

## **Manual of European Environmental Policy**

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# CO<sub>2</sub> from passenger cars

<b>Formal reference</b>	
Regulation (EC) No <a href="#">443/2009</a> (OJ L140 5.6.2009)	Regulation setting emission performance standards for new passenger cars as part of the Community's integrated approach to reduce CO <sub>2</sub> emissions from light-duty vehicles
Proposed 19.12.07 – <a href="#">COM(2007)856</a>	
Commission Regulation (EU) No <a href="#">63/2011</a> (OJ L 23 27.1.2011)	Regulation setting out details for those applying for derogation from the specific CO <sub>2</sub> targets pursuant to Art. 11 of Regulation (EC) No 443/2009.
Commission Implementing Regulation (EU) No <a href="#">725/2011</a> (OJ L194 26.7.2011)	Regulation establishing a procedure for the approval and certification of innovative technologies for reducing CO <sub>2</sub> emissions from passenger cars pursuant to Regulation (EC) No 443/2009.
<a href="#">1999/94/EC</a> (OJ L12 18.1.2000)	Directive relating to the availability of consumer information on fuel economy and CO <sub>2</sub> emissions in respect of the marketing of new passenger cars
Proposed 3.10.98 – COM(98)489	
<a href="#">2003/73/EC</a> (L186 25.7.2003)	Commission Directive amending Annex III of Directive 1999/94/EC
<a href="#">1753/2000/EC</a> (L202 10.8.2000)	Decision establishing a scheme to monitor the average specific emissions of CO <sub>2</sub> from new passenger cars
<b>Legal base</b>	Article 192 TFEU (originally Article 175(1) TEC)
<b>Binding dates</b>	
Directive <a href="#">1999/94/EC</a>	
Formal compliance	18 January 2001
Member State report on effectiveness of Directive	31 December 2003
Decision 1753/2000/EC	
Report to Commission on implementation of provisions and designation of competent authority	22 December 2000
Commission report to Parliament and Council on operation of scheme	31 December 2002

## Purpose of the legislation

The 1999 Directive, 2000 Decision and 2009 Regulation all follow from the 1995 Community strategy to reduce CO<sub>2</sub> (carbon dioxide) emissions from new cars. Directive 1999/94/EC aims to provide buyers with information on the fuel economy and CO<sub>2</sub> emissions of new cars at the point of sale. The intention is to guide buyers' choices towards more fuel-efficient models and thereby encourage manufacturers to adapt to this demand. Decision 1753/2000/EC establishes a scheme to monitor CO<sub>2</sub> emissions from new passenger cars in order to verify that manufacturers are meeting their commitments. The other elements of the

strategy are described below. Regulation (EC) No 443/2009 establishes average CO<sub>2</sub> emission limits for new cars in the light of the failure of an approach based on voluntary agreements.

## Summary of the legislation

### Directive 1999/94/EC

The Directive provides four components to inform customers of the fuel economy and CO<sub>2</sub> emissions of new cars. These are as follows:

- The label itself. The label is to be attached to, or displayed near, the car in a clearly visible manner at the point of sale. It is to include the official fuel consumption (in litres per 100 kilometres) and the official specific emissions of CO<sub>2</sub> (in grams per kilometre) for that particular model. These are to be measured in accordance with the harmonized methods and standards set out in Directive [80/1268/EEC](#) and its amendments (see section on emissions from vehicles). The label should also include a reference to the fact that a free fuel economy guide is available (see below), state the fact that CO<sub>2</sub> is the main gas responsible for global warming and inform the consumer that driving behaviour and other non-technical factors also influence fuel economy and CO<sub>2</sub> emissions.
- A fuel economy guide. The guide is to be produced in cooperation with manufacturers on at least an annual basis and should be available to consumers free of charge, both at the point of sale and from the designated competent authority. The guide should contain a list of the official fuel consumption and the official specific emissions of CO<sub>2</sub> for all new passenger car models available for purchase in the Member State. The guide also has to include a prominent list of the top ten most fuel-efficient models for each fuel type, ranked in order of increasing specific emissions of CO<sub>2</sub>. The guide must also contain advice to motorists on how such things as driving behaviour and regular maintenance improve fuel consumption and reduce CO<sub>2</sub> emissions as well as an explanation of the effects of climate change and the role played by passenger cars.
- Showroom information posters. The poster, or similar display, should be exhibited in the showroom indicating the official fuel consumption and the official specific emissions of CO<sub>2</sub> of all new passenger car models available for purchase or lease at or through that point of sale. On the poster models are to be grouped and listed separately according to fuel type, with the model with the lowest official specific emissions of CO<sub>2</sub> being placed at the top of the list. The poster must be easy to read and advise consumers that driving behaviour and other non-technical factors also influence fuel economy and CO<sub>2</sub> emissions and state the fact that CO<sub>2</sub> is the main gas responsible for global warming.
- Promotional literature. Members States must ensure that all promotional literature contains the relevant official fuel consumption and the official specific emissions of CO<sub>2</sub>. Again this should be easy to read and understand and be no less prominent than the main part of the information in the literature.

The inclusion of marks, symbols or inscriptions relating to fuel consumption and CO<sub>2</sub> emissions on any of the above material, other than those set out in the Directive, is prohibited.

Member States must report to the Commission by the end of 2003 on the effectiveness of the provisions of the Directive in the first two years of its operation (up to the end of 2002), in accordance with the format set out in Decision [2001/677/EC](#). In the light of these reports and other developments, the Commission will lay down further specifications for the label and the guide and establish recommendations for extending the provisions relating to promotional literature to other media. It is up to Member States to determine the penalties to be applied for a breach of the national requirements but the Directive states that these should be effective, proportional and dissuasive.

Directive 2003/73/EC amends Annex III to this Directive to allow for the use of modern communications tools (notably electronic displays) to display the required information appropriately.

### **Decision 1753/2000/EC**

The Decision requires Member States to collect data on new passenger cars registered for the first time in their territory and then to communicate these data to the Commission. For each car, Member States have to collect information relating to specific emissions of CO<sub>2</sub>, fuel type, manufacturer, mass, maximum net power and engine capacity. Each Member State is responsible for the quality of the data and is to take steps to minimize errors and to improve its quality. Various aggregated data sets then have to be compiled, and transmitted to the Commission by 1 July 2001. In subsequent years, data must be submitted by 1 April for the previous calendar year.

The Commission has to report to the Parliament and the Council by the end of 2002 on the operation of the monitoring scheme. From 2003, the data collected under the scheme is to be used as a basis for monitoring the commitments made by car manufacturers to reduce CO<sub>2</sub> emissions from new cars and for their revision, if necessary. Each year, the Commission is to submit a progress report to the Parliament and the Council.

### **Regulation (EC) No 443/2009**

The Regulation sets an average CO<sub>2</sub> emission limit for new cars of 130 g/km. This target will be gradually phased in; it will apply to 65 per cent of the new fleet in 2012 and increase annually to cover 100 per cent of the fleet by 2015. Additional measures will also be implemented to contribute a further reduction of 10 g/km. The Regulation includes a longer-term target of average emissions of 95 g/km by 2020, although details on this target will only be discussed during the review of the legislation in 2013. The Regulation includes a set formula for calculating the fines to be levied on manufacturers who exceed their targets between 2012 and 2018; from 2019, the formula for calculating the premium shall be as follows: (excess emissions × €95 per g/km) × number of new passenger cars.

On 26 January 2011 the Commission adopted [Regulation \(EU\) No 63/2011](#) which sets out the detailed provisions for those applying for a derogation from Regulation (EC) No 443/2009, Article 11.

## Development of the legislation

Directive 1999/94/EC and Decision 1753/2000/EC are two of four strands of The Community Strategy on Passenger Car CO<sub>2</sub> Emissions ([COM\(95\)689](#)), which was published after protracted delays in December 1995. The Communication was originally a requirement of Directive [91/441/EC](#) (see section on emissions from vehicles) and was envisaged to form part of the [SAVE Programme](#) (see section on Intelligent Energy-Europe). It restated the importance of better fuel economy for cars as an element of climate policy, and reiterated that a 25 per cent improvement in new car fuel efficiency could be achieved by the year 2005. The four strands of the strategy were:

- Voluntary agreements with car manufacturers.
- A fuel economy labelling scheme.
- The development of a CO<sub>2</sub> monitoring mechanism for new cars.
- The incorporation of CO<sub>2</sub> emissions as an objective of future transport tax reforms.

The Council endorsed the Commission's programme in June 1996 and made it clear that the car industry would be expected to meet a substantial proportion of this target, preferably through a voluntary agreement with the Commission.

### Voluntary agreements with car manufacturers

The most important element of the strategy was the negotiation of voluntary agreements with manufacturers. In endorsing the Commission's programme, the Council agreed with the proposed target of 120 g/km as an average of CO<sub>2</sub> emissions from new cars, to be achieved by the year 2005 or at the latest 2010. In response ACEA (the European manufacturers' association) offered an average equivalent of 167 g/km by the same date, which only represented a 9 per cent improvement between 1993 and 2005 as opposed to the 25 per cent cut wanted by the Commission.

Initially negotiations were difficult with ACEA repeatedly saying that the target of 120 g/km by 2005 was unrealistic. In 1997, frustrated at the lack of progress in the talks, the European Parliament called for mandatory emission limits for CO<sub>2</sub> and Austria was also pressing for mandatory targets if a satisfactory agreement was not reached. Towards the end of 1997, then Environment Commissioner Ritt Bjerregaard warned ACEA that the setting of mandatory targets would not be in their interest – a clear threat that such targets might have to be considered if progress was not made.

In early 1998, ACEA finally gave in to pressure from the Commission and Member States and dramatically improved its offer to 140 g/km by 2008. This went significantly further towards meeting the Commission's desired target. ACEA also undertook that new models which were individually capable of meeting a 120 g/km limit would be on the market by 2000, and that a review in 2002 or 2003 would consider the potential for further reductions by 2012. However, ACEA attached conditions to the offer: that no negative measures are taken against diesel cars; and that clean fuels (especially those with a low sulphur content) should be fully available by 2005. By the time that the offer was confirmed in writing the condition with respect to diesel cars had been dropped, but the offer was conditional upon fuel quality and particularly fuel sulphur content. At the time this was something which the Commission could not commit to, given that the relevant [Auto Oil](#) negotiations were still

ongoing (see section on emissions from vehicles). However, within a matter of months, these negotiations were concluded and the Commission and ACEA reached an agreement on reducing CO<sub>2</sub> emissions in July 1998.

The agreement was to meet a CO<sub>2</sub> target of 140 g/km, as measured according to Directive 93/116/EEC (which amended Directive [80/1268/EEC](#)), for the average of new cars sold in the EU by 2008. In 2003, ACEA would review the potential for further reductions towards the original target of 120 g/km by 2012 (two years after the deadline set by the Council and seven years after the original deadline). An indicative target of 165–170 g/km was also set for 2003, and ‘some’ ACEA members will make available cars emitting no more than 120 g/km by the year 2000. As part of the agreement, ACEA wanted similar agreements reached with non-ACEA manufacturers, that is those from Japan and South Korea.

The European Parliament criticized the agreement, particularly as it lacked any reference to action that would be taken if manufacturers should fail to meet the agreed target. However it said, it would accept the deal if some of its concerns were addressed in subsequent negotiations. The Council of Ministers also approved the agreement, but called on the Commission to immediately come forward with legislation if it looked as if ACEA was not honouring the agreement. Denmark wanted the Commission to develop legislation at once, so that it would already be in place if ACEA failed to meet the target, but this was rejected as a sign of bad faith. The agreement was finally approved through a formal, signed commitment by the board of ACEA and Commission Recommendation [1999/125/EC](#).

In response to the agreement with ACEA, the Commission began negotiations with JAMA and KAMA, respectively the Japanese and Korean car manufacturers' associations. These too proved contentious, but agreements were eventually reached in the course of 1999, which were judged to be comparable to that reached with ACEA. Both JAMA and KAMA agreed to adopt the same CO<sub>2</sub> target of 140 g/km, although both were given an extra year – to 2009 – to do so. This was because both countries had higher starting points from which to reduce emissions (193–202 g/km in the case of JAMA and 194–197 g/km in the case of KAMA), and the fact that Korean manufacturers were technologically behind those of ACEA and JAMA. Further, as a result of the different starting points, both have agreed to different intermediate targets than those of ACEA. The Japanese target is 165–175 g/km by 2003 (instead of 165–170 g/km by 2003 for ACEA), while KAMA agreed a target of 165–170 g/km by 2004. Like ACEA, JAMA has an objective of making available cars emitting no more than 120 g/km by the year 2000, while KAMA is to do this ‘as soon as possible’.

On 24 August 2006 the Commission published its latest monitoring report on the progress made by car manufacturers towards meeting their commitments under the Community Strategy to Reduce CO<sub>2</sub> Emissions from Cars ([COM\(95\)689](#)). The Communication, which covered only data up to 2004, noted that although progress was being made by all manufacturers, there was a need for them to do more if they were to meet their agreed targets. Average CO<sub>2</sub> emissions from new vehicles in the EU-15 were 163 g CO<sub>2</sub>/km compared to 186 g CO<sub>2</sub>/km in 1995. In the wake of the report, Commission Vice-President and Commissioner for Enterprise and Industry Günter Verheugen and Environment Commissioner Stavros Dimas were united in calling on the industry to increase its efforts and underlined that the Commission would ‘consider taking measures, including possible legislation to ensure that CO<sub>2</sub> reductions were achieved’.



At last, after a period of intense political lobbying and infighting within the Commission itself, President Barroso intervened, marking an end to the current approach through voluntary agreements. In February 2007 the Commission adopted a Communication ([COM\(2007\)19](#)) which indicated next steps for a mandatory measure to require car makers to reduce average CO<sub>2</sub> emissions to 130 g/km for new cars by 2012 (see below).

## **Fuel economy-labelling scheme**

The proposal for a labelling scheme for fuel economy and CO<sub>2</sub> emissions, (COM(98)489, 3.10.1998) was published by the Commission in Autumn 1998. The proposal was a relatively uncontroversial part of the strategy to reduce emissions from new cars that the Council endorsed in 1996. At their first debate on the proposal in October 1998, some Ministers said that they would like to see the labelling scheme extended to hire cars and used cars. To reflect this view, in their common position of December 1998, Ministers agreed that they should agree on minimum requirements for labelling, so that individual Member States could go further if they so wished. Ministers also agreed that the Commission should produce a Community-wide guide that would be placed on the internet by the end of 1999.

The original proposal put forward by the Commission had included an Article calling for average fuel costs to be freely available for both petrol and diesel as well as including information on fuel consumption and CO<sub>2</sub> emissions on the label. In its first reading in December 1998, the European Parliament expressed a concern that making fuel cost information freely available might encourage the use of diesel, which, although it is more fuel-efficient, emits high amounts of particulates, which are of increasing concern with respect to human health. It therefore recommended that the label show only the amount of fuel consumed, as opposed to its cost. As there was a general agreement over the proposal, it was expected to pass quickly through the EU legislative process. However, the Parliament's Environment Committee did not consider the proposal in March 1999, and therefore further debate was delayed until after the elections for the Parliament that took place in June. When the proposal eventually had its second reading in Parliament MEPs approved the Council's common position without amendment as they wished to see the scheme come into force as soon as possible. To some this was a surprise as the delay in giving the proposal its second reading had meant that it was covered by the co-decision procedure from 1 May 1999, when the Amsterdam Treaty came into force. This increased the potential influence of Parliament over the proposal.

## **Mechanism to monitor CO<sub>2</sub> emissions from cars**

Directive 93/116/EC requiring the calculation and publication of CO<sub>2</sub> emissions was introduced as a result of the need to measure such emissions, in light of the then target of stabilizing these and other greenhouse gas emissions at 1990 levels by 2000. The Directive, which amends Directive [80/1268/EC](#) that addressed fuel consumption for reasons of type approval, also paved the way for further measures aimed at ensuring that CO<sub>2</sub> emissions from cars are reduced.

The Commission published its proposal for a monitoring scheme for passenger car CO<sub>2</sub> emissions ([COM\(98\)348](#)) in July 1998. The proposal was probably the least contentious of the four strands of the Commission's strategy to reduce CO<sub>2</sub> emissions from new passenger cars. The principal attempts to amend the substantive parts of the proposal by the European

Parliament were in relation to the range of vehicles covered by the Decision and the lack of a legal framework for the voluntary agreements with the car manufacturers.

In its first reading in December 1998, Parliament voted to include light commercial vehicles in the scope of the monitoring scheme on the recommendation of its Environment Committee. Neither the Council, in its common position, nor the Commission, in its amended proposal, accepted this amendment, not least because the necessary CO<sub>2</sub> measurements are mandatory only for cars. The Commission responded that it was going to study the possibility of extending the scheme to other motor vehicles.

For its second reading a year later, Parliament's Environment Committee proposed an amendment calling for the proposal to cover all motor vehicles, but this was rejected by the full Parliament, which opted to extend the scheme to light commercial vehicles for a second time. Parliament also adopted an amendment that called on the Commission to put forward a legal framework for the voluntary agreements entered into with the car manufacturers as soon as possible. The Commission again rejected the amendment relating to light commercial vehicles, as these were not covered by the voluntary agreements. It also rejected the amendment to put forward a legal framework as it was concerned that this could be interpreted as a sign that it did not trust the manufacturers – a perspective supported by the Council.

Even though the differences between the two institutions were relatively minor, a conciliation procedure was set up to decide the final wording of the text of the Decision. The legal framework issue was dealt with in a reference to the data collated by the Commission, which said that this would be used to monitor manufacturers' commitments and to revise them if necessary. The Commission had already said that it would look at the possibility of extending the schemes to other motor vehicles. The joint text of the Decision was agreed in March 2000 and was subsequently approved by the full Council and Parliament.

In the discussions that took place within the framework of the European Climate Change Programme in 2000/1, extending the voluntary agreement that applied to CO<sub>2</sub> emission from passenger cars to light commercial vehicles was a principal focus of attention in the working group on transport. In October 2001, the Commission published a proposal ([COM\(2001\)543](#)) to extend the scope of Directive 80/1268/EC to require the measurement of the fuel consumption and CO<sub>2</sub> emissions of light commercial vehicles as a precursor to the introduction of measures to reduce these emissions. In the event, the proposal was relatively uncontroversial. The only major amendment from both the Parliament and the Council was a technical one to aid the assessment of emissions in the course of the type approval process. Hence, Parliament approved the Council's common position at its second reading without amendment and the Directive entered into force on 10 February 2004.

## **The inclusion of CO<sub>2</sub> emissions as an objective of future transport tax reforms**

This is the strand of the 1995 strategy on which less progress has been made to date. In 2000, the Commission set up a Joint Expert Group (JEG) to look into the future use of fiscal instruments to reduce CO<sub>2</sub> emissions from new cars, which became closely associated with the transport Working Group of the European Climate Change Programme ([ECCP](#)). The Commission also funded a study looking at the use of fiscal instruments to encourage CO<sub>2</sub> savings in the Member States<sup>1</sup>, which contributed to a Communication published in



September 2002. A proposal to reform the taxation of passenger cars was eventually published in 2005.

In July 2005, the European Commission proposed legislation on the use of fiscal instruments to reduce CO<sub>2</sub> emissions from passenger cars ([COM\(2005\)261](#)). It proposed that Member States differentiate registration taxes (RT) and annual circulation taxes (ACT) according to a car's CO<sub>2</sub> emissions. Additionally, it proposed that countries abolish RT by the end of 2015, and in the interim proposed a rebate system for both RT and ACT on cars that are registered in one Member State and then permanently moved to another, thereby incurring double taxation. Given past problems with introducing [taxation legislation relating to the environment](#) (see section on energy taxation), it was unlikely that the proposal would become law in anything like its original form.

## **Mandatory emission limits**

By February 2007 it was clear that the voluntary agreements were not on target, and the Commission signalled a change of track with a Communication ([COM\(2007\)19](#)) indicating the next steps for a mandatory measure to require carmakers to reduce average CO<sub>2</sub> emissions to 130 g/km for new cars by 2012. Although the target for cars is set at 130 g/km, the Communication insisted that the original 120 g/km target would still be met by taking into account other measures including the introduction of biofuels (which will probably contribute the equivalent of about 5 g/km) and a group of other technical measures that have recently been announced and would fall largely outside the current test cycle, as follows:

- Minimum efficiency requirements for air conditioning.
- Compulsory tyre pressure monitoring devices.
- Maximum tyre rolling resistance standards.
- Gear shift indicators.
- Requiring CO<sub>2</sub> reductions in vans as well as cars.

## **Regulation (EC) No 443/2009**

The proposal for an actual legislative instrument to compel carmakers to cut their emissions was published in December 2007. The original focus was for a target of 120g CO<sub>2</sub>/km of average specific CO<sub>2</sub> emissions from new passenger car registrations by 2012. This was weakened through negotiations with the inclusion of 'the integrated approach'<sup>6</sup>. This gained traction especially through the Competitive Automotive Regulatory System for the 21<sup>st</sup> Century High Level Group (CARS 21) set up to support the competitiveness of the industry. The integrated approach focuses on the use of technology based efforts to reduce CO<sub>2</sub> emissions combined with other measures. This influenced the Commission which proposed an average target for each car manufacturer group or holding company, differentiated according to a function of the average weight of the new cars that it sells. This was intended to give some leeway to the makers of larger and more luxurious cars, particularly the German manufacturers. Another key feature of the proposal was that the Commission proposed to levy fines on manufacturers who exceed their targets. These would rise steeply from €20/g/km exceedance for every car sold in 2012, to €95 in 2015. An ambitious timetable was agreed by the Community institutions to 'fast track' the proposal through the legislative machinery.

Additionally the proposal allowed several elements of flexibility, e.g. pooling targets between several manufacturers were authorised. Once discussed, the manufacturers and Member States felt that the proposal was too strong, and the 2012 target was too near for the industry to meet it. The lobbying focused on having the actual compliance phase delayed and the reduction of the amount of the potential fines for non-compliance. The target of 120g CO<sub>2</sub>/km was also intensely disputed. The negotiation of the Regulation soon became a major political issue. The French Presidency made it one of its priorities, as it was considered as a strong demonstration of EU commitment to addressing climate change. During the Council reading, France and Germany dominated the debates while the UK and the Netherlands were against significant weakening of the Regulation. Also, the European Parliament had a strong internal division between the Environment Committee and the Industry Committee. The Parliament ultimately adopted a strongly compromised Regulation on 17 December 2008.

## Implementation of the legislation

The Commission has published annual monitoring reports on CO<sub>2</sub> emissions from passenger cars since 1999. The January 2009 report ([COM\(2009\)9](#)) detailed the data for the years 2005–2007). The report concluded that the average emissions from new cars registered in the EU in 2007 amounted to 158 g CO<sub>2</sub>/km (a reduction of 1.23 per cent from 2004 to 2005, of 0.6 per cent from 2005 to 2006 and of 1.25 per cent from 2006 to 2007; and 15.1 per cent below the 1995 starting point of 186 g CO<sub>2</sub>/km). The January 2010 report ([COM\(2009\)713](#)) noted that the average specific CO<sub>2</sub> emissions in the year 2008 were 153.5 g CO<sub>2</sub>/km. This was a decrease by 3.3 per cent or 5.2 g/km from the previous year (158.7 g CO<sub>2</sub>/km in 2007) – the largest relative drop in specific emissions since the beginning of the monitoring scheme. Some of this reduction was probably due to the onset of the economic crisis, although the data indicated that there had not been any substantial downsizing of the car fleet. Both petrol and diesel vehicles improved by more than 5 g/km in comparison to 2007. Since the year 2000, petrol vehicles improved by 11 per cent while diesel vehicles only by 6 per cent. However, alternative fuel vehicles (AFV) improved by 34 per cent since 2000.

On 10 November 2010 the Commission published a Communication ([COM\(2010\)656](#)) providing a review of the progress made towards the different elements of the 2007 strategy (COM(2007)19). This aimed at reaching the Community objective of 120 gCO<sub>2</sub>/km by 2012 via the legislative framework. The Commission concluded that the 2012 goal of the Strategy “is unlikely to be achieved”. The Commission, however, considered that the targets for 2012-2015 specified in Regulation (EC) No 443/2009 will be achieved.

On the 25 July 2011 the Commission adopted [Implementing Regulation \(EU\) No 725/2011](#) establishing a procedure for the approval and certification of innovative technologies for reducing CO<sub>2</sub> emissions from passenger cars pursuant to Regulation (EC) No 443/2009.

## Enforcement and court cases

Four cases concerning Directive 1999/94/EC have been concluded by the European Court of Justice:

- [C-198/06](#) 14.12.2006. This was a judgement against Luxembourg for failure to respect its obligation to report under Article 9 of Directive 1999/94/EC.

- [C-74/02](#) 25.09.2003. This was a judgement against Germany for failure to adopt within the prescribed period the laws, regulations and administrative provisions necessary to implement Directive 1999/94/EC.
- [C-22/02](#) 11.09.2003. This was a judgement against Italy for failure to adopt within the prescribed period the laws, regulations and administrative provisions necessary to implement Directive 1999/94/EC.
- [C-161/02](#) 19.06.2003. This was a judgement against France for failure to communicate to the Commission the implementing measures to transpose Directive 1999/94/EC.

## Further Developments

In October 2009 the Commission published a proposal for a Regulation on emission performance standards for new light commercial vehicles and minibuses as part of the Community's integrated approach to reduce CO<sub>2</sub> emissions from light-duty vehicles ([COM\(2009\)593](#)). The proposal aims to reduce the CO<sub>2</sub> emissions of new vans and minibuses that are introduced on the EU market. It extends the measures included in the CO<sub>2</sub> emissions from cars Regulation (EC) No 443/2009 to a wider range of vehicles so that all light duty vehicles are covered by the emissions requirements.

On 28 of April 2010, against the background of the TERM report from the European Environment Agency (EEA) reporting steadily rising greenhouse gas emissions from transport<sup>2</sup>, the Commission adopted a Communication 'A European strategy on clean and energy efficient vehicles' ([COM\(2010\)186](#)). In March, the draft findings from a Commission sponsored study had outlined, once again, the challenges in securing emission reductions from the transport sector<sup>3</sup>. The Strategy came out of DG Enterprise and Industry at a time when DG Mobility and Transport was also preparing a transport White Paper for 2010-2020 (expected November 2010), and DG Environment was developing a Green Paper on cutting transport emissions by 2050. The strategy should therefore be understood as one part of a wider suite of policy initiatives relating to the reduction of the environmental impact of the transport sector in general, and its greenhouse gas emissions in particular.

The Strategy builds on the 2007 Strategy set out in 'Results of the review of the Community Strategy to reduce CO<sub>2</sub> emissions from passenger cars and light-commercial vehicles' ([COM\(2007\)19](#)), and is intended to complement ongoing and planned activities to decarbonise the transport sector and reduce its environmental impacts. It also builds on the European Green Cars Initiative launched as part of the European Economic Recovery Plan in November 2008. The Communication positioned the Strategy as a vital part of the 2010 Europe 2020 flagship initiative 'Resource-Efficient Europe' which sought, among other things, to 'modernise and decarbonise the transport sector, thereby contributing to increased competitiveness'.

The Strategy makes the observation that as the global car fleet is predicted to grow from 800 million to 1.6 billion vehicles by 2030, and 'in view of the goal of decarbonising transport', a step change is needed in technology. The Commission also concluded that the only way the European automotive industry can remain competitive is by leading in green technologies. Therefore, a 'new industrial approach' was required. The scope of the Strategy is limited to road transport, road vehicles and the mid-term perspective, but is nevertheless intended to support the goal of reducing carbon emissions by 80-95 per cent by 2050. Heavy-duty vehicles (buses and trucks) (vehicles of categories M2, M3 and N2, N3 as defined in

Directive 2007/46/EC), light-duty vehicles (cars and vans) (vehicles of categories M1 and N1 as defined in Directive 2007/46/EC), as well as two-wheelers, three-wheelers and quadricycles (vehicles of category L as defined in Directive 2002/24/EC) are addressed.

In the Commission's view, a 'two-track' approach should be pursued which on the one hand will promote clean and energy efficient vehicles based on a conventional internal combustion engine and on the other, facilitate the deployment of 'breakthrough technologies in ultra-low carbon vehicles'. Three broad technology types are considered: firstly, conventional or modified combustion engines running on alternative fuels substituting petrol or diesel partly or fully; secondly, electric vehicles using batteries or other storage systems to store electricity onboard the vehicle; and finally, hydrogen fuel cell vehicles, also with an electric motor, but using an onboard fuel cell to generate electricity from hydrogen fuel.

The Strategy contains an eight point Action Plan with 46 actions, although a number of these actions already form part of the existing regulatory framework. Some actions are timetabled, others not. Key elements of the Strategy include:

- **Continuing measures for reducing the emissions from vehicles (regulatory framework).** The Communication set out ten actions under this heading. These included *inter alia* developing a new strategy targeting fuel consumption and CO<sub>2</sub> emissions from heavy duty vehicles. Furthermore, the Commission set itself a triple objective of ensuring the implementation of the Community's sustainability criteria for biofuels, promoting the development of advanced low carbon fuels and sustainable biofuels, as well as promoting an engine technology capable of using these fuels. The Commission asserted elsewhere in the Communication that to achieve the expected reduction in environmental impacts, alternative fuels must be produced in a sustainable manner.
- **Supporting research and innovation in green technologies.** This entails a long term research strategy planned for 2011 in the context of the Strategic Transport Technology Plan and the Communication on Clean Transport Systems. While the car industry had seen €5 billion earmarked for it under the Green Car Initiative, the Strategy suggests that the industry could look forward to additional funds. The Commission proposed to explore, for instance, with the European Investment Bank (see section on [the EU institutions](#)), the continuation of support to research and innovation projects to promote clean and energy efficiency automotive products to support the transformation of the industry.
- **Market uptake and consumer information.** Seven actions were proposed under this heading, including three which refer to the financial incentive structures relating to cars and fuels.
- **Global issues.** Three actions were set out under this heading. The Communication observed that the large-scale production of electric and hydrogen fuel cell vehicles will require the use of raw materials different to those of conventional vehicles and that some of these are in short supply and concentrated in very few geographical areas. The Commission therefore proposed to support access to materials in short supply through the Raw Materials Initiative.
- **Mid-term review of CO<sub>2</sub> emissions legislation.** Two actions were included under this heading. Of note here is what appeared to be the introduction of a new long term perspective in the review of Regulation (EC) No 2009/443/EC setting emission standards for new passenger cars. The Regulation required the review (scheduled for 2013) to define the modalities for reaching, by the year 2020, a long-term target of 95

g CO<sub>2</sub>/km in a cost-effective manner. The Strategy referred to the 2020 target, and the ‘longer term (2030) perspective’.

- **Specific actions for electric vehicles.** The section listed fourteen actions in five areas: placing on the market; standardisation; infrastructure: energy, power generation and distribution; and the recycling and transportation of batteries. The Commission justified this emphasis on electric vehicles at the beginning of the Strategy, with reference to the importance of ensuring technological neutrality. This set of actions was required to ensure a ‘regulatory framework’ for enabling electric vehicles.
- **Governance.** This section contained five actions motivated by the need to coordinate policy areas and stakeholders in order to ‘put everything in place to give the EU a sustainable transport system with a competitive industrial base’. Among these were the re-launch of the CARS 21 High Level Group; the close co-ordination of the workflows from European Climate Change Programme (ECCP) and CARS 21; as well as the integration of this Strategy into the overall EU transport policy with the forthcoming White Paper on European Transport Policy.

The stated intention of the Strategy is to provide ‘an appropriate and technology neutral policy framework for clean and efficient vehicles’. Nevertheless, the Strategy was interpreted in the press as emphasising electric cars rather than biofuel powered cars<sup>4</sup>. Reports in the press suggested that the Commissioner for Mobility and Transport, Antonio Tajani, himself saw the strategy as ‘biased towards electric vehicles’<sup>5</sup>. However, the Strategy suggests that the Commission sees the emphasis on electric vehicles as a way of redressing an imbalance and ensuring technological neutrality.

None of the three broad technology options outlined in the Strategy are necessarily very low carbon by definition. In addition, each has potential negative environmental impacts. While reference was made to performance standards for two-wheel, three-wheel and quadricycles, as well as to a future strategy targeting fuel consumption and CO<sub>2</sub> emissions from heavy duty vehicles, no reference was made to tightening up existing standards for cars or those proposed for light commercial vehicles (vans). A 2009 report by Transport & Environment called for the tightening of long-term CO<sub>2</sub> standards for cars to 80 g/km by 2020 and 60 g/km by 2025 as an essential requirement for giving the industry the required long-term security for investments in low carbon car technology and infrastructure<sup>6,7</sup>.

The Strategy appears to take the increase in the global car fleet not only as a given, but as an opportunity. Much also still needs to be done to ensure the sustainability, if possible, of biofuels. Similarly, the push for electric vehicles relies on the sustainable decarbonisation of the power sector, which is not yet secured. The EEA in its TERM report outlined a combination of policy options which together only reduce emissions from transport by 64 per cent by 2050 over 1990 levels. In its Communication, the Commission was at pains to emphasise that the new Strategy fitted into the bigger picture of Community level measures on reducing the environmental impact of transport and the forthcoming White Paper on European Transport Policy should give an indication of whether the different pieces can be brought together. The Strategy will be reviewed in 2014 to take stock of progress, assess how the market and technologies have changed and recommend further action.

In its November 2010 Communication ([COM\(2010\)656](#)), reviewing the 2007 strategy, the Commission outlined further future steps with regard to the Clean and Energy Efficient Vehicles Strategy. Specific actions for 2010-2020 include review of modalities of reaching the 2020 target of 95 gCO<sub>2</sub>/km and possibly modalities of the long-term target as proposed in



the draft regulation on CO<sub>2</sub> from light commercial vehicles. In addition, the Commission will propose a new test-cycle to reflect more accurately real world driving conditions as well as the specific CO<sub>2</sub> emissions and fuel consumption. The Commission is also planning to look into the possibility of measurement and certifications of CO<sub>2</sub> emissions from heavy duty vehicles.

On 11 May 2011 the Regulation setting emission performance standards for new light commercial vehicles first proposed in 2009 was adopted (see Section on emission performance standards for light commercial vehicles).

## Related legislation

The following legislation is related to the legislation addressing CO<sub>2</sub> emissions from passenger cars:

- Decision [280/2004/EC](#) concerning a mechanism for monitoring Community greenhouse gas emissions and for implementing the Kyoto Protocol.
- The range of legislation controlling [emissions from vehicles](#).
- [Intelligent Energy Europe](#).
- Directive [2003/96/EC](#) on energy taxation.
- Regulation (EU) No 510/2011 setting emission performance standards for new light commercial vehicles.

## References

1 CEC, Reducing the emissions from light duty vehicles, Commission webpage, [http://ec.europa.eu/environment/air/transport/co2/co2\\_home.htm](http://ec.europa.eu/environment/air/transport/co2/co2_home.htm)

2 European Environment Agency (2010) *Towards a resource-efficient transport system. TERM 2009: indicators tracking transport and environment in the European Union*. EEA, Copenhagen. <http://www.eea.europa.eu/publications/towards-a-resource-efficient-transport-system>

3 EU Transport GHG project website, <http://www.eutransportghg2050.eu/cms/about-the-project/>

4 *EurActiv* 28 April 2010. Brussels pushes for electric cars. <http://www.euractiv.com/en/transport/brussels-pushes-for-electric-cars-news-488875>

5 ENDS Europe 28 April 2010. Clean vehicle strategy ‘leaning towards electricity’. <http://www.endseurope.com/23829>

6 ten Brink, Patrick, Mitigating CO<sub>2</sub> Emissions from Cars in the EU ( Regulation (EC)No 443/2009).

7 Transport & Energy (2009) *How to Avoid an Electric Shock. Electric Cars. From Hype to Reality*. Transport & Environment, Brussels