



## Green and efficient road charging

- **Green and efficient charging of heavy goods vehicles needed**

Transport plays a crucial role in our daily life and in the economy. It connects producers to each other and with their consumers. Workers need efficient transport systems to commute between their homes and their places of work. The availability, quality, and reliability of transport services play a key role.

At the same time, transport does rely heavily on oil and the way it is used imposes significant negative impacts on society. Air pollution and noise caused by traffic damage peoples' health and the economic productivity. Road congestion wastes both the time of commuters and fuel. Carbon dioxide emissions contribute to global climate change.

These negative effects are borne by citizens and society at large, in particular the population of the territory where transport takes place. Given the steady growth of transport, in particular international transport, these social costs are set to continue to increase.

A wide range of policy tools both at EU and Member State level are required to optimise European logistics chains, make all transport greener and more efficient, and ultimately more sustainable. The right policy mix includes the development of public transport, intermodal transport, affordable, cleaner and more energy efficient vehicles but should also include a greater recourse to market-based instrument in all transport modes.

As to roads, green and efficient charging of their use by heavy goods vehicles, if implemented properly can be, for Member States an efficient way to manage traffic and make the most of transport resources while reducing pollution and congestion for those travelling on busy roads or living nearby.

## ● Existing road pricing instruments

Some countries apply road user charges to recover part of the infrastructure costs from motorway users. User charges can take the form of “time-based” fees, usually a sticker or a vignette bought for a week, a month or a year. Belgium, Denmark, Luxembourg, the Netherlands and Sweden are, for instance, jointly operating the so-called Eurovignette system for lorries. The principle of this system is that the vignettes are mutually recognised and valid in all participating countries.

Other countries apply “distance-based charges” levied by means of tolls. Traditionally these charges were levied only on a number of road infrastructure sections through payments collected at toll stations. More recently, some Member States have started to implement electronic toll systems for lorries on their main road networks. These tolling systems represent the technologically most advanced solution - see also the map on the last page for an overview of the current situation in the EU.

The EU passed legislation on road charging as early as 1999 - the first Eurovignette Directive<sup>1</sup>. This legislation applies to heavy goods vehicles only. Its purpose is to establish a Europe wide regulatory framework under which the arrangements of the individual Member States must fit, thereby ensuring a level playing field for the road transport industry in the single market.

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<sup>1</sup> Directive 1999/62/EC

#### Exploit new technologies

*Electronic tolling systems avoid queuing and the associated nuisances at tollbooths where trucks would otherwise have to stop. These systems can levy differentiated charges in an integrated way on large and dense networks instead of on isolated road sections. They offer more flexibility than traditional manual systems and can be easily installed on parallel roads to avoid the risk of undesired traffic detours. Such systems already exist in Germany, Austria, Switzerland and the Czech Republic. The Netherlands, France, Hungary and Slovenia have announced their intentions to install electronic toll systems by 2011.*

*The European interoperability of these systems is already phased-in by means of Directive 2004/52/EC. The Commission is preparing the necessary detailed technical specifications so that full interoperability, for the systems fitted in lorries, can be realised by 2012.*

## ● A common European framework

Road charges have traditionally been used mostly to raise funds to build new infrastructure. Now electronic toll systems could also be used to improve traffic conditions by reducing congestion and pollution caused by heavy goods vehicles. According to most transport economists, setting the toll rates at levels that better reflect the cost that a vehicle imposes on society would help achieve this objective.

The main reason is that these tolls, in contrast to existing taxation instruments, can be varied according to pollution and congestion levels. Unlike fuel taxes, they can be varied according to the emission standards of vehicles. Contrary to vehicle taxes or time-based user charges, they can be varied according to the intensity, location and time of vehicle use.

The first Eurovignette Directive, however, was conceived at a time when only rudimentary charging systems were available, with no real possibility to use them as traffic management tools. This framework needs now to be adapted to both technological progress and the growing need for more sustainable transport so that the tool box at the disposal of Member States to tackle congestion and pollution is widened.

#### Key points of the proposal

*Its objective is to improve the efficiency and environmental performance of road freight transport. It seeks to establish a legal framework by the end of 2010 that:*

- 1) enables Member States to calculate and vary tolls on the basis of the costs of traffic-based air and noise pollution and congestion;*
- 2) promotes recourse to electronic free flow tolling technologies instead of toll stations;*
- 3) establishes common charging principles, including a method to calculate the chargeable costs, and monitoring mechanisms to ensure that charging schemes are proportionate and non-discriminatory;*
- 4) ensures that any additional revenue from tolls based on congestion and pollution is used to develop cleaner and more energy efficient vehicles or to build alternative transport capacity;*
- 5) extends the scope of the current directive beyond the trans-European network in order to avoid inconsistent pricing schemes between major corridors and other interurban roads.*

## ● Main benefits of the new directive

This proposal will give Member States wider scope to fix road tolls for heavy goods vehicles in a way that reflects environmental costs and provides incentives for the use of more environmentally friendly vehicles and forms of transport. It will also work towards improving logistic operations so as to minimise journeys on busy roads during peak times and across areas where pollution and noise are more harmful.

Short-term beneficiaries will be all those travelling on congested main roads, and all those living nearby suffering from air and noise pollution. Ultimately, all European citizens will benefit, because the move to more economically efficient and environmentally friendly transport will help keep transport costs and therefore prices down, while at the same time reducing the bill taxpayers have to meet for repairing the damage caused by pollution.

If Member States fully apply such road pricing, the impact analysis carried by the Commission services indicates potential savings, due notably to effective management of congestion, of fuel consumption and CO<sub>2</sub> emissions of trucks in the order of 8%. This would contribute to a 2% reduction of total CO<sub>2</sub> emission from road transport in general.

The main benefits will come from the differentiation of charges and efficiency gains. But further benefits could come from the use of the likely additional revenue generated by such tolls.

### Use of revenues

*The additional revenues from tolls based on congestion and pollution will be used for projects such as:*

- *research and development on cleaner and more energy efficient vehicles;*
- *building alternative transport infrastructure for transport users;*
- *investments to replace tollbooths by free flow tolling technologies;*
- *local action plans on management of air quality and environmental noise.*

## ● Charging principles

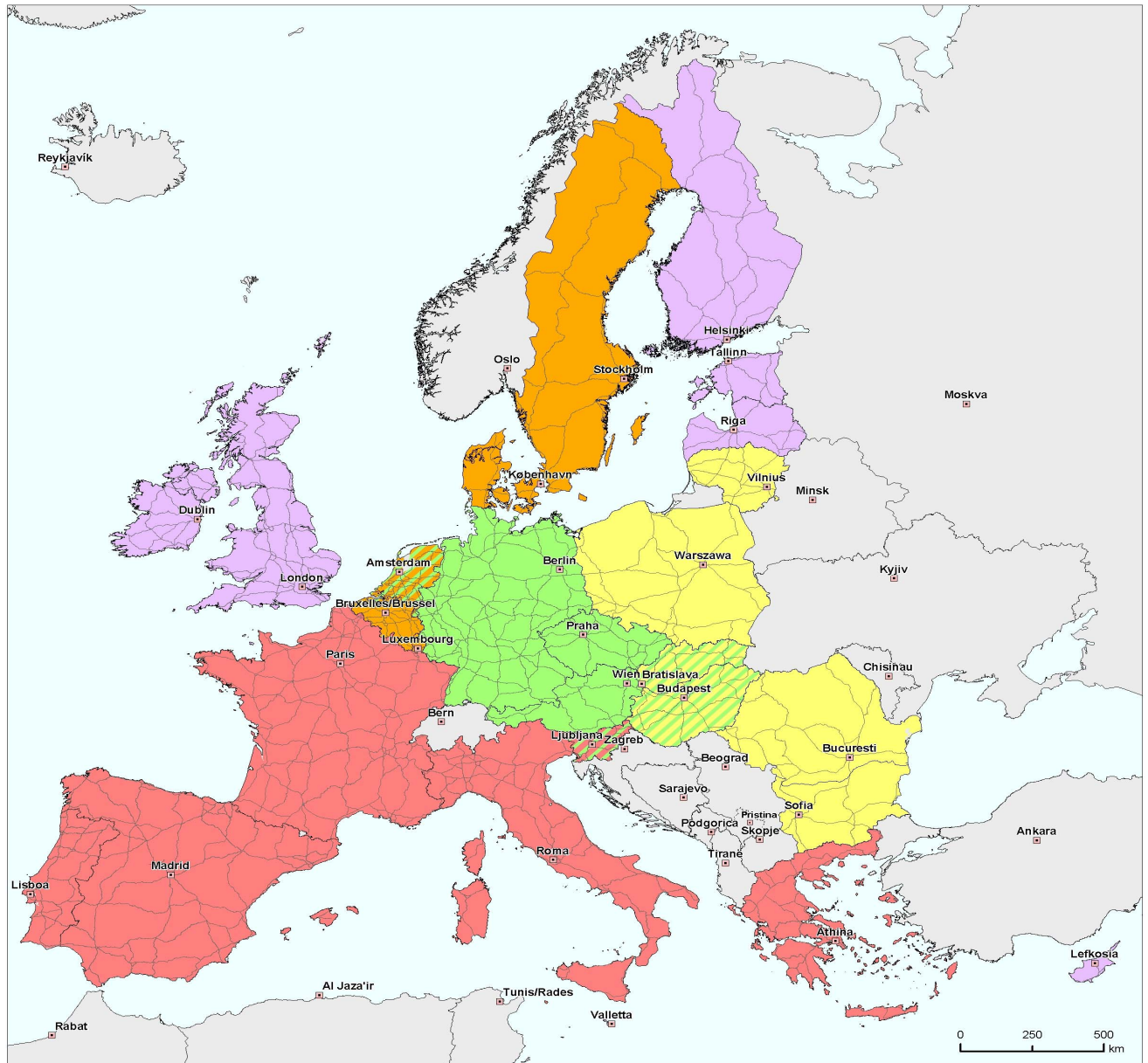
Member States will be able to include in tolls an amount which reflects the cost of pollution and congestion ("external cost"). This amount will be determined by an independent authority designated by the Member State where the road is located using a common method to calculate the external costs. The charges will vary according to:

- the type of vehicles: it will be much lower for a Euro V truck than for a Euro 0 truck;
- the type of roads: the amount will be higher for suburban roads than for other roads;
- the time periods: on roads usually congested, the amount will be higher during peak periods with forced or unstable flow of traffic.

The amount will be proportional, transparent and will be shown as a separate item on the toll bill so that hauliers and their customers are fully informed. The Directive also introduces special rules to prevent undue charging of operators, which would have otherwise negative effects on the internal market. For example, special calculation rules are planned when tolls will be used to both recover construction costs and to manage congestion.

The average amount of the external cost charge will be in the range of 4-5 eurocents per kilometre for a 40 tonne vehicle equipped with a EURO IV engine. The actual amount will vary from section to section as it will depend on the exact local situation, notably in terms of congestion.

## CHARGING OF HEAVY GOODS VEHICLES IN THE EU



— TEN-T road network (Decision 884/2004/CE)

Integrated electronic network-wide toll collection

Integrated electronic network-wide toll collection under preparation

Eurovignette

National vignettes

Toll collection with physical barriers\*

Neither vignettes nor tolls\*\*

\* Not the entire network is subject to tolls

\*\* Limited parts of the infrastructure might be subject to toll collection in some Member States

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