



GreenBudgetEurope

POLICY PAPER ON GREENING THE ENERGY TAX DIRECTIVE

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1. The great opportunity of its revision

The existing Energy Tax Directive (ETD) 2003/96/EC, started as an internal market harmonisation instrument. Its main target was to eliminate *fuel tank tourism*, as witnessed by the fact that the only appreciable minimum tax rates foreseen were those applying to oil fuels (excluding international aviation and shipping). Coal and electricity minimum tax rates were introduced but at extremely low levels¹. This despite the fact that the first Commission's proposal of a CO₂-energy tax, which was not finally adopted in 1993, was aiming at substantial environmental impacts.

The Commission's recent proposal (as presented in a yet unnumbered and undated document that appeared in mid summer 2009) makes three welcome departures from the existing Directive: **First**, it introduces a CO₂ tax quite distinct from the general energy tax and **secondly**, it changes the tax base of the latter from the metric unit of *1000 litre* to the energy unit of *Gigajoule*, thereby relating it to the calorific content of each fuel. It provides, therefore, two important environmental tax incentives: the first, to reduce CO₂ emissions and the second, to switch to more energy efficient fuels and/or technologies of energy production. In practice it must give a big push to the use of renewable energy sources (RES) and encourage more efficient technologies in the use of carbon fuels. It also provides for coordination with the European Trading System for CO₂ emissions, since all enterprises that participate in ETS, are exempted from the CO₂ component of the Energy Tax Directive.

This is the good news. The bad news is that, although the proposed changes are in the right direction, the actual size of the steps taken is inadequate. For, if you convert the euros per 1000 litres to the euros per gigajoules, in order to make the new tax base comparable to the old, you find that the minimum energy taxation more or less remains the same. The new element is simply the CO₂ tax, which for motor fuels is fixed at a minimum of 0,03 € per kg and for heating and other low taxed uses at 0,01 € per kg (equivalent to 30 and 10 euros per ton). This – if not watered down in the process of adoption of the Directive – is substantial but not sufficient, as a market signal for a change in consumption patterns. Various studies of the European Trading System (ETS) indicate that only market prices above the level of 35 € per tonne of CO₂ represent an effective incentive to reduce emissions.

Thirdly, another environmentally reasonable feature is the prescription of the tax structure e.g. for all heating fuels and for all transport fuels (article 4.3). The structure of the given minimum tax rates have to be mirrored in most cases by higher national tax rate structure. This provides for a fair and environmentally sound level playing field e.g. for all heating fuels. One of the impacts would be that coal, as is often the case now, could not be taxed at such low or even at zero level. Similarly in the transport sector it would end the much too low diesel tax rate, but this would have to reflect the higher carbon intensity per energy unit so that in nominal terms taxation would be about 15% higher than gasoline. This is also an important contribution to reducing the subsidies to sport utility

¹ See the actual rates in Annex I, Tables A, B and C of Directive 2003/96/EC of 27.10.2003

vehicles (SUV) and the hauliers sector. Though overall reductions are also eligible the required revenues will prevent governments from going down this road.

The real question now is: should the Commission, having done such good homework and having transformed a simple internal market Directive into a comprehensive market instrument, not pick its courage and propose more substantial minimum rates in the new Directive. Must we lament one more lost opportunity?

2. The serious impact of energy taxation

EU energy taxation is a highly complex matter, which apart from its obvious impact on the functioning of the internal market, could prove an important factor in the promotion of three key EU policies:

- Energy policy summarised in the triple 20% target (20 percent reduction in both, carbon emissions and energy consumption and a 20 percent share of renewables in total energy supply).
- Climate change policy, which addresses a much broader spectrum of problems, than CO₂ emissions.
- General environment policy, which goes beyond energy and covers all aspects of environmental protection and enhancement, including those pertaining to the man-made environment.

In the circumstances of a rapidly accelerating destabilisation of world climate, doing “too little, too late” is a recipe for disaster. Resorting to coal or nuclear, as the current trend of the power industry appears to be, under the impact of the negligible taxation of both, is no way to face climate change and the serious problem of safe waste disposal. There is an imperative need for clear, radical and brave decisions.

3. Basic targets

In view of the above considerations, the revision of the Energy Tax Directive, apart from the granted objective of the smooth operation of the Single Market, should have two further inter-related targets: **First**, *get energy prices right* and **second**, decouple energy from growth to the maximum possible extent.

“*Getting prices right*”, is a broader target having an impact on:

- the fuel mix and the restructuring of the power and transport industries, towards sustainability;
- the reduction of various emissions (most prominently CO₂) and the mitigation of climate change;
- as well as, the improvement of the environment and the quality of life in general.

At the economic level, it is achieved through the internalisation of all external costs, either through legislation and regulation, or more effectively through environmental fiscal reform (EFR), systems of tradable pollution permits and other market based instruments (MBIs).

With respect to the target of decoupling energy from growth, it must be stated that there are vast margins of reducing energy waste and increasing efficiency in its use. We should stress in particular the enormous savings that can be obtained, through the application of energy efficiency and bioclimatic design to both existing and new buildings. The Commission is making serious efforts in this direction.

The more specific tools and corrective actions to achieve both targets are in our opinion, as follows:

1. A **functional European Trading System** (ETS) extended to cover land, sea and air transport, based on the auctioning of permits, as opposed to the current free allocation schemes. The starting floor price for the auction should be set in accordance with national reduction targets,

but the system should have the flexibility of varying the amount of permits in circulation, following demand shifts, such as those induced by the trade cycle or other structural changes. Only then we shall see a real market.

2. A 2-tier **energy and environment (not just CO₂) tax** to eliminate waste and fully cover environmental costs respectively. Industries participating in ETS should be exempted only from the CO₂ component of this tax.
3. Introduction of **cost-effective road, air and sea-use pricing schemes**, so that all forms of transport fully cover their external costs. Assuming that the energy part is covered by (1) and the CO₂ component by (2) above, we propose that special pricing schemes for e.g. road use cover all other externalities of transport.
4. **Removal of all open and hidden subsidies**. Apart from known subsidies, such as those to coal and lignite, this includes the widespread practice of *cross subsidisation* of certain producer and consumer groups through electricity, gas and other tariffs. (That is why we speak of *Environmental Fiscal* rather than *Environmental Tax Reform*. EFR rather than ETR).

So in practical terms, in order to fully cover environmental costs in all sectors of the economy, we propose a **two-tier energy and environment tax, the latter having two components: one to cover CO₂ and a second to cover all other impacts**. Furthermore, we presume the continued operation of ETS (with the improvements suggested above), as well as the introduction of road, sea and air-use taxes to cover the non-energy environmental impact of transport and all other industrial activities. Table A depicts clearly these proposals:

Table 1) Coverage of Policy Instruments

Categories of taxpayers	Energy Tax Directive			ETS & other systems
	Energy Tax	Environment Tax CO ₂ component	Other impacts com-	
Subjects of Energy Tax Directive	paying	paying	paying	exempt
ETS members	paying	exempt	paying	paying
Members of other schemes	paying	depending on system	depending on system	paying

Some practical examples

- Electricity companies, participating in ETS, will not pay the part of the environmental component that corresponds to CO₂ emissions, but they will pay the rest of the environmental part (covering SO₂, N_{ox} and other) as well as the full energy part on coal, gas and other fuels, not on RES.
- Aviation and shipping companies participating in ETS will be similarly exempt from CO₂, but will pay the rest of the energy taxes, as well as other environmental taxes to cover noise, land-use of ports and airports, use of rivers and canals or congested traffic corridors, both in the air and at sea.

- Land transport which is not participating in ETS will fully pay energy taxes, plus vehicle taxes, plus charges for road and rail use escalated for congestion.

However, the supplementarity principle allows the possibilities of using CERs from the CDM to a broad extent in the ETS, this can reduce the ETS-price substantially in addition to denying domestic action which leads to less innovation and efficiency improvements in Europe which in turn endangers its competitive advantages of the environmental and energy efficiency technologies. The current draft ETD foresees no overlap; it could though indeed be reasonable to also apply the CO₂-tax-element to the entire ETS-sector. This opinion is shared by a majority in the GBE-Steering Committee.

4. The magnitude of external costs

The general justification of EFR is the internalisation of externalities, so as to get relative prices right. External costs of European energy and transport are not being calculated on a systematic basis. We can only give therefore fragmentary data, which document their magnitude in specific cases.

In 2003, a report of the European Commission, calculated the external cost of electricity production, as indicated in the following Table B:

Table 2) EXTERNAL COST FOR ELECTRICITY (€ cents/kwh)

Country	coal & lignite	oil	gas	nuclear	hydro	wind	Existing min. rates ²
AT			1-3		0.1		B = 0.05, NB = 0.1
BE	4-15		1-2	0.5			B = 0.05, NB = 0.1
DE	3-6	5-8	1-2	0.2		0.05	B = 0.05, NB = 0.1
DK	4-7		2-3			0.1	B = 0.05, NB = 0.1
ES	5-8		1-2			0.2	B = 0.05, NB = 0.1
FI	2-4						B = 0.05, NB = 0.1
FR	7-10	8-11	2-4	0.3	1		B = 0.05, NB = 0.1
GR	5-8	3-5	1		1	0.25	B = 0.05, NB = 0.1
IE	6-8						B = 0.05, NB = 0.1
IT		3-6	2-3		0.3		B = 0.05, NB = 0.1
NL	3-4		1-2	0.7			B = 0.05, NB = 0.1
NO			1-2		0.2	0-0.25	B = 0.05, NB = 0.1
PT	4-7		1-2		0.03		B = 0.05, NB = 0.1
SE	2-4				0-0.7		B = 0.05, NB = 0.1
UK	4-7	3-5	1-2	0.25		0.15	B = 0.05, NB = 0.1

Source: *External Costs. Research results on socio-environmental damages due to electricity and transport. European Commission. Directorate General for Research. EUR 20198. 2003*

The same report stated that prices would double if the above external costs would be internalised. It must be noted that the Report, quite rightly, estimates external costs even for wind and hydro energy.

² B = Business use and NB = non-business use

The minimum rates for electricity, in the current (as well as the amendment proposal) of the Energy Tax Directive stand at 0.1 € cent/kwh, compared to the estimated € 3 cent/kwh of the Table.

An application of the *ExternE Model*³ to Greece showed that in 2002 the external costs of transport and energy stood at 14.2% of GDP. Only 1/5th of these were covered by taxes.

A 2001 report of the European Environment Agency (EEA) on the external costs of transport, estimated them at 8% of GDP. For the same year, Eurostat estimated environment taxes on transport at 0.6% of GDP and energy taxes at 2% of GDP, hardly covering 1/3rd of the respective externalities.

5. Recommendations

For the reasons developed above, we agree with the comprehensive revision of the Energy Tax Directive, contained in the document mentioned in page 1, provided it is accompanied by the improvements in the ETS proposed in section 2 (i) above and supplemented by the environmental pricing schemes proposed in the same section on page 3. As far as the level of taxation and/or other pricing schemes we have the following comments.

As already stated, energy taxes have two objectives:

First, to limit the current waste of energy and promote its efficient use and,

Second, to curtail emissions of the six Kyoto Protocol gases (particularly of CO₂), which are mainly responsible for climate change, as well as all other polluting emissions and other environmental impacts.

They should be fixed at such levels, that the externalities associated with the use of the various forms of energy (including that used in transport) are fully internalised. We estimate that this calls for an increase of the minimum tax rates in the proposed amendment of the Energy Tax Directive, by 10-20% in the basic petroleum fuels and by a very substantial amount (of the order of 100%) in the case of coal, natural gas and electricity (depending on how high the price of CO₂ permits would get in the ETS).

Measures should be taken in order to avoid the mitigation of the effect of energy taxes and other MBIs by cross border transactions, notably through fuel tourism and fuel smuggling. This is a technically difficult problem but it must be tackled, in view of the fact that the recommended increase in energy taxation will increase the incentives for such illegal practices.

Wherever, tradable pollution permits or other MBIs of equivalent effect are in operation, those participating in them should be exempted from the CO₂ component or other components of the Energy Tax Directive, depending on each specific case. E.g. in case annual car circulation taxes are revised and calculated on the basis of CO₂ emissions, as per the current Commission proposal, this could justify a partial exemption from the CO₂ component of the Energy Tax Directive, only as far as the circulation tax covers the estimated annual CO₂ emissions of the car. On the other hand, charges for the use of congested roads or urban central areas do not give rise to an exemption, as they cover a different environmental cost.

All taxes and charges imposed for the above purposes and usually termed “environmental” should be escalated with volumes, wherever possible (e.g. in electricity or gas) to discourage increased consumption, especially at peaks. Whether a Border Tax Adjustment system could be introduced to encounter potential competitive disadvantages of European industry branches in the internal market, remains to be seen, also depending on the outcome of the climate negotiations. But it should be considered as a potential means.

³ This model is used by Commission services to calculate externalities.

Transport, apart from energy use and the resulting pollution has several other environmental impacts, such as noise, disruption of urban and rural amenity, accidents, congestion, loss of working time, etc. These are also serious externalities that have to be covered by separate pricing schemes.

“*Getting prices right*” is not just an environmental slogan, but a serious economic and social necessity. It leads to the restructuring of industry, the growth of new technology and jobs, as well as big gains in efficiency. At the same time, it protects the urban and rural environment, social cohesion and the quality of life.

Draft of the revised Energy Taxation Directive:

[http://www.foes.de/pdf/Energy%20Taxation%20Interservice%20proposal2%20\(2\).pdf](http://www.foes.de/pdf/Energy%20Taxation%20Interservice%20proposal2%20(2).pdf)