

AEBIOM position paper on energy taxation

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Revision of Energy Taxation Directive - background

*The EC proposal published on 13 April 2011 aims to revise the Energy Taxation Directive (ETD) 2003/96/EC which introduced a tax for energy products at EU level. This current energy tax, in the EC proposal, is split into **energy consumption tax** (min rate = €9,6/GJ for motor fuels, and €0,15/GJ for heating fuels) and **CO₂ tax** (€20 per ton of CO₂).*

In 2009, the EU-27 emitted more than 4,600 million tons of CO₂. Roughly half of EU emissions are already covered by the Emissions Trading Scheme (ETS) for plants above 20 MW. The EC proposal to revise the Energy Taxation Directive aims to cover the other half of CO₂ emissions by introducing a carbon tax for energy applications below 20 MW.

AEBIOM position

AEBIOM welcomes the introduction of a CO₂ tax at EU level. A carbon dioxide tax is already successfully introduced in countries like Sweden, Finland, Denmark, Slovenia and Ireland. The CO₂ tax, if introduced in all EU countries, would have an overall positive impact on bioenergy with an exception of biogas use in transport sector and biofuels in certain cases. Therefore, AEBIOM calls for:

1. Biogas and bio-oils for heat and electricity to be treated in a preferential way – exempt from both CO₂ and energy consumption tax as it is a renewable energy source and exemption of CO₂ taxation does not provide sufficient incentive to switch to RES (point 1 below).
2. An exemption of energy consumption tax for the biofuels for 10 years in order to improve the competitiveness of biofuels such as ethanol, biodiesel, pure vegetable oil and advanced biofuels and ensure that the 10% RES target is not undermined (point 2).
3. The same minimum energy tax for all biofuels and biogas for transport as for electricity in order to avoid the market distortion when electric cars come to the market (point 3).
4. Biomethane for transport should be taxed the same way as biogas for heating and electricity in order to ensure that biomethane is not pushed out from the market due to the high tax (point 4).
5. The Member States should be given a possibility to apply a CO₂ tax to energy products falling under ETS.

AEBIOM strongly supports the introduction of such a tax, nevertheless, thinks that a few points should be adjusted in the EC proposed revision.

Heating fuels and electricity

1. Biogas and bio-oils for heat and electricity should be excluded from CO₂ and energy consumption tax

Biogas and Bio-oils, if excluded from the scope of the directive from both: CO₂ and energy consumption tax, would result in a significant reduction of CO₂ emissions in the heating sector whilst providing an affordable and energy efficient fuel which will help to reduce energy poverty.

Energy poverty, with growing fossil fuels prices, will inevitably increase. Therefore, energy poverty issue should be taken seriously. Local, readily available and affordable renewable fuels will be needed in the future. Solid Biomass as well as biogas and bio-oils are an excellent solution to reduce energy poverty. During the economic crisis, for example, Greece is increasingly relying on local wood by using the wood logs to heat their homes. In Eastern EU countries, a significant part of income is spent for the heating purposes and in many cases constitutes up to 2/3 of the salary.

According the EC proposal biogas and bio-oils for heat will be exempt from CO₂ tax but not from energy consumption tax. Therefore, biogas would be taxed at a rate of 7,5 Euros/1000kg¹.

AEBIOM thinks that all biomass fuels (solid, gaseous and liquid) for heating and electricity should be treated in a preferential way. This would give an advantage for efficient biomass use in the heating sector which is one of the best ways to substitute coal and decarbonize the heating sector whilst solving the problem of energy poverty.

Transport fuels

2. Biofuels taxation should not undermine the 10% RES target – 10 years of energy tax exemption is needed for biofuels

Currently, the Energy Taxation Directive 2003/96/EC does not provide a proper taxation of biofuels but allows Member States to exempt or reduce excise duties to promote biofuels. The new EC proposal will lead to lower taxation of biofuels than under the current system in which biofuels are in general taxed at the rate of the fossil fuels they replace. However, it will reduce the tax only in those countries where biofuels are not exempt from excise duties. Also, under new proposal, biofuels would be taxed on the basis of their own – generally lower – energy content. With the new proposal, the biofuels (ethanol, biodiesel, pure vegetable oil and bio-ETBE) will receive a ‘natural’ advantage as they will be exempt from CO₂ tax:

¹ Energy consumption tax = biogas net calorific value (50 MJ/kg or 50 GJ/1000kg) × tax for heating fuels (0,15 Euros/GJ) = 7.5 Euros/1000 kg

	CO ₂ part	Energy part	Total
Petrol (EUR/1000l)	45,4	313,6	359
Ethanol (EUR/1000l)	0	201,6	201,6

	CO ₂ part	Energy part	Total
Gas oil (EUR/1000l)	52,1	337,9	390
Biodiesel (EUR/1000l)	0	316,8	316,8

Unfortunately, such natural advantage would not be sufficient to make biofuels competitive. The biofuels would be exempt from CO₂ tax but energy consumption tax would be applicable in the same way as for fossil fuels. As CO₂ tax is relatively small, this difference does not ensure the competitiveness of biofuels. It is important to note that in those countries, for example Germany, where biofuels are already exempt from excise duties (or they are reduced), the taxation of biofuels would significantly increase. Therefore, it is crucial to provide the possibilities for the Member States to ensure the development of the biofuels sector via a tax exemption for biofuels for the next 10 years. Europe has committed itself to reach 10% RES transport target by 2020; therefore, the EU taxation policy should not undermine this goal.

3. There should be the same minimum energy tax for all biofuels and biogas for transport as for electricity in order to avoid a distortion between biofuels (including biogas) fuelled cars (taxed with a high tax) and electric cars in the future

AEBIOM fears that this legislation may result in a market distortion in the future in the transport sector between electric cars and biofuels (including biogas) fuelled cars. The electricity tax would be equal to 0,54 € per MWh (**0,15 EUR/GJ**)² whereas biofuels and biogas would be taxed with high energy consumption tax. For example, biogas for transport would go up to 480 Euros/1000kg (**16 EUR/GJ**)³ with 60% methane content) by 2018 which is a heavy tax. In this case, it would be much more profitable to produce electricity from biogas and only then use it in cars. However, it would be more energy efficient to use biogas directly in the cars.

Electric cars will come on the market rather soon. When this happens, the electric cars (electricity mainly produced from fossil fuels or nuclear power) will have a huge advantage over the cars fuelled with renewable sources. In order to avoid this, biofuels should be taxed the same way as electricity.

4. Biomethane for transport should be taxed the same way as biogas for heating and electricity so that the biogas use in transport is not endangered or even stopped

ETD revision ensures that biogas is exempt from CO₂ taxation. However, the CO₂ tax is very small which means that biogas will have to bear an extremely high tax, almost equivalent to the one for fossil fuels

² Conversion factor used: 1 kWh = 3.6 MJ. Therefore: 1 € per MWh = 0.27777 EUR/GJ and 0,54 € per MWh = 0,15 EUR/GJ.

³ Assumption: density of biogas is equal to the density of natural gas = 0.73 kg/Nm³; then 480 euros/1000 kg = 0.3504 Euros /Nm³. Conversion factor used: NCV biogas (60% methane)= 21.6 MJ/m³. Therefore these 0.3505 Euros/m³ = 16.22 Euros/GJ.

(natural gas). This tax would eliminate biogas from the transport sector. However, biogas is a clean and renewable source for transport that should be promoted in order to reach 10% RES target by 2020 and ensure the reduced air pollution.

5. The Member States should be given a possibility to keep a CO₂ tax for energy products falling under ETS

The CO₂ tax must be seen as a minimum tax, and it should be possible to apply much higher levels of CO₂ taxation if Member States find it appropriate. Introducing rules that would lead to lowering current CO₂ taxes should be avoided. It should be possible to make exceptions from the rule that emitters inside ETS will be exempt from CO₂ tax. In the heat sector there is no cross-border competition, and Member States should be able to apply CO₂ tax on heat plants even if these are also included in ETS.

Explanation: in Sweden heat plants producing only heat have a CO₂ tax of 0.99 SEK/kg CO₂ (around 110 EUR/t CO₂), which is slightly reduced compared to the general CO₂ tax of 1.05 SEK/kg CO₂ (around 117 EUR/t CO₂). This is regardless the fact whether these plants are included in ETS or whether they are outside ETS. Heat plants over 20 MW are automatically included in ETS. But Sweden has also opted to apply CO₂ tax in all heat plants connected to district heating grids producing more than 20 MW combined. If all of these heat plants will have to be excluded from CO₂ tax, the effect will be the following:

- In many cases it is profitable to go back to coal instead of chips or pellets, or go back to oil instead of bio-oil. This will particularly be a risk if a price of the emission rights is low.
- It will slow down or reverse the growth of bioenergy in this sector.
- For CHPs this problem is not the same, as they get an extra incentive from green electricity certificates.

CO₂ Taxation in the Member States – why is it necessary?

The increased energy consumption tax and CO₂ tax would improve the competitiveness of solid biomass for heat and power as it is exempt from energy tax. It would also slightly improve the competitiveness of biogas for heat and power compared to fossil fuels as it is exempt only from CO₂ tax but not from energy consumption tax. By promoting RES, the Member States have an opportunity to diversify energy supply and reduce energy dependency.

Beside this, the energy tax would be beneficial in many other ways as it would:

- a) secure the income of Member States budgets and help to solve the energy poverty issue
- b) provide rather a reliable and neutral way to support RES technologies without discrimination
- c) CO₂ tax would have a positive impact on market economy and energy efficiency
- d) CO₂ tax would ensure polluter pays principle without causing disadvantages

a) CO₂ tax provides an opportunity to refill the EU member states budgets

A carbon dioxide tax is already successfully introduced in countries like Sweden, Finland, Denmark, Slovenia and Ireland. The CO₂ tax, if introduced in all EU countries, would ensure a stable income (though this income will be stable until the moment the energy sector is reorganized into RES solutions) for the Member States budgets that do not apply this tax yet. Member States politicians, however, fear that a carbon dioxide tax on fossil fuels would lead to adverse effects for vulnerable people and all those dependent on fossil fuels for heating and hot water supply. This is an important issue to handle. According to AEBIOM, CO₂ tax budget could be used to facilitate the switch of fossil fuel systems into renewable ones e.g. exchanging oil boilers to pellets boilers, or for insulation of homes. Biomass is cheaper than oil, therefore, the income from the CO₂ budget could be used to restructure the fossil based systems into RES ones thus making the fuel affordable for people. Some of the income from a carbon tax can be also used to alleviate energy poverty, e.g. a higher pensions or social benefits.

Another possibility is to avoid raising taxes in general. Once the carbon dioxide tax is introduced or raised, other taxes are lowered by the same amount. Suitable taxes for tax switch are income tax and employment taxes. For example, Sweden has lowered its' income tax by 7 billion Euros during the years 2007-2010.

The Member States cannot avoid the negative impact of increasing fossil fuel prices on energy poverty. At the same time, the Member States cannot afford to continue subsidizing the difference between the lowest price of energy and the price that people can afford. By introducing a CO₂ tax and using the budget to switch to affordable and renewable technologies, the member states will avoid the aggravation of energy poverty and ensure that the energy prices are affordable.

b) environmental taxes – reliable and neutral way to support RES technologies without discrimination

Using taxes as incentive has great benefits compared to administrative systems like quotas and obligations. The politicians and administrators do not have to make choices between different technologies, which also make them less susceptible to lobbying and corruption. The taxes are technology neutral and will promote whatever technology is most successful on the market, under the new price conditions. Instead of politically deciding what solutions to promote, the market will make these choices. The European Union is, after all, a market place. Nevertheless, the Member States should not solely rely on taxation. It could and should be efficiently combined with subsidies.

When the governments run into fiscal problems during an economic downturn it is tempting to slash subsidies, as they are costs in the budgets. In this case, taxes would ensure the income for the governments and they will probably stay untouched, or even be increased to strengthen the budgets. In the long run, energy and carbon taxation will force European industries to develop the new technologies needed for the energy transition that has to take place globally. It will give sustainable industries a cutting edge in the global market when it comes to green solutions for energy efficiency and renewable technologies.

c) CO₂ tax has a positive impact on market economy and energy efficiency

Introduction of environmental taxes as incentives for change such as a general energy tax and a carbon dioxide tax or taxes on emissions of other unwanted substances or emissions have many advantages in a market economy. The tax will increase the price of the unwanted activity or product and hit the products hardest that use most energy or cause the highest emissions. The tax incentive uses the dynamic forces of the market economy.

In the case of the energy tax, it will help promoting energy efficiency and energy savings as well as the development of new technologies using less energy. In the case of the carbon tax, it will increase the price of all products and activities causing emissions of carbon dioxide. This will make renewable energy more competitive with fossil energy and accelerate the substitution of fossil fuels with renewable bioenergy. But it will also promote energy efficiency. People will turn from heating oil to biomass but they will also be encouraged to rebuild their houses, insulate and install energy efficient windows. They will change to a car using biofuels, or to a more efficient car using less energy altogether or even refrain from having a car using public transport instead, take a bike and walk more.

d) CO₂ tax ensures polluter pays principle without causing disadvantages

The main reason for the carbon dioxide tax is that it puts a price on carbon emissions according to the Polluter Pays Principle (PPP). The emitters of carbon to the atmosphere pay for (at least some of) the environmental damages and costs caused by these emissions. Carbon dioxide is the major greenhouse gas and it is the first priority in climate policy to reduce the net emissions of carbon dioxide.

The emissions of carbon dioxide are the easiest to tax, as the emissions are directly linked to the combustion of fossil fuels. The tax can easily be calculated for the different fuels, oil, natural gas and coal, according to their carbon content. In all countries there is already taxation levied on these fuels (e.g. the current minimum energy tax), and the carbon tax is, therefore, easy to introduce. The administrative cost of a carbon dioxide tax is very low compared to almost all other taxes, as it can be collected from a few producers and importers of fossil fuels.

A second major reason for introducing a common carbon dioxide tax in Europe is that it creates a more level playing field between the companies inside and outside the emission trading system. Today in most member states, carbon only has a price inside the ETS, whereas carbon emissions in other sectors of the economy remain untouched.

A carbon dioxide tax would have an impact in the heating sector, as well as in small businesses and industries outside the ETS. It would first of all promote the efficient use of fossil fuels and encourage savings of these fuels in boilers and processes. It would secondly encourage exchange of boilers and ovens using fossil fuels, in favor of biomass heating and district heating with biomass.

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