



Car CO₂ labelling in Europe

Gena Gibson



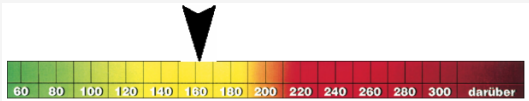
Senior Consultant

30th April 2013

- [illegible]

Most Member States have voluntarily developed labels based on the EU energy label

RICARDO-AEA

| Format | Member State | Rating categories | Example |
|--------------------------|--|------------------------------|---|
| Based on EU Energy label | Denmark, France, Romania, Spain, Netherlands, Finland | A-G categories |  |
| | Germany | A+ to G | |
| | UK | A-N categories (2 per band) | |
| Own style | Belgium | A-G categories |  |
| | Austria | Continuous comparative label |  |
| | Hungary Italy Sweden | List format | N/A |

Harmonise the design of the car CO₂ label to reflect the EU Energy Label...

- ✓ Improving consumer recognition
- ✓ Reducing risk of confusion
- ✓ Building on existing work

... Use a closed system (i.e. always limited to 7 bands)

- ✓ Avoids confusion over differences between A, A+, A++ etc.
- ✓ Periodic reviews to align with technological progress

What are the ratings based on? Definitions of absolute and relative comparison

Absolute



Cars are rated according to the actual CO₂ emissions compared to the entire range of potential models. Hence, a car with low emissions would be in category “A” no matter what its size or type, while a car in category “G” would have high emissions, independent of its size or type.

Relative



Compares cars within the same type or class, i.e. a large car can receive an “A” rating if it is the best performing of its type (even if its absolute emissions are high)

Most Member States use absolute ratings*

Absolute



- | | |
|-------------|-------------|
| 1. Belgium, | 5. UK |
| 2. Denmark, | 6. Finland, |
| 3. France, | 7. Austria |
| 4. Romania, | |

Relative



1. Germany (weight),
2. Spain (footprint)
3. Netherlands (CO₂ performance)

** Based on AEA(2012) "Report on the implementation of Directive 1999/94/EC" and European Parliament (2010) "Study on consumer information on fuel economy and CO₂ emissions of new passenger cars", .*

However, there are pros and cons for each option

| | Advantages | Disadvantages |
|-----------------|---|--|
| Absolute | <ul style="list-style-type: none">✓ Simple to administer;✓ Easy to understand;✓ Directly encourages consumers to buy cars with fewer emissions | <ul style="list-style-type: none">× Erodes differences between the ratings assigned to similar cars |
| Relative | <ul style="list-style-type: none">✓ Enables comparison of cars with similar characteristics;✓ Larger cars do not automatically fall into the worst classes | <ul style="list-style-type: none">× Difficult to agree on the method;× Harder for consumers to understand;× Gives no incentive for downsizing within the complete car fleet;× Manufacturers could manipulate car characteristics to achieve a better rating without improving CO₂ performance e.g. by increasing weight in a weight-related system |

Recommendations on choosing absolute or relative labelling:

- We are more convinced by the arguments in favour of an absolute label over those in favour of a relative label,
- But providing consumers with information on best (and worst) in class could be beneficial...

- Therefore, a **composite label** could be used, which shows
absolute ratings
and
“best and worst in class”

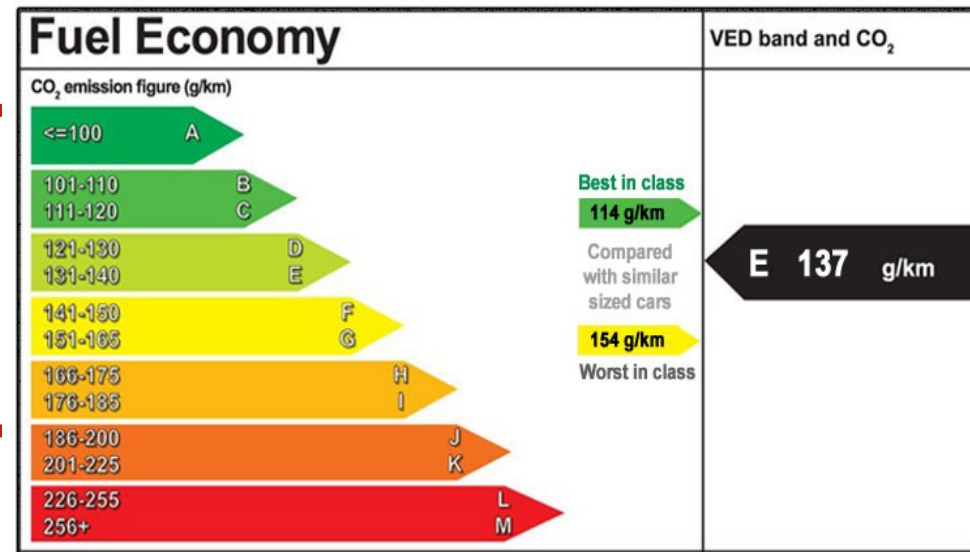


Image source: Ecolane (2010) LowCVP car buyer survey: Improved environmental information for consumers

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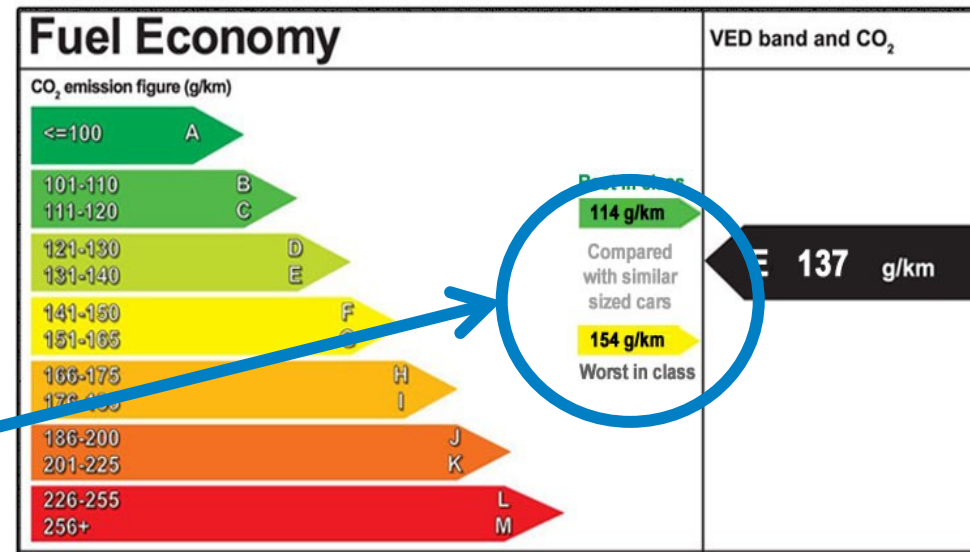


Image source: Ecolane (2010) LowCVP car buyer survey: Improved environmental information for consumers

Questions?

Mandatory information
(in black)

Presentation of rating scale
(blue background)

Information that exceeds
minimum requirements
(in red)



Vehicle make and model information

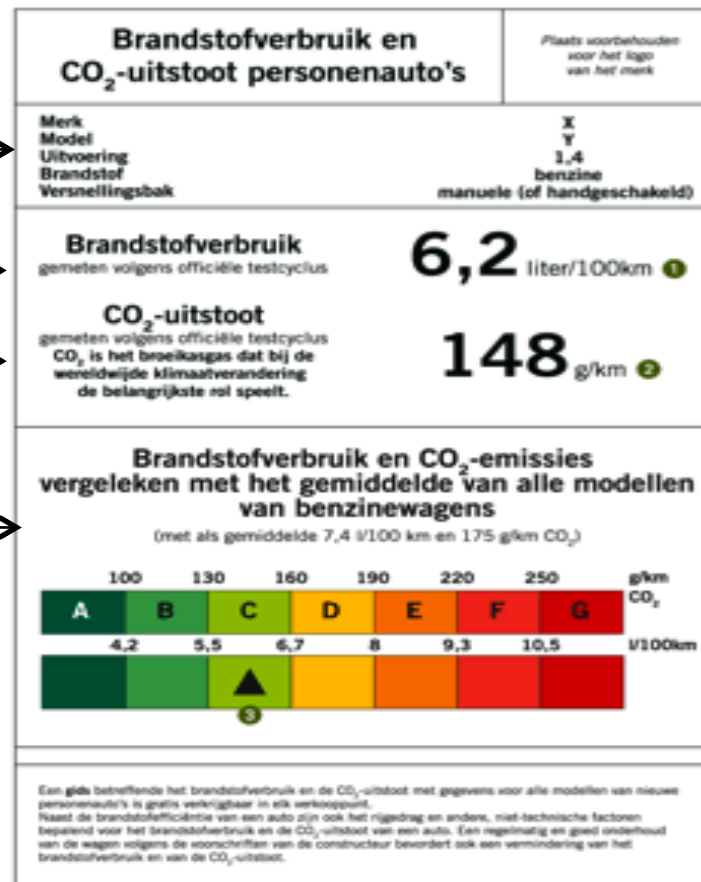
Fuel consumption in litre/100km

CO₂ emissions in g/km

CO₂ information presented in scaled and coloured format

Absolute label

7 bands A to G



Fuel consumption presented in EU Energy Labelling-style format

Absolute label

7 bands – A to G

Fuel consumption in **km/litre**

CO₂ emissions in g/km

Euro NCAP star rating

Information on whether diesel cars have particle trap (if not, required to pay additional tax)

Energi

Personbil/Varebil Diesel/Benzin

Mærke

Model

Billogo

| | |
|---|------------------|
| Lavt forbrug | <div>A</div> |
| <div>A</div> | |
| <div>B</div> | |
| <div>C</div> | |
| <div>D</div> | |
| <div>E</div> | |
| <div>F</div> | |
| Højt forbrug | |
| Brændstofforbrug i km pr. liter <small>(ifølge officiel typegodkendelse)</small> | X |
| CO ₂ -udslip i gram pr. km | Y |
| Økonomiplysninger <small>Ejeravgift pr. år Tillægsavgift ved blandet erhverv/privat pr. år Tillægsavgift ved privat anvendelse pr. år Brændstofudgift ved 20.000 km og X,XX kr./liter</small> | Z W U T |
| Sikkerhed <small>Færdselsstyrelsens vurdering af bilens sikkerhed på basis af Euro NCAP, tilpasset danske versioner Nærmere oplysninger findes på www.bilviden.dk</small> | ★★★★★ |
| Partikelfilter <small>Biler uden filter pålægges årlig partikeludledningsafgift</small> | Ja |

En oversigt over brændstofforbrug og CO₂-udledning for alle nye personbiler fås gratis på alle salgsteder og findes på www.bilviden.dk.

Ud over bilens oplyste brændstofforbrug spiller også køremåde en rolle for en bils faktiske brændstofforbrug og CO₂-udledning. CO₂ er den drivhusgas, der er hovedansvarlig for den globale opvarmning. Forbrug til klimaanlæg og lignende indgår desuden ikke i oplysningerne om brændstofforbrug.

Dieselmotorer, der ikke er forsynet med partikelfilter, er mere sundhedsskadelige end benzinmotorer.

Vehicle make and model information

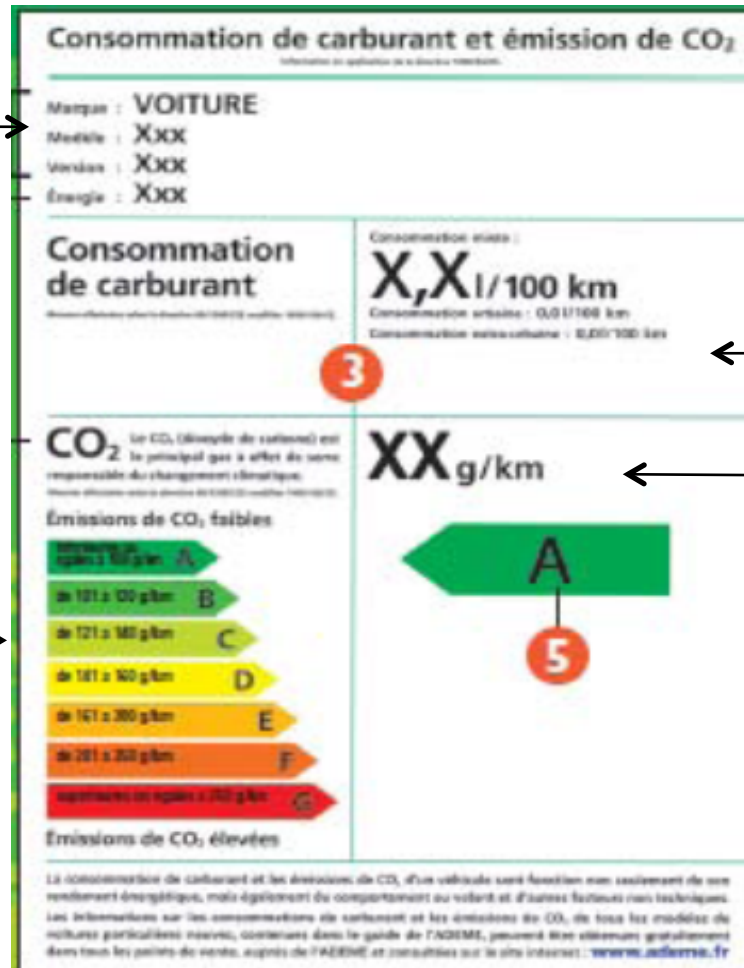
Economic running costs:
•Annual road tax
•Typical fuel costs for 20,000 km

Vehicle make and model information

CO₂ information presented in EU Energy Labelling-style format

Absolute label

7 bands – A to G



Fuel consumption in litres/100 km

CO₂ in g/km

Fuel consumption in litres/100 km (natural gas or biogas in kg/100km)

CO₂ in g/km

CO₂ information presented in EU Energy Labelling-style format

Relative label

8 bands A+ to G (currently)

Information über Kraftstoffverbrauch, CO₂-Emissionen und Stromverbrauch i. S. d. Pkw-EnVKV

| | |
|-----------|-----------------------|
| Marke: | Kraftstoff: |
| Modell: | andere Energieträger: |
| Leistung: | Masse des Fahrzeugs: |

Kraftstoffverbrauch

| | |
|-------------|---------|
| kombiniert: | /100 km |
| innerorts: | /100 km |
| außerorts: | /100 km |

CO₂-Emissionen

| | |
|-------------|------|
| kombiniert: | g/km |
|-------------|------|

Stromverbrauch

| | |
|-------------|------------|
| kombiniert: | kWh/100 km |
|-------------|------------|

Die angegebenen Werte wurden nach vorgeschriebenen Messverfahren (§ 2 Nrn. 5, 6, 6a PKW-EnVKV in der gegenwärtig geltenden Fassung) ermittelt. CO₂-Emissionen, die durch die Produktion und Bereitstellung des Kraftstoffes bzw. anderer Energieträger entstehen, werden bei der Ermittlung der CO₂-Emissionen gemäß der Richtlinie 1999/94/EG nicht berücksichtigt. Die Angaben beziehen sich nicht auf ein einzelnes Fahrzeug und sind nicht Bestandteil des Angebotes, sondern dienen allein Vergleichszwecken zwischen den verschiedenen Fahrzeugtypen.

Hinweise nach Richtlinie 1999/94/EG:
Der Kraftstoffverbrauch und die CO₂-Emissionen eines Fahrzeugs hängen nicht nur von der effizienten Ausnutzung des Kraftstoffs durch das Fahrzeug ab, sondern werden auch vom Fahrverhalten und anderen nichttechnischen Faktoren beeinflusst. CO₂ ist das für die Erderwärmung hauptsächlich verantwortliche Treibhausgas. Ein Leitfaden für den Kraftstoffverbrauch und die CO₂-Emissionen aller in Deutschland angebotenen Personenkraftfahrzeugmodelle ist unentgeltlich an jedem Verkaufsort in Deutschland erhältlich, an dem neue Personenkraftfahrzeugmodelle ausgestellt oder angeboten werden.

CO₂-Effizienz

Auf der Grundlage der gemessenen CO₂-Emissionen unter Berücksichtigung der Masse des Fahrzeugs ermittelt.

A+
A
B
C
D
E
F
G

B

Jahressteuer für dieses Fahrzeug
Energieträgerkosten bei einer Laufleistung von 20.000 km:
Kraftstoffkosten () bei einem Kraftstoffpreis von _____ Euro/Abrechnungseinheit
Stromkosten bei einem Strompreis von _____ Euro/Abrechnungseinheit

Euro
Euro
Euro

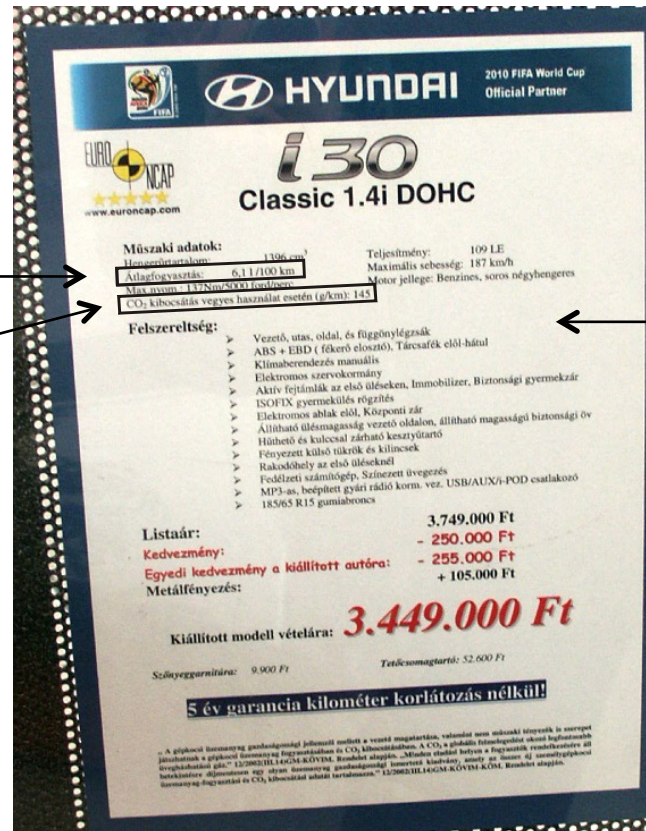
Erstellt am:

Vehicle make and model information

Power consumption pure electric and hybrid electric vehicles (external recharge) in kWh/100km

Economic running costs:
•Annual road tax
•Typical energy costs (fuel and electricity)

CO₂ emissions in g/km



Vehicle make and model information

Vehicle make and model information

CONSUMURI de CARBURANT si EMISII de CO₂

MARCA :
MODEL :
TIP / VARIANTA / VERSIUNE :
TIPUL CARBURANTULUI :

CONSUM OFICIAL de CARBURANT (l/100 km)

5,2
mixt / urban / extra-urban
5,2 / 5,9 / 4,8

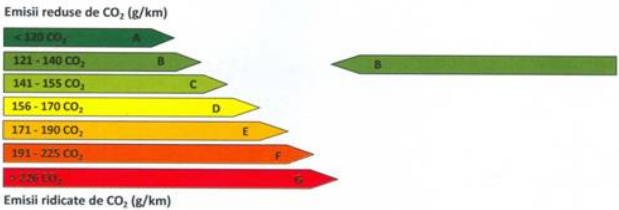
EMISIILE SPECIFICE OFICIALE de CO₂ (g/km)

137

Fuel consumption in litres/100 km

CO₂ in g/km

CO₂ information presented in EU Energy Labelling-style format



Absolute label

7 bands A to G

Un ghid conținând date privind consumul de carburant și emisiile de CO₂ pentru toate modelele de autoturisme noi poate fi obținut gratuit în toate punctele de vânzare a acestora. Consumul de carburant și emisiile de CO₂ ale unui autoturism depind nu doar de randamentul său energetic, ci și de comportamentul la volan și de alți factori care nu sunt de natură tehnică. Dioxidul de carbon (CO₂) este principalul gaz cu efect de seră responsabil pentru încălzirea planetei.

Fuel consumption in
litres/100 km and **km/
litre**

CO₂ in g/km

CO₂ information
presented in EU
Energy Labelling-
style format

Relative label

7 bands A to G

| Eficiencia Energética | |
|---|-------------------|
| Marca | X |
| Modelo | Y |
| Tipo Carburante | Gasolina |
| Transmisión | Manual |
| Consumo de Carburante (litros por cada 100 kilómetros) | 17,4 litros/100km |
| Equivalencia (kilómetros por litro) | 5,75 km/litro |
| Emisión de CO ₂ (gramos por kilómetro) | 412 g/km |
| Comparativa de Consumo (con la media de los coches de su mismo tamaño a la venta en España) | |
| <div>Bajo Consumo</div> <div><div><-25% A</div><div>-15-25% B</div><div>-5-15% C</div><div>media D</div><div>+5+15% E</div><div>+15+25% F</div><div>>25% G</div><div>Alto Consumo</div></div> | |
| <div>* En todos los puntos de venta puede obtenerse gratuitamente una guía sobre el consumo de combustibles y emisiones de CO₂ en la que figuran los datos de todos los modelos de automóviles de turismo nuevos.</div> <div>* El consumo de combustible y las emisiones de CO₂ no sólo dependen del rendimiento del vehículo; también influyen el comportamiento al volante y otros factores no técnicos. El CO₂ es el principal gas de efecto invernadero responsable del calentamiento del planeta.</div> | |

Vehicle make and
model information

CO₂ information
presented in EU Energy
Labelling-style format

Absolute label

7 bands A to M

CO₂ in g/km

Fuel consumption in
litres/100 km and **miles/
gallon**

| Fuel Economy | | VED band and CO ₂ | | | | | | | | | | | | | |
|--|--------------|--|----------------|-------------|--------------|-----|-------|--|--|-------------|--|--|----------|--|--|
| CO ₂ emission figure (g/km) | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | |
| Fuel cost (estimated) for 12,000 miles <small>A fuel cost figure indicates to the consumer a guide price for comparison purposes. This figure is calculated by using the combined drive cycle (town centre and motorway) and average fuel price. Re-calculated annually, the cost per litre as at Mar 2011 is as follows - petrol 133p, diesel 138p, LPG 77p.</small> | | | | | | | | | | | | | | | |
| VED for 12 months <small>Vehicle excise duty (VED) or road tax varies according to the CO₂ emissions and fuel type of the vehicle.</small> | | 1 st Year rate* | Standard rate* | | | | | | | | | | | | |
| Environmental Information A guide on fuel economy and CO ₂ emissions which contains data for all new passenger car models is available at any point of sale free of charge. In addition to the fuel efficiency of a car, driving behaviour as well as other non-technical factors play a role in determining a car's fuel consumption and CO ₂ emissions. CO ₂ is the main greenhouse gas responsible for global warming. | | | | | | | | | | | | | | | |
| Make/Model: | | Engine Capacity (cc): | | | | | | | | | | | | | |
| Fuel Type: | | Transmission: | | | | | | | | | | | | | |
| Fuel Consumption: <table border="1"> <thead> <tr> <th>Drive cycle</th> <th>Litres/100km</th> <th>Mpg</th> </tr> </thead> <tbody> <tr> <td>Urban</td> <td></td> <td></td> </tr> <tr> <td>Extra-urban</td> <td></td> <td></td> </tr> <tr> <td>Combined</td> <td></td> <td></td> </tr> </tbody> </table> | | | | Drive cycle | Litres/100km | Mpg | Urban | | | Extra-urban | | | Combined | | |
| Drive cycle | Litres/100km | Mpg | | | | | | | | | | | | | |
| Urban | | | | | | | | | | | | | | | |
| Extra-urban | | | | | | | | | | | | | | | |
| Combined | | | | | | | | | | | | | | | |
| Carbon dioxide emissions (g/km): <small>Important note: Some specifications of this make/model may have lower CO₂ emissions than this. Check with your dealer.</small> | | | | | | | | | | | | | | | |
| Department for Transport | | To compare fuel costs and CO ₂ emissions of new cars, visit http://carfueldata.direct.gov.uk/ | | | | | | | | | | | | | |

Economic running costs:

- Annual road tax
- Typical fuel costs for 12,000 miles

Vehicle make and model information

* A new 1st year VED rate will be applied to vehicles registered for the first time on or after April 2010.
 ** The standard 12 month VED rate for all registered cars in this band is shown for the purposes of comparison. Note: figures quoted reflect the current rate only, and may be subject to change.

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