

# Fuel Economy Labelling of Passenger Cars

## Summary Final Report

### Introduction

This summary outlines the main contents of the project conducted within the framework of the European Commission's SAVE programme (DG TREN) and supported by the Austrian Ministry of Science and Transport as well as the Dutch "Buy Eco-Wise, Drive Eco-Nice" programme ("The new Driving Force").

Together with five European partners, E.V.A. carried out the project in several steps:

		E.V.A. TU Graz (AT)	NOVEM (NL)	INESTENE (FR)	Wuppertal Institute (GE)	TU Rome " La Sapienza" (IT)
A	Data collection	+	+	+	+	+
B	Statistical analysis	+		+		
C	Label developmen	+	+			
	Consumer test		+			
D	Market research	+		+		
E	Impact analysis	+		+		
F	Recommendations	+	+	+	+	+

### Getting started

Labelling is just one part of the European Union's strategy to reduce CO2 emissions from passenger cars. Firstly, this study supports the decision of the Commission and the member states to introduce a Directive on fuel economy information, of which car labelling is one aspect.

Secondly, existing or planned car labels in EU member states, as well as in the USA and Canada, have been studied extensively to get an idea of different labelling possibilities and the potential impact of fuel economy labels for cars on buying decisions.

Thirdly, our work to create labels for cars has been guided by the experience gained with the existing energy labels for household appliances.

### Objectives and tasks

The project deals with the introduction of a fuel economy label for new passenger cars.

It has been designed

- to develop labels which will meet the criteria for being successful

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- to evaluate the impact of the label on consumer buying behaviour, the reduction of fuel consumption and CO<sub>2</sub> emissions of the car fleet
- to provide recommendations for a labelling strategy

The label is just one element of an information strategy to make consumers aware of fuel efficiency, to influence their purchasing behaviour and to stimulate car manufacturers to put more emphasis on fuel efficiency.

The final report includes

- the label development and design process
- the consumer test, evaluating design and the communicative aspects of the label
- representative market research on the label's impact on buying behaviour
- analysis of label impacts regarding fuel consumption and CO<sub>2</sub> reduction using a quantitative model
- recommendations for a labelling strategy
- several channels for dissemination and communication of the study, its results and the label

## Recommendations and results

The following recommendations on fuel economy labelling for passenger cars give a picture of the labelling system that seems best suited to influence consumers to purchase and manufacturers to produce more efficient cars.

1. Consumer tests and market research clearly show that a **comparison** of a specific car's fuel consumption to other cars on the label **is essential**. It forms a real added value for the consumer, although standardised fuel consumption figures are already displayed in sales brochures.
2. Since car buyers have a certain idea of the car they want to purchase, they distinctively prefer a **comparison of cars that are similar**, e.g. with respect to size or segment. This "relative" comparison is clearly preferred to an "absolute" comparison (one car to all new cars). "Do not compare a Mini with a Ferrari", as one car buyer put it in the consumer test.
3. **Vehicle size** is the **standardisation parameter** best suited for comparison, because it is easily available, indisputable and easy for consumers to understand.

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4. The main requirement for the label is to ensure a good **communication effect**. The relevant information has to be communicated within a few seconds. Therefore **simplicity** of design and contents are important.
5. **Fuel consumption** as a parameter **for comparison** is much better known among consumers than CO<sub>2</sub> and is therefore recommended. Nevertheless, CO<sub>2</sub> emissions (in g/km) could be mentioned on the label and should be given in the accompanying fuel economy guide.
6. A **label** is a very **consumer-oriented measure**, based on intensive consumer tests and market research, rather than producer-oriented.
7. A well communicated label results in a **market pull effect from the consumer side** (consumers and their representative organisations such as touring and automobile clubs, consumer associations), urging manufacturers to provide cars with higher fuel efficiency.
8. An **EU-wide standardised design** derived from EU household appliance labels will enhance the label impact (recognition effect). Similar labels for other products strengthen this effect and communication/marketing tasks carried out for one label can also be used for others.
9. Most **car manufacturers** tend to reject the idea of a comparative label. Therefore a dialogue with the car industry is needed to make the label proposal known and to prevent misunderstandings. Regarding "relative" and "absolute" comparisons, manufacturers clearly prefer the former, which is recommended in this study.
10. The **impact** of a fuel economy label **on the entire car fleet's fuel consumption** and CO<sub>2</sub> emissions is estimated at **4-5% reduction** by 2010.
11. A fuel economy **label** is just **one part of a consumer information strategy** and accompanying measures (fuel economy guides, posters and fuel consumption data in promotional literature), which increases the impact on buying behaviour and fuel efficiency.
12. From these different information carriers, recommended both in the EU Directive and this report, the **label** is **most appreciated** and used by the consumer.
13. An information scheme should be part of a **complementary strategy to reduce CO<sub>2</sub> emissions from cars**. It is the ideal precursor for other measures aimed at reducing energy consumption, such as economic and fiscal incentives.
14. A fuel economy label is a **means to influence consumer behaviour**, as well as to **induce a market transformation** by encouraging car manufacturers to produce vehicles that are more efficient.
15. **Awareness raising** and communication work on consumer information regarding fuel economy should be based on **economic aspects**, particularly on the argument that car drivers save money by purchasing fuel-efficient cars. This is because fuel economy is ranked higher than ecological aspects or environmental friendliness when purchasing a car.

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These recommendations (comparison, design) sometimes exceed the guidelines from the Directive, which set a common framework for labelling, while still allowing additional steps to be taken by the member states.

Therefore, the recommendations of this study are to be understood as proposals for the measures set by the member states. If they turn out to be successful in some countries, they may also serve as a pool of suggestions for reconsidering the contents of the Directive.

Label: Fuel Economy

<h1>Fuel Economy</h1> <p>Passenger car petrol</p>		<h1>1997</h1> <p>Year of application</p>	
<b>Trade mark</b> <b>Model</b> Fuel <b>Transmission</b> <b>Vehicle size (length x width)</b>	Opel Corsa X1.4 SZ 3 doors SWING Petrol Manual 6,00 m <sup>2</sup>		← Make, model, fuel, gear system
<b>Fuel Consumption</b> <small>measured according to Directive 93/116/EC</small> <b>This is equivalent to</b>	7,3 litres/100 km 13,6 km/litre		← Fuel consumption figure
<b>Comparison of fuel consumption</b> <small>with the average of all passenger cars with the same size</small>			← <i>main element of the label</i> Relative fuel consumption (How much fuel the car uses compared to the average of its size)
<b>Fuel costs</b> for 100.000km <small>determined on base of the fuel economy measured according to Directive 93/116/EC and a fuel price of</small> The actual fuel economy will depend on how the car is used. Fuel consumption is directly related to CO <sub>2</sub> emissions which contribute to global warming. <small>Further information is contained in brochures of the car          Norm EN 61121          Directive J.J.J.: Fuel Economy Label for Passenger Cars</small>	5.780 EURO 0,79 EURO/litre		← Fuel costs for 100.000 km
			← Influence of driving style CO <sub>2</sub> and global warming

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## PROJECT-INFO

### Projectname:

Energy Efficiency of Passenger Cars: Labelling and Its Impacts on Fuel Efficiency and CO<sub>2</sub>- Reduction

### ordered by:

SAVE (DG TREN of the European Commission)

bm:ww (Austrian Ministry of Science and Transport)

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## PUBLICATIONS

- **Report: Consumer test report**  
27 Page(s); 172.5 kb; english; 05.1999
- **Report: Energy Efficiency of Passenger Cars: Labelling and its Impacts on Fuel Efficiency and CO<sub>2</sub>-Reduction**  
The paper describes a study on fuel economy labels for passenger cars: Requirements, options, detailed analysis, findings, recommendations for and impacts of a comparative label.  
S. Fickl, W. Raimund  
14 Page(s); 128.3 kb; english; 06.1999
- **Report: Labelling and its impacts on fuel efficiency and CO<sub>2</sub> – reduction**  
Study for the Directorate Generale for Energy (DGXVII) of the Commission of the European Communities  
S. Fickl, W. Raimund u.a.; 3-901381-72-4  
128 Page(s); 128.3 kb; english; 01.1999

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- **Lecture: Labelling and its impacts on fuel efficiency and CO<sub>2</sub>-reduction - Attachements**  
including the final workshop presentations, data tables, results of the interviews with french manufacturers, etc.  
125 Page(s); 1.8 Mb; english; 05.1999
- **Report: Labelling and its impacts on fuel efficiency and CO<sub>2</sub>-reduction - Final report**  
136 Page(s); 1.2 Mb; english; 05.1999
- **Report: Market research summary**  
45 Page(s); 118.1 kb; english; 05.1999

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