Global Fuel Economy Initiative

Shifting to Efficient and Zero Emissions Vehicles in the Global South

13-15 June 2022

Nairobi, Kenya

Session on Africa – 14 June 2022
Implementing Fuel Economy Policies in Mauritius
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Ministry of Environment, Solid Waste Management and Climate Change, Mauritius
Outline of presentation

- **Introduction** - Land Transport, Fuel Consumption, GHG Emissions
- **GFEI in Mauritius**
  - Phase 1
  - Phase 2
- **Implementation of GFEI Policies**
- **New initiatives for decarbonisation of the land transport system**
- **Conclusion**
Land Transport

- More than 600,000 vehicles as at 2021
- More than 2700 km of roads
- Modernisation of the public transport landscape in Mauritius with the operation of the light rail system in January 2020 (The Metro Express)
Vehicles

Source: National Land Transport Authority
Fuel Consumption

- The Transport sector represents around 50% of the total final energy consumption.

![Figure III - Final energy consumption by sector, 2019](image)

Source: Statistics Mauritius
GHG emissions from transport sector

Since 2010, land transport emissions have accounted for between 25% and 26.5% of national CO2e emissions.

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</tr>
</thead>
<tbody>
<tr>
<td>GHG emissions, ktCO2e</td>
<td>645</td>
<td>736</td>
<td>834</td>
<td>918</td>
<td>1,044</td>
<td>1,063</td>
<td>1,083</td>
<td>1,109</td>
<td>1,132</td>
</tr>
<tr>
<td>% of total CO2e emissions</td>
<td>37</td>
<td>30</td>
<td>28</td>
<td>25</td>
<td>26</td>
<td>26</td>
<td>25</td>
<td>26</td>
<td>26.4</td>
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</tbody>
</table>

GHG emissions from transport sector

Source: National Inventory Report 2021
GFEI in Mauritius

- UNEP assistance
- **PHASE 1: 2013 to 2014**
  - **Objective:** To come up with a ‘Cleaner, More Energy Efficient Vehicles Strategy, Policy Package and Timeline for Implementation’
  - **Process:** A National Task Force Committee under chair of the Ministry of Environment and 3 Working Groups (WGs) were set up.
  - Two national workshops held:
    i. at start of project to inform stakeholders of the project goals
    ii. at end of the project to present key findings and policy recommendations.
GFEI Phase 1

- A baseline fuel economy was worked out for year 2005 and 2013 according to GFEI methodology;
- Proposals on vehicle regulations and policies for the promotion of cleaner and more energy efficient vehicles were made;
- A cost-benefit analysis of policy options to support fuel economy was made.
GFEI Phase 1

Benefits obtained

Generate policy interest in the topic
Data collection (vehicle inventory)
Further enhance stakeholder networks
Develop interim policy options
Contribute to public sensitization
Capacity building of local stakeholders

This phase laid down the foundation for further analysis, discussion and development of a detailed vehicle strategy.
GFEI in Mauritius (Phase 2)

- **Phase 2: 2015 to 2018**
- **Objective:** ‘Promoting Cleaner, More Energy Efficient Vehicle Strategies in Mauritius and the Southern Africa Region’

- **Process:** Steering Committee and 6 Technical Working Groups set up

- **Consultations:** Over 80 consultative meetings held with Ministries, para-statal bodies, academia, and the private sector
Technical Working Groups

1. Vehicle labelling Regulations
2. Cleaner fuels
3. Vehicle Inventory
4. Traffic management measures
5. Fiscal incentives
Successful Implementation

- Fuel quality
- Fiscal incentives
- Vehicle Labelling Regulations
- Traffic Management measures (grade separated junctions)
- Sub-regional workshop
- Sensitisation (Radio clips, pamphlet on.ecodriving)
Fuel quality

- **2001**
  - Diesel Sulphur content lowered from 5000 to 2500 ppm

- **2002**
  - Introduction of unleaded petrol
  - Petrol with 1000 ppm Sulphur

- **2010**
  - Diesel Sulphur content lowered from 2500 to 500 ppm

- **2012 – 2020**
  - Diesel Sulphur content lowered from 500 to 50 ppm

- **2021**
  - Ultra low Sulphur Fuels - Petrol and diesel with 10 ppm Sulphur
Fiscal incentives

2011
- CO₂ Feebate system

2016
- Reduction of excise duty on hybrid and electric cars

2022
- As from 01 July, all hybrid and electric vehicles will be duty free
Feebate system

2011: Under the CO₂ levy/rebate scheme, a motor car buyer pays an additional amount as levy per gramme of CO₂ per km emission above a set threshold. On the other hand, the buyer receives a rebate if the CO₂ emission value of his motor car is below the CO₂ threshold.

On 30 July 2016, the CO₂ levy/rebate scheme was suspended as there were a number of operational and litigation issues – such as there were different standards for measurement of CO₂ (UNECE Regulation No. 101, JC08 Emission Test Cycle).
Reduction of excise duty on hybrid and electric cars

- **2016:**
  - The rates of excise duty on hybrid motor cars were lowered by 30 percentage points for all cylinder capacity (c.c.).
  - Excise duty was also abolished on electric cars of up to 180 kW.
  - Hybrid and electric cars also benefitted from other fiscal incentives - registration duty and road tax.
Vehicle Labelling Regulations

**Fuel Economy**

- **4 1/2 stars**
- **Fuel Economy Rating Out of 6**

**Fuel Consumption**

- **Make Model Variant Transmission Fuel Type**
  - 12.4 Combined Test
  - 16.7 Urban
  - 9.8 Extra Urban
  - CO₂ Emissions (g/km) 291 Combined Test

**Environmental Comparisons**

- **25 MPG**
- **Annual Fuel Cost $1,680**

**Disclaimer:** The information on this label is provided for comparative purposes. Your actual cost per year and fuel consumption will vary from what is shown, depending on factors such as vehicle condition and any vehicle modifications, driving style, traffic conditions, climate, travel and fuel price variations. You should not expect to meet exactly what this label says. Visit www.enviroguide.gov.au to find out more about this label and New Zealand’s fuel economy.

**EPA Fuel Economy and Environmental Comparisons**

- 4.0 gallons of gasoline used every 100 miles

**How This Vehicle Compares**

- Among all vehicles and within midsize cars
  - Worst: 10
  - 25
  - Best: 100

**Other Air Pollutants**

- Smartphone Interaction

Visit www.enviroguide.gov.au to calculate estimated rates for your driving, and to download the Fuel Economy Guide for free. Policy may change.
Fuel Economy Label


- A dealer shall affix a label on every new motor car which is displayed for sale.
# Fuel Economy Label

## SCHEDULE

[Regulation 4]

<table>
<thead>
<tr>
<th>FUEL CONSUMPTION AND CARBON DIOXIDE EMISSION LABEL [28]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Make – [28]</td>
</tr>
<tr>
<td>Model – [28]</td>
</tr>
<tr>
<td>Engine capacity – [24]</td>
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<tr>
<td>Fuel type – [24]</td>
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<tr>
<td>Fuel consumption [22] (litres per 100 kilometres) [22]</td>
</tr>
<tr>
<td>Carbon dioxide (CO₂) emissions [22] (grammes per kilometre) [22]</td>
</tr>
<tr>
<td>[72]</td>
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<td>[72]</td>
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</tbody>
</table>

**Notes** – [12]

1. The fuel consumption and level of CO₂ emission shall be as specified by the car manufacturer [12].
2. Actual fuel consumption and CO₂ emissions shall depend on factors such as traffic conditions, vehicle condition and driving behaviour [12].
3. Carbon dioxide is the main greenhouse gas responsible for global warming and climate change [12].

It shall be an offence to remove, cover or damage this label before the sale of this motor car [12].

More information can be obtained at [http://environment.govmu.org](http://environment.govmu.org) [12].

1. All fonts shall be in arial and bold.
2. The numbers in square brackets indicate the font size.
Benefits of labelling regulations

- Consumers understand the choices available to them.
- They can compare fuel consumption and Carbon Dioxide emissions of different vehicle models.
- They can make informed decisions about the more efficient and environment-friendly vehicles.
Traffic management measures
Traffic management measures

- To improve the fluidity of traffic and travel time thus reducing fuel consumption and carbon dioxide emissions.
- A number of measures has been implemented to optimise traffic flow, including:
  - Traffic control measures such as grade separated junctions and road infrastructural improvements;
  - Introduction of the Light Rail Transport system – The Metro Express;
Sub-regional Workshop
(12–13 October 2017)

- More than 70 participants from some 20 African countries
- Objective was to share experiences on GFEI
- A roadmap on fuel economy for the African sub-region was developed comprising common low-carbon land transport strategies.
Sensitisation
Radio clips and pamphlet on Ecodriving

Quick Tips On Eco Driving

Eco driving is a new driving culture which means smarter and more fuel efficient driving that reduces the emanation of pollutants.

- Starting the engine – when starting a fuel injected engine, do not accelerate. This will minimize harmful emissions.
- Accelerate gently - Avoid harsh accelerations as this can use up to four times more fuel.
- Steady speed - Maintain a steady speed for fuel efficiency and harmonise the gear changes with respect to the acceleration.
- Decelerate to slow down - Releasing the accelerator to slow down stops fuel supply.
- Do not let your engine idle – Do not let your engine on when not moving, as this causes wastage of fuel.

Check your tyre pressure regularly - Correctly inflated tyres can lead to fuel economy. Tyre pressure should be checked at least once a week.

- Think ahead when you drive – Anticipate traffic flow. Keep appropriate distance between your car and the one in front to avoid sudden braking.
- Avoid speeding – High speeds consume more fuel. Driving at 100 km/h instead of 90 km/h will make you consume around 10-15% more fuel.
- Limit the use of air conditioning – Air conditioning uses up a lot of fuel due to the additional mechanical and electrical demand that it imposes.
- Avoid carrying unnecessary weight – Increasing the load of the car increases fuel consumption.
- Be attentive to the signboards on the road – abide by the above advices and avoid honking in sensitive places like hospitals.

Prepared by the Ministry of Environment, Sustainable Development, Disaster and Beach Management with funding from the European Union and the Global Environment Facility.
Sensitisation

- A TV clip focussing on vehicle emissions was aired on 3 local channels in January 2019 to sensitise people on fuel economy, vehicle label and air pollution from the transport sector amongst others
Back to some statistics

Total number of Hybrid vehicles registered: 2013-2022

Source: National Land Transport Authority
Back to some statistics

Total number of Electric vehicles (by type) registered: 2012-2022

Source: National Land Transport Authority
Budget 2022-2023

- Accelerating the Land Transport Electric Vehicles Transition

- “We will further reduce our dependence on import of petroleum products, decarbonize the land transport system, and accelerate the EV transition.”
Measures announced in budget 2022-2023

- Photovoltaic farms will be set up to meet the electricity needs of the light rail system.
- Leasing facilities will be provided to transport operators to acquire electric vehicles and charging infrastructure to further promote the electrification of the public transport system.
- The public transport company will be equipped with 200 electric buses to renew half of its fleet.
- The Bus Modernisation Scheme will apply only to electric buses (initially the “Bus Modernisation Programme”, provided financial incentives to bus operators for the purchase of modern semi-low floor buses).
Measures announced in budget 2022-2023

- Concessionary leasing will be provided to companies renewing their company fleet to electric vehicles.
- Taxis and van operators will be provided loan facilities for the purchase of electric vehicles.
- As from 1st July 2022, all hybrid and electric vehicles will be duty-free.
- A negative excise duty scheme of 10 percent is being introduced for the purchase of electric vehicles by individuals.
Conclusion

- **Budget 2022 – 2023**: Firm commitment to decarbonise the land transport sector
- **With these new measures** the number of hybrid and electric vehicles will increase.
Thank You