

FEALAC Meeting on Eco-Business Promotion

Jaya Singam Rajoo
Ministry of Energy, Green Technology and Water
MALAYSIA

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Outline

Introduction

- Key Indicators
- Introduction to Power Industry

Green Technology Policy

- Green Technology Policy
- Renewable Energy
- Energy Efficiency

Green Technology Incentives

- Green Technology Financial Scheme
- FiT Rates
- Energy Efficiency Incentives



INTRODUCTION



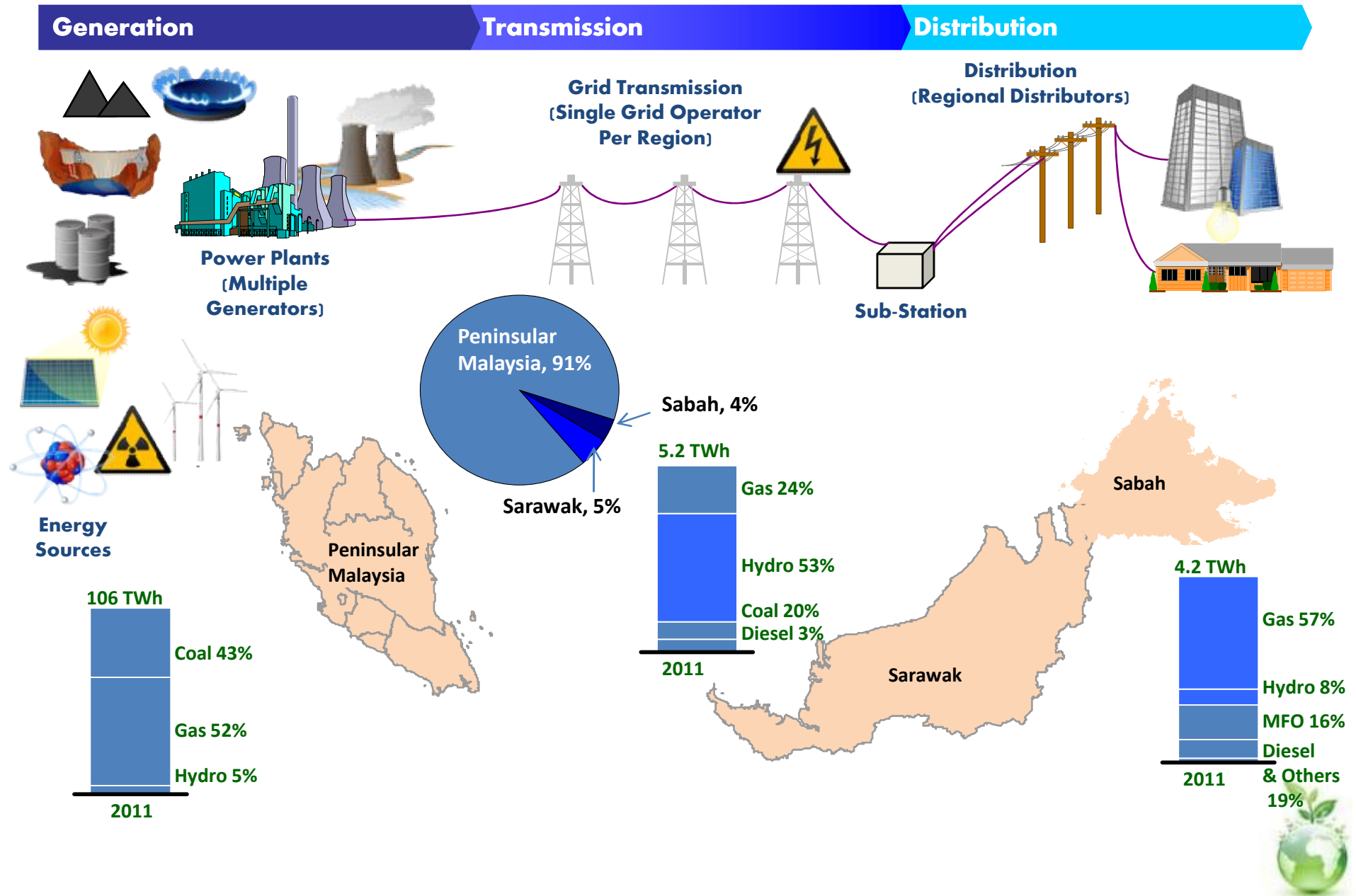
MALAYSIA: KEY INDICATORS

Economic Indicators (2011)	
Population	28.6 million
Area	329,847 sq km
GDP	USD269.34 billion
GDP Growth	5.1%
Per capita income	USD9,382
Energy Resources (2010)	
Oil	5.52 bbl
Gas	87.98 Tscf
Coal	1.94 bil ton
Hydro Potential	20 GW

Source : 1.National Energy Balance 2010
2. Department of Statistics Malaysia



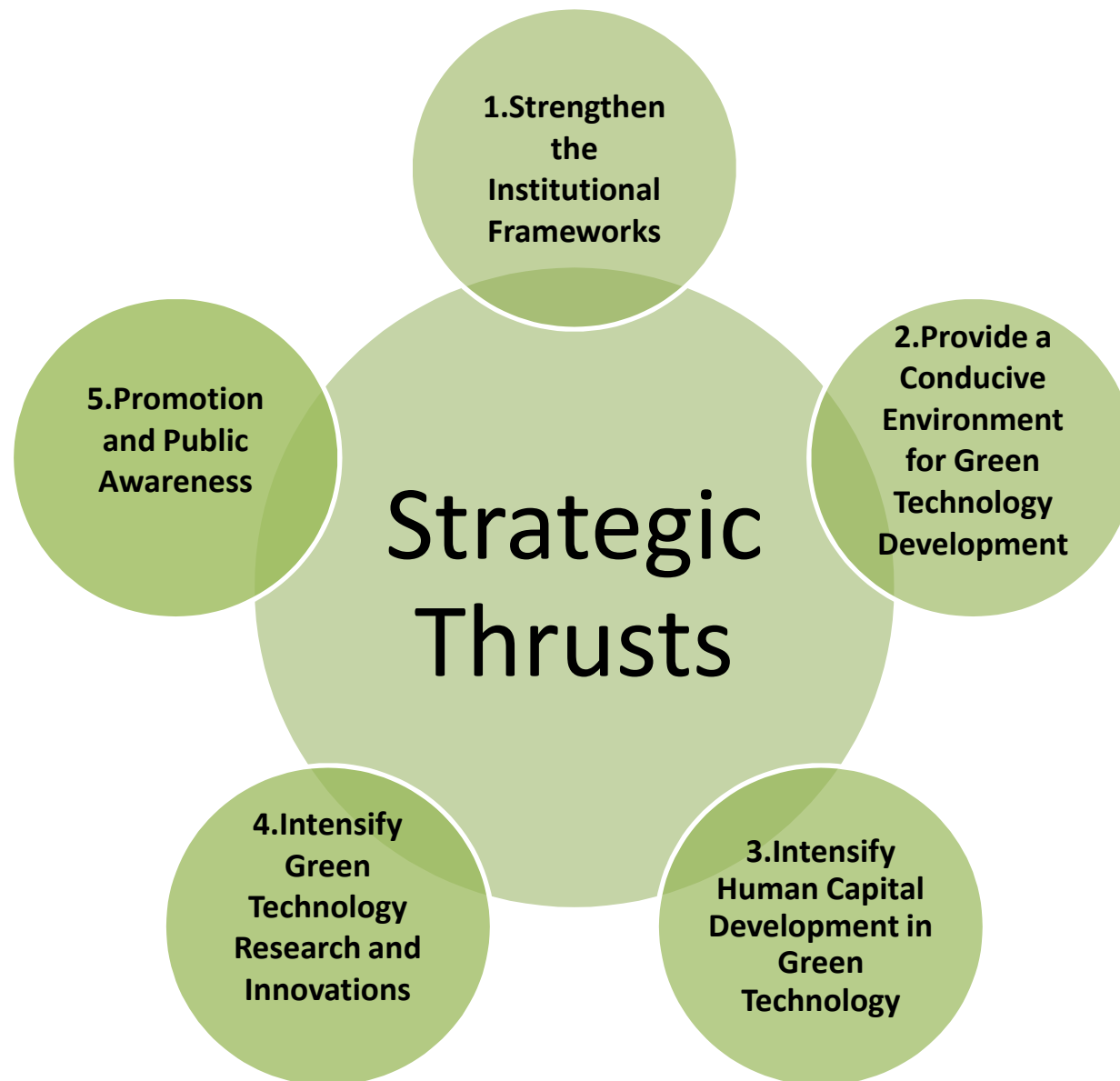
Introduction: Power Industry



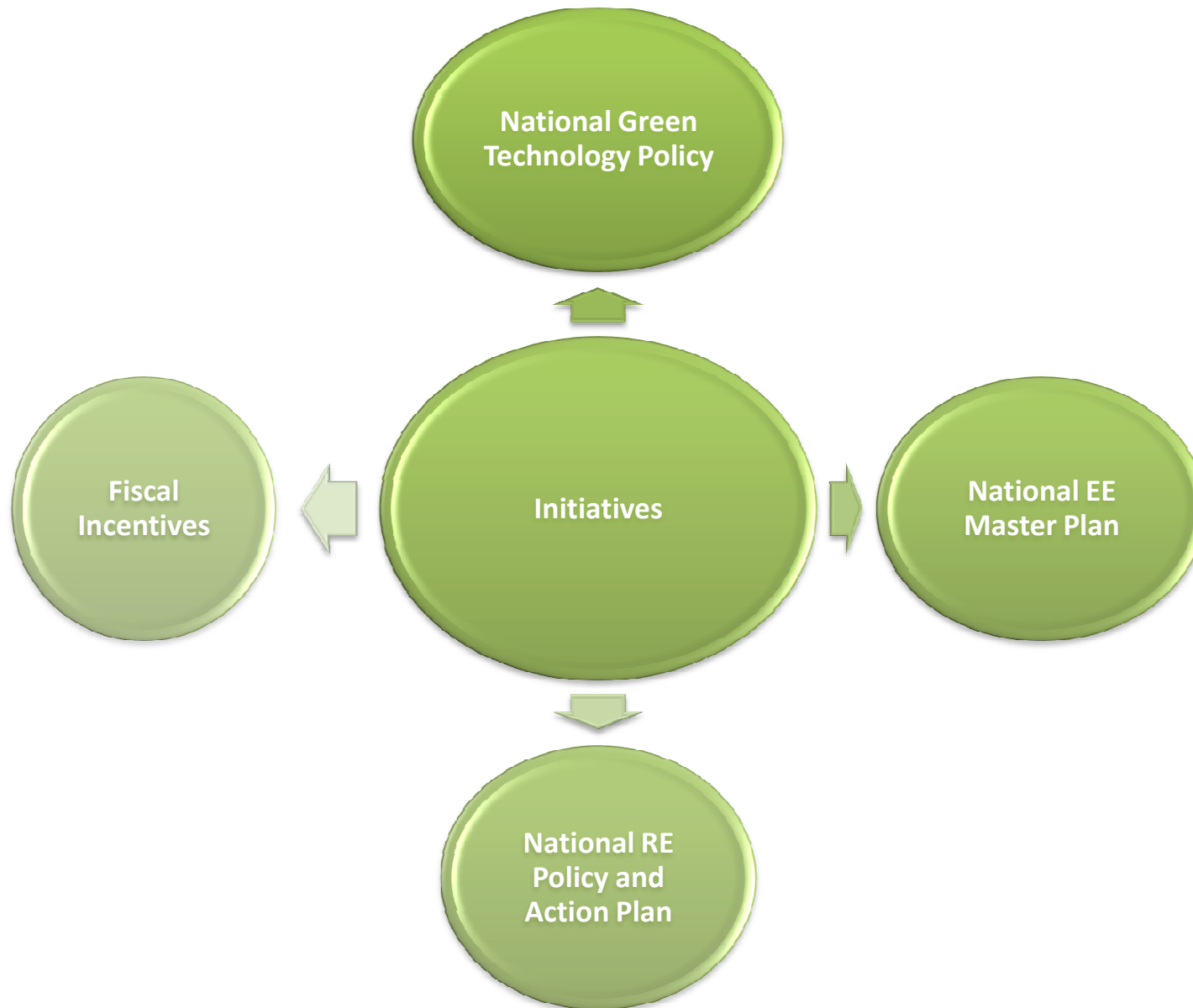
GREEN TECHNOLOGY POLICY



Green Technology Policy: Strategic Thrusts



Governments Initiatives: Towards Green Growth



RE Development in Malaysia

8TH Malaysia
Plan (2001 -
2005)

- Adopted RE as the 5th Fuel
- Goal – 5% of RE in energy mix

9th Malaysia
Plan
(2006 – 2010)

- RE Target – 300 MW grid-connected capacity (Peninsular Malaysia)
- Carbon intensity reduction target: 40% lower than 2005 levels by 2020

RE as of 31st
December
2011

- Current status :68.5 MW grid-connected
- Off-grid: >430MW (private palm oil millers and solar hybrid)



Feed-in Tariff

Malaysia introduced FiT via the Renewable Energy Act 2011

- Implementation by Sustainable Energy Development Authority Malaysia (SEDA Malaysia)

Current Status of FiT Application (Sept. 2012)

	Total	Capacity (MW)
Applications received	1090	641
Approved Applications	535	404
Applications in process	171	44



FiT Targets by 2014

	No of Jobs Creation	RE Generation (MWh)	Installed Capacity (MW)	CO2 Reduction / tonnes
Biogas (palm oil waste, agro based, farming)	662	150,902	20.5	278,662
Biomass (palm oil waste, agro based)	4,747	793,468	96.4	1,373,260
Mini Hydro	1,381	516,917	79.6	613,940
Solar PV	4,413	222,731	165.9	346,229
Total	10,697	1,684,017	362.3	2,612,090



RE Targets

Year	Cumulative RE Capacity	RE Power Mix	Cumulative CO ₂ avoided
2015	985 MW	6%	11.1 mt
2020	2,080 MW	11%	42.2 mt
2030	4,000 MW	17%	145.1 mt

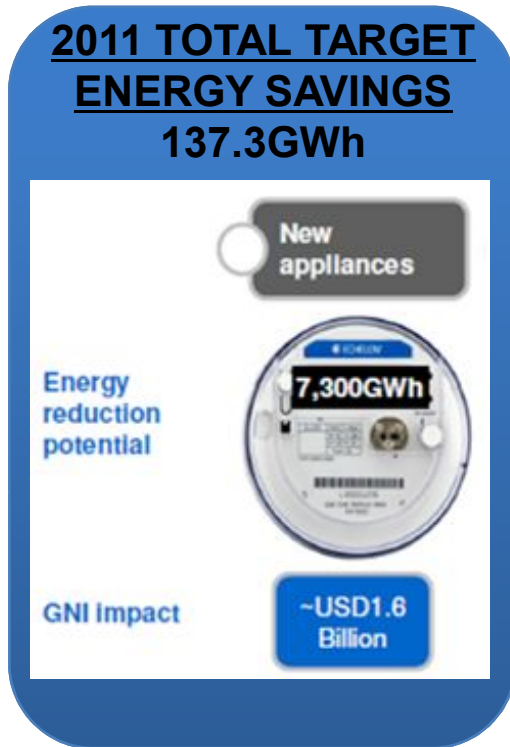





Energy Efficiency

- The **S**ustainability **A**chieved **V**ia **E**nergy Efficiency (SAVE) programme
 - Launched in July 2011
 - Aimed at promoting energy efficient home appliances and chillers in commercial/industrial sector
- National Energy Efficiency Master Plan
 - Covers electrical energy
 - To be implemented in 3 Sectors : Industry, Building and Residential



Sustainability Achieved via Energy Efficiency (SAVE) Programme



Type of Appliances		Fridges 	Air - ditioners 	Chillers 
2011 Target Savings ¹	Target # of Units	100,000 units	65,000 units	72,000RT
	Energy	24.9GWh	58.75GWh	53.6GWh
	Cost	RM5.9mil	RM10.6mil	RM16.8mil
	Estimated Lifetime Savings ²	RM41.3mil	RM74.2mil	RM252mil
Allocation	Offered Rebates Per Unit	RM200	RM100	RM200
	Total Budget Allocation	RM20mil	RM6.5mil	RM14.4mil

¹ Target energy and cost savings at current tariff rate

² Lifetime saving for fridge and in 7 years; for chillers in 15 years



SAVE Programme Achievements

Appliances (Market Share Target)	2012 Target	Market share Achievement (July – December 2011)		Market share Achievement for 2012 (Jan - March 2012)		*Cumulative Achievement (2011-2012)	
		Unit	%	Unit	%	Unit	%
Refrigerator	25%	132,553	22.09	31,083	5.18	163,636	28
Air-condition	20%	84,327	14.05	15,078	2.51	99,405	17
Chillers	39%	27,995	13.61	32,395	15.75	42,737	21

- **Refrigerator & Air-condition baseline based on 600,000 units marketshare*
- *Chillers baseline based on 205,461RT marketshare*



GREEN TECHNOLOGY INCENTIVES



NGTP Incentives

Green Technology Financial Scheme (GTFS)

- RM1.5 billion soft loan (Additional RM 2 billion under 2013 Budget)
- Up to RM50.0 million for producers and RM10.0 million for users of green technology
- 2% interest subsidised by the government
- 60% government guarantee
- 140 companies are expected to benefit from the scheme
- GreenTech Malaysia Corp to administrator all applications
- Effective until 2015



FiT Rates

Technology / Source	FiT Duration (Years)	Range of FiT Rates (RM/kWh) {USD/kWh}	Annual Degression	Rate in Second Year (After Degression)
Biomass (palm oil waste, agro based)	16	0.27 – 0.35 {0.09 – 0.12}	0.5%	0.268 – 0.348 {0.088 – 0.115}
Biogas (palm oil waste, agro based, farming)	16	0.28 – 0.35 {0.09 – 0.12}	0.5%	0.278 – 0.348 {0.09 – 0.115}
Mini Hydro	21	0.23 – 0.24 {~0.08}	0%	0.23 – 0.24 {~0.08}
Solar PV & PP	21	0.85 – 1.78 {0.28 – 0.59}	8%	0.782 – 1.63 {0.258 – 0.538}
Solid waste & Sewage	16	0.37 – 0.45 {0.12 – 0.15}	1.8%	0.363 – 0.441 {0.12-0.146}

RM1 = USD0.33



EE Incentives

- ❑ Pioneer Status (PS) with tax exemption of 100% of statutory income for 10 years
- ❑ Investment Tax Allowance (ITA) of 100% on qualifying capital expenditure incurred within a period of 5 years to be utilised against 100% of the statutory income for each year of assessment
- ❑ The incentives are valid until 31 December, 2015
- ❑ Exemption on import duty and sales tax on energy efficient equipments and appliances including locally produced insulation materials (ends on 31 December 2012)



Conclusion

- The government has identified **low carbon economy** as the driver of growth
- The government is actively putting in place the ecosystem, value system and supply chain to create a vibrant **low carbon economy**
- Development of **Eco-business** is imperative to support **low carbon economy** and ensure sustainability



THANK YOU

Ministry of Energy, Green Technology and Water,
Block E4/5 Parcel E,
Federal Government Administrative Centre,
62668 Putrajaya Malaysia
www.kettha.gov.my

