Reduce and **I**nvest

Reduce the CO_2 Burden in the Atmosphere and Invest in a Sustainable Economy

Concept Outline

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Including addenda dated 9 February 2012, see pages 8/9

The **U**sitawi**N**etwork

The UsitawiNetwork Foundation
Mosermatte 2
3110 Muensingen / Berne
Switzerland

Authors:

Willy Mayer
Brigitte Mayer

Contact:

Tel +41 31 921 14 04
willy.mayer@usitawi.org
brigitte.mayer@usitawi.org

Draft Concept for the Reduction of the Carbon Dioxide (CO_2) Burden in the Atmosphere

Preliminary Remarks

The carbon dioxide burden in the atmosphere must be drastically reduced in the next forty years. During this period, it will not be possible to achieve an adequate reduction of such emissions through prohibitions, artificial shortages, and other measures that will prove difficult to implement.
Since the carbon dioxide burden in the atmosphere is a global problem, any viable solution needs to involve all countries and take into account their particular interests. Solutions demanding disproportional contributions or cutbacks from individual countries or from a group of countries will not be enforceable.

Solution Concept Requirements

For a solution concept to enjoy political success and to be enforceable worldwide, it must

- enable development towards a climate-friendly energy approach.
- be applicable to all important fossil energy sources.
- be acceptable to all concerned.
- burden the economic activities of all countries as little as possible.
- be continuously adjustable to current needs.
- be easily executable.
- complement existing national or global reduction concepts, or ones about to be introduced.

The "Reduce and Invest" Solution Concept

The implementation concept "Reduce and Invest" is a funding proposal for economic conversion to a sustainable economy based on reduced carbon dioxide emissions.

We suggest that a percentage fee be levied worldwide at source on the world market price for fossil energies. Fee revenues will be used to fund measures leading to the reduction of the carbon dioxide burden in the atmosphere.

Such a fee needs to be set at a level that would make it possible to achieve reduction objectives and to make the necessary adjustments to the economy with the revenues raised over time.

Both levying a small percentage (in the range of 5 – 10%) at source on the respective world market price and the resulting slight price increase for consumers is bearable even in difficult economic times. Especially since these financial means will flow back into the economy to fund incentive programmes and promotion measures, such as

- investments, technical developments and research reducing the consumption of fossil energy sources, such as efficiency increases, the exploitation of alternative energy sources, and so forth.
- measures designed to remedy or reduce environmental damages.
- promoting the reduction of carbon dioxide in the atmosphere through reforestation.
- reconfiguring the economy and agriculture in terms of sustainable development.
- supporting the conversion to other economic sectors in regions where fossil energy sources are exploited.

The criteria for funding reduction endeavours and for allocating funds must still be elaborated. All endeavours to contribute to a sustainable reduction of the carbon dioxide burden and to convert the global economy to a reduced demand for fossil energy sources will be considered worthy of support.

Implementing “Reduce and Invest”

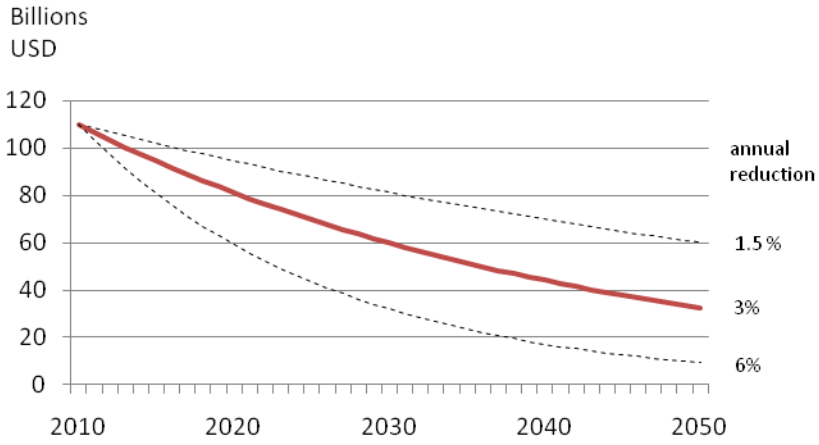
The carbon dioxide burden in the atmosphere is a global problem that demands a global solution. The “Reduce and Invest” concept presented here must therefore be implemented by an international organisation like the United Nations or by one of its sub-organisations. The criteria for disbursing funds and the procedure for their distribution will also have to be worked out there.

Based on the condition of the atmosphere and the amount of carbon dioxide absorbable per year, the scientific models available today help set the carbon dioxide emissions target to be reached in a given period and to determine the financial means needed to achieve the defined target. In turn, this helps determine the percentage fee to be levied on introducing the concept. In subsequent years, calculations will be periodically reassessed and supplemented by empirically established figures. Where necessary, the percentage for the various energy sources can be set at different levels.

The Effect of "Reduce and Invest"

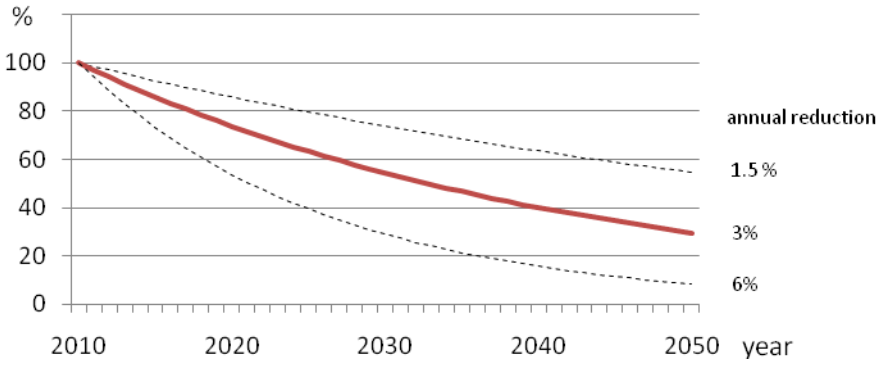
Given the assumptions made in Diagram 1, alone the use of mineral oil would make available between 30 and 110 billion US dollars each year for a period of forty years for investments, technical developments, economic adjustments, etc. Comparable revenues result from coal and natural gas. While fee revenues decrease, and thus also the amount of available resources, demand also decreases with increasing target approximation.

Diagram 1: Annual revenue resulting, for instance, from a fee levied on oil



Assumptions: - world market price for oil: 50 USD/bbl
- fee levied at source: 10%
- consumption in 2010: $22*10^9$ bbl/year

Diagram 2: The development of the relative carbon dioxide input into the atmosphere.



Given a constant annual reduction of 3% over a period of forty years, the CO_2 burden could be reduced by 70%.

Some Advantages of "Reduce and Invest"

Simplicity:

Since the fee will already be levied at source of fossil energies, funds procurement can proceed with minimal administrative effort.

No market distortions:

Likewise, since the fee will already be levied at source of fossil energies, energy prices will increase to the same extent for all market participants in all countries.

The Polluter-pays principle:

The fee ensures that all producers of carbon dioxide contribute to resolving the problem in proportion to their energy consumption, without, however, incurring an excessive burden.

Leverage:

On the one hand, a relatively small financial contribution of each consumer generates as many financial means as are required for resolving the problem.
On the other hand, a likewise relatively small yet continuous annual reduction of carbon dioxide helps achieve the necessary overall reduction over the years.

Fee flexibility:

The market will continue to determine energy prices and energy consumption.
The targeted carbon dioxide reduction and the fee need to be determined, and can be easily adjusted to the current situation.

Revenue-use flexibility:

Financial means can also be used in a concentrated manner where they have the greatest impact. Adjustments to current needs are also possible here. For instance, emergent economies, which are especially affected by higher energy costs, can be given purposeful support to reduce their dependence on fossil energy sources.

System regulation:

If the reduction target is not reached, fee revenue will be higher than anticipated. If the target is exceeded, revenue will be smaller. This effect can be enhanced through the downward or upward adjustment of the fee percentage in order to thus direct the system toward the target.

Enhancing Economic Sustainability:

The conversion to an economy with a strongly reduced demand for fossil energy sources and the promotion of endeavours leading thereto will strongly enhance the sustainability of such an economy.

Addenda on the implementation of „Reduce and Invest“

Revenue use

Revenues resulting from the fees levied on fossil energy sources should be used to fund measures leading to the reduction of the carbon dioxide burden in the atmosphere and its consequences. Fees will thus provide new financial means for implementing such measures.

New or existing United Nations funds, or those of other suitable organisations, should be used for receiving these monies.

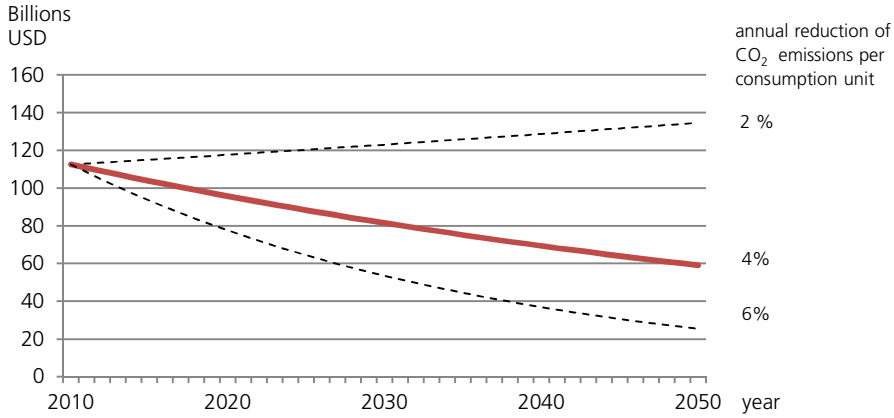
Addenda on the impact of „Reduce and Invest“

Economic development and reduction measures

Diagrams 3 and 4 assume that annual world economic growth will amount to 2.5% over the next forty years, and that such growth will be accompanied by a correspondingly higher demand for energy. Both diagrams illustrate the effects of increased consumption and reduction measures while taking into account current output and world market prices. Since world market prices are now almost twice as high as assumed when the first version was written (2010), the fee percentage has been reduced from 10 to 5%.

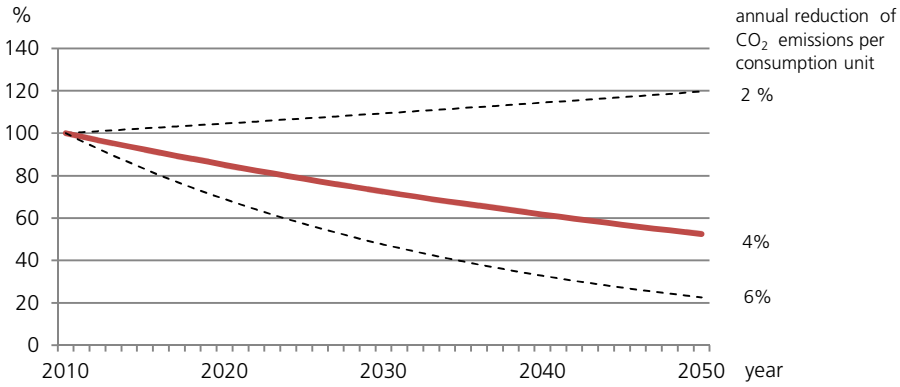
Given the assumptions made in Diagram 3, alone the use of mineral oil would make available between 30 and 110 billion US dollars each year for a period of forty years for investments, technical developments, economic adjustments, etc. Comparable revenues result from coal and natural gas. While fee revenues decrease, and thus also the amount of available resources, demand also decreases with increasing target approximation.

Diagram 3: Annual revenue resulting, for instance, from a fee levied on oil



Assumptions:
- world market price for oil: 90 USD/bbl
- fee levied at source: 5%
- output 2011: $25*10^9$ bbl/Jahr
- annual growth-related needs increase: 2.5%

Diagram 4: The development of the relative carbon dioxide input into the atmosphere.



If carbon dioxide emissions were reduced annually by 4% per consumption unit, then the carbon dioxide burden in the atmosphere could be reduced by 50% over a period of forty years, despite world economic growth amounting to +2.5% per annum.