll struggle to find a company that totally fits the bill. Even if you track one down, you would be unwise to sink all your savings into it. While most of us are happy to make compromises in our day-to-day lives – we recycle glass and paper, for instance, but choose to drive a car when we could walk or take the bus we often apply different standards to ethical or green funds. The problem is that, if you want to avoid compromising or taking decisions you're not 100 percent happy with, you're likely to be disappointed by many of the ethical funds around.

But that doesn't mean there aren't fund managers out there who are genuinely trying to do something different. Even when, in some cases, the make-up of a fund may look similar to nonethical funds, the process of deciding whether or not to invest in it may be very different.

If you're well-off enough to put into direct investments such as specialist funds, company shares or social businesses, you can set your own rules about where your money goes. But if you're a novice investor you're more likely to start with indirect funds such as unit trusts and investment trusts.

Fund managers' websites carry information about Top 10 holdings etc., but if you want to compare different funds try

> The first step ... is to work out what's important to vou.

the yourethicalmoney.org website (an initiative of the EIRIS foundation). As well as doing your own research, talking to a specialist ethical independent financial adviser can be well worth it – as long as you choose carefully. The problem is that virtually anyone can say they advise on green and ethical issues, so go for someone who's a member of a specialist organisation such as the Ethical Investment Association or UKSIF, or who's listed on yourethicalmoney.org. These advisers have a track record in ethical finance and should have the expertise you need.

The first step, before you see an adviser or start any research, is to work out what's important to you; where you're happy to compromise and where you'll draw the line. Bear in mind that the more companies you exclude from the range you can invest in, the more risk you're likely to be exposed to.

If you're thinking of investing in a fund, aim to find something that's broadly in line with your ideas. You should feel comfortable enough with what it's trying to achieve, even with the areas on which you'll have to agree to disagree.

Questions to consider include:

- What's important to me? Is my priority avoiding oppressive regimes or companies involved in the arms sector (traditional "ethical" areas), or would I rather capitalise on the potential of the renewable energy and green hi-tech sectors?
- Do I want my money to influence the way companies behave? Some funds actively engage with organisations they invest in, while others simply focus on avoiding specific sectors or companies.
- How much risk am I willing to take? Investing is for the long term, but you still need to be comfortable with short-term volatility.
- How open is the fund management company about what it invests in? Some are better than others at giving investors information, especially about how much say they have in organisations they own shares in.

The key is to look behind the label: don't assume that funds called "green" or "ethical" are what *you'd* consider to be green or ethical. Nevertheless, it's important to realise that, even if such funds don't live up to your expectations, it doesn't mean they're are a waste of time.

Sarah Pennells is the founder of savvywoman.co.uk, a finance website for smart women. Her latest book is Green Money: How to Save and Invest Ethically (A & C Black, 2009).



EIRIS: eiris.org/media.html#marketstats2010

NEIW: neiw.org/about/media-centre/greed-good-green-good-2010s-setbecome-decade-financial-responsibility

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Climate Confusion

A lot of people equate weather with climate but it's not that straightforward. David Tebbutt digs deeper.



"Global warming? Geddaway. Look at all that snow. Hasn't snowed like this since I was a nipper, and that was before the roads were full of cars and the skies full of aeroplanes."

You can imagine your dad or your nan saying that. And they'd be dead right. But, if that's the case, what's all this nonsense about global warming, or climate change as we're now obliged to call it?

That is the deniers' argument, that the weather ebbs and flows regardless of what we do to the atmosphere, so we may as well carry on as we are. The warmists point to the greater frequency of peculiar weather events and suggest that this is caused by humans messing with the climate. Then the scientists come marching in with their own views on what we're doing, how dangerous it is, and so on

But none of them, not even the Met Office, is capable of grasping the fantastic complexity of the world's environmental systems. They use information from things like greenhouse gas emissions, population growth, heat from industry, and so on, to offer best guesses and, it has to be said, these do veer towards human-induced climate change.

At the long-term and global level they point towards a general warming trend. At a local level, they suggest that other factors come into play. This is where it gets complicated, because the general public would prefer simple, easy-to-understand predictions. But that is not the scientific way. At a local level the weather is unpredictable, especially in a small offshore island like the UK, which has a varied topology and is surrounded by sea. We all know that the weather just a few miles down the road can be totally different from our own. A lot also depends on land use: farmland has a different effect on humidity and air circulation than a town, for example.

The best the meteorologists can do is to deploy massive computers to try to model the climate over a long period and the weather over a shorter timescale. We humans occupy a very thin layer of the Earth's atmosphere and we mostly want answers relating to just that bit, which we get in our beloved weather forecasts. But the climate folk look at the whole atmosphere and, indeed, a lot of the ocean too. Between them, ocean currents and

the atmosphere act to redistribute heat around the planet. Just over 70 percent of the Earth's surface is water and we've still got only a vague idea about the tiniest fraction of it, so no doubt they're right to look.

The more the scientists learn about the past and the present, the more information they can put into their models. And, it seems logical to say, the more sensors they have sampling various aspects of our environment – the acidity and temperature of the seas, the cloud cover and precipitation of various parts of the world, for example – the better they will become at predicting what's to come.

Since the oceans cover so much of the Earth's surface, you can be certain that large chunks of the world remain unobserved at the surface. Satellites play an increasingly important part in resolving this difficulty, but the bottom line is that the computers (or, more accurately, the scientists feeding the data to them) still have to guess or extrapolate from the readings of the nearest sensors, be they surface- or space-based.

There is also the matter of that great hot ball in the sky that sustains us though we take it so much for granted. (We always forget to look up – Ed.) We've worshipped it for centuries without grasping its potential to provide us with an eternal source of clean energy if only we had the wit to catch it and distribute it on a wide scale.

Coming back to the extreme weather events, the floods, the droughts, the snow and so on, on a geological timescale, these are natural variations. There's no reason why we shouldn't have a bit of cooling followed by a bit of warming, floods followed by droughts. After all, the Earth went through over 30 ice ages before we were even around, so no one can explicitly nail mankind as the root cause of all climate problems. However, it won't be long before the increasing frequency of current "1 in 400 years" events will make even the most reserved climate scientist reconsider mankind's influence on both the climate and the weather.

But let's not get confused that they are the same thing. Or that they're equally predictable. Except in the most general terms, they're not.

With only 31 short days to go until St Valentine's Day, why not earn some brownie points with your significant other by buying one of our Valentine's ideas? It doesn't need to cost the Earth. All of these products are assessed to make sure they're ecological, organic, fair and sustainable trade or focused on natural living or well-being. This is a small sample; you can find a whole lot more at blueandgreenshopping.com.

Plush Fairtrade Chocolate

£7.25

A mouth-watering collection of assorted Belgian fairtrade milk, white and dark chocolates that will melt the heart and in the mouth of your other half.

Plush Fairtrade Milk Chocolate Petals with Strawberry & Geranium 70g

£4.65

This fun handbag gift pack contains delicious handmade milk chocolate petals with strawberry pieces, infused with geranium.

Plush Fairtrade White Chocolate Petals with Raspberry & Rose 70g

This fun handbag gift pack contains delicious handmade white chocolate petals with raspberry pieces, infused with rosewater.

blueandgreenshopping.com for more great deals

Raw Gaia Bath Time Heaven Gift Set

£24.50

Spoil the chocolate lover in your life with the Bath Time Heaven Gift set from Raw Gaia - the ultimate in rich chocolate indulgence. Sit back and relax in a chocolate orange bath tub, smother your face with the raw chocolate face pack, and lather up with the beautifully scented rose and geranium soap. All that remains is to enjoy the edible chocolate treat, and the pamper experience is complete.



Dalit Handmade Candle -Karan (Set of 3)

£10.25

Handcrafted in the Dharavi slums of Mumbai, these beautiful clay pots with candles help support street children and the Dalit people of India.



Pants To Poverty - Red (Men's)

£12.25

Made with fairtrade and pesticide free cotton with a touch of lycra for great stretch and shape, you can rest assured these comfy boxers help provide a fair wage for producers.



Green Pots Indoor Garden - Love

£11.95

Bring the outdoors indoors with these adorable grow-your-own grass message pots. Spell out your feelings and watch them grow with these ceramic pots, complete with rye grass seeds and growing medium included.



£11.25

The traditional family game, this fairtrade wooden domino set will last for years and years.

£204.25

This stunning new addition to the Roberts Revival family adds that touch of class to any room.

Films & Books

If you're anything like us, which we believe you are, these films and books will appeal to you.



Plastic Planet (2009)

Director: Werner Boote

youtube.com/watch?v=dgdI6ygPH8Utrailer

Plastic Planet (Actes Sud, 2010) Authors: Werner Boote and Gerhard Pretting, translated by Dominique

Taffin-Jauhaud

Plastic is everywhere. Could we do without it? Should we? This film/ book looks at the impact of plastics on human life and the environment. Some plastics are alleged to lower sperm counts by 40 percent. Others will persist for hundreds of years. Plastic fantastic? Maybe not.



Cool It (2010)

Director: Ondi Timoner

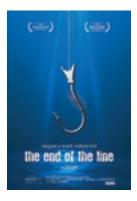
youtube.com/watch?v=JLJFNB9sDwE

Cool It: The Sceptical Environmentalist's Guide to Global

Warming (Marshall Cavendish, 2009)

Author: Bjørn Lomborg

The author thinks we're in danger of letting the obsession with climate change eclipse other important problems that need to be solved: drinking water, sanitation, malaria and so on. He's against quick "feel good" actions that don't "do good". And he's optimistic that scientists and engineers will invent us out of the hole we're in. Rated 4.5 on amazon.co.uk



End of the Line (2009)

Director: Rupert Murray

youtube.com/watch?v=bedirwk95Oc

The End of the Line: How Overfishing Is Changing the World and What We

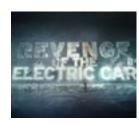
Eat (Ebury Press, 2005)

Author: Charles Clover

Scientists predict that in 40 years we'll have hardly any seafood left. This film explains in detail what's going on and why. It also tells us what we can do

about it.

Rated 4.5 on amazon.co.uk

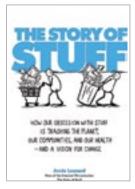


Revenge of the Electric Car (due 2011)

Director: Chris Paine

youtube.com/watch?v=jkRIu5a6Sb0

In 2006 thousands of electric cars were destroyed by the major car companies that built them. Now they're coming back. The film goes behind the scenes at Nissan, GM and Tesla Motors to dig out the story.



The Story of Stuff: How Our Obsession with Stuff Is Trashing the Planet, Our Communities, and Our Health - And a Vision for **Change** (Constable, 2010)

Author: Annie Leonard The Story of Stuff (2007) Director: Ondi Timoner youtube.com/watch?v=gLBE5QAYXp8

Leonard's book builds on the excellent short movie she made. Her point is that we expend a lot of money, energy and resources on stuff that is often pointless and harmful. Eye opening. Rated 5 on amazon.co.uk

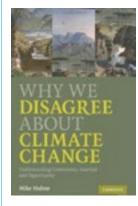


You Are STILL Being Lied To: The Remixed Disinformation Guide to Media Distortion, Historical Whitewashes and Cultural Myths (Disinformation Company, 2008)

Editor: Russ Kick

This fully revised and expanded book contains contributions from over 60 authors and interviewees. It's a great way to see the spectrum of fact and opinion around a topic. Use their insights as a springboard for your own thinking.

Rated 5 on amazon.co.uk (3.5 on .com)



Why We Disagree about Climate Change: Understanding Controversy, Inaction and **Opportunity**

(Cambridge University Press, 2009)

Author: Mike Hulme

A climate change insider takes a broad view of the subject and our reactions to it. He achieves this by explaining things from the perspectives of science, economics, faith, psychology, communication, sociology, politics and development. As Hulme believes, once we understand this we can figure out how to adapt to the new realities. Rated 4 on amazon.co.uk



The Greenwash Guide (2008)

Authors: Futerra Sustainability

Communications

futerra.co.uk/downloads/Greenwash_Guide.pdf

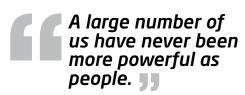
Some organisations deliberately create misleading perceptions about themselves, their products and services or their people. This free-to-download book may have been written almost three years ago, but its guidelines still stand you in good stead when it comes to separating the good guys from the bad.

Embracing Uncertainty

Simon Leadbetter argues that we now have the power to overcome the weaknesses of our so-called leaders.

We live in uncertain times. Confidence in the country's leaders, be they politicians, business people or scientists, is at an alltime low. Politicians of all parties have racked up an impressive

scorecard on bad behaviour: from cash for honours and influence and scandalous expenses claims to manifesto pledge u-turns and general skulduggery. Rather than Abraham Lincoln's ideal of "government of the people, by the people, for the people", we've ended up with government of the millionaires, by



the global media conglomerates, for the banking community. Is it any wonder election turnouts continue to fall when those three constituencies are so unrepresentative of the UK electorate?

Business leaders generally and the City specifically grow ever more disconnected from the economy and country generating their wealth. Telephone-figure salaries don't bother $B \not \sim GT$ at all provided they're linked to telephone-figure performance; but there appears to be no relationship today between long-term performance and the rewards it generates. Short-termism has always been a peculiarly Anglo-Saxon business disease but longterm business performance and shareholder return should be the main factors in deciding job rewards.

And scientists, who should have a clear conscience born of scientific method, instead eagerly pluck sensational elements from their research to get the precious media centimetres that could lead to grant approval or corporate sponsorship.

The increasing cynicism of our age is deeply worrying. With fewer routes out of poverty, and one rule for some, another for others, we see crime on the rise in a zero-sum, nothing-to-lose game of mutually assured destruction. This is as true globally as it is locally; some are imprisoned for stealing phones, while others get millions for crashing the world economy; and eventually corrosive feelings of injustice erupt in rage and violence. History teaches us that building ever higher walls between the rich and the poor doesn't work. So how can we learn?

A large number of us have never been more powerful as people. Politically, we have the vote, locally, nationally and on a European level, whereas 85 percent of the world's population doesn't (EIU democracy index). We can demand higher standards of our politicians - current plans to allow constituents to recall MPs for bad behaviour should be applauded, as should reform to an electoral system that permits a minority of votes to return a majority of seats, with an unelected second chamber. Greater proportionality will lead to a greater number of parties in Parliament; more views being represented will lead to more people voting; and a more vibrant democracy is a better democracy. And most politicians enter politics to make a difference but are worn down by a patronage system that corrupts. A less disciplined and whipped Parliament will lead to a better class of debate, which is why a reduction in the number of MPs is a bad idea. As a greater percentage of politicians become Government apparatchiks so more of their independent voices are silenced, their private opinions are compromised through collective responsibility and the contracts they have forged with their electors are broken.

We're also consumers and shareholders who can use our purchasing power to support companies that link reward to financial, social and environmental performance. Whether you buy something, or you have a shareholding, either directly or through an investment, you have a powerful voice to do two things: reward those organisations that link performance to reward and

> punish those that don't. Capitalism is a fantastic system with varied and real-time feedback loops from shareholders and consumers. The Left-leaning think tank Compass has set up a high pay commission with the Joseph Rowntree Foundation to examine the societal consequences of high pay inequality. We at $B \mathscr{C}GT$ have no issue

with high pay as long as it's linked to performance; there should be no reward for failure.

Cynicism about science is often overdone. The media, looking for "an angle", often take good science out of context, giving an edge that isn't there, or being slightly misleading to catch your attention. But to be ignorant in the internet age is lazy. If your sole source of information is a newspaper that mirrors your opinions, you're likely to get only one side of the story. Ben Goldacre's excellent "Bad Science" website uncovers the "facts" beneath many a science news story. Accepting that science is about balance of probability rather than doctrine or dogma also helps. It certainly makes it easier to accept that scientists get it wrong and actually applaud them for trying to get closer to "the truth" than many politicians or business people ever can.



In uncertain times we need to be relaxed about uncertainty in ourselves: political, economic and scientific fundamentalisms are as much an ill as religious fundamentalism. While global changes and differing views are interesting, we should remain confident in our developed world's greatest exports: democracy, capitalism and reason.

To paraphrase Stewart Brand, "views strongly stated and loosely held" seems a good motto for our age.

badscience.net economist.com/media/pdf/democracy_index_2007_v3.pdf electoral-reform.org.uk equalitytrust.org.uk highpaycommission.co.uk

Where did I see...?

As you've whizzed through the magazine, you might have thought, "I must remember that." But as real life gets in the way, we thought you'd like a reminder of all those references and links buried in the news and in our articles.

To visit a website, just prefix the given code with tinyurl.com/ so the first article link 'World Climate Conference' would be tinyurl.com/2ua6sc7

Climate & Energy

p.1	World Climate Conference	2ua6sc7
p.5	Scientific Guide to Global Warming Skepticism	398dxr3
p.5	Energy: How Fair Is It Anyway? (DECC)	388lsxb
p.6	Ethics of biofuels	2vdy6mk
p.7	Sahara Solar Breeder Project	256mfan
p.9	Proposed areas for tidal and wave energy	37wkht3
p.9	Sustainabilitylive!	29ehn58
p.9	Tesla Motors	l6vno
p.10	Energy consumption in the UK	37nd8oh
p.10	ReEnergise Renewables	3x3n3o7
p.10	Rethinking Refurbishment	2fk6vgb
p.15	Good Energy	llogqf

Money & Science

p.20	WHEB AM	2ekbgt3
p.21	EIRIS	2x723g
p.21	Internet access data	5sfa2
p.21	Energy and environmental impacts of PCs	2bjyk73
p.21	Your Ethical Money	y8elx9h
p.24	EIRIS market statistics	2w78572
p.24	NEIW stories	2v78ep8
p.29	Bad Science	fbnzg
p.29	Economist intelligence unit: Democracy index	2bdkjn7
p.29	Electoral Reform Society	2dt6vug
p.29	Equality Trust	cjxo8z
p.29	High Pay Commission	399yxvw



Travel

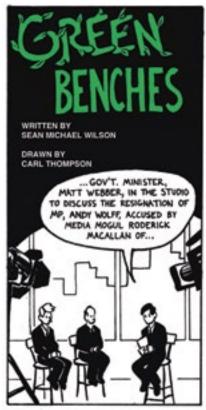
p.13	VisitEngland	2dh2mdq
p.13	Green Tourism Business Scheme	2e4wxet

Transport

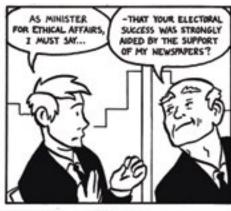
p.11	RAC report on motoring	2ua6sc7
p.11	Who Killed The Electric Car?	ybump9q

Competition Terms & Conditions

1. Submitting your completed competition entry will automatically enter you into the draw for the prize(s). 2. Competitions are not open to employees of Blue and Green Communications Limited (B&GC) or participating companies. 3. No cash alternative will be offered. 4. The prize(s) described are available at the date of publication. Events may occur that render the promotion or the awarding of the prize(s) impossible owing to reasons beyond B&GC's control, which may at its discretion vary or amend the promotion. No liability shall be attached to B&GC or participating companies as a result thereof. 5. Proof of mailing or emailing will not be accepted as proof of delivery and no responsibility can be accepted for entries lost, delayed or mislaid, or for any technical failure or event that may cause any competition to be disrupted or corrupted. 6. When necessary to determine an outright winner or winners, the Editor reserves the right to request entrants to take part in an eliminating contest (or "tie breaker"). 7. When for any reason there are more winners than prizes on offer, the Editor reserves the right to conduct a simple second draw to determine the winner or winners of the prize(s) available. 8. Winners will be notified by post or email within 28 days of the competition closing date. 9. All entries and copyright therein will become the property of B&GC. 10. Entry to all competitions is restricted to entrants of 18 years of age and over, unless stated otherwise. 11. B&GC may ask winners to assist with publicity regarding the prize experience. 12. If the winner of a competition is unable to take up a prize for any reason, the Editor reserves the right to award it to an alternative winner, in which case the first winner chosen will not be eligible for any share of the prize whatsoever. 13. The Editor's decision in all matters relating to competitions is final and it is a condition of entry to any competition that entrants agree to be bound by these rules whether they be published or not. 14. No purchase of the magazine is necessary. 15. No more than one entry is permitted per household. 16. Competitions are open to UK residents only, unless otherwise stated. 17. The promoter is B&GC. 18. Names of winners will be available on receipt of a request enclosing a stamped self-addressed envelope to the competition address: Competitions Manager, Blue and Green Communications Limited, 6 Peal's Court, 9-10 Colville Terrace, London W11 2BE.

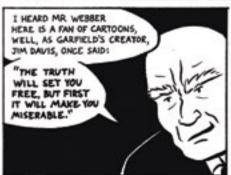


























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The next issue of B> is out on Friday 11 **February**





- Learn about how and where your money is invested
- **E** Search for green and ethical financial products
- Find out how you can help make finance more sustainable



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Child Trust Funds

