

The beauty of Carbon tax!

Global warming is the most challenging problem facing humanity today. Carbon tax (carbon dioxide tax) is a simple and efficient way to address this problem and reduce the use of fossil fuels.

• Easy to apply

All countries already have some kind of energy taxation, it is administratively easy to introduce the carbon tax in all countries at a low level.

• Simple

If Bioenergy, or other energy, is produced with the input of fossil fuels these inputs will be taxed according to the normal carbon tax, and they will thus automatically be included in the cost of producing bioenergy. In this way calculations of carbon balances for biomass for energy will not be necessary, and there will be an economic incentive to produce biomass in a climate efficient way.

• Tax neutral

Carbon tax must not lead to higher taxation in general. The Carbon tax can be raised at the same time as other tax is reduced.

• Economic

The Carbon tax will make it more profitable to use fossil fuels efficiently. It will also make it more profitable to switch to renewable energy sources. Or to abstain from using fossil energy altogether.

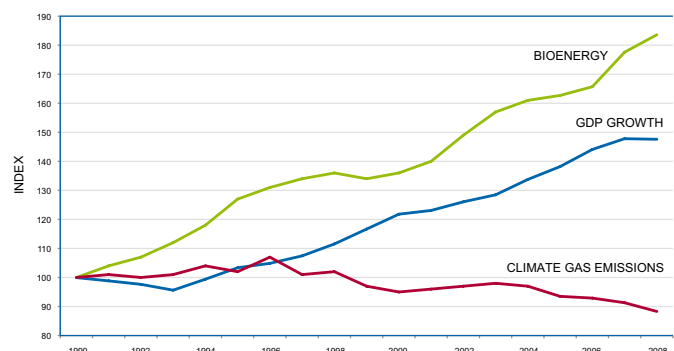
• Efficient

The purpose of carbon taxation is not to punish people for their life style or technical equipment today, but to help them make the right choices and investments for the future.

Background and theory

Polluter Pays Principle and Carbon Dioxide Tax

- According to Polluter Pays Principle (PPP) emitters of CO₂ should pay a Carbon tax for their emissions and in this way pay for current and future costs caused by the emission. That way the environmental costs (external costs) are internalised and made a part of the total cost of the polluting activity.



The Swedish example: Sweden introduced carbon tax in 1990. Since then Sweden has experienced rapid economical growth and decreased carbon emissions.

- The Carbon tax should be in relation to the emission of CO₂ by the different fossil fuels. This is well known, and in direct relation to the carbon content of each fuel.

- The Carbon tax should be introduced in all sectors of society. If cap and trade is used for certain sectors, the Carbon tax must be applied for all other sectors.

- The level of the Carbon tax is not the main issue at the start. More important is to get a general acceptance for the carbon taxation. Once the tax is introduced it can be raised gradually to make it possible for companies and individuals to take action to reduce their use of fossil fuels.

- The purpose of the tax is not to increase taxation, but to steer the economy in a sustainable direction. Other taxes can be lowered to compensate for the raised Carbon tax, in a "green tax shift".

Emissions of CO₂ from use of fossil fuels cause damage on the environment in the short and long run. The damaging influence on the climate is of primary concern. The future cost to

society may be very large. The climate change will influence and damage future generations and people who have had no or little part in the use of fossil fuels. Low lying third world countries affected by rising sea levels, and farmers affected by changing climate patterns causing drought and flooding are two examples.

Imposing a Carbon tax is the most efficient way of applying PPP to the climate issue. The Carbon tax is a better steering measure than "cap and trade", which is the other major measure used to put a price on CO₂ emissions.

How the tax is applied and consequences

A Carbon tax can be applied to all sectors of society, whereas cap and trade has only been used to limit emission of large emission sources like power plants and heavy industries.

The Carbon tax is levied on all fossil fuels at the production or wholesale level. It is paid by the big producers: oil, coal and natural gas companies, and added to the price of the fuels. That way the tax raises the price of all fossil fuels and in the end paid for by all consumers. The price of gasoline, diesel fuel, heating oil, coal for combustion in power plants, natural gas for power plants and individual households, etc. All these energy products will be more expensive because of the tax.

All countries already have some kind of energy taxation, and it is easy to introduce the Carbon tax on top of other energy taxes.

The level of the Carbon tax should be in direct relation to the emissions of carbon dioxide from the different fuels. As fossil fuels are used through combustion in power plants, furnaces and motors, all the carbon in the fuel will be converted into carbon dioxide. Thus the tax is calculated by measuring the carbon content of different fossil fuels. Bituminous coal and brown coal have higher carbon content than heating oil and other oil products, whereas natural gas has lower carbon content in relation to its energy value.

Bioenergy does not pay Carbon tax, as the carbon dioxide released at combustion of biomass and biofuels is equivalent to the carbon dioxide uptake by the plants used as biomass for energy. If bioenergy is produced with the input of fossil fuels these inputs will be taxed according to the normal Carbon tax, and they will thus automatically be included in the cost of producing bioenergy. In this way calculations of carbon balances for biomass for energy will not be necessary, and there will be an economic incentive to produce biomass in a climate efficient way.

The Carbon tax will make it more profitable to use fossil fuels efficiently. It will also make it more profitable to switch to renewable energy sources. Or to abstain from using fossil energy altogether, taking the bike instead of the car. The tax will therefore reduce the consumption of fossil energy compared to a situation with no Carbon tax. How big this reduction is depends on the level of the tax, but also on the available alternative technology.

The carbon taxation will stimulate development of low carbon technology by creating a growing market for this technology.

Environmental taxation, like a Carbon tax, must not lead to higher taxation in general. The Carbon tax can be raised at the same time as some other tax is reduced. This is called "tax switch", and has been practiced in Sweden for some years. As the Carbon tax has been raised income tax has been lowered. This means lower taxation for households using less fossil fuels than average, and raised taxation for households using more fossil energy than the average.

The Carbon tax does not have to be very high when first introduced. The important issue is the general acceptance of this kind of taxation. After being introduced the tax can be raised gradually year by year, according to an agreed plan. This gives industries and the public an opportunity to respond and change their behaviour. When taking decisions about investments, choice of cars, etc., they will take into consideration the future higher carbon taxation and increasing prices of fossil fuels.

The purpose of carbon taxation is not to punish people for their life style or technical equipment today, but to help them make the right choices and investments for the future.

Carbon tax or other methods?

When comparing carbon taxation, cap and trade, and administrative systems like quota, feed-in tariffs, and mandatory obligations, Carbon tax has certain clear advantages. In a cap and trade system the price or cost of the emission can never be calculated beforehand. Therefore also the profitability of the alternative investment (e.g. renewable technology) cannot be calculated. A Carbon tax is always the same – or higher in the future, if this has been decided on. The tax therefore creates a higher degree of certainty for investors. A quota system or a feed-in tariff system is good for the investors and energy producers who qualify for the system, but it doesn't affect the whole society the same way as a Carbon tax. Furthermore, the politicians have to decide what technologies to stimulate, e.g. whether to further energy efficiency or renewable energy production, as well as what kind of renewable technology. With a Carbon tax these decisions are left to the market (the companies, the consumers).

Carbon tax used in several countries

Carbon tax is levied so far in Sweden, Finland, the Netherlands, Norway and Canada. Canada uses the model with a "green shift", gradually raising the Carbon tax and reducing other taxes. Sweden has the highest Carbon tax, about 15 U.S. cents per kg of carbon dioxide. In September of 2009 France decided on a Carbon tax of 17 euros per tonne of carbon dioxide. This is equivalent of 2,5 U.S. cents per kg CO₂.

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