

FREQUENTLY ASKED QUESTIONS (FAQs) ON THE MANDATORY FUEL ECONOMY LABELLING SCHEME (FELS)

Introduction

Answers to the questions frequently asked by the motor industry on the Mandatory Fuel Economy Labelling of motor vehicles are presented below¹.

If you have any other questions that have not been addressed below, please email them to NEA_energylabel@nea.gov.sg.

General Requirements

1. When will mandatory fuel economy labelling of motor vehicles come into effect?

Mandatory fuel economy labelling of registrable motor vehicles will commence from 1 Apr 09.

2. What is the definition of 'registrable motor vehicles' under the mandatory FELS?

Registrable motor vehicles (RMVs) are defined as motor vehicles constructed for the carriage of:

- not more than 7 passengers (exclusive of the driver) and having an unladen mass not exceeding 3000kg; or
- goods and having an unladen mass not exceeding 2500kg.

The definition includes:

- motor vehicles equipped with an internal combustion engine and powered by diesel, petrol, LPG or natural gas;
- hybrid-electric vehicles running on diesel, petrol, LPG or natural gas; and
- electric vehicles.

It excludes motorcycles or second-hand motor vehicles.

3. What are the requirements for importers and manufacturers of RMVs under the mandatory FELS?

All importers and manufacturers must affix the Fuel Economy Label on every RMV they supply in Singapore.

From 1 April 09, all importers and manufacturers who supply the following categories of RMVs must register themselves and the RMV models they supply with NEA:

- RMVs that have been granted type-approval, modified type-approval or batch-type approval by LTA on or after 1 April 09; or
- RMVs that have a test report prepared in accordance with the prescribed test standards or methods listed in FAQ no. 7 below; or

¹ Please note that the contents are subject to change without prior notice.

- RMVs that have a certificate of compliance, prepared in accordance with the prescribed test standards or methods listed in FAQ no. 7(b) below, that contains the measured emissions in grams per km of carbon monoxide, hydrocarbons and carbon dioxide.

From 1 October 09, all importers and manufacturers who supply any RMV in Singapore must register themselves and their RMV models with NEA.

4. Do the requirements in (3) apply to motor traders who supply RMVs in Singapore, but are not involved in the importation or manufacturing of the motor vehicles?

Such motor traders need not register themselves or their RMV models with NEA. However, they must ensure that the RMV models that they supply have already been registered with NEA and that every RMV they supply has been affixed with the Fuel Economy Label by an importer or manufacturer.

Registration

5. What are the registration fees for Registered Supplier and RMV Models?

The registration fees are waived till 30 Jun 2010.

6. What is the registration procedure?

Application for registration as a Registered Supplier is to be made in person at NEA's Customer Service Centre located at 2nd storey of Environment Building, 40 Scotts Road, Singapore 228231. The following documents are required for the application:

- Duly completed application form (can be downloaded from NEA website at <http://www.nea.gov.sg/fels>) with applicant's stamp and the authorized representative's signature
- Original and copy of the NRIC of the applicant's authorized representative

Applicant will be notified of the outcome within 3 working days and successful applicant will receive the Registered Supplier ID by email.

Application of RMV models is to be made online at NEA website (<http://www.nea.gov.sg/fels>). Information required during application is as follows:

- Company information
- Registered Supplier ID
- Details of vehicle model
- Test report (2MB or less)
- Letter of authorization, if registration is done by a third-party on behalf of applicant

Applicant will be notified of outcome within 5 working days by email and successful applicant will receive the Certificate of Registration (COR), softcopy of Fuel Economy Label and printing guide by email.

Test report

7. Which test standards are acceptable for measuring the CO₂ emissions and fuel consumption of registrable motor vehicles (RMVs)?

All RMV models must be tested to the test method stipulated in UN ECE R 101 (Revision 2) with amendment 1 for both urban and extra urban driving cycles.

- (a) The following test standards or methods are also acceptable:
- Directive 80/1268/EEC including amendment 2004/3/EC
 - Directive 692/2008/EC

(b) The test used for demonstrating compliance to Euro 2 and Euro 4 standards is similar to the test method for determining the fuel consumption and CO₂ emissions stipulated under the test standard, UN ECE R101 (Revision 2) with amendment 1.

The fuel consumption (FC) can be calculated based on the measured emissions in grams per km of carbon monoxide (CO), hydrocarbons (HC) and carbon dioxide (CO₂) from emission reports tested in accordance to [Directive 96/69/EC](#) or [Directive 98/69/EC](#) using the following formula:

Type of fuel	Fuel Consumption Formula
Petrol	$FC = (0.1154 / D) \times [(0.866 \times HC) + (0.429 \times CO) + (0.273 \times CO_2)]$
LPG	$FC = (0.1212 / 0.538) \times [(0.825 \times HC) + (0.429 \times CO) + (0.273 \times CO_2)]$
NG	$FC = (0.1336 / 0.654) \times [(0.749 \times HC) + (0.429 \times CO) + (0.273 \times CO_2)]$
Diesel	$FC = (0.1155 / D) \times [(0.866 \times HC) + (0.429 \times CO) + (0.273 \times CO_2)]$

Where D is the density of the reference fuel, in kilogram per litre.

8. When making an application for the registration of RMV models, what are the key documents required?

Registered suppliers applying to register their RMV models must submit a Test Report prepared in accordance with the prescribed test method and such other documents as may be required.

9. For existing models of motor vehicles that have been granted type-approval, modified type-approval or batch type-approval from LTA, can the test report submitted to LTA for conformance of exhaust emission standards for petrol and diesel driven motor vehicles be acceptable for mandatory fuel economy labelling?

For existing motor vehicle models that have been granted type-approval, modified type-approval or batch type-approval from LTA prior to 1 Apr 09, the fuel consumption figure derived from the [emission test report or certificate of compliance](#) for conformance of Euro 2 and 4 standards, as described in FAQ no. 7(b) above, will be accepted.

Registered Suppliers must provide evidence acceptable to NEA that a motor vehicle model has been granted type-approval, modified type-approval or batch type-approval from LTA prior to 1 Apr 09, as well as such other information as NEA may require.

For new motor vehicle models that are granted type-approval, modified type-approval or batch type-approval from LTA on or after 1 Apr 09, the fuel consumption figures for [urban, extra-urban and combined driving cycles](#) derived from the [emission test report](#) for conformance of Euro 2 and 4 standards, as described in FAQ no. 7(b) above, will be accepted.

10. Will there be a standardized Test Report format for FELS?

The Test Report must contain the requisite fuel consumption (L/100km, kg/100km, w-h/km) and CO₂ emission (g/km) figures for urban, extra-urban and combined driving cycles, and the following details.

- a) Model
- b) Make
- c) Model Code/ Version
- d) Transmission
- e) Type of body
- f) Engine Type
- g) Fuel Type
- h) Tyre Size
- i) Engine capacity (cc)
- j) Unladen mass (kg)
- k) Odometer reading (km)
- l) Country of origin
- m) Year of manufacture
- n) Test standard
- o) Manufacturer's name and address
- p) Colour photos showing the exterior and interior of the model as well as the engine
- q) Colour photo of the Vehicle identification Number (VIN) plate
- r) Detailed description of Vehicle Identification Number

The cover page of the Test Report shall be printed on the testing laboratory's company letterhead and it shall be signed and stamped by the testing laboratory.

Original test report issued by approved test laboratories can be accepted if it has all the information, and satisfies the requirements, as stated above.

11. What are the requirements for existing vehicle models that have stopped production and are still selling in Singapore?

Existing motor vehicle models that have been granted type-approval, modified type-approval or batch type-approval from LTA prior to 1 Apr 09 can be tested without the 3,000km run in. Instead a fixed evolution coefficient (EC) of 0.92 can be multiplied to the measured CO₂ emissions for computation of fuel consumption.

Registered Suppliers must provide evidence acceptable to NEA that a motor vehicle model has been granted type-approval, modified type-approval or batch type-approval from LTA prior to 1 Apr 09, as well as such other information as NEA may require.

12. What categories of testing laboratories can provide the Test Report?

Test Reports from the following categories of testing laboratories are acceptable:

- Testing laboratories that are accredited by the Singapore Accreditation Council (SAC) to carry out the tests in accordance with the applicable test standards
- Local and overseas testing laboratories recognised by LTA and NEA
- Independent testing laboratories located in countries that are accredited by their local accreditation bodies which have signed a Mutual Recognition Agreement (MRA) with SAC to carry out the tests in accordance with the applicable test standards
- Manufacturer's designated testing laboratories

13. Can a Test Report for the same RMV model be shared among registered suppliers?

Yes. However, every application for registration of the RMV model must be accompanied by the Test Report and such other documents (e.g. authorization letter to share Test Report) as may be required.

14. When a vehicle is supplied as a dual-fuel vehicle, for what fuel type should the information on the Fuel Economy Label be based on?

There must be two Fuel Economy Labels displaying information on the two fuels respectively.

15. If a vehicle is retrofitted locally to run on compressed natural gas (CNG) car, must the Fuel Economy Label display the fuel consumption figure for CNG fuel?

Only for modifications carried out by the manufacturer that affect the fuel consumption of the motor vehicle, is the Registered Supplier required to submit a Test Report showing the fuel economy of the modified vehicle model and such other information as NEA may require.

16. For models in the form of concept, prototype and pre-production motor vehicles that have not commenced mass production, is the Registered Supplier allowed to take advance orders?

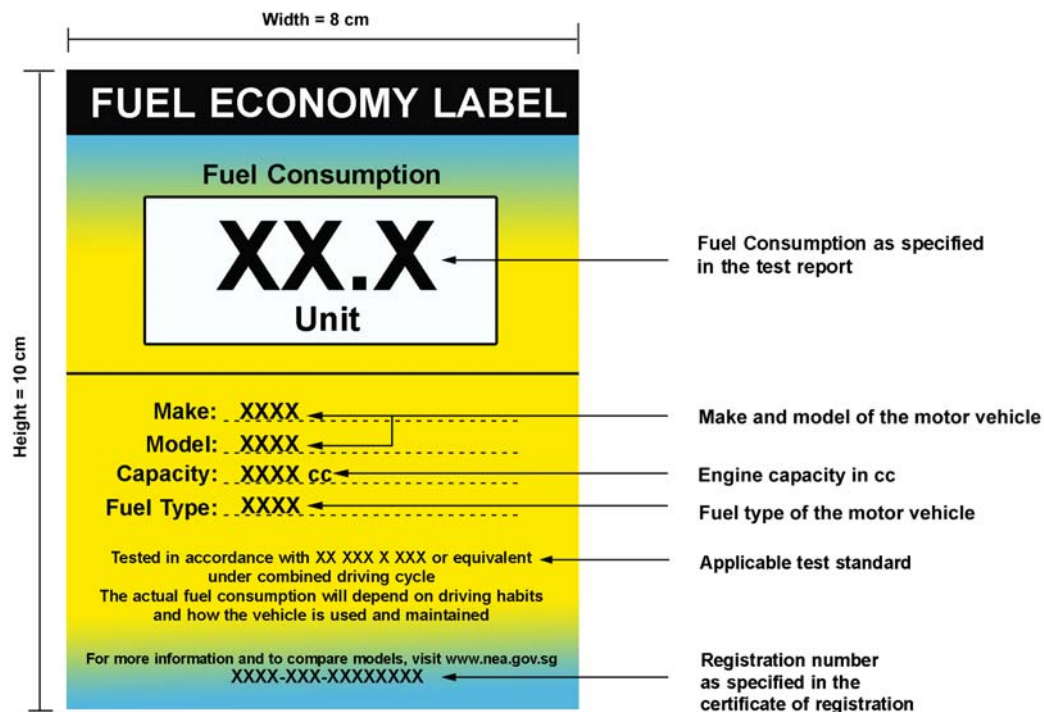
The approval will be granted on a case-by-case basis. The Registered Supplier has to register with NEA such motor vehicles and must provide evidence acceptable to NEA that a production model of the motor vehicle has not been produced, as well as such other information as NEA may require.

Once the motor vehicle goes into production, the Registered Supplier must submit the Test Report to NEA, before registering the motor vehicle for type-approval, modified type-approval or batch type-approval with LTA.

Fuel Economy Labelling

17. What key information on a registered motor vehicle model must be presented on the Fuel Economy Label?

The fuel consumption for the registered motor vehicle model measured in accordance with the prescribed test method under **combined driving cycle** must be presented on the label. A copy of the Fuel Economy Label is appended below.



18. Must the label be affixed on every registered motor vehicle supplied in Singapore?

Yes.

19. Where must the label be affixed on the registered motor vehicles?

In showrooms, the label must be affixed on the registered motor vehicle in a prominent manner, conspicuous and unobstructed. Affixing the label on the upper section of the vehicle's front windscreen would meet these criteria. For units supplied directly to customers, Registered Suppliers can affix the Fuel Economy Label on the unit or provide it in loose form.

20. Must the label be affixed on vehicles that are not intended to be driven on public roads?

For vehicles that are not intended to be driven on Singapore's public roads, the requirements of FELS do not apply to them. For example, vehicles intended for racing purposes at designated racing routes.

21. Who is responsible for printing the label?

Registered Suppliers are responsible for editing and printing the label. A softcopy of the label and a guide on how to edit and print the label will be provided to registered suppliers upon successfully registering their RMV models. A copy of a blank label is appended to the FAQs.

22. What is the approved material for the label?

The material to be used for the label are such material approved by the Director-General of Environmental Protection. The material should be durable. Registered suppliers may consult NEA by providing a sample of the label and indicating the material to be used and where they intend to affix the label.

Public Awareness Campaign

23. How would the Fuel Economy Label help car buyers?

The label provides information on the fuel consumption of the motor vehicle. It allows car buyers to compare the fuel consumption of the vehicle with vehicles of similar capacity and to factor this into their purchasing decision. A disclaimer will be included on the label to remind car buyers that the actual fuel consumption will depend on how the vehicle is used and maintained as well as the driver's driving habits.

24. How would NEA inform car buyers on how to use the information on the label?

NEA will develop informational materials to inform consumers on how to read the label and use the information to help them select fuel-efficient vehicle models. NEA will also work with motor traders to distribute such materials and raise public awareness on the mandatory FELS and the benefits of using fuel-efficient vehicles.