17.12.2008: Tidal Energy in Britain [1]
the Northwest Regional Development Agency (NWDA) will determine the feasibility of generating renewable power from the Irish Sea The NWDA claims that the area could meet up to six per cent of Britain's electricity needs.

The Northwest Tidal Energy Group started life four years ago at Lancaster University as part of the University's Renewable Energy Group.

Aquamarine Power made a "significant investment" in Ocean Flow Energy, from North Shields, to increase its development of wave and tidal power generation technologies.

[1] UK Trade and Investment Services: Group examines North West tidal projects
http://www.ukinvest.gov.uk/OurWorld/4040820/nlBE.Html

16.12.2008: Professor from Sweden suggests that China coal power plants operate with good technology [1]
Coal fired power plants from China China, USA, Germany and India rely on this fossil energy. It is one of the dirty ways to cheap energy.

Prof. Dr. Bo Leckner, writing for the German coal lobby, hailed the green technology of China coal electricity power plants. He reports that the country is studying the possibility of Carbon Capture and Storage. Bo Leckner stresse that CCS will have to wait decades to be used, but he is very impressed concerning the fluidized bed combustion FBC technology of the Chinese coal power plants.

Fluidized bed combustion (FBC) is a technology used in power plants. FBC plants are more flexible than conventional plants in that they can be fired on coal and biomass, among other fuels. Fluidized beds suspend solid fuels on upwardblowing jets of air during the combustion process. The result is a turbulent mixing of gas and solids. These combustors may burn everything beginning from different types of coal up to waste. When using limestone as bed material, nitric oxides emission may be reduced. [2]

China and USA are leading the global emission of greenhouse gases. They urgently need tho change their energy sources. Comparing the euphoric article of Prof. Dr. Bo Leckner with the reality of the situation in China doubts arise very soon.
Investing in solar energy from the deserts could become a new clean start described in the Global Energy Initiative.

[1] Prof. Dr. Bo Leckner, University of Goeteborg: Muessen uns erst die Chinesen zeigen wie umweltvertraeglich Kohle nutzen laesst?
http://www.braunkohleforum.de/890ProfDrBoLeckner.html

[2] Wikipedia: Fluidized bed combustion
http://en.wikipedia.org/wiki/Fluidized_bed_combustion

21.11.2008: The London Oil Week Conference calls energy firms to invest in lowcarbon renewable technologies [1]
According to Samir Brikho of Energy Excellence and Amec, at the London Oil Week conference 1721 Nov.2008, UK firms should increase their investment in the renewable energy sector.

Brikho said that now time has come to invest in the development of new technologies. The lowcarbon industry could be boosted if the UK works to make its innovation process quicker and more effective.

[1] UK Trade and Investment: UK energy firms have been called on to invest in lowcarbon renewable technologies. 20.11.2008
http://www.ukinvest.gov.uk/OurWorld/4039943/nlBE.html

20.11.2008: Liedership in global hydrogen economy[1]
Abu Dhabi opens the way to the hydrogen economy with its hydrogen power generation project. The country aims to become a world leader in clean power generation, carbon sequestration and the new hydrogen economy. According to the holder of the project, other hydrogenrelated fields such as clean transport, fuel cells and industrial applications will be stimulated.

[1] Masdar: The special Project unit, a "kick start " of sizeable new businesses in advanced energy and sustainability technologies.
http://www.cleanenergyawards.com/uploads/tx_x4eenergy/Masdar_Brochure.pdf

20.11.2008: New warning of a shortfall of crude oil [1]
Hilmar Rempel and his colleagues Bernhard Cramer and HansJoachim
KÃ¼mpel of Germany's
Federal Institute for Geosciences and Natural Materials (BGR) in Hannover say that half of all global crude oil reserves will be consumed in 12 years, drilling cost will rise then enormously. According to the annual report of the BGR, by these authors, the peakoilpoint
has already been reached. Crude oil production in 2007 stagnated and demand increased. A shortfall of crude oil is predicted in case other energy forms are not added to the global market.

The authors stress that reserves from the Arctic region and deep sea should be exploited, energy consumption has to be reduced and alternatives such as geothermal energy, solar energy and hydroelectricity must be found.

[1] Spiegel Online: Trotz niedriger Preise : Experten warnen vor Ölknappheit. 20.11.2008.
http://www.spiegel.de/wissenschaft/natur/0,1518,591688,00.html

07.11.2008: Electrical car fails environment test [1]
The German Automobile Club ADAC tested the DaimlerChrysler's Smart ED (Electrical Drive). It uses a 60 kg SodiumNickelChloride battery with a rage of 110 km. Battery reload takes 8 Hours. The battery must be kept warm. This consumes energy, even at the garage. If not recharged, the battery is empty in 8 Days. The much hailed Lithiumion battery costs 15.000 EUR.

Its a good car to drive to office but what if you want to make a trip exceeding 29 miles?.
Bad cards for the battery driven Smart The ADAC gives bad environment note for the Smart ED: The greenhouse gas CO2 which the car apparently avoids has already been produced at the electricity plant. The ADAC calculates for the Smart ED a CO2 emission of 71g/km which comes from the German electricity mix of 590 g CO2 per Kilowatt/hour (The Smart has only two seats, so for family with 4 seats it looks like 142g/km).

Driven by electricity from hard coal the Smart ED CO2 emission is 107 g/km, from Wind 2,5 g/km. However, the actual electricity mix will not improve in a near future.

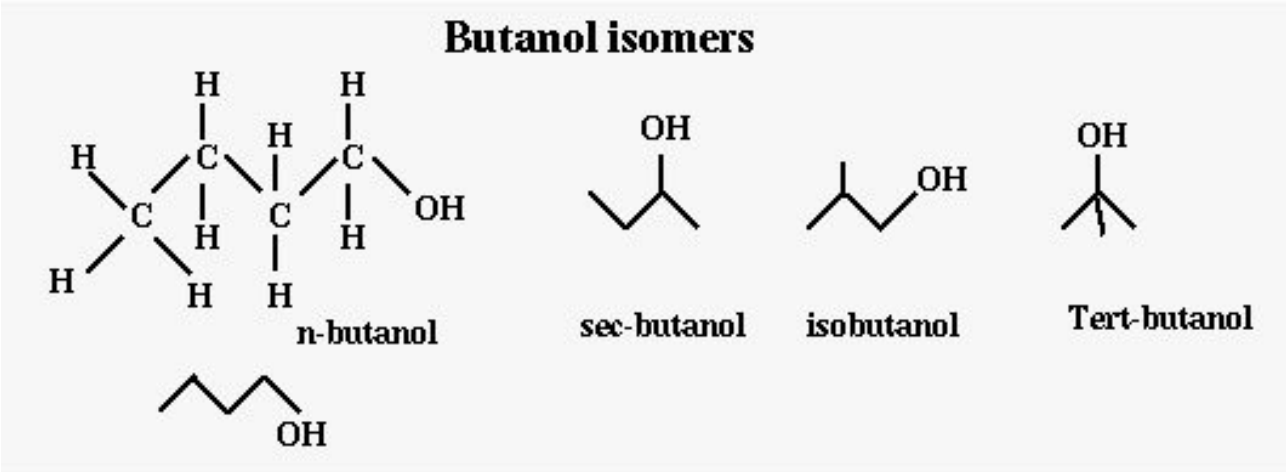
Hybrids like Toyota Prius and Honda Civic are environmental friendlier compared with Smart ED in ADAC Eco Test.

[1] ADAC motorwelt Das Aktuelle Clubmagazin: Teil 2 Fahren unter Strom. Das kann der ElektroSmart. Page 34. No 11, November, 2008

07.11.2008: Waste to biofuel in UK and India[1]
Instead of ending as landfill byproducts of paper and sugar mills will be turned to biobutanol. Green Biologics Limited GBL is an environmental biotechnology company that develops high temperature microbial processes for the degradation of plant waste and conversion into fuels and chemicals, using thermophile bacteria and thermostable enzymes, working at 70°C.. The fermentation technology for the production of biochemicals from sugars derived from process effluents and byproducts from existing industrial and agro processes avoids landfill, reduces the need for expensive waste treatment and avoids the use of food crops.

Butanol: The unmodified term butanol usually refers to the straight chain isomer with the alcohol functional group at the terminal carbon, which is also known as nbutanol
or 1butanol. Butanol is a precursor for a range of polymers and plastics and a “nextgeneration” biofuel which may replace bioethanol and biodiesel. The technology can be coupled to paper mills and sugar production facilities.
Butanol at 85 percent strength can be used in cars designed for gasoline (petrol) without
any change to the engine (unlike 85% ethanol), and it contains more energy for a given volume than ethanol and almost as much as gasoline, so a vehicle using butanol would return fuel consumption more comparable to gasoline than ethanol. [2]

Using waste feedstocks for fermentation is more sustainable and environmentally friendly than use of food crops such as sugar beet, sugar cane,
maize and wheat used in the “first generation” biofuel.



04.11.08 Lowcarbon
technology partnership between Qatar and UK [1]
The UK Prime Minister Gordon Brown announced a Â£250million QatarUK
Clean Technology Investment Fund which will see the Qatar Investment Authority (QIA) and the Carbon Trust united to create a global lowcarbon economy.

UK government and the government of Qatar are working closely together to boost the new economy which promises leadership of Qatar and UK in technology advances.
The Qatar QIA will invest Â£150 million of venture capital in projects of clean energy companies

based mainly in the UK.

Other investors will complete the total value to Â£250 million of the project comprising knowledge transfer on the development, commercialisation and deployment of lowcarbon technology between the UK and Qatar.

The Carbon Trust, UK's way to green leadership [2]
The Carbon Trust was set up by the UK Government in 2001 as an independent company to accelerate the move to a low carbon economy by working with organisations to reduce carbon emissions and develop commercial low carbon technologies.

The Carbon Trust has signed a groundbreaking agreement in offshore wind with five international energy companies: DONG Energy (Denmark), Airtricity Developments (UK), RWE Innogy (Germany), Scottish Power Renewables (UK) and StatoilHydro (Norway). This marks the start of a major new research, development and demonstration initiative called the Offshore Wind Accelerator (OWA) which works on the improvement of Offshore foundations in deep water, knowledge on wake effects, access, logistic and transportation, and improvement of electrical systems. [3]

Carbon Trust is strongly focused on hydrogen technology. The University of Birmingham received an Applied Research Grant from the Carbon Trust to explore novel, potentially lowercost materials, which could store large amounts of hydrogen in relatively small spaces. [4]

The Qatar Investment Authority a world class investor [5]
The Qatar Investment Authority was founded by the State of Qatar in 2005 to strengthen the country's economy by diversifying into new asset classes of its growing portfolio of longterm strategic investments.

[1] UK Trade and Investment Services: UKQatar
lowcarbon fund announced
http://www.ukinvest.gov.uk/OurWorld/4039203/nlBE.html

[2] The Carbon Trust
http://www.carbontrust.co.uk/about

[3] The Carbon Trust, Press Centre: Five major international energy companies join forces with the Carbon Trust in a Â£30 million initiative to reduce the cost of energy from offshore wind by 10% or more. 21 October 2008.
http://www.carbontrust.co.uk/News/presscentre/slashingcostsofoffshorewind.htm

[4] CTS012 Case study – Applied Research – University of Birmingham
http://www.carbontrust.co.uk/Publications/publicationdetail.htm?productid=CTS012&metaNoCache=1
[5]The Qatar Investment Authority
http://www.qia.qa/QIA/

30.10.2008: Wrong policies accelerate global warming, says economic researcher HansWerner Sinn [1]
HansWerner Sinn from the Ifo Institute for Economic Research, Ludwig Maximilian's University, Munich, Germany says that reducing the demand for fossil fuels does not limit global warming. He postulates that demand reduction leads to a fall of the price of the fuel. Lower prices induce the

developing countries to consume what the Kyoto countries have economized on. Sinn claims that suppliers, feeling threatened by a gradual greening of economic policies, might extract their stocks more rapidly, accelerating global warming.
HansWerner Sinn refers to the Stern Review which provides pessimistic data on global warming. [2]
HansWener Sinn calls for:
A unit tax on carbon consumption: The tax would have to be equal to the present value of the flow of damages it causes.

Subsidizing the stock in situ: The consuming countries should pay each year a fee of size to the resource owners to keep their proven stocks underground.

Taxing capital income: As the problem of overextraction implies a wrongly composed portfolio of manmade and natural capital, the portfolio composition can be improved by taxing the returns to manmade capital, while leaving the capital gains of the resource owners untaxed. This would eliminate the tax havens existing in the world and make sure that all interest income earned is subjected to a minimum source tax.

Safer property rights: Sinn calls to support and stabilize the regime of resource owners, rather than interfere in their regime.

Quantity constraints and emissions trading: According to Sinn the Kyoto Protocol countries consume just 29% of annual carbon supply. India and China signed and ratified, but are not constrained, and the US signed, but did not ratify. Countries that are resource consumers and resource owners alike are likely to object to establishing an emissions trading system that means partial expropriation of the existing stocks in situ and to undercut the consumer demand for energy.

Sequestration and Afforestation: The volume of CO2 to be stored is gigantic, consume enormous amount of energy for storage procedures and is risky because it would crowd out oxygen at the surface once released. HansWerner Sinn gives the highest priority afforestation which should be sponsored by industrial countries. Forests are, according to Sinn the best carbon storage. Unfortunately deforestation is still increasing.

Hydrogen: HansWerner Sinn advocates electricity from nuclear energy, which albeit not particularly green, could be used to produce hydrogen, as storage and transportation of energy.

[1] Sinn, HansWerner:
Public policies against global warming: a supply side approach. Ifo Institute for Economic Research, Ludwig Maximilian's University, Munich, Germany. Online 23 May 2008. CESifo Working Paper No. 2087, August 2007 and NBER Working Paper 13454, September 2007. http://portal.ifo.de/link/ITAXhws2008.Pdf

[2] Stern, N., Peters, S., Bakhshi, V., Bowen, A., Cameron, C., Catovsky, S., Crane, D., Cruickshank, S., Dietz, S., Edmonson, N., Garbett, S.L., Hamid, L., Hoffman, G., Ingram, D., Jones, B., Patmore, N., Radcliffe, H., Sathiyarajah, R., Stock, M., Taylor, C., Vernon, T., Wanjie, H., & Zenghelis, D. (2006). Stern review: the economics of climate change. London: HM Treasury. http://www.hmtreasury.gov.uk/6520.htm

27.09.2008: New climate 2007 report predicts a worst scenario than given by the IPCC Report [1]
The report of the Global Carbon Project (GCP) concludes that far from slowing down, global carbon dioxide emissions are rising faster than ever. China (with 1,8 Billions tons) superseded the

US (1.59 Billion Tons) as greatest emitter of greenhouse CO2 gas. Other developing countries India and Brazil are joining them.

According to the Global Carbon Project the atmospheric carbon dioxide (CO2) rose from 1.8 ppm in 2006 to 2.2 ppm in 2007 and amounts now 383 ppm. The researchers of GCP stress that since 2000 the increase of CO2 emission has quadrupled compared with the foregoing decade. The emission growth rate is still higher than the worst scenario of the Intergovernmental Panel on Climate Change IPCC.

The report says that the carbon dioxide of the atmosphere in 2007 increased about 37 per cent compared with 1750, before of the industrial revolution. The CO2 emission in 2007 10 billion tons, whereas 8.5 billion tons came from fossil fuels. Deforestation the situation of the ocean reduced their efficiency to bind CO2 by 5 percent. [2]

[1] Planet ARK: Global Carbon Emission Rising Rapidly. 26.09.2008
http://www.planetark.org/dailynewsstory.cfm/newsid/50370/story.htm

[2] IPCC: Climate Change 2007, Synthesis Report
http://www.ipcc.ch/ipccreports/ar4syr.
htm