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Corporate Finance and Climate Protection: A Beneficial Alliance

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Summary

The following proposal represents an attempt to redefine climate protection measures and to reset climate protection targets into accordance with what is scientifically necessary. In essence, this means organising business in such a way that successful economic activity and climate protection are not mutually exclusive. What is proposed is an evolutionary political process in which statutory regulations are implemented step by step which facilitate profitable financial investment in climate protection activities and technologies on the one hand and which, on the other hand, make climate-damaging actions and technologies appear increasingly to be more of a financial burden.

The financial services industry will play a key role in this process, not only as an investor in climate protection but as a political player calling for and implementing these political regulations.

Therefore, an alternative solution has to be developed for and in conjunction with the financial industry to assure the branch that climate protection is not an obstacle to their goals, but an opportunity.

This paper is intended as a catalyst for further discussion. All contributions are welcomed so that the approach presented here can be further developed to increase the chances of its implementation.

The latest climate research paints a bleak picture: global warming is happening at a much faster pace than previously assumed. It appears to be too late to avert irreversible changes. The climate protection targets and measures discussed up to now are clearly inadequate to tackle global warming. Emissions reductions on their own will further increase the concentration of climate gases in the earth's atmosphere.

Instead of accepting the 2°C target for global warming, the international community should be seeking to reduce the current concentration of climate gases in the atmosphere to 330 ppm, well below today's level.

This is possible using a strategy based on two pillars:

Pillar 1: Ensuring there are no more new emissions

Pillar 2: Cleaning the atmosphere of carbon dioxide

This goal is achievable in just a few decades if the entire global community takes concerted action. It will necessitate converting the fossil and nuclear industries to an industry based on renewable energies, and introducing technologies and agricultural methods which filter out carbon dioxide from the atmosphere. This relates above all to the energy industry and agriculture, but also to the chemical industry and transport, as well as much more.

The key element of this new climate protection strategy is the total conversion of the world's energy supply to renewable energies. Scientists Jacobson and DeLucchi from the universities of Stanford and Davis in California have shown in their plan published in November 2009 that this will be technologically and economically possible by 2030.

The profit interests of the biggest companies worldwide, which do virtually all their business with the fossil and nuclear energy industries, represent the main obstacle to this changeover.

The worldwide growth rates for renewable energies are already much higher than had been forecasted just a few years ago. Since the production of renewable energies, with the exception of biomass, does not involve fuel costs, renewables have a systemic advantage since they are not at the mercy of the rising prices of conventional fuels, which are becoming ever more critical as fuel becomes scarcer. For this reason alone climate protection technologies will find it increasingly easy to establish themselves in the market. Given active political measures it is feasible to convert the world economy to zero emission technologies in a few decades. Together with technologies and ecological farming methods which remove carbon dioxide from the atmosphere, it will be possible to reduce the CO₂ concentration in the atmosphere from today's figure of 387 ppm to 330 ppm¹.

Implementation of the appropriate political measures would open up many new investment possibilities with expectations of returns. This would release the financial sector from the need to generate returns from investments in technologies which harm the climate, and would instead enable them to turn to profitable investments in climate protection technologies.

Shifting to a solar economy, on the other hand, would provide societies around the world with solutions for climate protection, economic development, poverty reduction, conflict resolution and local environmental protection.

Furthermore, changing over to renewable energies by 2030 would cost less than half the worldwide fuel bill for fossil and nuclear energy fuels up to 2030. According to Jacobsen und DeLucchi's calculations, changing over to renewable energies by 2030 would cost around 100,000 billion US \$.² The Energy Watch Group estimates that the fuel bill for the same period would be around 200,000 billion US \$.³ The basis for the estimate is the world's fuel bill for 2008, plus an assumed price increase by 2030 of

¹ Average of 2009 according to the National Oceanic and Atmospheric Administration (NOAA), ftp://ftp.cmdl.noaa.gov/ccg/co2/trends/co2_mm_mlo.txt.

² DeLucchi, Mark A./Jacobson, Mark Z., Plan für eine emissionsfreie Welt bis 2030, Spektrum der Wissenschaft, Dezember 2009, <http://www.spektrumverlag.de/artikel/1010840> (German) (29.03.2010)

³ Zittel, Werner Dr. 2010, Estimate of annual worldwide spending on energy supply, http://www.energywatchgroup.org/fileadmin/global/pdf/2010-03-23_EWG_Kosten_Weltenergieversorgung_D.pdf (29.03.2010)

only 20%. Even without factoring in external costs such as damage to the climate, the environment and health, these figures clearly show that it will be far more expensive to continue to use fossil and nuclear energies than to shift to renewables. This is all the more true in view of the fact that the price of conventional fuels is likely to surge dramatically in the coming years as a result of shortages once peak oil is passed.

Initial estimates by Professor Markus Antonietti indicate that cleaning carbon dioxide from the atmosphere is also economically self-sustaining. Investments in HTC (hydrothermal carbonisation) facilities, for example, will also pay dividends, alone by virtue of other effects such as energy generation, avoidance of fertilisers and increased agricultural yields. Together with the higher biomass yield possible from soil enriched with carbon dioxide through HTC, removing carbon from the atmosphere is not only possible but even economically self-sustaining. Biomass growth can be accelerated by afforestation. Particularly rapid successes can be achieved with forest seeds, which also enable high economic returns. One way to fasten this process is afforestation. Quick and profitable results can be achieved especially with forest seeds.

In order to implement these solutions there is a need for a clear policy which abolishes the privileges enjoyed by the fossil and nuclear energy industries and creates new privileges or at least a level playing field for the solar industry.

This will take more than just one single solution for climate protection policy such as emissions trading, which is currently under discussion. It will take a whole series of concerted political actions. These include laws on feed-in tariffs for renewable energies in the electricity and gas sector, as well as abolition of subsidies and tax breaks for conventional energies, conventional chemicals and intensive farming. It will be necessary to create tax breaks for climate protection technologies and measures, to mount an education and research offensive, to abolish privileges, e.g. in the licensing process in the fossil and nuclear energy industries, and to create similar privileges to promote the expansion of the solar industry.

Immediate step-by-step implementation of these measures will help build the self-sustaining forces needed for the implementation of climate protection and the development of the solar industry.