

Energy Efficiency Initiatives in Malaysia

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Malaysia

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Overview

- National Energy Policy
- Current Energy Scenario
- Initiatives by Government
 - Buildings
 - ✓ MEGTW's LEO Building
 - ✓ PTM's GEO Building
 - Regulations & Manuals
 - Fiscal Incentives
 - Awareness programmes
- Future Direction

National Energy Policy

The national energy policy has been predicated on the following principles:

- **Supply Objective:**

To ensure provision of adequate, secure and cost-effective energy supplies by developing indigenous energy resources, both non-renewable & renewable, using least-costs options, & diversifying supply resources within & outside the economy;

- **Utilisation Objective:**

To promote the efficient utilisation of energy and the elimination of wasteful & non-productive patterns of energy consumption;

- **Environmental Objective:**

To minimise the negative impacts of energy production, transportation, conversion, utilisation & consumption on the environment

Current Energy Scenario

- Biggest challenges facing energy industry worldwide:
 - ✓ security of energy supply
 - ✓ price volatility of oil and gas
- Malaysia current energy supply scenario
 - ✓ crude oil reserves will last another 19 years
 - ✓ gas will last 33 years
- Increased efforts to intensify EE in transport, industrial and power generation

Initiatives by Government

A. Building Sector

The Low Energy Office (LEO Building)

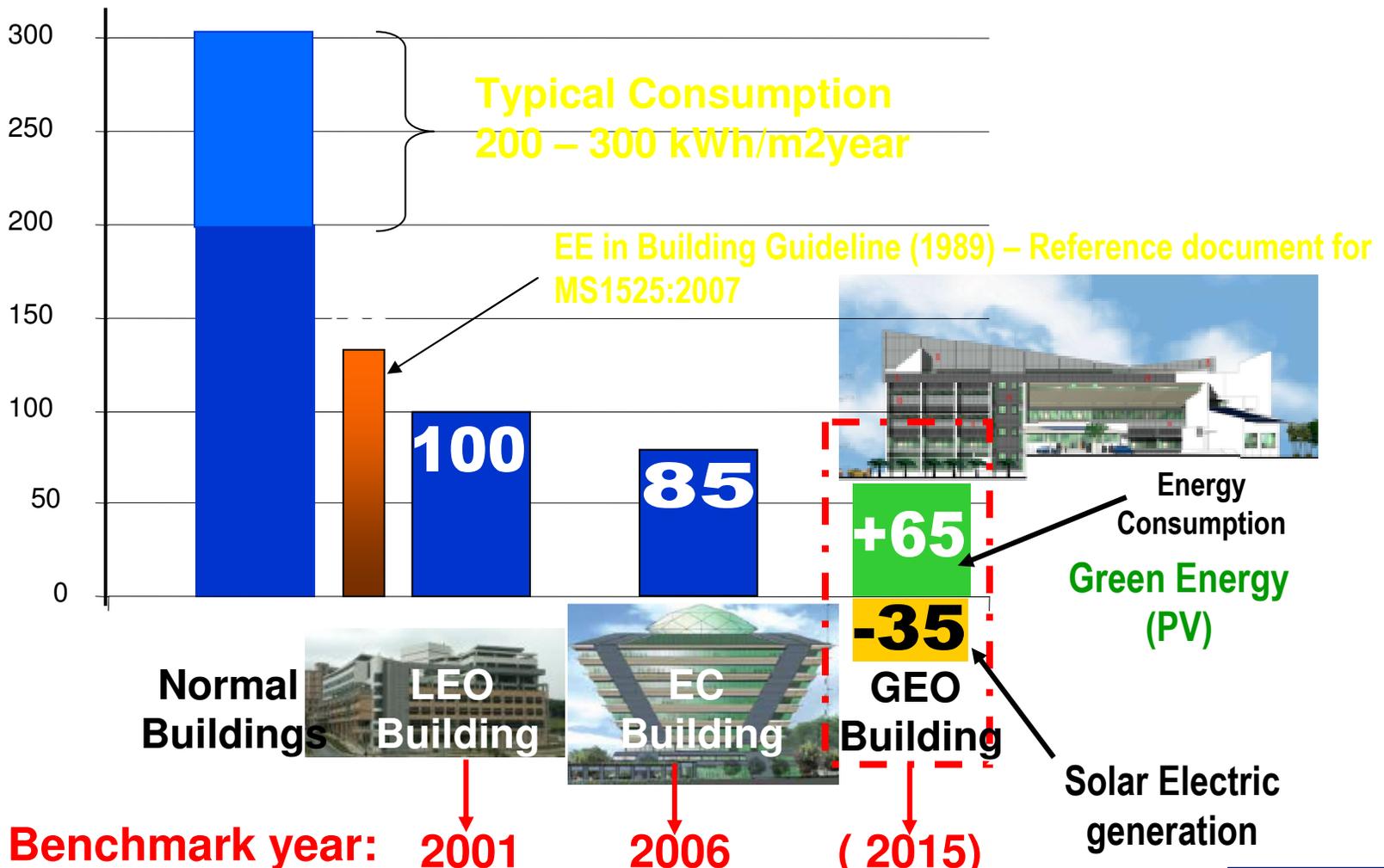
- 1st government intelligent building built with integrated energy efficient design
- showcase building to demonstrate energy efficient and cost effective features
- public & private sector buildings to replicate
- target - to achieve building energy index (BEI) of **100kWh/m² p. a.**
 - energy savings > **50%** to normal buildings
- electricity bill savings-RM600,000 p.a.

Zero Energy Office Building

- ❖ building must not consume more electricity than what can be produced in the building using renewable energy sources
- ❖ objective of the PTM GEO Building
 - provide a platform to advance Malaysian building industry towards more sustainable solutions
 - State-of-the-art because it is the cheapest solution in an overall economic perspective
 - BEI as low as 50 kWh/m²/year

Continuous Improvement project of Energy Efficiency buildings in Malaysia

Energy Indices (kWh/m²year)



Energy Audits of Government Buildings

- several government buildings have been audited
- audit exercise to complete in Dec 2009

Outcomes of audit:

- current trend of energy use in government buildings
- improvements needed
- standard process for government building energy audits

Next Step:

- Proposal of Policy on Efficient Use on Energy in Government Buildings to the Cabinet

B. Regulations & Manuals

(i) Efficient Management of Electrical Energy Regulations 2008

- under the Electricity Supply Act 2001
- Gazetted on 15 December 2008

Provisions of Regulations:

installations that consume **3 million kWh or more over a period of 6 months** required to engage a registered electrical **energy manager**

Role of Energy manager:

- to analyse total consumption of electrical energy
- to advise on the development and implementation of measures to ensure efficient management of electrical energy
- to monitor the effectiveness of measures taken

Regulations...contd

(ii) MS 1525

The Code of Practice on the Use of Renewable Energy and Energy Efficiency in Non-Residential Buildings

- Proposal MS 1525 to be incorporated into the Uniform Building By-Laws (UBBL).
- All non-residential buildings to comply with UBBL requirements
- To encourage design of new & existing buildings that reduces energy use;
- To provide criteria and minimum standards for EE in design of new buildings, retrofit existing buildings;
- To provide guidance for EE designs;
- Encourage application of RE in new or existing buildings

C. Fiscal Incentives

FISCAL INCENTIVES FOR EE

- **Companies Providing Energy Conservation Services**
- **Companies Incurring CAPEX For Conserving Energy For Own Consumption [this will be discussed at length by reps from MIDA and IRB]**
- **Enhanced annually**
- **Guidebook on Fiscal Incentives**

D. Awareness Programmes

Energy Month

- An annual event which begun in November 2007 to promote EE and RE
- Events:
 - Seminars
 - Exhibitions
 - TV campaign on EE at home
 - Schools and universities activities
 - *A Guide to Energy Efficiency At Home* published in Nov. 2008 distributed to the public

Future Direction

- Intensify EE initiatives in industrial, transport and commercial sectors and in government buildings
- MEGTW is currently developing a Master Plan for EE to accelerate the development of EE in the 9th Malaysian Plan and beyond
- Need to look at energy in a holistic manner for comprehensive policies and management

Thank You

