

Update on Energy Efficiency Policies & Programmes in Singapore

35th APEC EGEE&C Meeting
Wellington, NZ, 4-5 Feb 10



Summary

1. Introduction
2. Electric Vehicles (EVs) test-bed project
3. Intelligent Energy System (IES) pilot project
4. Other Energy Efficiency Initiatives



Brief Introduction

Introduction

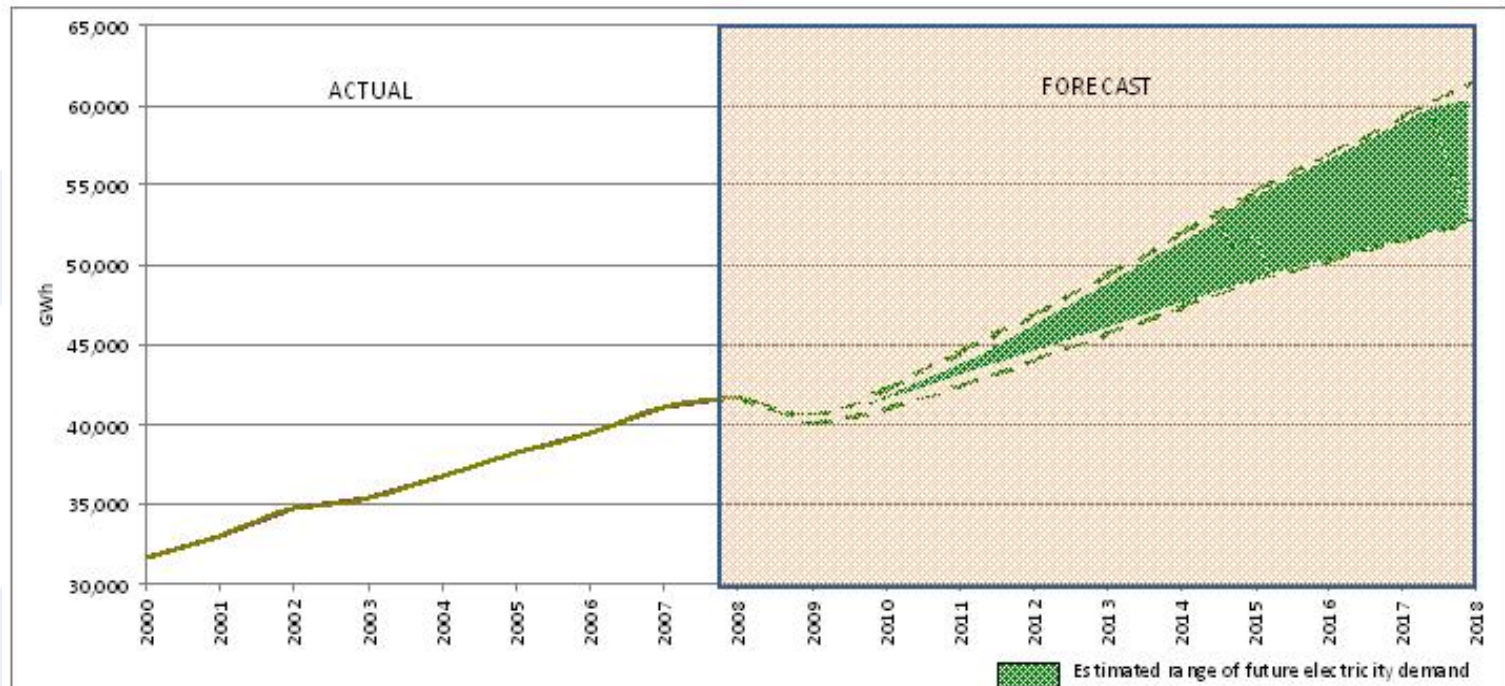
- Singapore's energy needs are almost *entirely imported*;
- Additionally due to the small land area, Singapore is also "*alternative-energy disadvantaged*";

Efficiency

- However energy demand, an economic growth enabler, is expected to increase at **2.5 - 3% p a** over the next 10 years;

Sustainable Development

EE Initiatives



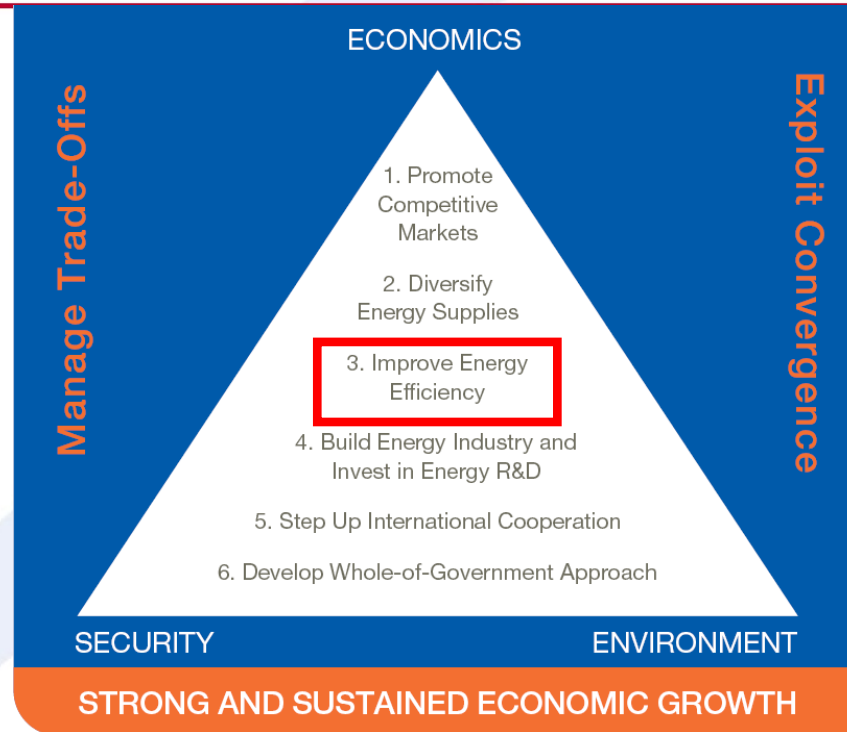
Energy Efficiency in Singapore

Introduction

Efficiency

Electric Vehicles

EE Initiatives



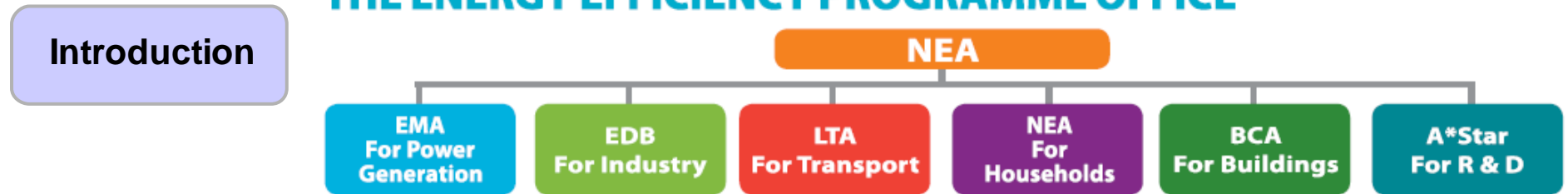
Source: MTI "Energy for Growth" National Energy Policy Report 2007

Energy efficiency is a key strategy to achieve :

- Energy Security
- Economic Competitiveness
- Environmental Sustainability
- Innovation in EE technologies

Energy Efficiency Programme Office (E²PO)

THE ENERGY EFFICIENCY PROGRAMME OFFICE



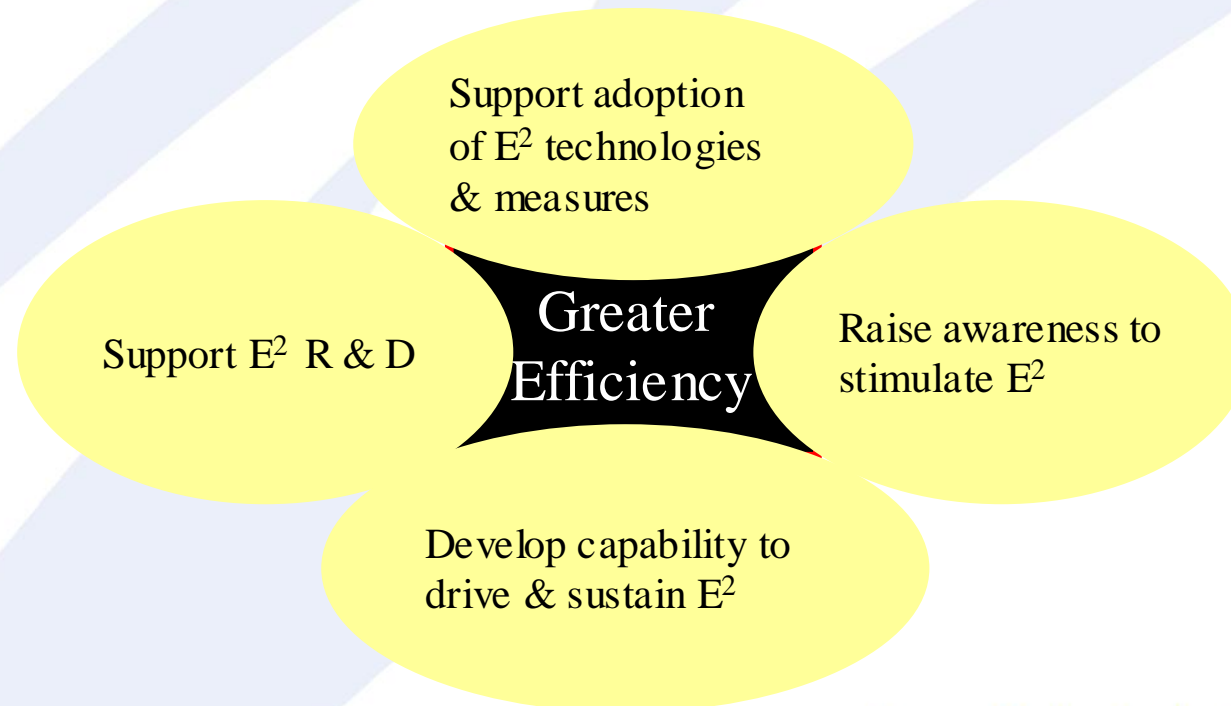
Introduction

Efficiency

Electric Vehicles

EE Initiatives

Each member agency is to implementing EE initiatives in their respective energy sector to the following:



Energy Efficiency Targets and Incentives

Introduction

In Apr 09, Singapore released a Sustainability Development Blueprint with specific targets for energy :

- reduce energy intensity by 20% from 2005 by 2020;
- reduce energy intensity by 35% from 2005 by 2035

Efficiency

Summary of Incentives Schemes for Energy Efficiency:

Sustainable Development

- Design for Efficiency Scheme(DfE);
- Energy Efficiency Improvement Assistance Scheme(EASe);
- Grant for Energy Efficient Technologies (GREET);
- Accelerated Tax Depreciation Allowance for Energy Efficiency Equipment & Technologies;

EE Initiatives

- Training Grant for Singapore Certified Energy Manager (SCEM) Program;
- Green Mark Incentive Scheme
- Green Vehicle Rebate Scheme

Electric Vehicles Test-bedding

Introduction

Efficiency

Electric Vehicles

Intelligent Energy Systems

EE Initiatives

- EVs viewed as a sustainable mode of transport
- **\$20 million set aside to support infrastructure development and test-bed EVs**
- Interested auto manufacturers & technology companies are required to collect data on performance of EVs (from Mitsubishi, Nissan and Renault)
- **Key industry players are to:**
 - examine infrastructure requirements;
 - develop new business models;
 - identify industry & R&D opportunities



Intelligent Energy System (IES)

Introduction

- Pilot project launched in Nov 09 to test a range of smart grid technologies to enhance the capabilities of Singapore's power grid infrastructure.

Efficiency

- Singapore already has a high-quality power system, nevertheless, there is scope to leverage on new technologies to further improve the capabilities to develop a 'smarter grid'

Electric Vehicles

- Specifically, the IES pilot project, to be implemented in multiple sites, seeks to develop and test:

Intelligent Energy Systems

- Advanced Metering and Communications Infrastructure;

- Demand Response Management Systems; &

- Management Systems for Distributed Energy Sources such as solar PV, mini-cogen plants, EVs, etc

EE Initiatives

Test-bedding of EE technologies

Introduction

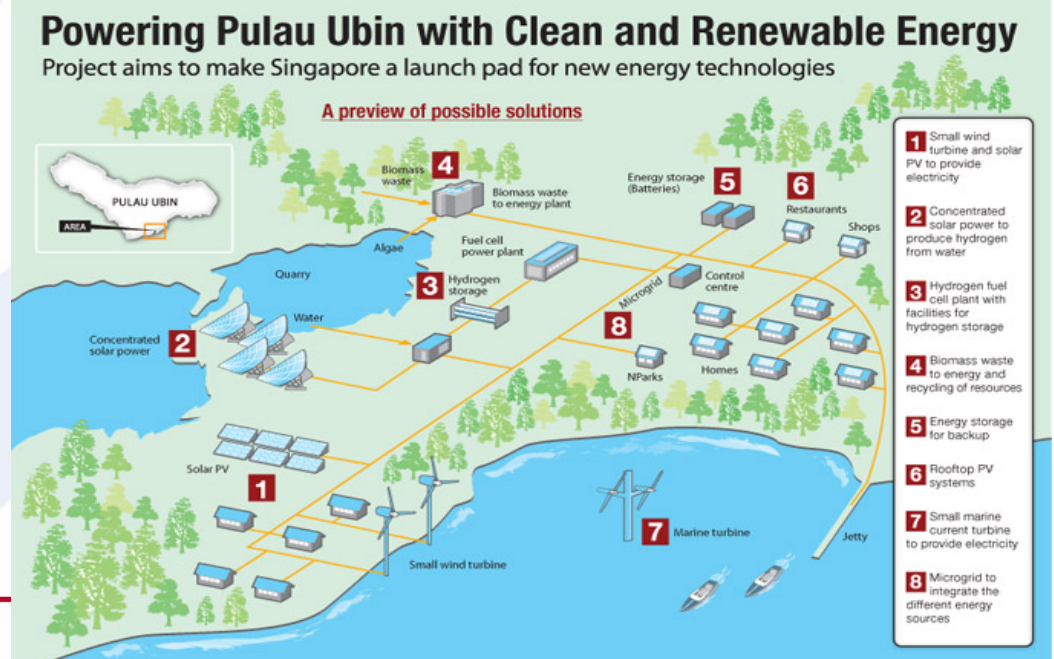
Efficiency

Electric Vehicles

Intelligent Energy Systems

EE Initiatives

- 1st of its kind in SE Asia
- Host a number of plug & play test-bedding facilities for:
 - small wind & marine turbines & solar to generate electricity;
 - solar power to produce hydrogen from water for fuel cells;
 - waste to energy;
 - micro-grid to integrate the different energy sources



Other Energy Efficiency Initiatives

Introduction

Energy Efficiency National Partnership (EENP);

- a voluntary program to assist companies set up project teams to reduce wastage and improve EE at organisational level;

Efficiency

- long-term aim is to poster a culture of sustained EE improvements & encourage investments in EE ;

Electric Vehicles

- an annual award to recognise companies with excellent EM practices & demonstrate tangible results;

Intelligent Energy Systems

- a committee to spearhead EE partnerships and awards;

EE Initiatives

- augment the current basket of EE - related voluntary schemes such as EASe, GREET, DfE and SCEM training grants



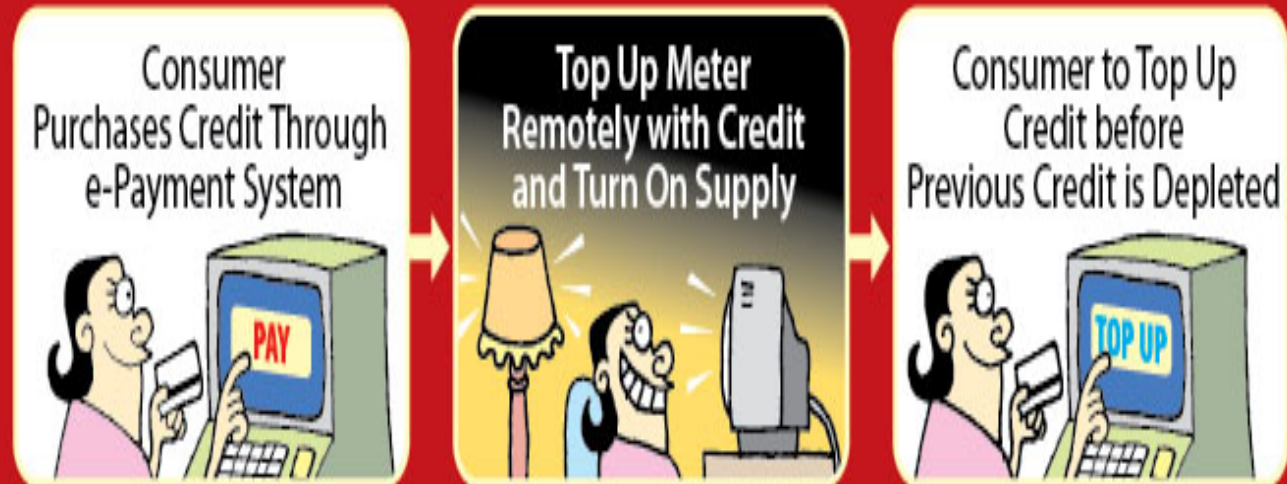
Electricity Vending System (EVS)

Introduction

Efficiency

Sustainable Development

EE Initiatives



- A new way for domestic consumers to purchase electricity, where:
 - ✓ retailers post electricity packages at points-of-sale;
 - ✓ consumers choose packages they prefer & also help to reduce their consumption through prudent use
- Helps to reduce back-end business/admin costs
- Pilot trial run to test concept of EVS was completed end last year.

Singapore International Energy Week 2009

- We had a successful run of the SIEW 09 in Nov 09
- Dr Daniel Yergin, Founder & Chairman of Cambridge Energy Research Associates (CERA), delivered the Singapore Energy Lecture
- A total of 1,800 energy companies and over 5,000 participants attended the events from 16-20 Nov 09

Upcoming SIEW 2010



SINGAPORE INTERNATIONAL ENERGY WEEK 2010



SAVE THE DATE
27 October - 4 November 2010

CLEAN ENERGY EXPO



CARBON FORUM ASIA
Carbon Market Trade Fair & Conference

Energy Market Authority



Thank You