



COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, xxx
COM(2008) XXX final

Proposal for a

DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

of ...

**amending Directive 1999/62/EC on the charging of heavy goods vehicles for the use of
certain infrastructures**

{SEC(2008) yyy }

(presented by the Commission)

EXPLANATORY MEMORANDUM

1. CONTEXT OF THE PROPOSAL

1.1. Grounds for and objectives of the proposal

In 2006, the European Parliament and the Council called on the Commission to draw up a report on a generally applicable, transparent and comprehensible model for assessing the external costs of transport, such as pollution and congestion, to serve as the basis for calculating infrastructure user charges. The Commission was asked to propose a strategy for stepwise implementation of the model for all transport modes, accompanied if appropriate by a proposal for revising Directive 1999/62/EC on the charging of heavy goods vehicles for the use of infrastructure.¹

More recently, in its resolution of 11 March 2008 on sustainable European transport policy, Parliament urged the Commission to come up with such a model, a strategy for implementing it in all modes, and legislative proposals starting with a review of the Directive.

A Communication comprising a model and a strategy is submitted to Parliament and the Council together with this proposal (see COM(2008)...). The goal is to set transport prices correctly so that they better reflect the costs of the actual use of vehicles, trains, planes or ships in terms of pollution, congestion and climate change.

This calls for a stepwise approach in all transport modes, but in particular in the road sector given its influence on the transport system and its contributory effect on traffic and emissions. In this sector, this implies greater recourse to user charges which vary according to the distance travelled, the location and the time of use in proportion of the external costs caused by vehicles.

The attached proposal contributes to this broader strategy. Its objectives are to encourage Member States to implement differentiated charging to improve the efficiency and environmental performance of road freight transport. It seeks to amend Directive 1999/62/EC to establish a framework which enables Member States to calculate and vary tolls on the basis of the costs of traffic based pollution and of congestion in a way compatible with the internal market.

Such charges will encourage transport operators to use cleaner vehicles, to choose less congested routes, to optimise the loading of their vehicles, and ultimately to make more efficient use of infrastructure.

1.2. General context

Transport plays a crucial role in the economy and society. But it relies heavily on oil and its use produces costs on society in terms of health costs and loss of production due to air and noise pollution and accidents; time and fuel wasted in congestion; and broader environmental damage such as climate change.

Currently these external costs are borne by the rest of society either through general taxation to pay for policing, road management services, and hospital treatment or through the impact of noise, emissions and accidents on people's health and quality of life.

¹ Article 11 of amended Directive 1999/62/EC

Roughly 90% of these negative impacts is usually attributed to road transport and a quarter to road freight transport. Given the steady growth of road freight transport, in particular international road freight transport, which forecasts see as possibly doubling between 2000 and 2020, these social costs are most likely to increase.

As outlined by the 2006 review of the European Transport Policy, a wide range of policy tools at EU and Member State level is required to optimise European logistics chains, make all transport greener and more efficient, and ultimately ensure more sustainable transport. The right policy mix must not only act on the supply of transport, it must address pricing, which in a market economy is an efficient way to better manage transport demand and achieve more efficient use of infrastructure.

Current levies on road freight transport reflect a wide variety of approaches between Member States. Some countries rely on a mix of different taxation instruments (fuel and vehicle taxes). In others, the fiscal mix is more diverse and includes road user charges to recover infrastructure costs from hauliers using motorways. User charges take the form of time-based fees (e.g. the Eurovignette²), introduced often as a transitional system, or distance-based charges (tolls) levied on individual road sections or the full primary network.

In most cases, current levies by Member States fail to send the right price signals. Road users are all treated alike, irrespective of the congestion or pollution they cause. They are not provided with effective incentives to use cleaner vehicles and to adapt their choice of route and mobility behaviour. While a lorry may be charged a toll to use a motorway crossing a rural area, it usually does not pay any user charge when crossing a densely populated area even though its cost in terms of pollution and congestion may typically be five times higher.

With the exception of climate change, most of the external costs are borne by the population and the local or national governments of the territory where transport takes place and not where the vehicle is registered, nor where the vehicle is refuelled. These costs vary according to the travelled distance, the environmental performance of vehicle (e.g. Euro emission standards) and different points in time (peak or off peak) and space (densely populated area or not). This is especially the case for the costs of air pollution, of noise and of congestion.

The best pricing instruments for assigning these costs to users in a fair and efficient way are tolls. The main reason is that tolls can vary according to the main cost drivers of pollution and congestion. Unlike fuel taxes, they can vary according to the emission standards of vehicles; contrary to vehicle taxes or time-based user charges (vignettes), they can vary according to the intensity, location and time of use. This allows the tolls to be set at a level which better reflects the real use of vehicles and therefore the external costs that users actually cause.

The impact analysis carried out by the Commission suggests that even with a simple degree of differentiation road user charges calculated on the basis of the cost of traffic-based air and noise pollution and of the cost of congestion imposed upon other vehicles would yield considerable welfare benefits in terms of saving time, reducing pollution, improving road safety and optimising the use of infrastructure and of the

²

A vignette or sticker based on an agreement between several Member States which gives access to the network on each other's territory — hence the term 'Eurovignette'.

transport system at large. By reducing the consumption of fuel wasted in congestion, it would also reduce emissions of CO₂ from road transport.

It should be stressed that a toll set in a Member State on the basis of the costs of congestion and pollution has a direct relationship with the use of infrastructure. Its key goal is to optimise the transport system and make mobility more sustainable. The toll is a payment for costs to the Member State, to the infrastructure provider and to the local population. In return, this payment gives the right to use the infrastructure and to consume scarce capacity and resources. As envisaged in the attached proposal, its revenue will be used to develop transport alternatives (cleaner vehicles, new infrastructure). Since a toll is payable by all users, irrespective of their Member State of registration (where domestic vehicle taxes are due) or of where the vehicle is refuelled (where domestic fuel taxes are paid), there is no risk that it distorts competition between hauliers from different Member States.

As to climate change, the impact of motor vehicles is global. Its cost does not depend on the time and place where the vehicle is used but on fuel consumption. Hence, fuel taxes are usually considered a simple and efficient way of internalising this cost irrespective of any other measures taken to achieve the target agreed at the level of the European Union for reducing CO₂. On this issue, the Commission has already proposed invoking Article 93 of the Treaty establishing the European Community to improve coordination of taxes on motor fuels, partly by raising the minimum Community rate for commercial diesel fuel³. The Commission will further review the general energy taxation Directive to ensure that it better reflects the EU's climate change and energy goals. However, if the results achieved are not satisfactory by the end of 2013, the Commission will assess whether to further review the Directive on charging heavy goods vehicles so that it does not prevent Member States to include a CO₂ charging element in tolls.

Lastly road accidents make up an important part of the social costs. In 2003, the Commission proposed to enable the inclusion of accident costs in the calculation of tolls. But this particular provision was eventually rejected by Parliament and the Council⁴. Accident risks are related not only to the distance travelled but also to complex factors such as speeding, driving under the influence of alcohol or failure to use seat belts, hence instruments like insurance rates might be a more effective tool. This issue will be further reflected upon in the review of the European road safety Action Programme that the Commission intends to carry out until 2010.

1.3. Directive in force

Directive 1999/62/EC recognises the “user pays” principle by allowing Member States to levy distance-based charges (tolls) to recover the cost of construction, maintenance and operation of infrastructure. The Directive also authorizes time-based charges below a maximum rate.

Toll rates may be varied according to vehicle emission standards or congestion levels, but under a condition of revenue neutrality on a biennial basis. However, except in Germany and the Czech Republic this option has hardly been exercised. One of the reasons is the great complexity for infrastructure operators to adjust their charging structure to the demand response in a way that keeps their revenue constant.

³ Proposal for a Council Directive amending Directive 2003/96/EC as regards gas oil used as motor fuel for commercial purposes, COM(2007)52 final.

⁴ Proposal for a directive amending Directive 1999/62/EC, COM(2003) 448 final

In 2006, the Directive was amended by Directive 2006/38/EC to set out the rules for calculating chargeable infrastructure costs. It has allowed tolls in mountainous areas, to be marked-up by up to 25% to co-finance alternative infrastructure labelled trans-European network priority projects by Parliament and the Council. This mark-up is currently applied on the Brenner motorway (Austria) to co-finance the Brenner rail base tunnel that forms part of the priority axis from Berlin to Palermo. The amendment also inserted a provision on regulatory charges specifically designed to combat pollution and congestion but has left legal uncertainties about where and how to apply them. This makes Member States reluctant to apply them.

The above provisions constitute a step in the right direction to improve the price signal. But they still do not enable Member States to apply optimal pricing. The Directive indeed limits revenues from tolls to what is strictly necessary to recover infrastructure costs, even in areas exposed to traffic-based pollution and congestion costs above the recoverable construction costs. It fails to provide effective incentives to differentiate charges so as to align them with the main cost drivers which are the time periods, the place and the types of vehicles. Moreover, it covers only the use of the trans-European network, which may lead to inconsistent pricing structures between the main corridors and other inter-urban roads used by international transport.

1.4. Unlock more efficient and greener charging

Existing road levies have not proved effective enough to internalise external costs of road freight transport. Tolls could be made more effective, but the current Directive blocks it.

The Commission has long advocated greater recourse to differentiated infrastructure charges which reflect external costs. It proposed legislative measures as early as 1996⁵ to authorise Member States to integrate in tolls levied on heavy goods vehicles an external cost element. At that time, the Member States considered such a step premature because of uncertainties both about calculating external costs and about the maturity of the required toll technologies.

These reasons are no longer valid.

Methods of monetising the external costs of pollution, noise and congestion caused by vehicles are now available. Most are in fact already used to various degrees in nearly all Member States to carry out cost/benefit analysis of infrastructure projects. Furthermore the model devised by the Commission following the EP's initiative (see COM (2008)...) provides reliable methods and a range of unit values which can serve as a basis for the calculation of road user charges.

As to tolling technologies, electronic systems combining automatic payment transactions and location of vehicles are already in operation in several Member States and have proven to be reliable and cost-effective. A number of other Member States announced their intention to install them on their main road network by 2011. Full technical and contractual interoperability for users is already provided by Directive 2004/52/EC. Such systems have other advantages; they do not cause local queues and nuisances as do tollbooths where lorries often have to stop.

⁵ Proposal for a Council Directive on charging heavy goods vehicles for the use of certain infrastructure, COM (1996) 331 final.

To unlock greener and more efficient road charging, the Commission envisages a stepped approach. The step proposed now is to enable Member States to calculate tolls on the basis of the costs of local pollution and, on congested roads during peak periods, of congestion. It also provides incentives to both differentiate toll rates accordingly and install toll collection systems without tollbooths.

The proposed framework leaves it to Member States to decide whether or not to levy tolls based on external costs. There are still uncertainties about the cost/benefit of the required toll systems on some Member States' lesser-used networks. In these circumstances, a phasing-in approach enabling pilot schemes and encouraging a gradual build-up and sharing of experience is preferable to a binding approach based on mandatory user charges. However, the Commission will review this strategy in 2013 to identify whether a more binding approach towards the internalisation of external costs is conceivable in the light of further likely falls in the cost of technology to enforce tolls. Depending on progress in defining a common fuel tax element related to climate change in the Energy Taxation Directive, the review will also assess whether the cost of CO₂ emissions should be allowed to be included in tolls.

To ensure that tolls based on external costs are applied homogeneously within the internal market, the attached proposal lays down certain rules akin to those in the current Directive concerning tolls to recover infrastructure costs. These rules prevent any discrimination between domestic hauliers and foreign hauliers. They ensure that tolls neither create disproportionate obstacles to freedom of movement, nor entail controls or checks at the internal borders. In particular, they establish common charging principles and mechanisms to avoid overcharging by infrastructure. They impose the use of a common and transparent method of calculating chargeable costs. Furthermore, they promote recourse to electronic toll systems which do not create hindrance to the free flow of traffic. Lastly they make sure that a document indicating the amount of the charge is issued to the haulier so that the latter can easily pass on the cost to the shipper.

Sustainable transport requires recourse to better pricing instruments but also considerable investment in research and development and infrastructure. Funding is particularly needed to reduce road pollution at source, improve CO₂ and energy performance of vehicle and offer a wider choice of realistic alternatives for users. Charging will be more effective when these needs are properly addressed. The current Directive recommends that revenue from infrastructure charges should be used to benefit the transport sector and optimise the entire transport system. In the case of the mark-up in mountainous areas, the legislator specified that such a mark-up on tolls paid by users coming from all the EU could be levied but only if revenues were clearly earmarked to specific projects of the trans-European network, hence transport projects with a general Community interest. Inspired by the same principle, the Commission proposes that any additional revenue from the part of a toll which is related to pollution and congestion is used to make transport more sustainable, hence with a Community interest and long-term benefits for transport users at large.

On a final note, it should be stressed that failing to enable more efficient and greener road pricing is not an option, neither for sustainable mobility, nor for the internal market. Given the growing environmental impact of transport, time is pressing and efficient pricing is a good way to reduce the negative impact of transport at least cost to the economy. Local governments in areas exposed to high congestion and pollution caused by international transport could be left with no alternative but to

take up in an uncoordinated way other sorts of measures, like sectoral traffic bans. This would disrupt supply chains and create disproportionate obstacles to freedom of movement.

1.5. Consistency with the other policies and the objectives of the Union

The proposed directive is part of the Commission's work programme (TREN/2008/073) and of the 'Greening Transport' package. From a general point of view, it contributes to both the EU Lisbon agenda and the Sustainable Development Strategy as it enables action to better manage congestion, to curb transport air emissions and as it encourages the development of cleaner transport technologies.

2. CONSULTATION OF INTERESTED PARTIES AND IMPACT ASSESSMENT

The public consultation and the impact assessment covered both the broader strategy related to all transport modes and the attached proposal.

An internet consultation was carried out between 29 October and 31 December 2007 and followed by a hearing of stakeholders on 31 January 2008.

The respondents supported the principle of internalising the external costs of transport, considered that air pollution and congestion were the two biggest nuisances in road transport and that the best economic instruments to tackle these costs were differentiated user charges. As to climate change, the use of energy taxation, or the integration of transport in the Emission Trading System, were considered as more appropriate. It was generally felt that revenue from internalisation should be invested into alternative transport infrastructures, cleaner technologies or used more generally to reduce the negative externalities of transport⁶.

The impact assessment gives an overview of the external expertise that provided methodological or modelling support for drafting the proposal. In particular, the Commission carried out a study to review the state of the art in the theory and practice of estimating and internalising external costs⁷.

The assessment confirmed that the "business as usual" scenario, i.e. no new actions to encourage efficient pricing, would fail to achieve sustainable mobility. It was shown that differentiated user charges were more efficient than the usual transport taxes to tackle air pollution, noise costs and congestion in road transport.

The advantages and disadvantages of mandatory versus optional charging schemes for road freight transport were compared. It was found that while there are clear and immediate benefits to be reaped in Member States with a lot of traffic, the financial viability of charging systems for external costs in Member States with low traffic requires further studies.

Levying a specific CO₂ charge or tax on top of the air pollution and noise charges was looked at as well. The conclusion was that, although this could deliver additional benefits, it should better be addressed through a more coordinated approach at EU

⁶ The summary of the contributions received and a report of the hearing are available on the following website: http://ec.europa.eu/transport/road/consultations/road_market_en.htm.

⁷ "Handbook on the estimation of external cost in the transport sector": http://ec.europa.eu/transport/costs/handbook/index_en.htm.

level to reduce greenhouse emissions based on either the Emission Trading System or a common fuel tax element in the Energy Taxation Directive.

The impact of levying a congestion charge on congested links was also assessed. This option would reduce congestion but would also significantly reduce both pollution and CO₂ emissions, particularly if similar charges are applied to cars as well.

It was also found that extending the scope of the charging schemes for the trans-European network to other interurban roads may avoid the problem of potential traffic diversion from toll motorways to non-toll interurban roads.

The advantages and disadvantages of earmarking revenue from external cost charges were also examined from both an economic point of view and in terms of facilitating better understanding and support among transport users.

If all Member States opt for road charging as allowed by the proposal the assessment estimates a significant reduction in emissions of local pollutants from road freight transport, and reductions in congestion and in road fatalities. Variation of charges according to the vehicles' Euro emission standard will accelerate fleet renewal, resulting in improved environmental performance. The positive effects on congestion will also deliver a reduction in consumption of diesel by lorries of 8% and therefore of transport CO₂ emissions of 2%. There would be no impact on the general level of mobility (see SEC(2008)... for more details).

3. LEGAL ELEMENTS OF THE PROPOSAL

3.1. Summary of the proposed action

The proposed Directive enables Member States to integrate in tolls levied on heavy goods vehicles an amount which reflects the cost of air pollution and noise pollution caused by traffic. During peak periods, it also allows tolls to be calculated on the basis of the cost of congestion imposed upon other vehicles. The amounts will vary with the travelled distance, location and time of use of roads to better reflect these external costs. The proceeds will have to be used by Member States for making transport more sustainable through projects such as research and development on cleaner and more energy efficient vehicles, mitigating the effect of road transport pollution or providing alternative infrastructure capacity for users.

Member States which opt for it must respect common charging principles together with mechanisms for notifying and reporting tolling schemes to the Commission. Member States must designate independent authorities to set the chargeable costs by using a common method which can be easily monitored and adapted to scientific progress. This will ensure that charging schemes are transparent, proportional to the objective pursued and do not discriminate against the nationality of hauliers.

The charge must be collected through electronic systems which does not create hindrance to the free flow of traffic and local nuisance at tollbooths, and which can be extended to other part of the network at a later stage without significant additional investments. A transition period for the current systems with barriers is planned. To avoid undue charging of users, other conditions must be met when a charge based on the costs of congestion and pollution is combined with a charge to recover the cost of infrastructure.

The proposal extends the scope of the current Directive beyond the trans-European network to avoid inconsistent pricing schemes between major corridors and other interurban roads. It makes more practicable the provisions in the current Directive on the mark-up levied in mountainous areas to co-finance EU labelled priority projects.

It does not prevent Member States from applying regulatory charges specifically designed to reduce traffic congestion or combat environmental impacts in urban areas with more than 100 000 inhabitants.

3.2. Legal basis, subsidiarity and proportionality principles

The proposal is based on Article 71 of the Treaty, as improving the efficiency and environmental performance of road freight transport is a key goal of the common transport policy.

It complies with the principles of subsidiarity and proportionality. Given the importance of transport for the internal market, its growing cross-border dimension and external cost, common charging principles must be established for all interurban roads, including the trans-European network, to enable Member States to recover external costs through tolls. This can only be achieved by modifying an existing directive and therefore cannot be achieved by the Member States alone.

The proposal leaves Member States the freedom to decide whether, and on which roads, to levy tolls and whether or not to incorporate local environmental and congestion costs in the tolls. The choice of projects to be financed with the proceeds of such charging is also left to the discretion of Member States provided that the projects chosen contribute to sustainable mobility. The proposal therefore does not exceed what is required to achieve its objective.

The proposed instrument is a directive since a regulation might unnecessarily restrict the margin of discretion of Member States.

It concerns a matter relevant to the European Economic Area and should therefore extend to it.

It will not affect the Community budget.

4. DETAILED EXPLANATION OF THE PROPOSAL

Article 2 adds new definitions relating to tolls, infrastructure cost charges, external cost charges, costs of traffic based air and noise pollution and costs of congestion. The former concept of weighted average toll is replaced by the concept of weighted average infrastructure charge.

Article 7 specifies that a Member State cannot impose both country wide tolls and user charges, and must therefore choose between the two systems.

Article 7a specifies the proportions to apply between the daily, weekly, monthly and annual rates of time-based charges (vignettes) to ensure that charges paid do not discriminate against occasional users, which are usually foreign hauliers.

Article 7b enables Member States to levy through tolls either a charge based on the cost of traffic-based air and noise pollution and congestion or a charge to recover the construction, maintenance and operation of infrastructure, or both.

Article 7c imposes to vary the charge based on external costs according to types of vehicles, roads and time periods. The amount of the charge will be set by an independent authority according to the method of Annex IIIa.

Article 7e allows a mark-up on alternatives of the main route on which a mark-up in mountainous area is levied and introduces a rule to avoid double charging when a charge based on external costs is levied in combination with a mark-up.

Article 7f(5) avoids double charging which would result of a double variation of both the charge related to infrastructure cost and the charge based on external costs.

Article 7g updates the notification requirements.

Article 7h prohibits discounts or reductions in charges based on external costs.

Article 7i requires to collect a charge based on external costs by means of an electronic toll system which avoids hindrance to the free flow of traffic and which can be subsequently extended at low cost to other road sections. A transition period is planned for existing tolls. A document indicating the amount of the charge will also have to be delivered to the haulier.

Article 8c ensures that the Commission is involved when several Member States cooperate in introducing a toll system.

Article 9(1)a specifies that regulatory charges are allowed in urban areas with a population above 100 000 persons.

Article 9 earmarks the part of the toll based on external costs to various measures contributing to sustainable transport.

Article 9b-c empowers the Commission to adapt to scientific progress the method to calculate the charges.

Article 11 introduces reporting requirements for Member States and the Commission. A report on a further extension of the Directive is due by 31 December 2013.

Other articles repeat existing provisions and are inserted for reason of legal clarity.

(Articles refer to the amended Directive and not to the amending Directive).

Proposal for a

DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

of ...

amending Directive 1999/62/EC on the charging of heavy goods vehicles for the use of certain infrastructures

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty establishing the European Community, and in particular Article 71(1) thereof,

Having regard to the proposal from the Commission⁸,

Having regard to the Opinion of the Economic and Social Committee⁹,

Having regard to the Opinion of the Committee of the Regions¹⁰,

Acting in accordance with the procedure laid down in Article 251 of the Treaty,

Whereas:

- (1) The promotion of sustainable transport is a key element of the common transport policy. To this end, the negative impacts of transport, in particular congestion, which impedes mobility, pollution, which creates health and environmental damage, and its contribution to climate change must be reduced. Moreover environmental protection requirements must be integrated into the definition and implementation of other Community policies, including the common transport policy.
- (2) The objective of reducing the negative impacts of transport should be achieved in such a way as to avoid disproportionate obstacles to the freedom of movement in the interest of sound economic growth and the proper functioning of the internal market.
- (3) To optimize the transport system accordingly, the common transport policy must use a mix of instruments to improve the transport infrastructure and technologies and enable a more efficient management of transport demand. This calls for a further recourse to the “user pays” principle and the development of the “polluter pays” principle in the transport sector.
- (4) Article 11 of Directive 1999/62/EC of the European Parliament and of the Council¹¹ called on the Commission to present a model for the assessment of all external costs arising from use of the transport infrastructure to serve as the basis for future calculations of infrastructure charges. This model was to be accompanied by an impact analysis of the internalisation of external costs for all modes of transport and a strategy

⁸

...

⁹ ...

¹⁰ ...

¹¹ ...

¹¹ OJ L 187, 20.7.1999, p. 42. Directive as last amended by Council Directive 2006/103/EC (OJ L 363, 20.12.2006, p. 344).

for a stepwise implementation of the model and, if appropriate, by proposals for further revision of that Directive.

- (5) In order to move towards a sustainable transport policy, transport prices should better reflect the costs related to traffic-based air pollution, traffic-based noise pollution, climate change and congestion caused by the actual use of vehicles, trains, planes or ships as a means of optimising the use of infrastructure, reducing local pollution, managing congestion and fighting against climate change at least cost for the economy. This calls for a stepwise approach in all transport modes, taking into account their particular characteristics.
- (6) In the road transport sector, tolls being distance based charges for the use of infrastructure constitute a fair and efficient economic instrument to achieve this objective since they have a direct relation with the use of infrastructure and can vary according to the distance travelled, the environmental performance of vehicles and the place and time of use of vehicles and therefore can be set at a level which reflects the cost of pollution and congestion caused by the actual use of vehicles. Moreover tolls do not create any distortion of competition within the internal market since they are payable by all operators irrespective of their Member State of origin or establishment and in proportion to the intensity of use of the road network.
- (7) The impact analysis shows that applying tolls calculated on the basis of the cost of pollution, and on congested roads, on the basis of the cost of congestion would have a positive effect on the transport system by reducing congestion, local pollution, encouraging the use of cleaner vehicle technologies, reducing empty returns, and also indirectly play a role in reducing fuel consumption and contributing to the fight against climate change. Toll schemes which integrate in their calculation for using congested roads a cost element related to congestion will be more effective in reducing congestion if Member States include other road users outside the scope of this Directive in a scheme of a similar nature.
- (8) The costs of traffic-based air and noise pollution and congestion, such as health costs, including medical care, crop losses and other loss of production, and welfare costs, are born within the territory of the Member State in which the use of transport takes place.
- (9) The model devised by the Commission for calculating these external costs provides reliable methods and a range of unit values which can already serve as a basis for the calculation of road user charges.
- (10) There are still uncertainties about the costs and benefits of the systems required to enforce differentiated usage charges on roads with low traffic. Until such uncertainties are removed, a flexible approach at Community level appears most appropriate. This flexible approach should leave Member States to decide whether and on which roads to introduce external cost charges on the basis of the local and national characteristics of the network.
- (11) Time-based user charges and tolls should not be applied simultaneously within the territory of a Member State in order to avoid a fragmentation of the charging schemes with negative effects for the transport industry, except in certain specific cases where this is necessary to finance the construction of tunnels, bridges or mountain passes.
- (12) Time-based user charges levied on a daily, weekly, monthly or annual basis should not discriminate against occasional users, since a high proportion of such users are likely to be non-national hauliers. A more detailed ratio between daily, weekly, monthly and annual rates should therefore be fixed.

- (13) Inconsistent charging schemes should be avoided between the trans-European network and other parts of the road network which may be used by international traffic. The same charging principles should therefore be applied to the entire interurban road network.
- (14) Tolls based on the distance travelled should be allowed to include an external cost element based on the cost of traffic-based air and noise pollution and on roads usually congested and during peak periods congestion costs which are mostly borne at local level. The external cost element included in tolls should be allowed to be added to the cost of infrastructure, provided that certain conditions are respected in the calculation of costs so that to avoid undue charging.
- (15) To better reflect the cost of traffic-based air and noise pollution, and congestion, the external cost charge should vary according to the type of roads, type of vehicles and time periods such as daily, weekly or seasonal peak and off peak periods and night period.
- (16) The smooth functioning of the internal market requires a Community framework in order to ensure that road charges set on the basis of the local cost of traffic-based air and noise pollution and congestion are transparent, proportionate and non-discriminatory. This requires common charging principles, calculation methods and unit values of external costs based on acknowledged scientific methods together with mechanisms for notifying and reporting tolling schemes to the Commission.
- (17) The authority which sets the external cost charge should also have no vested interest in setting the amount at an undue level and should therefore be independent from the body which collects and manages toll revenue. Experience has shown that adding a mark-up to tolls in mountainous areas in order to finance priority projects of the trans-European network is not a practicable option for infrastructure operators if the traffic diversion which may result from an increase of the toll is such that it implies a loss of revenue. To remedy this situation, a mark-up should be allowed on alternative routes to which traffic could otherwise be diverted.
- (18) In order to give the precedence to the construction of priority projects of European interest, Member States which have the possibility of applying a mark-up should use this option before levying an external cost charge. To avoid an undue charging of users, an external cost charge should not be combined with a mark-up unless the external costs exceed the amount of the mark-up already levied. In such a case, it is thus appropriate that the amount of the mark-up should be deducted from the external cost charge.
- (19) Where differentiated external cost charges are levied, a variation in the infrastructure charge for the purpose of reducing congestion, optimising the use of the infrastructure, minimising infrastructure damage or road safety would represent an undue burden on certain categories of users and should accordingly be precluded.
- (20) Discounts or reductions of the external cost charge should not be permitted as there would be a significant risk that they would unduly discriminate against certain categories of users.
- (21) Charging external costs through tolls will be more effective in influencing transport decisions if users are aware of these costs. They should accordingly be identified separately on a statement, a bill or an equivalent document from the toll operator. Furthermore such document may make it easier for hauliers to pass on the cost of the external cost charge to the shipper or any other clients.

- (22) The use of electronic tolling systems is essential to avoid disruption to the free flow of traffic and to prevent adverse effects on the local environment caused by queues at toll barriers. It is therefore appropriate to ensure that the external cost charge is collected by means of such a system, subject to compliance with the requirements of Directive 2004/52/EC of the European Parliament and of the Council of 29 April 2004 on the interoperability of electronic road toll systems in the Community.¹² Furthermore such systems should be designed in a way which allows subsequent extension to any parallel roads at low cost. Provision should however be made for a transitional period in order to permit the necessary adaptations to take place.
- (23) For reasons of legal clarity, it should be specified where regulatory charges specifically designed to reduce traffic congestion or combat environmental impacts, including poor air quality are permitted.
- (24) In accordance with the transport policy objectives of this Directive, the additional revenue generated from an external cost charge should be used in projects with a broad Community interest and designed to promote sustainable mobility at large. Such projects should therefore relate to facilitating efficient pricing, reducing road transport pollution at source, mitigating its effects, improving CO₂ and energy performance of vehicles, and developing alternative infrastructure for transport users. It includes for example research and development on cleaner vehicles and the implementation of the transport part of the action plans under Council Directive 96/62/EC on ambient air quality assessment and management¹³ and Directive 2002/49/EC of the European Parliament and of the Council of 25 June 2002 relating to the assessment and management of environmental noise¹⁴, which may comprise measures to mitigate traffic-based noise and air pollution around large infrastructure and in agglomerations. Earmarking this revenue does not release Member States from the obligation laid down in Article 88(3) of the Treaty to notify the Commission of certain national measures. The Directive does not prejudice the outcome of any State aid procedures that may be initiated under Articles 87 and 88 of the Treaty, nor does it prejudice the outcome of any procedures initiated under Articles 87 and 88 of the Treaty.
- (25) In order to promote interoperability of tolling arrangements, two or more Member States should be allowed to cooperate on introducing a common system of tolls, subject to compliance with certain conditions.
- (26) A comprehensive assessment of the experience acquired in those Member States which apply an external cost charge, in accordance with this Directive should be sent in due time by the Commission to the Council and Parliament. This assessment should also include an analysis of progress in the strategy to fight climate change, including in defining a common fuel tax element related to climate change in the Council Directive 2003/96/EC of 27 October 2003 restructuring the Community framework for the taxation of energy products and electricity¹⁵, and in the light of these progress whether the cost of carbon dioxide emissions should be included in tolls and an analysis of any other further appropriate actions to be taken.

¹² OJ L 166, 30.4.2004, p. 124;

¹³ OJ L 296, 21.11.1996, p. 55. Directive as amended by Regulation (EC) No 1882/2003 of the European Parliament and of the Council (OJ L 284, 31.10.2003, p. 1).

¹⁴ OJ L 189, 18.7.2002, p. 12.

¹⁵ OJ L 283, 31.10.2003, p.51. Directive as last amended by Directive 2004/75/EC (OJ L 157, 30.04.2004, p.100).

- (27) Article 55(2) of Council Regulation (EC) No 1083/2006 of 11 July 2006 laying down general provisions on the European Regional Development Fund, the European Social Fund and the Cohesion Fund¹⁶ provides that the revenue generated by charges borne directly by users must be considered in the determination of the funding-gap in the case of a revenue-generating project. However, since the revenue generated by an external cost charge is earmarked to project aiming at reducing road transport pollution at source, mitigating its effects, improving CO₂ and energy performance of vehicles, and developing alternative infrastructure for transport users, it should not be considered in the calculation of the funding-gap. The measures necessary for the implementation of this Directive should be adopted in accordance with Council Decision 1999/468/EC of 28 June 1999 laying down the procedures for the exercise of implementing powers conferred on the Commission¹⁷.
- (28) In particular, the Commission should be empowered to adapt Annexes 0, III, IIIa and IV to technical and scientific progress, and Annexes I and II to inflation. Since those measures are of general scope and are designed to amend non-essential elements of this directive, they must be adopted in accordance with the regulatory procedure with scrutiny provided for in Article 5a of Decision 1999/468/EC.
- (29) Since the objectives of the action which are to encourage differentiated charging based on external costs as a means towards sustainable transport cannot be sufficiently achieved by the Member States alone, and can therefore, by reason of the importance of the cross-border dimension of transport, be better achieved at Community level, the Community may adopt measures in accordance with the principle of subsidiarity, as set out in Article 5 of the Treaty. In accordance with the principle of proportionality, as set out in that Article, this directive does not go beyond what is necessary in order to achieve those objectives.

HAVE ADOPTED THIS DIRECTIVE:

Article 1

Directive 1999/62/EC is amended as follows:

1. In Article 2, points (b) and (ba) are replaced by the following points:

- "(b) 'toll' means a specified amount payable for a vehicle based on the distance travelled on a given infrastructure and comprising an infrastructure charge and/or an external cost charge;
- (ba) 'infrastructure charge' means a charge levied through a toll for the purpose of recovering the costs incurred by a Member State related to infrastructure;
- (bb) 'external cost charge' means a charge levied through a toll for the purpose of recovering the costs incurred by a Member State related to traffic-based air pollution, traffic-based noise pollution and congestion ;
- (bc) 'cost of traffic-based air pollution' means the cost of the damage caused by the release of certain harmful air emissions in the course of the operation of a vehicle;

¹⁶ OJ L 210, 31.7.2006, p. 25–78

¹⁷ OJ L 184, 17.7.1999, p. 23. Decision as amended by Decision 2006/512/EC (OJ L 200, 22.7.2006, p. 11).

- (bd) ‘cost of traffic-based noise pollution’ means the cost of damage caused by the noise emitted by a vehicle or created by the interaction of a vehicle and the road surface;
- (be) ‘cost of congestion’ means the additional cost in terms of time loss, unreliability of travel time, increased fuel consumption and vehicle maintenance costs imposed upon other vehicles when the infrastructure approaches capacity;
- (bf) ‘weighted average infrastructure charge’ means the total revenue of an infrastructure charge over a given period divided by the number of vehicle kilometres travelled on the road sections subject to the charge during that period;
- (bg) ‘weighted average external cost charge’ means the total revenue of an external cost charge over a given period divided by the number of vehicle kilometres travelled on the road sections subject to the charge during that period;"

2. Articles 7, 7a and 7b are replaced by the following:

“Article 7

1. Member States may maintain or introduce tolls and/or user charges on their road network or on certain sections of that network under the conditions laid down in paragraphs 2, 3 and 4 of this article and Articles 7a to 7j.
2. Member States shall not impose within their territory both tolls and user charges on any given category of vehicle. However, a Member States which imposes a user charge on its network may also impose tolls for the use of bridges, tunnels and mountain passes.
3. Toll and user charges shall not discriminate, directly or indirectly, on the grounds of the nationality of the haulier, the Member State or the third country of establishment of the haulier or of registration of the vehicle, or the origin or destination of the transport operation.
4. Member States may provide for reduced toll rates or user charges or exemptions from the obligation to pay tolls or user charges for vehicles exempted from the requirement to install and use recording equipment under Council Regulation (EEC) No 3821/85 of 20 December 1985 on recording equipment in road transport¹⁸, and in the cases covered by, and subject to the conditions contained in, Article 6(2) (a) and (b) of this Directive.
5. For a transitional period until 31 December 2011 inclusive, a Member State may choose to apply tolls and/or user charges only to vehicles having a maximum permissible laden weight of not less than 12 tonnes. From 1 January 2012, tolls and/or user charges shall be applied to all vehicles within the meaning of Article 2(d) unless a Member State considers that an extension to vehicles of less than 12 tonnes would:
 - (a) create significant adverse effects on the free flow of traffic, the environment, noise levels, congestion or health; or
 - (b) involve administrative costs of more than 30% of the additional revenue which would have been generated by that extension.

¹⁸ OJ L 370, 31.12.1985, p. 8, as last amended by Commission Regulation (EC) No 432/2004 (OJ L 71, 10.3.2004, p. 3).

Article 7a

1. User charges shall be in proportion to the duration of the use made of the infrastructure and shall be available for the duration of a day, week, month and a year. In particular, the annual rate shall be no less than 80 times the daily rate, the monthly rate shall be no less than 13 times the daily rate and the weekly rate shall be no less than five times the daily rate.

A Member State may apply only annual rates for vehicles registered in that State.

2. User charges, including administrative costs, for all vehicle categories shall be set by the Member State concerned at a level which is no higher than the maximum rates laid down in Annex II.

Article 7b

1. The infrastructure charge shall be based on the principle of the recovery of infrastructure costs. The weighted average infrastructure charge shall be related to the construction costs and the costs of operating, maintaining and developing the infrastructure network concerned. The weighted average infrastructure charge may also include a return on capital or a profit margin based on market conditions.

2. The external cost charge shall be related to the cost of traffic-based air pollution, the cost of traffic-based noise pollution, or both. On road sections subject to congestion the external cost charge may also include the cost of congestion during the periods when these road sections are usually congested.

3. The costs taken into account shall relate to the network or a part of the network on which tolls are levied and to the vehicles that are subject thereto.

Article 7c

1. The external cost charge shall vary according to the type of road and EURO emission class, and also the time period in cases where the charge includes the cost of congestion and/or traffic-based noise pollution.

2. The amount of the external cost charge for each combination of class of vehicle, type of road and time period shall be set in accordance with the minimum requirements, the common formulae and the maximum chargeable external costs in Annex IIIa.

3. The amount of the external cost charge shall be set by an authority designated by the Member State for this purpose. The authority shall be legally and financially independent from the organisation in charge of managing or collecting part or all of the charge. However, if that organisation is controlled by the Member State, the authority may be an administrative entity of that State.

Article 7d

1. Member States shall calculate the infrastructure charge using a methodology based on the core calculation principles set out in Annex III.

2. For concession tolls, the maximum level of the infrastructure charge shall be equivalent to, or less than, the level that would have resulted from the use of a methodology based on the core calculation principles set out in Annex III. The assessment of such equivalence shall be made on the basis of a reasonably long reference period appropriate to the nature of that concession contract.

3. Tolling arrangements which were already in place on 10 June 2008 or for which tenders or responses to invitations to negotiate under the negotiated procedure were received pursuant to a public procurement process before 10 June 2008 shall not be subject to the obligations set out in paragraphs 1 and 2 for as long as these arrangements remain in force and provided that they are not substantially amended.

Article 7e

1. In exceptional cases concerning infrastructure in mountainous regions, and after informing the Commission, a mark-up may be added to the infrastructure charge levied on specific road sections which are subject to acute congestion, or the use of which by vehicles is the cause of significant environmental damage, on condition that:

- (a) the revenue generated from the mark-up is invested in financing the construction of priority projects of European interest, identified in Annex III to Decision No 1692/96/EC, which contribute directly to the alleviation of the congestion or environmental damage and which are located in the same corridor as the road section on which the mark-up is applied;
- (b) the mark-up does not exceed 15% of the weighted average infrastructure charge calculated in accordance with Article 7b(1) and Article 7d except where the revenue generated is invested in cross-border sections of priority projects of European interest involving infrastructure in mountainous regions, in which case the mark-up may not exceed 25%;
- (c) the application of the mark-up does not result in unfair treatment of commercial traffic compared to other road users;
- (d) a description of the exact location of the mark-up and proof of a decision to finance the construction works referred to in point (a) are submitted to the Commission in advance of the application of the mark-up; and
- (e) the period for which the mark-up is to apply is defined and limited in advance and is consistent, in terms of the expected revenue to be raised, with the financial plans and cost-benefit analysis for the projects co-financed with the revenue from the mark-up.

The first subparagraph shall apply to new cross-border projects subject to the agreement of all Member States involved in that project.² After informing the Commission, a mark-up may also be applied to a road section which constitutes an alternative route to that covered by the mark-up referred to in paragraph 1, if:

- the application of a mark-up on a road would result in a significant share of traffic being diverted to this alternative route ; and
- the conditions set out in points a)-e) of paragraph 1 are complied with."

3. A mark-up may be applied to an infrastructure charge which has been varied in accordance with Article 7f.

4. When the Commission receives the required information from a Member State intending to apply a mark-up, it shall make this information available to the members of the Committee referred to in Article 9c. If the Commission considers that the planned mark-up does not meet the conditions set out in paragraph 1, or if it considers that the planned mark-up will have significant adverse effects on the economic development of peripheral regions, it may reject

or request amendment of the plans for charges submitted by the Member State concerned, in accordance with the consultation procedure referred to in Article 9c (2).

5. On road sections where the criteria for applying a mark-up pursuant to paragraph 1 are met, the Member States may not levy an external cost charge unless a mark-up is applied.

6. The amount of the mark-up shall be deducted from the amount of the external cost charge calculated in accordance with Article 7c.

Article 7f

1. Tolls which comprise only an infrastructure charge shall be varied according to EURO emission class in such a way that no toll is more than 100% above the toll charged for equivalent vehicles meeting the strictest emission standards.

2. Where a driver is unable to produce the vehicle documents necessary to ascertain the EURO emission class of the vehicle in the event of a check, Member States may apply tolls up to the highest level chargeable.

3. Tolls which comprise only an infrastructure charge may also be varied for the purpose of reducing congestion, minimising infrastructure damage and optimising the use of the infrastructure concerned or promoting road safety, on condition that:

- (a) the variation is transparent, openly published and available to all users on equal terms; and
- (b) the variation is applied according to the time of day, type of day or season;
- (c) no toll is more than 100% above the toll charged during the cheapest period of the day, type of day or season.

4. The variations referred to in paragraphs 1 and 3 shall not be designed to generate additional toll revenue, any unintended increase in revenue being counterbalanced by changes to the structure of the variation which must be implemented within two years of the end of the accounting year in which the additional revenue is generated.

5. If a toll includes an external cost charge, paragraphs 1 and 3 shall not be applied to the part of the toll consisting of an infrastructure charge.

Article 7g

1. At least six months before the implementation of a new infrastructure charge tolling arrangement, Member States shall send to the Commission:

(a) for tolling arrangements other than those involving concession tolls:

- the unit values and other parameters used in calculating the various infrastructure cost elements, and
- clear information on the vehicles covered by the tolling arrangements, the geographic extent of the network, or part of the network, used for each cost calculation, and the percentage of costs that are intended to be recovered.

(b) for tolling arrangements involving concession tolls:

- the concession contracts or significant changes to such contracts,
- the base case on which the grantor has founded the notice of concession, as referred to in Annex VII B to Directive 2004/18/EC; this base case shall include the estimated costs as defined in Article 7b (1) envisaged under the

concession, the forecast traffic, broken down by type of vehicle, the levels of toll envisaged and the geographic extent of the network covered by the concession contract.

2. The Commission shall, within six months of receiving all the necessary information in accordance with paragraph 1, give an opinion as to whether the obligations of Article 7d are complied with. The opinions of the Commission shall be made available to the Committee referred to in Article 9c.

3. At least six months before the implementation of a new external cost charge tolling arrangement, Member States shall send to the Commission:

- precise information locating the road sections where the external cost charge is to be levied and describing the class of vehicles, type of roads and the exact time periods according to which the external cost charge will vary;
- the envisaged weighted average external cost charge and the envisaged total revenue;
- the name of the authority designated in accordance with Article 7c(3) to set the amount of the charge, and of its representative; and
- the parameters, data and information necessary to demonstrate how the calculation method set out in Annex IIIa will be applied.

4. The Commission may, within six months of receiving the information in accordance with paragraph 3, decide to ask the Member State concerned to adapt the proposed external cost charge, if it considers that the obligations laid down by Articles 7b, 7c, 7i or 9(2) are not complied with. The decision of the Commission shall be made available to the Committee referred to in Article 9c.

Article 7h

1. Member States shall not provide for discounts or reductions for any users in relation to the external cost charge element of a toll.

2. Member States may provide for discounts or reductions to the infrastructure charge on condition that:

- the resulting charging structure is proportionate, openly published and available to all users on equal terms and does not lead to additional costs being passed on to other users in the form of higher tolls; and
- such discounts or reductions lead to actual savings in administrative costs and do not exceed 13% of the infrastructure charge paid by equivalent vehicles not eligible for the discount or reduction.

3. Subject to the conditions contained in Article 7f(4) and the second indent of Article 7f(3), toll rates may in exceptional cases, for specific projects of high European interest, be subject to other forms of variation in order to secure the commercial viability of such projects, where they are exposed to direct competition with other modes of vehicle transport. The resulting charging structure shall be linear, proportionate, openly published, and available to all users on equal terms and shall not lead to additional costs being passed on to other users in the form of higher tolls. The Commission shall verify compliance with these conditions prior to the implementation of the charging structure in question.

Article 7i

1. Tolls and user charges shall be applied and collected and their payment monitored in such a way as to cause as little hindrance as possible to the free flow of traffic and to avoid any mandatory controls or checks at the Community's internal borders. To this end, Member States shall cooperate in establishing methods for enabling hauliers to pay user charges 24 hours a day, at least at the major sales outlets, using all common means of payment, inside and outside the Member States in which they are applied. Member States shall provide adequate facilities at the points of payment for tolls and user charges so as to maintain normal road safety standards.
2. The arrangements for collecting tolls and/or user charges shall not, financially or otherwise, place non-regular users of the road network at an unjustified disadvantage. In particular, where a Member State collects tolls and/or user charges exclusively by means of a system that requires the use of a vehicle on-board unit, it shall ensure that appropriate on-board units compliant with the requirements of Directive 2004/52/EC can be obtained by all users under reasonable administrative and economic arrangements.
3. If a Member State levies an external cost charge on a vehicle, the amount of such charge shall be indicated in a document provided to the haulier.
4. An external cost charge shall be levied and collected by means of an electronic system which complies with the requirements of Article 2(1) of Directive 2004/52/EC and which can subsequently be extended to other road sections without significant additional roadside investment.
5. However, for a transitional period until 31 December 2013 inclusive, an external cost charge may be levied and collected by means of an existing tolling arrangement. In such a case, the Member State concerned shall notify the Commission of a plan to change by 31 December 2013 at the latest to a system which complies with the requirements of paragraph 4.

Article 7j

This Directive does not affect the freedom of Member States which introduce a system of tolls and/or user charges for infrastructure to provide, without prejudice to Articles 87 and 88 of the Treaty, appropriate compensation for these charges.

3. The following Article 8c is inserted:

"Article 8c

1. Two or more Member States may cooperate in introducing a common system for tolls applicable to their territories as a whole. In that case, those Member States shall ensure that the Commission is closely involved in such cooperation and in the system's subsequent operation and possible amendment.
 2. The common toll system shall be subject to the conditions set out in Articles 7 to 7j and shall be open to other Member States."
4. Article 9 paragraph 1a is replaced by the following:

"This Directive shall not prevent the non-discriminatory application by Member States of regulatory charges specifically designed to reduce traffic congestion or combat environmental

impacts, including poor air quality, on any urban road located in a built up area having a population in excess of 100 000 persons."

5. Article 9 paragraph 2 is replaced by the following:

" A Member State in which an external cost charge is levied shall ensure that the revenue generated by the charge is earmarked for measures aimed at facilitating efficient pricing, reducing road transport pollution at source, mitigating its effects, improving CO2 and energy performance of vehicles, and developing alternative infrastructure for transport users.

A Member State in which an infrastructure charge is levied shall determine the use to be made of revenue generated by that charge. To enable the transport network to be developed as a whole, revenue from charges should be used to benefit the transport sector and optimise the entire transport system

6. Article 9b is replaced by the following:

"Article 9b

The Commission shall facilitate dialogue and the exchange of technical know-how between Member States in relation to the implementation of this Directive and in particular the Annexes. The Commission shall adapt Annexes 0, III, IIIa and IV in the light of scientific and technical progress and Annexes I and II in the light of inflation. Those measures designed to amend non-essential elements of this Directive shall be adopted in accordance with the regulatory procedure with scrutiny referred to in Article 9c (3)."

7. Article 9c is replaced by the following:

"Article 9c

1. The Commission shall be assisted by a Committee.
2. Where reference is made to this paragraph, Articles 3 and 7 of Decision 1999/468/EC shall apply, having regard to the provisions of Article 8 thereof.
3. Where reference is made to this paragraph, Article 5a (1) to (4) and Article 7 of Decision 1999/468/EC shall apply, having regard to the provisions of Article 8 thereof."

8. Article 11 is replaced by the following:

"Article 11

1. Every four years and for the first time by 31 December 2012, Member States which levy an external cost charge and/or an infrastructure charge shall draw up a report on tolls levied on their territory and shall forward it to the Commission. The report shall comprise information on:

- the weighted average external cost charge and the specific amounts levied for each combination of class of vehicle, type of road and period of time;
- the total revenue raised through the external cost charge, and information on the use of that revenue; and the weighted average infrastructure cost charge and total revenue raised through the infrastructure charge.

2. No later than 31 December 2013, the Commission shall present a report to the European Parliament and the Council on the implementation and effects of this Directive, in particular as regards the effectiveness of the provisions on the recovery of the costs related to congestion and traffic-based pollution. The report shall also assess:

- the relevance of integrating in the calculation of tolls other external costs, especially the cost of carbon dioxide emissions should the definition of a common fuel tax element related to climate change have not yielded satisfactory results and the cost of biodiversity loss;
- the relevance of extending the scope of the Directive to other categories of vehicles;
- the possibility of adopting a revised classification of vehicles for the purposes of varying tolls taking into account the average impact on the environment, congestion and infrastructure, their CO₂ and energy performance, and the practical and economic feasibility of levying and enforcing tolls; and
- the technical and economic feasibility of introducing on the main inter-urban roads minimum distance-based charges reflecting at least the marginal cost of infrastructure and pollution. The report shall identify the possible type of road sections to be charged, the possible ways of levying and enforcing in a cost-effective way such charges and a common simple method to set the minimum rates".

9. In Annex III, the words “weighted average tolls” are replaced by “weighted average infrastructure charge”.

10. The Annex to this Directive is inserted after Annex III.

Article 2

1. Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive by 31 December 2010 at the latest. They shall forthwith inform the Commission thereof and supply a table of equivalence between those provisions and this directive.

2. When Member States adopt such measures, they shall contain a reference to this Directive or shall be accompanied by such reference at the time of their official publication. The procedure for such a reference shall be adopted by Member States.

3. Member States shall send the Commission the text of the main provisions of domestic law which they adopt in the field covered by this directive.

Article 3

This Directive shall enter into force on the day following that of its publication in the *Official Journal of the European Union*.

Article 4

This Directive is addressed to the Member States.

ANNEX IIIA

MINIMUM REQUIREMENTS FOR LEVYING AN EXTERNAL COST CHARGE AND MAXIMUM CHARGEABLE EXTERNAL COST ELEMENTS

This Annex sets out the minimum requirements for levying an external cost charge and the maximum authorised cost elements to be included when setting the amount.

1. THE PARTS OF THE NETWORK CONCERNED

The Member State shall specify precisely the part or parts of network which are to be subject to an external cost charge.

Where a Member State chooses to levy an external cost charge on only a part or parts of the network, the part or parts shall be chosen after an assessment establishing that:

- vehicles' use of the roads where the external cost charge is applied generates environmental damage and congestion higher than that generated on average on other parts of the road infrastructure network that are not subject to a external cost charge, or
- the imposition of an external cost charge on other parts of the network might have adverse effects on the environment, congestion or road safety, or levying and collecting an external cost charge on them would entail disproportionate cost.

2. THE VEHICLES, ROADS AND TIME PERIOD COVERED

The Member State shall notify the Commission of the classification of vehicles according to which the toll shall vary. It shall also notify the Commission of the location of roads subject to higher external cost charges (hereafter "suburban roads") and of roads subject to lower external cost charges (hereafter "other interurban roads").

Where applicable, it shall also notify the Commission of the exact time periods corresponding to the night period and to the various daily, weekly or seasonal peak periods during which a higher external cost charge may be imposed to reflect greater congestion or greater noise annoyance.

The classification of roads and the definition of time periods shall be based on objective criteria related to the level of exposure of the roads and their vicinities to congestion and pollution such as population density, the yearly number of pollution peaks measured in accordance with Directive 96/62/EC, the average daily and hourly traffic and the level of service (percentage of the day or the year when road usage is close to or above capacity, average delays and/or queues lengths). The criteria used shall be included in the notification.

3. AMOUNT OF THE CHARGE

For each vehicle class, type of road and time period, the independent authority shall determine a single specific amount. The resulting charging structure shall be transparent, openly published and available to all users on equal terms.

When setting the charges, the independent authority shall be guided by the principle of efficient pricing that is a price close to the social marginal cost of the usage of the vehicle charged. The charge shall be set as close as possible to the external costs which can be allocated to the category of road users concerned.

The charge shall also be set after having considered the risk of traffic diversion together with any adverse effects on road safety, the environment and congestion, and solutions to mitigate these risks.

The independent authority shall monitor the effectiveness of the charging scheme in reducing environmental damage arising from road transport and in relieving congestion where it is applied. It shall regularly adjust the charging structure and the specific amount of the charge set for a given class of vehicle, type of road and period of time to the changes in transport demand.

4. EXTERNAL COST ELEMENTS

4.1. Cost of traffic-based air pollution

When a Member State chooses to include all or part the cost of traffic-based air pollution in the external cost charge, the independent authority shall calculate the chargeable cost of traffic-based air pollution by applying the following formulae or by taking the unit values in Table 1 if the latter are lower:

$$PCV_{ij} = \sum_k EF_{ik} \times PC_{jk} \text{ where:}$$

- PCV_{ij} air pollution cost of vehicle class i on road type j (euro/vehicle.kilometre)
- EF_{ik} emission factor of pollutant k and vehicle class i (gramme/kilometre)
- PC_{jk} monetary cost of pollutant k for type of road j (euro/gramme)

Only the emissions of particulate matter and of ozone precursors such as nitrogen oxide and volatic organic compounds will be taken into considerations. The emission factors shall be the same as those used by the Member State to draft the national emissions inventories provided for in Directive 2001/81/EC on National Emission Ceilings (which requires use of the EMEP/CORINAIR Emission Inventory Guidebook)¹⁹. The monetary cost of pollutants shall be taken from Table 13 of the “Handbook on estimation of external cost in the transport sector”²⁰.

Table 1: Air pollution cost of vehicle (PCV)

| Euro cent/vehicle.kilometre | Suburban roads | Other interurban roads |
|-----------------------------|----------------|------------------------|
| EURO 0 | 16 | 13 |
| EURO I | 11 | 8 |
| EURO II | 9 | 8 |
| EURO III | 7 | 6 |
| EURO IV | 4 | 4 |
| EURO V and less polluting | 3 | 2 |

Values in euro cents, 2000

The values in Table 1 represent arithmetic averages of the values given in Table 15 of the "Handbook on the estimation of external cost in the transport sector"²¹ for vehicles belonging to four different weight classes. Member States may apply a correction factor to the values in Table 1 to reflect the actual fleet composition in terms of vehicle size.

¹⁹ Methodology of the European Environmental Agency http://reports.eea.europa.eu/EMEP_CORINAIR5/.

²⁰ http://ec.europa.eu/transport/costs/handbook/index_en.htm.

²¹ Idem

The independent authority may adopt alternative methods using data from air pollutant measurement and the local value of the monetary cost of air pollutants, provided that the results do not exceed the results which would have been obtained with the above formulae or the above unit values for any class of vehicles.

All parameters, data and other information necessary to understand how the air pollution cost is calculated shall be made public.

4.2 Cost of traffic-based noise pollution

When a Member State chooses to include all or part of the cost of traffic-based noise pollution in the external cost charge, the independent authority shall calculate the chargeable cost of traffic-based noise pollution by applying the following formulae or by taking the unit values in Table 2 if the latter are lower:

$$NCV_{ij}(\text{day}) = \sum k NC_{jk} \times POP_k / ADT$$

$$NCV_{ij}(\text{night}) = n \times NCV_{ij}(\text{day}) \text{ where}$$

- NCV_{ij} noise cost of vehicle class i on road type j (euro/vehicle.kilometre)
- NC_{jk} noise cost per person exposed on road type j to noise level k (euro/person)
- POP_k population exposed to daily noise level k per kilometre (person/kilometre)
- ADT average daily traffic (vehicle)
- n night correction factor

The population exposed to noise level k shall be taken from the strategic noise maps drafted under Article 7 of Directive 2002/49/EC on the evaluation and management of ambient noise.

The cost per person exposed to noise level k shall be taken from Table 20 of the “Handbook on estimation of external cost in the transport sector”²².

The average daily traffic shall assume a weighting factor of no more than 4 between heavy goods vehicles and passenger cars.

Table 2: Chargeable noise cost of vehicles (NCV)

| Euro cent/vehicle.kilometre | Day | Night |
|-----------------------------|------|-------|
| Suburban roads | 1.1 | 2 |
| Other interurban roads | 0.13 | 0.23 |

Values in euro cents, 2000

Source: Handbook on the estimation of external cost in the transport sector, table 21²³

All parameters, data and other information necessary to understand how the noise cost is calculated shall be made public.

4.3 Cost of congestion

On congested roads, a Member State may choose to include all or part of the cost of congestion in the external cost charge provided that the Member State demonstrates that the

²² Idem

²³ Idem

congestion cost imposed by a vehicle on other users exceeds the infrastructure development cost already charged for this vehicle. In such a case, the independent authority shall calculate the chargeable congestion cost for the different periods of time by applying the following formulae or by taking the unit values in Table 3 if the latter are lower.

$$CCV = MEC(Q_0) - IDC$$

$$MEC(Q) = \frac{VOT \times Q}{v(Q)^2} \times \frac{(v(Q) - v(Q - \Delta Q))}{\Delta Q} \quad \text{where}$$

- CCV chargeable congestion cost (euro/vehicle.kilometre)
- IDC infrastructure development cost already charged (euro/vehicle.kilometre)
- Q₀ optimal hourly traffic (vehicle/hour)
- MEC(Q) marginal external cost of congestion (euro/vehicle.kilometre)
- VOT value of time (euro/hour.vehicle)
- Q average hourly traffic (vehicle)
- ΔQ small change in hourly traffic
- v(Q) average traffic speed (kilometre/hour)

The average daily traffic shall assume equivalence factor between heavy goods vehicles and passengers cars of no more than 3.

The optimal hourly traffic shall be computed by iteratively levying the cost until equilibrium is reached between the hourly traffic and the marginal external cost of congestion. Alternatively, the ratio between the congestion charge (CCV) and the marginal external cost of congestion (MEC) shall be 0.5.

The speed-flow function shall be based on standard engineering curves.

The value of time shall be based on state of the art surveys of the willingness to pay.

Table 3: Chargeable congestion cost of vehicles (CCV)

| Euro cent/vehicle.kilometre | Time period A | Time period B | Time period C |
|-----------------------------|---------------|---------------|---------------|
| Suburban roads | 0 | 20 | 65 |
| Other interurban roads | 0 | 2 | 7 |

Values in euro cents, 2000

Source: Estimated from the "Handbook on the estimation of external cost in the transport sector", table 7²⁴

Time period A is an off peak period with stable flow of traffic

Time period B is a peak period or close to peak period with unstable flow of traffic

Time period C is an extreme peak period with forced or breakdown flow of traffic

All parameters, data and other information necessary to understand how the chargeable congestion cost is calculated shall be made public.

²⁴ Idem