# Fuel economy labels: Focus on non-EU countries

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**IEA Paris**
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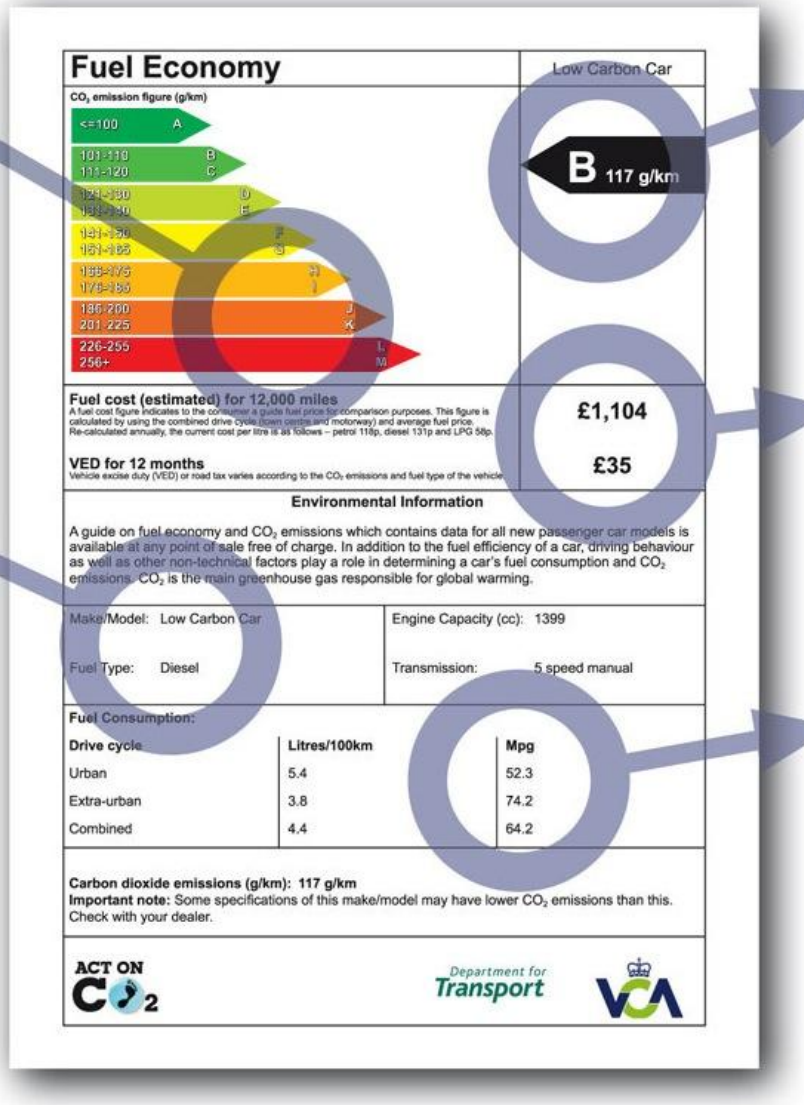
# United Kingdom

## Thirteen VED bands

The figures on the coloured arrows (A-M) indicate the 13 ranges of emissions by g/km that correspond to levels of annual Vehicle Excise Duty (VED or Road Tax). Low carbon-emitting cars pay less tax. The lowest – Band A – pay no tax.

## Make, model and engine details

The vehicle make, model, fuel type, engine capacity and transmission type are all listed. Together they determine the $CO_2$ emissions and running costs.



**Fuel Economy** — Low Carbon Car

$CO_2$ emission figure (g/km)

| | |
|---|---|
| <=100 | A |
| 101-110 | B |
| 111-120 | C |
| 121-130 | D |
| 131-140 | E |
| 141-150 | F |
| 151-165 | G |
| 166-175 | H |
| 176-185 | I |
| 186-200 | J |
| 201-225 | K |
| 226-255 | L |
| 256+ | M |

B 117 g/km

**Fuel cost (estimated) for 12,000 miles** £1,104

A fuel cost figure indicates to the consumer a guide fuel 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 current cost per litre is as follows – petrol 118p, diesel 131p and LPG 58p.

**VED for 12 months** £35

Vehicle excise duty (VED) or road tax varies according to the $CO_2$ emissions and fuel type of the vehicle.

**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: Low Carbon Car

Engine Capacity (cc): 1399

Fuel Type: Diesel

Transmission: 5 speed manual

**Fuel Consumption:**

| Drive cycle | Litres/100km | Mpg |
|---|---|---|
| Urban | 5.4 | 52.3 |
| Extra-urban | 3.8 | 74.2 |
| Combined | 4.4 | 64.2 |

**Carbon dioxide emissions (g/km): 117 g/km**
**Important note:** Some specifications of this make/model may have lower $CO_2$ emissions than this. Check with your dealer.

ACT ON $CO_2$ — Department for Transport — VCA

## $CO_2$ emissions figure

The black arrow points to the vehicle's relevant band of $CO_2$ emissions on which Vehicle Excise Duty (VED or Road Tax) is based.

## Running costs

Average yearly fuel costs are calculated and displayed together with the relevant level of Road Tax. Figures updated with recent prices.

## Fuel consumption

Shows how efficient the car is in miles per gallon and litres per 100km in town, country and combined driving situations.

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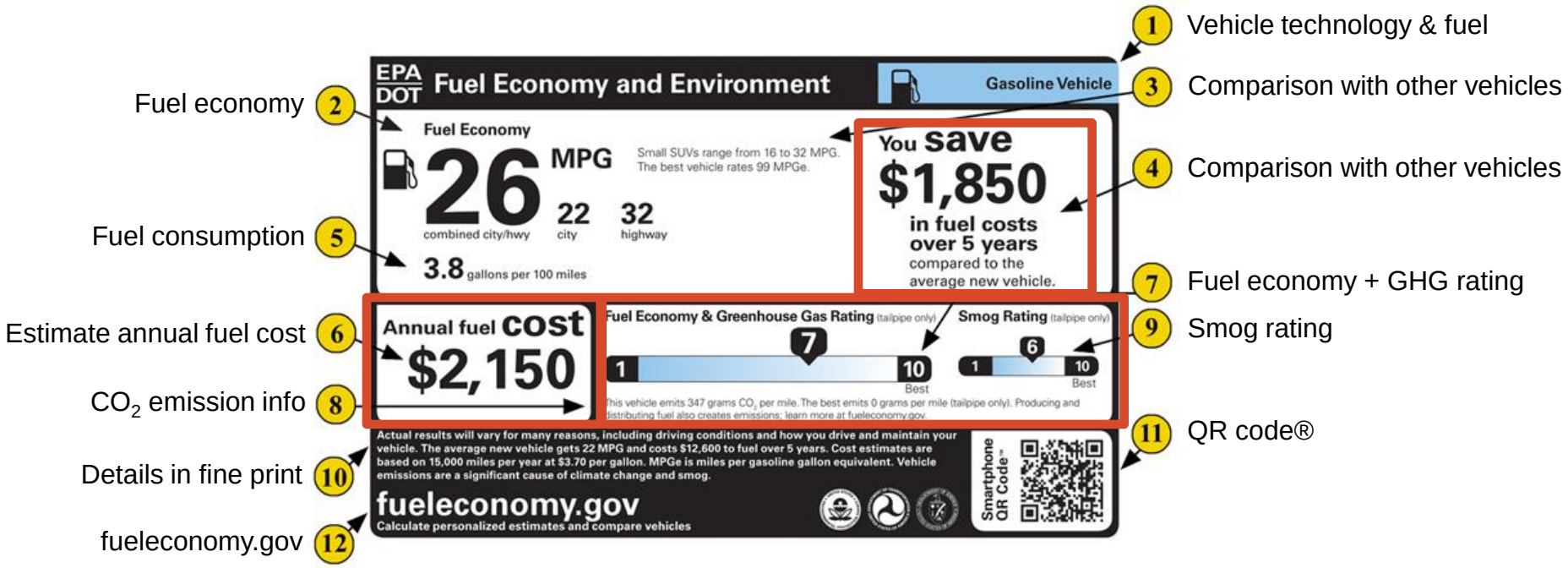
# United States




→ No color

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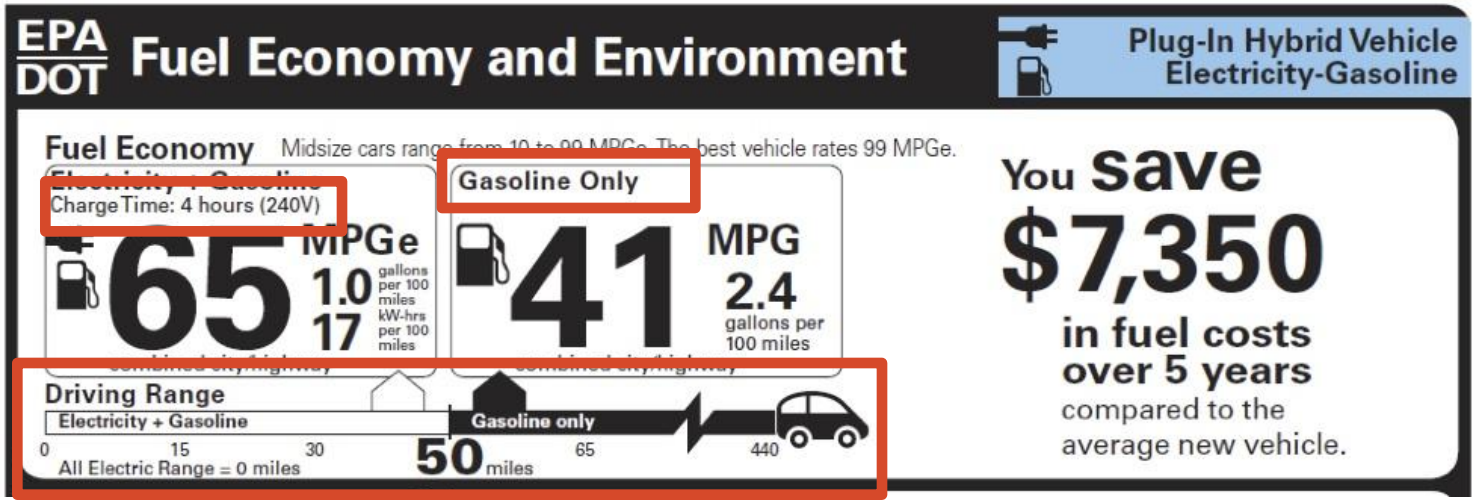
# United States (Plug-in hybrids)




→ No color
→ No graphical comparison with other vehicles

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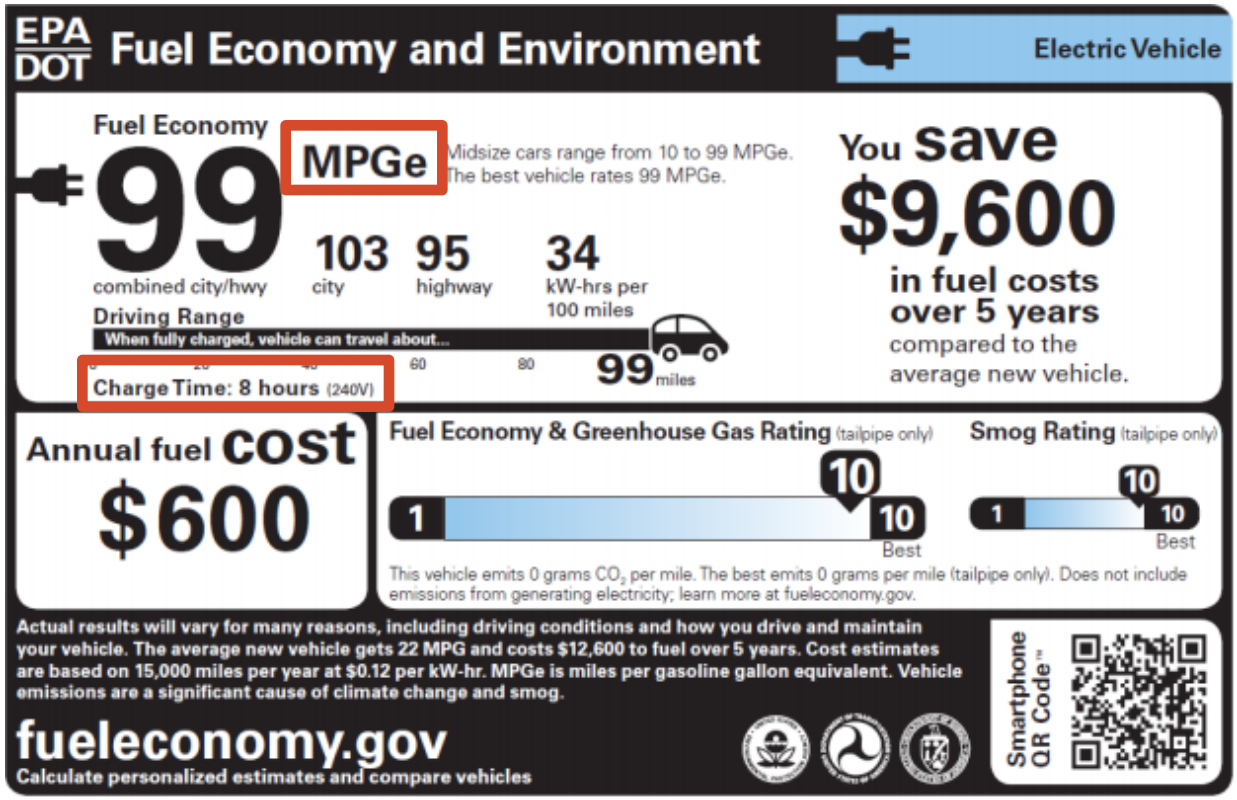
# United States (Electric vehicles)

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# Chile


- First country in Latin America to introduce mandatory label
- New Energy label since Feb 2013
- Provides information on:
  - $CO_2$ emissions in (g/km)
  - fuel consumption in highway, city, and overall (km/l)
  - model and maker of the car
  - emission standard
  - QR code

→ **No color**
→ **No comparison with other vehicles**
→ **No fuel cost / tax info**

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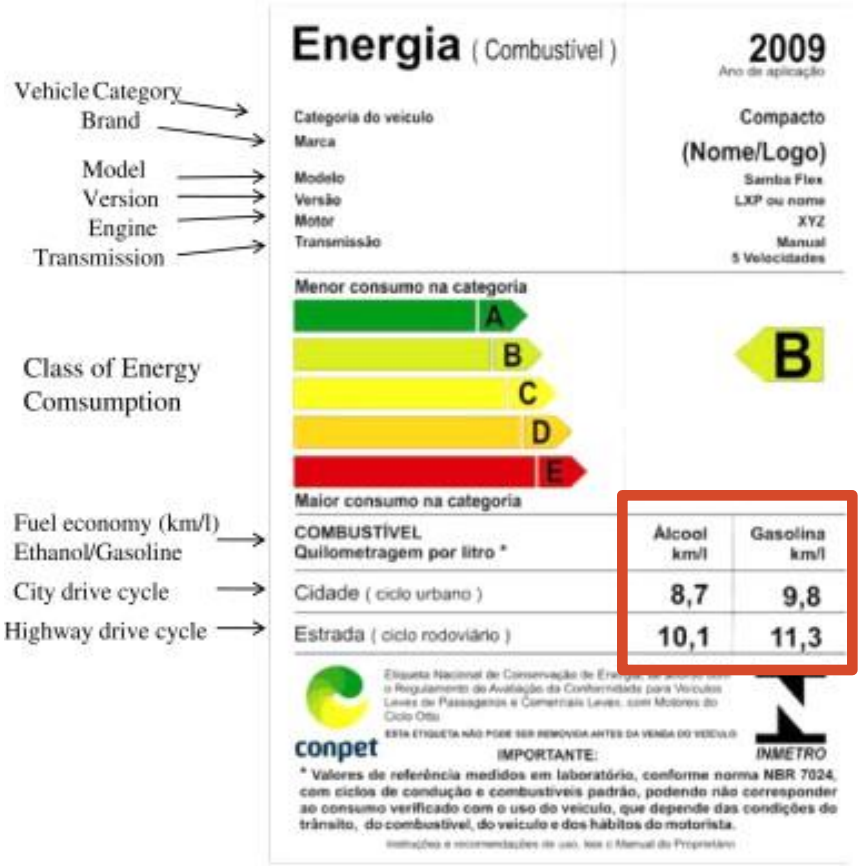
# Brazil




- Voluntary since November 2009
- The categories are defined as:
  - Subcompact
  - Compact
  - Medium size
  - Large
  - Sports cars
  - Off-road
  - Pick-up
- Shows fuel economy for ethanol (álcool) and gasoline (gasolina)

# China

- Mandatory fuel economy label since July, 2009

→ **No color**
→ **No comparison with other vehicles**
→ **No fuel cost / tax info**

汽车燃料消耗量标识

AUTOMOBILE FUEL CONSUMPTION LABEL

Note: The logo for the virtual display, and paste data and vehicle identification consistent, but the format there are some differences.

| | | | |
|---|---|---|---|
| Manufacturer: | GAC Toyota Motor Co., Ltd. | Vehicle Type: | Passenger car category M1 |
| Vehicle type: | GTM7251GB | Common name: | Toyota Camry |
| Engine Model: | 5AR | Fuel type: | Gasoline |
| Displacement: | 2494 | Rated power: | 135 |
| Transmission type: | AT | Driving type: | Front-wheel drive |
| Curb weight: | 1490 | Maximum design quality: | 2000 |

燃油消耗量

| | | |
|---|---|---|
| Urban driving conditions: | 10.8 | L/100km |
| Integrated operating condition: | **7.6** | L/100km |
| Suburban conditions: | 5.8 | L/100km |

Applicable national standard number limit requirements and implementation date (click to enter)

The identification using the fuel consumption data is measured according to GB / T 19233-2008 "light vehicle fuel consumption test methods".
Due to the impact of driving habits, road conditions, weather conditions, and fuel quality and other factors, the actual fuel consumption may fuel consumption with the logo. In order to avoid identification affect vision, after the purchase of the vehicle to remove the logo.

Record No.: 20111115029105

# China’s tax incentive label (certificate)


- Established in June, 2010
- Promotion for certain cars with engine displacement of 1.6L and below
- Consumer gets a one-time fixed subsidies of 3000 yuan/vehicle
- Label shows vehicle details and level of subsidy

# China’s traffic control labels


**Yellow Label:**

- Cars in Beijing that fail to meet Euro 1 standards
- Cars manufactured before 1996
- Imported cars before 1998


**Green Label:**

- Gasoline cars meeting Euro 1
- Diesel cars meeting Euro 2

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# South Korea


Grade based on fuel economy

Combined fuel economy

City mode fuel economy

Highway mode fuel economy

$CO_2$ emissions

Reminder that there are many reasons why actual FE may vary from estimates

Legal basis

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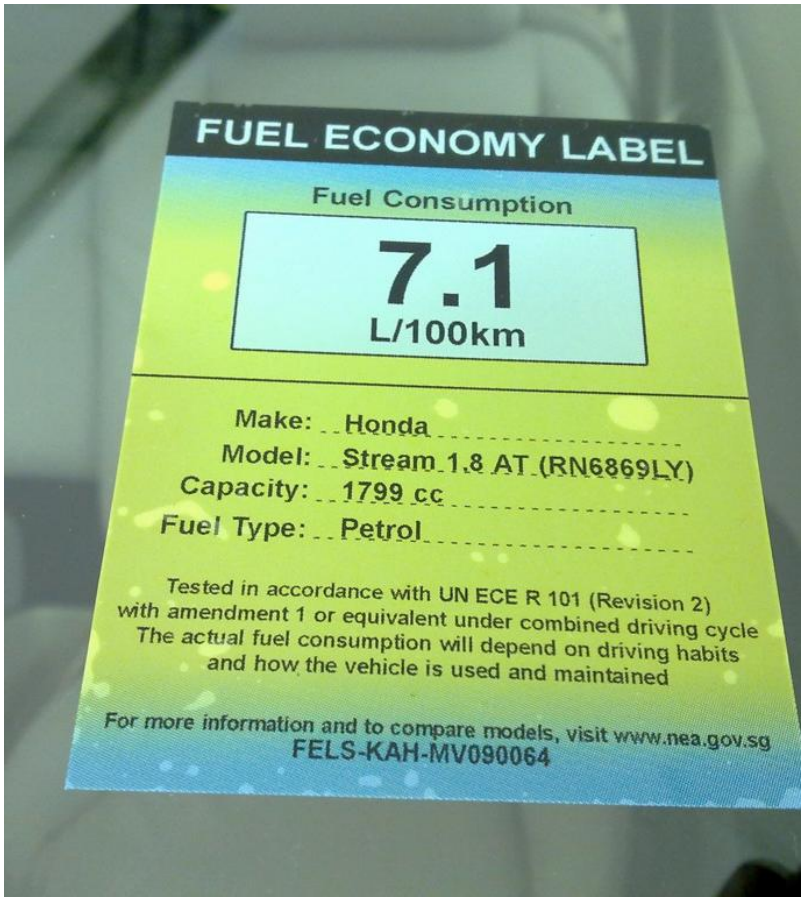
# Singapore

## Old Label




## New Label (since January 2013)

Land Transport Authority

FUEL ECONOMY

| Fuel Consumption (L/100km) | $CO_2$ Emissions (g/km) |
|---|---|
| 5.8 | 135 |
| Combined Test | Combined Test |

Tested in accordance with UN ECE R101

**$CO_2$ Relative Comparison**

40 g/km — 400 g/km

135

**Fuel Consumption Relative Comparison**

3 L/100km — 23 L/100km

5.8

**Make & Model:**(Make)(Model) 1.4(A) Hatchback

**Engine Cap & Fuel Type:** 1399cc Petrol

*Vehicle actual fuel consumption and $CO_2$ emissions will depend on the driving behaviours as well as other non-technical factors such as traffic condition and vehicle condition. $CO_2$ is the main greenhouse gas responsible for global warming.*

For comparison of fuel economy of various vehicles, please visit
**www.onemotoring.com.sg**
FELS S/No. xxxx-xxxx-xxxx-1234

**CARBON EMISSIONS-BASED VEHICLE SCHEME BANDING (Year 2013 & 2014)**

| $CO_2$ Emissions (g/km) | Feebate Amount | |
|---|---|---|
| A1 0 – 100 | $20,000 | |
| A2 101 – 120 | $15,000 | |
| A3 121 – 140 | $10,000 | 135 |
| A4 141 – 160 | $5,000 | |
| B 161 – 210 | $0 | |
| C1 211 – 230 | - $5,000 | |
| C2 231 – 250 | - $10,000 | |
| C3 251 – 270 | - $15,000 | |
| C4 > 270 | - $20,000 | |

*Carbon Emissions-Based Vehicle Scheme (CEVS) is a new vehicle scheme which will apply to new cars registered on or after 1 Jan 2013.*

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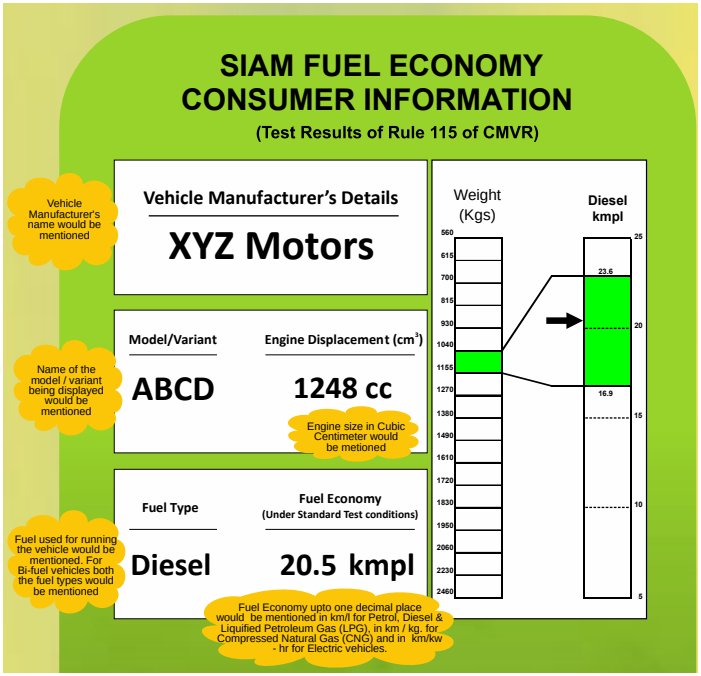
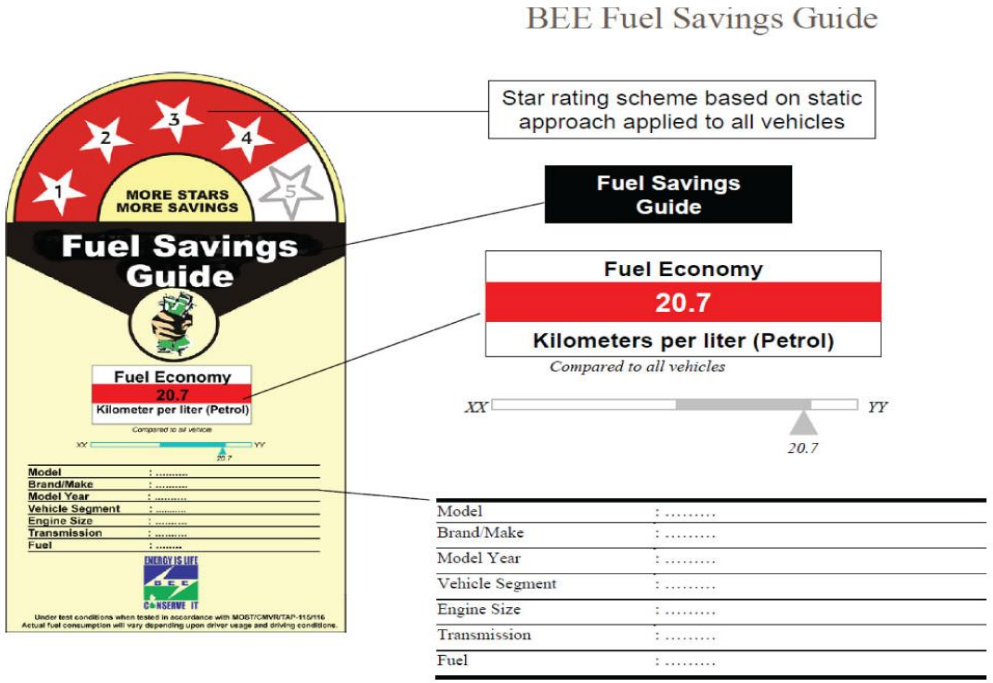
# India: BEE and SIAM Labels




- Voluntary for Consumer Interest
- Based on ARAI test data released by manufacturers
- Comparison of vehicle fuel economy in its market segment

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# Japan

| | Fuel Efficiency | Emissions Performance | Incentives | | |
|---|---|---|---|---|---|
| | | | Automobile Tax | Acquisition Tax | Tonnage Tax |
| Alternative-Energy/ Next-Generation Vehicles | Electric (including fuel cell), plug-in hybrid, clean diesel, hybrid and natural gas vehicles that meet certain performance requirements | | 50% reduction | Exempt | Exempt |
| Passenger Cars and Mini-Vehicles | Compliant +25% compared to 2010 fuel efficiency standards  | Emissions down by 75% from 2005 standards  | 50% reduction | 75% reduction | 75% reduction |
| | Compliant +15% compared to 2010 fuel efficiency standards  | | – | 50% reduction | 50% reduction |

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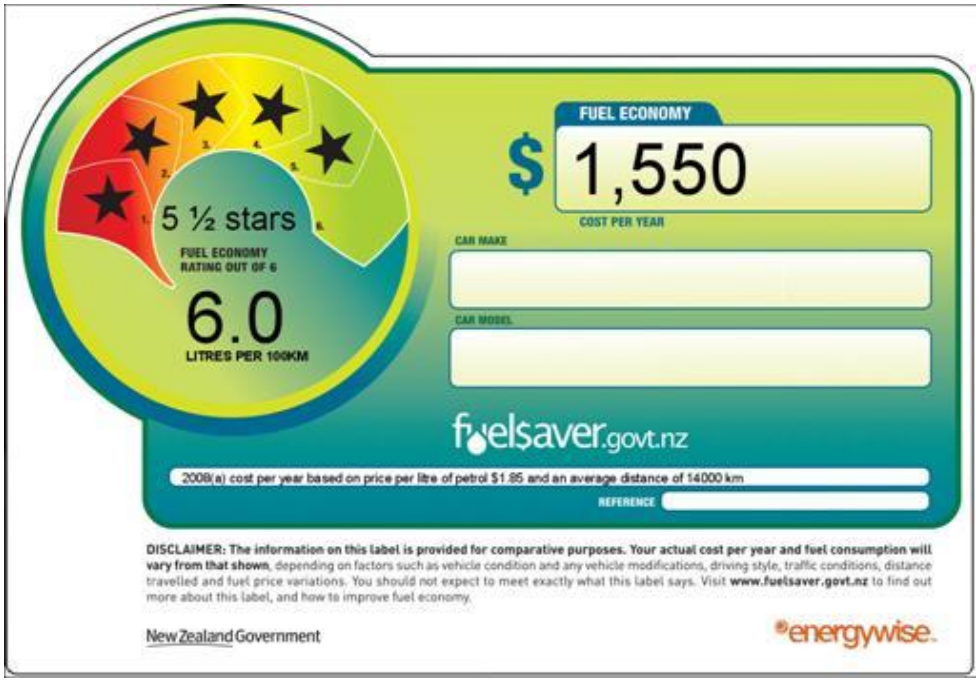
# New Zealand




- Came to effect in April 2008
- Star rating:
  6 being most efficient
  1 being a gas guzzler
- Annual cost based on average fuel price and 14,000 km/year

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| *Countries* | *Test Cycle* | *$CO_2$ emission Displayed?* | *Fuel Consumption/Economy Unit* | *Comparison* |
|---|---|---|---|---|
| **United States** | 5 Cycle | Yes | mpg | Relative: Fuel economy<br>Absolute: GHG and smog |
| **China** | NEDC | No | l/100km | --- |
| **South Korea** | FTP-75 (up till 2011)<br>US comb. (2012~) | Yes | km/l | Relative: Fuel economy |
| **India** | NEDC | No | km/l | BEE: Relative and absolute<br>SIAM: Relative |
| **Singapore** | UN ECE R 101 (NEDC) | No (old)<br>Yes (new) | l/100km | Relative: $CO_2$ emission<br>Absolute: Fuel consumption |
| **Brazil** | FTP-75 | No | km/l | Relative: Energy consumption by car class |
| **Chile** | FTP-75 | Yes | km/l | Absolute |
| **Australia** | ADR 81/02 (NEDC) | Yes | l/100km | Absolute |
| **New Zealand** | NEDC (new cars)<br>Japanese 10-15 (used cars) | No | l/100km | Absolute |
| **United Kingdom** | NEDC | Yes | l/100km | Absolute |

# **Labeling best practice** (for discussion)

- Present $CO_2$ emission number clearly on the label?
- Display fuel costs and vehicle taxation?
- Present cost estimate for the next few years?
- Have both absolute and relative scale on the same label?
- Use color?
- Star system (e.g. New Zealand) instead of numbers?
- Point out influence of driving style and vehicle use?
- How to deal with alternative technologies?
- Strive towards harmonization?

# For more information

- US Department of Energy: www.fueleconomy.gov
- Department of Transportation (UK): www.dft.gov.uk/vca/
- Land Transport Authority (Singapore): www.lta.gov.sg/
- New Zealand: www.fuelsaver.govt.nz
- ANFAVEA (Brazil): www.anfavea.com.br
- Japan Automobile Manufacturers Association (JAMA) and 2011 Report on Environmental Protection Efforts (Japan)
- Ministry of Industry and Information Technology of the People's Republic of China: www.miit.gov.cn/
- Korea Energy Management Corporation (KEMCO)
- Ministerio del Medio Ambiente (Chilé): www.mma.gob.cl/

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