

European Union Environmental Legislation

Existing and Proposed Legislation
and the Potential Impact on Public Transport

Third Edition
June 2009



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Introduction

With the background of climate change and energy efficiency, environmental policy has developed to one of the top policy areas on the European level. Public transport is affected directly or indirectly by a whole range of legislation covering *inter alia* sustainable development, climate change, internalisation of external costs, energy efficiency, pollutant emissions, noise or urban mobility. On the one hand, opportunities arise to promote public transport as an environmental friendly mode of transport with high energy efficiency, low emissions, low accident rates and low space consumption compared to the private car. On the other hand, policy-makers want the public transport sector to go even greener and want it to take lead even if its overall part in emissions is little. This means that the public transport sector including operators, authorities and the industry, have to meet new standards and requirements set by European legislation. In order to conserve the image of public transport as a green mode of transport, this is absolutely necessary. However, it should be underlined that public transport is not part of the problem but has to be considered as part of the solution to the challenges and problems urban areas are facing.

This brochure is now in its third edition and provides a comprehensive overview of existing and proposed European legislation and its potential impact on the public transport sector up-to-date in spring 2009. It does not aim to be complete but rather focuses on the most recent and most relevant legislation.

Ulrich Weber, EuroTeam Expert

Félix Buchwald

1. Framework Initiatives

1.1. The EU Sustainable Development Strategy

Renewed EU Sustainable Development Strategy, document 10917/06 adopted by the June 2006 European Council.

Communication – Progress report document COM(2007) 642 Final

In 2001, the Gothenburg European Council adopted the EU Sustainable Development Strategy (SDS). The Member States committed themselves to adopt ‘economic, environmental and social policies and actions that meet the needs of the present generation without compromising the ability of future generations to meet their needs’. The SDS is the overall framework of the EU’s orientation towards sustainable development.

Against the background of persisting trends in unsustainable production and consumption patterns and new urgent pressing challenges, especially climate change, the June 2006 European Council adopted a renewed SDS. It focuses on unsustainable trends within 7 key policy areas and sets objectives and targets for the EU to obtain sustainability depending on the policy area within the next 10, 20 or 50 plus years. Its success rests on the integration of sustainability concerns

into all policy areas and the change of human behaviour. Furthermore, the 20/20/20-strategy adopted by the March 2007 European council fixes concrete operational targets to cut emissions, to improve energy efficiency and to increase the share of renewable energy sources. The political commitment was translated into detail by the 2008 energy and climate change package (see page 11).

The seven key challenges/policy areas in the SDS are: climate change and clean energy, sustainable transport, sustainable production and consumption, the conservation and management of natural resources, public health, social inclusion, demography and migration and global poverty and development. Referring to climate change, the SDS calls for an adaptation to global warming in all relevant EU policies and a significant increase of the share of renewable energy sources in energy consumption, an increased share of biofuels in transport fuels, considerable energy savings and energy-efficiency measures and a further reduction of greenhouse gas emissions besides the EU’s commitment under the Kyoto protocol.

Against the background of the SDS, the March 2007 European council adopted an overarching strategy for the EU’s climate policy (sometimes referred to as the 20/20/20-strategy) and fixed concrete operational targets to the EU’s climate policies (all figures compared to 1990 levels). European leaders committed themselves to:

- achieve at least a 20% reduction of greenhouse gas emissions by 2020 compared to 1990. An extra 10% would be added if this was supported by other industrialised countries. This will be negotiated at the UNFCCC meeting in December 2009 and if agreed become a binding target as part of the post Kyoto 2012 international agreement.
- realise a 20% saving in energy consumption compared to the projections for 2020.
- increase the share of renewable energies in overall EU energy consumption up to a binding target of 20% by 2020.
- a 10% binding minimum target to be achieved by all Member States for the share of biofuels in overall EU transport petrol and diesel consumption by 2020.

Sustainable transport is identified as key challenge as well. The SDS outlines *inter alia* that transport greenhouse gas emissions, pollutant emissions from transport and noise from transport should be reduced and calls for a 'balanced shift towards environment friendly transport modes' and 'a shift from road to rail'. It also mentions decoupling economic growth and demand for transport with the aim to reduce environmental impacts and modernising the EU framework for public passenger transport services to encourage better efficiency and performance by 2010.

Furthermore, the SDS asks Member States to consider a taxation shift 'from labour to resource and energy

consumption and/or pollution' and indicates that the Commission should work out a roadmap on reforms of subsidies 'incompatible with sustainable development'. The European Council is scheduled to discuss a possible review of the SDS by 2011.

Potential impacts on public transport:

More than ever, authorities, operators and industries involved in public transport have to single out that public transport is crucial in adopting an orientation towards sustainable development. Especially with the background of a tightened economic situation around the globe, investment in public transport infrastructure should be promoted as a sustainable component of recovery programmes. According to UITP estimations, public transport operators in the EU offer 1,000,000 direct jobs. Public transport networks provide essential and eco-friendly links to all the different functions of the city while securing social inclusion and stable local employment.

At present, transport is bundled into the national Greenhouse Gas inventory under the present international Framework Convention. More robust and standardised calculation of CO₂ avoidance with public transport would be beneficial to the sector and increase investment as part of metropolitan or city wide climate change action plans. This could be a threat to the sector if action is not taken.

The UITP EU Committee issues memoranda for the EU Council presidencies outlining the economic, environmental and social role of public transport. The documents are available on our website at <http://www.uitp.org/eupolicy/positions.cfm>

In late 2008, UITP addressed a letter to the President of the Commission urging the European Commission to specifically include urban and suburban public transport networks into the transport infrastructure investments within the framework of the European recovery plan.

The UITP Sustainable Development Charter is a world wide voluntary commitment by over 140 UITP members to monitor, measure and report on their own performance in economic, environmental and social terms. Many examples from signatories can be found in the reports 'Making Tomorrow Today' (available via the UITP web site www.uitp.org) that highlight examples and best practises in the seven policy areas of the EU Sustainable Development Strategy.

References:

Renewed EU Sustainable Development Strategy (document 10917/06), adopted by the June 2006 European Council:

<http://register.consilium.europa.eu/pdf/en/06/st10/st10917.en06.pdf>

Presidency conclusions, March 2007 European council:

http://www.consilium.europa.eu/ueDocs/cms_Data/docs/pressData/en/ec/93135.pdf

1.2. The Sixth Community Environment Action Programme (2002-2012)

Decision 2002/1600/EC

The Sixth Community Environment Action Programme (6th EAP) provides the environmental dimension of the EU's Sustainable Development Strategy and represents the framework to all related Community policies until 2012.

The 6th EAP defines the following seven Thematic Strategies: soil protection, protection and conservation of the marine environment, sustainable use of pesticides, air pollution, sustainable use and management of resources, waste recycling and urban environment.

In April 2007, the Commission issued its mid-term review on the 6th EAP which stresses climate change, biodiversity and health and resource use as the most pressing challenges.

The EU environmental policy-making is guided by principles enshrined in the Treaties such as the 'polluter-pays', preventive action and that pollution should be rectified at source. In addition, the 6th EAP develops the 'substitution approach' (encouraging the substitution of dangerous by less dangerous substances) and the reversal of the burden of proof approach (making producers responsible to prove that any hazardous substance they currently use and any that they create or plan to use does not presents risks for environment or human health).

The mid-term review highlights that the costs of preventive action are significantly inferior to the costs of cleaning up pollution that has already occurred. Furthermore, it states that the integration of environmental considerations into corporate strategies can lead to a 'stronger branding and an improved corporate image'.

There are several references to transport, as climate change is seen as a key challenge demanding significant reduction of greenhouse gas emissions. The mid-term review refers *inter alia* to Green Procurement and the idea to include aviation into the EU's Emission Trading Scheme (EU ETS) which – according to a compromise reached in June 2008 – is now scheduled to come into force in 2012/13.

The Commission stresses that, even without competence on urban issues, it will look at how to improve the quality of the urban environment with transport being cited as a sector which one of the greatest potentials for further improvements.

Besides regulation, market-based instruments such as the ETS and fiscal policy are seen as cost-effective mechanisms in order to achieve the main EU guidelines in the transport fields to tackle climate change, namely the development of alternative fuels, the decoupling of economic growth from transport demand and an increased share in eco-friendly modes of transport.

Potential impacts on public transport:

Being already a sustainable and environmental-friendly mode of transport, public transport has to become even more efficient and more sustainable. Public transport operators should include environmental considerations in the entire range of their activities including for example maintenance and waste management in order to improve their corporate image. Without an increased share of public transport and other environmental-friendly modes of transport, emissions from the transport sector will continue to grow – a conclusion that has to be highlighted by all stakeholders involved in public transport.

References:

The Sixth Community Environment Action Programme (Decision 2002/1600/EC):

http://europa.eu.int/eurlex/pri/en/oj/dat/2002/l_232/l_24220020901en00010015.pdf

Communication from the Commission on the Mid-term review of the Sixth Community Environment Action Programme, COM (2007) 225 final:

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2007:0225:FIN:EN:PDF>

1.3. The Greening transport package

Communication of the Commission on the strategy for the internalisation of external costs, COM (2008) 435 final

Proposal for a Directive amending Directive 1999/62/EC on the charging of heavy goods vehicles for the use of certain infrastructures, COM (2008) 436 final.

Communication of the Commission on rail noise abatement measures addressing the existing fleet, COM (2008) 432 final

In July 2008, the Commission issued its so-called greening transport package which covers the Greening Transport Inventory (a summary of measures taken in the past) the Strategy to Internalise the External Costs of Transport, a proposal for a directive on road tolls for lorries (Eurovignette reform) and proposals to reduce the perceived rail noise from existing wagons.

According to the Commission, 'getting prices right' is the key measure in the move towards sustainable transport. Today, transport costs do not represent their real costs on society and with climate change being 'now the priority environmental problem' the transport sector as 'the only sector of the economy where emissions are predicted to increase in the future' is in the spotlight.

In order to make transport more sustainable, the costs of transport have to reflect both the private costs (those directly paid by users) and the external costs (those caused by negative side effects such as pollution or climate change). **The Strategy to Internalise the External Costs of Transport** identifies market-based instruments, namely taxation, tolls (or user charges) and 'in certain circumstances emissions trading' as most effective mechanisms. The idea is that smart payments such as different congestion charging depending on the location and time of day and the mentioned market-based instruments create incentives for transport users to switch to cleaner vehicles or cleaner transport modes. Whereas aviation will be included in the EU's Emission Trading Scheme, the Commission is considering proposing a similar approach for inland waterways. Possible measures to internalise the real costs of mobility and best practice examples are presented in a handbook worked out by external consultants on behalf of the Commission (see references below).

A proposed Directive amending Directive 1999/62/EC (**Eurovignette**) on the charging of heavy goods vehicles for the use of certain infrastructures represents the second component of the greening transport package. The Commission proposes that Member States should be able to vary charges according to the local air and noise pollution and the congestion that the vehicle causes at the time it is used. The current EU legislation only allows charging for infrastructure costs with environmental costs explicitly excluded. According to the document, the Commission envisaged to establish the new legal framework until the end of 2010. Furthermore, the legislation could in future include more roads and apply also to smaller lorries above 3.5 tonnes. However, given fierce criticism from parts of the Parliament and the industry, it remains unclear if and when the Commission's proposals to charge trucks for the environmental damage they cause could come into effect.

Proposals to reduce the perceived **rail noise** (especially from older wagons already in service) include noise emissions ceilings, voluntary commitments and legislation setting financial incentives. The Commission states that '10% of the EU's population is exposed to high rail noise levels' and that they are 'one of the main factors limiting the further growth of the sector'. Possible measures could include the variation of track access charges according to the noise resulting from a wagon and low noise brakes. According to the document, Member States should be allowed to introduce noise emissions ceilings.

In its Communication on the greening transport package, the Commission concludes that a report on 'long-term scenarios for the development of transport policy for the next 20-40 years' is scheduled to be published in 2009 and that it will start its reflections on the revision of transport White Paper which will come to end in 2010. The global post-2012 agreement on greenhouse gas emissions and the start of operation of Galileo will have significant influence on the EU's transport policies in the next decade.

Potential impacts on public transport:

Fair internalisation of external costs of the different transport modes as it is proposed by the Commission as part of the greening transport package should contribute to promote sustainable ways of mobility. Public transport operators, authorities and suppliers should closely monitor the methodology used to internalise external costs in the transport sector. Firstly, external benefits generated by public transport (e.g. social inclusion) should also be taken into account. Secondly, calculations should be based on passenger km instead of vehicle km as the aim of public transport is not to move vehicles but passengers. Finally, space consumption should be included in the calculation of external costs, e.g. the part of urban surface which is devoted to car use and car parking in urban areas.



The UITP EU Committee's position paper on the internalisation of external costs of transport in urban areas (November 2008):

<http://www.uitp.org/mos/positionpapers/67-en.pdf>

References:

Communication of the Commission on the greening transport package, COM (2008) 433 final:

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2008:0433:FIN:EN:PDF>

Communication of the Commission on the Strategy for the internalisation of external costs, COM (2008) 435 final:

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2008:0435:FIN:EN:PDF>

Handbook on estimation of external costs in the transport sector (2008):

http://ec.europa.eu/transport/sustainable/doc/2008_costs_handbook.pdf

Proposal for a Directive amending Directive 1999/62/EC (Eurovignette), COM (2008), 436 final:

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52008PC0436:EN:HTML:NOT>

Memo Green and efficient road charging on the Eurovignette reform proposals:

http://ec.europa.eu/transport/strategies/doc/2008_greening/2008_greening_road_memo.pdf

Communication of the Commission on rail noise abatement measures addressing the existing fleet, COM (2008), 432 final:

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2008:0432:FIN:EN:PDE>

2. Climate Change and Energy Efficiency

2.1. The Kyoto protocol and international 'climate diplomacy'

The Kyoto Protocol to the United Nations Framework Convention on Climate Change

In June 1992, the Rio de Janeiro United Nations Conference on Environment and Development agreed on the United Nations Framework Convention on Climate Change (UNFCCC), an international treaty aiming at stabilising greenhouse gas concentrations in the atmosphere. Greenhouse gases such as carbon dioxide (CO₂) or methane are considered responsible for global warming and climate change.

In 1997, world leaders negotiated the so-called Kyoto protocol as an amendment to the UNFCCC. Under the protocol, industrialised countries committed themselves to a concrete and binding reduction of their collective greenhouse gas emissions (5.2% by 2012 compared to 1990 levels).

Currently and within the framework of the UNFCCC, international negotiations are working on an agreement to establish new reduction goals for the post-2012 second commitment period.

New binding targets that will include targets for the developing world need to be agreed at the December 2009 UNFCCC Copenhagen conference so they can be ratified and to ensure a seamless transition from the Kyoto protocol period to this new agreement.

The EU and its then 15 Member States ratified the Kyoto protocol on 31 May 2002. Under the Kyoto Protocol, the EU committed itself to cut greenhouse gas emissions by 8% from 1990 levels during the first commitment period. A burden-sharing agreement between the Member States sets an individual target for each of the fifteen EU countries. Among the countries that joined the EU in 2004 and 2007, ten of them have a greenhouse gas reduction target. The same is valid for Croatia. Only Cyprus and Malta have not been allocated targets: they are not included in Kyoto Protocol Annex 1 which lists industrialised countries.

To enter into force, the Kyoto protocol had to meet two conditions. It had to be ratified by fifty-five countries. These latter must be responsible for at least 55% of CO₂ emissions in 1990. Russia's ratification in November 2004 allowed the Kyoto protocol to enter into force on 16 February 2005. Australia joined last year and so currently, the United States is the only country with emission reduction targets that have not ratified the

Kyoto protocol. The Kyoto protocol agreement period expires in 2012.

In February 2007, the leaders of the G8 countries and the five leading emerging economies (Brazil, China, India, Mexico and South Africa) issued the common non-binding 'Washington declaration' which accepted the existence of man-made climate change and called for a global agreement on concrete emission reduction goals and a carbon emission trading mechanism for both industrialised and developing countries. Confirmed by the 2007 UNFCCC conference in Bali, and the Bali Road Map, world leaders hope to find a post-Kyoto agreement by 2009.

However, the 2008 UNFCCC conference in Poznan showed that basic questions over a balance of emission cuts by richer and poorer countries remains unsolved and negotiations were hampered by the change in the US administration. It remains unclear how global leaders will agree on binding emission reduction goals at the 2009 conference in Copenhagen, but it is expected that the USA will play an active role.

In its Communication **Towards a comprehensive climate change agreement in Copenhagen COM (2009) 39 final**, the Commission outlined its own proposals, including a proposed 30% emission cut by 2020 compared to 1990 for developed countries and a 15-30% emission cut by 2020 compared to 'business as usual' levels for developing countries, except the poorest ones. Furthermore, the Commission calls for a rapid decrease in emission caused by deforestation, an extended international funding to help countries to adapt to 'already inevitable consequences of climate change' and for an OECD-wide carbon market.

Even with the background of ongoing difficulties in global climate diplomacy, the European Commission sees itself 'at the forefront of international efforts'. Launched in 2000, the **European Climate Change Programme** represents the framework for the implementation on the Kyoto protocol and for the move towards a so-called 'low carbon economy'. Being part of the European Climate Change Programme, the **European Union Emission Trading Scheme (EU ETS)** based on **Directive 2003/87/EC** operates since 2005. It covers CO₂ emissions in more than 10,000 installations related to electricity generation and some parts of the cement and steel industry. In 2005, the Commission launched its Second European Climate Change Programme and proposes the extension of the EU ETS to other greenhouse gases and other sectors such as aviation.

From 2010, aviation as the first sub sector of transport will be included in the EU Emissions Trading Scheme (EUTS). Initially this will be for European flights.

Further proposals to strengthen the EU's ambitions to limit greenhouse gas emissions were presented in January 2007 in the Commission's Communication on **Limiting Global Climate Change to 2 degrees Celsius, the way ahead for 2020 and beyond COM (2007) 2 final**.

Based on proposals made by the Commission and leaders from world leading economies, the March 2007 European Council then adopted an overarching strategy for the EU's climate policy. European leaders committed itself to a unilateral reduction of greenhouse gas emissions of 20% by 2020 compared to 1990 levels. A reduction of even 30% is promised if the international community agrees on a global agreement. All current EU climate policies including the post-2012 phase of the EU ETS are bundled in the so-called **energy and climate package** which was adopted in its final version by the European Parliament in December 2008.

Potential impacts on public transport:

According to the 2006 Stern Review on the Economics of Climate Change, both bus and rail (including non urban/suburban rail) only account for about 3% of global greenhouse-gas emissions – compared to 36% caused by passenger car traffic. So the sector is seen as part of the solution, not part of the problem. However, policy-makers want public transport to become even cleaner and to create markets for new eco-friendly products. It should be remembered that CO₂ emissions are not part of the EURO standard calculation of vehicle performance, and higher EURO levels do not necessarily have an added benefit of reduced CO₂.

Public transport operators, authorities and suppliers should promote the importance of public transport for the fight against climate change, highlighting it as an energy efficient and low carbon transport option and they should actively partner with regional, metropolitan and local authorities as a vital partner for them to meet local and national goals of CO₂ reduction targets.

The sector itself should urgently prepare itself in terms of how its carbon emissions are calculated. Considering direct 'scope 1' or tailpipe emissions only is not advantageous to the sector as our energy efficiency is strongly linked to occupancy. In addition, many, if not most PT trips in the developing world, replace an individual motorised trip. Therefore a land use multiplier factor should be made acceptable as part of the calculation.

In addition, well patronised public transport is very carbon friendly, but it can be shown that low levels of occupancy of high-capacity public transport vehicles emit more than individual cars for the same trips. The risk is that in most 'cap and trade' systems (whether regional such as the EUTS or voluntary) are based on energy reduction compared to a baseline. This means that the introduction of any new services have a negative impact on the baseline offsetting all other energy reducing efforts, and in a worse case scenario mean that an organisation would have be penalised.

In cooperation with CER, EIM, UIC and UNIFE, UITP issued a position paper on the railway community's aspiration concerning the fight against climate change:

<http://www.uitp.org/mos/positionpapers/40-en.pdf>

The UITP EU Committee's position paper on the role of public transport to reduce greenhouse-gas emissions and improve energy efficiency (March 2006):

<http://www.uitp.org/mos/positionpapers/13-en.pdf>

References:

The Kyoto Protocol to the UN Framework Convention on Climate Change (UNFCCC):

<http://unfccc.int/resource/docs/convkp/kpeng.pdf>

Directive 2003/87/EC establishing the EU ETS:

http://eur-lex.europa.eu/LexUriServ/site/en/oj/2003/l_275/l_27520031025en00320046.pdf

Communication from the Commission on Limiting Global Climate Change to 2 degrees Celsius – the way ahead for 2020 and beyond, COM (2007) 2 final:

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2007:0002:FIN:EN:PDF>

Communication from the Commission Towards a comprehensive climate change agreement in Copenhagen, COM (2009) 39 final:

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2009:0039:FIN:EN:PDF>

<http://www.uitp.org/mos/focus/FP-Climate-en.pdf>

<http://unfccc.int/meetings/items/2654.php>

2.2. The energy and climate package

Proposal for a Directive on the promotion of the use of energy from renewable sources, COM (2008) 19 final

Proposal for a Directive amending Directive 2003/87/EC so as to improve and extend the greenhouse gas emissions allowance trading system of the Community, COM (2008) 16 final

Proposal of a Directive on the geological storage of carbon dioxide, COM (2008) 18 final

Proposed Directive on the monitoring and reduction of greenhouse gas emissions from fuels (amending Directive 1998/87/EC), COM (2007) 18 final

Proposal for a Regulation setting emission performance standards for new passenger cars as part of the Community's integrated approach to reduce CO₂ emissions from light-duty vehicles, COM (2007) 856 final

The so-called energy and climate package was approved in its final version by the European Parliament in December 2008 and now has to be formally adopted by the Council. It translates into detail the political commitment made at the March 2007 European Council to reduce greenhouse gases by at least 20%, to increase energy efficiency by 20%, to increase the share of renewable energy in overall consumption up to 20% and to set a 10% binding minimum target for the share of biofuels in transport petrol and diesel. All targets are based on the 1990 figures and are to be met by 2020.

The package includes a proposal for a Directive on the promotion of the use of energy from renewable sources, a proposal for a Directive modifying and extending the EU ETS, a proposal for a Decision to reduce greenhouse gas emissions by 2020 according to the goals defined in 2007, a proposal for a Directive on the geological storage of carbon dioxide, a proposal for a Directive on the monitoring and reduction of greenhouse gas emissions from fuels (road transport and inland waterway vessels) and a proposal for a regulation setting emission standards for new passenger cars.

The **Directive on the promotion of the use of energy from renewable sources** lays down 27 different mandatory national targets which should enable the EU to achieve the 20% share in its overall energy consumption by 2020. In order to be able to meet those targets, the Member States will have to considerably increase the share of renewable energy, e.g. from 1.3% in 2005 to 15% for the UK, from 5.8% to 18% for Germany, from 5.2% to 17% for Italy or from 8.7 to 20% in Spain. Furthermore, the proposed Directive foresees a 10% binding minimum target for the share of renewable energy in transport fuel consumption which thus has to be met by every single Member State. In order to promote 'second-generation biofuels', this type of biofuels which are produced from e.g. wastes and therefore do not compete with food production will be double credited. Green electricity for trains will count only once, renewable energy consumed by electric cars will be counted at 2.5 times its input. More generally, the proposed Directive identifies energy saving as an important instrument in order to reach the overall target. The document explicitly cites the development, expansion and promotion of public transport offers as essential cornerstones of the EU's commitment to fight climate change.

The reform of the EU's ETS mainly implies its extension to new industries (e.g. aluminium and ammonia production and petrochemicals) and new gases (nitrous oxide and perfluorocarbons). The **revised ETS Directive amending**

Directive 2003/87/EC will apply from 2013 to 2020 and sets out new rules for the allocation of greenhouse gas emission allowances. Auctioning will be phased gradually so that partly free allocation and exceptions (especially concerning smaller installations and sectors exposed to carbon leakage, i.e. relocations in third countries due to environmental legislation) will remain for decades. The question of how to deal with the aviation sector was not reopened yet. Consequently, the current provision that aviation companies will receive 85% of the allowances for free for the whole trading period remains valid.

The **Directive on the geological storage of carbon dioxide** establishes a framework for large-scale tests on the underground carbon dioxide storage and allows them to be financed by revenues from emission trading allowances.

The so-called energy and climate package also includes a **Directive on the monitoring and reduction of greenhouse gas emissions from fuels (amending Directive 1998/87/EC)**. The idea is to reduce greenhouse gas emissions produced throughout the lifecycle of fuels that means extraction or cultivation including land-use changes, transport, distribution, processing and combustion. The directive will apply both to fossil and biofuels. The proposed provisions aim at a 10% reduction from 2010 levels by 2020. Partly, the reduction can be obtained through the use of electric vehicles (not trains) or carbon capture and storage.

Finally, the legislative package contains the **Regulation on emission standards for new passenger cars** which was intensively debated by political leaders. The compromise sets an average fleet target of 130g CO₂/km for new passenger cars to be reached by vehicle motor technology. In order to reach an average of 120g CO₂/km, it was agreed that a further 10g CO₂/km can be reached through biofuels or better tyres. Manufacturers will have to progressively adopt the new rules on 65% of new cars from 2012, on 75% from 2013, 80% from 2013 and all by 2015. Furthermore, the document identifies an emission standard of 95g CO₂/km as a possible long-term goal for period after 2020.

The proposed Regulation also includes penalties for non-compliance starting at 5 EUR for the first gram of CO₂ up (compared to 20 EUR initially proposed by the Commission) and a ceiling at 95 EUR from the fourth gram onwards. A general rule of 95 EUR/g from the first gram on is foreseen for 2019, but this could be revised on the occasion of the impact assessment and review in 2013. Furthermore, the compromise allows manufacturers to be given special credits for so-called 'eco-innovations'.

In order to improve consumer information and adapt the existing legal framework to the new emission standards, the Commission is expected to present a proposal for a reform of the CO₂/cars labelling Directive 1999/94/EC in the course of 2009.

Potential impacts on public transport:

The development, expansion and promotion of public transport should be promoted as an essential cornerstone of the fight against climate change. In order to be able to meet the overall climate change policy targets for 2020, Member States should boost public transport powered by green electricity. While the public is increasingly aware of the causes and consequences of climate change, public transport operators, authorities and suppliers should highlight the environmental impact of using a particular mode of transport, e.g. through marketing campaigns. Operators and suppliers should consider using fuels or electricity from renewable sources.

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Proposal for a Directive on the promotion of the use of energy from renewable sources, COM (2008) 19 final:

http://ec.europa.eu/energy/climate_actions/doc/2008_res_directive_en.pdf

Proposal for a Directive amending Directive 2003/87/EC so as to improve and extend the greenhouse gas emissions allowance trading system of the Community, COM (2008) 16 final:

http://ec.europa.eu/environment/climat/emission/pdf/com_2008_16_en.pdf

Proposal of a Directive on the geological storage of carbon dioxide, COM (2008) 18 final:

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2008:0018:FIN:EN:PDF>

Proposed Directive on the monitoring and reduction of greenhouse gas emissions from fuels (amending Directive 1998/87/EC), COM (2007) 18 final:

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Proposal for a Regulation setting emission performance standards for new passenger cars as part of the Community's integrated approach to reduce CO₂ emissions from light-duty vehicles, COM (2007) 856 final:

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2007:0856:FIN:EN:PDF>

Overview on the texts adopted by the European Parliament on 17 December 2008 (energy and climate change package):

<http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+TA+20081217+TOC+DOC+XML+V0//EN&language=EN>

Presidency conclusions, March 2007 European council:

http://www.consilium.europa.eu/ueDocs/cms_Data/docs/pressData/en/ec/93135.pdf

2.3. Energy efficiency

Directive 2006/32/EC on energy end-use and energy services

Action Plan for Energy Efficiency: realising the potential, COM (2006) 545 final

Based on a proposal made by the Commission in 2003, the Directive is meant to serve as an ‘umbrella’ to complement and improve the EU’s energy efficiency legislation. According to the Directive, Member States will have to draw up national action plans to realise 1% yearly energy savings from 2008 to 2017.

In 2006, the Commission issued its Action Plan for Energy Efficiency intended to lead the EU on the track to significant energy savings by 2020 – a priority that was endorsed by the March 2007 European Council and its commitment to realise a 20% saving in energy consumption compared to the actual projections.

According to **Directive 2006/32/EC on energy end-use and energy services**, Member States will have to draw up national actions plans in order to achieve an overall national energy saving target of 9% by 2017. These savings have to be achieved in the following sectors: households, agriculture, commercial and public sectors such as industry and transport (air and maritime transport are not included in this energy saving proposal). In order to attain the target of 1% yearly, the Directive underlines the importance of the public sector which should ‘fulfil an exemplary role’ and thus realise a significant contribution, mainly through public procurements related to the purchase of vehicles, buildings and other equipments.

The 2006 **Action Plan for Energy Efficiency** outlines numerous specific propositions in ten priority areas, namely new energy efficiency labelling standards, energy standards for so-called passive houses, efficiency of power generation, new CO₂ emission limits for cars, facilitated investment in energy efficiency, programmes for the new member states, taxation measures, education and campaigns and international agreements. Furthermore, improving energy efficiency in urban areas is identified as a priority area with the new ‘Covenant of mayors’ set to support the exchange of best practices. The Action Plan underlines the importance of the transport sector and therefore calls *inter alia* for cleaner vehicles, more efficient transport systems and a change in transport behaviours. The Commission’s document singles out ‘a need for reducing unnecessary energy consumption caused by inefficient urban transport’ and points out the importance of public transport, car-sharing, non-motorised

transport, co-modality, telecommuting and, ‘if necessary’, congestion charges. Most of the elements were further developed in the 2007 Green paper on urban mobility.

Potential impacts on public transport:

Public transport operators, authorities and suppliers should consider adopting energy efficiency measures in order to strengthen the sector’s eco-friendly image. Public transport operators should reduce their energy consumption through innovative lighting and air conditioning management and thus, if possible, use energy-efficient installations or switch off lights at daytime, for example.

Public transport operators, authorities and suppliers should consider adopting energy efficiency measures in order to strengthen the sector’s eco-friendly image. Public transport operators can reduce their energy consumption for operations by eco-friendly driving, regularly checking tyre pressure, introducing new technologies and fuel additives. Careful monitoring and management of heating, lighting and air conditioning and using energy-efficient installations in fixed facilities should not be neglected.

Public transport operators and authorities can partner with local authorities or regions who have signed the Covenant of Mayors as they have to submit an energy reduction action plan to the Commission as part of this commitment.

References:

Directive 2006/32/EC on energy end-use and energy services and repealing Directive 1993/76/EEC:

http://eur-lex.europa.eu/LexUriServ/site/en/oj/2006/L_114/L_11420060427en00640085.pdf

Action Plan for Energy Efficiency: realising the potential, COM (2006) 545 final:

http://ec.europa.eu/energy/action_plan_energy_efficiency/doc/com_2006_0545_en.pdf

3. Transport Emissions

3.1. Air quality directive

Directive (2008/50/EC) on ambient air quality and cleaner air for Europe

Directive (2004/107/EC) relating to arsenic, cadmium, mercury, nickel and polycyclic aromatic hydrocarbons in ambient air

Based on first proposals outlined by the Commission in 2005, the new 2008 air quality directive restructures the EU's entire legal frame on air pollution. It merges most of the existing legislation into a single directive and sets new standards for fine particle PM_{2.5} pollution.

The EU's air quality legislation was originally based on Directive (1996/62/EC) on ambient air quality assessment and management which defines basic principles for assessing air quality in Member States, based on common methods and criteria, and for obtaining adequate information on ambient air quality and ensuring that this is made available to the public through the use of alert thresholds. The framework directive was accompanied by the four so-called Air Quality Daughter Directives.

Pollutants targeted by the legislation are fine particles (PM_{2.5}), sulphur dioxide, nitrogen dioxide, PM₁₀, lead, carbon monoxide, benzene, ozone, arsenic, cadmium, nickel, and polycyclic aromatic hydrocarbons.

The new **Directive 2008/50/EC on ambient air quality and cleaner air for Europe** is in fact a merger of:

- Directive 1996/62/EC on ambient air quality assessment and management ('framework directive').
- Directive 1999/30/EC relating to limit values for sulphur dioxide, nitrogen dioxide and oxides of nitrogen, particulate matter and lead in ambient air ('first daughter directive').
- Directive 2000/69/EC relating to limit values for benzene and carbon monoxide in ambient air ('second daughter directive') and
- Directive 2002/3/EC related to ozone in ambient air ('third daughter directive').

However, the so-called **Fourth Air Quality Daughter Directive**, namely Directive 2004/107/EC relating to arsenic, cadmium, mercury, nickel and polycyclic aromatic hydrocarbons in ambient air, remains unaffected by the new 2008 Directive.

In fact, the new air quality Directive scheduled to come into force in mid-2011 does not change most of the existing standards. However, greater flexibility is foreseen as the deadlines for complying with the PM₁₀ standards can be postponed for three years or by a maximum period of five years for nitrogen dioxide and benzene.

Concerning fine particle PM_{2.5} pollution, the Directive sets new standards which have to be respected by Member States by 2015 at latest. The limit value is fixed at 25 micrograms/m³. Furthermore, the Directive obligates Member States to reduce exposure of the population to PM_{2.5} articles by an average of 20% by 2020 based on 2010 levels and to bring exposure level below 20 micrograms/m³ by 2015 in these areas.

The following table outlines the limit values for concentrations of the different pollutants targeted by the EU's air quality legislation (extract):

Pollutant	Concentration in ambient air, limit value	Averaging period	Date by which limit value is to met
Fine articles (PM _{2.5})	25 µg/m ³	1 year	1.1.2015
Sulphur dioxide (SO ₂)	350 µg/m ³ not to be exceeded more than 24 times a calendar year	1 year	1.1.2005
	125 µg/m ³ not to be exceeded more than 3 times a calendar year	24 hours	1.1.2005
Nitrogen dioxide (NO ₂)	200 µg/m ³ not to be exceeded more than 18 times a calendar year	1 hour	1.1.2010
	40 µg/m ³	1 year	1.1.2010
PM ₁₀	50 µg/m ³ not to be exceeded more than 35 times a calendar year	24 hours	1.1.2005
	40 µg/m ³	1 year	1.1.2005
Carbon monoxide (CO)	10 µg/m ³	Maximum daily 8 hour mean	1.1.2005
Ozone	120 µg/m ³	Maximum daily 8 hour mean	1.1.2010

Source: DG Environment,
<http://ec.europa.eu/environment/air/quality/standards.htm>

Potential impacts on public transport:

As the Commission is monitoring very closely if Member States do comply with the Directive and is determined to take legal action in case of non compliance, boosting public transport would help Member States to meet the ambient air pollution targets. More general, promoting public transport in order to achieve modal shift will help to reduce both air pollutant and greenhouse-gas emissions. Public transport operators and authorities should contribute to limit air pollutant emissions through the purchase and operation of clean vehicles.

Particulate filters and fuel additives can help reduce local emissions and PM levels, but careful monitoring is recommended as local environmental conditions strongly influence local air quality.

References:

Directive 2008/50/EC on ambient air quality and cleaner air for Europe:

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:152:0001:0044:EN:PDF>

Directive 2004/107/EC relating to arsenic, cadmium, mercury, nickel and polycyclic aromatic hydrocarbons in ambient air:

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2005:023:0003:0016:EN:PDF>

3.2. Pollutant emissions from road vehicles (EURO standards)

The EU's pollutant emissions from road vehicles are defined separately for light-duty vehicles (cars and light vans) measured in g per km and for heavy-duty vehicles (trucks, lorries and buses over 2,610 kg) measured in g per kWh. In order to define the different standards, the so-called EURO regulation uses Arabic numbers the classification of light-duty vehicles (1-6) and Latin numbers for high-duty vehicles (I-VI). The current regulation applied is EURO or the optional Enhanced Environmentally Friendly Vehicle (EEV) standard. The latest and strictest EURO VI regulation agreed on in December 2008 will apply from 1st January 2014 on.

Historically, the regulation of pollutant emission from high-duty vehicles is based on Directive 1988/77/EC and the consecutively amending Directives and related Regulations. The following tables outline the different stages of the EURO regulation including the latest and strictest EURO VI standard:

	EURO I (1993)	EURO II (1996)	EURO III (2000)	EURO IV (2005)	EURO V (2009)	EEV	EURO VI (2014)/ tbc
CO	4.5	3	2.1	1.5	1.5	1.5	1.5
HC	1.1	0.95	0.66	0.46	0.46	0.25	0.13
NO _x	8	7.2	5	3.5	2	2	0.4
PM	0.36	0.14	0.1	0.02	0.02	0.02	0.01

ESC Test-Upper Limit Values (in g/kWh) for four regulated pollutants

Source: <http://register.consilium.europa.eu/pdf/en/08/st15/st15367-re01.en08.pdf>

	EURO III (2000)	EURO IV (2005)	EURO V (2009)	EEV	EURO VI (2014)/ tbc
CO	5.45	4	4	3	4
NMHC	0,78	0,55	0,55	0,4	0,16
CH ₄	1,6	1,1	1,1	0,65	0,5
NO _x	5	3,5	2	2	0,4
PM	0,16	0,03	0,03	0,02	0,01

ETC Test-Upper Limit Values (in g/kWh)

Source: <http://register.consilium.europa.eu/pdf/en/08/st15/st15367-re01.en08.pdf>

According to the comprise agreed between the Parliament and Council representatives in December 2008, EURO VI will apply from January 2014 on, nine months earlier than the Commission proposed. The limit values remained unchanged compared to the Commissions' proposal. Hence, from 2014 on, the registration, sale and putting into service of vehicles that do not comply with the EURO VI standards will be prohibited. The proposed Regulation enables Member States to put into place tax incentives in order to promote a quick and cost-effective adoption of new vehicles meeting the EURO VI requirements.

Potential impacts on public transport:

From 2014 on, public transport operators and authorities will have to purchase vehicles which respect the new EURO VI regulation. Public transport stakeholders should lobby Member States to put into place public funds or financial incentives which will help to purchase EURO VI buses even earlier than 2014 as well as invest in new technologies such as hybrid buses as these best available technologies have currently still a considerable extra cost. Special attention should be devoted to the harmonisation of test cycles and its adaption to a real operating conditions.

The European Investment Bank is introducing a new credit line called the 'Clean Bus Facility'. This product is supposed to be help especially public transport operators and authorities to purchase clean buses.

References:

Proposal for a Regulation on type approval of motor vehicles and engines with respect to emissions from heavy duty vehicles (EURO VI) and on access to vehicle repair and maintenance information, approved by the European Parliament on 16 December 2008:

<http://register.consilium.europa.eu/pdf/en/08/st15/st15367-re01.en08.pdf>

3.3. Pollutant emissions from non-road vehicles

Directive 1997/68/EC relating to measures against the emission of gaseous and particulate pollutants from internal combustion engines to be installed in non-road mobile machinery, amended by Directive 2002/88/EC, Directive 2004/26/EC and partly Directive 2006/105/EC.

The legislation concerning the air pollutant emissions of non-road mobile machinery (NRMM) contains today four directives, one of them being the ‘mother’ Directive 1997/68/EC. It targets nitrogen oxide and particle emissions.

NRMM is defined as ‘a mobile machine or industrial equipment not intended for the use of passengers or goods transport on the road, in which an internal combustion engine is installed’ such as excavators, bulldozers, compressors, etc. The legislation mainly targets nitrogen oxides (NO_x) and particulate matter (PM) emitted by these (diesel) engines. The third Directive 2004/26/EC extended the scope of the legislation to railcars, locomotives and inland waterway vessels. The Directive sets emission standards and defines type-approval procedures for the vehicles in question which will come into force progressively. The final stage is scheduled to become fully effective in 2014.

The 2006 amendment is mainly related to the accession of Bulgaria and Romania to the EU in 2007. The European NRMM legislation is aligned with similar US legislation in order to harmonise the types of engines produced by the industry worldwide. In December 2007, the Commission issued a technical review of the NRMM Directive suggesting to adjust emission limits and / or to postpone the introduction of the next stricter stages, for example concerning rail and locomotive engines.

Through type-approval procedures, the Member States or their competent authorities certify that an internal combustion engine type or engine family meets the Directive with regard to its level of gaseous and particulate pollutants.

Concerning inland waterway vessels, this Directive has to be applied only for vessels measuring 20 metres or longer or with a volume of 100m³ or more. It does not cover small vessels carrying not more than 12 passengers.

Potential impacts on public transport:

Public transport operators and authorities have to consider the standards when purchasing new non-electrically powered rolling stock and waterborne or when replacing the motors of such vehicles.

References:

Consolidated version of Directive 1997/68/EC relating to measures against the emission of gaseous and particulate pollutants from internal combustion engines to be installed in non-road mobile machinery and the two first amending Directives (2002/88/EC and 2004/26/EC):

<http://eur-lex.europa.eu/LexUriServ/site/en/consleg/1997/L/01997L0068-20040520-en.pdf>

2007 Technical review of the NRMM Directive, final draft report:

http://ec.europa.eu/enterprise/mechan_equipment/emissions/2007tecrew_dfr.pdf

3.4. Quality of Petrol and Diesel Fuels

Proposal for a Directive amending Directive 98/70/EC as regards the specification of petrol, diesel and gas-oil and introducing a mechanism to monitor and the introduction of a mechanism to monitor and reduce greenhouse gas emissions from the use of road transport fuels.

European legislation relating to the quality of petrol and diesel fuels used in cars, trucks and other vehicles including locomotives and inland waterway barges is based on Directive 1998/70/EC. So far, the legal provisions aiming to reduce pollutant emissions from motor vehicles were amended once, namely amended by Directive 2003/17/EC.

In January 2007, the Commission proposed a further review of the fuel quality Directive calling for a reduction of greenhouse gases produced by fuels throughout the entire lifecycle by 1% a year between 2011 and 2020. According to an informal agreement reached in late 2008 between the European Parliament, the Council and the Commission, the original target was reduced to an obligatory 6% and a voluntary 4% cut by 2020.

According to the 2003 amendments, Member States had to ensure from 2009 on that all unleaded petrol and diesel fuels (leaded petrol was banned in 2000) comply with the environmental specifications, namely limits of contents composing petrol and diesel fuels. Sulphur content was fixed at a maximum of 10mg/kg.

The proposal made by the Commission included the obligation for fuel suppliers to monitor and reduce greenhouse gas emissions produced by their fuels throughout their lifecycle (including production, distribution, use, etc.) by 1% per year between 2011

and 2020. According to the Commission, a saving of 500 million tonnes of carbon dioxide emission could be realised. Furthermore, as the provisions are aligned to similar standards introduced in the US, the regulation could help to create a huge market for low carbon oil and cut demand for carbon-intensive and environmentally damaging oil production methods.

In late 2008, the European Parliament, Member States and the Commission agreed on an obligatory 6% and a voluntary 4% target concerning the cut of greenhouse-gas emissions produced by the fuels in question throughout their lifecycle. However, the optional 4% target will be reviewed in 2012 and could then become obligatory. Furthermore, the proposed amendments confirm the 10 mg/kg limit from 2009 on and include stricter limits on fuel components.

Potential impacts on public transport:

Public transport operators and authorities should ensure that the quality of fuel used in their vehicles meets the standard laid out by the Directive. The amending provisions will mean that fuel quality will have to be increased further and that greenhouse-gas emission produced by fuels will have to be monitored throughout the entire lifecycle.

References:

Proposal for a Directive amending Directive 98/70/EC as regards the specification of petrol, diesel and gas-oil and introducing a mechanism to monitor and the introduction of a mechanism to monitor and reduce greenhouse gas emissions from the use of road transport fuels:

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2007:0018:FIN:EN:PDF>

Directive 2003/17/EC amending Directive 98/70/EC relating to the quality of petrol and diesel fuels:

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2003:076:0010:0019:EN:PDF>

Directive 1998/70/EC relating to the quality of petrol and diesel fuels:

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31998L0070:EN:HTML>

4. Noise

4.1. Environmental Noise Directive

Directive 2002/49/EC relating to the assessment and management of environmental noise

The Directive on environmental noise aims to assess noise perceived by the public in built-up areas, public parks, quiet areas in an agglomeration or in open country and near schools, hospitals and other noise-sensitive buildings and areas. It does not apply to noise inside means of transport.

Member States have to ensure that the competent authorities draw up action plans to manage noise issues and effects (including noise reduction if necessary) for specified areas and infrastructures. The Commission is scheduled to present a report on the Directive's implementation in 2009.

By 30 June 2007, Member States had to ensure that their component authorities have issued so-called strategic noise maps for all agglomerations with over 250,000 inhabitants, for all mayor roads carrying more than 6 million vehicles per year, for mayor airports with more than 50,000 movements per year and for all railways carrying more than 60,000 trains a year. Harmonised

noise indicators such as L_{den} (day-evening-night equivalent level) and L_{night} (night equivalent level) have to be used in order to design those maps.

By 18 July 2008, the competent authorities had to draw up national actions plans to reduce environmental noise in large agglomerations and on major roads and railways. The action plans have to be revised as soon as a major development occurs affecting the assessed noise situation and at least every five years. The Directive covers measures to be taken until 2014.

The Commission is scheduled to issue a report assessing the need for further action on environmental noise and proposing, if appropriate, the implementation of strategies to reduce environmental noise emitted by specific sources, in particular outdoor equipment and means of transport and their infrastructures in 2009. It is possible that amendments to the Directive are proposed.

Potential impacts on public transport:

Public transport operators and authorities have to consider how they can meet the requirements set in the national action plans (e.g. new road surfaces, noise prevention measures). The design of new vehicles and the planning of public transport infrastructure should take into account noise consideration, especially in dense populated urban areas.

References:

Directive 2002/49/EC relating to the assessment and management of environmental noise:

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2002:189:0012:0025:EN:PDF>

Table summarising the related deadlines (issues by the DG Environment):

http://ec.europa.eu/environment/noise/pdf/deadlines_d2002_49.pdf

4.2. Tyre noise and emissions

Proposal for a Directive on labelling of tyres with respect to fuel efficiency and other essential parameters, COM (2008) 779 final

Already announced in the Energy Efficiency Action Plan and the Communication on the greening transport package, the Commission issued in 2008 a proposal for a Directive on labelling of tyres. The legislation would oblige tyre makers to give information about the environmental performance of a tyre and to make it available to customers.

The proposal has been forwarded to the Council and the European Parliament which, however, is not expected to have a first reading before the 2009 elections. According to the draft proposal, the new legislation could come into force in 2012.

According to the document, tyres account '20% to 30% of the fuel consumption of vehicles and a reduction of the rolling resistance of tyres may therefore contribute significantly to the energy efficiency of road transport and thus to the reduction of emissions'. The Commission proposed a labelling scheme similar to household appliances providing information on a tyre's environmental performance. The proposal concerns parameters such as fuel efficiency, wet grip and external rolling noise addressing C1, C2 and C3 tyres (tyres fitted on passenger cars, light- and heavy-duty vehicles). The information should be made available to retailers and consumers via different media including promotional literature and a sticker on the tyre itself.

Potential impacts on public transport:

Once a tyre labelling system is in place, public transport operators and authorities should take account the environmental performance including emissions and noise when purchasing new tyres.

References:

Proposal for a Directive on labelling of tyres with respect to fuel efficiency and other essential parameters, COM (2008) 779 final:

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2008:0779:FIN:EN:PDF>

5. Urban Mobility

5.1. The Green Paper on urban mobility

Green Paper: towards a new culture for urban mobility, COM (2007) 551 final

In September 2007, the Commission adopted its Green Paper on urban mobility. The document identifies the following five policy areas as the future challenges to urban mobility: congestion, air pollutant emissions and noise, Intelligent Transport Systems (ITS), accessibility of urban mobility infrastructures and safety and security in urban transport. More generally, the Green Paper proposes to 'rethink urban mobility' by organising 'co-modality' between collective and individual transport modes within an integrated approach.

After a public consultation phase on the Green Paper, an Action Plan was scheduled to be published in late 2008. However, the publication has been delayed and it now remains unclear when the Action Plan will be issued. In any case, the issue is likely to come up again under the new college of Commissioners after the 2009 European elections.

Whereas the competence for urban transport lies in the hands of local, regional and national authorities, the Commission considers that the negative effects of congestion, air pollution, noise, increasing traffic and accidents have an 'impact on a continental scale'. Consequently, the Commission wants the EU to play a role e.g. in the animation of debates on the related issues, in the communication of best practices, in the coordination of policies, and in the development of databases and common standards. Some Member States however stay reluctant to the idea that the EU might infringe subsidiarity principles and it is thus due to political reasons that the Action Plan has not been issued so far. Several initiatives from the Parliament and even the Commission itself show that the question of further action on urban mobility will remain on the agenda in the upcoming years.

In order to counteract **congestion**, the Commission suggests to improve the attractiveness and safety of walking and cycling and to integrate those modes of transport into mobility policies. Furthermore, the Green Paper points out the importance of an active parking space policy which create incentives and links between the different modes of transport. Urban freight transport is seen as another important issue which should not be managed on its own but in coordination with passenger transport (freight tram).

Poor air quality and noise could be reduced through cleaner passenger vehicles, Green Public Procurement and – in some cases – local traffic restrictions and urban charges. According to the document, European added value in this field is mainly realised through common standards (emission thresholds, interoperability).

Against the background of spacious and environmental constraints, the efficiency of urban transport infrastructures should be improved through **Intelligent Transport Systems (ITS)**. Innovative technologies could help to guarantee better information and coordination of mobility. In late 2008, the Commission issued a specific **Action Plan for the Deployment of Intelligent Transport Systems in Europe [COM (2008) 886 final]** concerning road transport and an accordingly Directive on its implementation.

Accessibility is considered of high importance considering people with reduced mobility and their access to transport infrastructure and, in more general terms, considering the quality of access people have to the urban mobility system. Public transport should meet the citizens' needs 'in terms of quality, efficiency and availability', including Park&Ride, attractive travel times and passenger rights. Furthermore, the Commission proposes the promotion of 'less costly collective transport solutions, such as bus rapid transit'. According to the document, accessibility also includes the idea of an integrated approach to mobility covering all modes of transport and including both passengers and freight

transport and both the city and the wider metropolitan area. In order to realise that approach in practice, the Green Paper briefly mentions the concept of **Sustainable Urban Transport Plans (SUTP)** but then simply refers to the upcoming green paper.

Originally, the concept of SUTPs emerged in 2004 within the **Thematic Strategy and on the Urban Environment (TSUE)** in the framework of the Sixth Community Environment Action Plan. The Commission's DG Environment appointed an expert group including UITP-EuroTeam representatives which worked out guidelines for the establishment of SUTPs and published a final report in the end of 2004. The UITP-EuroTeam called for the compulsory introduction of SUTP for cities with more than 50,000 inhabitants. However, no legal initiative to establish any compulsory mechanisms followed and the Action Plan – whenever published – is not likely to include concrete proposals on SUTPs.

In order to increase **safety and security in urban transport**, the Commission calls for safer vehicles, safer infrastructures and an ITS-based shift towards safer behaviour.

Potential impacts on public transport:

The follow-up measures on the Green Paper on urban mobility will have a considerable impact on public transport and therefore have to be closely monitored.

Some areas raised in the – probably still coming – Action Plan will directly address public transport, others will have indirect consequences.

Public transport should be promoted as a sustainable mode of transport which can help to tackle local pollution and congestion effectively. Furthermore, innovative public transport infrastructure can help to develop attractive urban areas. Public transport operators, authorities and suppliers should improve accessibility and should actively manage and promote the use of complementary transport modes (e.g. Park&Ride, bike rental, car-sharing, etc.) that make the offer of public transport even more attractive. The adoption of a SUTP can help to strengthen the role of public transport.



The UITP EU Committee's position paper on the Green Paper (February 2008):

<http://www.uitp.org/mos/positionpapers/42-en.pdf>

References:

Green paper: towards a new culture of urban mobility, COM (2007) 551 final:

http://ec.europa.eu/transport/clean/green_paper_urban_transport/doc/2007_09_25_gp_urban_mobility_en.pdf

The Thematic Strategy on the Urban Environment, COM (2004) 60 final:

http://eur-lex.europa.eu/LexUriServ/site/en/com/2004/com2004_0060en01.pdf

The Final Report of the Expert Working Group on Sustainable Urban Transport Plans:

http://europa.eu.int/comm/environment/urban/pdf/final_report050128.pdf

Follow-up of the Thematic Strategy on the Urban Environment on Sustainable Urban Transport Plans, annex document with a presentation of best practices (published 25 September 2007):

http://ec.europa.eu/environment/urban/pdf/transport/2007_sutp_annex.pdf

Action Plan for the Deployment of Intelligent Transport Systems in Europe, COM (2008) 886 final:

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2008:0886:FIN:EN:PDF>

Initiative Report of the European Parliament on urban mobility (to be decided until April 2009):

<http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//NONSGML+COMPARI+PE-416.379+01+DOC+PDF+V0//FR&language=EN>

6. Green Procurement

6.1. The Directive on the procurement of clean road vehicles

Directive on the promotion of clean and energy efficient road transport vehicles, COM (2009) 33 final

The Directive on the promotion of clean vehicles aims at creating a market for vehicles consuming less fuel and emitting less emissions and thus make it more attractive to design eco-friendlier vehicles in general. At the same time, policy-makers want the public sector to take the lead, even if its part in overall emissions is not that important. The Directive foresees that procuring/purchasing entities will have to consider operational lifetime costs and emission levels of their future vehicles.

The first proposal of the Commission, dating back to 2005, was rejected by the European Parliament calling for more ambitious steps. The new proposal was made by the Commission in 2007 and was finally adopted by the Council in March 2009. EU Member States will have to transpose the provisions of the Directive within 18 months into national laws. From around the end of 2010, procuring/purchasing entities will have the obligation to

apply the provisions of the Directive which, however, can already be applied earlier on a voluntary basis.

The Directive has to be applied by entities procuring all kind of road vehicles according to the public procurement Directives 2004/18/EC and 2004/19/EC as well as operators performing public transport services with a public service obligation according to regulation 1370/2007. Public authorities/operators will have to take into account energy consumption, CO₂ emissions and local air pollutants (PM, NO_x etc.) over an operational lifetime when purchasing road transport vehicles (such as buses, trolley buses, police cars, waste collection vehicles etc., not tramways!). Further environmental impacts can be taken into account. The Directive has to be applied either when purchasing new or second-hand vehicles.

The Directive enables different options how to take into account the environmental impacts: either by including technical specifications already in tender documents or by using these impacts as award criteria. As a further option, environmental impacts can be monetised. In this case, the methodology proposed in the Directive has to be used.

Potential impacts on public transport:

Public transport operators and authorities will have to adapt their procurement/purchase of buses and other road transport vehicles according to the provisions of the new Directive. In case the environmental impacts are monetised, the proposed methodology and values

in the annex of the Directive have to be used. UITP recommends to calculate environmental impacts on the basis of real drive cycles, such as SORT. In this context public transport operators/authorities in cooperation with vehicle manufacturers should agree on calculation and measurement methodologies providing data that correspond to different types of buses (size and fuels) in real operation conditions rather than to test bench measurements of single engines. Such activities are currently ongoing under the umbrella of UITP.

Public transport operators and authorities should use the obligation to apply the new Directive in their external communication highlighting that an already very clean mode of transport (bus or trolley bus) will be even cleaner in future. At the same time, the coming into force of the Directive should be used to ask for the introduction of dedicated European, national and regional public funds or incentives in order to enable public transport operators/authorities to procure/purchase best available and future technologies (such as hybrid buses) as these technologies still have in most cases a considerable extra cost.

The European Investment Bank is introducing a new credit line called the 'Clean Bus Facility'. This product is supposed to be help especially public transport operators and authorities to purchase clean buses.



The UITP EU Committee's position paper on the proposed Directive on the procurement of clean road vehicles Directive (April 2008):

<http://www.uitp.org/mos/positionspapers/45-en.pdf>

Findings of the UITP seminar on the new Directive on the promotion of clean and energy efficient vehicles, 29 January 2009:

<http://www.uitp.org/MOS>

(restricted access for UITP members --> A-UITP Documents --> EUROTEAM --> Seminar 2009 Bruxelles)

UITP recommendations on SORT (Standardised On-Road Test Cycles), 2004

UITP recommendations for tendering of buses and related services (updated version available from UITP Congress in Vienna June 2009)

References:

Directive on the promotion of clean and energy efficient road transport vehicles, 2009/33/EC; final text of the Directive available via: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:120:0005:0012:EN:PDF>

Specific website of the European Commission on clean and energy efficient vehicles: http://ec.europa.eu/transport/urban/vehicles/clean_energy_efficient_vehicles_en.htm

Brochure on "UITP bus tender structure recommendations": <http://www.uitp.org/publications/index.cfm>

7. Land Use and Environmental Impact

7.1. Environmental Impact Assessment

Directive 1997/11/EC (amending 1985/337/EEC) on the assessment of the effects of certain public and private projects on the environment

Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment

Environmental assessment aims at taking into account the environmental implications of decisions before they are made. This includes an analysis of the likely effects and public consultations. Environmental assessment can be made for individual projects such as a new railway line (a so-called 'Environmental Impact Assessment') or for plans, programmes and policies. Both aspects are covered by the two Directives 1997/11/EC and 2001/42/EC. As the latter does not concern concrete projects but broader policy orientations, it is often referred to as the 'Strategic Environmental Assessment Directive'.

The Environmental Impact Assessment Directive introduces a difference between projects that have to be submitted to an assessment procedure in every case and those for which Member States or their competent authorities can decide whether projects have to be subject to assessment or not.

Projects that should be assessed include construction of lines for long-distance railway traffic, of motorways and express roads, of new roads of four or more lanes and the widening of existing roads to four or more lanes. Also included are projects such as the construction of inland waterways and ports for inland waterway traffic, allowing the passage of vessels of over 1,350 tonnes.

Member States can decide whether to submit to environmental assessment projects such as the manufacture and assembly of motor vehicles, of motor-vehicle engines and of railway equipment. Infrastructure projects are also listed: urban development projects, construction of railways, of inter-modal trans-shipment facilities, of inter-modal facilities, of roads and of tramways used for passenger transport (elevated or underground, suspended lines or similar lines).

Member States had to transpose Directive 1997/11/EC by March 1999. The Strategic Environmental Assessment Directive appeared later and was designed to include environmental impact assessment to broader policy orientations. It had to be transposed by July 2004. According to his Directive, Member States and

their competent authorities should conduct strategic environmental assessments on all plans and programmes, which set the framework for future development consent of projects. In the field of transport, the Directive targets plans and programmes for among other things, the construction of motorways, express roads, lines for long-distance railway traffic, inland waterways and ports for inland waterway traffic.

Plans and programmes for urban development projects and the construction of tramways and similar public transport systems are also submitted to strategic environmental assessments.

However, competent authorities can assess whether these plans and programmes imply significant environmental effects when applied at local level. Only if they determine that locally there are environmental effects, a strategic environmental assessment has to be conducted.

To carry out a strategic environmental assessment, the Directive sets out the required elements. These include *inter alia* environmental reports (identifying likely significant effects, and the geographical scope of the plan or programme), a public consultation as well as monitoring aimed at identifying unforeseen negative effects and taking remedial action.

Potential impacts on public transport:

Depending on the transposition of the Environmental Impact Assessment Directive, public transport operators and authorities have to carry out environmental assessments for urban and regional rail projects. According to the Strategic Environmental Assessment Directive, public transport operators and authorities responsible for drawing up transport-related plans have to conduct a strategic environmental impact assessment if they determine that these plans have environmental effects. This might vary from case to case.

References:

Directive 1997/11/EC amending Directive 1985/337/EEC on the assessment of the effects of certain public and private projects on the environment:

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31997L0011:EN:HTML>

Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment:

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2001:197:0030:0037:EN:PFE>

Annex

1. Public transport facts and figures

Importance for economy and employment

Within the EU, around 1.000,000 people are directly employed in urban public transport¹.

According to various studies from EU and US, every direct job in public transport is linked to 2-2,5 indirect jobs in other sectors of the economy².

Countries with high investments in public transport and railroads such as Switzerland count four indirect jobs on one direct job³.

Jobs in the public transport sector have a particular importance for local employment as they are - compared to other sectors – relatively stable also in crisis situations and can not be delocalized.

In most large and medium-sized cities, local public transport operator are amongst the most important employers as well as investors.

Studies in the EU⁴ and the US⁵ show that around 30 jobs are created for every EUR 1 million invested in public transport infrastructure and about 57 jobs for a similar investment in public transport operations.

The annual cost of road transport congestion is estimated to reach EUR 106 billion by 2010⁶.

Public transport users spend less on the journey to work than those who travel by car, thus enabling them to spend more

on goods and services that create wealth. Car users spend 12% of net annual income on the journey to work. Public transport users spend less than 1% for the same purpose⁷.

Businesses improve their competitiveness by locating in areas with good access to public transport. A survey among businesses in Germany⁸ shows that the access to the general transport network – after high-skilled potential staff – is considered as the most important location factor. A good connection to the local public transport system is seen as important as a connection to a highway system and more important than a connection to a nearby airport or the long distance rail network.

Good access to public transport enables businesses to save considerable congestion costs and to minimise on investment in car parking spaces, including the annual maintenance costs associated with them.

1 Estimations by UITP

2 Verkehrsclub Österreich: Wirtschaftsfaktor Öffentlicher Verkehr, 2004

3 Volkswirtschaftliche Bedeutung des öffentlichen Verkehrs in der Schweiz. VÖV/UTP 10/2004

4 TRANSECON. Urban Transport and local Socio-Economic development. Final Report. December 2003

5 Public Transportation and the Nation's Economy - A Quantitative Analysis of Public Transportation's Economic Impact. Prepared by Cambridge Systematics, Inc. with Economic Development Research Group. October 1999

6 Green paper: towards a new culture of urban mobility, COM (2007) 551 final

7 Wirtschaftsfaktor Öffentlicher Verkehr, VCÖ, Mobilität mit Zukunft, 03/2004

8 Land Nordrhein-Westfalen, VDV: public transport as location factor, study carried out by Prognos AG, Basel, 2000; updated 2005

Land value such as house prizes as well as office rents increase significantly if investments in new public transport lines are realised (up to +20 % for houses, up to +25 % for offices)⁹.

Importance for environment

Urban transport, especially private car transport, accounts for 40% of CO₂ emissions of road transport and up to 70% of other pollutants¹⁰. German research institutes suggest that 1,800 early deaths – most in urban areas – are caused each year through excessive noise.

In Germany, every journey made by train instead of by car reduces CO₂ emissions by two thirds; for a train journey instead of a flight, CO₂ emissions are much as 70% lower (per passenger).

Calculated on the basis of the average occupancy of vehicles, using a car emits 215.3 g CO₂ per km per passenger compared to 66.4 g for a city bus and 24.7 g for a metro. Thus, emissions per passenger per km are 3.24 to 8.71 lower when public transport is used (calculations based on the German energy mix for electricity production)¹¹. At peak times, public transport has an even bigger advantage over the private car – up to 27 times more – due to higher occupancy rate.

A UITP study in 50 cities worldwide has brought clear evidence that cities with a high density (population, jobs) and with a high share of public transport and other alternative modes are most energy efficient¹².

In traffic, public transport is up to 25 times more effective in terms of space consumption. A street lane has a maximum capacity of about 1,000 passengers per hour when used by private cars in European urban centres. The same lane, when used exclusively by public transport, can accommodate the same number of passengers with only one standard bus every 2 minutes – which means that the lane may appear to be always empty!

If the lane is grade separated (elevated or in tunnel) its capacity can reach about 2,500 passengers per hour when used by private cars, and up to 60,000 passengers per hour (over 20 times more) in some metro systems.

More than 60% in Los Angeles downtown is devoted to car use and car parking, compared with 22% in Paris and 11% in Mumbai. In Paris, 60% of the road space is used by parked cars, 35% by moving cars and only 5% by buses.

9 Study of University of Wuppertal, 2004

10 Green paper: towards a new culture of urban mobility, COM (2007) 551 final

11 Calculations of Verband Deutscher Verkehrsunternehmen (VDV)

12 UITP (2006) Mobility in Cities Database

2. Sustainable Development at UITP

The first discussions about the concept of sustainable development and the term itself was first coined in the Report of the Brundtland Commission, *Our Common Future* (http://en.wikipedia.org/wiki/Our_Common_Future), published in 1987. UITP launched its Sustainable Development Charter in 2003 after taking part in the World Summit on Sustainable Development in Johannesburg.

We are quite possibly at a pivotal point in our history. As human population increases and become more urban, consumption levels of the Earth's natural resources have reached unprecedented levels. 2007 saw us reach the tipping point when more people now live in cities than in rural areas¹.

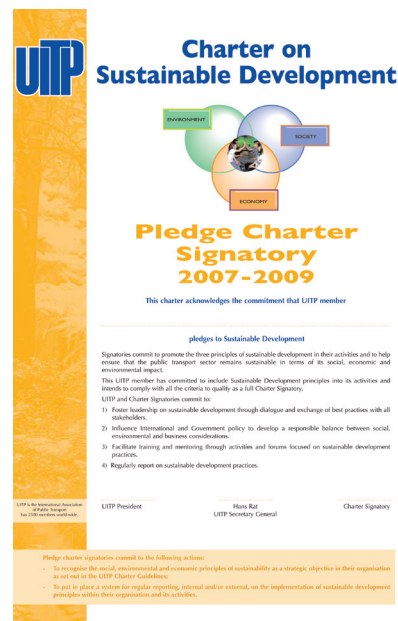
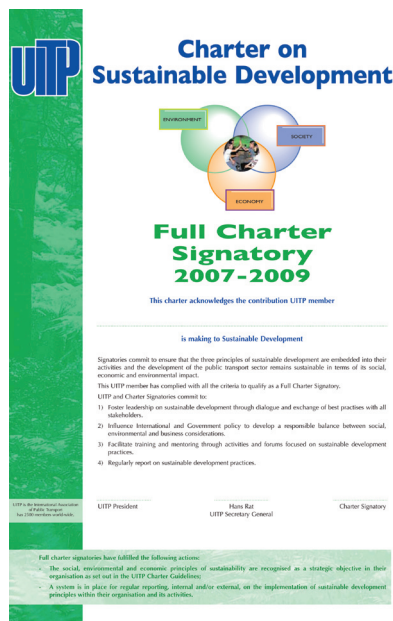
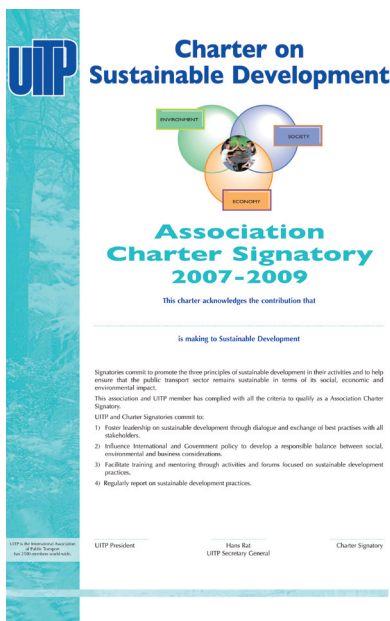
On the one hand, personal mobility is a key issue for today's society and it is perfectly clear that our present mobility patterns are unsustainable

and therefore it is necessary for us to change. Behaviour must generally shift from individual to more collective forms of transport, creating a huge opportunity for public transport.

On the other hand, public transport itself, in all its forms, must also improve its own performance and become more attractive, environmentally efficient and socially acceptable in order to be able to more fully serve the growing mobility needs of people, from all levels of society and in all corners of the world.

UITP's charter signatories bring current state-of-the-art organisational and operational expertise to this debate, and UITP is able to use this to bring public transport to the attention of other international organisations. For example concrete actions and transport expertise has been put behind the 'Memorandums of Understanding' signed with the United Nations Environment Programme and UNHABITAT. The database to best practice can be downloaded from UITP's website www.uitp.org.

¹ UNHABITAT



The UITP Sustainable Development Charter

An international commitment

The charter is a voluntary, measurable commitment to monitor and report on an organisation's performance in economic, social and environmental terms. There are three main types of signatory: Full, Pledge and Association. Signatories must demonstrate their commitment to sustainable development, have policies and measures in place and also show that they are reporting on the three pillars of sustainability; pledge signatories commit to putting this in place within a reasonable time frame and association signatories work with UITP via events and workshops to increase the awareness in their regions on this topic.

From an initial group of 33 pioneer signatory to the charter, there are now around 150 signatories to the charter, from all types of organisations active in providing public transport services² from all over the world. This charter can only be signed by UITP members who are willing to engage actively in the programme.

UITP Charter on Sustainable Development

By signing the UITP Charter on Sustainable Development organizations commit to:

1. Foster leadership on sustainable development through dialogue and exchange of best practice with stakeholders.
2. Influence international and government policy to support public transport and develop a responsible balance between social, environmental and business considerations.
3. Facilitate training and mentoring through activities focused on sustainable development practices.
4. Report regularly on sustainable development practices.

An updated list of full, pledge and association signatories is available on the UITP web site www.uitp.org.

² Public transport is the public offer of transport services offered by either publicly organised enterprises or privately run businesses in the area surrounding an urban area. In the case of UITP it does not include air travel, intercity rail or coach services nor taxis. It does include all modes of transport (rail, bus, ferry) as well as car sharing

Definition of Sustainable Development

After four years of work with many different organisations the following definitions has been accepted by charter signatories:

Making decisions that take into account the impact of them in terms of

- Social Justice
- Environmental Protection
- Economic Sense

Sustainable development is how you plan for the future while operating in the now.

Reports and further information

Several reports are available via the web site and in the UITP members only section. For example: *Making tomorrow today – mapping the progress in sustainable development of the public transport sector* is the progress report (2005) on the commitment of the sector and the organisations that have signed the charter. It contains around 100 examples and best practises, and an updated (2009) database of examples is also available. It complements the report published in 2005

entitled 'Bringing Quality to Life'³ which focussed on the processes and management of sustainable development and the first report 'Ticket to the Future; three stops to sustainable mobility (2003). All three reports can be downloaded from the UITP web site www.uitp.org. The edition of Public Transport International July 2008 was dedicated to Sustainable Development see <http://www.uitp.org/publications/back-issues.cfm> for back issues.

The information is complemented with position papers, fact sheets and state-of-the-art thinking on certain topics such as climate change, energy and social inclusion with examples of best practices from charter signatories.

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³ Ticket to the Future – three stops to sustainable mobility was the first report and set out the pathway towards sustainable consumption and production of public transport.

3. UITP Fuels and Traction Systems Observatory

To tackle global warming and growing energy consumption, bus transport operators are increasingly moving towards environmentally friendly vehicles and lower transport emissions through the implementation of new technologies on their networks and by testing and operating alternative solutions.

In this context, the Fuels and Traction Systems Observatory was set up in 2006 by a team of bus operators under the umbrella of the UITP Bus Committee to record the experiences of bus operators with alternative fuels, follow-up fuels and technological developments and serve as a structure for knowledge exchange. An internet platform has now been created to make public the experiences gathered and to offer a wide range of information in the field of clean fuels and EU related legislations.

The Observatory is a 'living' platform and should be considered as a complement to UITP's official Focus Paper on the choice of alternative fuels (<http://www.uitp.org/advocacy/positions.cfm>)

Contents available in the Observatory will be regularly updated through contributions from members. Any inputs to enrich the platform will be most welcomed.

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