

## DEBTS FOR TECHNOLOGIES

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The climate change problem and its primary factor – greenhouse gas (GHG) emissions has clear international aspects. Understanding of the necessity of joint efforts in reduction of GHG emissions and rising concern over the possible negative changes in the world's economy and life led to Kyoto Protocol and following crystallization of problems to be solved in achieving proclaimed targets.

One of the main tasks is to change energy consumption mode and transfer to a greater use of non-carbon energy sources such as nuclear, hydro, wind, solar and other alternatives.

The share of each country in this process is different and depends on many factors but at the moment the developed countries lead both in GHG emissions and efforts to mitigate the consequences. Development of advanced technologies plays an important role in creation of a basis to shift from traditional energy production and distribution.

The developing countries, on the contrary, mostly because of the economical reasons, can not take active part in the new technologies development and deployment today. Inevitable world's population growth, according to some estimates, up to 9 billion by the year 2050 with 9/10 of its living in the developing countries, will change global balance of GHG emissions with increasing share in it of the sources from these countries.

The best scenario would be to deploy GHG emission cutting technologies on the earlier stages of country's economy development and not to wait until it reaches the substantial level of the fossil organic fuel consumption.

One of the reasons that hamper the process of deployment of advanced technologies in the developed countries is existence of developed infrastructure of traditional energy production and distribution. On the other hand, the developing countries have massive debts both to the individual countries and international organizations such as International Monetary Fund.

Such external debts can be converted into the advanced GHG emission reducing technologies deployed in these countries.

This paper will discuss how such "debts for technology" schemes can be implemented; positives and negatives of such debt restructuring (there are obvious positives for a country-debtor: funds are spent on its territory and in national currency, the external debt is reduced etc, but there are also hidden and clear negatives); geographical factor and criteria to choose a proper technology for deployment; control measures and international guaranties, returns to the country-donor as well as existing barriers.

Also, the "first in the line" technologies for a deployment and opportunities for Canada are discussed.