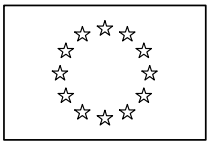

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COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS

Strategy for the internalisation of external costs

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Strategy for the internalisation of external costs

1. INTRODUCTION: TOWARDS SUSTAINABLE TRANSPORT

The internalisation of external costs is part of a package of initiatives intended to make transport more sustainable. Today, it is vital for the transport sector to contribute to the Commission's key priorities of sustainable development and maintaining competitiveness in Europe.

In 2006, the legislature asked the Commission to draw up "a generally applicable, transparent and comprehensible model" for the assessment of external costs.

"*No later than 10 June 2008, the Commission shall present, after examining all options including environment, noise, congestion and health-related costs, a generally applicable, transparent and comprehensible model for the assessment of all external costs to serve as the basis for future calculations of infrastructure charges. This model shall be accompanied by an impact analysis of the internalisation of external costs for all modes of transport and a strategy for a stepwise implementation of the model for all modes of transport.*

The report and the model shall be accompanied, if appropriate, by proposals to the European Parliament and the Council for further revision of this Directive" (Directive 2006/38/EC).

This kind of project is nothing new. For a number of years, the European Commission has been highlighting **the need for a transport pricing system that is more efficient and more accurately reflects the true costs involved**[1]. Transport generates negative externalities that involve a cost to society and the economy. By internalising those external costs, the intention is to give the right price signal, so that users will bear the costs they create and will thus have an incentive to change their behaviour in order to reduce those costs.

The European Union must take action. The impact assessment[2] indicates that, if nothing is done in the next few years, the environmental costs (air pollution, CO_2 emissions) could reach €210 billion by 2020. Individuals and businesses would also face congestion on more than a quarter of Europe's roads.

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[1] The fact that only some of the costs arising from the use of transport infrastructure are passed on to users and, in particular, the uneven distribution of that burden were discussed in the Commission's 1995 Green Paper *Towards fair and efficient pricing in transport*, its 1998 White Paper *Fair payment for infrastructure use: A phased approach to a common transport infrastructure charging framework in the EU* and its White Paper *European Transport Policy for 2010: time to decide*, which was adopted in September 2001. The subject was raised again during the mid-term review of *European Transport Policy for 2010: time to decide*, which took place in 2006. It was then that the Commission undertook to propose a methodology for infrastructure charging based on the Road Charging Directive.

[2] Impact assessment on the internalisation of external costs (SEC(2008) 2208).

2. WHAT WE EXPECT FROM INTERNALISATION: MORE INTELLIGENT PRICES

2.1. Taking into account the costs generated by transport

Transport users have to pay costs that are directly related to the use of their mode of transport (fuel, insurance, etc.). Such costs are considered ***private*** in the sense that they are paid directly by the user. However, transport users also generate negative externalities that involve a cost to society, such as delays to other drivers as a result of congestion, health problems caused by noise and air pollution and, in the longer term, the effects of greenhouse gas emissions on climate change, but users do not bear those costs directly (***external*** costs). Such costs are real, even if they do not always have an explicit market value: expenditure on police and infrastructure management, hospital charges, public health spending and loss of quality of life. They are generally borne by the State and its citizens. The sum of the private and external costs of transport gives its ***social*** cost. Only a price based on the total social costs generated by the transport user will help give the right price signal and take account of the services used and the consumption of scarce resources.

However, for that price signal to be effective, the transport user must be price sensitive. Sometimes this is not possible for specific reasons, such as the lack of credible alternatives, insufficient competition with regard to a particular mode of transport, insufficient incentive to innovate and switch to clean vehicles, etc. Internalisation is a necessary step in itself, but it must be accompanied by other measures intended to create greater elasticity of demand, i.e. greater sensitivity to price variations, to make the supply of certain services more attractive or to speed up technological innovation. In order to reduce the external costs, we therefore need a strategy that includes various other elements in addition to internalisation, elements such as providing infrastructure, encouraging technological innovation, competition policy, legislation and setting standards.

2.2. Choosing the right economic instrument for each external cost

In practice, the main economic instruments for internalising external costs are taxation, tolls (or user charges) and, in certain circumstances[3], emissions trading. They are already applied to varying extents depending on the mode of transport and the costs involved. The impact assessment on the internalisation of external costs[4] examines the existing situation for each mode of transport with regard to tolls, taxation and emission rights.

Each external cost has specific characteristics which require the use of the appropriate instruments. Some external costs relate to the use of infrastructure and vary according to time and place. This is the case for congestion, air pollution, noise and accidents, all of which are highly localised and vary depending on the time, place and type of network. The use of differentiated charging is the best way of taking those variations into account. Why should users have to pay the same regardless of whether they travel at peak times or at the recommended times, take congested routes or find an alternative way of getting to their

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[3] Under Directive 2003/87/EC, Member States are to allocate at least 90% of CO_2 allowances free of charge. For emissions permits to internalise external costs, the granting authorities must sell them at a price that is, for example, equal to those external costs. In January 2008, the Commission put forward a proposal (COM(2008) 16) to set up an auction system that would make it possible to reflect the "polluter pays" principle. The system is to be introduced gradually, and at least two thirds of all allowances are expected to be sold by auction by 2013.

[4] SEC(2008) 2208.

destination? And why should a "clean" vehicle incur the same charge as a noisier vehicle that produces more pollution?

Climate change, on the other hand, has no such local dimension. Emissions of greenhouse gases in general and CO_2 in particular do not vary according to time or place but are linked to fuel consumption. It is therefore not necessary to apply differentiated charges. Rather, it would be more appropriate to use an instrument directly linked to that consumption, such as a fuel tax or even a CO_2 emissions trading system.

2.3. Ensuring that the internal market continues to function properly

Safeguarding the internal market is one of the European Union's basic principles. We must therefore avoid overcharging, as this could hamper freedom of movement and, because of its effect on through traffic, would be detrimental to other regions. Consequently, the principles governing internalisation must be laid down at European level in order to prevent fragmentation of the market. At the same time, the local character of some external costs must be recognised, and it is important to strike the right balance between a Community-level approach and a more local approach.

Setting **common principles** for all Member States should prevent any discrimination and ensure market transparency. The proposed common methodology will ensure that charges are not disproportionate to the existing external costs. Lastly, setting up a monitoring system will make the process clear and effective for all concerned.

3. GENERAL PRINCIPLES FOR THE INTERNALISATION OF EXTERNAL COSTS: SOCIAL MARGINAL COST CHARGING

Giving transport users the right signals involves setting prices that do not lead to overexploitation of resources, but do not damage the transport sector, or ultimately the economy, either. According to economics literature, **"social marginal cost charging"** achieves that balance. **It is therefore being proposed as the general principle for internalisation**.

According to this approach, transport prices should correspond to the additional short-term cost created by one extra person using the infrastructure. In theory, this additional cost should include the costs to the user and the external costs. Social marginal cost charging would therefore lead to efficient use of the existing infrastructure. Furthermore, as users would pay for the additional costs they generate for society, it would also help ensure fair treatment of both transport users and non-users and would create a direct link between the use of shared resources and payment on the basis of the "polluter pays" and "user pays" principles. This approach is only possible if the "polluter" does not benefit from any compensation that would cancel out the possible effects of internalisation.

Nevertheless, marginal costs vary according to time and place and, in practice, it is difficult to judge their exact level. A certain degree of simplification is therefore inevitable. In general, the marginal costs can be said to correspond to the average of the variable costs.

In some cases, the marginal cost approach may have certain limitations. It does not necessarily make it possible to include infrastructure costs, as is the case where fixed costs are high or traffic density is low. If necessary, it may be combined with other approaches to make sure that infrastructure is funded according to the "user pays" principle and external costs are

internalised according to the "polluter pays" principle. This could also help ensure fair treatment for transport users and society as a whole. Furthermore, for some costs, such as those relating to noise, the method for estimating the marginal costs is very complex, and a pragmatic approach based on the average cost may be more feasible (see technical annex[5]).

The technical annex contains a proposal to create a common framework for calculating the external costs of congestion, air pollution, noise and climate change by establishing common principles and a common methodology. Accidents are not explicitly dealt with in this document (see Figure 2 in the technical annex). The external costs of accidents should be internalised using mechanisms that are capable of taking high-risk behaviour (speed, drink-driving) into account and giving people an incentive to change that behaviour. Insurance premiums already meet this requirement by taking the driver's risk profile into account, for example through the bonus/malus system, but premiums are based on the cost of the damage, which does not usually cover all the costs involved. Although the consultation process showed that there is support for passing costs on through insurance premiums, any such initiative would have to take account of the existing differences between Member States and would need more in-depth analysis, particularly with regard to issues such as subsidiarity. At present, this process is not sufficiently advanced to be able to put forward a proposal for an initiative at European level.

4. STRATEGY FOR INTERNALISING EXTERNAL COSTS FOR ALL MODES OF TRANSPORT

Even if it is possible to establish a general principle for internalisation (social marginal cost charging) and a methodology for quantifying externalities, it is difficult to imagine an internalisation mechanism that would be generally applicable to all forms of transport, as these involve different technologies, different numbers of operators, existing legal and regulatory frameworks, etc. The same principle should be applied using different instruments.

The EU is not starting from scratch. It has already adopted measures to enable the internalisation of external costs and to help reduce negative externalities. Harmonisation of energy taxation in 2003 was an important step forward. It is scheduled for review in 2008, and the intention is to give greater consideration to CO_2 emissions. The recent proposal to include the aviation industry in the emissions trading system by 2011 is another crucial stage in the transport sector's contribution to combating climate change.

Based on the results of the impact assessment, it will be possible to adapt the overall strategy to the characteristics of each mode of transport and thus take another step forward.

4.1. Making internalisation possible in the road haulage sector

The road haulage sector accounts for three quarters of freight transport, and internalising the external costs could help cut the cost to the environment by some €1 billion in comparison with the reference scenario in which no action is taken. Moreover, reducing congestion also reduces the time spent in traffic jams and could help make value-added chains more efficient. The Commission is therefore proposing to make it possible to internalise some of the external costs in the road haulage sector.

[5] SEC(2008) 2207.

4.1.1. "Green" and "intelligent" charges: revision of Directive 1999/62/EC (June 2008)

The 1999 Directive on the charging of heavy goods vehicles precludes incorporating any of the external costs when calculating tolls. It was amended in 2006 to allow different tariffs to be applied depending on vehicles' environmental characteristics. However, with the exception of mountainous regions, and then only in certain circumstances, toll revenues may not exceed infrastructure costs. This is the case even in more congested regions or regions with higher levels of pollution.

The impact assessment looked at various ways of internalising external costs. The results show to what extent charges for air pollution, noise pollution and congestion would contribute to reducing external costs without having a disproportionately negative impact on the economy. Time savings as a result of reduced congestion would make a positive contribution towards improving economic efficiency and significantly reducing CO_2 emissions.

The Commission is therefore proposing to revise Directive 1999/62/EC in order to allow charges to include external costs. The revision process will focus primarily on the following areas: (1) taking account of the external costs of air pollution, noise pollution and congestion, (2) setting up Community coordination mechanisms with a common methodology and ceilings for the calculation of charges and (3) allocating revenue to the transport sector. This approach is backed up by the results of the public consultation. To be effective, tolls should vary depending on the vehicle concerned, the type of route and the time. Furthermore, payments should be made via electronic toll systems in order to prevent tailbacks at the toll booths.

4.1.2. Promoting internalisation through the use of technology (autumn 2008)

The Intelligent Transport System Action Plan, to be proposed in autumn 2008, is intended to increase the use of technology. The Commission is to adopt Decisions to implement interoperability of electronic toll systems, as provided for in Directive 2004/52/EC, thus ensuring full interoperability of electronic toll systems within three years of the adoption of Decisions relating to the definition of the European Electronic Toll Service.

4.2. Encouraging more sustainable car use (autumn 2008)

Private cars should not be left out of this initiative. The charging principles proposed here could usefully be extended to private cars. For reasons of subsidiarity, Member States retain the freedom to choose whether to do so or not.

The Urban Mobility Action Plan, to be proposed in autumn 2008, will also look at how to improve mobility in urban centres and will consider the added value of Community action. It follows a wide-ranging debate initiated by the publication of a Green Paper on urban transport[6]. Best practices with regard to charging will be identified by passing on the various experiences gained with charging systems in European cities and setting up a discussion platform. Furthermore, developing harmonised criteria for urban traffic restrictions and promoting technological interoperability could help harmonise strategies for the internalisation of external costs in urban areas across Europe.

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[6] Green Paper *Towards a new culture for urban mobility*, September 2007 (available at http://ec.europa.eu/transport/clean/green_paper_urban_transport/index_en.htm).

Lastly, a proposal[7] on the taxation of private cars is currently under discussion in the Council. This proposal provides for the restructuring of existing taxes in order to take CO_2 emissions into account. The Commission's proposal includes three key measures: abolishing the registration tax, setting up a system for refunding it and restructuring the tax base for the registration tax and the annual road tax to establish a full or partial link with CO_2 emissions.

4.3. Towards internalising external costs for other modes of transport

The European Union should not stop there. Other modes of transport also have their part to play in improving people's quality of life, and each one presents specific challenges: noise pollution for rail transport, air pollution and climate change for maritime transport and noise pollution, air pollution and climate change for air transport. Internalising the external costs will also make it possible to use the most suitable instruments to encourage users to adopt more sustainable behaviour.

The impact assessment also looked at the various options for internalising external costs for these modes of transport. The policy options examined envisaged internalising environmental costs (air pollution and noise) and costs linked to climate change, which would have a positive effect on reducing negative externalities.

4.3.1. Rail transport (2008)

Directive 2001/14/EC allows internalisation of external costs. However, if it would lead to an increase in the revenue accruing to the infrastructure manager, the Directive allows internalisation only if there is an equivalent increase for competing modes of transport. Revising Directive 1999/62/EC will therefore make it possible to internalise external costs in the road transport sector, which is in competition with rail transport.

Noise pollution remains a major challenge for rail transport. When it publishes this Communication, the Commission will also publish a Communication on incentives for reducing noise levels and may propose legislation in this area by the end of 2008 when reviewing the first railway package.

4.3.2. Air transport (late 2008)

Air transport is already making a contribution to this programme. As emissions from air transport are increasing particularly rapidly, the Commission put forward a proposal on 20 December 2006 to include CO_2 emissions from the aviation sector in the European Union Emissions Trading System (ETS). Consequently, from 2011 or 2012, aircraft operators will be required to surrender allowances to cover their emissions according to the "polluter pays" principle. The draft Directive applies not only to intra-Community flights but also to all other flights arriving at or departing from an EU airport. It caps emissions at 100% of the levels obtained during the 2004-06 reference period.

The Commission is aware that the aviation industry's impact on climate change is not just limited to its CO_2 emissions and has already announced that it intends to deal with emissions of other greenhouse gases, particularly nitrogen oxide (NOx). The Commission is therefore drawing up another proposal, to be submitted by the end of 2008, with the aim of reducing NOx emissions.

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[7] Proposal for a Council Directive on passenger car related taxes (COM(2005) 261).

Lastly, on 24 January 2007, the Commission put forward a proposal for a Directive on airport charges. Both the Council and the Parliament welcomed the proposal. The suggested amendments relate to the inclusion of differentiated charging on the basis of environmental damage.

4.3.3. Maritime transport (2009)

Over the last few years, the growth of the maritime transport sector has led to an increase in its CO_2 emissions. In its conclusions, the March 2007 European Council proposed taking action to address emissions from international maritime transport. The Commission wishes to include the maritime sector in the post-2012 agreement on preventing climate change and would also like the International Maritime Organisation (IMO) to develop a series of measures over the course of 2009 to reduce greenhouse gas emissions. However, if the IMO does not make sufficient progress, the Commission will suggest taking action at European level, with one of the possible options being to include the maritime sector in the EU Emissions Trading System.

4.3.4. Inland waterways

The NAIADES Communication envisaged internalising external costs for all modes of transport by 2013. It pointed out that this could revitalise inland waterway transport and would make it possible to fund infrastructure development projects in the sector. The impact assessment shows that inland waterways would benefit from this kind of approach and, depending on their energy efficiency in terms of tonnes per kilometre, could benefit from a true intermodal transport policy.

4.4. Using the revenue generated by internalisation to make transport sustainable

The use to which the revenue generated by internalisation is put should take account of the benefits that international traffic has for the Community. In many cases, it is international traffic that generates the revenue. International road transport accounts for almost a quarter of all road transport in Europe, with that figure rising above 50% in seven Member States (and even reaching 74% in Belgium, 76% in Luxembourg and 85% in Estonia). If this revenue is not earmarked for transport, Member States might use the revenue generated by internalisation to pursue their own interests without considering the advantages of sustainable mobility at Community level.

To make transport sustainable, there is a considerable need for research, innovation, investment in more environmentally friendly infrastructure, development of public transport, etc. The list is long and requires sustained effort on the part of Member States. Moreover, substantial funding is needed in order to develop trans-European networks, in particular for those projects to which the EU has given priority. The revenue generated by internalisation should also be earmarked for the transport sector and the reduction of external costs, always on the basis of cost-benefit studies or similar analyses which guarantee that the chosen uses maximise the net benefits to society. The proposed revision of Directive 1999/62/EC envisages just such an approach.

5. NEXT STEPS

The Commission is encouraging Member States to use the proposed common framework. A legislative proposal on road transport is being put forward as part of this package of initiatives.

The Commission will carry out an evaluation of these measures in 2013 and draw up a report on the progress made towards internalising external costs. The evaluation of external costs will be updated to take account of research and scientific work in the field. If necessary and depending on how much progress has been made, other external costs such as those relating to biodiversity, nature and the countryside or land use may be included in the analysis.