

THE NATIONAL BIOFUEL POLICY



MINISTRY OF PLANTATION INDUSTRIES AND COMMODITIES
MALAYSIA

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FOREWORD

By the Prime Minister of Malaysia



The depletion of fossil fuels will require Malaysia to use more sources of renewable energy for the sustainability of its development. Malaysia will also have to address the associated environmental issues, particularly greenhouse gas emissions. For this, Malaysia will need a planned and dedicated approach with the appropriate measures, hence the formulation of the National Biofuel Policy.

The National Biofuel Policy encourages the use of biofuels in line with the nation's Five-Fuel Diversification Policy. It spells out a comprehensive framework with concrete initiatives in line with the objectives of the United Nations Framework Convention on Climate Change (UNFCCC) to which Malaysia is a party. Malaysia has the potential to lead the way in biofuels production capitalising on its vast production of agricultural products and by-products.

The National Biofuel Policy sets the platform for attainment of the following objectives:

- supplementing the depleting supply of fossil fuels with renewable resources;
- mobilising local resources for biofuels
- exploiting local technology to generate energy for the transportation and industrial sectors;
- paving the way for exports of biofuels; and
- benefiting from the spin-off effect of more stable prices for palm oil.

Implementation of the National Biofuel Policy will be spearheaded by the Minister of Plantation Industries and Commodities. Towards this end, specific legislation on biofuels will be enacted. I call upon all the organisations and stakeholders associated with the implementation of this Policy to give their full commitment and support to achieve our national aspiration. God willing, we will cater for the well being of the present as well as future generations.

YAB Dato' Seri Abdullah Hj Ahmad Badawi
Prime Minister of Malaysia



MESSAGE

From the Minister



On behalf of the Ministry of Plantation Industries on Commodities (MPIC) and its agencies, I wish to express my gratitude to the Government for entrusting us the lead in formulating the National Biofuel Policy (NBP).

Biofuels are becoming an increasingly important alternative source of energy. In a number of countries, their use has been gaining momentum. We realise the need for alternative energy sources that are both renewable and more environmentally friendly. In Malaysia, there are vast agricultural products that can be turned into biofuels. Hence, the NBP will pave the way for extensive development of the biofuels sector to ensure their greater use in the country.

The NBP was only formulated after extensive consultation with all the stakeholders and as a result of research findings by PORIM/MPOB since 1982. It took into account the development, feasible use and sustainable supply of biofuels in the short, medium and long terms.

The policy will focus on blending processed palm oil with petroleum diesel. It will also involve converting palm oil into biodiesel (methyl esters), mainly for export.

I take this opportunity to thank YAB Prime Minister for his support and guidance towards the formulation of the NBP, while at the same time commending all relevant Ministries and agencies for their contribution and cooperation. My appreciation also goes to all industries, in particular the palm oil industry, petroleum, automotive and industrial sectors, as well as, to the institutions directly or indirectly involved in this endeavour.

YB Datuk Peter Chin Fah Kui
Minister of Plantation Industries and Commodities Malaysia

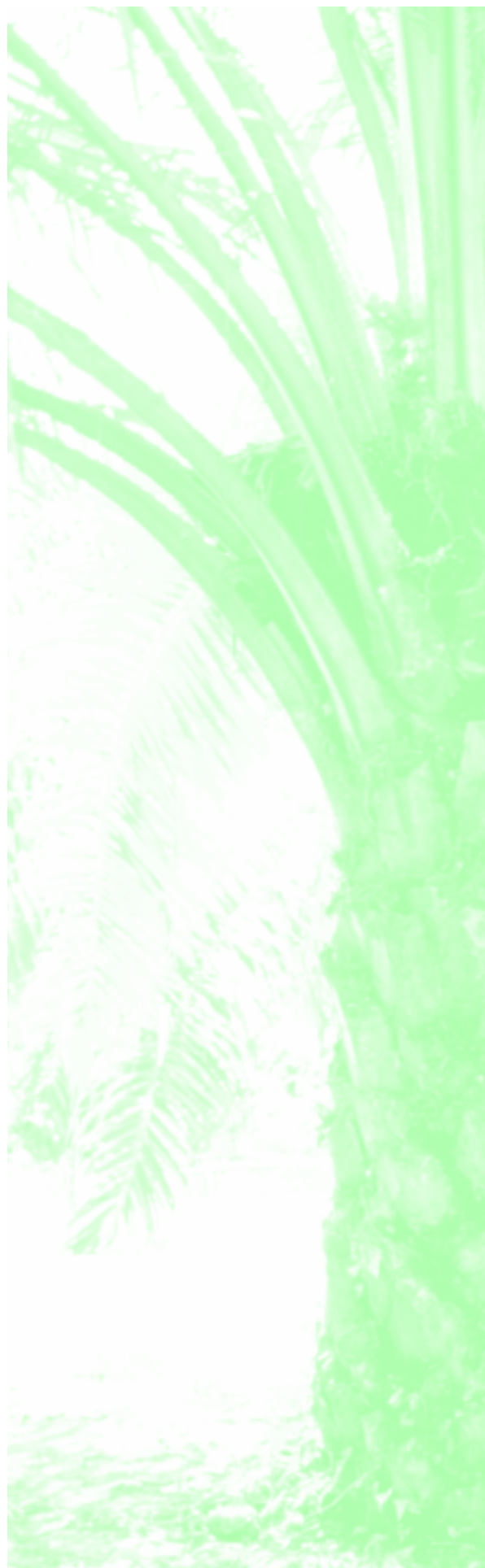
BACKGROUND

The fast depletion of fossil fuels, coupled with the increasing awareness of environmental issues, concern for increasing green house gas emissions and escalating petroleum prices, have led to concerted efforts in the search for renewable and environmentally friendly alternative energy sources.

Biofuel is one such fuel. In the global scene, especially on the European front, the use of methyl esters as diesel has achieved widespread acceptance. In fact, biodiesel made from rapeseed oil is already produced on a significant scale in Europe. The demand in the EU is projected to increase from 3 million tonnes in 2005 to 10 million tonnes in 2010. The United States, Brazil, India and Japan, have already embarked on their own biofuels programme, while other countries like Korea and Thailand have set specific targets for biofuels implementation.

As the world's largest palm oil producer and exporter, Malaysia is now looked upon as the pioneer palm biofuel producer. Malaysia has embarked on a comprehensive palm biofuel programme since 1982 and has successfully established the use of palm methyl esters and the blend of processed palm oil (5%) with petroleum diesel (95%) as a suitable fuel for the transport and industrial sectors. Homegrown indigenous palm biodiesel production technologies, including winter palm biodiesel, have also been successfully developed. These products and technologies can be further developed for the world market.

Formulation of the National Biofuel Policy would ensure healthy development of the biofuel industry, in line with the Five Fuels Diversification Policy.



National Biofuel Policy

The National Biofuel Policy envisions

- Use of environmentally friendly, sustainable and viable sources of energy to reduce the dependency on depleting fossil fuels,
- Enhanced prosperity and well-being of all the stakeholders in the agriculture and commodity based industries through stable and remunerative prices.

STRATEGIC THRUSTS

The National Biofuel Policy envisions that biofuel will be one of the five energy sources for Malaysia, enhancing the nation's prosperity and well-being. The policy is primarily aimed at reducing the country's dependence on depleting fossil fuels, promoting the demand for palm oil as well as stabilising its prices at a remunerative level.

The Policy is underpinned by five strategic thrusts:

THRUST 1: BIOFUEL FOR TRANSPORT

Diesel for land and sea transport will be a blend of 5% processed palm oil and 95% petroleum diesel. This B5 diesel will be made available throughout the country. As this sector is the main user of diesel which is highly subsidised, it will be given priority in this policy.

THRUST 2: BIOFUEL FOR INDUSTRY

B5 diesel will also be supplied to the industrial sector including for firing boilers in manufacturing, construction machinery, and generators.

THRUST 3: BIOFUEL TECHNOLOGIES

Research, development and commercialisation of biofuel technologies (including technologies for extraction of minor components therein) will be effected and adequately funded by both the government and private sectors including venture capitalists to enable increased use of biofuel.

THRUST 4: BIOFUEL FOR EXPORT

Worldwide interest reflects the important role of biofuels in energy for sustainable development. Malaysia will have an edge to supply the growing global demand for biofuel. The establishment of plants for producing biofuel for export will be encouraged and facilitated.

THRUST 5: BIOFUEL FOR CLEANER ENVIRONMENT

The use of biofuel will reduce the use of fossil fuels, minimise the emission of green house gases (carbon dioxide), carbon monoxide, sulphur dioxide and particulates. Increased use of biofuel will enhance the quality of the environment.

IMPLEMENTATION

Short Term



Figure 1. Various Biodiesel Blends.

- The Malaysian Standard specifications for B5 diesel will be established.
- Selected Government departments with their fleets of diesel vehicles will participate in trials for using B5 diesel.
- B5 diesel pumps for the public will be established at selected stations.
- Voluntary trials on B5 diesel will be run by MPOB for selected users in the industrial sector.
- A promotional awareness programme will educate the public on the use of B5 diesel.
- The voluntary trials will be monitored to enhance acceptance of B5 diesel.

Medium Term



Figure 2. Vehicle Running on B5.

- The Malaysian Standard specifications for palm oil based methyl ester biofuel for domestic use and export will be established.
- Efforts will be made to get engine manufacturers to extend their warranties to the use of B5 diesel. Extensive B5 diesel testing shall be carried out to facilitate the granting of such engine warranties.
- Legislation to mandate the use of B5 diesel will be passed and enforced.
- To meet strategic thrust for exporting biofuel, establishment of commercial methyl ester plants will be encouraged. In this regard, MPOB will act as a catalyst by pioneering the establishment of palm biodiesel plants in Malaysia in collaboration with the private sector.

Long Term

- The proportion of processed palm oil in the diesel blend will be gradually increased.
- Greater uptake of biofuels technology by Malaysian companies and foreign companies abroad.

INCENTIVES

Biodiesel is included in the list of products/activities that are encouraged under the Promotion of Investments Act 1986. Biodiesel projects are therefore eligible to be considered for Pioneer Status or Investment Tax Allowance.

If such projects fulfill specific criteria, they may also be considered for other incentives including:

- i) Incentives for Strategic or High Technology projects;
- ii) Incentives for Commercialisation of Research and Development findings of the public sector in resource based industries.



Figure 3. Palm Biodiesel Plant at the Malaysian Palm Oil Board (MPOB).

BENEFITS

- **Mitigating the Effects of Petroleum Price Escalation**

In view of the escalating petroleum price and depleting sources of petroleum, the introduction of biofuel as a fifth source of energy is deemed critical. It will help to reduce the dependency on fossil fuels.

- **Savings in Foreign Exchange**

The introduction of palm based biofuel as a diesel substitute will help to reduce imports of petroleum diesel. This will help save foreign exchange.

- **Environment Friendly Source of Energy**

The use of renewable palm oil as biofuel will help reduce the use of fossil fuel and indirectly reduce the emissions of greenhouse gases such as carbon dioxide to the atmosphere.

- **New Demand for Palm Oil**

By using palm oil-based diesel substitutes in the form of biofuel, new demand for palm oil will be stimulated.

Malaysia being the world's largest producer and exporter of palm oil will benefit through the creation of new markets to use palm oil as a diesel substitute locally and overseas.

- **Mutually Beneficial Effects on Petroleum and Palm Oil Sectors**

By creating the new demand for palm oil, its price will be stabilised at a higher level.

Blending 5% processed palm oil with all diesel in the country will create a new demand for 500,000 tonnes of palm oil (assuming national consumption of 10 million tonnes of diesel per year). This will be equivalent to removing 40%-50% of the current national stock of palm oil.

As an illustration, an estimated increase of RM 100 in palm oil price will lead to a gain of export revenue of RM1 billion from the export of 10 million tonnes per year. This will mean additional revenue for the Government from increased corporate taxes.

- **Achieving Socio Economic Safety Net**

The possibility of varying the proportion of processed palm oil in the blend provides the flexibility for supply management as a means for achieving a socio economic safety net to ensure a remunerative price for palm oil.

- **Efficient Utilisation of Raw Materials**

The implementation of National Biofuel Policy will stimulate more efficient utilisation of raw materials.

CONCLUSION

The biofuel policy will help the country reduce its petroleum imports and save foreign exchange. Any gain in revenue by the industry and Government will reduce the subsidy burden of the Government.

Being renewable, palm oil has an important role to play in supplying the energy needs of the country by incorporation in the national diesel supply. Its use as biofuel will create a new demand in the export market, thus helping to strengthen Malaysia's position as a leading producer and exporter of palm oil. This will enable all the stakeholders in the palm oil industry to continue to prosper and enable Malaysia to exercise greater influence over the palm oil price. It will also be in line with global efforts to reduce the emissions of greenhouse gases, and underscores Malaysia's contribution to this global objective.

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