



## EUROPEAN COMMISSION

DIRECTORATE-GENERAL FOR ENERGY AND TRANSPORT

DIRECTORATE D - New and Renewable Energy Sources, Energy Efficiency & Innovation  
**Energy Efficiency of Products & Intelligent Energy – Europe**  
DIRECTORATE E - Inland Transport  
**Road Safety**

### **CONSULTATION DOCUMENT** **on tyre labelling in prevision of the workshop** **to take place on the 26<sup>th</sup> of May**

**Working document**  
**Presented by the Directorate General for Energy and Transport**

As announced in the Energy Efficiency Action Plan (COM (2006)545 final) adopted in October 2006, the European Commission is foreseeing the introduction of a legislative proposal on energy labelling of tyres for 2008. The aim is to promote market transformation towards low rolling resistance tyres (LRRT) as significant fuel savings, hence CO<sub>2</sub> reduction, can be achieved through their increased use.

The European Commission is seeking views of interested parties on tyre labelling in the framework of the impact assessment.

Consultation of stakeholders is open on the Commission energy efficiency web site:  
[http://ec.europa.eu/energy/demand/legislation/under\\_discussion\\_en.htm](http://ec.europa.eu/energy/demand/legislation/under_discussion_en.htm).

Comments can be sent to [alix.chambris@ec.europa.eu](mailto:alix.chambris@ec.europa.eu) a few days ahead of the workshop on the 26<sup>th</sup> of May 2008 so as to allow for a well structured discussion.

The Commission will publish position papers on the above web site except for specific request for confidentiality.

This document has been prepared by the Commission services.

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### *NOTICE*

*The document is seeking stakeholders' comments to support the preparation of an impact assessment on the introduction of a legislative proposal on tyre labelling. It does not prejudice the final form of any decision to be taken by the Commission and nobody can claim any rights from its content.*

## 1. Policy background

With as much as 23% of CO<sub>2</sub> emissions coming from the road transport<sup>1</sup>, reducing energy intensity and emissions from road transport will play an important part in reaching the post-Kyoto goal as well as in reducing energy dependency of Europe. While the EU as a whole has reduced its emissions of greenhouse gases by 5% over 1990-2004, CO<sub>2</sub> emissions from road transport have increased by 26% due to a growing demand for road transport offsetting relative emissions reduction due to technical improvements on vehicles fuel efficiency. Further improvements are necessary if the EU wants to reach the post-Kyoto target and a sustainable transport pattern.

A significant potential of fuel savings, hence CO<sub>2</sub> and other pollutants emission reductions, due to the increased use of low rolling resistance tyres (LRRT) has been identified. The Energy Efficiency Action Plan announced in this framework a proposal for an energy labelling of tyres by 2008. The aim is to promote market transformation towards LRRT, taking safety consideration into account.

Tyre labelling will also play an important part in the objective of "empowering consumers" as formulated in the EU Consumer Policy Strategy 2007-2013 (COM(2007)99). It will provide consumers and stakeholders with the ability to make informed choice when buying replacement tyres which represent 75% of the tyre market.

## 2. Problem definition

Change in rolling resistance is one factor which can influence vehicle fuel savings. The spread of rolling resistance coefficient (RRC) in all tyres categories varies by 100%, which means for passenger cars for instance a difference in fuel savings between the worst and the best performing tyre of up to 10%. Studies show that LRRT are cost effective, as the potential price increase in purchasing the higher performing tyre will be compensated with savings over its lifetime. There is therefore a direct interest for tyre purchasers to reduce their fuel bill and for society as a whole to reduce its emissions due to road transport. The impact at EU level as a whole may be impressive; a recent study identified a savings potential from a 20% decrease in average RRC of all passenger cars tyres in the EU25 from 2008 to 2030 of €100 billion and 600 million tons CO<sub>2</sub> emissions<sup>2</sup>.

Legislation addressing fuel efficiency of vehicles already gives strong incentives for car manufacturers to fit their vehicles with good performing tyres, but on the tyres replacement market which represents 75% of market share, there is a significant barrier to the development of LRRT as consumers and companies have no access to data on tyre rolling resistance performance, and cannot compare additional purchasing costs with fuel savings. In the UK for example, consumers may be confronted by as many as 250 different brands with no objective information on tyre performances. Market surveys have also

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<sup>1</sup> European Environment Agency, [Annual European Community Greenhouse Gas Inventory 1990-2005 and Inventory Report 2007](#), p. 88.

<sup>2</sup> Europe Economics, [Impact Assessment Study on a Possible Extension, Tightening or Simplification of the Framework Directive 92/75 EEC on Energy Labelling of Household Appliances](#), October 2007, p 36. These figures will be complemented by the on going impact assessment study run by EPEC (GHK/TNO) on behalf of the European Commission.

shown that consumers would be interested in buying LRRT. There is therefore a market failure due to the lack of information.

An energy labelling scheme of tyres at EU level aims at responding to this market failure. It would allow consumers to make informed choice, give incentives to tyre manufacturers to upgrade their product and contribute to awareness-raising. Experience from the energy labelling directive on households appliance shows indeed that energy labelling has significantly contributed to market transformation towards more energy efficient appliances<sup>3</sup>.

In addition, preliminary results of the ongoing impact assessment on tyre labelling have shown that there is a potential to improve tyre wet grip performances above the limit value which is considered to be set by 2012<sup>4</sup>. Market surveys show that tyre safety performance is the most important criteria for consumers purchasing decision after life duration of tyres (tread wear). Including wet grip on a labelling scheme for tyres in addition to rolling resistance could therefore give incentives to tyre manufacturers to improve both wet grip and rolling resistance performances and will respond to consumer's expectation, which will in return increase the success of a labelling scheme.

### **3. Objective of the consultation**

The principle of an energy labelling scheme of tyres has already been validated during the DG ENTR public consultation on Advanced Safety Features and Tyres<sup>5</sup>. The objective of the ongoing consultation is to complement these first results and collect input in the framework of the impact assessment on tyre labelling.

Tyre labelling in this document will be understood in its broader meaning, which is building an information system providing targeted and easy to understand information to consumers, companies and retailers. This may include the grading of performance that would be made available to users via different media (e.g. electronic, catalogues, label) allowing fair and objective comparison between tyres. It should include C1 and C2 tyres (passenger cars and light commercial vehicles) and possibly C3 tyres (heavy duty vehicles).

The feedback of stakeholders should be gathered on:

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<sup>3</sup> See for instance, GSK and Fraunhofer ISI, 2001, Energy Efficiency and Labelling, IEA, 2004; Evaluating the Implementation of the Energy Consumption Labelling Ordinance; Atkins ad ATN, 2006, Impact Assessment on the Future Action Plan for Energy Efficiency; Electricity Consumption and Efficiency Trends in the Enlarged European Union, JRC, 2007 (EUR22753 EN; The European Energy Label: An energy efficiency success story with an impact beyond EU borders, Lebot Benoit and Paul Waide, 2007.

<sup>4</sup> According to the draft proposal on general safety of motor vehicles which is transposing wet grip minimum requirements defined in UN-ECE regulation 117.

<sup>5</sup> See <http://ec.europa.eu/enterprise/automotive/pagesbackground/safety/consultation/index.htm> (the draft proposal on general safety of motor vehicles is based on the outcome of this public consultation).

- The technicalities of a labelling scheme: What information should be displayed on the labelling scheme so that it both responds to consumer expectations and provides tyre manufacturers with incentives towards lower rolling resistance of tyres and increased safety.
- The functioning of the retailer market so that the design of a labelling scheme is targeted at the right end-user. There may be a significant difference between the business to consumer and the business to business retailer market (the latter being divided between SMEs owing a small number of vehicles and bigger transport companies or companies with significant fleets) which needs to be addressed.

## 4. Questions to the stakeholders

### 4.1. Information on tyre parameters to be provided on the labelling scheme

Numerous studies seem to indicate that improved rolling resistance of tyres can be achieved without necessarily downgrading other parameters of tyre performance such as wet grip, rolling noise and tread wear<sup>6</sup>. It can be expected however that with a labelling scheme showing tyre performance on rolling resistance alone, the focus will be on this parameter, without optimizing tyre performance with respect to other parameters.

#### *Rolling resistance*

The principle of energy labelling of tyres, similar to that used for domestic energy appliances using bands to indicate the energy efficiency, has already been validated within the DG ENTR public consultation on advanced safety features and tyres in October 2007 with some respondents asking for narrower band width than that proposed (at 1kg/t instead of 1,5kg/t). It is clear that product differentiation is essential for a successful labelling scheme.

Market data reveal some correlation between rolling resistance and external diameter (and/or load index) showing that rolling resistance decreases when external diameter (and/or load index) increases. There is a risk therefore that an absolute grading scheme comparing tyres across the whole market would unfairly favour larger tyres and potentially restrict the number of bands within which a given consumers may choose since he needs to change his tyres within a given size. Larger tyres would more easily receive a higher grading than smaller ones. As a consequence innovation effort may be focused mainly on smaller tyres to improve their grading. ETRMA (the European Tyre and Rubber Manufacturers' Association) also suggested that there is a difference of 1kg/t

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<sup>6</sup> See IEA workshop, [Energy Efficient Tyres: Improving the On-Road Performance of Motor Vehicles](#), November 2005; TNO, [Review and Analysis of the Reduction Potential and Costs of Technological and other Measures to Reduce CO<sub>2</sub>-Emissions from Passenger Cars](#), October 2006; California Energy Commission, [California State Fuel-Efficient Tire Report: Volume II](#), January 2003; Transport Research Board, [Tires and Passenger Vehicle Fuel Economy -Informing Consumers, Improving Performance](#), 2006; Natural Resources Defence Council, [Fuel Efficient Replacement Tyres - Guidelines for Transforming the Marketplace](#), May 2004.

between average RRC of winter and summer tyres. To help clarify this issue, the tyre industry is considering tabling a proposal by the end of May for a relative grading scheme.

It is suggested to adopt a grading scheme on rolling resistance for all tyre categories (C1/C2 and C3) with an open question on the approach to be adopted towards retreaded tyres knowing that they account for 50% of market share in the C3 category.

#### *Wet grip*

Minimum requirements on wet grip for passenger cars (C1 tyres) should be made mandatory as from 2012 according to the draft proposal of DG ENTR on general safety of motor vehicles. These minimum requirements are based on the work made during the drafting of UN-ECE regulation 117 in Geneva which was initially addressing rolling noise limit values. There was a consensus among tyre experts that existing tyre safety performance were satisfactory but that there may be a danger that more stringent rolling noise limit values may have an adverse effect on safety. It was therefore considered that the minimum wet grip requirements for passenger cars were needed in order to guarantee no deterioration of safety. Limit values should also be defined for C2 and C3 tyres as soon as testing methods are available.

A strong request has been put forward by the tyre industry within DG ENTR public consultation on advanced safety features and tyres in favour of a grading of both rolling resistance and wet grip. The rationale is that a labelling scheme on both parameters, rolling resistance and wet grip, will give incentives for the optimization of both, hence guarantee that performance of one parameter is not maximised at the cost of the other. There is indeed a significant potential for improvement of wet grip performances above the wet grip minimum requirements set for passenger cars. For a car rolling at 80km/h for example on a wet road with a friction coefficient of 0,5 (corresponding to a road polished by traffic), the gain in braking distance between the best and worst performing tyre may be up to 18 meters above the wet grip limit value; at higher speed the gain would be obviously higher.

According to the tyre industry, a refined measuring method of wet grip for C1 tyres based on the existing ISO 23671 is currently being drafted and should be available by the end of 2009.

Including wet grip grading for C2 tyres may also be a good step forward as soon as testing methods are available for these tyres. The question remains open for C3 tyres as no wet grip tests are available for them.

#### *Rolling noise*

Ambitious limit values for rolling noise will be made mandatory according to the draft proposal on general safety of motor vehicles with the effect of decreased traffic noise. Rolling noise being a significant environmental nuisance, the question is whether it would be technically feasible to indicate the rolling noise measured value of a given tyre family in a labelling scheme, with sufficient differentiation so as to be convincing for consumers. It is arguable also whether the provision of actual noise performance on a label would have any significant effect on the market below the noise limit values.

#### *Life duration of tyres (tread wear)*

The life duration ("tread wear") of tyres is a performance consumers can clearly notice when they have to change their tyres. Market surveys show that "long lasting tyres" is the most important criteria in consumers purchasing decision. It is therefore considered that the market is self-regulating: no established tyre manufacturer would take the risk to decrease the lifetime of a tyre since he knows that consumers will notice it (even if a few years after the purchasing decision) and hence lose market share in the long run.

Taking into account the facts that the market is self-regulating, that no reliable testing methods on tread wear exists and that testing tread wear would be very costly (due to the necessity to test tyres over 10 000 km), it is suggested not to include tread wear in a labelling scheme.

*Q1: Do you agree that a grading on rolling resistance, for C1/C2 and C3 tyres, being made available to end users and retailers, would be effective in fostering market transformation towards LRRT? What conditions would need to be met (e.g. simplicity of markings, transparency of data)?*

*Q2: Is there a need to adopt different grading schemes on rolling resistance for winter (M+S) and summer tyres (assuming that suitable criteria to distinguish the two categories can be agreed)?*

*Q3: Are you in favour of a grading of both rolling resistance and wet grip for C1 and C2 tyres? If not, why?*

*Q4: Should a grading on wet grip also include C3 tyres?*

*Q5: Is the display of the measured noise value in a labelling scheme technically feasible and understandable for consumers? Do you think that it would have any significant effect on the market bellow the limit values set for rolling noise?*

*Q6: Do you consider that some of the issues raised in the preceding questions should be considered for retreaded tyres?*

#### **4.2. Display and design of the labelling scheme –use at point of sale and in advertising tools**

The tyre market is divided between the original equipment (OE) market (25% market share), i.e. tyres originally fitted in a new vehicle, and the replacement market (75% market share), i.e. tyres replaced on the vehicles once the OE tyres are worn out (usually after 40 000 km in Europe).

It is the OE market through car manufacturers, which has usually driven the tyre market forward. This is due to the existing pressures lying on car producers to reduce CO<sub>2</sub> and polluting emissions. It is likely that the considered provision on mandatory measurement of CO<sub>2</sub> and pollutant emissions with the OE tyres with the highest rolling resistance<sup>7</sup> will

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<sup>7</sup> Or second highest if there are more than three sizes of tyres. See implementing measure of Regulation 715/2007 on type-approval of motor vehicles with respect to emissions from light passenger and

also have a positive impact on average RR of OE tyres. The rationale is that car producers who have to comply with stringent emissions limits will put more pressure on their suppliers for reduced rolling resistance of OE tyres as they will be obliged to do the testing with the worst of them.

A harmonised grading scheme may give additional incentives for car producers to fit their vehicles with LRRT. It may be beneficial to make the information on the rolling resistance of OE tyres and possibly wet grip available to vehicle buyers. Incentives towards lower rolling resistance of OE tyres are essential as they prove to have important spill over effect on the replacement market, partly because consumers often replace their tyres with the same brand as the original ones.

*Q7: Do you think that a grading scheme could be used by car manufacturers to offer better performing tyres to their consumers? Do you think that car manufacturers can take advantage in their marketing strategy from a tyre labelling scheme?*

*Q8: Should the grading of OE tyres (tyres originally fitted to new vehicles) be made available on catalogues and advertising tools on cars?*

*Q9: What will be the likely impact of the worst tyre principle defined for emissions measurement, on average rolling resistance of OE tyres? Is there a need to encourage car manufacturers to offer tyres with improved rolling resistance compared with the 'worst case' tyre used for the mandatory tyre-approval measurement?*

On the replacement market, there may be a distinction to be made between the business to consumer retailer market and the business to business market. The impact of the labelling scheme will depend heavily on its accessibility for end users.

For consumers and small business entities who lack human means to spend much time reviewing tyre technicalities, a labelling scheme in its usual meaning (e.g. stickers on the products and bandings allowing comparison between tyres) seems the most effective tool. It is envisaged to draft a banding scheme with the same design as the energy label provided for in the framework of the energy labelling directive on household appliances (Directive 1992/75/EC); as consumers know it already very well, it will increase its efficiency.

In this case, the accessibility and design of the label will be instrumental for its success. Given the fact that consumers most of the time have no access to tyres, the display of the label should be widely enforced such as on every stickers when tyres are exhibited to the public and on advertising tools in the broader sense (catalogues, sales and advertising, www-pages, newspaper and TV adds...).

Bigger companies and fleet managers would benefit from accurate and comparable information on tyres which they could use in their purchasing decisions.

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commercial vehicles (Euro 5 and Euro 6), annexes III, point 3.5 and annexes XII point 3.2, see <http://ec.europa.eu/enterprise/automotive/directives/proposals.htm>

*Q10: How do you suggest the information on tyres should be provided (how, to whom and when)?*

*Q11: What should be the role of the retailers?*

*Q12: Do you think that the labelling scheme should be associated with other types of measures designed to accelerate the market take up of LRRT (e.g. specific criteria or guidelines for public procurement of replacement tyres, fiscal incentives...)?*