

03.12.2009: Three municipalities have their groundwater contaminated with uranium in Bahia, Brazil[1]

The municipalities are, Caetité, Lagoa Real and Livramento de Nossa Senhora, The Ministry of Health advises to stop drinking water or to use it in the kitchen. Safe drinking water will be supplied to the population by the municipalities.

Alfa and beta radiation was found in drinking water and lakes of the state of Bahia, Brazil. Health officials published the results of the analyses:

	Radiation
	Alfa and beta
Public well	0,5 and 2,3
Water reservoir of Paiol farm	0,2 and 0,5
Health officials published the results of the analyses:	
Water reservoir Goiabeira	0,5 and 0,9
Lagoa Grande lake	0,4 and 1,2
Billabong in front of Dom Eliseu school	0,3 and 0,3
Cachoeirinha "Tanque do Governo" pond	0,1 and 1,0

The directive of the Health Ministry sets upper limits of 0,1 for alfa and 1,0 for beta radiation [2]

A picture of a pond in Caetité which is used by the local population shows the fragility of the ecosystem of this region.
http://www.ambienteja.info/imagem_full.asp?par=1419

The local mining company INB (Indústrias Nucleares do Brasil) says that there is no problem related to their company. However, it seems that INB is connected with the contamination of the surroundings of Caetité [3]. The search for the cause of the widespread contamination of public waters will take some time.

Mining, disturbing geologic stratifications with constructions of roads or reservoir dams may have freed nuclides leading to the contamination of the public waters of the region. Once again, mistrust rises against the proliferation of nuclear power plants which do not provide a safe disposal of the nuclear waste. Germany used the old salt mine Asse 2 as a repository. The mine is now being flooded by ground water and the caverns are collapsing. The Ground water of the surrounding region is in acute danger of contamination comparable to the municipalities on Bahia.

[1] Mineração, Energia Atômica, Poluição Hídrica. Governo da Bahia suspende consumo de água após vazamento de solvente com urânio. Ambiente já. 03 dezembro 2009.
http://www.ambienteja.info/ver_cliente.asp?id=157449&aux=1

[2] Portaria 518 de 2004 do Ministério da Saúde)

[3] Vazamento de solvente orgânico com urânio em Caetité, Bahia. Ag Solve 27/11/2009.
<http://www.agsolve.com.br/noticia.php?cod=2693>

23.10.2009: Biofuel may increase greenhouse gases as a result of a flaw of the climate accounting [1]

Searchinger and colleagues 2009 stress that the climate accounting treats all bioenergy as carbon neutral. This flaw was also included climate regulations 2003/87 of the EU [2] and the The American Clean Energy and Security Act of 2009 [3]. The authors point to the fact that these regulations count biofuel as 100% reduction, and do not count CO₂ emitted from tailpipes and smokestacks when bioenergy is being used, and also does not consider the CO₂ emission from land use, burning of wood and energy crops.

The authors say that counting bioenergy from any biomass as carbon neutral, so as handled by the climate accounting, large-scale land conversion for bioenergy is favoured regardless of the actual net emissions. This will lead to further increase of greenhouse gases. The area covered by fuel crops will be higher than the area used for food crops by the end of this century, say the authors. Increase of biofuel crop can only take place by deforestation, with the loss of trees which are important carbon sinks. On the other fuel crops may use the area of food crops, increasing the use of fertiliser ammonium nitrate which decomposes in the soil releasing nitrous oxide N₂O which is a stronger greenhouse gas as CO₂. To avoid such undesirable development, the authors suggest global rules to protect forests and to avoid overfertilisation. Should this not be introduced all over the globe the climate will breakdown, say the authors.

Biofuel will cause food and water scarcity [4]

Bio fuel, such as ethanol and biodiesel compete with food crops resulting in rising prices of food staples. Robert Service points to an

additional problem of biofuel crops which may pinch water supplies and worsen water pollution. The already serious shortage of water will even be worsened by a wide shift from crude oil to biofuel.

[1] Searchinger, Timothy D. et al: Climate Change: Fixing a Critical Climate Accounting Error. Science 23 October 2009: Vol. 326. no. 5952, pp. 527-528. Doi: 10.1126/science.1178797
<http://www.sciencemag.org/cgi/content/summary/326/5952/527>

[2] European Commission, Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003, Official Journal of the European Union L 275, 25.10.2003
<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2003:275:0032:0046:EN:PDF>

[3] The American Clean Energy and Security Act of 2009, H.R. 2454, 111th Cong., 1st Sess. (as passed by U.S. House of Representatives July 2009).
http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=111_cong_bills&docid=f:h2454pcs.txt.pdf

[4] Service, Robert F.: Green Energy: Another Biofuels Drawback: The Demand for. Irrigation. Science 23 October 2009: Vol. 326. no. 5952, pp. 516 – 517. Doi: 10.1126/science.326_516
<http://www.sciencemag.org/cgi/content/summary/sci:326/5952/516>

No feasible solution for nuclear waste

05.10.2009: Germany fails to present a solution for deadly nuclear waste [1]

The Asse II pit near Wolfenbüttel is a potash and salt mine which was a research project to demonstrate safety of management and storage of radioactive waste where 46,930 cubic metres of radioactive waste. Also deadly polonium was deposited there

Today the Asse faces two major problems: The mine has been penetrated by salt solution. At the same time the mine threatens to collapse. The German government does not know how to clean up the mess.

Asse II is the demonstration that no geologic formation is secure. Safety of storage of nuclear waste is being treated with even lower priority in France and USA, leaving drums bearing high radioactive waste unprotected outdoors.

Experts say: drill deeper [2]

TÜV NORD suggests to drill deeper and transfer the nuclear waste from 700 metres to a depth of 1.200 metres. TÜV Nord hopes to find solid rock there. Transfer of the nuclear material will take 15 to 18 years.

More German nuclear waste [3]

In Germany there are 270.000 cubic metres of low and medium and 24.000 cubic metres of high radioactive nuclear waste and more is added every day. This enormous amount will bother future generations for billions of years. There is no way to get rid of it. No safe repository has been found. The nuclear industry puts the problem in the hands of politics which present no solution.

[1] Federal Office for Radiation Protection (BfS): Asse Site
<http://www.bfs.de/en/endlager/asse>

[2] Federal Office for Radiation Protection (BfS): Beurteilung der Machbarkeit einer Umlagerung aller oder Teile der radioaktiven Abfälle in der Schachanlage Asse II
http://www.bfs.de/en/endlager/asse/Studien/machbarkeit_umlagerung.html

[3] Kernenergie.de: Radioaktive Abfälle - Woher kommen sie?
<http://www.kernenergie.de/kernenergie/Themen/Entsorgung/Zwischenlagerung/>

05.10.2009: RUDEA: Russia goes green [1]

In July 2009 RUDEA was signed by German Chancellor Angel Merkel and the President of the Russian Federation Medwedew. The tasks of the Russian and German Energy Agency (RUDEA) are:

- Energy efficient buildings
- Energy efficient production and use of electric power
- Energy efficiency in the oil and gas economy
- Energy efficient transportation systems
- Renewable energy

Medwedew decided to green Russia. The President wants Russia to reduce its energy consumption by 40 percent until 2020. The necessary know how will be brought in by Germany. [2]

[1] RUDEA
<http://www.rudea-energy.com/rudea.html>

[2] Medwedew verordnet Russland die Öko-Wende. Spiegel Online 05.10.2009.

03.10.2009: Alliance between E-cell car makers and oil companies to build hydrogen filling stations [1]

The start of the E-cell car was announced by Dr. Dieter Zetsche, board of the German car maker Daimler. Zetsche reported in an interview with the ADAC Motorwelt Journal that Daimler has massively invested in hydrogen technology, and is now developing the line production of the E-cell car. Zetsche stressed that seven other car makers declared to push on the worldwide line production. He also highlighted the agreement between car makers which will build the E-cell cars, and oil companies will build the filling stations, at a cost of about one million Euro each. Actually there are only seven filling stations in Germany, however the oil companies agreed to build 25 new stations until 2011. The government will do its part leaving the whole system tax free.

According to Zetsche a definite technical breakthrough of the E-cell has been attained, and hydrogen cars will be on market in 2015, with a price near a conventional car, or a bit more.

[1] ADAC Motorwelt: Interview "Der Durchbruch ist geschafft". Issue 10. October 2009. pp 49.

28.09.2009: Scientists issue warnings but have no solution for the problem: A safe operating space for humanity [1]

The journal Nature published a report of Johan Rockström and colleagues 2009 setting ten boundaries which should not be exceeded to avoid crossing dangerous tipping points. These include atmospheric CO₂ levels, the rate of species extinction, the over-use of nitrogen and phosphorus in fertilisers, use of fresh water, the clearing of land, ozone depletion, ocean acidification, aerosol pollution of the atmosphere and chemical contamination. The authors add that if one boundary is transgressed, then safe levels for other boundaries are endangered, so the land use changes in the Amazon may cause water scarcity in Tibet,

Climate

The authors stress that most human activities depend on fossil energy and on agriculture which is heavily mechanised. They propose an upper limit of 350 parts per million by volume of CO₂ in the atmosphere, and that radiative forcing should not exceed 1 watt per square metre above pre-industrial levels (the rate of energy change per unit area of the globe as measured at the top of the atmosphere). Transgressing these boundaries will increase the risk of irreversible climate change. The authors say that the current CO₂ concentration stands at 387 p.p.m.v. and the change in radiative forcing is 1.5 W per square metre. This requires immediate reduction in fossil fuels.

Nitrogen and phosphorus cycles

The manufacture of fertilizer for food production and the cultivation of leguminous crops convert around 120 million tonnes of nitrogen from the atmosphere per year into reactive forms, influencing lake systems and marine ecosystems. The authors propose to reduce new reactive nitrogen to 25% of its current value, or about 35 million tonnes of nitrogen per year, and no more than 11 million tonnes of phosphorus per year should be allowed to flow into the oceans.

Uncertain data

The authors conclude that there are significant uncertainty over how long it takes to cause dangerous environmental change or to trigger other feedbacks that drastically reduce the ability of the earth system, or important subsystems, to return to safe levels. They stress that, as long as the thresholds are not crossed, humanity has the freedom to pursue long-term social and economic development.

Politicians will appreciate these conclusion giving them the possibility to shelve the report because of its uncertainties and the lack of any suggestion how to amend the situation.

Reversing ecological deterioration of earth

This reports misses to give solutions for climate changer and does not tackle rising use of chemical fertilisers. It is amazing how the serious scientific Journal Nature prints such inconsistent article which repeats affirmations already known long before and which had been repeated over and over.

To overcome the paralyzing passivity of scientists which are advisors of the political leaders, here are some solution presented. They could be used in Copenhagen as friendly approach of the global problems. However, those who are in charge to present suggestions are deeply entangled in lobbying for oil, natural gas and nuclear power.

Alternative to fossil fuels: Fossil fuel dependence should be drastically, if not completely zeroed using solar electricity and hydrogen as fuel for transportation. A global grid according to Fuller may supply all nations [2]. Electrolysis of water to produce hydrogen may stabilise the grid, using peak energy from wind turbines. Global greenhouse gases emission may thus be reduced near zero. [3]

Alternative to agrarian giant corporations: Activities of giant agriculture corporations should be limited by international laws. This includes the US corn belt of the Mississippi region where most of the runoff of nitrogen and phosphor occur. Dr. Vandana Shiva Navdanya developed such a system for small agricultural systems which are based on sustainable agriculture. [4]

Changing the energy economy from fossil origin to solar energy and hydrogen and changing the demographic structure of our society means that scientists should stand for their ideal to work for the development of our culture. Powerless and helpless activities such as shown by Dr. Steven Chu, as energy advisor of the USA, is disappointing. All scientists are hereby urged to present solutions and not disagreements. The previous cited hydrogen economy and the agricultural system of Dr. Vandana Shiva Navdanya are robust foundations for a global agreement in Copenhagen.

[1] Rockström, J, Steffen, W, Noone, K, Persson, A, Chapin III, FS, Lambin, EF, Lenton, TM, Scheffer, M, Folke, C, Schellnhuber, HJ, Nykvist, B., de Wit, CA, Hughes, T, van der Leeuw, S, Rodhe, H, Sörlin, S, Snyder, PK, Costanza, R, Svedin, U, Falkenmark, M, Karlberg, L, Corell, RW, Fabry, VJ, Hansen, J, Walker, B, Liverman, D, Richardson, K, Crutzen P, Foley, JA. A safe operating space for humanity. Nature 461, 472-475 (24 September 2009) | : 10.1038/461472a; Published online 23 September 2009
<http://www.nature.com/nature/journal/v461/n7263/full/461472a.html>

[2] Hoffert et al. 2002: Advanced Technology Paths to Global Climate Stability: Energy for a Greenhouse Planet Science. 1 Nov. 2002. Vol. 298. No. 5595, pp 981987. Doi: 10.1126/science.1072357
<http://www.sciencemag.org/cgi/content/abstract/298/5595/981>

[3] The Global Hydrogen Initiative. Desert Energy Project.
http://www.desertenergyproject.net/Global_Initiative.pdf

[4]Navdanya: Food sovereignty
<http://www.navdanya.org/>

18.08.2009: Release of methane from methane hydrate from the arctic seabed[1]

Methane hydrate is an ice-like substance composed of water and methane. It is stable under high pressure and low temperature.

Westbrook and colleagues 2009 found that methane hydrate is being broken down and methane rises as bubble plumes. Warming of the northward-flowing West Spitsbergen current by 1°C over the last thirty years causes the break down of the methane hydrate.

Methane released from the seabed is seen as an agent of climate change. The authors stress that if this process continues, enormous amounts of methane may come free.

[1] Westbrook, Graham K.; Thatcher, Kate E.; Rohling, Eelco J.; Piotrowski, Alexander M.; Pälike, Heiko; Osborne, Anne H.; Nisbet, Euan G.; Minshull, Tim A.; Lanoisellé, Mathias; James, Rachael H.; Hühnerbach, Veit; Green, Darryl; Fisher, Rebecca E.; Crocker, Anya J.; Chabert, Anne; Bolton, Clara; Beszczynska-Möller, Agnieszka; Berndt, Christian; Aquilina, Alfred: Escape of methane gas from the seabed along the West Spitsbergen continental margin. Geophysical Research Letters, 2009; Doi: 10.1029/2009GL039191
<http://www.agu.org/pubs/crossref/2009/2009GL039191.shtml>

07.08.2009: Indian state promotes solar electricity [1]

The Government of Gujarat (a western state of India) has introduced the Solar Power Policy - 2009 promoting solar energy.

Subsidies mount up to \$0.31 per kWh for photovoltaic and \$0.25 per kWh for solar thermal electricity. The minimum project capacity to be subsidized is 5 MW. The Government will pay the subsidies for the period of 25 years.

[1] CSP Today: GERC proposes tariff for solar thermal power
<http://social.csptoday.com/news/gerc-proposes-tariff-solar-thermal-power>

29.06.2009 International Renewable Energy Agency (IRENA) in Abu Dhabi [1]

According to gulf news IRENA will have its head quarter in Abu Dhabi allowing the United Arab Emirates to become the global centre of a future renewable energy industry and expertise.

At the Agency's second session of the Preparatory Commission in Sharm El Sheikh, Egypt, the Signatories designated Abu Dhabi, the capital of the United Arab Emirates, as the interim headquarters. Bonn will host IRENA's center of technology and innovation and Vienna the Agency's liaison office for cooperation with other organisations active in the field of renewables. More than 130 Member States participated at the conference in Cairo. [2]

The International Renewable Energy Agency (IRENA) was founded in Bonn, Germany, on 26 January 2009. The purpose of IRENA is to provide support and advice to industrialised and developing countries in expanding the use of renewable energy sources. IRENA will promote and accelerate the global dissemination of all renewable energy sources that are sustainably used. IRENA is to provide resource persons who can pass on knowledge about successful policies and practical applications as well as technological know-how in the field of renewable energy. [3]

IRENA will counterbalance the IEA which is not strongly engaged in climate protection. [4]

[1] Gulf News: UAE wins bid to host Irena HQ
<http://www.gulfnews.com/nation/Environment/10327093.html>

[2] International Renewable Energy Agency (IRENA)
<http://www.irena.org/>

[3] Background information on the International Renewable Energy Agency (IRENA)
http://www.irena.org/downloads/Foundconf/IRENA_090507_background_information_press.pdf

[4] International Energy Agency (IEA)
<http://www.iea.org/>

25.06.09: China-Arab Cooperation Forum in Beijing establishes energy cooperation. [1]

China and 22 Arab nations will establish a cooperative mechanism on energy resources, including renewables such as solar and wind. The governments, State-owned and private enterprises will be engaged.

Both side emphasized the right to use nuclear energy peacefully and that investment in oil and natural gas exploration, refining, transportation and sale should be encouraged.

Another interesting activity is the joint research project between China and Kenya which will help utilize solar energy. Kenya has rich solar resources, but its electricity comes mainly from hydropower and imported oil. Its rural population relies heavily on wood and charcoal for heating and cooking. China is the world's largest producer of solar heaters and the third largest maker of photovoltaic cells, says a report of Xinhua. [2]

[1] China, Arab nations to establish energy co-op mechanism.
<http://www.ccchina.gov.cn/en/NewsInfo.asp?NewsId=18077>

[2] China, Kenya jointly develop solar products for Africa.China Climate Change Info-net. 11.06.2009
<http://www.ccchina.gov.cn/en/NewsInfo.asp?NewsId=17810>

17.06.2009: DESERTEC changes the global energy economy [1]

A solar energy project in the African desert will be started by 20 German companies. They plan to invest €400bn in developing projects to supply solar powered electricity from North Africa to Europe. On board are the electricity giant RWE, technical supplier Siemens, investor Deutsche Bank and reinsurance group Munich Re. They will meet in July to start the the consortium.

The construction of huge solar power plants in the North African deserts using solar thermal technology will take ten years before they can supply their first power supply and will booth the European energy technology. It opens the way for the production of hydrogen as clean fuel for transportation.

[1] Energy from North Africa: Massive European Solar Project Set for Launch. Spiegel Online. 16.06.2009.
<http://www.spiegel.de/international/business/0,1518,630699,00.html>

31.05.2009: The US car safety agency NHTSA recalls Tesla Roadster because of safety flaws [1] [2]

Tesla, a company run by Elon Musk, was ordered to recall the bulk of its production, 345 Roadsters, A screw may get loose on its wheel mountings. The rear wheels may get loose and the car gets out of control. The Roadster is a conglomeration of parts of different producers. It uses the Lotus Elisa platform, an English car. This platform bears the dangerous screw on its wheel suspensions

Tesla produced 500 cars till today. It has asked for government financial aids to start its Model S in 2012. The German carmaker Daimler joined Tesla to profit from its publicity and its knowhow.

SpaceX Falcon 9, another Elon Musk blueprint company, was selected by NASA in December 2008 to resupply the International Space Station (ISS) when the Space Shuttle retires in 2010. Astronauts hope that safety will not be compromised by outsourcing construction of vital parts as happened with the Roadster.

[1] SpiegelOnline: Schraube locker: Tesla ruft Hunderte seiner Elektro-Roadster zurück.
<http://www.spiegel.de/auto/aktuell/0,1518,627732,00.html>

[2] Tesla Motors: Tesla all grown up, first NHTSA recall announced. Autobloggreen. 20.May 2009.
<http://www.autobloggreen.com/2009/05/28/tesla-all-grown-up-first-nhtsa-recall-announced/>

28.05.2009:The Green Paradox explains why billions of Euro are spent ineffectively [1] [2]

According to Hans-Werner Sinn, Professor of economic sciences at the German University of Munich, the production of oil, coal and gas rises inexorably despite spending billion of Euro on alternative energy, improvement of building isolation and low fuel consuming cars.

Sinn says that rising fuel production is a result of the green politics which exert pressure on carbon based fuels increases fears of low oil prices in a foreseeable future. This ignites a panic between holders of oil gas and coal business which are forced to increase the mining activities to extract as much as possible of these resources in order to transfer their wealth to the Swiss banks. Hans-Werner Sinn believes that green activities of government and NGOs act like an expropriation and calls it "Green Paradoxon".

He says that reforestation has only a limited effect. Industrial-scale carbon capture and storage strategy is doomed to fail. It consumes one third of the energy released by combustion and is therefore inefficient. Another barrier is that there is not enough space to store the liquid CO₂. Burning anthracite coal the carbon atom joins two atoms of oxygen. The resulting liquefied carbon dioxide has the five fold of the initial volume of the coal. Resulting space due to mining activities will not be enough to store it. The IPCC reported that worldwide existing storage capacity is sufficient only for one tenth of the space needed for the global reserves of fossil fuels. Pumping it to the sea acidifies the water and marine life will die out.

Hans-Werner Sinn accuses politicians to lack strategies to counter the continuously increasing emission. The European pressure on fossil fuels increases their production reducing its price. As a result the USA and China and the rest of the world increase their demand of energy.

Hans-Werner Sinn calls for a tax deducted at source or the installation of a global emission allowances. This could limit production of fossil fuel.

Despite growing warnings the Australian government plans to invest A\$2 billion on carbon capture and storage projects (CCS). A total of A\$4.5 billion investment will be spent on technology and infrastructure to reduce carbon emission. Australia depends mainly on coal power plants. Coal export to Europe is an important part of national economy. CCS is therefore a good publicity to fix up the bad image of coal. Other countries like Germany invest in CCS. [3]

All these activities do not decarbonize fuel. CCS cannot be applied on transportation, which is 25 per cent of the CO₂ emission. Transportation is still growing. Professor Sinn omits to present a robust solution.

Cutting the chains of the "Green Paradox" [4]

Solar energy of the deserts can be used to produce hydrogen as a complete carbon-free fuel. Politicians and scientists are being accused to follow the footsteps of past administrations.

[1] Handelsblatt: Kurzarbeit auf den Bohrinseln. Hans-Werner Sinn (President of the Ifo-Institut) 28.05.2009.
<http://www.handelsblatt.com/politik/deutschland/kurzarbeit-auf-den-bohrinseln;2303561>

[2] TimesOnline: Why oil rulers won't go green. 03.03.2008
<http://business.timesonline.co.uk/tol/business/columnists/article3472008.ece>

[3] Australian government injects A\$2 billion into clean coal. Mining-Journal. 15.05. 2009
[http://www.mining-journal.com/production-and-markets/aus-government-injects-a\\$2-billion-into-clean-coal](http://www.mining-journal.com/production-and-markets/aus-government-injects-a$2-billion-into-clean-coal)

[4] Desert Energy Project: The Global Hydrogen Initiative
http://www.desertenergyproject.net/Global_Initiative

27.05.2009: Steven Chu, a headless scientist in charge of the destiny of the US energy without a strategy [1]

Once a laureated scientist calls now to paint the roofs, roads and cars white to reflect sunshine to cope with the climate change. Mr. Chu should get to work on his primary duty to reduce the CO₂ emission of his country. A strategy to decarbonize fuel using solar energy for the production of clean electricity and hydrogen as fuel for transportation is more plausible than painting roofs.

Mr. Chu presented the white paint strategy to the English Prince Charles and a group of 19 other laureates at the Climate Change Symposium in London on May 2009. The US energy secretary said in his presentation that white colour could cut down the air conditioning of the car and save energy.

The United States, of whom he is the energy secretary, caused the misery he laments of, and worse of all, the US continues, under his command to continue uncurbed emission of greenhouse gases. Now, after six months in office, the oil, the coal and the electricity lobby have cut his wings. His words turned to politician strategies which avoid to commit oneself to figures and limits and evades with vague verbalizations such as calling the start important and despises any targets of CO₂ reduction. These were the strategies of the foregoing administration. We all heard this before.

Mr. Chu, according to The Guardian, warned against expecting too much of the US too soon. He fears a huge disruption and calls for a lot of incentives, and some regulation. His strategy is to form a group of scientists to study ways to reduce carbon emission using a new generation of nuclear power stations, a "smart" electricity grid, improved battery technologies, new energy standards, electric cars and highly efficient buildings.

The energy strategy of the Obama administration builds on coal to fire power plants. Physicists are unable to free themselves from the ties of the lobby of nuclear and oil industry. Meanwhile a feasible suggestion with immediate relief for the environment had been sent to Mr. Chu, to Obama and to the EPA authorities. The proposal included the "US Initiative" comprising solar power plants in the US deserts. Surplus of electricity should be used for electrolysis of water to produce hydrogen for transportation. This could also stabilize the grid absorbing fluctuations. [2]

Incentives and how to install the hydrogen infrastructure was also described [3]

All US and European scientists alike like Dr. Chu or Prof Schellnhuber from the Potsdammer Climate Institute, advisor of the German Government, will be personally be blamed by following generations as responsible for the the disruption of climate and its inability to present a robust plan how to handle the situation.

Developing nations are demanding that industrialized countries cut emissions by 40 percent from 1990 levels by 2020 to stave off dangerous rises in temperature. Obama, concerned about losing competitiveness, opts for a reduction of 5% (which is attainable effortless by the financial crisis).

Blomber.com cites Alden Meyer, director of policy at the Washington- based Union of Concerned Scientists, saying that for the Senate to ratify a new treaty "it's important that there be a perception that there's meaningful action by developing countries like China." The fine construction of political evasive excuses are in full action. It is the old politic of making profits at other people's expense. [4]

U.S.A. Is the bad guy of greenhous gases emission [5]

Country	Environmental Ranking	% of CO2 Emission	% of World Population	% of Energy Consume
Gernany	2	2,94	1,26	2,97
India	4	4,46	16,98	4,82
Great Britain	6	1,95	0,91	2,05
South Korea	38	1,70	0,74	1,84
Japan	40	4,33	1,95	4,49
Italy	41	1,60	0,90	1,57
China	46	20,02	20,07	16,00
Russia	51	5,67	2,18	5,76
USA	55	20,34	4,59	19,77
Canada	56	1,92	0,50	2,30

[1] White roofs and 'cool' cars - Obama's US energy secretary gives Prince Charles tips on tackling climate change. Reflecting sunlight on buildings and cars among dozens of ideas considered by Steven Chu and the US energy department. The Guardian. 26.05.2009
<http://www.guardian.co.uk/environment/2009/may/26/chu-us-climate-change>

[2] Desert Energy Project: US Initiative
http://www.desertenergyproject.net/US_Initiative.pdf

[3] Desert Energy Project: Transportation Support
<http://www.desertenergyproject.net/Transportation.pdf>

[4] Blomber.com: Chu Says U.S. May Accept Climate Target Before China (Update1)
<http://bloomberg.com/apps/news?pid=20601130&sid=a1Co9a.O1k8M>

[5] Umweltwende in den USA: Obamas Klimaziele stehen auf der Kippe
<http://www.spiegel.de/flash/0,5532,19543,00.htm>

The electric car air bubble

23.05.2009: Daimler wants to improve its image and joins Tesla Motors start-up [1]

According to the German Spiegel Online the German carmaker Daimler AG acquired 10 percent of Tesla Motors, run by Elon Musk. Tesla needs desperately capital and Daimler needs the American Know How on electric technology and wants to share publicity build up by Tesla around a not existent product.

Daimler could not get started with the batteries for a series of 1000 Smart cars planed to be built by its associated battery company Evonik. Evonik it could not start the battery production before 2012.

Elon Musk, the man which makes Daimler CEOS bow their heads

Elon Musk made a start capital with X.com and Paypall and invested recently in Tesla Motors and Space X. Both activities are built up upon promises on future deeds. Musk presents an excellent marketing strategy, but no product. The fusion of Daimler with Tesla is also a marketing strategy of the German carmaker without a sound technical background.

Reaching for internet money [2]

Payroll: Elon Musk made millions with his first business the X.com Payroll internet payment system.

Reaching for government subsidies [3]

Tesla Motors: Musk needs capital to have his Model S built. He needs 450 million Dollars from the electric-car government subvention program. Musk marketing strategy is to pretend to help combat global warming by funding Tesla Motors and "Solar City", a photovoltaics products and services startup company. Musk plans to have his model Tesla Model S built in 2011 with a calculated price of \$50,000. The car, if it ever gets on market, will have a range of 250 km, not suited for a vacation ride.

Additional money is brought in by potential buyers. Tesla started a subscription system 2 years ahead of production. Paying 40,000 in advance, will reserve the right of one of the first 2000 cars. This system of reservation was used by Tesla before, selling the Roadster driven by California governor Scharzenegger. Technical and financial problems delays the production, and hundreds of clients are still waiting for their pre-financed Roadsters.

The Batteries from EnerDel [4] [5]: Tesla plans to use Lithium-ion batteries from EnerDel, a battery company which builds the batteries for the electric car. Electric cars are already being built. EnerDel and Fisker, an independent American carmaker developing a line of high-tech green vehicles for the global market, got together signing a long-term battery supply agreement.

Fisker plans to build 15,000 vehicles per year and market them through an existing network of 32 U.S. retailers. A European retail network will be announced in September at the Frankfurt Motor Show in Germany.

Reaching for the stars [6]

NASA outsources its flight program to Musk's SpaceX [6]: Musk founded SpaceX in 2002. In December 2008, NASA announced the selection of SpaceX Falcon 9 launch vehicle and Dragon Spacecraft to resupply the International Space Station (ISS) when the Space Shuttle retires in 2010. The \$1.6 billion contract represents a minimum of 12 flights, with an option to order additional missions for a cumulative total contract value of up to \$3.1 billion.

Performed SpaceX test flight [7]: Up today Musk's SpaceX performed only four starts, of which only one was successful with a payload of 165 Kg. Here are the starts:

- 1 25.03.2006 Failure Engine failure at T+25 seconds. Loss of vehicle
- 2 21.03.2007 Failure Maximum altitude 289 km. Premature engine shutdown at T+7 min 30 s. Failed to reach orbit. Failed to recover first stage.
- 3 03.08.2008 Failure Residual stage 1 thrust led to collision between stage 1 and stage 2
- 4 28.09.2008 Success Dummy payload - mass simulator, 165 kg

Scheduled Flights: [8] Other 24 starts are scheduled in 2009 to 2015 to supply the ISS. See the SpaceX launch manifest. The projected engine for the SpaceX9 has already performed a 3 minutes run at the test site. [9]

Conclusion: It is hard to believe that the fusion of Daimler and Tesla will be profitable for the German carmaker. It is unreliable that Musk does all this for the sake of climate protection. His rockets are not welcome by environmentalists.

[1] SpiegelOnline: Technologie-Partnerschaft: Daimler steigt bei Elektroauto-Pionier Tesla ein. Überraschungscoup bei Daimler: Der Stuttgarter Autohersteller steigt mit einem Zehn-Prozent-Anteil beim kalifornischen Elektroauto-Startup Tesla Motors ein. Mit dem Schritt sichert sich der Mercedes-Konzern Zugang zur Technologie der Amerikaner - und poliert das eigene Image auf. 19.05.2009
<http://www.spiegel.de/auto/aktuell/0,1518,625710,00.html>

[2] Wikipedia: Elon Musk
http://en.wikipedia.org/wiki/Elon_Musk

[3] SpiegelOnline: Tesla Model S fährt mit Strom und Staatsknete. 27.03.2009.
<http://www.spiegel.de/auto/aktuell/0,1518,615793,00.html>

[4] EnerDel signs deal to maybe provide batteries to Fisker Automotive. May 8th 2009
<http://www.autobloggreen.com/2009/05/08/enerdel-signs-deal-to-maybe-provide-batteries-to-fisker-automoti/>

[5] EnerDel: Lithium Power Systems
<http://www.enerdel.com/>

[6] SpaceX Space Exploration Technologies: SpaceX 1
<http://www.spacex.com/multimedia/videos.php?id=35&cat=recent>

[7] Wikipedia: Space Exploration Technologies Corporation (SpaceX)
http://en.wikipedia.org/wiki/Falcon_1

[8] SaceX Launch Manifest 2009-2015
http://spacex.com/launch_manifest.php

[9]Updates of Falcon 9. May 14. 2009.

<http://spacex.com/updates.php>

May 22, 2009: The fall of Steven Chu from the position of a laureated scientist to a jobholder of a cracked task [1]

Only few month in charge of the US energy secretary Dr. Steven Chu is frustrated because of remarkable oppositions to his work. He has been the director of Lawrence Berkeley National Laboratory since 2004, where he tried to find solutions to climate change. His inexperience as a politician may now become a setback to its career.

He stresses, in an interview at the BBC, that the US will not be able to cut greenhouse emissions as much as it should due to domestic political opposition. Dr. Chu referring to the awareness of climate tipping points coming closer said in the interview: "But if I am going to say we need to do much, much better I am afraid the US won't get started."

The House of Representatives is debating a climate and energy bill, "The American Clean Energy and Security Act of 2009" [4]. This act is the core strategy of Prof Chu. It may be rejected by senators, many of whom are funded by the energy industry, or be watered in a way to become totally ineffective. Environmentalists quote compromises such as the approval of new coal-fired power plants without carbon capture and store (CCS). In UK the CCS is already binding for new coal plants.

Admitting that photovoltaic in desert areas could provide clean electricity for the entire world Dr. Chu discarded the idea stressing the difficulties to transport the energy to where it is needed. It has to be said that Prof Chu, the EPA and Obama were informed of Desert Energy Project which covers all those problems using long distance DCHV lines according Kurokawa and Fuller. Hydrogen as fuel for transportation may be produced in the region where solar power plants are installed. Cars could run on clean fuel. [2]

U.S.A. Is the bad guy of greenhous gases emission [3]

Country	Environmental Ranking	% of CO2 Emission	% of World Population	% of Energy Consume
Gernany	2	2,94	1,26	2,97
India	4	4,46	16,98	4,82
Great Britain	6	1,95	0,91	2,05
South Korea	38	1,70	0,74	1,84
Japan	40	4,33	1,95	4,49
Italy	41	1,60	0,90	1,57
China	46	20,02	20,07	16,00
Russia	51	5,67	2,18	5,76
USA	55	20,34	4,59	19,77
Canada	56	1,92	0,50	2,30

The American Clean Energy and Security Act of 2009 [4]

This act must pass the loophole of the politics where it will be adapted to suit the lobby of oil, gas electricity corporations and carmaker.

Here some of its content :

The legislation has four titles: (1) a "clean energy" title that promotes renewable sources of energy and carbon capture and sequestration technologies, low-carbon transportation fuels, clean electric vehicles, and the smart grid and electricity transmission; (2) an "energy efficiency" title that increases energy efficiency across all sectors of the economy, including buildings, appliances, transportation, and industry; (3) a "global warming" title that places limits on the emissions of heat-trapping pollutants; and (4) a "transitioning" title that protects U.S. consumers and industry and promotes green jobs during the transition to a clean energy economy.

Renewable Energy: The renewable electricity requirement begins at 6% in 2012 and gradually rises to 25% in 2025. The governor of any state may choose to meet one fifth of this requirement with energy efficiency measures.

Carbon Capture and Sequestration: Developing carbon capture and sequestration (CCS) technologies should ensure a continuing place for coal in the energy future.

Clean Fuels and Vehicles: Establishes a low-carbon transportation fuel standard to promote advanced biofuels and other clean transportation fuels. It authorizes financial support in the form of grants or loan guarantees to cities, large-scale demonstrations of electric vehicles and financial support to car companies to retool their plants to build electric vehicles.

Transportation Efficiency: Harmonize the federal fuel economy standards, any emission standards promulgated by EPA, and the California standards for light-duty vehicles. The EPA is to carry out the SmartWay Transportation Efficiency Program to increase the efficiency of highway trucking.

Global Warming Pollution Reduction Program: The draft establishes a market-based program for reducing global warming pollution from electric utilities, oil companies, large industrial sources, and other covered entities that collectively are responsible for 85% of U.S. global warming emissions. Under this program, covered entities must have tradable federal permits, called "allowances," for each ton of pollution emitted into the atmosphere. Entities that emit less than 25,000 tons per year of CO₂ equivalent are not covered by this program. The program reduces the number of available allowances issued each year to ensure that aggregate emissions from the covered entities are reduced by 3% below 2005 levels in 2012, 20% below 2005 levels in 2020, 42% below 2005 levels in 2030, and 83% below 2005 levels in 2050.

Additional Greenhouse Gas Standards: Creates special programs to reduce emissions of two pollutants that contribute to global warming: hydrofluorocarbons (HFCs) and black carbon. HFCs are chemical products that are used in refrigeration, air conditioning, and insulation, among other things. The draft adds HFCs to the list of similar substances that EPA currently regulates because they deplete the ozone layer. Under this regulatory program, EPA will be directed to phase down the production of HFCs. Black carbon, or soot, is the product of incomplete combustion of fossil fuels or biomass. It is a major contributor to warming in the Arctic.

Ensuring Domestic Competitiveness: To ensure that U.S. manufacturers are not put at a disadvantage relative to overseas competitors, the draft authorizes companies in certain industrial sectors to receive "rebates" to compensate for additional costs incurred under the program. Sectors that use large amounts of energy, and produce commodities that are traded globally, would be eligible for the rebates. Foreign manufacturers and importers would be required to pay for and hold special allowances to "cover" the carbon contained in U.S.-bound products.

Decarbonisation of Energy: No effort is decarbonisation of energy is being undertaken.

[1] BBC: US CO₂ goals 'to be compromised'. 21 May 2009.

US Energy Secretary Steven Chu says the US will not be able to cut greenhouse emissions as much as it should due to domestic political opposition.

<http://news.bbc.co.uk/2/hi/science/nature/8061929.stm>

[2] Desert Energy Project: Global Energy Initiative

http://www.desertenergyproject.net/Global_initiative.pdf

[3] Umweltwende in den USA: Obamas Klimaziele stehen auf der Kippe

<http://www.spiegel.de/flash/0,5532,19543,00.html>

[4] Discussion Draft Summary: The American Clean Energy and Security Act of 2009

http://energycommerce.house.gov/Press_111/20090331/acesa_summary.pdf

16.03.2009: Nuclear energy for Kuwait, the uncertain solution [1]

According to the nuclear team head Ahmad Beshara, the GCC Secretariat (Secretariat-General of the Gulf Cooperation Council (GCC)) a feasibility study was already worked out regarding the Kuwaiti initiative for a peaceful, joint GCC nuclear program.

Beshara pointed out that the United Arab Emirates (UAE) and Qatar had announced individual plans to begin nuclear programs.

Therefore, Kuwait is required to move in this direction too.

The Global Hydrogen Initiative

The global economic crisis hits car manufacturing business very hard. Increasing demand of energy by China, India and USA will dictate new technologies which promise increasing revenues and sustainable de-carbonisation of fuel for transportation.

The Global Hydrogen Initiative was presented to Arabian countries, the United States, India, China, European Commission and Australia. All countries are highly interested in sustainable energy, including fuel for cars. The Climate Conference at Copenhagen in December will pave the global road in this direction.

[1] Kuwait Times: Kuwait explores nuclear cooperation with France. 16.March 2009.

http://www.kuwaittimes.net/read_news.php?newsid=MTA1MDk1MDkzNw==

16.03.2009: German carmaker VW invests on internal combustion engines for the future [1]

According to Jens Hadler, chief engineer at Volkswagen engine research department, the company will stick to internal combustion engines. Hadler says that batteries, fuel cells and the electro car is not ready yet for the production. It will take years to develop them. To late to master the economic crisis, and to late for climate protection. He also is also uncertain about the fuel for the future. The oil companies remain silent on that.

VW will therefore continue the development of internal combustion engines, which are the broad technology all over the world.

Hydrogen used as fuel for already available internal combustion engines is being suggested by the [Global Hydrogen Initiative](#), offering zero emission.

[1] Spiegel Online: VW-Motorenentwicklung. Dauerbrenner mit Benzin im Tank. 13.March 2009
<http://www.spiegel.de/auto/aktuell/0,1518,612935,00.html>

08.03.2009: The Pickens Plan is shuffling deck with new energy cards [1]

The investment giant BP Capital Management owned by T. Boone Pickens diversifies in BP Capital Commodity Fund and the BP Capital Equity Fund, having \$4 billion to invest in energy field. The company is engaged in oil, natural gas, water marketing, such as Mesa Water and groundwater rights in the United States.

A new activity, the new Clean Energy strategy called "The Plan" can bring a move in an aging energy market. Pickens shuffles the deck with new cards having wind turbines as ace and natural gas as joker.

The Plan wants to build wind generation facilities to produce 22% of US electricity. Electricity is presently won from nuclear and fossil fuels:

Coal	50%
Natural gas	22%
Nuclear power plants	20%
Others (water power, wind)	8%

Wind energy is thus planned in 10 years to replace one-third of oil import. Clean Energy wants to replace gasoline and diesel with natural gas which is spared for electricity production.

Pickens Plan gets people to think about clean energy. Investing in wind turbines and HVDC grid in USA is a remarkable start. The Plan uses natural gas as fuel for cars. This is no solution for countries which do not have natural gas of its own. The infrastructure and car technology will therefore be of importance for the homeland but is not suited to boost the export industry. The plan still uses carbon combustion for cars. According to IEA fossil fuels supply over 85 percent of the world's energy and are projected to remain the dominant fuel. The IEA strongly recommends the decarbonisation of energy strategy. [2] [3]

The US Energy Initiative [4]

The financial crisis and the collapsing climate demand more than local activities. Energy from Wind, together with solar energy from the deserts may deliver, not only 22% of electricity, but will produce clean electricity and clean fuel for transportation for 100% of global needs.

The US Hydrogen Initiative meets the basic idea of the Pickens Plan, but goes further. It uses solar energy and wind energy. With the energy of the deserts electricity and hydrogen may be produced to feed the nation and even export energy to a global grid. Due to easy assembling of photovoltaic arrays the production of energy starts immediately, right from the beginning. Hydrogen cars, using normal internal combustion engines with double injection system can use hydrogen or gasoline, as on route available. [5]

Stabilising the electric Grid

Hydrogen may be won by electrolysis of water using surplus of power, avoiding overloads. Hydrogen production is therefore an energy storage which stabilises the grid.

The Global Energy Initiative [6]

Solar energy and Hydrogen internal combustion is being presented as the Initiative for governments which signed the Kyoto Protocol. A standard energy solution is recommended to avoid fail developments such as happened before with so many technical devices before. The national activities will join later on to a global grid. A standardisation of the procedures is therefore extremely important to avoid countries to miss the global standards.

[1] The Pickens Plan
<http://www.pickensplan.com>

[2] International Energy Agency: Decarbonization
http://www.iea.org/impagr/cip/pdf/zets_tsr_no4.pdf

[3] IEA: Realizing the Hydrogen Future
http://www.iea.org/Textbase/work/2002/washington/2_spa.pdf

[4] The US Hydrogen Initiative
http://www.desertenergyproject.net/US_initiative.pdf

[5] Universiteit Gent: Flow, Heat and Combustion Mechanics: Internal combustion engines versus fuel cells
http://www.floheacom.ugent.be/Transport/transp_h2_en.htm

[6]The Global Energy Initiative
http://www.desertenergyproject.net/The_Energy_Initiative_explained.html

26.02.2009: Nuclear waste disposal site in Germany dangerous; access impossible [1]

Radioactive brine leaking from section 12 of the German nuclear waste disposal site "Asse 2" is contaminated with radioactive caesium, cobalt 60, strontium 90 and Tritium. Nuclear waste from nuclear power plants were sealed in metal barrels and stored in this section. The barrels probably corroded and are leaking. Access to this section for inspection or rehabilitation is impossible because of high radioactivity and eminent danger of physical collapse of the whole section.

Helmholtz-Zentrum München (HMGU), which was holding the nuclear disposal site Asse 2, drilled a hole to permit the leaking radioactive brine to flow from the level situated at 750 metre depth down to a level situated in 975 metres, hoping to get rid of it.

Leakage from section 12 had been known by HMGU since 1988, which dumped the leaking brine in another section filled with debris situated at 700 metres.

The German government took over "Asse 2" in 2008 but sees no solution for the increasing problems of a nuclear contamination of the ground water of the region.

"Asse 2" is a painful lesson for Germany. It proves that there are no safe disposal sites for nuclear waste. Clean energy from wind turbines and solar energy has its price, but pays off with safety. Nuclear energy does not include costs of disposal in its price, because there is no way to get rid of it, so no costs are billed to the consumer.

[1] Schon 1988 wurde kontaminierte Lauge abgepumpt. BfS stößt bei Recherchen in der Asse auf neue Erkenntnisse. Klima Magazin 11.02.2009

<http://www.klima-magazin.de/news/ansicht/archive/2009/02/11/article/schon-1988-wurde-kontaminierte-lauge-abgepumpt-587.html>

24.02.2009: NASA Orbiting Carbon Observatory fails climate priorities [1]

Today the NASA Orbiting Carbon Observatory (OCO) crashed near the Antarctic after a fail launch. The extreme expensive project was intended to :

- 1- study carbon dioxide sources (where it comes from) and sinks (where it is pulled out of the atmosphere and stored).
- 2- help policymakers and leaders make more informed decisions to ensure climate stability and retain our quality of life.

Comment:

- We do not need further data. All know already from where CO2 comes: [2]

Country	% of the world CO2 Emission	% of the world Energy consumed	% of the world Population Mio
USA	21 %	20 %	4,6 %
China	18 %	15 %	20,5 %
Russia	5 %	5 %	2,2 %
India	4 %	5 %	17,0 %
Germany	3 %	3 %	1,3 %

- Policymakers and leaders need only one information to make good decisions:
The priority is to stop carbon based combustion. Use solar energy from the deserts and from wind turbines for the production of hydrogen using electrolysis of water.

Good for a flourishing economy

Investment priorities concentrate in hydrogen infrastructure, energy transport grid and hydrogen cars. This meets the future of the coming decade.

[1] NASA's Launch of Carbon-Seeking Satellite is Unsuccessful. Feb. 24, 2009
<http://oco.jpl.nasa.gov/>

[2] Desert Energy Project: The Global Energy Initiative. Slide 10.
<http://www.desertenergyproject.net/Global%20Initiative.pdf>

21.02.2009: Approval of hydrogen motor vehicles, EU regulations [1] [2]

The EU regulations on motor vehicles comprise also safety tests for hydrogen cars. The relevant regulation is the Directive 2007/46/EC which was now amended by the Regulation EC No 79/2009, describing the technical requirements for hydrogen cars. See complete text below.

[1] Directive 2007/46/EC of the European Parliament and of the Council of 5 September 2007 establishing a framework for the approval of motor vehicles and their trailers, and of systems, components and separate technical units intended for such vehicles
<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2007:263:0001:0160:EN:PDF>

[2] Regulation EC No 79/2009 of the European Parliament and of the Council of 14 January 2009 on type-approval of hydrogen-powered motor vehicles, and amending Directive 2007/46/EC.
<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:035:0032:0046:EN:PDF>

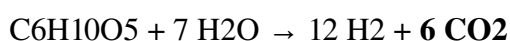
19.02.2009: BioHydrogen from starch and cellulosic materials

The Virginia Tech, Oak Ridge National Laboratory (ORNL), and the University of Georgia produce hydrogen from biomass using multiple enzymes. Starch from corn is used to feed the hydrogen fermentation which breaks the polysaccharides up into carbon dioxide and hydrogen. [1]

Also cellulosic materials is planned for the production of hydrogen. [2]

A membrane separates the CO₂ from the hydrogen. According to the researchers reaction takes place at 30°C and atmospheric pressure. The price of hydrogen was estimated of approximately \$ 2/Kg.

The authors claim that the energy conversion efficiency from the sugar-hydrogen-fuel cell system is three times higher than a sugar-ethanol-internal combustion engine. They calculate that the proposed 30 percent of transportation fuel replaced by ethanol from biomass, would be equivalent to 100 percent of vehicle transportation powered by hydrogen.



1 Kg of starch produces 0,148 kg hydrogen and is equivalent to 1.12 kg (0.38 gallons) of gasoline. The vision is for the ingredients to be mixed in the fuel tank of a car. A car with an approximately 12-gallon tank could hold 27 kg of starch, which is the equivalent of 4 kg of hydrogen. One kg of starch will produce the same energy output as.

Comment: Using starch or cellulosic materials the overall reaction shows that all carbon dioxide which had been bound by the plants is again liberated to the atmosphere. The energy which is used for the agrarian production of corn or cellulosic materials turns the energy turnover equation as a negative figure. Starch also competes with food and cellulosic materials increases deforestation and leaves less material as ground conditioner.

Not everything which is labelled as “Bio” is good for nature. Emission-free Hydrogen is a domain of solar energy and water hydrolysis as presented with unlimited resources. It presents an enormous wealth for the desert owning countries. Stop war and destruction- make money. [3]

[1] Y.H. Percival Zhang, Barbara R. Evans, Jonathan R. Mielenz, Robert C. Hopkins, Michael W.W. Adams: High-Yield Hydrogen Production from Starch and Water by a Synthetic Enzymatic Pathway. PLoS ONE 2(5): e456. doi:10.1371/journal.pone.0000456
http://www.greencarcongress.com/2007/05/researchers_dev_1.html

[2] Xinhao Ye, Yiran Wang, Robert C. Hopkins, Michael W. W. Adams, Barbara R. Evans, Jonathan R. Mielenz, Y.-H. Percival Zhang: Spontaneous High-Yield Production of Hydrogen from Cellulosic Materials and Water Catalyzed by Enzyme Cocktails (p 149-152) Published Online: Feb 2 2009 1:56AM DOI: 10.1002/cssc.200900017
<http://www.greencarcongress.com/2009/02/enzymatic-proce.html#more>

[3] Desert Energy Project: The Global Energy Initiative explained.
http://www.desertenergyproject.net/The_Energy_Initiative_explained.html

16.02.2009: Climate change with great impact on investment decisions [1]

Leading global providers of consulting and investment services stress that climate change will create new fields in the investment economy. Carbon Disclosure Project, for example, maintains a greenhouse gas emissions database, issues analyst reports, and analyses company responses to climate change.

The increase in climate change regulations will get tighter around the globe. Emission control and energy efficiency will be promoted by governments and subsidies will turn the field attractive.

The German Chancellor Angela Merkel stressed in 2006 the importance of investors to take account of climate change in their decision-making. This acquires new actuality on face of the financial crisis which demands a new concept of global energy business.[2]

Miss planning of the car manufacturers, relying on fossil fuel and high dimensioned engines. They will be swept away by the changing market. The coming BlueHybrid from Mercedes-Benz and the Hyundai the Santa Fe blue Hybrid still rely on petrol [3] [Download News Mercedes](#)

The new technologies of the carbon-free fuel hydrogen won by electrolysis of water using solar and wind power is to be focused by energy related investments. Solar energy and wind turbines opens a new dimension of revenues on the investment market. [4]

[1] The Carbon Disclosure Project

<http://www.cdproject.net/>

[2] Foreword to the first German Report of the Carbon Disclosure Project. 22.September 2006.

http://www.cdproject.net/download.asp?file=CDP_Merkel_letter.pdf

[3] Green Car Congress: Daimler Will Launch Mercedes-Benz Mild Hybrid S 400 in Summer 2009

<http://www.greencarcongress.com/2008/09/daimler-will-la.html>

[4] 13.02.2009: Poor 20% reduction of CO2 emission with Daimler new model BlueHybrid dinosaur. Desert Energy Project-News.

<http://www.desertenergyproject.net/News.html>

13.02.2009: Poor 20% reduction of CO2 emission with Daimler new model BlueHybrid dinosaur [1]

Mercedes heralds that its limousine S400 BlueHybrid will be launched in summer 2009. It bears a lithium-ion-battery which is supposed to reduce emission of the limousine from 230 down to 190g CO2/Km.

The gasoline engine of the BlueHybrid has 3,5 litre cylinder capacity and generates 299HP. The new 110 V battery activates an electric motor which acts at sudden starts, starter motor and alternator.

The Price of the system remains secret, but what is known so far is that it will be very expensive.

The lithium-ion-battery, aside of its extreme high price, has the inconvenience that high temperatures or mechanical injuries cause fire. A cooling system and a gel are integrated to avoid a short-circuit.

Mercedes [1]

The BlueHybrid from Mercedes is therefore another model of the fleet of Jurassic Park monsters. A mix of such halfhearted activities are typical for the climate politic. Hydrogen/Solar Energy are to be focused.

Hyundai [2]

Hyundai presented its version of the Santa Fe blue Hybrid will use a 2.4 liter four-cylinders still emits 148 g CO2 /Km relying on petrol. It also fails the future market of maximal 120 g CO2/Km while relying on petrol.

BMW, Hydrogen 7, the winner [3]

The Hydrogen/petrol version of BMW, which a combustion engine which operates with hydrogen and petrol as well, for the case no hydrogen refilling station is available, is the smart innovative answer for the time of the hydrogen refilling station infrastructure matures.

The cooperation of the European Union and the Arabic States could unit these huge economic liaison to the best of the financial prosperity of the region. The Arabian deserts may generate hydrogen, the clean fuel with zero emission.

The deserts of USA are ideal regions to start solarenrgy/hydrogen energy business.

[1] Mercedes-Benz S 400 BlueHYBRID: CO2 Champion in the Luxury Class with Efficient Hybrid Drive System and Lithium-Ion Technology

<http://www.daimler.com/dccom/0-5-633234-1-1129030-1-0-0-0-0-0-9293-7163-0-0-0-0-0-0.html>

[2] Hyundai enters the hybrid-electric game with Santa Fe Blue Hybrid concept
<http://www.worldcarfans.com/9081003.010/hyundai-sante-fe-blue-hybrid-debuts-in-paris>

[3] BBC: BMW's Hydrogen car: Beauty or beast? 17 November 2006
<http://news.bbc.co.uk/1/hi/business/6154212.stm>

13.01.2009: Google carbon footprint of concern [1]

Requests doesn't go to just one Google server, it goes to several competing against each other. Data from the fastest server are sent to the customer. That is why Google has the best search engine. This demands a lot of energy and produces greenhouse gases if power plants are fired with coal, natural gas, oil or nuclear devices.

With more than 200m internet searches estimated globally daily, the global IT industry generates as much greenhouse gas as the world's airlines - about 2% of global CO2 emissions, says a report by Gartner, the industry analysts.

Not Google, but the the government and energy corporations are to be blamed

The energy corporations do not move toward clean electrical energy production. They rely on fossil fuel and nuclear energy disregarding the enormous damage to nature. They aim to produce highest revenues as soon as possible. They do not consider themselves as charitable or non-profit organisations. If they are left on their own they take all they get.

The government is the controlling instance which has to set limits to the activities of corporations when they harm public interests. The government has to create the prerequisites for a sound functioning of corporations. The government of US and the European countries have failed to introduce a clean energy politic. They still are avoiding to force the introduction of renewables by law.

Solar energy wind and hydroelectric plants can be integrated in a worldwide grid, as described in [Global Energy Initiative \[2\]](#) and in [Roadmap to the Global Energy initiative \[3\]](#).

[1] Sunday Times: Revealed: the environmental impact of Google searches. Physicist Alex Wissner-Gross says that performing two Google searches uses up as much energy as boiling the kettle for a cup of tea. 11.01.2009
http://technology.timesonline.co.uk/tol/news/tech_and_web/article5489134.ece

[2] <http://www.desertenergyproject.net/Global%20Initiative.pdf>

[3] <http://www.desertenergyproject.net/Roadmap>

08.01.2009: Abu Dhabi funds London Array Windfarm [1]

The business investment group Masdar Initiative of the Abu Dhabi Government invests 500 million Pounds in a 1 Giga Watt Windpark, on England's coast in the River Thames estuary. The UK offshore wind farm would consist of 200300 gigantic turbines, with a projected total cost of 2.5 billion Pounds. If a decision on the realisation of the project may be achieved, construction could start in 2010 with the first power possibly being generated in 2012.

The German energy group E.On, one of the UK's leading power suppliers, sold 20 percent of its stakes to the Masdar Group. E.On holds now 30 percent, while Dong Energy, Denmark's wind farm company, holds the remaining 50 per cent. [2]

According to Sultan Ahmed Al Jaber, the Chief Executive of Masdar the offshore wind market will be a major force in the future and is the opportunity to enter the renewable energy market building a partnership with the UK government for the benefit of both economies. [3]

According to an economic development plan of Abu Dhabi, which holds more than 90 percent of the oil reserves of the United Arab Emirates, government finances are to be "decouple" from oil revenues. Banks will be encouraged to invest their capital through foreign channels to negate the effects of excess liquidity in the local system. A real growth in the nonoil sector of about 9.5 percent per year through to 2015 is projected. [4]

UK, struggling with its bank crisis and declining economy, hopes to create jobs in the renewable energy sector.

[1] UK Trade and Investment Services: World's largest wind farm gets Abu Dhabi funding
<http://www.ukinvest.gov.uk/Feature/4041137/nlBE.html?print=true>

[2] The London Array
<http://www.londonarray.com/>

[3] Masdar
<http://www.masdar.ae/home/index.aspx>

[4] Kuwait Times: Abu Dhabi eyes 7% annual GDP growth through 2015. 08.01.2008
http://www.kuwaittimes.net/read_news.php?newsid=MjcxMjU2OTQ2

05.01.2009: Extreme weather changes hits local agriculture in Kuwait [1]

Heavy rains in April 2008, winds of the power of hurricanes, followed by drought for months and historically cold temperatures this season with temperatures below zero in Kuwait have destroyed 80 percent of the local agricultural production. The very cold weather will remain this month According to meteorologist Eisa Ramadan, responsible for these extreme weather changes is the greenhouse effect, caused by modern industry. He says that this problem will continue to develop in the coming years.

[1] Kuwait Times: Below zero temperature hits Kuwait agricultural products. Published Date: January 05, 2009 By Nawara Fattahova, Staff Writer
http://www.kuwaittimes.net/read_news.php?newsid=MTQwMzQ0MDE4Ng==