

Energy Efficiency Developments in Singapore

34th APEC EGEE&C Meeting
Chinese Taipei, 7 Oct 09



Summary of presentation

1. Introduction

2. Energy Efficiency Programme Office

3. Sustainable Development Blueprint '09

4. Energy Efficiency Initiatives

Energy Efficiency in Singapore

Introduction

E²PO

Sustainable
Development

EE Initiatives



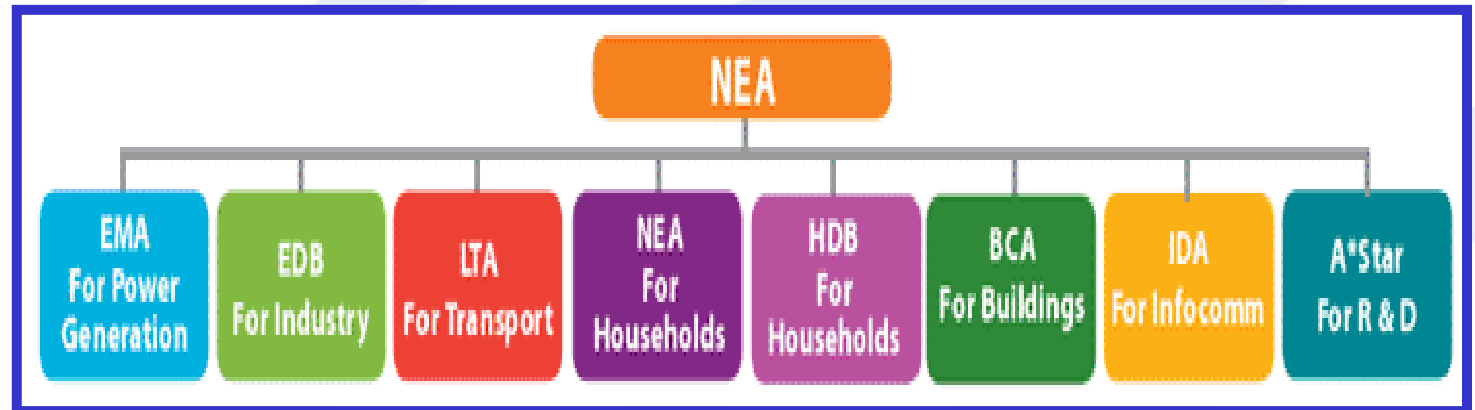
Key strategy to achieve :

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

Energy Efficiency Programme Office (E²PO)

Introduction

E²PO



Sustainable Development

- E2 Singapore
- Promotion of EE technologies
- Raise awareness
- Build Capability

EE Initiatives

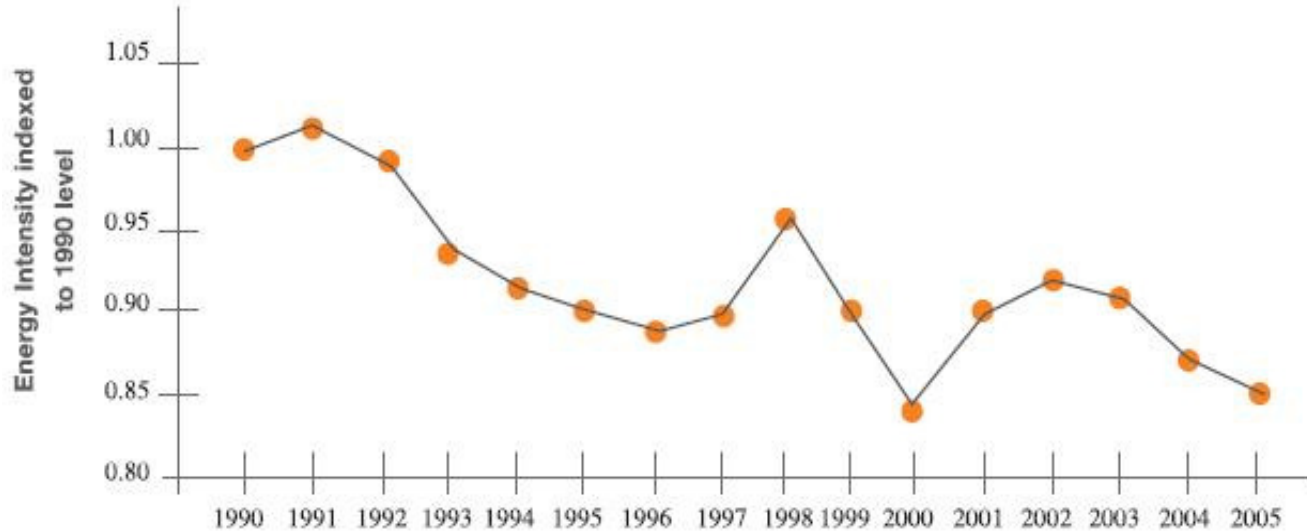
Sustainable Development Blueprint launched in Apr 09

Introduction

E²PO

Sustainable Development

EE Initiatives



The key goal for Energy resource is to reduce our energy intensity (per \$GDP) :

- by 20% from 2005 levels by 2020, and
- by 35% from 2005 levels by 2030.

SUSTAINABLE SINGAPORE
A Lively & Liveable City

Sustainable Development Blueprint

Introduction

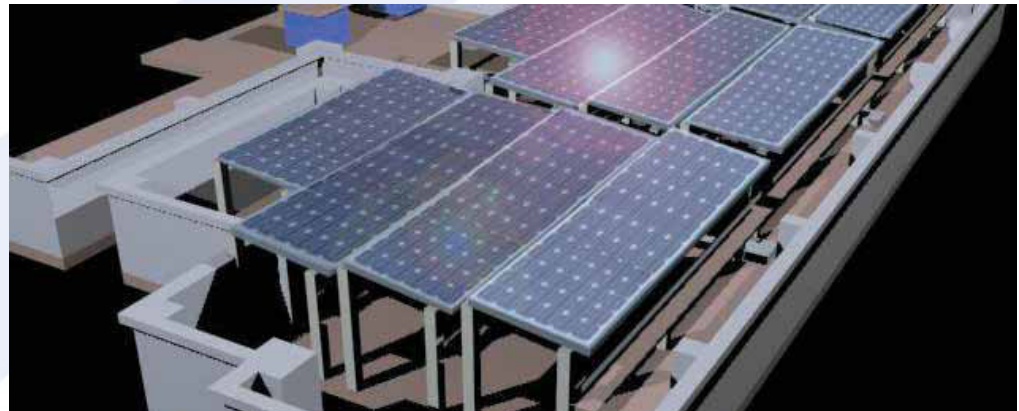
E²PO

Sustainable
Development

EE Initiatives

The key Energy priorities include:

- Pricing energy appropriately – no subsidies for energy
- Provide information for better decisions – mandating energy labelling, setting MEPS & energy performance benchmarks
- Boost EE industry designs, processes & technologies
- Build capabilities in EE & RE - training programs, schemes
- Promote resource-efficient buildings – Green Mark Scheme



Energy Efficiency Initiatives - Buildings

Introduction

E²PO

Sustainable
Development

EE Initiatives

- **Energy Efficiency Improvement Assistance Scheme (EASe)**
- **Energy Smart Building Labelling Programme for Hotels, Office buildings and Retail Malls**
- **Financial incentives – GREET, Singapore Certified Energy Manager (SCEM) Training Grant, Design for Efficiency Scheme**
- **ESCO Accreditation Scheme**



Test-bedding of EE technologies

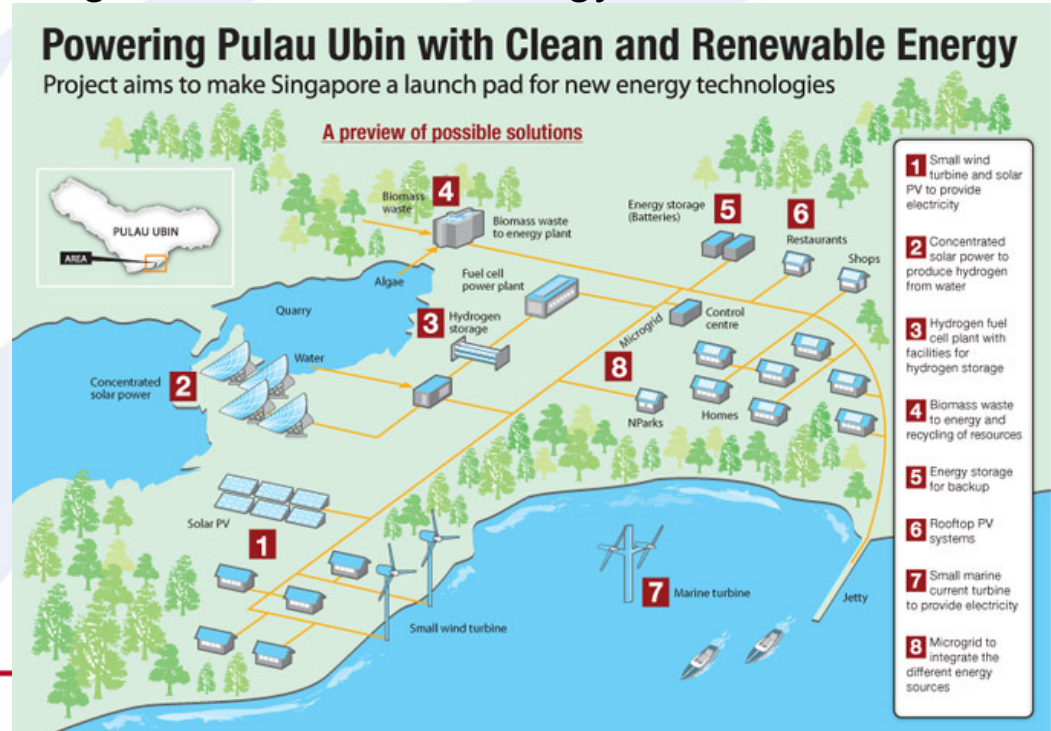
Introduction

E²PO

Sustainable Development

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 provide electricity
 - solar power to produce H₂ from water
 - biomass to energy
 - micro-grid to integrate the different energy sources



Electric Vehicle Test-bed & Exploring Vehicle to Grid Power with Electric Vehicles

Introduction

- Due to our compact size & high-density urban setting, Singapore is well placed to deploy EVs.

E²PO

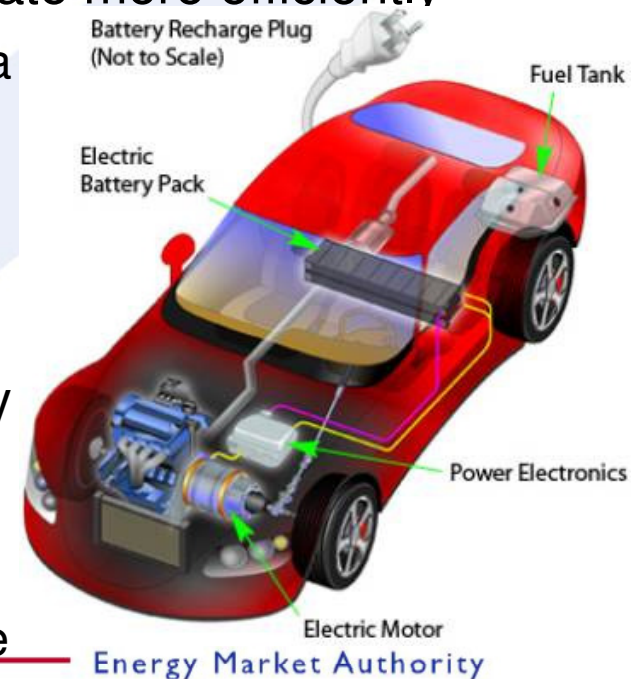
- Launched in May 09, this project will involve key industry players to examine infrastructure
- Looking further, we are exploring Vehicle-to-Grid power to enable our power system to operate more efficiently

Sustainable Development

- In Jun 09, Renault & Nissan signed a MOU with the Government, through a Task Force, to explore the development & promote the introduction and expansion of the Zero Emission EVs in Singapore.

EE Initiatives

- TF will develop the overall plan of EV test-bedding and evaluation of the environmental and economic benefits, with a view of a potentially larger scale adoption of EVs in future



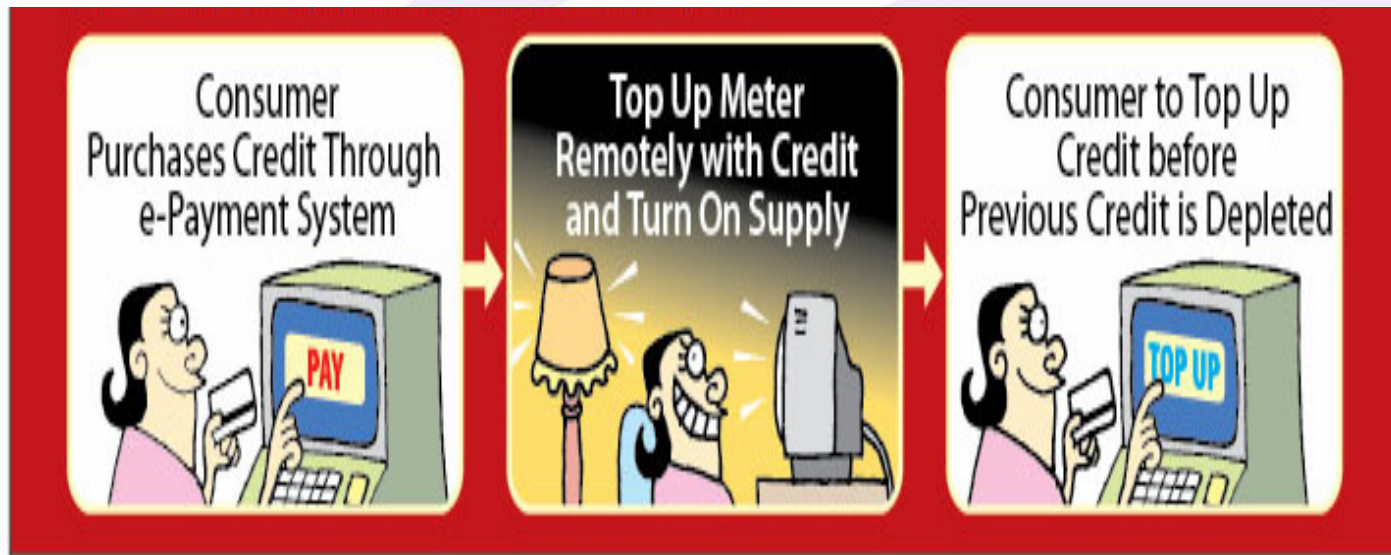
Electricity Vending System (EVS)

Introduction

E²PO

Sustainable
Development

EE Initiatives



- New way for consumers to purchase electricity
 - ✓ retailers post electricity package at points-of-sale
 - ✓ help reduce back-end business costs
- Pilot project to test concept of EVS on 1000 households is expected to be completed by end 2009.

Concerns on Financing model for EE

Introduction

- Currently financial incentives / grants for EE are provided by the Government

E²PO

- This is not a sustainable model

Sustainable Development

- Financial institutions have traditionally not viewed financing EE projects as viable projects for investment

EE Initiatives



Thank You