KeTTHA
KEMENTERIAN TENAGA, TEKNOLOGI HIJAU DAN AIR

NATIONAL INITIATIVES FOR A LOW CARBON SOCIETY

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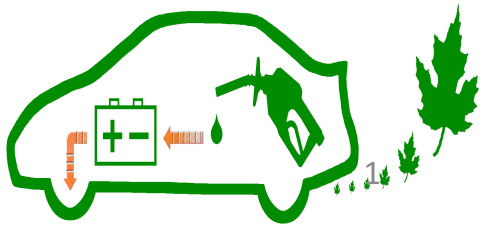


MALAYSIA'S COMMITMENT

"I am pleased to be able to announce that by the end of 2015, Malaysia is projected to have achieved a reduction in the green house gas intensity of GDP of 35 percent vis-à-vis our pledged 40% carbon intensity reduction by 2020

POLICY MEASURES & MITIGATION TOWARDS ACHIEVING LOW CARBON GROWTH

The introduction of policy measures and mitigation have been undertaken by the government to ensure the goals of **sustainable development** is achieved

Green Technology has been identified as a driver of the future economy for the nation that would contribute to overall Green Growth and Sustainable Development

MALAYSIA'S INTENDED NATIONALLY DETERMINED CONTRIBUTION (INDC)

PARIS AGREEMENT 12 Dec 2015

Malaysia intends to reduce its greenhouse gas (GHG) emissions intensity of GDP by 45% by 2030 relative to the emissions intensity of GDP in 2005. This consist of 35% on an unconditional basis and a further 10% is condition upon receipt of climate finance, technology transfer and capacity building from developed countries.

MINISTRY OF ENERGY, GREEN TECHNOLOGY & WATER

In April 2009, the Ministry of Energy, Green Technology and Water was established.

In July 2009, the National Green Technology Policy was introduced.

Low Energy Office (LEO)

Ministry of Energy, Green Technology and Water (KeTTHA), Putrajaya

NATIONAL GREEN TECHNOLOGY POLICY

ENERGY
Seek to attain energy independence and to promote efficient utilisation

ENVIRONMENT
Conserve and minimise the impact on environment

ECONOMY
Enhance the national economic development through the use of technology

SOCIAL
Improve the quality of life for all

Rationale for Low Carbon Community

- Malaysia's urban population will rise to 82 percent of its total population expected 32.4 million in 2020. (*source: World Bank*).

Economic Indicators (2015)	
Population	30.03 million
Area	330,290 sq km
GDP	RM1,070 billion
GDP Growth	6.0%
Per capita income	RM33,875

Energy Resources (2013)	
Oil	5.9 billion barrel
Gas	98.315 Trillion Standard Cubic Feet(TSCF)
Coal	1.94 billion metric tonne
Hydro	20 GW

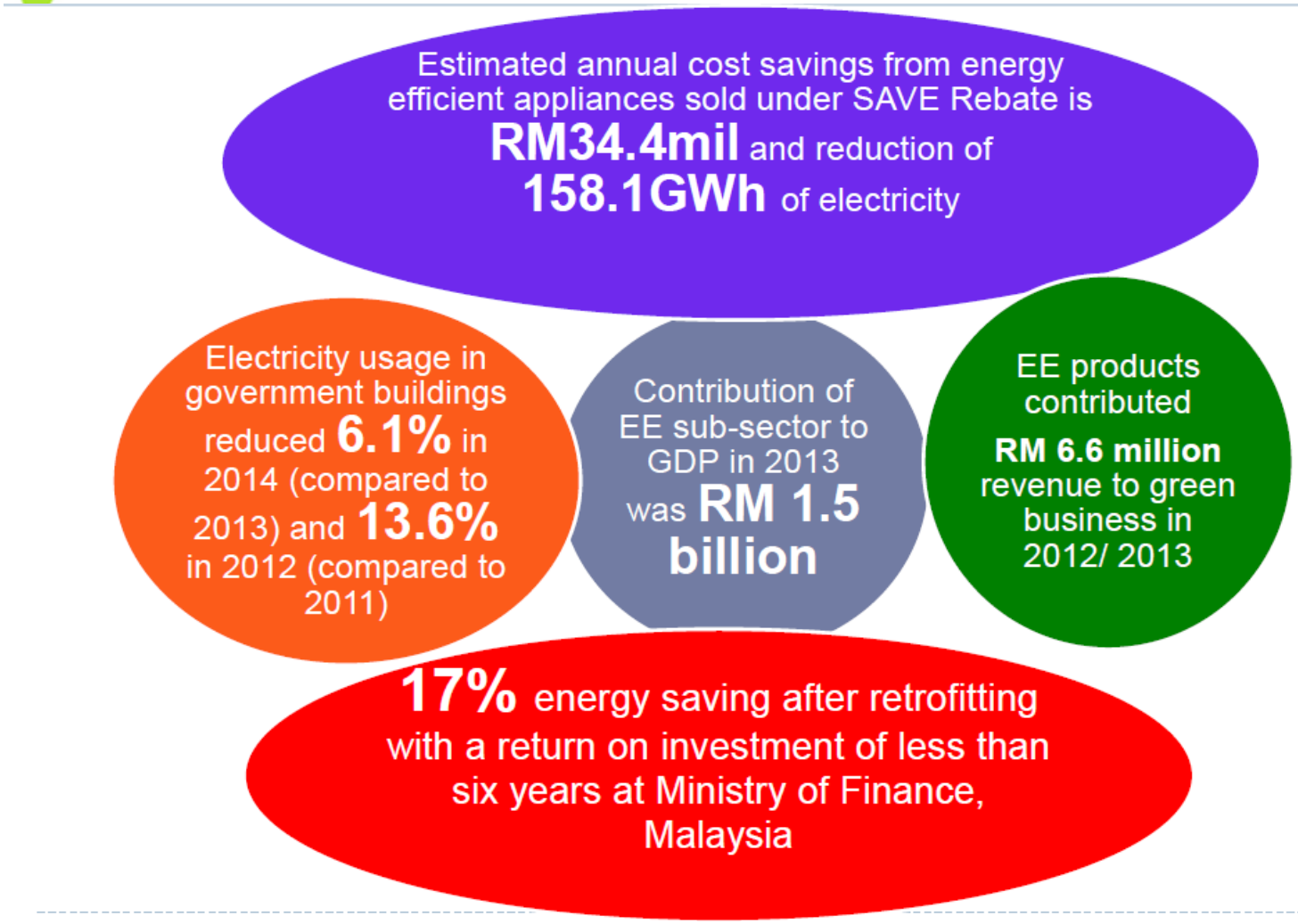
Renewable Energy Targets

Year	Cumulative RE Capacity	RE Power Mix (vs Peak Demand)	Cumulative CO_2 avoided
2020	2,080 MW	11%	42.2 mt
2030	4,000 MW	17%	145.1 mt

Achievement of Feed-in Tariff (till 31 October 2015)

	No of jobs create	RE generation (MWh)	Installed capacity (MW)	FiTCD capacity (MW)	Co2 reduction (tonnes)	Total inve (RM
gas (palm oil waste, ago based & ning)	3,392	949,431.10	135.69	17.23	683,066.39	1,093,957,
nas (palm oil waste, ago based & ning)	7,675	1,531,516.74	257.99	74.90	1,026,072.15	1,565,727,
i hydro	4,100	1,704,289.30	273.34	18.30	1,220,830.17	2,500,193,
PV	7,488	405,653.20	299.53	215.0	292,526.54	3,172,506,9
hermal	450	236,520.00	30.00	0.0	129,139.92	0.00
AL	23,105	4,827,410.34	996.55	325.41	3,351,635	8,332,385,

Achievement from Energy Efficiency Initiatives



COMMITMENT TOWARDS GREEN ECONOMY

The National Green Technology Policy represented a significant milestone in the country's pursuit of green economic development. It encompasses short, medium and long term objectives under the respective Malaysia Plans:

10 MP

In the short term (2011 – 2015), to :

- Increase public awareness and commitment
- Greater availability and recognition for green technology
- Increased FDI in green technology
- Expanding R&D on green technology towards commercialization

11 MP

In the medium term (2016 – 2020), to :

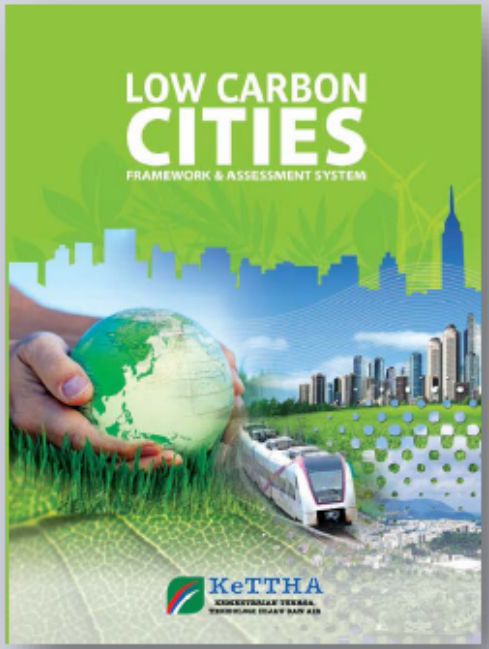
- Increase local production of green technology products
- Proliferation of green technology applications
- Expansion of green technology businesses into the global market
- Increased R&D on green technology

12 MP

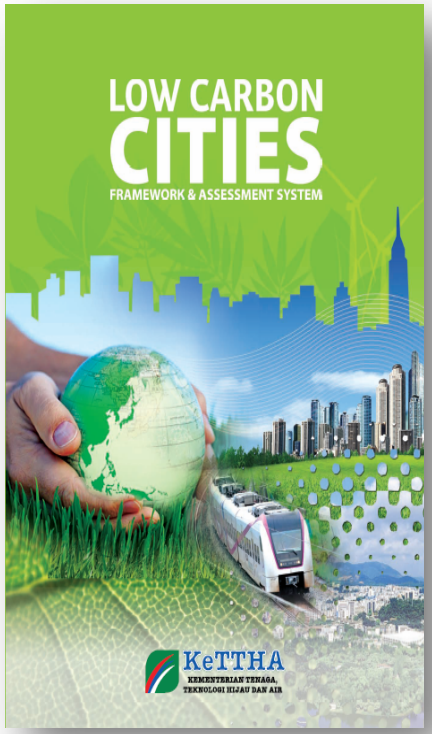
In the longer term (2021 – 2025 and beyond), to :

- Inculcation of green technology in Malaysian culture
- Widespread adoption of green technology
- Significant reduction in national energy consumption
- Improvement of Malaysia's ranking in environment ratings
- Malaysia becomes a major producer of green technology globally

Transforming the Building Sector

No.	Green Building Tools/ Guides	Description
1.	Low Carbon Cities Framework & Assessment System (LCCF) 	• Launched in 2011by Ministry of Energy, Green Technology and Water, Malaysia; • Objectives of LCCF are (i) to encourage & promote the concept of low carbon cities and townships in Malaysia; (ii) to increase the compatibility of cities/townships with their local natural system; (iii) To guide cities in making choice/decisions towards greener solutions. Achievements (till Nov 2015) -CO_2 baseline calculated for **8** sites -Project Briefs completed for **6** sites

TOWARDS A LOW CARBON ECONOMY



4 ELEMENTS OF LOW CARBON CITIES FRAMEWORK

- Urban Environment
- Buildings
- Urban Infrastructure
- Urban Transportation

Low Carbon Cities – Pilot Project (2015)

- Cyberjaya
- Pulau Sah Besar, Tasik Kenyir
- Majlis Bandaraya Miri, Sarawak
- Universiti Malaya (UM)
- Universiti Teknologi Malaysia (UTM)
- & 10 Local authorities

Low Energy Office
LEO

Green Energy Office
GEO

Diamond Building

National Initiatives in Greening the Building Sector (2)

No.	Green Building Tools/ Guides	Description
2.	Green Building Index (GBI) 	• Launched in 2009 • The index is based on criteria which are: (i) energy & water efficiency; (ii) Indoor environmental quality; (iii) Usage of recyclable & environment friendly material; and (iv) adoption of new technology. • Achievement (till 15/10/2014): - **334** buildings certified (152 million sqft) - **0.73** $MtCO_2eq$ of emission reduction by GBI certified buildings

National Initiatives in Greening the Building Sector (3)

No.	Green Building Tools/ Guides	Description
3.	Malaysian Carbon Reduction and Sustainability Tool (MyCREST)	• currently being developed to be proposed as the National Green Rating Tool; • tool for sustainable building rating system which aims at quantifying, reducing built environment's impact in terms of carbon emissions and environmental implication; • Integrating socio-economic considerations relating to the built environment and urban development. • Takes into account a more holistic lifestyle view of the built environment; and 

National Initiatives in Greening the Transport Sector •Electric Mobility

Malaysia's Targets for Electric Mobility by 2020

100,000 electric cars
100,000 electric motorcycles
2,000 electric buses
125,000 charging stations

EXPECTED OUTCOMES

- Reduction of emission by **0.6 mil tonnes CO_2**
- Reduction fuel subsidy cost by **25%**, estimated at **RM0.1 bill by 2020**
- Enhancement of economic growth: expected **RM328 mil** investment by 2020
- Reduction of healthcare cost from better environmental condition

•Energy Efficient Vehicles

CURRENT SCENARIO (till October 2015)

No. of Hybrid Cars:
43,256

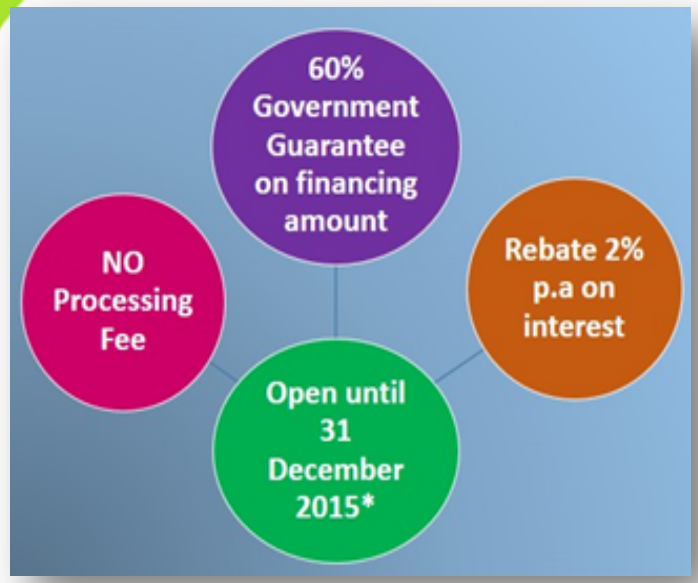
No. of Electric Bikes:
1,144

Revenue from Green Transportation in 2012/2013
RM 2.4 billion

No. of Electric Cars:
120

No. of EV Charging Stations:
41

GREEN TECHNOLOGY FINANCING SCHEME (GTFS)



* The Scheme will expire on 31 December 2015 or upon reaching financing approval of RM3.5 billion, whichever earlier

Total loan amount: **RM 3.5 billion**
Duration: Jan 2010-Dec 2015

A total of RM 2.02 billion has been approved till Dec 2014

Estimated CO_2 emission reduction via approved GTFS projects: 2.09 $MtCO_2e/yr$

No. of green jobs created from GTFS projects: 2467 jobs

A summary of the salient terms of the Scheme

FEATURES	PRODUCER OF GREEN TECHNOLOGY	USER OF GREEN TECHNOLOGY
Financing size	Maximum: RM50 million per company	Maximum: RM10 million per company
Financing tenure	Up to 15 years	Up to 10 years
Eligibility criteria	Legally registered Malaysian-owned companies (at least 51%)	Legally registered Malaysian-owned companies (at least 70%)
Participating financial institutions (PFIs)	All commercial and Islamic banks, and DFIs (Bank Pembangunan, SME Bank, Agrobank, Bank Rakyat, EXIM Bank and Bank Simpanan Nasional)	

GOVERNMENT GREEN PROCUREMENT (GGP)

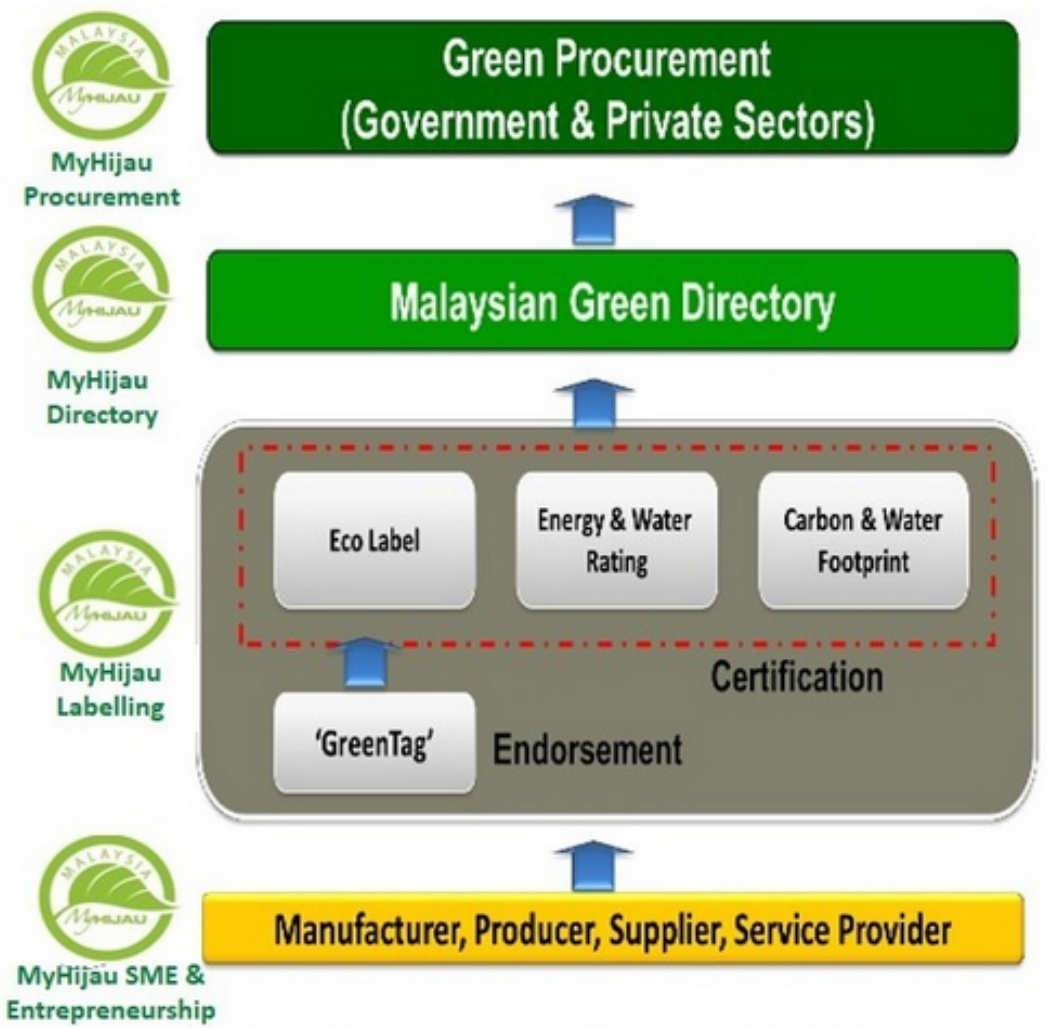
Recognising the importance of Government Green Procurement (GGP), the Malaysian government has engaged in various initiatives to boost demand for green products and services with the target set at 50% of the selected products and services purchased by the government sector are eco-labelled by the year 2020.

GGP provides numerous benefits, among others are:

- Promote local markets;
- Improve environmental performance;
- Contribute to economic performance;
- Expand markets for innovative sustainable solutions;
- Stimulate competition; create markets for appropriate technology; and
- Help to develop the marketplace

GGP process flow

based on GreenTech Malaysia's sustainable procurement initiatives:



MyHIJAU PROGRAM

Sustainable Consumption

MyHIJAU Procurement

MyHIJAU Directory

Sustainable production

MyHIJAU Mark

MyHIJAU Industry & SMEs

MyHIJAU PROGRAM

SIRIM ECO-LABEL

No. of products received SIRIM Ecolabel

454

No. of products received SPAN Water Efficient Label Product Scheme

119

No. of products received Energy Rating Label Scheme

236

Note: Statistics above is till December 2014

TAX INCENTIVES

For Green Technology

No.	Tax Incentives
1.	**Energy Efficiency** i. Providing energy conservation services a. PS 100% for 10 years; or ITA 100% for 5 years offset against 100% of SI b. Import duty and sales tax exemption on energy conservation equipment ii. Undertaking conservation of Energy for own consumption a. ITA 100% for 5 years offset against 100% of SI b. Import duty and sales tax exemption on energy conservation equipment
2.	**Renewable Energy** i. Energy generation activities using renewable energy resources a. PS 100% for 10 years; or ITA 100% for 5 years offset against 100% of SI b. Import duty and sales tax exemption on equipment used to generate energy from renewable sources ii. Generation of renewable energy for own consumption a. ITA 100% for 5 years offset against 100% of SI b. Import duty and sales tax exemption on equipment used to generate energy from renewable sources

PS – Pioneer Status
SI – Statutory Income

ITA – Investment Tax Allowance
PIA – Promotion of Investment Act 1986

TAX INCENTIVES

For Green Technology (cont'd)

No.	Tax Incentives
3.	**Green Building Index (GBI)**
4.	**Incentives for storage, treatments and disposal of toxic and hazardous wastes**
5.	**Incentives for waste recycling activities**
6.	**Incentives for forest plantation projects**
7.	**Strengthening development of green technology**
8.	**Exemption of income derived from trading of Certifies Emission Reduction CER certificates**
9.	**Franchise holders of imported hybrid and electric cars and motorcycles**

SUMMARY

Policies & Regulation • NationaL Renewable Energy Policy and Action Plan • Renewable Energy Act • National Climate Change Policy • National Automative Policy	**Institutional Framework** • Malaysian Green Technology Corporation • MTHPI • SEDA • Yayasan Hijau	**Fiscal Instrument** • Green Technology Financing Scheme • Feed in tariff (FiT) • Incentives for RE & EE • Incentives for GBI certified • Incentives for hybrid and EV
Promotion, Industry & Public Awareness • IGEM • Green Carnival • Malaysian Green Technology Awards	**Labeling and Certification** • Eco labeling • MyHIJAU Mark • Energy Efficient Rating and Labeling Scheme • Water Efficient Product Labeling Scheme	**Rating Tool** ▪ Low Carbon City Framework (LCCF) Assessment Tool • Green Building Index • Green Pass • Green RE
MyHIJAU Programme • MyHIJAU Procurement • MyHIJAU Mark • MyHIJAU Directory • MyHIJAU SME	**Human Capital Development** • MGTC = Industry Lead Body for GT • NOSS for GT • AEMAS • MyHIjau Youth Camp • SME Development Programme	**Green Township – Pilot Projects** • Putrajaya • Cyberjaya • Subang Jaya • Petaling Jaya • Hang Tuah Jaya • Iskandar Malaysia

CONCLUSION

In Malaysia there has been many policies, legislation and promotional activities put in place to foster green growth for the nation;

However, **more needs to be done by all parties through strategic partnerships and collaborations**;

These efforts need to be long term and consistent for us to achieve green growth and overall Sustainability.

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THANK YOU IR3S

WHERE ARE WE NOW

Achievement 2012/2013 (*Estimation*) – Green Technlogy

(Energy, Transportation, Building, Waste and Water Sectors)

- **RM7.9 billion (0.8%)** to GDP.
- **Job Creation**: 61,280 green jobs.

***Source: Economic Assessment On The Green Business Environment In Malaysia - KeTTHA**

GREEN TARGETS IN 2030

BUSINESS AS USUAL
(*Estimation*)

- **RM27.9 billion** to GDP.
- **Job Creation**: 104,060 green jobs.

MEETING THE GREEN TARGET
(*Estimation*)

- **RM60 billion** to GDP.
- **Job Creation**: 211,495 green jobs.

***Source: Economic Assessment On The Green Business Environment In Malaysia - KeTTHA**

GREEN GROWTH FOR MALAYSIA

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