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**COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN  
PARLIAMENT AND THE COUNCIL**

**Greening Transport**

{SEC(2008) 2206}

# COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND THE COUNCIL

## Greening Transport

(Text with EEA relevance)

### 1. INTRODUCTION

*Mobility* is key to our quality of life and is vital for the EU's competitiveness. It is the backbone of the economy making the links between the different stages of production chains and allowing service industries to reach their clients, as well as being a significant employer in its own right. As such it is key to achieving the goals of the EU's 'Lisbon' strategy for growth and employment. This is all the more so given that the sector is growing rapidly: between 1995 and 2005, goods and passenger transport in the EU grew by 31.3% and 17.7% respectively and this growth is predicted to continue.

But mobility also imposes *costs on society* due to the impacts it causes. Transport emissions threaten our health, negatively affect our local environmental quality and make a significant and growing contribution to climate change. CO<sub>2</sub> emissions from the road sector are 30% higher than in 1990 and transport is the only sector of the economy where emissions are predicted to increase in the future. Noise and traffic jams are an everyday annoyance for many citizens, and transport accidents kill many people each year.

"Sustainable mobility", that is disconnecting mobility from its harmful effects, has been at the heart of the EU's Transport Policy for several years. In its 2006 review<sup>1</sup> of the 2001 White Paper, the Commission pointed to the need to use a broad range of policy tools, ranging from economic instruments and regulatory measures to infrastructure investment and new technologies in order to achieve sustainable mobility.

"Getting the prices right" is essential. Transport users already pay a significant amount, but the price they pay often bears little connection to the real costs on society of their choices. They have thus no incentive to adopt less costly behaviour. By making payments smarter<sup>2</sup>, economic instruments (taxes, charges or emission trading schemes) can encourage transport users to switch to cleaner vehicles or modes (including walking and cycling), to use less congested infrastructure or to travel at different times. As such they represent an effective way to make mobility sustainable.

Price signals will be even more effective if the market offers realistic alternatives, cleaner vehicles at an affordable price, or an appropriate level of service in another

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<sup>1</sup> COM(2006) 314.

<sup>2</sup> For example, for congestion charging, allowing this to reflect the location and time of day.

mode of transport. These alternatives may not always exist, in particular where there is underinvestment in infrastructure and in research and development because of markets failures. As a result other, complementary, policy measures are also needed, including regulation. These measures should neither lock-in nor favour one particular technological approach or solution.

The Commission is therefore putting forward two different types of initiatives to redouble its efforts to make transport greener and more sustainable. The first type is to “get the prices right” through internalising the external costs of transport. Here the Commission’s strategy is to act in a way that is tailor-made to each impact and transport mode, taking into account the fact that the EU has already started work in this area. As such the EU rules on energy taxation and the Commission’s proposals to include the aviation sector in the EU’s Emissions Trading System are significant first steps in the strategy. The second type is a set of complementary measures comprising regulatory instruments, infrastructure measures and research and development measures. Here too there are many EU measures on which efforts can build.

This Communication begins by summarising the existing and proposed EU measures in the field of sustainable transport. These measures are and will continue to be complementary to action taken by Member States, which are a vital element in achieving sustainable mobility. Next it describes the two accompanying initiatives on internalising the external costs of transport — an overall strategy and a proposal to revise the directive on heavy goods vehicle charging for infrastructure use. Finally the communication describes a further accompanying communication on reducing rail noise and sets out the complementary initiatives that the Commission will take over the coming months.

All these initiatives are particularly important given the current political context. Both the European Parliament<sup>3</sup> and European Council<sup>4</sup> have recently stressed the importance of a sustainable transport policy, particularly in the context of combating climate change. Transport will clearly have to contribute to the ambitious goals that the European Council set itself in 2007: reducing greenhouse gases by 20% (30% in the framework of an international agreement), increasing the use of renewable energy sources to 20% and reducing energy consumption by 20%, all by 2020.

## **2. BUILDING ON WHAT EXISTS...**

The accompanying Greening Transport Inventory shows that the EU has already done a lot in all transport modes and many different policy areas ranging from research and development to energy policy and from transport to environment policy. As ever their implementation is key to their effectiveness. The measures are grouped according to their major negative impact, namely climate change, local pollution, noise pollution, congestion and accidents. A summary of the initiatives addressing each impact is given below.

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<sup>3</sup> Resolution of 11.3.2008 on sustainable European transport policy, taking into account European energy and environment policies — Rapporteur: Mr Albertini.

<sup>4</sup> March 2008 European Council.

## **2.1. Climate change**

Climate change is now the priority environmental problem with the most significant EU measures having recently been proposed by the Commission and awaiting agreement between the Council and European Parliament. These include measures to limit CO<sub>2</sub> emissions from new cars, to include aviation in the EU Emissions Trading System (ETS), to apply differentiated annual circulation and registration taxes for cars based on their CO<sub>2</sub> emissions and to ensure that all means of transport not covered by the ETS contribute to achieving national targets for limiting greenhouse gas emissions.

Member States should meet objectives for increasing the share of renewable energy used in road transport and the Commission recently proposed making a 10% target binding. The Commission has also proposed that fuel suppliers reduce greenhouse gas emissions from fuel across its life-cycle by 10% by 2020. For motor fuels, EU rules set minimum tax levels; nevertheless most aviation and maritime uses are exempt, although Member States can limit these exemptions to international transport.

In addition, there are particular EU requirements for some road vehicles concerning equipment such as air-conditioning systems. The Commission is developing initiatives on gear-shift indicators and recently proposed a framework for tyre pressure monitoring systems.

## **2.2. Local pollution**

As far as tackling local pollution is concerned the EU has already achieved a great deal, but there remains a significant amount of work still to do. Measures to limit air pollution have been developed in the framework of the Single Market and vary considerably between the means of transport but are focused on limiting emissions from new vehicles (the “EURO” standards), vessels or recreational craft. There are also maximum levels of certain pollutants in fuels, such as sulphur in marine fuel and lead in petrol, and rules to reduce emissions during fuel storage and distribution.

For waterborne transport there are requirements to limit water pollution. All transport modes are covered by general legislation on where and how waste can be disposed of and there are specific requirements for some types of road vehicles and their components (e.g. tyres, batteries).

In terms of vehicle procurement the Commission has recently proposed<sup>5</sup> that all public purchases of cars, vans, buses and lorries use a methodology that takes into account the energy consumption, CO<sub>2</sub> and pollutant emissions costs during the vehicle’s use over its lifetime. Most new transport infrastructure projects are also subject to rules on environmental assessment and some also to the rules on nature protection.

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<sup>5</sup> COM(2007) 817.

### **2.3. Noise pollution**

EU measures to limit noise pollution have focused on providing a general framework for assessing noise and for limiting noise emissions from all new, motorised, inland transport modes in the framework of the Single Market.<sup>6</sup> Limits also exist for aircraft, and more stringent restrictions can be put in place at certain EU airports. Airports, large towns (including their ports), heavily-used railways and roads must also be mapped for noise and action must be taken to reduce it where necessary. There are also limits for tyre noise which come into force in 2009 for replacement tyres.

### **2.4. Congestion**

EU measures have helped finance increased and alternative infrastructure capacity and EU policy has aimed to move transport away from the most congested modes, while at the same time developing common charging frameworks. There are existing measures for charging heavy-goods vehicles for infrastructure use and also specific requirements for rail infrastructure. In addition, the Commission recently made a proposal on airport charging. Rail, inland waterways and maritime transport receive most funding for infrastructure provision under the Trans-European Networks and the Marco Polo programme, mainly in order to encourage a shift from road transport. There are measures in the air and rail sectors that aim to increase infrastructure efficiency, and work on technological improvements in the road sector is ongoing. All sectors will benefit from the possibilities that Galileo will offer for fleet management, optimising transport routes to avoid congestion and preventing accidents.

### **2.5. Accidents**

Safety has been one of the key parts of EU transport policy since its very beginning. There are many different EU safety requirements for new road vehicles, as well as requirements for obtaining driving licences, limiting the speed of buses and coaches, and ensuring the roadworthiness of vehicles and the infrastructure itself. There are also a variety of safety measures in the rail and inland waterways sectors, addressing both the rolling stock and vessels, while in the rail sector infrastructure and organisations are considered. In the maritime sector there are many measures to increase safety, prevent accidents involving ships, passengers and crew and reduce the environmental impacts of accidents; these are all backed up by inspections. In the aviation sector safety measures include the aircraft's design and maintenance, use and personnel licensing. The aviation, rail and maritime sectors have requirements on accident investigation and reporting.

## **3. GETTING THE PRICES RIGHT ...**

Capitalising on the existing policy instruments is crucial to making transport more sustainable and addressing the five different negative impacts of transport. As mentioned above, getting prices right is one significant way of doing this and is central to the Commission's approach. The Commission is therefore presenting two

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<sup>6</sup> Including, for example, the technical specifications for interoperability in the rail sector.

initiatives along with this communication that aim to do this: a communication on internalising the external costs of transport; and a proposal to revise the existing directive on infrastructure charging for heavy goods vehicles.

### **3.1. Internalising the external costs of transport**

This communication and its annexes contain two elements. The first is a common framework for estimating the external costs of transport. This is based upon the results of Commission-financed work to review best practices, suggest a methodology and produce a handbook containing reference values that can be used for external costs. The communication provides guidance on how to use these values for external costs.

The second element of the communication is a strategy that sets out how external costs can be internalised in all modes of transport. In so doing it meets the requirement of the directive on heavy goods vehicles charging.<sup>7</sup> The strategy takes into account that for some impacts — such as noise and congestion — the costs that transport users impose on society vary in space, time and depending on the mode in question, while for others, such as greenhouse gas emissions, this is not the case. As a result the strategy is both mode and impact-specific.

Over the years the Commission has consistently stressed the importance of using economic instruments to achieve its policy goals. Within this framework, efforts to internalise the external costs of transport were a key part of the 2001 Transport White Paper and its 2006 Mid-Term Review. The EU has already started to internalise these external costs through the aforementioned rules on motor fuel taxation, as well as with the Commission's proposals to include the aviation sector in the EU's ETS and to incorporate a CO<sub>2</sub> component in registration and annual circulation taxes for cars. This strategy builds on these initiatives.

In the road sector the strategy launches immediate action to allow more effective and efficient internalisation with the proposal on infrastructure charging for heavy goods vehicles (see section 3.2). Private transport is not covered because of subsidiarity, but the Commission encourages Member States to implement a charging system for all road transport and not just heavy goods vehicles as this would create incentives for all road users to change their behaviour, thereby increasing the significant positive impacts.

In the rail sector the proposal on internalisation for heavy goods vehicles will also have a positive impact by giving further opportunities to internalise in the sector, provided that other modes also internalise.

The strategy also sets out subsequent steps in other modes. For inland waterways it announces the internalisation of all external costs in the sector, and, for maritime, where internalisation has yet to begin, it commits the Commission to acting in 2009 if the International Maritime Organisation (IMO) has not agreed concrete measures to reduce greenhouse gas emissions by then, something the EU is actively working towards. Commission action may include integrating the sector into the EU's ETS.

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<sup>7</sup> Directive 2006/38/EC amending Directive 1999/62/EC on the charging of heavy goods vehicles for the use of certain infrastructures.

For maritime transport, the strategy will be developed in line with the new European Integrated Maritime Policy.<sup>8</sup>

At the same time the strategy announces a cross-cutting internalisation measure for later in 2008: the revision of the Energy Taxation Directive. This will ensure that energy taxation better complements the EU ETS and better reflects the EU's climate change, energy and air quality goals.

The strategy will be evaluated in 2013.

### **3.2. Road charging**

Road transport accounts for the majority of external costs from transport so getting the prices right in this area is particularly urgent. Revising the heavy goods vehicles charging directive to encourage Member States to implement differentiated charging systems will improve the efficiency and environmental performance of road freight transport, something that is particularly important given its significant contribution to traffic and emissions.

At present the directive effectively stops Member States from making the most effective use of their tolling systems or the systems they are developing. Charges cannot currently be calculated and varied on the basis of external costs. This means that Member States cannot put in place sufficient incentives for operators to modernise their fleet with cleaner vehicles and to adapt their route planning and logistics to make them more sustainable.

The proposal would change this by giving Member States a framework to better vary charges<sup>9</sup> according to the local pollution (air and noise)<sup>10</sup> and congestion that the particular vehicle causes at the time it is used. By reducing congestion it will also contribute significantly to reducing CO<sub>2</sub> emissions.

To ensure that the tolls are both proportionate to the actual environmental damage and congestion caused and that the internal market continues to work properly the Commission is proposing that a common and transparent method is used for calculating external costs. The directive would also insist that any revenues from the scheme are earmarked for reducing the environmental impacts of transport and congestion<sup>11</sup> and that, after a transition period, charges are levied using electronic systems.

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<sup>8</sup> COM (2007) 575. This policy includes several proposals improving the sustainability (greening) of maritime transport. For more details see section 4 of the Greening Transport Inventory Commission Staff Working Document SEC (2008) 2206.

<sup>9</sup> As long as only infrastructure costs are recovered and subject to a number of conditions, which include that no additional revenue is generated, the existing directive allows limited differentiation of tolls.

<sup>10</sup> Costs for CO<sub>2</sub> will be tackled through fuel taxes as part of an envisaged review of the Energy Taxation Directive.

<sup>11</sup> For example, alternative infrastructure, traffic management and research.



## **4. TAKING COMPLEMENTARY MEASURES**

As stated above, both action to get the prices right and complementary action are needed to tackle the negative effects of transport. This is all the more so because, as the strategy part of the Communication on internalisation underlines, prices for some products and services, such as transport, may not lead to a change in behaviour (i.e. demand is rather inelastic). As a result complementary measures are essential. The Commission is therefore presenting, at the same time as this communication, a further communication to reduce rail noise from existing wagons and will, over the next 18 months, take additional steps focused on different modes and impacts. These are outlined below.

### **4.1. Reducing rail noise**

Estimates show that 10% of the EU's population is exposed to high rail noise levels and they are one of the main factors limiting the further growth of the sector. Reducing noise will have a positive effect not just of itself, but also in terms of making the development of rail transport and infrastructure more publicly acceptable. If, as a result, rail infrastructure can be more easily expanded and more flexibly used, this in turn should help shift passengers and freight away from road transport and onto rail thereby reducing the overall societal impacts of the transport sector.

Given that EU rules already limit the noise emissions from new rolling stock, this communication focuses on existing wagons and sets out measures to equip the majority of them with low-noise brakes. The strategy combines noise emissions ceilings, voluntary commitments and legislation setting financial incentives.

The Commission will propose the legislation in 2008 to ensure that, by adapting the existing rules on track access charging, charging schemes are harmonised across Europe. Quieter wagons will be charged less than noisier ones to allow payback of the necessary investment. Fitting with low noise brakes should be finished in 2015. After retrofitting, higher charges should be introduced for the remaining noisy wagons with Member States introducing noise emissions ceilings to cap the overall amount of noise on a particular stretch of track — and hence provide an incentive to use lower noise wagons — if they so wish.

To speed up implementation, the Commission also encourages voluntary commitments to pass on price signals to wagon owners before the legal deadlines.

### **4.2. Measures that will be taken in the next 18 months**

#### *4.2.1. Climate change*

As climate change is probably the number one challenge for the EU and for transport, the Commission will come forward with measures that go beyond those mentioned above for internalising external costs. For aviation, it will propose legislation on emissions of nitrogen oxides (NO<sub>x</sub>) from aviation, while in the road sector, the Commission will, by the end of 2008, propose reducing the CO<sub>2</sub> emissions from new vans, a system for tyre labelling and revising the existing car labelling directive.

#### 4.2.2. *Local pollution*

Many EU measures already exist to tackle local and regional pollution, so new initiatives concentrate on strengthening and complementing them.

Given the contribution that volatile organic compounds make to smog, limiting their emission during the refuelling of passenger cars at petrol stations is important. The Commission will therefore propose legislation to achieve this. The aforementioned NOx from aviation proposal should also contribute to reducing local air pollution.

Further reducing the sulphur content of liquid fuels has been identified as being a cost effective way to reduce air pollutant emissions. To achieve this the Commission will come forward with a proposal in 2009 which will take into account the significant recent progress on the issue in the IMO and which will include maritime transport fuels.

#### 4.2.3. *Noise*

Given the growing nuisance noise causes, its impact on health<sup>12</sup> and the effect this has on limiting transport infrastructure improvements, the Commission considers it very important to continue its efforts to reduce noise emissions from transport. In addition to the legislative proposal on rail noise (see section 4.1) the Commission may take further action to limit noise at EU airports by revising the existing directive on aircraft noise. In 2009, the Commission will also propose revising the directive on environmental noise.

#### 4.2.4. *Congestion*

With road congestion estimated to cost around 1.1% of EU GDP per year, the Commission considers tackling it a priority. Internalisation of external costs through smart road charging systems will be the key way to do this and the proposal to revise the directive on infrastructure charging for heavy goods vehicles will be the main EU instrument in the road sector. This will be accompanied by the Commission making funding available under the Trans-European Network programme for actions on electronic toll systems, where tolling systems have been implemented together by at least two Member States. The Commission will also clarify to what extent and under which conditions interoperable on-board tolling equipment may be included.

In the aviation sector the recent Single Sky Package aims to increase the capacity of European airspace three-fold while reducing air emissions per flight by up to 10%.

#### 4.2.5. *Cross-cutting measures*

The Commission will also come forward with actions that will have positive effects on several negative impacts, especially in the rail and inland waterways sectors, which offer an alternative to road transport. For rail, the Commission will adopt a legislative proposal on rail freight and one revising the directive on rail infrastructure charging (which will incorporate the changes mentioned in section 4.1).

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<sup>12</sup> See, for example on airport noise, COM(2008) 66.

The action plan on urban mobility will consider all five negative impacts and propose actions with a clear EU added value while respecting the subsidiarity principle. It will differentiate between actions that can be taken in the short term, and those that can be taken over the medium to long term.

The Green Paper on the Trans-European Transport Networks will review existing policy, draw lessons, and consider how best to take this policy forward in the years to come. This will include reinforcing the networks' sustainable development dimension and considering how they can best contribute to tackling climate change.

The action plan on Intelligent Transport Systems for Road, which will be accompanied by a legislative initiative, will set out a common approach to get existing technologies onto the market and used. It should help identify a set of core Europe-wide ITS applications, work out their business case, organise the necessary research and validation, and manage their implementation across Europe by road operators, industry, service providers and road users. These technologies will help to reduce congestion, while increasing safety and fuel efficiency by allowing shippers and the travelling public to plan their journeys to avoid traffic jams and by allowing governmental authorities to direct traffic away from areas where it would contribute significantly to local air pollution. In addition, using existing infrastructure more efficiently will mean that less new infrastructure will be needed, avoiding habitat fragmentation and soil sealing. Making use of future Galileo applications will also be part of this plan.

## **5. CONCLUSION**

Achieving sustainable mobility requires efforts from all stakeholders and not just the Commission. While the three new initiatives accompanying this communication (the communications on internalising the external costs of transport and on reducing rail noise, as well as the proposal to revise the directive on infrastructure charging for heavy goods vehicles) and the other measures set out within it are a further contribution from the Commission to meeting the challenge, concerted action by all stakeholders is needed to increase their effectiveness.

The three new measures accompanying this communication build on the large body of existing initiatives set out in the accompanying inventory in order to make progress in the short to medium term; however, the Commission is also looking to the longer term. In 2009, it will present a report on long-term scenarios for the development of transport policy over the next 20-40 years and it will begin internal reflections on the follow-up to the current transport White Paper, which will come to end in 2010. It is clear that, when developing any future policy a number of issues will have to be followed closely, including responding to any agreed post-2012 follow-up to the Kyoto Protocol and exploiting the numerous possibilities offered by Galileo.

The Commission invites the European Parliament and Council to endorse this approach.